

**CONTRACT DOCUMENTS
AND
SPECIFICATIONS
FOR
PROJECT NO. SP 21-6
FRED JOHNSON PARK REHABILITATION**

ATTENDANCE AT PRE-BID CONFERENCE IS MANDATORY

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PARKS & FACILITIES
CABS – City Architectural Building Services

ANNA AMERICA, DIRECTOR

Account Numbers: 2443X0028Z.Facilities.Parks.4295.42954111-541103
2244P00012.Facilities.Parks.409.4094111-541103

Public Works Department
175 East 2nd Street, Suite 261
Tulsa, Oklahoma 74103
(918) 596-9637

CONTRACT DOCUMENTS

PROJECT NO. SP 21-6
FRED JOHNSON PARK REHABILITATION

DEPARTMENT OF CITY EXPERIENCE

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**NOTICE TO BIDDERS
SEALED BIDS FOR
PROJECT NO. SP 21-6**

Notice is hereby given that pursuant to an order by the Mayor of the City of Tulsa, Oklahoma, sealed bids will be received in Room 260 of the Office of the City Clerk, City of Tulsa, 175 E. 2nd Street, Tulsa, Oklahoma 74103 until **8:30 a.m. the 24th day of April, 2026** for furnishing all tools, materials and labor and performing the work necessary to be done in the construction of the following:

**PROJECT NO. SP 21-6 FRED JOHNSON PARK
REHABILITATION**

The entire cost of the improvement shall be paid from Account No.
2443X0028Z.Facilities.Parks.4295.42954111-541103
2244P00012.Facilities.Parks.409.4094111-541103

A **MANDATORY** Pre-Bid Conference is scheduled for **Tuesday, April 7, 2026 at 9:30 a.m.** and will be held through video conferencing with Microsoft Teams, invitation presented on the City of Tulsa's website at this link:
<https://www.cityoftulsa.org/government/departments/engineering-services/construction-bids/>

Attendance at the Pre-Bid Conference is MANDATORY. Bids will not be received from contractors who did not attend the Pre-Bid Conference.

Bids will be accepted by the City Clerk from the holders of valid pre-qualifications certificates from the City of Tulsa in one or more of the following classifications: **A or C.**

Drawings, specifications and contract documents for construction of said public improvements of the said project have been adopted by the Mayor of said City. Copies of same may be obtained at the Office of Contract Administration, 175 E. 2nd St., 13th Floor, Tulsa, OK 74103 for a non-refundable fee in the amount of **\$50.00** made payable to the City of Tulsa by check or money order.

Contract requirements shall include compliance as required by law pertaining to the practice of non-discrimination in employment.

The overall aspirational Small Business Enterprise utilization goal for this project is **ten (10)** percent.

Attention is called to Resolution No. 18145 of August 23, 1988, requiring bidders to commit to the goal of employing on the project at least fifty percent bona fide residents of the City of Tulsa and/or MSA in each employment classification.

Attention is called to Resolution 7404 of November 8, 2006, requiring bidders, their subcontractors and their lower-tier subcontractors to hire only citizens of the United States.

The City of Tulsa itself is exempt from the payment of any sales or use taxes, and pursuant to Title 68 O.S. Section 1356(10), direct vendors to the City are also exempt from those taxes. A bidder may exclude from his bid appropriate sales taxes, which he will not have to pay while acting for and on behalf of the City of Tulsa.

A Certified or Cashier's Check or Bidders Surety Bond, in the sum of 5% of the amount of the bid will be required from each bidder to be retained as liquidated damages in the event the successful bidder fails, neglects or refuses to enter into said contract for the construction of said public improvements for said project and furnish the necessary bonds within thirty days from and after the date the award is made.

The bidder to whom a contract is awarded will be required to furnish public liability and workmen's compensation insurance; Performance, Statutory, and Maintenance bonds acceptable to the City of Tulsa, in conformity with the requirements of the proposed contract documents. The Performance, Statutory, and Maintenance bonds shall be for one hundred percent (100%) of the contract price.

The bidding for this project is subject to a local preference law as defined in Oklahoma Statutes, Title 61, Section 103. For purposes of Section 103 a "local bid" means a bid submitted by a business entity that is authorized to do business in the State of Oklahoma and maintains its primary office or principal place of business within the State of Oklahoma. If the conditions outlined in Title 61 are met, The City of Tulsa must select the second lowest bid if within 5% of the lowest bid and the second lowest bid is a local bid and the lowest bid is not a local bid (i.e. non-local/out of state). Accordingly, when the local bid is required to be selected under the State law, the local bidder must agree to do the work at the lowest bid price to be awarded the project.

All bids will be opened and considered by the Bid Committee of said City at a meeting of said Committee to be held in the City Council Room of City Hall in said City at 9:00 a.m. on the 24th day of April, 2026.

Dated at Tulsa, Oklahoma, this 20th day of March, 2026.

(SEAL)

Christina Chappell
City Clerk

INSTRUCTIONS TO BIDDERS

B-1. BIDS

Each bid Proposal shall be completed, signed, and submitted. No alterations, additions, or erasures shall be made on the Proposal. Erroneous entries shall be lined out, initialed by the bidder, and the correct entry inserted. The unit price bid must cover all expense for furnishing the labor, materials, tools, equipment, and apparatus of every description to construct, erect, and furnish all work required by and in conformance with the Drawings and Specifications.

Each bid shall be enclosed in a sealed envelope addressed to the City of Tulsa, 175 E. 2nd Street, Room 260, City Hall, Tulsa, Oklahoma, identified on the outside with the words:

PROJECT NO. SP 21-6 FRED JOHNSON PARK REHABILITATION

Pre-qualification Certificate Number _____.

And shall be filed with the City Clerk in Room 260, City Hall.

All addenda to the contract documents should be denoted on the last page of the Proposal in the space provided.

B-2. BID SECURITY

Each bid shall be accompanied by a cashier's check, a certified check, or bidder's bond, in the amount of five percent (5%) of the total amount bid.

The bid security shall be made payable, without condition, to the City of Tulsa, Oklahoma. The bid security may be retained by and shall be forfeited to the City as liquidated damages if the bid is accepted, a contract based thereon is awarded, and the bidder fails to enter into a contract in the form prescribed, with legally responsible sureties, within thirty (30) days after such award is made by the City.

B-3 RETURN OF BID SECURITY

The bid security of each unsuccessful bidder will be returned when his bid is rejected. The bid security of the bidder to whom the contract is awarded will be returned when he executes a contract and files satisfactory bonds. The bid security of the second lowest responsible bidder may be retained for a period of time not to exceed sixty (60) days pending the execution of the contract and bonds by the successful bidder.

B-4 WITHDRAWAL OF BIDS

No bidder may withdraw his bid for sixty (60) days after the date and hour set for the opening. A bidder may withdraw his bid any time prior to expiration of the

period during which bids may be submitted by making a written request signed in the same manner and by the same person who signed the Proposal.

B-5 REJECTION OF BIDS

Bids received more than ninety-six (96) hours before the time set for opening bids, excluding Saturdays, Sundays, and holidays, as well as bids received after the time set for opening bids, will not be considered and will be returned unopened.

The City of Tulsa reserves the right to reject any and all bids when such rejection is in the best interest of the City of Tulsa. All bids are received subject to this stipulation and the City reserves the right to decide which bidder shall be deemed lowest responsible bidder.

A violation of any of the following provisions by a bidder shall be sufficient reason for rejecting bidder's bid, or shall make any contract between the City of Tulsa and the Contractor that is based on bidder's bid, null and void: divulging the information in said bid before the bids have been opened; submission of a bid which is incomplete, unbalanced, obscure, incorrect, or which has conditional clauses, additions, or irregularities of any kind not in the original proposal form, or which is not in compliance with the Instruction to Bidders and published Notice to Bidders, or which is made in collusion with another bidder. The City shall have the right to waive any immaterial defects or irregularities in any bid received.

B-6 DISQUALIFICATION OF BIDDERS

No contract will be awarded to any person or persons, firm, partnership, company, or corporation which is in arrears to the City upon any debt of contract, or in default as surety or otherwise upon any obligation to the City.

B-7 SIGNATURE OF BIDDERS

Each bid shall be properly signed with the full name of the company or individual submitting the bid, the bidder's address, and the name and title of all persons signing printed below their signature lines. Bids by partnerships shall be signed with the partnership name followed by the signature and title of one of the partners. Bids by corporations shall be signed with the name of the corporation followed by the signature and title of the president, vice president, chairman, or vice chairman of the Board of Directors with attestation by the corporate secretary or assistant corporate secretary. Bids by joint ventures shall be signed by each participant in the joint venture. Bids by limited liability companies shall be signed with the name of the limited liability company followed by the signature and title of the Manager or Managing Member. Bid by limited partnerships shall be signed with the name of the limited partnership followed by the signature of the general partner. Note: The signature requirements listed above are for Oklahoma entities; entities organized in other states must follow the law of the state in which they are organized.

A bid by a person who affixes to his signature the word "President", "Manager", "General Partner", "Agent", or other title, without disclosing the name of the company for which he is signing, may be held to be the bid of the individual signing.

B-8 INTERPRETATION OF CONTRACT DOCUMENTS

If any bidder who contemplates submitting a bid is in doubt as to the true meaning of any part of the drawing, specifications, or other proposed contract documents, bidder may submit to Contract Administration and the Engineer a written request for interpretation thereof. The person submitting the request shall be responsible for its prompt delivery. Interpretation of the proposed contract documents will be made only by addendum. The addendum will be posted on the City of Tulsa website and emailed to all the pre-bid attendees. The City will not be responsible for any other explanations or interpretations of the proposed contract documents.

B-9 LOCAL CONDITIONS AFFECTING WORK

Each bidder shall visit the site of the work and shall completely inform himself relative to construction hazards and procedure, labor, and all other conditions and factors, local and otherwise, which would affect prosecution and completion of the work and its cost. Such considerations shall include the arrangement and condition of existing structures and facilities, the procedure necessary for maintenance of uninterrupted operation of existing structures and facilities, the availability and cost for labor, and facilities for transportation, handling, and storage of materials and equipment. All such factors shall be properly investigated and considered in the preparation of the bid. There will be no subsequent financial adjustment for lack of such prior information.

B-10 TIME OF COMPLETION

The time of completion is an essential part of the contract and it will be necessary for each bidder to satisfy the City of his ability to complete the work within the allowable time set forth in the Bid Form. For all projects that will impact the public, a public meeting is required before any work is done. In this connection, attention is directed to the provisions of the General Conditions and Special Conditions relative to delays, extension of time, and liquidated damages.

B-11 QUALIFICATION OF BIDDERS

No bid will be received and filed by the City Clerk of the City of Tulsa unless the person submitting the bid has been pre-qualified as provided by ordinance, and is the holder of a current certificate of Pre-qualification in force and effect on the date such bid is to be submitted and filed.

B-12 TAXES AND PERMITS

Attention is directed to the requirements of the General Conditions regarding payment of taxes and obtaining permits. Contractor shall comply with all zoning ordinances of the City, as provided in the Tulsa Zoning Code, Title 42 Tulsa Revised Ordinances and conform with all zoning requirements established by the Tulsa Metropolitan Area Planning Commission and the Board of Adjustment.

Contractor can call the Indian Nations Council of Governments (INCOG) at (918) 584-7526, to determine if any zoning requirements must be met.

B-13 OKLAHOMA LEGAL REQUIREMENTS

The Contractor must comply with the Oklahoma Scaffolding Law, 40 Oklahoma Statutes, Sections 174 - 177, which cover erection and use of scaffolds, hoists, cranes, stays, ladders, supports, or other mechanical contrivances.

In accordance with Oklahoma Statutes, Title 68, Section 1701-1707, before commencing any work pursuant to this contract, any nonresident contractor shall give written notice by certified mail, return receipt requested, to the Oklahoma Tax Commission, the Oklahoma Employment Security Commission, the Workers Compensation Court, and the county assessor of each county in which work will be performed. The notices shall comply with the requirements set forth in said statute.

B-14 BONDS

The bidder to whom a contract is awarded will be required to furnish bonds as follows:

- a. Performance Bond – A Performance Bond to the City in an amount equal to one hundred percent (100%) of the Contract price.
- b. Statutory Bond – A Statutory Bond to the State of Oklahoma in an amount equal to one hundred percent (100%) of the contract price.
- c. Maintenance Bond – A Maintenance Bond to the City in an amount equal to one hundred percent (100%) of the contract price.

The bonds shall be executed on the forms included in the contract documents by a surety company authorized to do business in the State of Oklahoma and acceptable as Surety to the City of Tulsa.

Accompanying the bonds shall be a "Power-of-Attorney" authorizing the attorney-in-fact to bind the Surety Company and certified to include the dates of the bonds.

B-15 BOUND COPY OF CONTRACT DOCUMENTS

Bound contract documents are no longer required.

B-16 EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS

Each bidder agrees to comply with the terms of Title 5, Chapter 1, Section 111, of the Tulsa Revised Ordinances relating to Non-Discrimination.

B-17 BASIS FOR AWARD OF CONTRACT

The basis for award of a contract shall be the total base bid submitted by the lowest responsible bidder unless otherwise directed in the form of proposal. The City of Tulsa reserves the right to withhold the awarding of a contract for a reasonable period of time from the date of opening of bids. The awarding of a contract upon a successful bid shall give the bidder no right or action or claim against the City of Tulsa upon such contract until the same shall have been reduced to writing and duly signed by the contracting parties. The award of a contract will not be completed until the contract is duly executed and the necessary bonds and insurance approved.

B-18 TIME FOR AWARDING OF CONTRACT

The awarding of a contract to the lowest responsible bidder will be made within thirty (30) days after the opening of bids unless the City of Tulsa by formal recorded action and for good cause shown, provides for a reasonable extension to that period, which extension period shall not in any event exceed fifteen (15) days where only state or local funds are involved, or not to exceed ninety (90) days on any award of contract for the construction of public improvements where funds are utilized which are furnished by an agency of the federal government.

B-19 SAFETY AND HEALTH REGULATIONS

Bidders should note that they are subject to "Safety and Health Regulations for Construction", Chapter XVII of Title 29, CFR, Part 1926 and that compliance, review and enforcement are the responsibility of the U.S. Department of Labor.

The Contractor is fully responsible for the safety of the work site and is expected to train their employees in all applicable safety issues. This should include but not be limited to: trench safety, confined space entry, head protection, etc. In accordance with construction contracts with the City, Authority, Board, or Commission, all applicable Labor and OSHA safety regulations must be followed.

Work sites must be monitored by the Contractor and safety provisions enforced. Contractors are asked to ensure that all employees are properly informed and trained in construction, work site safety.

B-20 VENDORS AND SUBCONTRACTOR IDENTIFICATION

Where Vendor and Subcontractor Identification Questionnaires are included in the bid documents, each bidder shall submit the Questionnaire directly to the Engineer no later than 5:00 p.m. on the first working day following the bid opening. Failure to submit the questionnaire may render the bid unresponsive and not eligible for award. The award of the Contract will be subject to the acceptability of the vendors and subcontractors listed. If an award is made, the

vendors and subcontractors listed on the questionnaire shall be used on the project. No changes in the vendor and subcontractor list will be permitted unless prior consent is obtained from the Engineer.

B-21 U.S. ENVIRONMENTAL PROTECTION AGENCY NPDES REQUIREMENTS FOR STORMWATER DISCHARGES

The bidder's attention is directed to U.S. Environmental Protection Agency (EPA) NPDES requirements for stormwater discharges. The Contractor shall be responsible for filing a Notice of Intent and development and implementation of a Stormwater Pollution Prevention Plan (PPP).

B-22 AMERICANS WITH DISABILITIES ACT

The Contractor shall take the necessary actions to ensure its facilities are in compliance with the requirements of the Americans with Disabilities Act (ADA). It is understood that the program of the Contractor is not a program or activity of the City of Tulsa. The Contractor agrees that its program or activity will comply with the requirements of the ADA. Any costs of such compliance will be the responsibility of the Contractor. Under no circumstances will the Contractor conduct any activity, which it deems non-compliant with the ADA.

RESOLUTION NO. 18145

A RESOLUTION REQUIRING THE INCLUSION IN PLANS AND SPECIFICATIONS FOR PUBLIC IMPROVEMENT CONTRACTS OF PROVISIONS PROVIDING FOR THE EMPLOYMENT OF BONA FIDE RESIDENTS OF THE CITY OF TULSA; AND/OR THE MSA; ALSO PROVIDING THAT AT LEAST OF FIFTY PERCENT (50%) OF EACH CLASS OF EMPLOYEES USED ON A PROJECT BE BONA FIDE RESIDENTS OF THE CITY OF TULSA AND/OR THE MSA; THAT THE DIRECTOR OF THE DEPARTMENT OF HUMAN RIGHTS IS CHARGED WITH ENSURING THAT ALL BIDS FOR PUBLIC CONSTRUCTION CONTRACTS COMPLY WITH THIS RESOLUTION; AND DECLARING AN EMERGENCY.

WHEREAS, City of Tulsa, Oklahoma, desires to achieve a goal of full employment.

WHEREAS, it is necessary for the protection of the health, safety and welfare of all residents of the City of Tulsa, Oklahoma, to accomplish this goal.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE CITY OF TULSA, OKLAHOMA:

SECTION 1. The City of Tulsa is committed to the policy of achieving full employment of its citizens by encouraging the employment of bona fide Tulsa and MSA residents in public improvement contracts.

SECTION 2. Definitions. The definitions of certain terms used in this resolution are as follows:

a. "Bidding Documents" or "Bid" means the bid notice, plans and specifications, bidding form, bidding instructions, special provisions and all other written instruments prepared by or on behalf of an awarding public agency for use by prospective bidders on a public construction contract.

b. (i) "Bona Fide Residents" shall include only those persons who are either registered to vote in the City of Tulsa or who have resided within the city limits for at least six months, or who have purchased a permanent residence within the city limits or who have leased a residence for at least a six month term. Residency may be further determined by a valid Oklahoma driver's license, a current Oklahoma license tag, and a valid Oklahoma automobile inspection sticker. (ii) Bona fide residents of MSA shall include only those persons who are registered to vote in outlying MSA areas or who have resided within the outlying MSA area for at least six months, or who have purchased a permanent residence within the outlying MSA areas or who have leased a residence for at least a six month term. Residency may be further determined by a valid Oklahoma driver's license, a current Oklahoma license tag, and a valid Oklahoma automobile inspection sticker.

c. "Public Construction Contract" or "Contract" means any contract exceeding Seven Thousand Five Hundred Dollars (\$7,500.00) in amount, awarded by the City of Tulsa for the purpose of making any public improvements or constructing any public building or making repairs to the same.

d. "Public Improvement" means any beneficial or valuable change or addition, betterment, enhancement or amelioration of or upon any real property, or interest therein, belonging to the City of Tulsa, intended to enhance its value, beauty or utility or to adapt it to new or further purposes. The term does not include the direct purchase of materials, equipment or supplies by the City of Tulsa.

CITY OF TULSA
FILED

AUG 23 1988

Office Of City Auditor

e. "MSA". All of the land areas composed of Creek County, Osage County, Rogers County, Tulsa County and Wagoner County.

SECTION 3. Residency Requirements of Contractor's Employees. Every employee and/or agent of the City of Tulsa, Oklahoma, charged or involved with the preparation of plans and specifications for any public impvement funded in whole or in part with funds of the City of Tulsa, is hereby charged to include in said plans and specifications the following provisions which shall be binding upon the successful bidders:

- a. Each bid shall be accompanied by a sworn statement that the bidder is committed to the goal of employing at least 50% bona fide residents of the City of Tulsa and/or the MSA in each classification as determined by the Oklahoma Commissioner of Labor.
- b. The successful bidder will be responsible for having like requirements placed upon any subcontractor.
- c. The successful bidder will submit to the Director or his designated representative of the Department of Human Rights any compliance reports involving the bidder and its subcontractors required by Title 31, Chapter 1, Section 9, of the Tulsa Revised Ordinances. The reports shall include information about the residence of each employee in each laboring and trade class applicable to any City project.

SECTION 4. Unresponsive Bids. The failure to submit the documents required by Section 3 shall render a bid unresponsive. Said documents must be submitted prior to the opening of the bids. The Director of the Department of Human Rights Section of City Development is charged with ensuring that all bids comply with Section 3 prior to the bid opening date.

SECTION 5. Duty of Employees and/or Agents of the City of Tulsa. Any employee and/or agent of the City of Tulsa who fails to include the goals for residency requirements found in Section 3 in the plans and specifications for any public improvement may be subject to disciplinary action, including dismissal.

SECTION 6. Severability. The invalidity of any section, subsection, provision or clause or portion of this chapter, or the invalidity of the application thereof to any person or circumstance shall not affect the validity of the remainder of this chapter or the validity of its application to other persons or circumstances.

SECTION 7. Effect Date. This resolution shall take effect as of July 1, 1988.

SECTION 8. Emergency Clause. That an emergency exists for the preservation of the public peace, health and safety, by reason whereof this resolution shall take effect immediately upon its passage, approval and publication.

PASSED, with the emergency clause ruled upon separately and approved this 23rd day of August, 1988.

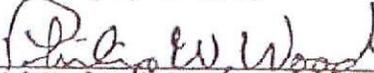
APPROVED, this 23rd day of August, 1988.

Rodger Randle



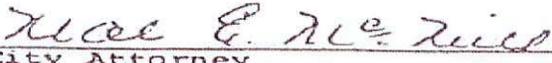
Mayor

ATTEST: Philip W. Wood



City Auditor

APPROVED: Neal E. McNeil



City Attorney

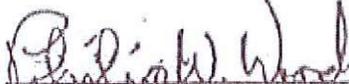
PASSED, with the emergency clause ruled upon separately and approved this 23 day of August, 1988.

- APPROVED, this 23 day of August, 1988.



Mayor

ATTEST:



City Auditor

APPROVED:



City Attorney

CITY OF TULSA
FILED
AUG 23 1988
A.M. _____ P.M. _____
Office of City Auditor
By _____

**CITY OF TULSA, OKLAHOMA
SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS
BID OPENING AND AWARD SYSTEM**

NOTICE FOR PROJECTS ADVERTISED (effective date 11.03.25)

The “RECIPROCITY” provisions within the City of Tulsa Small Business Enterprise (SBE) Instructions for Oklahoma Department of Transportation (ODOT) DBE firms are suspended until further notice due to changes in federal regulations issued by the USDOT.

Utilization of firms in the ODOT DBE program cannot be counted towards City of Tulsa SBE utilization goals for projects.

ODOT has been issued updated guidance by the USDOT to reassess their DBE programs effective 11.03.25. ODOT’s DBE program is suspended until final rules are established.

CITY OF TULSA, OKLAHOMA

SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS

BID OPENING AND AWARD SYSTEM

05.27.25

POLICY STATEMENT

The City of Tulsa (hereinafter City) is committed to implementing the City of Tulsa Small Business Enterprise (SBE) Program of the City of Tulsa, hereinafter referred to as SBE Program. The stated objectives of the programs are:

- To ensure the employment of SBE(s) in the award and administration of City agreements and contracts;
- To create a level playing field on which SBE firms can compete fairly for City contracts;
- To ensure that only firms that fully meet the eligibility standards are permitted to participate as SBE participants;
- To help remove barriers to participation in City contracts;
- To assist in the development of SBE firms so that they may graduate from the SBE Program and ultimately compete successfully in the marketplace.

GOALS BY BUSINESS CATEGORY – SBE

There are seven (7) Business Categories for the City of Tulsa: Construction Contractors (Prime and Subcontractor), Architecture / Engineering (Consultant and Subconsultant), Professional Services, Other Services, and Goods and Supplies. A general description of each category follows:

Construction

- General building contractors engaged primarily in the construction of commercial buildings.
- Heavy construction such as airport runways, bridges, plants, grading and drainage, roadways, and other municipal infrastructure.
- Light maintenance construction services such as carpentry work; electrical work; installation of carpeting; air-conditioning repair, maintenance, and installation; plumbing; and renovation.
- Other related services such as water and sewer lines and maintenance, asbestos abatement, drainage, dredging, grading, hauling, landscaping (for large construction projects such as boulevards and highways), paving, roofing, and toxic waste clean-up.

Architecture and Engineering

- Licensed Architect
- Landscape Architect
- Professional Engineer
- Professional Land Surveyor
- Construction observation
- Other professional design / construction related services

**CITY OF TULSA, OKLAHOMA
SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS
BID OPENING AND AWARD SYSTEM**

Professional Services

- Financial Services
- Legal services
- Medical services
- Educational services
- Real Estate services
- Planning services.
- Other professional services

Other Services

- Janitorial and maintenance services
- Uniformed guard services
- Computer services
- Certain job shop services
- Graphics, photographic services
- Landscaping
- Other non-technical professional services

Good and Supplies

- Office goods
- Medical supplies
- Miscellaneous building materials
- Computers

The goals are to reflect resource availability and capability. The City of Tulsa's goal is to mitigate and close the disparity between the availability/capability versus actual utilization of SBE firms in Creek, Okmulgee, Osage, Pawnee, Rogers, Tulsa, and Wagoner counties in Oklahoma.

The City enters various agreements and contracts with the private sector for services, goods and supplies, and construction activities. The agreements or contracts may have a specific or primary deliverable associated with one of the Business Categories. However, supplementary efforts may exist to fulfill the agreement or contract. Therefore, the table below is provided to show goals for all Business Categories. Good faith efforts shall first be focused on the Business Category or Categories that relate directly to the deliverables. Additional good faith efforts shall be in supplementary efforts from other categories to assist in meeting the overall project goal.

The project goals will be monitored and periodically adjusted to address the disparity between the available / capable / willing SBE firms versus actual utilization of SBE firms. The **overall project goal is 10%**.

SBE firms identified for utilization in an agreement or contract must be paid from the proceeds from that agreement or contract.

**CITY OF TULSA, OKLAHOMA
SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS
BID OPENING AND AWARD SYSTEM**

<i>Business Category</i>	<i>SBE Goal (%)</i>
Construction (Prime Contractors)	10
Construction (Subcontractors)	10
Architecture / Engineering (Consultant)	10
Architecture / Engineering (Subconsultant)	10
Professional Services	10
Other Services	10
Goods and Supplies	10

BIDDER'S ACTIONS

For:

- A. **GENERAL / PRIME CONTRACTOR Contract:** When the City has established SBE contract goals (hereinafter referred to as "goals"), the City will award a contract only to a bidder who makes good faith efforts to meet the goals.
- B. **GENERAL / PRIME CONTRACTOR Contract:** When the City has established SBE contract goals (hereinafter referred to as "goals"), a Bidder who is an SBE by membership or reciprocity will be deemed as meeting the utilization goals for the project. Full value of the project bid will be credited as SBE utilization. However, the Bidder who is an SBE is not required to solicit other SBE firms but is encouraged to do so.
- C. **CONSTRUCTION MANAGEMENT AT-RISK (CMAR) Contract:** When the City has established SBE contract goals (hereinafter referred to as "goals"), the City will recommend award to the Construction Management (CM) firm the bidder who makes good faith efforts to meet the goals. However, Bidder(s) who are SBE(s) are not required to solicit other SBE firms but are encouraged to do so.

The following summary outlines the procedures

Summary:

- 1. **RECORD OF SOLICITATION FOR SBE form:**
These forms **MUST** be submitted with the bid documents. These documents establish the initial good faith, outreach efforts. In the event the bidder submitted the lowest bid, the SBE firms identified on these forms submitted with the bid are the only SBE firms that will be considered for establishing the bidder's projected utilization percentages for consideration of the award of bid.
- 2. **LETTER OF INTENT TO CONTRACT WITH SBE form:**
The bidder that submits the apparent lowest bid will be notified by City staff no later than the Monday following bid opening. The apparent low bidder **MUST** submit these forms and the

CITY OF TULSA, OKLAHOMA SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS BID OPENING AND AWARD SYSTEM

associated attachments by close of business on Thursday following bid opening. Only SBE firms documented on the RECORD(s) OF SOLICITATION FOR SBE forms submitted with the bid will be considered for establishing the bidder's projected utilization percentages for consideration of the award of bid. If Letters of Intent are not submitted, the projected utilization will be 0% and the apparent lowest bidder is subject to being deemed non-responsive.

3. ADMINISTRATIVE RECONSIDERATION:

If the City determines that a bidder failed to meet the requirements above, City staff will contact the bidder by phone to define the issue and clarify any miscommunications and/or inadvertent actions. If issue was not due to miscommunication and/or inadvertent actions, the bidder will be notified per the Administrative Reconsideration process defined below. If the apparent low bidder is deemed non-responsive, City staff will notify the next lowest bidder to submit their LETTERS OF INTENT TO CONTRACT WITH SBE by close of business of the 6th day following notification or may exercise its right to reject any and all bids.

4. CITY OF TULSA SBE UTILIZATION form:

This form is completed by the contractor (successful bidder) and submitted as part of the contract to perform the project. This form documents the "projected" utilization for the project. At the end of the project, this form is submitted with the final pay request documenting the "actual" utilization. The "actual" utilization must meet or exceed the "projected" utilization. Any change in the "projected" utilization must be documented, submitted to the City on the CHANGE REQUEST FOR SBE PARTICIPATION form, and approved by the City. Approval of the change must occur at the time of the change. If the change is a reduction and not submitted and approved per the instructions, the amount will be deducted from the contractor's final pay request.

5. CHANGE REQUEST FOR SBE PARTICIPATION form:

This form documents any change to the "projected" utilization for the project. Change in utilization includes reduction, substitution, and/or increase. Utilization shall be checked with the submission of partial pay requests, but not longer than 30 day intervals throughout the project. The contractor's acknowledgement that they have verified changes in his/her utilization is required as part of partial pay request documents. Reductions in utilization not approved prior to the final pay request will result in pay reduction to the contractor. If, at the completion of the project, the contractor has failed to meet the SBE contract goals, does not have an approved change request, and has not demonstrated good faith efforts to meet the contract goal, the contractor will be assessed liquidated damages for the difference between the contract goal and the actual SBE participation achieved.

Record of Solicitation

All bidders shall, ***with the submissions of their bids***, show their RECORD(s) OF SOLICITATION FOR SBE that demonstrates the good faith outreach effort to meet or exceed the SBE goals established for the project.

If bidders cannot meet the established SBE goals, the bidders shall document and submit with their bid proposal, justification stating why they could not meet the established SBE goals. To demonstrate

CITY OF TULSA, OKLAHOMA

SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS BID OPENING AND AWARD SYSTEM

good faith efforts to meet the SBE goals, the bidders shall document their efforts to obtain SBE participation. City will review and determine that the information is complete, accurate and adequately documents the bidder's good faith efforts before committing to the award of the contract to the bidder. In the event that the City awards a contract to a bidder who cannot meet the established SBE goals, the findings of the City's review shall be in written form and shall be incorporated into and become part of the contract documents.

If the bidder to whom City proposes to award the contract is able to demonstrate good faith efforts, City may accept the bidder's proposed goal. Acceptance by the City of the bidder's proposed goal does not release the bidder from its contractual obligation to continue to make efforts throughout the duration of the project to utilize SBE firms on the project.

All bidders shall submit with their bid the completed and signed RECORD OF SOLICITATION FOR SBE form.

Letter of Intent

The bidder must submit to the Engineering Contract Coordinator written confirmation from the SBE firms on the form LETTER OF INTENT TO CONTRACT WITH SBE that it is participating in the contract as provided in the contractor's bid commitment. This may be submitted with the bid, but not later than the City's close of business of the Thursday following the bid opening. The signed forms will define the contractor's final proposed utilization and will be the basis of a final evaluation. If inadequate utilization is proposed, the bid shall be considered non-responsive.

The SBE firms submitted on the LETTER OF INTENT TO CONTRACT WITH SBE forms shall be considered binding and changes of committed SBE firms may only be made after the contract is fully executed, and may only be changed through the submission, review and approval of form CHANGE REQUEST FOR SBE PARTICIPATION.

Failure to make the written assurance (City form LETTER OF INTENT TO CONTRACT WITH SBE), which includes the names of the SBE firms to be used, the work they will perform, and the price for the work, or failure to demonstrate good faith efforts that is deemed acceptable to the City to meet or exceed the SBE goals, shall render a bid non-responsive.

It is the contractor's responsibility to submit the information necessary for the City to ascertain compliance with the good faith efforts requirement. Extra cost involved in finding and utilizing SBE firms shall not be deemed adequate reason for the bidder's failure to meet the project SBE goals unless such costs are grossly excessive.

In instances where a successful bidder's SBE commitment exceeds the actual SBE contract goals, the submitted goals of the bidder become the contractual obligation.

In instances where a successful bidder's SBE commitment is below the SBE contract goals, the submitted utilization goals become the contractual obligation.

**CITY OF TULSA, OKLAHOMA
SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS
BID OPENING AND AWARD SYSTEM**

Good Faith Efforts

The steps taken by the bidder to obtain SBE participation shall be documented in writing and shall include, but are not limited to, the following good faith efforts:

- A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) in the interest of all certified SBE firms capable to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the SBE firms to respond to the solicitation. The bidder must determine with certainty if the SBE firms are interested by taking appropriate steps to follow-up on the initial solicitation.
- B. Selecting portions of the work to be performed by SBE firms in order to increase the likelihood that the SBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate SBE participation, even when the contractor might otherwise prefer to perform these work items with its own forces.
- C. Providing interested SBE firms with adequate information about the plans, specifications and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- D. Negotiating in good faith with interested SBE firms:
 - (1) It is the bidder's responsibility to make a portion of the work available to SBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available SBE subcontractors and suppliers, to facilitate SBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of SBE firms that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for SBE firms to perform the work. RECORD OF SOLICITATION FOR SBE form will be submitted.
 - (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including available SBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using SBE firms is not sufficient justification for a bidder's failure to meet the contract SBE goals, as long as such costs are reasonable. Also, the ability or desire of a contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Contractors are not, however, required to accept higher quotes from SBE firms to fulfill the SBE contract requirements if the price difference is excessive or unreasonable. Documentation of quotes shall be submitted to the City with the bid as part of the bidder's record of solicitation.
- E. Thoroughly analyzing the capabilities of SBE firms before determining a firm's qualification for a project. The following shall not be legitimate causes for the rejection or non-solicitation of SBE quotes in the efforts of the contractor to meet the project goal: (1) the subcontractor's standing, unrelated to

**CITY OF TULSA, OKLAHOMA
SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS
BID OPENING AND AWARD SYSTEM**

job performance, within the industry; (2) membership in specific groups or organizations; or, (3) association with certain political and/or social organizations.

Administrative Reconsideration

If City determines that a bidder fails to meet the requirements stated above, the bidder will be provided an opportunity for administrative reconsideration. City staff will contact the bidder by phone to define the issue and clarify any miscommunications or inadvertent actions. If issue was not due to miscommunication and/or inadvertent actions, the following process will be followed:

1. The bidder will be notified by fax/email within ten working days following the bid opening.
2. The bidder will have 2 working days from time of notification to schedule a meeting for the purpose of administrative reconsideration with a City of Tulsa Attorney. Reconsideration meetings will generally be held within 7 days of notification of a bidder being determined non-responsive.

As part of this administrative reconsideration, the bidder will have the opportunity to meet in person with a City of Tulsa Attorney to present arguments concerning whether it met the goal or made adequate good faith efforts to do so. Submittal of additional information documenting solicitation, which was due with the original bid submission, will not be accepted or considered.

3. The decision on reconsideration will be made by a City of Tulsa Attorney who did not take part in the original determination that the bidder failed to meet the goal or make adequate good faith efforts to do so.
4. No awards will be made until all administrative reconsiderations as outlined herein are complete. A City of Tulsa Attorney will provide a written decision on reconsideration to the bidder. This decision will explain the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. The determination is copied to the Contract Administrator, City Engineer, and the Director of Human Rights.

CONTRACTOR ACTIONS AFTER AWARD OF THE CONTRACT:

Counting SBE Participation Toward the Goal

When an SBE participates in a contract, only the value of the work actually performed by the SBE is counted toward the contract goal.

The entire amount of that portion of a contract that is performed by the SBE firm's own forces is counted, including the cost of supplies and materials obtained by the SBE for the work on the contract, including supplies purchased or equipment leased by the SBE (except supplies and equipment the SBE purchases or leases from their Prime Contractor).

CITY OF TULSA, OKLAHOMA SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS BID OPENING AND AWARD SYSTEM

When an SBE performs as a participant in a joint venture, the portion of the total dollar value of the contract is equal to the clearly defined portion of the work that the SBE performs with its own forces may be counted toward the goal.

Only expenditures to an SBE contractor who performs a commercially useful function may be counted toward an SBE goal.

Commercially Useful Function

An SBE performs a commercially useful function when it is responsible for the execution of the work of its contract and is carrying out its responsibilities by actually performing, managing and supervising the work involved. The SBE must be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself.

To determine whether an SBE is performing a commercially useful function, City will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid is commensurate with the work it is actually performing and the SBE credit claimed, and other relevant factors.

An SBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction through which funds are passed in order to obtain the appearance of SBE participation. In determining whether an SBE is acting as a pass-through, City will examine similar transactions, particularly those in which SBE firms do not participate.

Manufacturers and Material Suppliers

If the materials or supplies are obtained from a certified SBE manufacturer, 100 percent of the cost of the materials or supplies will be counted toward the SBE goals. A manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials required under the contract as described by the specifications.

If the materials or supplies are purchased from a certified SBE regular dealer, 100 percent of the cost of the materials or supplies will be counted toward the SBE goals. A regular dealer is a firm that owns, operates or maintains a store, warehouse, or other establishment in which the materials, supplies, articles, or equipment described by the specification and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

To be a regular dealer, the firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating or maintaining a place of business as provided for in the above paragraph if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad-hoc or contract-by-contract basis.

CITY OF TULSA, OKLAHOMA SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS BID OPENING AND AWARD SYSTEM

In order for a firm to qualify as an SBE supplier of metal and/or concrete pipe, the firm must also fabricate the pipe. Metal or concrete pipe is specialty pipe which is project specific and is inspected during the manufacturing process. This arrangement provides for no warehousing of metal or concrete pipe and essentially requires the manufacturer to be the supplier. Merely ordering pipe from the fabricator and in turn selling it to contractors is not consistent with normal industry practice. Contractors normally purchase pipe directly from the manufacturer, thus eliminating the middleman. Supplying metal or concrete pipe is viewed as brokering and is considered inconsistent with SBE program requirements.

Change Request for SBE Participation

Substitution or replacement of an SBE firm will only be permitted or allowed after award and execution of the City contract.

A contractor may not terminate for convenience an SBE listed in their contract (or an approved substitute SBE firm) and then perform the work of the terminated subcontract with its own forces or those of an affiliate, without City's prior written consent.

When an SBE is terminated or fails to complete the work of the contract for any reason, the contractor must make good faith efforts to find another SBE to substitute for the original SBE. These good faith efforts shall be directed at finding another SBE to perform at least the same amount of work (not necessarily the same work) under the contract as the SBE that was terminated, to the extent needed to meet the SBE goals established in the contract.

When the contractor obtains a substitute SBE, the contractor shall provide the Engineering Contract Coordinator with copies of the CHANGE REQUEST FOR SBE PARTICIPATION form and supporting documentation.

If the contractor is unable to replace the SBE with another SBE, then the contractor must provide City with evidence in writing that they have made a good faith effort. The contractor must submit to the Engineering Contract Coordinator a CHANGE REQUEST FOR SBE PARTICIPATION form along with documentation to support they have made a good faith effort. City may adjust the goal as appropriate.

In the case where a contractor cannot meet the SBE goals of a contract, he or she should request a change of that portion of the SBE goal, which cannot be met. The request will be subject to the following:

- A written request for change will be initiated by the contractor at the time he or she reasonably knows that despite good faith efforts the contract goal cannot be achieved. The request will be included on the CHANGE REQUEST FOR SBE PARTICIPATION form and will contain written documentation of all good faith efforts made to meet the goal as well as the reason for the change.

CITY OF TULSA, OKLAHOMA SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS BID OPENING AND AWARD SYSTEM

- The request for change, CHANGE REQUEST FOR SBE PARTICIPATION form, will be submitted for review to the Engineering Contract Coordinator. The City will make the decision on the approval or denial of the change request and inform the contractor.
- If, at the completion of the project, the contractor has failed to meet the SBE contract goals, does not have an approved change request, and has not demonstrated good faith efforts to meet the contract goal, the contractor will be assessed liquidated damages for the difference between the contract goal and the actual SBE participation achieved. The City shall deduct the liquidated damages from the final payment. In the event insufficient earnings remain for the reduction of liquidated damages, the City may claim against the contractor's bond, suspend the contractor under performance suspension, withhold further proposals, suspend prequalification and/or other remedies available under the law.
- In those instances when the goal is not met due to a change in quantity, which occurs through no fault of the contractor, but due to City and/or changed site conditions, a change request will be recommended by Field Engineering at the time the change becomes known, but not later than the next progressive payment application from the contractor which covers the work identified for the SBE firm. The change request will include the statement of quantity change(s). The contractor shall endeavor, with good faith efforts, to mitigate underruns by utilizing other SBE firms.

Change in utilization includes reduction, substitution, and/or increase. Utilization shall be checked with the submission of each partial pay request, but not longer than 30 day intervals throughout the project. The contractor's acknowledgement that they have verified changes in his/her utilization is required as part of partial pay request documents. Reductions in utilization not approved prior to the final pay request, will result in pay reduction to the contractor.

If a contractor fails to comply with this section, appropriate administrative remedies may be taken including, but not limited to:

- No additional progressive payments may be processed
- Refusal to issue proposals
- Liquidated damages
- Suspension of work on the project
- Suspension of prequalification
- Termination of the contract

Prompt Payments

To ensure that contractors' obligations under City contracts are met, the contractor shall endeavor to pay all subcontractors for satisfactory performance of their contracts no later than fifteen (15) calendar days after receipt of each progressive payment from City. The contractor must further endeavor to make prompt release of retainage held to the SBE within thirty days after the work is satisfactorily completed, whether the contractor's work is complete or not. The term "satisfactorily completed" is defined as when; 1) City finds the work completed in accordance with the Plans and Specifications; 2)

CITY OF TULSA, OKLAHOMA SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS BID OPENING AND AWARD SYSTEM

any required paperwork, including material certification, payrolls, etc., have been received and approved by City; 3) Field Engineering has determined the final quantities on the subcontractor's portion of the work; and 4) Contractor has received progressive payments from City which includes subcontractors' work.

In an effort to accelerate payments to subcontractors, the City may pay the Contractor for acceptable material stockpiled or delivered to the project, at other approved or designated locations, or at a plant site required for Contractor's operations as approved by the City. This is governed by Oklahoma Department of Transportation Standard Specifications for Highway Construction 2009 or latest edition.

Contractor shall endeavor to include invoices from SBE for materials on hand, partially completed work, or complete work on the earliest partial payment request submitted to the City. It is incumbent on the SBE to submit invoices to the Contractor in a timely manner.

Failure to comply with the prompt payment and return of retainage provisions of the contract may result in sanctions under the contract, as listed below:

- Refusal to issue proposals
- Liquidated damages
- Suspension of work on the project
- No additional progressive payments may be processed
- Suspension of prequalification

Any delay or postponement of payment among the parties may take place only for good cause, with City written approval. The explanation from the contractor must be made in writing to the City.

Record Keeping Requirements

The contractor shall keep such records as are necessary to determine compliance with the SBE contract obligations. The records kept by the contractor will indicate:

1. The name(s) of SBE firms or other subcontractors, the type of work being performed, and payment for work, services and business.
2. Documentation of correspondence, verbal contracts, telephone calls, etc., to obtain services of SBE firms on the project.

Upon request, the contractor shall submit all subcontracts, purchase orders, contracts, agreements, and financial transactions, including canceled checks, executed with SBE firms with the reference to records referred to in this provision, in such form, manner, content prescribed by City.

The contractor should list all SBE firms in the contract and summarize total amounts paid to SBE firms and the project goal amount for each SBE firm.

**CITY OF TULSA, OKLAHOMA
SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS
BID OPENING AND AWARD SYSTEM**

Reciprocity

~~The City will grant reciprocity of membership in the SBE program to certified Oklahoma Department of Transportation Disadvantaged Business Enterprises which are located in the Tulsa Metropolitan Statistical Area.~~

(Must be submitted with Bid)

**CITY OF TULSA
BIDDER'S AFFIDAVIT FOR
SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION GOALS**

STATE OF)
) ss:
COUNTY OF)

_____, of lawful age, being first duly sworn, says that s(he) is the agent authorized by the bidder to submit the attached bid. Affiant further states that the bidder agrees to fully comply with the City of Tulsa's Resolution requiring that a good faith effort be made to utilize small business enterprises as subcontractors.

Affiant further states that s(he) will document on pages SBE-2BID, -3BID, -4BID, and -5BID for public record, his/her good faith efforts in solicitation.

Affiant further states that s(he) is responsible for having like requirements placed upon any subcontractor of said bidder.

Affiant further states that s(he) has read and agrees to the current CITY OF TULSA, OKLAHOMA SMALL BUSINESS ENTERPRISE (SBE) UTILIZATION INSTRUCTIONS FOR BID OPENING AND AWARD SYSTEMS.

BIDDER (Company Name)

SIGNED

TITLE

SUBSCRIBED and SWORN to before me this _____ day of _____, 20_____.

NOTARY PUBLIC

MY COMMISSION EXPIRES:

SBE-1BID



LETTER OF INTENT
TO CONTRACT WITH SMALL BUSINESS ENTERPRISE (SBE)
(Must be submitted by close of business on Thursday following bid opening)

Public Works Department, Attn: Contracts Coordinator
CITY OF TULSA
2317 South Jackson, N-103
Tulsa, Oklahoma 74107
Ph.: 918.596.9637
Fax: 918.596.1299

Project Name: _____
Project Number: _____
Submittal Date: _____

Prime Contractor

HEREBY, intends to subcontract items of work generally described as

to:

SMALL BUSINESS ENTERPRISE

Total amount of participation by City of Tulsa SBE: \$ _____
(City of Tulsa SBE, quote must be attached)

City of Tulsa SBE: Yes No

City of Tulsa SBE Certificate Number: _____

Other SBE Certificate Number(s): _____

SMALL BUSINESS ENTERPRISE

PRIME CONTRACTOR

Signature: _____

Signature: _____

Title: _____

Title: _____

Date: _____

Date: _____

Signatures of Authorized representatives of the Prime Contractor and the City of Tulsa SBE firm above represent the written commitment by the Prime Contractor to subcontract with the City of Tulsa SBE firm and a written commitment by the City of Tulsa SBE firm to subcontract for work as described in the attached quote.

This form, along with the City of Tulsa SBE firm's quote must be submitted to the City with the executed Contract documents. If this form is not received, the proposed utilization will NOT be counted as part of the Prime Contractor's agreement. This may cause the agreement to be considered non-compliant and be rejected by the City of Tulsa.

SBE – 3BID



CHANGE REQUEST
FOR SMALL BUSINESS ENTERPRISE (SBE) PARTICIPATION

Project Name: _____

Project Number: _____

Prime Contractor: _____

CHANGE: From / To (fill in both sides)
FROM:

OR

ADD: To (fill in this side only)
TO:

Name: _____

Name: _____

City of Tulsa SBE: Yes No

City of Tulsa SBE: Yes No

City of Tulsa SBE Certificate Number: _____

City of Tulsa SBE Certificate Number: _____

Other SBE Certificate Number(s): _____

Other SBE Certificate Number(s): _____

Change in service to be performed: _____

Change in amount of participation by City of Tulsa SBE: \$ _____

Reason for Change: _____

NOTE: Attach a copy of the Letter of Intent for the original City of Tulsa SBE and a new Letter of Intent for the proposed City of Tulsa SBE.

PRIME CONTRACTOR

SBE SUBCONTRACTOR

Signature: _____

Signature: _____

Date: _____

Date: _____

Title: _____

Title: _____

Approved / Disapproved: _____ Date: _____

Public Works Design Engineering Manager
(Planning, Design, or Field)

Approved / Disapproved: _____ Date: _____

Public Works Contracts Coordinator

Distribution: Tulsa Authority for Economic Opportunity
Public Works Design/Public Works Department (Planning, Design, or Field)

(Must be submitted at time of Bid)
CITY OF TULSA
RESOLUTION NO. 7404
AFFIDAVIT OF COMPLIANCE

_____, of lawful age, being first duly sworn, states that s(he) is the authorized agent of the Company set forth below.

Affiant further states that the Company, in compliance with City of Tulsa Resolution No. 7404, shall not hire or knowingly allow any of its subcontractors or lower tier subcontractors to hire anyone who is not a United States citizen or legal immigrant or anyone who does not have legal status as a temporary worker to perform work on any project which is the subject of a contract between the Company and the City of Tulsa.

Affiant further states that the Company shall not fail to comply with and shall not knowingly allow any of its subcontractors or lower tier subcontractors to fail to comply with all applicable laws including, but not limited to, labor, employment and taxation laws, in the performance of any work on any project which is the subject of a contract between the Company and the City of Tulsa.

Affiant further states that the Company shall make available to the City of Tulsa, at the City's request, sufficient information and/or affirmations to allow the City to confirm Company's compliance with Resolution No. 7404 relating to the performance of any contract between the Company and the City of Tulsa.

Company: _____

Signed: _____

Title

SUBSCRIBED and SWORN to before me, this ____ day of _____, 20__.

NOTARY PUBLIC

MY COMMISSION EXPIRES:

COMMISSION NO.:

Resolution No. 7404
RAC-1

(Must be submitted at time of bid)
NON-COLLUSION AFFIDAVIT

STATE OF _____)
) ss:
COUNTY OF _____)

_____, of lawful age, being first duly sworn, says that:

1. I am the duly authorized agent of the bidder submitting the competitive bid associated with this sworn statement for the purpose of certifying facts pertaining to the existence of collusion among bidders and between bidders and municipal officers or employees, as well as facts pertaining to the giving or offering of things of value to governmental personnel in return for special consideration in the letting of any contract pursuant to the bid;
2. I am fully aware of the facts and circumstances surrounding the making of the bid and have been personally and directly involved in the proceedings leading to the submission of such bid;
3. Neither the bidder nor anyone subject to the bidder's direction or control has been a party:
 - a. to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding;
 - b. to any collusion with any municipal official or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract; nor
 - c. in any discussions between bidders and any municipal official concerning exchange of money or other things of value for special consideration in the letting of a contract.
4. If awarded the contract, neither the bidder nor anyone subject to the bidder's direction or control has paid, given or donated or agreed to pay, give or donate to any officer or employee of the City of Tulsa or of any public trust where the City of Tulsa is a beneficiary, any money or other thing of value, either directly or indirectly, in procuring the contract for which the bid is submitted.

BIDDER (Company Name)

Signed

Title

SUBSCRIBED and SWORN to before me this _____ day of _____, 20__.

NOTARY PUBLIC

MY COMMISSION EXPIRES:
_____ , _____

COMMISSION NO.: _____

(Must be submitted at time of bid)
BUSINESS RELATIONSHIP AFFIDAVIT

STATE OF)
) ss:
COUNTY OF)

_____, of lawful age, being first duly sworn, says that s(he) is the agent authorized by the bidder to submit the attached bid. Affiant further states that the nature of any partnership, joint venture or other business relationship presently in effect or which existed within one (1) year prior to the date of this statement with the architect, engineer, or other party to the project is as follows:

Affiant further states that any such business relationship presently in effect or which existed within one (1) year prior to the date of this statement between any officer or director of the bidding company and any officer or director of the architectural or engineering firm or other party to the project is as follows:

Affiant further states that the names of all persons having any such business relationships and the positions they hold with their respective companies or firms are as follows:

(If none of the business relationships herein above mentioned exist, affiant should so state.)

Signed: _____

BIDDER (Company Name)

Title:

SUBSCRIBED and SWORN to before me this _____ day of _____, 20__.

NOTARY PUBLIC

MY COMMISSION EXPIRES:

_____, _____
COMMISSION NO.:

ELECTRONIC BID PROPOSAL INSTRUCTIONS - EXCEL SPREADSHEET
Fred Johnson Park Rehabilitation
PROJECT NO.SP 21-6

Please read the following instructions carefully.

1. After opening this file re-save it as your company's name.
2. Open the BID FORM Sheet from the tabs below.
3. Input the unit price of the appropriate pay item in the cells highlighted in blue.
4. Review all data input and check calculations to ensure accuracy of Bid.
5. Print 1hardcopy of the "PROPOSAL" tab, BID FORM and the "SIGNATURE PAGE" tab.
6. Complete and sign the "Signature Page" document.
7. Submit hardcopy and electronic disk with Contract Documents and Specifications for Bid opening date.

NOTES:

1. The sheet named "FOR CONTRACTOR USE" shall be used by the contractor to export data to estimating software.

LEGEND

- | | | |
|----|------|-----------------------------|
| \$ | 1.00 | Cells Requiring Data Input. |
| \$ | 1.00 | Internal Data Transfer. |
| \$ | 2.00 | Calculated Results. |

AGREEMENT FOR USING ELECTRONIC BID PROPOSAL

By and Between: LandPlan Consultants, (ENGINEER) and RECIPIENT. The enclosed electronic media is provided pursuant to your request and is for your limited use in connection with your submittal of Bid Proposal for Project No. SP 21-6. In no event shall the information be used for any other purpose or be released to third parties without the written consent of the ENGINEER. In the event of a discrepancy between the hard copy and this electronic media at delivery or in the future, the hard copy shall govern. ENGINEER hereby disclaims any and all liability for the consequences from use of the electronic media and makes no warranty or guarantee of accuracy. RECIPIENT shall assume full responsibility for the uses and consequences of the electronic media. It is agreed that ENGINEER has and retains ownership of the electronic media. ENGINEER does not warrant or guarantee that the electronic data is compatible with RECIPIENT'S computer hardware or software, and ENGINEER'S responsibility for the electronic media is limited to replacement of defective media for a period of thirty (30) days after delivery to RECIPIENT. !!! By opening and using this FILE, You AGREE to these TERMS AND CONDITIONS!!!

PROPOSAL
Fred Johnson Park Rehabilitation
PROJECT NO. SP 21-6

TO: HONORABLE MAYOR
CITY OF TULSA, OKLAHOMA

THE UNDERSIGNED BIDDER, having carefully examined the drawings, specifications, and other Contract Documents of the above project presently on file in the City Clerk, City of Tulsa Oklahoma:

CERTIFIES THAT he has inspected the site of the proposed work and has full knowledge of the extent and character of the work involved, construction difficulties that may be encountered, and materials necessary for construction, class and type of excavation, and all other factors affecting or which may be affected by the specified work; and

CERTIFIES THAT he has not entered into collusion with any other bidder or prospective bidder relative to the project and/or bid: and

HEREBY PROPOSES: to enter into a contract to provide all necessary labor, materials, equipment and tools to completely construct and finish all the work required by the Contract Documents referred to therein; to complete said work within **298 calendar days** after the work order is issued; and to accept in full payment therefore the amount set forth below for all work actually performed as computed by the Engineers as set forth in the Contract.

Basis of Award

IT SHOULD BE NOTED THAT THE LOWEST RESPONSIBLE BID SHALL BE DETERMINED BY THE TOTAL BASE BID PLUS ADDITIVE ALTERNATES NO. 1, 2, 3, 4, & 5. THE ITEMS IN ADDITIVE ALTERNATES NO. 1, 2, 3, 4, & 5 MAY OR MAY NOT BE INCLUDED IN THE CONTRACT AWARD AT THE SOLE DISCRETION OF THE CITY OF TULSA. ANY PROPOSAL SUBMITTED WITH THE ADDITIVE ALTERNATES NO. 1, 2, 3, 4, & 5 INCOMPLETE SHALL BE CONSIDERED NON-RESPONSIVE.

Note: - Item numbers omitted are not a part of the Contract.

**PROPOSAL FOR
Fred Johnson Park Rehabilitation
PROJECT NO. SP 21-6**

ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY	DATA INPUT UNIT PRICE	AMOUNT
1	PLAYGROUND EQUIPMENT INSTALLATION (BY ACS)	SYSTEM	1		
2	ARTIFICIAL TURF PLAYGROUND SURFACING	SF	7605		
3	ARTIFICIAL TURF BERMS	SF	7809		
4	ARTIFICIAL TURF AT BASKETBALL/PARKING LOT PLAZA	SF	1098		
5	VORTEX INTERACTIVE FOUNTAIN	SYSTEM	1		
6	VORTEX GLOMIST POLE COOLING STATION	EA	5		
7	PORTLAND LOO	EA	1		
8	BASKETBALL COURT 65' X 109' SHELTER	EA	1		
9	LIGHTING AT BASKETBALL COURT SHELTER	LSUM	1		
10	24' x 24' SHELTER	EA	1		
11	12' x 12' SHELTER	EA	5		
12	SITE AMENITIES (DOG PLAY STRUCTURES)	LSUM	1		
13	SITE AMENITIES (DOGPOT PET WASTE STATION)	EA	3		
14	SITE AMENITIES (DOG BONE BENCH)	EA	7		
15	SITE AMENITIES (BASKETBALL HOOPS)	EA	2		
16	SITE AMENITIES (PICKLEBALL POST AND NET SYSTEM)	EA	4		
17	SITE AMENITIES (72" BENCH WITH BACK AND ARMS)	EA	25		
18	SITE AMENITIES (72" ADA PICNIC TABLE)	EA	11		
19	SITE AMENITIES (U-RACK BICYCLE RACK)	EA	9		
20	SITE AMENITIES - DRINKING FOUNTAIN (MOST DEPENDABLE FOUNTAINS)	EA	1		
21	DURABOUND SURFACING SYSTEM	SF	2240		
22	14' HAWAII MODEL (HEX) SHADE UMBRELLA	EA	1		
23	UNCLASSIFIED EXCAVATION	CY	300		
24	UNCLASSIFIED BORROW	CY	300		
25	EARTHWORK	LSUM	1		
26	INFILTRATION STRIP	CY	178		
27	SODDING	SF	529985		
28	LANDSCAPE (DECIDUOUS SHADE TREE)	EA	108		
29	LANDSCAPE (EVERGREEN TREE)	EA	23		
30	LANDSCAPE (ORNAMENTAL TREE)	EA	34		
31	REMOVING TREES (CRAPE MYRTLES)	EA	6		
32	REMOVING TREES (9", 10", & 28")	EA	7		
33	AGGREGATE BASE - 4" THICK DRAINABLE AGGREGATE OR WASHED ROCK	CY	148		
34	AGGREGATE BASE TYPE A (DEPTH VARIES)	CY	694		
35	DESERT GOLD SCREENINGS	SY	1972		
36	SLATE SCREENINGS	SY	4		
37	SANDSTONE BOULDERS	TON	60		
38	COLD MILLING PAVEMENT	SY	5478		
39	SUPERPAVE, TYPE S3(PG 70-28 OK) (NEW PARKING)	TON	250		
40	SUPERPAVE, TYPE S4(PG 70-28 OK) (NEW PARKING)	TON	125		
41	SUPERPAVE, TYPE S4(PG 76-28 OK) (OVERLAY)	TON	614		
42	SEPARATOR FABRIC	SY	5480		
43	CONCRETE STEPS (AT BASKETBALL COURT PLAZA)	CY	12		
44	CLASS 'A' CONCRETE DECORATIVE SEATWALL (AT BASKETBALL COURT PLAZA)	LF	75		
45	WHEEL STOP	EA	75		
46	CONCRETE CURB AND GUTTER	LF	2123		
47	CONCRETE FLUSH CURB	LF	680		
48	CONCRETE MOW STRIP	LF	409		
49	CONCRETE HEADER CURB	LF	36		
50	4" CONCRETE SIDEWALK (NO REINFORCEMENT)	SY	5424		
51	4" CONCRETE SIDEWALK (WITH REINFORCEMENT)	SY	2365		
52	4" CONCRETE, INTEGRAL COLOR (WITH REINFORCEMENT)	SY	174		
53	6" CONCRETE SIDEWALK	SY	226		
54	6" CONCRETE DRIVEWAY	SY	132		
55	MANHOLE (4' DIA.)	EA	1		
56	INLET (SMD-TYPE 1)	EA	1		
57	28"X18" R.C PIPE ARCH CLASS A-III	LF	306		
58	18" PREFAB.CULVERT END SEC., ROUND	EA	2		
59	28"X18" PREFAB. CULVERT END SEC., ARCH	EA	4		
60	15" CORRUGATED POLYPROPYLENE PIPE	LF	72		
61	18" CORRUGATED POLYPROPYLENE PIPE	LF	29		
62	5" CONCRETE, POST TENSIONED (BASKETBALL COURT AND PICKLEBALL COURT)	SY	1674		
63	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (EXISTING PLAYGROUND AND SWINGSET)	LSUM	1		
64	REMOVAL OF EXISTING PLAYGROUND AND SWINGSET BORDER	LF	281		
65	REMOVAL OF FENCE (CLF FOR BACKSTOPS AND BASEBALL FENCING)	LF	977		
66	REMOVAL OF CONCRETE PAVEMENT	SY	5743		
67	REMOVAL OF ASPHALT PAVEMENT	SY	2174		
68	REMOVAL OF EXISTING STRUCTURES (RESTROOM BUILDING)	LS	1		
69	REMOVAL OF PIPE RAILING AND ASSOCIATED FLUSH CURB (AT EXISTING PARKING LOT)	LF	657		
70	REMOVAL OF CURB	LF	287		
71	REMOVAL OF EXISTING PIPE (15" REINFORCED CONCRETE PIPE WITH END SECTIONS)	LF	48		
72	REMOVAL OF BOLLARDS	EA	5		
73	REMOVAL OF WOODEN POSTS	EA	4		
74	REMOVAL OF EXISTING BENCHES	EA	12		
75	REMOVAL OF WATER FOUNTAIN	EA	2		
76	REMOVAL OF EXISTING BACKFLOW PREVENTER	EA	1		
77	REMOVAL OF EXISTING SPLASH PAD (COMPLETE)	EA	1		
78	REMOVAL OF EXISTING UTILITIES (ELECTRICAL EQUIPMENT)	LSUM	1		
79	2" SANITARY SEWER DRAIN LINE SDR 26, TRENCHED (DRINKING FOUNTAIN)	LF	30		
80	6" SANITARY SEWER DRAIN LINE SDR 26, TRENCHED	LF	710		
81	3" WATER METER, FEES AND INSTALLATION (COMPLETE)	SYSTEM	1		
82	1" PEX WATERLINE, TRENCHED (TO VORTEX GLOMIST POLES)	LF	55		
83	2" PEX WATERLINE, TRENCHED (TO PORTLAND LOO AND DRINKING FOUNTAIN)	LF	488		
84	3" PEX WATERLINE, TRENCHED (TO VORTEX FOUNTAIN)	LF	330		
85	CUSTOM ACRYLIC PAINT AND STRIPING (BASKETBALL COURT)	SYSTEM	1		
86	ACRYLIC PAINT AND STRIPING (PICKLEBALL COURTS)	SYSTEM	1		
87	BASEBALL BACKSTOP	LSUM	1		
88	5" VINYL COATED CHAINLINK (DOG PARK FENCING)	LF	2587		
89	5" VINYL COATED CHAINLINK (PICKLEBALL BACKSTOPS)	LF	256		
90	4" VINYL COATED CHAINLINK (PICKLEBALL SIDESTOPS)	LF	175		
91	POST AND CABLE BARRIER	EA	1		
92	1" PVC SCH. 40 PLASTIC CONDUIT TRENCHED	LF	1640		
93	1 1/2" PVC SCH. 40 PLASTIC CONDUIT TRENCHED	LF	330		
94	2" PVC SCH. 40 PLASTIC CONDUIT TRENCHED	LF	520		
95	PULL BOX SIZE III	EA	7		
96	REMOVE AND RESET EXISTING SIGNS	EA	1		

97	LITHONIA D-SERIES SIZE 1 (PARKING LOT LIGHT POLE)	EA	10		
98	GREENSHINE SOLAR LIGHT POLES	EA	27		
99	GREENSHINE SOLAR LIGHT POLES (SPORTS)	EA	8		
100	APPLETON POWER PEDESTAL	EA	2		
101	POWER PEDESTAL	EA	1		
102	1/C NO. 1/0 ELECT. COND.	LF	1560		
103	1/C NO. 6 ELECT. COND.	LF	640		
104	1/C NO. 8 ELECT. COND.	LF	5900		
105	1/C NO. 10 ELECT. COND.	LF	600		
106	SHEET ALUMINUM SIGNS	SF	40		
107	2 1/4" SQUARE TUBE POST	LF	84		
108	TRAFFIC STRIPE (PAINT, 4" WIDE, WHITE) - PARKING	LF	3813		
109	TRAFFIC STRIPE (PAINT, 8" WIDE, WHITE) - PARKING CROSSWALKS	LF	1054		
110	TRAFFIC STRIPE (PAINT) (SYMBOLS) - HANDICAP	EA	7		
111	CONSTRUCTION TRAFFIC CONTROL	LSUM	1		
112	CONSTRUCTION STAKING LEVEL II / SURVEY	EA	1		
113	OWNERS ALLOWANCE	ALLOW	1	\$35,000.00	\$35,000.00
114	SWPPP DOCUMENTATION AND MANAGEMENT	LSUM	1		
115	GENERAL CONDITIONS / MOBILIZATION	LOT	1		
					\$35,000.00

ADDITIVE ALTERNATE #1: SKATE PARK / ART FEATURE

	DESCRIPTION	UNIT	QUANTITY	DATA INPUT UNIT PRICE	AMOUNT
116	EARTHWORK	LSUM	1		
117	SKATEPARK / ART FEATURE (TUL)	LSUM	1		
118	SMALL SKATE FEATURES ALONG SKATE LOOP	LSUM	1		
119	LANDSCAPE (DECIDUOUS SHADE TREE)	EA	6		
120	LANDSCAPE (ORNAMENTAL TREE)	EA	23		
121	SODDING	SF	96284		
122	6" LED IN-GRADE FIXTURE	LSUM	3		
123	2" PVC SCH. 40 PLASTIC CONDUIT TRENCHED	LF	800		
124	1/C NO. 4 ELECT. COND.	LF	2400		
TOTAL ADDITIVE ALTERNATE #1					

ADDITIVE ALTERNATE #2: POLYCARBONATE SKYLIGHTS IN BASKETBALL SHELTER

	DESCRIPTION	UNIT	QUANTITY	DATA INPUT UNIT PRICE	AMOUNT
125	POLYCARBONATE SKYLIGHTS IN BASKETBALL SHELTER	LSUM	1		
TOTAL ADDITIVE ALTERNATE #2					

ADDITIVE ALTERNATE #3: SWING AREA

	DESCRIPTION	UNIT	QUANTITY	DATA INPUT UNIT PRICE	AMOUNT
126	SWING SET EQUIPMENT & INSTALLATION (BY ACS)	EA	2		
127	ARTIFICIAL TURF PLAYGROUND SURFACING	SF	1789		
128	AGGREGATE BASE - 4" THICK DRAINABLE AGGREGATE OR WASHED ROCK	CY	22		
129	CONCRETE FLUSH CURB	LF	99		
TOTAL ADDITIVE ALTERNATE #3					

ADDITIVE ALTERNATE #4: DURATHERM DECORATIVE ASPHALT TREATMENT

	DESCRIPTION	UNIT	QUANTITY	DATA INPUT UNIT PRICE	AMOUNT
130	DURATHERM ASPHALT TREATMENT	LSUM	1		
TOTAL ADDITIVE ALTERNATE #4					

ADDITIVE ALTERNATE #5: BOMANITE CONCRETE TOPPING SYSTEM

	DESCRIPTION	UNIT	QUANTITY	DATA INPUT UNIT PRICE	AMOUNT
131	CONCRETE GAMES @ PLAYGROUND AND DOG PARK ENTRANCE	SF	1800		
TOTAL ADDITIVE ALTERNATE #5					

TOTAL BASE BID	<u>\$35,000.00</u>
TOTAL ADD ALT #1	Figures _____
TOTAL ADD ALT #2	Figures _____
TOTAL ADD ALT #3	Figures _____
TOTAL ADD ALT #4	Figures _____
TOTAL ADD ALT #5	Figures _____
TOTAL BID (BASE BID + ADD ALTS #1, #2, #3, #4, & #5)	Figures _____ <u>\$35,000.00</u>

Enclosed is a () Bidder's Surety Bond, () Certified Check, () Cashier's Check for

_____ Dollars (\$ _____)
Figures

which the City of Tulsa may retain or recover as liquidated damages in the event that the undersigned fails to enter into contract for the work covered by this proposal., provided the Contract is awarded to the undersigned within thirty (30) days, or within ninety (90) days if Federal funds are utilized, from the date fixed for opening of bids and the undersigned fails to execute said Contract and furnish the required bonds and other requirements as called for in these Contract Documents within thirty (30) days after award of Contract.

Dated at Tulsa, Oklahoma, this _____ day of _____, 20__.

Respectfully submitted,

 (Complete legal name of company)

 (State of Organization)

By: _____
 Title: _____
 Printed Name: _____

ATTEST: _____
 Title: Corporate Secretary
 Printed Name: _____
(SEAL)

Address: _____

Telephone Number: _____ Fax Number: _____

By signing above bidder acknowledges receipt of the following Addenda (give number and date of each):

This form is made available for example purposes only and is not intended to be legal advice nor intended to be relied upon in lieu of consultation with an attorney.

Certificate of Secretary

The undersigned _____ (Assistant) Secretary of _____, a _____ corporation, (the "Corporation") hereby certifies that the following is a true and correct copy of a Resolution duly adopted by the Board of Directors of the Corporation on the _____ day of _____, 20____.

RESOLVED, that _____ is authorized to execute and enter into bids, contracts, bonds, affidavits and any ancillary documents, on behalf of the Corporation.

The undersigned further certifies that this Resolution is in full force and effect as of the date of this Certificate and has not been amended, modified, revoked or rescinded.

IN WITNESS WHEREOF, I have executed this Certificate this ___ day of _____, 20__.

(Signature)

Printed Name

(Assistant) Secretary

This form is made available for example purposes only and is not intended to be legal advice nor intended to be relied upon in lieu of consultation with an attorney.

Consent of Members

The undersigned, being all of the Members of [Name of Company], LLC, an Oklahoma Limited Liability Company, hereby authorize, consent to, approve and ratify the execution by _____ on behalf of [Name of Company], LLC of bid proposals, contracts, affidavits and related documents in connection with [Name of Project] of the City of Tulsa.

DATED, this ____ day of _____, 20__.

Name printed: _____

Name Printed: _____

[ADD ADDITIONAL LINES FOR ADDITIONAL MEMBERS]



PUBLIC WORKS
Engineering

DATE:
Month Day, Year

{Company Name}
(Address)
{City, State Zip}

RE: City of Tulsa Project No. {number and Title}

TO WHOM IT MAY CONCERN:

Please be advised that the City of Tulsa, Oklahoma, a municipal corporation, has contracted for the construction of a public improvement project as referenced above, and that pursuant to Title 68 § Section 1356 (10), sales on tangible personal property or services to be wholly consumed in the performance of such projects are exempt from Oklahoma and City of Tulsa Sales Tax when:

“...Any person making purchases on behalf of such subdivision or agency of the state shall certify, in writing, on the copy of the invoice or sales ticket to be retained by the vendor that the purchases are made for and on behalf of such subdivision or agency of this state and set out the name of such public subdivision or agency.”

This letter of authorization expires **{Date.}**

A photostatic copy of this letter may be considered as the original.

CITY OF TULSA

Paul D. Zachary, P.E.
Deputy Director

cc: Ryan McKaskle

HAS:JR:kt

STED-1

EXTENSION OF TIME REQUEST
(to be submitted with each partial payment application)

DATE: _____

CONTRACTOR: _____

ADDRESS: _____

CONTRACT NO.: _____

PROJECT NO.: _____

DESCRIPTION: _____

ARE THERE ANY CHANGES TO YOUR SBE UTILIZATION? YES NO

IF YES, GIVE REASON AND ATTACH CHANGE REQUEST FORM (SBE-4): _____

EXTENSION OF CONTRACT TIME REQUIRED: YES NO

TOTAL OF EXTENSION TIME REQUESTED: _____

IF YES GIVE REASON: _____

SIGNATURE - CONTRACTOR

CONSULTING ENGINEER OR DEPARTMENT OF PUBLIC WORKS STAFF RECOMMENDATIONS

APPROVED: _____

REJECTED: _____

REASON: _____

SIGNATURE

DATE

ACTION WILL BE TAKEN WITHIN 30 DAYS FROM RECEIPT OF REQUEST

ETR-1

**CONTRACT FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS
TULSA, OKLAHOMA**

THIS CONTRACT made and entered into the ____ day of _____, 2026, by and between ___an (list state)_____ (Corporation or Limited Liability Company) of _____, Oklahoma, hereinafter called the "CONTRACTOR", and the CITY OF TULSA - TULSA, OKLAHOMA, a Municipal Corporation, herein called the "CITY."

WITNESSETH:

WHEREAS, the City has caused to be prepared the necessary Drawings, Specifications, and other Contract Documents for the public improvements herein described, and has invited bids for the construction thereof in accordance with the terms of this Contract, all of which is hereby designated as:

PROJECT NO. SP 21-6 FRED JOHNSON PARK REHABILITATION

WHEREAS, the Contractor, in response to the Advertisement, has submitted to the City, in the manner and at the time specified, a sealed bid in accordance with the terms of this Contract; and,

WHEREAS, the City, in the manner prescribed by law, has publicly opened, examined, and canvassed the bids submitted, and has determined the above named Contractor to be the lowest responsible bidder for the work and has duly awarded to the said Contractor therefore, for the sum or sums named in the Contractor's bid, a copy of the Bid Form being attached to and made a part of this Contract;

NOW, THEREFORE, in consideration of the compensation to be paid to the Contractor and of the mutual agreements and covenants herein contained, the parties to this Contract have agreed and hereby agree, as follows:

ARTICLE I. That the Contractor shall (a) furnish all tools, equipment, supplies, superintendent, transportation, and other construction accessories, services, and facilities; (b) furnish all materials, supplies, and equipment specified and required to be incorporated in and form a permanent part of the completed work; (c) provide and perform all necessary labor; and (d) in a good, substantial, and workmanlike manner and in accordance with the requirements, stipulations, provisions, and conditions of the Contract as defined in the attached General Provisions, sometimes referred to as General Conditions in the Contract Documents, said documents forming the Contract and being as fully a part thereof as if repeated verbatim herein, perform, execute, construct, and complete all work included in and covered by the City's official award of this Contract to the said Contractor, such award being based on the acceptance by the City of the Contractor's bid, or part thereof, as follows:

PROJECT NO. SP 21-6 FRED JOHNSON PARK REHABILITATION

ARTICLE II. That the City shall pay to the Contractor for performance of the work embraced in this Contract, and the Contractor will accept as full compensation therefor, the sum (subject to adjustment as provided by the Contract) of _____ AND /100 Dollars (\$_____) for all work covered by and included in the Contract award and designated in the foregoing Article I; payments therefore to be made in cash or its equivalent, in the manner provided in the General Provisions.

ARTICLE III. That the Contractor shall start work within ten (10) days following the date stipulated in a written order from the City to proceed with the work to be performed hereunder, and shall complete the work within the number of consecutive calendar days after the authorized starting date, as stipulated below:

All Work Completed: 298 calendar days

ARTICLE IV. The sworn, notarized statement below shall be signed and notarized before this Contract will become effective.

ARTICLE V. Prior to submitting a final payment request, the Contractor shall furnish a lien waiver certifying that all subcontractors and suppliers have been paid.

ARTICLE VI. If the Contractor has 10 or more full-time employees, and this contract exceeds \$100,000 in total value, Contractor acknowledges and agrees that, in accordance with and pursuant to 21 O.S. 1289.31, Contractor verifies to City that: (i) it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, and (ii) will not discriminate against a firearm entity or firearm trade association during the term of this Contract.

IN WITNESS WHEREOF, the parties have hereto set their hands and seals,

this _____ day of _____, 2026.

CITY OF TULSA, OKLAHOMA
a municipal corporation

By: _____

ATTEST: (SEAL)

Mayor

Date: _____

City Clerk

Date: _____

APPROVED:

APPROVED:

City Attorney

Date: _____

Director

Date: _____

CONTRACTOR

By: _____

Printed Name _____

Title

Date: _____

Title

Date: _____

ATTEST:

Corporate Secretary

(SEAL)

AFFIDAVIT

STATE OF _____)
)ss
COUNTY OF _____)

_____, of lawful age, being first duly sworn, on oath says that (s)he is the agent authorized by the Contractor to submit the above Contract to the CITY OF TULSA, Tulsa, Oklahoma.

Signature

Subscribed and sworn to before me this _____ day of _____, 2025.

NOTARY PUBLIC

My Commission Expires:
_____, _____.

City of Tulsa Construction Escalation Process

Step	Contractor Representative(s)	City of Tulsa Representative(s)	Process	Communication / Documentation	Resolution (**)	No Resolution	Typical Time Frame (***)
1.0	Superintendent	Construction Inspector	Field Meeting Request for Information (RFI) may apply	Phone, Text, Email, or RFI / Daily Report	Within Construction Documents	If not resolved within Construction Documents, escalate to 2.0	Same day to 3 days
2.0	Superintendent	Construction Inspector Manager / Construction Inspector	Field Meeting Request for Information (RFI) may apply	Phone, Text, Email, or RFI / Daily Report	Within Construction Documents	If not resolved within Construction Documents, escalate to 3.0	1 day to 3 days
3.0	Project Manager / Superintendent	Construction Manager / Construction Inspector Manager / Construction Inspector Lead Engineer / Project Manager Design Consultant	Contractor submit RFI	Phone, Email, RFI / Daily Report, RFI Log, Progress Mtg	Additional information provided. Potential Allowance Authorization, Extension of Quantities, Change Order, or Other	If not resolved by additional information and within terms of contract, escalate to 4.0	Within 10 calendar days (as ODOT 104.06.B)
4.0	Project Manager / Superintendent	Field Engineering Manager / Construction Manager Lead Engineer / Project Manager Design Consultant	Appeal Construction Manager's Decision	Email, RFI / Daily Report, RFI Log, Progress Mtg	Field Engineering Manager makes determination on appeal. Potential Allowance Authorization, Extension of Quantities, Change Order, or Other	If not resolved by additional information and within terms of contract, escalate to 5.0	Within 10 calendar days (as ODOT 104.06.B)
5.0	Owner / Project Manager / Superintendent	PW Deputy Director and/or other Dept Design Manager / Field Engineering Manager / Construction Manager Lead Engineer / Project Manager Design Consultant	Appeal Field Engineering Manager's Decision	Email, RFI / Daily Report, RFI Log, Progress Mtg	PW Deputy Director and/or other Dept. Design Manager makes determination on appeal. Potential Allowance Authorization, Extension of Quantities, Change Order, or Other	If appeal is not resolved, escalate to 6.0	Within 10 calendar days (as ODOT 104.06.B)
6.0	Owner / Project Manager / Superintendent	Director (*) / PW Deputy Director and/or other Dept Design Manager / Field Engineering Manager / Construction Manager Lead Engineer / Project Manager Design Consultant	Appeal PW Deputy Director's and/or other Dept. Design Manager's Decision	Email, RFI / Daily Report, RFI Log, Progress Mtg	Director makes determination on appeal. Potential Allowance Authorization, Extension of Quantities, Change Order, or Other		Within 10 calendar days (as ODOT 104.06.B)

(*) Director of the Department under whose a authority construction is managed by Public Works Field Engineering. Public Works Deputy Director will notify Director of Public Works.

(**) Resolution - Complete information will assist in the most timely resolution. Each escalation step should address any information deficiencies and proposed resolutions, if any, that were unsatisfactory.

(***) Time frames - It is understood that special issues will require a more rapid response and escalation.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we, the undersigned, _____, (hereinafter called the Contractor"), duly authorized by law to do business as a construction contractor in the State of Oklahoma, and _____ (hereinafter called the "Surety"), a corporation organized under the laws of the State of _____, and authorized to transact business in the State of Oklahoma, as Surety, are hereby held and firmly bound unto the City of Tulsa, Tulsa, Oklahoma (hereinafter called the "City"), in the penal sum of

_____ Dollars (\$) in lawful money of the United States, for the payment of which, well and truly to be made unto the said City, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents, as follows:

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH THAT, WHEREAS, the Contractor has on the _____ day of _____, _____, entered into a written contract with the City of Tulsa, Tulsa, Oklahoma, for furnishing all materials, labor, tools, equipment, and transportation necessary for:

Project No. SP 21-6 FRED JOHNSON PARK REHABILITATION

NOW, THEREFORE, if said Contractor shall well and truly perform and complete said project in accordance with said Contract, Advertisement for Bids, General Conditions, Instructions to Bidders, Bid Form, Plans and Specifications, and related documents, shall comply with all the requirements of the laws of the State of Oklahoma; shall pay as they become due all just claims for work or labor performed and materials furnished in connection with said contract, and shall defend, indemnify and save harmless said City against any and all liens, encumbrances, damages, claims, demands, expenses, costs and charges of every kind, including patent infringement claims except as otherwise provided in said specifications and other contract documents, arising out of or in relation to the performance of said work and the provisions of said Contract, then these presents shall be void; otherwise, they shall remain in full force and effect.

This obligation is made for the use of said City and also for the use and benefit of all persons who may perform work or labor, or furnish any material in the execution of said Contract, and may be sued on thereby in the name of the City.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder, or the specifications accompanying same, shall in any way affect its obligation on this bond; and it does hereby waive notice of any such change, extension of time, alteration or addition of the terms of the Contract, or to the work or to the specifications.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year first above written.

CONTRACTOR (Principal)

BY: _____ ATTEST: (SEAL)
Date: _____ Date: _____

Title: _____ Title: _____

Attorney In Fact ** Surety (SEAL)
Date: _____ Date: _____

**This date shall match the notarized certificate on the Power-of-Attorney

(Accompany this Bond with Power Of Attorney)

APPROVED AS TO FORM:

City Attorney Date: _____

City Clerk Date: _____

STATUTORY BOND

WHEREAS, the undersigned _____ has entered into a certain contract dated the _____ day of _____, _____, designated as **Project No. SP 21-6** for the construction of certain public improvements Consisting of **Fred Johnson Park Rehabilitation** to be situated and constructed on and through the property described in said Contract, including all of the work mentioned and described in said Contract, and to be performed by the undersigned strictly and punctually in accordance with the terms, conditions, drawings and specifications thereof, on file in the office of the office of the City Clerk.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: That _____, as Principal, and _____, a Corporation organized under the laws of the State of _____, and authorized to transact business in the State of Oklahoma, as Surety, are held and firmly bound unto the State of Oklahoma in the penal _____ sum _____ of _____

_____ Dollars (\$) _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our successors, and assigns, jointly and severally firmly by these presents.

NOW, THEREFORE, if the said Principal shall fail or neglect to pay all indebtedness incurred by Principal or sub-contractors of said principal who perform work in the performance of such contract, for labor and materials and repairs to and parts for equipment used and consumed in the performance of said contract within thirty (30) days after the same becomes due and payable, the person, firm or corporation entitled thereto may sue and recover on this bond the amount so due and unpaid.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder, or the specifications accompanying the same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or to the specifications.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year first above written.

CONTRACTOR (Principal)

BY:

ATTEST: (S E A L)

Date: _____
Title: _____

Date: _____
Title: _____

Date: _____
Attorney-In-Fact **

Date: _____
Surety (S E A L)

**This date shall match the date of the notarized certificate on the Power-of- Attorney.

(Accompany this Bond with Power-Of-Attorney)

APPROVED AS TO FORM:

Date: _____
City Attorney

Date: _____
City Clerk

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____, as Principal,
and _____, a
corporation organized under the laws of the State of _____ and authorized to transact
business in the State of Oklahoma, as Surety, are held and firmly bound unto the City of
Tulsa in the Penal sum of

_____ Dollars (\$ _____) in lawful money of the United States of America for the
payment of which, well and truly to be made, we bind ourselves and each of us, our
heirs executors, administrators, trustees, successors, and assigns, jointly and severally,
firmly by these presents.

The condition of this obligation is such that:

WHEREAS, said Principal entered into a written contract with the City of Tulsa,
Oklahoma dated _____, _____, for

Project No. SP 21-6 FRED JOHNSON PARK REHABILITATION

all in compliance with the drawings and specifications therefore, made a part of said
Contract and on file in the office of the City Clerk, Tulsa, Oklahoma.

NOW, THEREFORE, if said Principal shall pay or cause to be paid to the City of Tulsa,
Oklahoma, all damage, loss, and expense which may result by reason of defective
materials and/or workmanship in connection with said work, occurring within a period of
one (1) year for all projects, from and after acceptance of said project by the City of
Tulsa, Oklahoma; and if Principal shall pay or cause to be paid all labor and materials,
including the prime contractor and all subcontractors; and if principal shall save and
hold the City of Tulsa, Oklahoma, harmless from all damages, loss, and expense
occasioned by or resulting from any failure whatsoever of said Principal, then this
obligation shall be null and void, otherwise to be and remain in full force and effect.

It is further expressly agreed and understood by the parties hereto that no changes or
alterations in said Contract and no deviations from the plan or mode of procedure herein
fixed shall have the effect of releasing the sureties, or any of them, from the obligation
of this Bond.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year first above written.

CONTRACTOR (Principal)

BY: _____ ATTEST: (S E A L)
Date: _____ Date: _____
Title: _____ Title: _____

Attorney-In-Fact ** Surety (S E A L)
Date: _____ Date: _____

** This date shall match the date of the notarized certificate on the Power of Attorney
(Accompany this Bond with Power-Of-Attorney)

APPROVED AS TO FORM:

City Attorney Date: _____

City Clerk Date: _____

AFFIDAVIT OF CLAIMANT

STATE OF _____

COUNTY OF _____

The undersigned, of lawful age, being first duly sworn, on oath says that this contract is true and correct. Affiant further states that the work, services or materials will be completed or supplied in accordance with the contract, plans, specifications, orders or requests furnished the affiant. Affiant further states that (s)he has made no payment directly or indirectly of money or any other thing of value to any elected official, officer or employee of the City of Tulsa or any public trust of which the City is a beneficiary to obtain or procure the contract or purchase order.

By: _____

Signature

Name: _____

Company: _____

Title: _____

Subscribed and sworn to before me this _____ day of _____, 20____.

Notary Public

My Commission Expires: _____

Notary Commission Number: _____

GENERAL
CONDITIONS

GENERAL CONDITIONS OF CONTRACT

GC-1. SCOPE:

The Contract stipulations, which follow, are general in scope and may refer to conditions that will not be encountered in the performance of the work included in this Contract, and which are not applicable thereto. Any requirements, provisions, or other stipulations of these General Conditions, which pertain to a nonexistent condition, and are not applicable to the work to be performed hereunder, shall have no meaning in the Contract.

The specifications and drawings are intended to supplement, but not necessarily duplicate each other. Together they constitute one (1) complete set of specifications and drawings, so that any work exhibited in the one and not in the other shall be executed just as if it had been set forth in both, in order that the work shall be completed according to the complete design or designs as decided and determined by the Engineer.

Should anything be omitted from the specifications and drawings which is necessary to a clear understanding of the work, or should it appear various instructions are in conflict, then the Contractor shall request written clarification from the Engineer before proceeding with the construction affected by such omissions or discrepancies.

GC-2. CONTRACT DOCUMENTS :

It is understood and agreed that the Notice to Bidders, Instructions to Bidders, Proposal, Contract, Statutory Bond, Performance Bond, Maintenance Bond, Power of Attorney, Certificates of Insurance, General Conditions, Specifications, Drawings, Addenda, and duly authorized Change Orders, together with any and all supplementary drawings furnished by the Engineer as and when required to make clear and to define in greater detail the intent of the contract, drawings, and specifications, other drawings, specifications, and engineering data furnished by the Contractor (when accepted by the Engineer), and instructions furnished by manufacturers of equipment for the installation thereof, are each and all included in this Contract, and the work shall be done in full compliance and accord therewith.

GC-3. DEFINITIONS:

Any word, phrase, or other expression defined in this paragraph and used in these Contract Documents shall have the meaning herein given:

1. "Contract" or "Contract Documents" shall include all of the documents and drawings mentioned in Paragraph GC-2.
2. "City" shall mean the City of Tulsa, Tulsa County, Oklahoma.
3. "Contractor" shall mean the entity named and designated in the Contract who has entered into this Contract to perform the work covered thereby, and its, his, or their duly authorized agents and other legal representatives.
4. "Engineer" shall mean the Director of Engineering Services, or the Architect or Engineers who have been designated, appointed, or employed by the City for this project, or their duly authorized agents; such agents acting within the scope of the particular duties entrusted to them in each case.
5. "Inspector" shall mean the engineering or technical inspector or inspectors duly authorized by the Engineer, limited in each case to the particular duties entrusted to him or them.
6. "Surety" shall mean any entity that executes, as surety, the Contractor's performance bond, maintenance bond, and statutory bond securing the performance of this Contract.

7. "Drawings" shall mean and include all drawings prepared by the City as a basis for proposals; all drawings submitted by the successful bidder with his proposal and by the Contractor to the City, when and as accepted by the Engineer, and all drawings submitted by the City to the Contractor during the progress of the work as provided herein.

8. "Subcontractor" shall mean a person, firm or corporation to whom any portion of this work has been sublet by the Contractor.

9. "Work" shall mean the task to be performed, necessary for the fulfillment of this Contract.

10. "Unit Price" shall mean the cost per specified unit of measurement of work and/or material.

11. "Lump Sum" shall mean the price of an item of work including all things necessary to complete the item as shown on the drawings and specifications. Such an item is not measured in units but is defined by description.

GC-4. MODIFICATIONS AND ALTERATIONS:

In executing the Contract, the Contractor agrees that the City shall have the right to make such modifications, changes, and alterations as the City may see fit, in the extent, or plan of the Work agreed to be done or any part thereof, or in the materials to be used therein, either before or after the beginning of construction thereof, without affecting the validity of the Contract or the liability of the Sureties upon the performance of this Contract or the Statutory Bond.

Where any modification, change, or alteration increases the quantity of Work to be performed and is within the scope of a fair interpretation thereof, such increase shall be paid for according to the quantity of work actually done, either at Unit Prices included in the Contract, or in the absence of such unit, as extra Work. Modifications and alterations, which reduce the quantity of Work to be done, shall not constitute a claim for damages or for anticipated profits on Work involved in such reduction.

The Engineer shall determine, on an equitable basis, the amount of credit due the City for Work not performed as a result of modifications or alterations authorized hereunder; where the value of the omitted Work is not fixed by Unit Prices in the Contract; allowance to the Contractor for any actual loss incurred in connection with the purchase, delivery, and subsequent disposal of materials and equipment required for use on the Work as actually built; and any other adjustment of the Contract amount where the method to be used in making such adjustment is not clearly defined in the Contract Documents. In this respect, such determination shall be final and binding only when approved by the Director of Public Works.

GC-5. CPM SCHEDULE AND DRAWINGS TO BE FURNISHED BY CONTRACTOR:

The successful contractor shall furnish a CPM schedule per ODOT 108.03B. If at any time, in the opinion of the Engineer, proper progress is not being maintained, such changes shall be made in the schedule of operations, which will satisfy the Engineer that the work will be completed within the period stated in the Proposal. Monthly progress meeting will be conducted to maintain coordination between all project entities.

The Contractor shall furnish all shop, fabrication, assembly, foundation, and other drawings required by the specifications; drawings of equipment and devices, offered by the Contractor for review by the Engineer, shall be in sufficient detail to show adequately the construction and operation thereof; drawings of essential details of any change in design or construction proposed for consideration of the Engineer, by the Contractor in lieu of the design or arrangement required by the Contract or any item of extra work thereunder. The Contractor shall submit to the Engineer, the required number, of each copy of such drawing for the Engineer's review. After review by the Engineer, all such drawings shall become a part of the Contract Documents and the work or

equipment shown thereby shall be in conformity therewith unless otherwise required by the City.

The Engineer's check and acceptance of drawings submitted by the Contractor will be for, and will cover, only general conformity to the plans and specifications and will not constitute a blanket acceptance of all dimensions, quantities, and details of the material or equipment shown; nor shall such acceptance relieve the Contractor of his responsibility for errors contained in such drawings.

GC-6. CONTRACTOR'S BUSINESS ADDRESS:

The business address of the Contractor given in the bid or proposal upon which this Contract is founded is hereby designated as the place to which all notices, letters, and other communications to the Contractor may be mailed or delivered. The delivery at the above named address or depositing in any mailbox regularly maintained by the Post Office, of any notice, letter, or other communication to the Contractor, shall be deemed sufficient service thereof upon the Contractor and the date of said service shall be the date of such delivery or mailing. Such address may be changed at any time by a written instrument, executed by the Contractor and delivered to the Engineer. Nothing contained herein shall be deemed to preclude or render inoperative the service of any notice, letter, or communication upon the Contractor personally.

GC-7. CONTRACTOR'S RISK AND RESPONSIBILITY:

The performance of the Contract and the Work is at the risk of the Contractor until the final acceptance thereof and payment therefor. The Contractor shall take all responsibility of the Work, and shall bear all losses resulting because of the amount or character of the Work, or because the nature of the land in or on which the Work is done is different from what is assumed or expected, or on account of the weather, floods, fire, windstorm, or other actions of the elements, or any cause or causes, whatsoever, for which the City is not responsible. If the Work or any part or parts thereof is destroyed or damaged from any of the aforesaid causes, the Contractor, at his own cost or expense, shall restore the same or remedy the damage.

The Contractor shall, in a good and workmanlike manner, perform all Work and furnish all supplies and materials, machinery, equipment, facilities, and means, except as otherwise expressly specified, necessary or proper to perform and complete all Work required by the Contract within the time herein specified, in accordance with the provisions of these Contract Documents and Drawings of the Work covered by this Contract, and any and all supplemental Drawings. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements and limitations of the Contract, and shall complete the entire Work to the satisfaction of the Engineer and of the City.

GC-8. ASSIGNMENT AND SUBLETTING OF CONTRACT:

The Contractor shall give his personal attention to the fulfillment of this Contract, and shall not let, assign or transfer it or his right, title, or interest in any part thereof, by attorney or otherwise, or sublet any part of the Work to any other person without the prior consent of the City in writing.

Should any Subcontractor fail to perform his work in a satisfactory manner the Contractor upon notice from the City shall immediately terminate his subcontract. The Contractor shall be fully responsible to the City for the acts and omissions of his Subcontractor, and of persons either directly or indirectly employed by his Subcontractor. Nothing contained in these Contract Documents shall create any contractual relation between any Subcontractor and the City.

GC-9. CONTRACTOR'S REPRESENTATIVES:

The Contractor shall designate a person on the Work site to represent him when absent from the Work site.

GC-10. CONTRACTOR AND HIS EMPLOYEES:

The Contractor shall employ competent foremen, experienced mechanics, and others skilled in the Work in this Contract; and shall promptly discharge any and all incompetent or otherwise unsatisfactory employees. Contractor's employees directly employed to perform the Work shall

not be paid less than the prevailing minimum wage scale.

Necessary sanitary conveniences for the use of employees on the job site, properly secluded from public observation, shall be provided and maintained by the Contractor. The construction and location of the facility and disposal of the contents shall comply with all laws of the City and State, relating to health and sanitation regulations.

GC-11. CONTRACTOR'S RIGHT OF PROTEST:

If the Contractor considers any work demanded of him to be outside the requirements of the Contract, or considers any record or ruling of the Engineers to be unfair, he shall, immediately upon such Work being demanded or such record or ruling being made, ask for written instructions or decisions, whereupon he shall proceed without delay to perform the Work or to conform to the record or ruling; and within ten (10) days after the date of receipt of written instructions or decision, he shall file a written protest with the Engineer, stating clearly and in detail the basis of his objections. Except for such protests and objections made of record in the manner herein specified and within the time stated, the records, rulings, or decisions of the Engineer shall be final and conclusive.

GC-12. INSURANCE AND BONDS:

The CONTRACTOR (and any subcontractors) shall carry and keep in force during this Contract, policies of insurance issued by an insurer authorized to transact business in Oklahoma in minimum amounts as set forth below or as required by the laws of the State of Oklahoma. The Contractor shall also furnish an Owner's Protective Policy in the same amounts naming the City of Tulsa as the assured, issued by the same insurance company as the Contractor's liability coverage and indemnifying the City of Tulsa against any and all actions, claims, judgments or demands arising from injuries of any kind and character sustained by any person or persons because of work performed by the Contractor.

General Liability Insurance with a bodily injury and property damage combined single limit of not less than \$1,000,000.00 for each occurrence.

Employer's Liability and Workmen's Compensation in the amounts as required by law.

The Contractor shall provide proof of such coverage:

- (a) By providing Certificate(s) of Insurance prior to the execution of this contract; and
- (b) By submitting updated Certificate(s) of Insurance with each and every subsequent request for payment. The Certificate(s) should show that the policies are current and should be dated within 30 days of the payment request.

The Contractor shall not cause any required insurance policy to be cancelled or permit it to lapse. If the Contractor cancels, allows to lapse, fails to renew or in any way fails to keep any required insurance policy in effect, the City will suspend all progress and/or final payments for the project until the required insurance is obtained. Further, a Contractor who fails to keep required insurance policies in effect may be deemed by the City to be in breach of contract, ineligible to bid on future projects, and/or ineligible to engage in any new contracts.

The Contractor shall execute and furnish a Statutory Bond for the protection of laborers, mechanics, and material men in a sum equal to one hundred percent (100%) of the contract price.

The Contractor shall execute and furnish a Performance Bond in a sum equal to one hundred percent (100%) of the contract price.

The Contractor shall execute and furnish a Maintenance Bond in a sum equal to one hundred percent (100%) of the contract price.

Prior to doing blasting, the Contractor shall furnish a Certificate of Insurance, which shall certify that any damage caused by blasting is within the coverage of the Contractor's liability insurance to the full limits thereof.

All bonds and insurance must be executed by a company licensed to do business in the State of Oklahoma and must be acceptable to the City.

GC-13. TIME FOR COMPLETION:

For all projects that will impact the public, a public meeting is required before any work is started. The City of Tulsa requires a minimum of 25 days' notice to get the public meeting scheduled and invitations mailed out.

The Work shall commence within ten (10) days from and after the date of a written work order from the City. The Contractor agrees that the Work shall be performed regularly, diligently, and uninterruptedly at a uniform rate of progress so as to ensure completion within the number of days after the day on which the work order is issued. If the Contractor fails to complete all Work within the time specified, then the Contractor agrees to pay the City, not as a penalty, but as liquidated damages for breach of contract, the Sum of **Two Thousand Five Hundred Dollars (\$2,500.00)** for each and every calendar day beyond the date on which the work was to be completed. The said amount is fixed and agreed upon because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the City would sustain in such event. It is expressly understood and agreed that the said time for completion of the work described herein is a reasonable time for the completion of same.

The Contractor shall commence work within twenty-four (24) hours of traffic control devices being established at the project location. If the Contractor fails to commence work within twenty-four (24) hours of traffic control devices being established at the project location, then the Contractor agrees to pay the City, not as a penalty, but as liquidated damages the sum of **One Thousand Dollars (\$1,000.00)** per lane for each day of failure to commence work after the specified time set forth. The amount is fixed and agreed upon because of the impracticability and extreme difficulty of fixing and ascertaining the actual damage the City would sustain in such event.

The Contractor will be required to provide a full-time, onsite English-speaking superintendent for this Work for direct contact with City and coordination of Subcontractors. A working foreman is not acceptable as a project superintendent. The superintendent shall be required to be present at the Work site whenever the Contractor or Subcontractors are performing Work. The superintendent shall be a representative of the Contractor with the authority to make decisions. If the Contractor fails to provide a non-working superintendent on a day when Work is being performed, the Contractor agrees to pay the City, not as a penalty, but as liquidated damages for such breach of contract, the sum of **One Thousand Dollars (\$1,000.00)** for each and every calendar day it fails to provide a non-working superintendent at the Work site. This amount is fixed and agreed upon because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the City would sustain in such an event.

It is further agreed that time is of the essence as to each and every portion of this Contract and the specifications wherein a definite and certain time is fixed for the performance of any act whatsoever; and where under the Contract an allowance of additional time for completion of any Work is made, the new time fixed by such extension shall be of the essence of this Contract.

Failure to complete the Work within the specified time, as set forth in the Contract, may be grounds for disqualification for future consideration for contracts with the City of Tulsa.

Final acceptance of the Work is defined as the completion of the Work and the Contractor moving off the project site. No defined or additional Work is needed.

Contract Evaluation forms will be compiled by City staff upon completion of Work to provide a record of the Contractor's performance for use in subsequent projects.

GC-14. EXTENSIONS OF TIME:

Should the Contractor be delayed in the final completion of the Work by any act or neglect of the City or Engineer, or any employee of either, or strikes, injunctions, fire, or other causes outside of and beyond the control of the Contractor and which, in the opinion of the Engineer, could have been neither anticipated nor avoided, then an extension of time sufficient to compensate for the delay, as determined by the Engineer, shall be granted by the City, provided, however, that the Contractor shall give the City and the Engineer notice in writing of the cause of each delay on the "Extension of Time Request" form enclosed in these documents, and agrees that any such claim shall be fully compensated for by an extension of time to complete performance of the Work.

The Contractor shall submit the "Extension of Time Request" form with each partial payment application. Failure to submit the Extension of Time Request with a partial payment application shall constitute a complete waiver of any claim for time extension for the period covered by the partial payment.

Extensions of time will not be granted for delays caused by unsuitable ground conditions, inadequate construction force, or the failure of the Contractor to place orders for the equipment or materials a sufficient time in advance to ensure delivery when needed. Any extension of time granted by the City shall not release the Contractor and Surety herein from the payment of liquidated damages as provided in the General Conditions of this Contract, for a period of time not included in the original Contract or the time extension, as herein provided.

In no event shall the City be liable or responsible to the Contractor, Surety, or any person for or on account of any stoppage or delay of Work herein provided for by injunction or any other kind of legal, equitable proceedings, or from or by or on account of any delay from any other cause whatsoever.

GC-15. ENGINEER'S POWERS AND DUTIES:

The Engineer will provide general administration of the Contract, including performance of the functions hereinafter described.

The Engineer will be the City's representative during construction and until final payment. The Engineer will have authority to act on behalf of the City to the extent provided herein unless otherwise modified by written instrument, which will be shown to the Contractor. The Engineer will advise and consult with the City, and all of the City's instructions to the Contractor shall be issued through the Engineer. Nothing contained in the Contract documents shall create any contractual relationship between the Engineer and the Contractor.

The Engineer shall at all times have access to the Work as provided elsewhere herein. The Engineer will make periodic visits to the Work site to familiarize himself generally with the progress and quality of the Work and to determine in general whether the Work is proceeding in accordance with the Contract. On the basis of his on-site observations as Engineer, he will keep the City informed of the progress of the Work and will endeavor to guard the City against defects and deficiencies in the Work caused by the Contractor. The Engineer will not be responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work and will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract. Based on such observations and the Contractor's applications for payment, the Engineer will determine the amounts owing to the Contractor and will issue certificates for payment in amounts as provided elsewhere herein.

The Engineer may provide one or more full-time project representatives to assist the Engineer in carrying out his responsibilities at the Work site. The duties, responsibilities and limitations of authority of the Engineer as the City's representative during construction as set forth herein will not be modified or extended without written consent of the City, the Contractor and the Engineer.

The Engineer will not be responsible for the acts or omissions of the Contractor, any Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.

The Engineer shall decide the meaning and intent of any portion of the specifications, and of any plans or Drawings, where the same are found to be obscure or be in dispute; he shall have the right to correct any errors or omissions therein when such corrections are necessary to further the intent of said specifications, plans or Drawings; the action of such correction shall be effective from the date that the Engineer gives due notice thereof.

Any differences or conflicts, which may arise between the Contractor and other contractors with the City in regard to their work, shall be adjusted as determined by the Engineer.

Neither the Engineer's authority to act under this article or elsewhere in the Contract nor any decision made by the Engineer in good faith either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the Engineer to the Contractor, any Subcontractor, any manufacturer, fabricator, supplier or distributor, or any of their agents or employees or any other person performing any of the Work.

Whenever in the Contract the terms "as ordered", "as directed", "as required", "as allowed", or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives of like effect or import are used, to describe requirements, direction, review or judgement of the Engineer as to the Work, it is intended that such requirement, direction, review, or judgement will be solely to evaluate the Work for compliance with the Contract (unless there is a specific statement indicating otherwise). The use of any such term or adjective never indicates that the Engineer shall have authority to supervise or direct performance of the Work or authority to undertake responsibility contrary to the provisions of this General Condition.

GC-16. CITY'S RIGHT OF INSPECTION:

The City shall appoint or employ such engineers or inspectors as the City may deem proper to inspect the materials furnished and the work performed, and to determine whether said materials are furnished and work is performed in accordance with the Drawings and specifications therefor. The Contractor shall furnish all reasonable aid and assistance required by the Engineer, or by the Inspectors, for the proper inspection and examination of the Work and all parts thereof, even to the extent of uncovering or taking out portions of finished Work. Should the Work thus exposed or examined prove satisfactory, the uncovering or removing and the replacing of the covering or the making good of the parts removed shall be paid for by the City; however, should the Work exposed or examined prove unsatisfactory, the uncovering, taking out, replacing, and making good shall be at the expense of the Contractor.

Such inspection shall not relieve the Contractor of any obligation to perform said Work strictly in accordance with the Drawings and specifications or any modifications thereto as herein provided; and the Work not so constructed shall be removed and made good by the Contractor at his own expense; and free of all expense to the City, whenever so ordered by the Engineer, without reference to any previous oversight or error in inspection.

GC-17. SUSPENSION OF WORK ON NOTICE:

The Contractor shall delay or suspend the progress of the Work or any part thereof whenever he shall be so required by written order of the City or Engineer, and for such period of time as it or he shall require. Any such order of the City or Engineer shall not modify or invalidate in any way the provisions of this Contract.

GC-18. QUALITY OF WORKMANSHIP:

All workmanship shall be the best possible, both as to material and labor that could be demanded by these Contract Documents or if no specific description is given, it is understood that the best quality is required.

GC-19. SATURDAY, SUNDAY, HOLIDAY, AND NIGHT WORK:

No work shall be done between the hours of 7:00 p.m. and 7:00 a.m., nor on Saturday, Sunday, or legal holidays without the written approval or permission of the Engineer in each case, except such work as may be necessary for the proper care, maintenance, and protection of work already done, or of equipment, or in the case of an emergency.

GC-20. LAWS AND ORDINANCES:

The Contractor shall keep himself fully informed of all existing and current regulations of the City, county, state and national laws which in any way limit or control the actions or operations of those engaged upon the Work, or affecting the materials supplied to or by them. The Contractor shall at all times observe and comply with all applicable ordinances, laws, and regulations; and shall protect and indemnify the City and the City's employees and agents against any claims or liability arising from or based on any violations of the same.

The contractor certifies that it and all of its Subcontractors to be used in the performance of the Contract are in compliance with 25 O.S. Sec. 1313 and participate in the Status Verification System. The Status Verification System is defined in 25 O. S. Sec. 1312 and includes but is not limited to the free Employee Verification Program (E-Verify) available at www.dhs.gov/E-Verify.

The Contractor shall take the necessary actions to ensure its facilities are in compliance with the requirements of the Americans with Disabilities Act (ADA). It is understood that the program of the Contractor is not a program or activity of the City. The Contractor agrees that its program or activity will comply with the requirements of the ADA. Any costs of such compliance will be the responsibility of the Contractor. Under no circumstances will Contractor conduct any activity which it deems to not be in compliance with the ADA.

GC-21. TAXES AND PERMITS:

Unless otherwise specified in these Contract Documents, the Contractor shall pay all sales, use, and other taxes that are lawfully assessed against the City or Contractor in connection with the Work included in this Contract and shall obtain all licenses, permits, and inspections required for the Work. Contractor shall comply with all zoning ordinances of the City, as provided in the Tulsa Zoning Code, Title 42 Tulsa Revised Ordinances and conform with all zoning requirements established by the Tulsa Metropolitan Area Planning Commission and the Board of Adjustment. Contractor can call the Indian Nations Council of Governments (INCOG) at (918) 584-7526, to determine if any zoning requirements must be met.

GC-22. PROTECTION OF PROPERTY:

The protection of City, state, and government monuments, street signs, and other City property is of prime importance, and if the same be damaged, destroyed, or removed, they shall be repaired, replaced, or paid for by the Contractor.

Work occurring within secured facilities will require the Contractor to obtain City of Tulsa issued ID badges for all employees and subcontractors requiring facility gate access. The Contractor will be responsible for all coordination with City Security as necessary to process background checks and issue badges. The City of Tulsa has the right to deny access to any individual based on evaluation of background check.

GC-23. PATENT RIGHTS:

All fees for any patented invention, article, or arrangement that is based upon, or in any manner connected with the construction, erection, or maintenance of the Work or any part thereof embraced in the Contract and these specifications, shall be included in the price stipulated in the Contract for said Work. The Contractor shall protect and hold harmless the City against any and all demands of such fees or claims.

GC-24. DEFENSE OF SUITS:

In case any action at law or suit in equity is brought against the City or any employer, officer, or agent thereof, for or on account of the failure, omission or neglect of the Contractor to do and perform any of the covenants, acts, matters, or things required by this Contract to be done or performed, or for injury or damage caused by negligence or willful act of the Contractor or his Subcontractors or his or their agents, or in connection with any claim or claims based on the lawful demands of Subcontractors, workmen, material men, or suppliers of machinery and parts thereof, equipment, power tools, and supplies incurred in the fulfillment of this Contract, the Contractor shall indemnify and save harmless the City and its employees, officers, and agents, and the Engineer and any employees, officers and agents thereof, of and from all losses, damages, costs, expenses, judgements, or decrees whatsoever arising out of such action or suit that may be brought without requiring said parties to give any notice thereof.

The City may suspend payments of any sum due or to become due for work done on this Contract until such claims, suits, actions, or proceedings are final and liability has been determined. The amount of such damages or liability shall be deducted from sums due or to become due on this Contract. The City will retain the sums mentioned above until the Contractor furnishes evidence that satisfactory settlement has been made. Any action taken by the City shall not excuse the Contractor for failure to perform this Contract or bar the City from legal action to recover from the Contractor the amount of damages or liability suffered in excess of the amount retained.

The Contractor shall furnish the City with satisfactory evidence upon demand that all persons who have done work on the Contract or furnished materials for the Contract have been paid in full. If such evidence is not furnished, the amount necessary to pay the lawful claims may be retained until such evidence is furnished, or if such evidence is not furnished, the City may apply any sums retained to valid claims and charge the amounts disbursed, including the costs of any action that may be necessary to prove or disprove the claims against the Contractor.

GC-25. REMOVAL OF CONDEMNED MATERIALS AND STRUCTURES:

The Contractor shall remove from the site of the Work, without delay, all rejected and condemned materials or structures of any kind brought to or incorporated in the Work, and upon his failure to do so, or to make satisfactory progress in so doing, within forty-eight (48) hours after the service of a written notice from the Engineer ordering such removal, the condemned material or structures may be removed by the City and the cost of such removal be taken out of the money that may be due or may become due the Contractor by virtue of this Contract. No such rejected or condemned material shall again be offered for use by the Contractor under this or any other Contract under this project.

GC-26. EXTRA WORK:

If a modification increases the amount of the Work, and the added Work or any part thereof is of a type and character which can properly and fairly be classified under one or more Unit Price items of the Bid Form, then the added Work or part thereof shall be paid for according to the amount actually done and at the applicable Unit Price. Otherwise, such work shall be paid for as hereafter provided.

Claims for extra work will not be paid unless the City authorized the work covered by such claims in writing. The Contractor shall not have the right to take action in court to recover for extra work unless the claim is based upon a written order from the City. Payments for extra Work will be based on agreed lump sums or on agreed Unit Prices whenever the City and the Contractor agree

upon such prices before the extra Work is started.

For the purpose of determining whether proposed extra work will be authorized, or for determining the payment method for extra work, the Contractor shall submit to the Engineer, upon request, a detailed cost estimate for proposed extra work. The estimate shall show itemized quantities and charges for all elements of direct cost. The cost shall include only those extra costs for labor and materials expended in direct performance of the extra work and may include:

- (a) **Labor.** For all labor and foremen in direct charge of the specific operations, the Contractor shall receive the rate of wage (or scale) agreed upon in writing before beginning work for each and every hour that said labor and foremen are actually engaged in such work. An amount equal to fifteen (15) percent of the sum of the above items will also be paid the Contractor.
- (b) **Bond, Insurance, and Tax.** For property damage, liability, and workmen's compensation insurance premiums, unemployment insurance contributions and social security taxes on the force account work, the Contractor shall receive the actual cost, to which cost no percentage will be added. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such bond, insurance, and tax.
- (c) **Materials.** For materials accepted by the Engineer and used, the Contractor shall receive the actual cost of such materials delivered on the Work site, including transportation charges paid by him (exclusive of machinery rentals as hereinafter set forth), to which cost ten (10) percent will be added.
- (d) **Equipment.** For any machinery or special equipment (other than small tools), including fuel, lubricants and transportation costs, the use of which has been authorized by the Engineer, the Contractor shall receive the rental rates agreed upon in writing before such work is begun for the actual time that such equipment is in operations on the Work, as provided in the ODOT Subsection 109.04 (b3), to which rental sum no percentage will be added.
- (e) **Miscellaneous.** No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

The form on which field cost records are kept, the construction methods and the type and quantity of equipment used shall be submitted to the Engineer for approval.

Construction equipment which the Contractor has on the Work site and which is of a type and size suitable for use in performing the extra Work shall be used. The hourly rental charges for equipment, including all insurance, taxes, fuel, and operating costs, shall not exceed twelve (12) percent of the latest applicable Associated Equipment Distributors published monthly rental rates and shall apply to only the actual time the equipment is used in performing the extra Work.

When extra Work requires the use of equipment which the Contractor does not have on the Work site, the Contractor shall obtain the approval of the Engineer before renting or otherwise acquiring additional equipment. The rental charges for the additional equipment shall not exceed the latest applicable Associated Equipment Distributors published rental rates.

The Contractor shall file with the Engineer, certified lists in duplicate, of any equipment and the schedule of pay rates for common and semi-skilled labor and operators of various classes which are intended to be used in performing the Work covered by this Contract. These rates shall be subject to the review of the Engineer. This information will be used by the Engineer for computation of extra work as mentioned above; however, if the Contractor fails to file these lists with the Engineer prior to starting any Work covered by this Contract, then the Engineer's computation shall be based on average wages and rates paid on City work.

GC-27. PAYMENT FOR CONTRACTOR'S PLANT AND MISCELLANEOUS TEMPORARY WORK:

For providing plant, tools, and equipment, and for furnishing, erecting, maintaining, and removing scaffolding and construction plant, construction roads, camps, sanitary conveniences, temporary water supply, trestles, dewatering and other temporary works, the Contractor shall receive no direct payment, but compensation for them shall be considered as having been included in the prices stipulated for the appropriate items.

GC-28. BASIS OF PAYMENT FOR ITEMS OF WORK:

The Contractor shall be paid for all Work performed under the Contract based on the Engineer's computations of as-built quantities and the Contractor's Unit Price or Lump Sum bid per item. This payment shall be full compensation for furnishing all supplies, materials, tools, equipment, transportation, and labor required to do the Work; for all loss or damage, because of the nature of the work, the action of the elements or any unforeseen obstruction or difficulty which may be encountered in the performance of the Work, and for which payment is not specifically provided; for all expense incurred by or because of any suspension or discontinuance of all or any part of the Work; and for faithfully completing the Contract according to the Drawings and specifications and requirements of the Engineer.

GC-29. PAYMENTS:

(1) Partial: If the work is progressing in good and workmanlike manner and if the Contractor is faithfully carrying out the terms of this Contract, approximate estimates of the work done shall be made by the Engineers between the first and fifteenth of each calendar month, including labor actually performed and supplies or materials actually used or incorporated in the Work, and an allowance will be made for acceptable materials satisfactorily delivered, stored and secured on the site of the Work in such amount as can be incorporated in the Work within a reasonable time. The City shall have a lien as owner on any materials stored on the site of the Work.

Each partial estimate for payment shall contain or have attached an affidavit in the form found in this book of specifications, as required by law.

The Contractor shall submit with each partial pay estimate a complete list of vendors and suppliers with itemized purchases and invoices from each vendor. Each list shall contain the name of the contractor or Subcontractor ordering the materials or supplies, and the specific use or placement of each of the materials purchased by the City of Tulsa for this project in accordance with Article IIB of the Contract. At the direction of the Contractor, the City of Tulsa will withhold retainage in the amount of 5% on materials and supplies to be purchased under the terms of this Contract.

Each month that work is performed for which payment is due, the Contractor shall submit to the Engineer an application for such payment, provided said payment is not less than \$1,000.00, and, if required, receipts or other vouchers from Subcontractors showing his payments to them shall be submitted.

Each estimate shall be of the approximate value of all work performed and materials in place or delivered to the Work site, determined as aforesaid from the beginning of this contract to the date fixed for the current estimate, from which shall be deducted five percent (5%) or a lesser amount approved by the City, and, in addition thereto, all previous payments and all other sums withheld under the foregoing provisions of this Contract, the remainder to become due and payable; after the estimate has been reviewed and signed by the Engineer the City shall pay the estimate in the regular manner in the amount determined as due unless it shall be known by the City that there is good reason under the terms of this Contract for withholding same.

When the Contractor has completed Work constituting more than fifty percent (50%) of the total Contract amount, the retainage will continue at two and one-half percent (2.5%) for the balance

of the remaining work; provided, however, that the City or its duly authorized representative has determined that satisfactory progress is being made and upon approval by the Surety.

The Contractor may withdraw any part or the whole of the amount which has been retained from partial payment to the Contractor pursuant to the terms of Contract, upon depositing with or delivery to the City:

- (1) United States Treasury Bonds, United States Treasury Notes, United States Treasury bills, or
- (2) General Obligation Bonds of the State of Oklahoma, or
- (3) Certificates of Deposit from a state or national bank having its principal office in the State of Oklahoma.

No retained amount shall be withdrawn which would represent an amount in excess of the market value of the securities at the time of deposit or of the par value of such securities, whichever is lower.

All partial estimates are subject to correction in the final estimate.

(2) Final Payment:

When this contract, in the opinion of the Engineer, shall be completely performed on the part of the Contractor, the Engineer shall proceed with all reasonable diligence to measure up the Work and shall make out the final estimate for the same, and shall, except for cause herein specified, give to the Contractor, within thirty (30) days after receiving said certificate, an order on the City for the balance found to be due, excepting therefrom such sum or sums as may be lawfully retained under any of the provisions of the Contract; PROVIDED, that nothing herein contained shall be construed to affect the rights of the City hereby reserved to reject the whole or any portion of the aforesaid Work should the said estimate and certificate be found or known to be inconsistent with the terms of this Contract or otherwise improperly given; PROVIDED, that if, in case after the work hereunder has been accepted and final payment made, it shall be discovered that any part of the Contract has not been fully performed or has been done in an improper or faulty manner, the Contractor shall immediately remedy such defect, or, in case of neglect to do so within a reasonable time after notice thereof, shall be liable for and shall pay to the City the cost of remedying such defect or a sum equal to the damages sustained thereby, as the City shall elect, and the acceptance of and final payment for the Work shall be no bar to suit on any bond against any principal or principals, or Surety or Sureties, or both, given for the due performance of the Contract, or for the recovery of such cost or the equivalent of such damage.

The City will pay to the Contractor interest at the rate of three-fourths percent (3/4%) per month on the final payment due the Contractor. For lump sum contracts, the interest shall commence thirty (30) days after the Work under the Contract has been completed and accepted and all required material certifications and other documentation required by the Contract have been furnished the City by the Contractor and shall run until the date when the final payment or estimate is tendered to the Contractor. For contracts bid by Unit Prices, the interest will commence sixty (60) days after the above conditions are satisfied. When contract quantities or the final payment amount is in dispute, the interest-bearing period will be suspended until the conclusion and settlement of the dispute.

GC-30. CONTRACTOR REIMBURSEMENT FOR SURETY BOND:

For contracts of \$1,000,000.00 or more, the Contractor may receive reimbursement for the cost of the surety bonds after issuance of a work order. To receive reimbursement, the Contractor shall submit a standard partial payment form and affidavit, and a copy of the surety bond invoice. The final partial pay estimate will be reduced by the amount paid for surety bond reimbursement.

GC-31. RELEASE OF LIABILITY AND ACCEPTANCE:

The acceptance by the Contractor of the final payment shall operate as, and shall be a release to the City and every employee, officer and agent thereof, from all claims and liability to the Contractor for anything done or furnished for or relating to the Work, or for any act or neglect of the City or of any person relating to or affecting the Work, and, following such acceptance, no person, firm, or corporation other than the signer of this Contract as Contractor, will have any interest hereunder, and no claim shall be made or be valid, and neither the City nor any employees, officers, or agents thereof shall be liable or be held to pay any money, except as herein provided.

It shall be the duty of the Engineer to determine when the Work is completed and the Contract fulfilled, and to recommend its acceptance by the City. The Work herein specified to be performed shall not be considered finally accepted until the City has accepted all the Work.

GC-32. RIGHT OF CITY TO TERMINATE CONTRACT:

If the Work to be done under this Contract shall be abandoned by the Contractor, or if this Contract shall be assigned by him otherwise than as herein provided, or if the Contractor should be adjudged bankrupt, or if a general assignment of his assets be made for the benefit of his creditors, or if a receiver should be appointed for the Contractor or any of his property; or if at any time the Engineer shall certify in writing to the City that the performance of the Work under this Contract is being unnecessarily delayed, or that the Contractor is executing the same in bad faith or otherwise not in accordance with the terms of the Contract; or if the work be not substantially completed within the time named for its completion, or within the time to which such completion date may be extended, then the City may serve written notice upon the Contractor and his Surety of said City's intention to terminate this Contract, and unless within five (5) days after service of such notice upon the Contractor, a satisfactory arrangement is made for the continuance of the Contract, this

Contract shall cease and terminate. In the event of such termination, the City shall immediately serve notice upon the Surety and Contractor, and the Surety shall have the right to take over and complete the Work, provided, however, that if the Surety does not commence performance thereof within fifteen (15) days from the date of said notice of termination, the City may take over the Work and perform same to completion, by Contract or otherwise, for the account and at the expense of the Contractor, and the Contractor and his Surety shall be liable to the City for any and all excess cost sustained by the City by reason of such performance and completion. In such event the City may take possession of and utilize in completing the Work, all such materials, equipment, tools, and plants as may be on the site of the Work and necessary therefor. The Contractor shall not receive any other payment under the Contract until said Work is wholly finished, at which time, if the unpaid balance of the amount to be paid under the Contract shall exceed the expense incurred by the City in finishing the Work as aforesaid, the amount of the excess shall be paid to the Contractor, but if such expense shall exceed the unpaid balance, the Contractor shall pay the difference to the City.

GC-33. ADMINISTRATIVE COSTS AND FEES:

Cash Improvements - In the event the improvements are to be paid for in cash, the costs and fees for publication, engineering, filing, recording, abstracting, acquisition of easements, flushings, and pipe testing, shall be paid by the City unless otherwise provided for in these Contract Documents.

Assessment Improvements: In the event the improvements are to be paid for by the issuance of special assessment bonds, the costs and fees for publication, engineering, filing, recording, abstracting, acquisition of easements, flushing, pipe testing, and other authorized costs shall be added to the contract price and paid for in the same manner as the other Work included in this Contract. The Contractor shall pay the City the amount of said charges before the execution and delivery of the special assessment bonds or other payments. If the Contractor fails, neglects, or refuses to pay said charges within thirty (30) days after the bonds are ready for delivery, he shall pay the City interest at the rate of seven percent (7%) per annum and shall be liable for same in a civil suit. The Contractor shall pay the pipe testing fees directly to the testing laboratory.

GC-34. PAYMENT OR ACCEPTANCE NOT A WAIVER BY CITY:

Neither acceptance by the City or the Engineer or any employee of either nor any order by City for the payment of money, or the payment thereof, nor any taking of possession by City, nor the granting of any extension of time, shall operate as a waiver of any rights or powers of the City hereunder, and in the event that after the Work hereunder has been accepted and final payment made, it should be discovered that any part of this Contract has not been fully performed, or has been done in a faulty or improper manner, the Contractor shall immediately remedy such defect, or in the event of neglect to do so within a reasonable time after notice thereof, shall be liable for and shall pay to City the cost of remedying such defect, or a sum equal to the damage caused thereby, as City may elect. The acceptance of the Work or final payment therefor shall be no bar to suit against the Contractor or Surety, or both.

GC-35. CONTRACTOR'S OBLIGATION AFTER ACCEPTANCE:

Contractor further agrees, without cost other than is specially provided for in this Contract, at any and all times during one (1) year next following the completion and final acceptance of the Work embraced in this Contract, without notice from City, to repair or rework any work that fails to function properly due to defective material or workmanship and to indemnify, save harmless and defend the City from any and all suits and actions of every description brought against City for, or on account of injuries or damages alleged to have been received or sustained by any party or parties by reasons of, or arising out of the failure of Contractor to repair or rework any work where such failures have occurred, which said injuries or damages are alleged to have been received or incurred within one (1) year from the final acceptance of the Work hereunder, and to pay any and all judgements that might be rendered against City in any suits and actions, together with such expenses or attorney fees expended or incurred by City in the defense thereof, and Contractor hereby expressly waives any notice that might by law be required to be given to them by City of any defect, break, settling, or failure or of any other condition that might be the cause of injury or damage to any person on account of which a claim or suit might be made or filed against City, or a judgement taken for damages against City. It is expressly agreed that the acceptance of the Work by City shall constitute no bar against any person injured or damaged by the failure of the Contractor to perform all of his covenants and agreements hereunder from maintaining an action against the Contractor, or against City from enforcing its rights against the Contractor hereunder.

GC-36. NOTICES:

Any notices or other communications hereunder may be given to Contractor at the address listed in the Proposal, to the Surety at the office of the Attorney-in-Fact signing the bond or at Surety's home office address on file with the Insurance Commissioner of the State of Oklahoma, and to City in care of the Deputy Director of Public Works, or at such other place as may be designated in writing. The delivery to such address, or depositing in any mailbox regularly maintained by the Post Office, of any notice, letter, or other communication to the Contractor, shall be deemed sufficient service thereof, and the date of said service shall be the date of such delivery or mailing.

GC-37. RELATION TO OTHER CONTRACTORS:

Nothing herein contained and nothing marked upon the Drawings shall be interpreted as giving the Contractor exclusive occupancy of the territory or right-of-way provided. The City and its employees, officers, and agents for any just purpose, and other contractors of the City for any purpose required by their respective contracts, may enter upon or cross this territory or occupy portions of it or take materials therefrom as directed or permitted. When two or more contracts are being executed at one time on the same or adjacent land in such manner that the work on one contract may interfere with the work on another, the Engineers shall decide which contractor shall cease work and which shall continue, or whether the work on both contracts shall progress at the same time and in what manner. When the territory of one contract is the necessary or convenient means of access for the transportation or movement of men, machines, or appliances for the execution of another contract, such privilege of access or any other reasonable privilege may be granted by the Engineers to the contractor desiring it, to the extent, amount, in the manner

and at the time permitted. Any decision regarding the method or time of conducting the work or the use of the territory shall not be made the basis of claims for delay or damage except as otherwise stipulated. The Contractor shall not cause any unnecessary hindrance or delay to any other contractors on the premises, and shall bear all damages done to the work of such other contractors by him or by his employees.

GC-38. PARTIAL OCCUPANCY AND USE:

The City, upon advance written notification to the Contractor, shall have the right to occupy and use any completed or partially completed portions of the Work site when such occupancy and use are in the City's best interest, notwithstanding completion of the entire project.

Such partial occupancy and use shall be upon the following terms:

- a. The Engineer shall make an inspection of the portion or portions of the Work concerned, and report to the City his findings as to the acceptability and completeness of the Work. The Engineer's report shall include a list of items to be completed or corrected before final payment.
- b. The City, upon acceptance of the Engineer's report, shall give written notice to the Contractor of the City's intention to occupy and use said portions of the Work site. The City's notice shall include a copy of the Engineer's report, shall clearly identify the portions of the Work site to be occupied and used, and shall establish the date of said occupancy and use.
- c. From the date thus established, the City shall assume all responsibilities for operation, maintenance, and the furnishing of water, gas, and electrical power for the portions of the Work site thus occupied and used. The City shall have the right to exclude the Contractor from those portions of the Work site but shall provide the Contractor reasonable access to complete or correct necessary items of Work.
- d. The one-year guarantee required by the General Conditions shall not begin until completion and final acceptance of the entire project, except as to any items of mechanical or electrical equipment such as pumps, blowers, process equipment, instrumentation, controls, metering equipment, heating, and ventilating equipment and similar items having movable or operable components, and any of which are thus used by the City. For said equipment, the one-year warranty shall start from the date established in the written notice from the City.
- e. Occupancy or use of any space in the Work site shall not constitute acceptance of Work not performed in accordance with the Contract, nor relieve the Contractor of liability to perform any Work required by the Contract but not completed at the time of said occupancy and use.
- f. The Contractor shall not be held responsible for normal wear and tear or damage resulting from said occupancy, except to the extent that such damage is covered by the one-year guarantee.
- g. The partial occupancy and use of any portions of the Work site by the City shall not constitute grounds for claims by the Contractor for release of any amounts retained from payments under the provisions of the Contract. The retained amounts will not be due until completion of the entire project for final acceptance and final payment, as set forth in the General Conditions.

SPECIAL
PROVISIONS

SPECIAL PROVISION
SUPPLEMENTAL CONTRACT REQUIREMENTS
PROJECT NO. SP 21-6
FRED JOHNSON PARK REHABILITATION

1. Apparent lowest, responsible bidder shall return their signed contract documents (including bonds and insurance) to the City of Tulsa, Contract Administration Section 175 E. 2nd Street, 13th Floor, OK 74103 within fifteen (15) days after notification by the City.
2. If the apparent lowest, responsible bidder provides their signed contract documents (including bonds and insurance) and the contract is executed by the City, the Pre-Construction Conference for this project will be held within sixty (60) days after bid opening.
3. The Notice to Proceed or written work order (NTP) will be issued in the normal time period (approximately within ten (10) days of the Pre-Construction Conference).

The City will grant up to **ninety (90) days** for a delayed (flexed) NTP after the Pre-Construction Conference. No delayed (flexed) NTP above this amount will be granted unless approved by the City Engineer or designee.

4. There will be no additional compensation due to the use of a delayed (flexed) NTP.
5. This Special Provision does not alter the Public Meeting requirements (and public notice) defined in the General Conditions.

SPECIAL PROVISIONS
INSURANCE REQUIREMENTS

In reference to Ordinance No. 24616 Adoption of State Specification for Highway Construction, Section 107.12 shall be modified as follows:

The CONTRACTOR (and any subcontractors) shall carry and keep in force during this Contract, policies of insurance issued by an insurer authorized to transact business in Oklahoma in minimum amounts as set forth below or as required by the laws of the State of Oklahoma. The CONTRACTOR shall also furnish an Owner's Protective Policy in the same amounts naming the City of Tulsa as the assured, issued by the same insurance company as the CONTRACTOR'S liability coverage and indemnifying the City of Tulsa against any and all actions, claims, judgments or demands arising from injuries of any kind and character sustained by any person or persons because of work performed by the CONTRACTOR.

General Liability Insurance with a bodily injury and property damage combined single limit of not less than \$1,000,000.00 for each occurrence.

Employer's Liability and Workmen's Compensation in the amounts as required by law.

The CONTRACTOR shall provide proof of such coverage:

- (a) By providing Certificate(s) of Insurance prior to the execution of this contract; and
- (b) By submitting updated Certificate(s) of Insurance with each and every subsequent request for payment. The Certificate(s) should show that the policies are current and should be dated within 30 days of payment request.

The CONTRACTOR shall not cause any required insurance policy to be cancelled or permit it to lapse. If the CONTRACTOR cancels, allows to lapse, fails to renew or in any way fails to keep any required insurance policy in effect, the City will suspend all progress and/or final payments for the project until the required insurance is obtained. Further, a CONTRACTOR who fails to keep required insurance policies in effect may be deemed by the City to be in breach of contract, ineligible to bid on future projects, and/or ineligible to engage in any new contracts.

The Contractor shall execute and furnish a Statutory Bond for the protection of laborers, mechanics, and material men in a sum equal to one hundred percent (100%) of the contract price.

The Contractor shall execute and furnish a Performance Bond in a sum equal to one hundred percent (100%) of the contract price.

The Contractor shall execute and furnish a Maintenance Bond in a sum equal to one hundred percent (100%) of the contract price.

Prior to doing blasting, the Contractor shall furnish a Certificate of Insurance, which shall certify that any damage caused by blasting is within the coverage of the Contractor's liability insurance to the full limits thereof.

All bonds and insurance must be executed by a company licensed to do business in the State of Oklahoma and must be acceptable to the City.

SPECIAL PROVISIONS GENERAL

1. Work Days: All work to be completed within **298 calendar days** for the Base Bid.
2. No work shall be done between the hours of 7:00 p.m. and 7:00 a.m., nor on Saturday, Sunday, or legal holidays without the prior written approval or permission of the Engineer in each case, except such work as may be necessary for the proper care, maintenance, and protection of work already done, or of equipment, or in the case of an emergency.
3. Traffic Control: All work shall be done in cooperation with the City to establish, install, maintain and operate complete, adequate and safe traffic control during the entire construction period. Barricades, signs, lights, flags and all other traffic control devices shall meet the requirements and specifications of the Standard Drawings entitled "Typical Applications of Traffic Control Devices" and shall be approved by the Traffic Engineer of the City of Tulsa. Two-way traffic shall be maintained at all times, unless otherwise approved by the Engineer. All contractors shall contact the City of Tulsa Traffic Engineering Section before removing or replacing traffic devices, detector loops and street signs. A traffic plan must be submitted for any temporary street closure at least 2 working days prior to planned closing.
4. Contractor shall provide an acceptable 10' straightedge for this Project. All transverse joints shall be straight edged and approved by the Engineer. Surface elevations will meet ODOT 401.04 and all other contract requirements.
5. The Engineer may do quality assurance testing in addition to that performed by the Contractor. The Engineer or a testing laboratory designated by the Engineer will do any testing for quality assurance. The City will pay all costs of quality assurance.
6. Full depth sawing of patches is required. This area to be removed shall be marked by the Contractor under the direction of the Engineer. The Contractor will provide personnel and equipment for marking of the patches as directed by the Engineer. Cost of full depth sawing shall be included in bid item for patching areas.
7. Areas to be patched shall be delineated in a straight-line geometric pattern. When completed, the patch shall be level and provide a smooth riding surface. Portland Cement Concrete patches will be protected from all traffic for a minimum period of 24 hours before removal of protective devices. No open excavations will be left overnight.
8. All asphalt patch work will require that asphalt rollers and an asphalt laydown machine be available for use on the job as directed by the Engineer.

9. Contractor will be required to employ the use of an Automatic Grade Referencing System. The equipment shall be capable of accurately and automatically establishing grades along each edge of the machine by referencing the existing pavement by means of a ski or joint matching shoe, or from an independent grade control. Minimum length of ski shall be 40'.
10. Prior to application of tack coat, the street shall be blown clean with compressed air to the satisfaction of the Engineer.
11. The tack coat must be uniformly distributed and adequately cured prior to beginning the overlay.
12. Contractor shall be responsible for cleanup and/or removal of any excessive overspray of any tack coat material to the satisfaction of the Engineer.
13. Debris from routing of cracks and cold milling shall be swept and vacuumed from the street to the satisfaction of the Engineer.
14. Contractor will be responsible for preparation and distribution of a written notice to residents within 48 hours of beginning milling and overlay operations. Costs associated with this requirement will be included in other items of work.
15. Contractor shall provide a continuous work effort towards total completion of the work in an area prior to moving to a different location.
16. No masonry structures shall be used in street right of way. Either precast or cast-in-place structures shall be used.
17. No lifting holes will be allowed in any reinforced concrete pipes or reinforced concrete boxes.
18. No fly ash is allowed to be used on this project.
19. The Contractor certifies that it and all of its Subcontractors to be used in the performance of the Contract are in compliance with 25 O.S. Sec. 1313 and participate in the Status Verification System. The Status Verification System is defined in 25 O. S. Sec. 1312 and includes but is not limited to the free Employee Verification Program (E-Verify) available at www.dhs.gov/E-Verify.
20. **Driveways.** Access to properties and businesses adjacent to the right of way must be provided and maintained at all times unless otherwise directed/approved by the Engineer. The Contractor will contact the business or property owner at least 5 days in advance of any driveway closure. Driveways and patches in front of driveways, which are removed, shall not be left unusable overnight. If concrete cannot be placed the same day as removal, the Contractor shall furnish screening or other suitable aggregate material to maintain temporary access until concrete

can be placed. The cost of placing and removing the material for temporary access shall be included in the pay item for Concrete Driveway (High Early Strength). **Failure to leave any driveway usable will subject the Contractor to a \$1000.00 per day fine for each and every calendar day that the driveway remains non-useable.** The only exception for a driveway to be non-useable is to allow for curing time for concrete. Cure time will not exceed 48 hours.

21. Driveways in excess of 18-feet in width shall be constructed in half-sections and access shall be maintained at all times.
22. Contractor shall prepare and present a schedule and plan for lane and driveway closures throughout the project. The Contractor shall include in the plan, driveway signage for local business access. Payment for signs will be included under the pay item "**Signage for Local Business Access**" and will be paid for by the square foot. Coordination with the City of Tulsa and local business operators shall be required before a driveway schedule and plan is approved.
23. Contractor shall coordinate with the City of Tulsa and local business operators to identify opportunities to perform weekend or "after business hours" construction on driveways to minimize impacts to the area.
24. Local and through traffic shall be maintained at all times through the project unless otherwise permitted by the Engineer. All public and private streets shall be accessible at all times. All detours, horizontal traffic movements, etc. are directly related to the sequence of work; therefore, the Contractor shall proceed with his construction operation in conformity with the details shown on the plans and as required by this special provision.
25. Traffic must be handled appropriately through the entire project during construction and it shall be the responsibility of the Contractor to provide for the safety and comfort of the traveling public at all times. The Contractor shall be required to give the traveling public at least **five (5) days** advance notice of any lane and/or street closures.
26. The Contractor may propose/recommend modifications to the sequence of work for consideration by the Engineer. Any major recommended modification by the contractor shall include any changes to the various pay items, impact to traffic, and effect of overall project in time and cost, etc. The Contractor shall not proceed with any construction operations based on a revised phase/sequence until the Contractor obtains written approval from the Engineer.

27. Two lanes shall remain open to traffic, one in each direction, throughout all phases of construction, unless otherwise approved/directed by the Engineer. Left turn lanes shall remain open to traffic throughout all phases of construction, unless otherwise approved/directed by the Engineer. Transitions from pavement elevations through construction areas to access driveways or intersections shall be the Contractor's responsibility. Contractor shall maintain signs and markings on a continuous basis.

SPECIAL PROVISIONS
TIME FOR COMPLETION

1. The work shall commence within ten days from and after the date of a written work order from the City. The Contractor agrees that the work shall be prosecuted regularly, diligently and uninterruptedly at a uniform rate of progress so as to ensure completion within the number of days after the day on which the work order is issued. If the Contractor shall fail to complete all work within the time specified, then the Contractor agrees to pay the City, not as a penalty, but as liquidated damages for Breach of Contract, the Sum of **Two Thousand Five Hundred Dollars (\$2,500.00)** for each and every calendar day for failure to complete all work within the time specified. The said amount is fixed and agreed upon because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the City would in such event sustain. It is expressly understood and agreed that the said time for completion of the work described herein is a reasonable time for the completion of same.
2. If the Contractor shall fail to complete reconstruction of a segment of roadway within **thirty (30)** days of beginning the reconstruction operation, then the Contractor agrees to pay the City, not as a penalty, but as liquidated damages for such breach of contract, the sum of **Two Thousand Five Hundred Dollars (\$2,500.00)** for each and every calendar day of failure to complete the work after the specified time. The said amount is fixed and agreed upon because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the City would in such event sustain. This time constraint applies only to roadways to be reconstructed and includes all subsidiary work items required to complete the reconstruction. Subsidiary items not required to complete the reconstruction are not subject to this time constraint.
3. If the Contractor shall fail to complete overlaying of any separately milled segment of roadway within **twenty (20)** days of beginning the milling operation, then the Contractor agrees to pay the City, not as a penalty, but as liquidated damages for such breach of contract, the sum of **Two Thousand Five Hundred Dollars (\$2,500.00)** for each and every calendar day of failure to complete the work after the specified time. The said amount is fixed and agreed upon because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the City would in such event sustain. The City will authorize when milling is to be done based on weather conditions. This time constraint applies only to segments to be milled and includes all subsidiary work items required to complete the overlay. Subsidiary items not required to complete the overlay are not subject to this time constraint.
4. The Contractor shall commence work within 24 hours of traffic control devices being established at the project location. If the Contractor shall fail to commence work within 24 hours of traffic control devices being established at the project

location, then the Contractor agrees to pay the City, not as a penalty, but as liquidated damages for such breach of contract, the sum of **One Thousand Dollars (\$1,000.00)** per lane for each day of failure to commence work after the specified time set forth. The amount is fixed and agreed upon because of the impracticability and extreme difficulty of fixing and ascertaining the actual damage the City would in such event sustain.

5. **The successful contractor shall furnish a CPM schedule per ODOT 108.03B.** If at any time, in the opinion of the Engineer, proper progress is not being maintained, such changes shall be made in the schedule of operations, which will satisfy the Engineer that the work will be completed within the period stated in the Proposal. Monthly progress meetings will be conducted to maintain coordination between all project entities.
6. The Contractor will be required to provide a full-time, onsite English speaking superintendent for this Project for direct contact with City and coordination of subcontractors. A working foreman is not acceptable as a project superintendent. The superintendent shall be required to be present at the work site whenever the Contractor or subcontractors are performing work. The superintendent shall be a representative of the Contractor with the authority to make decision. If the Contractor shall fail to provide a non-working superintendent on a day when work is being performed, then the Contractor agrees to pay the City, not as a penalty, but as liquidated damages for such breach of contract, the sum of **One Thousand Dollars (\$1,000.00)** for each and every calendar day of failure to provide a non-working superintendent at the work site. The said amount is fixed and agreed upon because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the City would in such event sustain.
7. It is further agreed that time is of the essence of each and every portion of this Contract and the specifications wherein a definite and certain time is fixed for the performance of any act whatsoever; and where under the contract an allowance of additional time for completion of any work is made, the new time fixed by such extension shall be of the essence of this Contract.
8. Should the Contractor be delayed in the final completion of the work by any act or neglect of the City of Tulsa, or of any employees of either, or by strikes, injunctions, fire or other cause or causes outside of and beyond the control of the Contractor and which, in the opinion of the Engineer, could have been neither anticipated or avoided, then an extension of time sufficient to compensate for the delay as determined by the Engineer, shall be granted by the City, provided however, that the Contractor shall give the City and the Engineer notice in writing of the cause of the delay in each case on the Extension of Time Request Form enclosed in these documents, and agrees that any such claim shall be fully compensated for by an extension of time to complete performance of the work included herein.
9. The Contractor shall submit the Extension of Time Request Form with each partial

payment application. Failure to submit the Extension of Time Request with a partial payment application shall constitute a complete waiver of any claim for time extension for the period covered by the partial payment.

10. Extension of time may be granted for delays caused by unsuitable weather. Extension of time will not be granted for delays caused by ground condition, inadequate construction force, or the failure of the Contractor to place orders for equipment or materials a sufficient time in advance to ensure delivery when needed. Any extension of time by the City shall not release the Contractor and surety herein from the payment of liquidated damages for a period of time not included in the original contract or the time extension as herein provided.
11. Failure to complete project within specified time, as set forth in the Contract, may be grounds for disqualification for future consideration for contracts with the City of Tulsa.
12. Final Acceptance of the Project will be in strict accordance with ODOT Specification 105.17– Project Completion and Acceptance and ODOT Specification 104.10– Final Cleaning Up and defined as “The date on which the Request for Action (RFA) for final payment has been signed by the Mayor of the City of Tulsa.”
13. Contract Evaluation forms will be compiled by City staff upon completion of this Project to provide a record of the Contractor’s performance for use in subsequent projects.

SPECIAL PROVISIONS
OWNER ALLOWANCE

The "Owner Allowance" may be used for various work and miscellaneous items not specifically identified in the Contract Documents with the following provisions:

- A. The allowance shall be used for cost of design and construction, including all materials, labor, equipment, profit and overhead, of work items not specifically identified in the Construction Documents, or included in original pay items bid for the contract.
- B. The allowance shall be utilized only at the discretion of the City of Tulsa. Any balance remaining at the completion of the Project will be retained by the City of Tulsa.
- C. The Contractor shall provide, to the City of Tulsa, a written request for the use of any allowance, including a schedule of values and associated backup information, including validity of need, materials, labor, equipment, and time required to perform the associated work.

Contractor shall proceed with the allowance work only after receiving written permission from the City of Tulsa. Proceeding with associated allowance work without written permission from the City of Tulsa will be at the Contractor's sole expense.

SPECIAL PROVISIONS

ENVIRONMENTAL ISSUES

1.1 ENVIRONMENTAL ISSUES

- A. Contractor shall immediately report to Owner (City of Tulsa):
 - 1. Any environmental issue, whether observed, uncovered, exposed, caused or created;
 - 2. Any activity, action or failure to act, which may be causative of increased environmental liability, degradation of the environment, or that could adversely affect or impact human health and/or safety.
- B. No action by Owner shall be deemed to relieve Contractor of these requirements.
- C. All Work performed and all Work subcontracted shall comply with all Local, State and Federal laws and regulations.
- D. Disposal of any material, including but not limited to waste, excess, spoil, or overburden, shall be done in a manner to comply with any and all Local, State and Federal laws and regulations.

END OF SECTION

SPECIAL PROVISION
FOR UTILITY RELOCATIONS
AND DESIGN ISSUES

It is the intent of this specification to provide no more than seventy-five **(75)** calendar days due to delays caused by required utility relocations and required design clarifications. Should the Contractor be delayed in the final completion of work by any utility relocation or design issue, additional days as determined by the Engineer shall be granted by the City. However, the Contractor shall give the Engineer notice in writing of the cause of the delay in each case on the Extension of Time Request Form enclosed in these documents and agrees that any claim shall be fully compensated for by the provisions of this specification to complete performance of the work. An adjustment will not be made to the contract time bid for incentive purposes.

Any time granted for utility relocations or design issues up to **(75)** calendar days will be in addition to the number of days shown in the proposal for computation of disincentive and liquidated damages.

Solomon Colors
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Springfield, Illinois 62791
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July 2009

Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, as described in *The Project Resource Manual—CSI Manual of Practice*.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all "Specifier Notes" when editing this section.

Section numbers and titles are from *MasterFormat 1995 Edition*, with numbers and titles from *MasterFormat 2004 Edition* in parentheses. Delete version not required.

SECTION 03055 (03 05 40)

CONCRETE PIGMENTS

Specifier Notes: This section covers Solomon Colors SGS Integral Colors for Ready Mix Concrete, SGS Color-Flo Liquid Colors.

Coordinate this section with the section specifying the concrete. Consult Solomon Colors for assistance in editing this section for the specific application.

PART 1 GENERAL

1.1 SECTION INCLUDES

Specifier Notes: List the materials specified in this section.

- A. Dry powder iron oxide pigments to be added to concrete.
- B. Liquid iron oxide pigments to be added to concrete.

1.2 RELATED SECTIONS

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- A. Section 03300 (03 30 00) - Cast-in-Place Concrete.
- B. Section 03330 (03 33 00) - Architectural Concrete.
- C. Section 03400 (03 40 00) - Precast Concrete.

1.3 REFERENCES

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

- A. ASTM C 33 - Standard Specification for Concrete Aggregates.
- B. ASTM C 94 - Standard Specification for Ready-Mixed Concrete.
- C. ASTM C 150 - Standard Specification for Portland Cement.
- D. ASTM C 979 - Standard Specification for Pigments for Integrally Colored Concrete.

1.4 SUBMITTALS

- A. Comply with Section 01330 (01 33 00) - Submittal Procedures.
- B. Product Data: Submit manufacturer's product data including mixing instructions.

Specifier Notes: Coordinate the following sentence with the section specifying the cement.

- C. Samples: Submit manufacturer's samples of standard concrete colors mixed with cement specified in Section 03_____.
- D. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- E. Warranty: Submit manufacturer's standard warranty.

1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications:
 - 1. Sufficient plant facilities to provide quality and quantity of materials as required without delaying progress of the Work.
 - 2. Minimum of 10 years experience in producing iron oxide pigments to be added to concrete.

Specifier Notes: Any differences in the concrete materials, batching, mixing, slump, or finishing techniques can create differences in the final concrete color. Construction of mock-ups for approval by the Architect prior to starting the work is strongly recommended.

Scope of the mock-up construction must be clearly specified. Coordinate the mock-ups paragraph with the section specifying the concrete.

Delete the following paragraph if mock-ups are not required.

B. Mock-Ups:

1. Construct mock-ups of concrete with pigments for approval of color by Architect.
2. Construct mock-ups as specified in Section 03_____.
3. Approved mock-ups shall become the standard for color, appearance and workmanship.

Specifier Notes: Delete **one** of the following **two** sentences.

4. Mock-ups shall remain as part of the completed Work.
4. Mock-ups shall not remain as part of the completed Work. At Architect's direction, demolish mock-ups and remove debris.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials in manufacturer's original unopened containers, with labels clearly identifying product name, manufacturer, color name and number, weight, and mixing instructions.
- B. Storage:
1. Store materials in clean, dry area in accordance with manufacturer's instructions.
 2. Keep containers sealed until ready for use.

Specifier Notes: Use the following paragraph when specifying SGS Color-Flo Liquid Colors.

3. Liquid Pigments:
 - a. Keep from freezing.
 - b. Keep container lids on.
 - c. Reseal partial containers.
- C. Handling:
 1. Handle materials in accordance with manufacturer's instructions.
 2. Protect materials during handling and mixing to prevent damage or contamination.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Solomon Colors, PO Box 8288, Springfield, Illinois 62791. Phone (800) 624-0261 / (217) 522-3112. Fax (800) 624-3147 / (217) 522-3145. Web Site www.solomoncolors.com. E-Mail sgs@solomoncolors.com.

2.2 CONCRETE PIGMENTS

Specifier Notes: Specify the required materials and delete the others.

A. Dry Powder Iron Oxide Pigments: SGS Integral Colors for Ready Mix Concrete.

Specifier Notes: Specify the color name and number. Consult Solomon Colors for availability of custom colors.

1. Color:
 - a. Name: _____ .
 - b. Number: _____ .
2. Compliance: ASTM C 979.
3. Material: Natural and synthetic, milled, blended iron oxide in dry powder form.
4. Produce uniform and consistent color.
5. Permanent, inert, stable to atmospheric conditions, sunfast, weather resistant, alkali resistant, water insoluble, lime proof, and nonbleeding.
6. Free of deleterious fillers and extenders.
7. Free of admixtures.
8. Particle Size: 95 to 99 percent minus 325 mesh.

B. Liquid Iron Oxide Pigments: SGS Color-Flo Liquid Colors.

Specifier Notes: Specify the color name and number. Consult Solomon Colors for availability of custom colors.

1. Color:
 - a. Name: _____ .
 - b. Number: _____ .
2. Compliance: ASTM C 979.
3. Material: Predispersed iron oxide pigments containing high pigment solids in aqueous base liquid.
4. Produce uniform and consistent color.
5. Permanent, inert, stable to atmospheric conditions, sunfast, weather resistant, alkali resistant, water insoluble, lime proof, and nonbleeding.
6. Free of deleterious fillers and extenders.
7. Particle Size: 95 to 99 percent minus 325 mesh.
8. Specific Gravity: 1.9 to 2.0.

2.3 CONCRETE MATERIALS

A. Materials:

1. Ready-Mixed Concrete: ASTM C 94.
2. Portland Cement: ASTM C 150. Use same source, brand, type, and color throughout project.
3. Coarse and Fine Aggregates: ASTM C 33. Use same source and color throughout project.
4. Admixtures: Designed for use with concrete pigments. Do not use calcium chloride or admixtures containing chlorides. Use same admixtures throughout project.

Specifier Notes: Coordinate the following paragraph with the section specifying the concrete.

- B. Concrete Mix Design: As specified in Section 03_____, except as specified in this section.
 - 1. Color Pigment Weight: Maximum 10 percent of cement weight.
 - 2. Water to Cement Ratio: Maximum 0.50.
 - 3. Use same concrete mix design throughout project.

PART 3 EXECUTION

3.1 APPLICATION - DRY POWDER AND LIQUID IRON OXIDE PIGMENTS

Specifier Notes: Coordinate the following two paragraphs with the section specifying the concrete.

- A. Measuring, Batching, Mixing, and Delivering Concrete: As specified in Section 03_____, except as specified in this section.
 - 1. Measure, batch, mix, and deliver concrete with pigments in accordance with manufacturer's instructions.
 - 2. Ensure mixer is clean and free of washout water before loading.
 - 3. Load mixer to a minimum of 40 percent capacity.
 - 4. Do not load mixer beyond recommended capacity.
 - 5. Add concrete materials to mixer in same order for each batch.
 - 6. Do not add pigment to mixer as first concrete material.
 - 7. Maintain consistent amounts of batch water in each batch.

- B. Placing, Finishing, and Curing Concrete: As specified in Section 03_____, except as specified in this section.
 - 1. Place, finish, and cure concrete with pigments in accordance with manufacturer's instructions.
 - 2. Allow excess surface water to evaporate before finishing.
 - 3. Do not over-finish surface. Avoid burning surface.
 - 4. Do not fog with water or cover surface of colored concrete during initial curing process for a minimum of 48 hours.

Specifier Notes: Use the following three sentences when specifying liquid iron oxide pigments.

- C. Add liquid pigments to concrete batch automatically by use of metering, volumetric, or weight measuring system or manually by weight or volume in accordance with manufacturer's instructions.

- D. Recycle liquid pigments while in their container before use to ensure uniformity and proper viscosity.

- E. Add liquid pigments to concrete batch after prewetted aggregate and before cement addition.

3.2 CLEANING

- A. Clean concrete of efflorescence in accordance with manufacturer's instructions.

- B. Ensure concrete has sufficiently cured before cleaning.

- C. Use concrete cleaner approved by pigment manufacturer and Architect. Do not use cleaners containing acid.

D. Apply cleaner in accordance with cleaner manufacturer's instructions.

END OF SECTION

Section 265629

Written Specification

LU-1-LI-T3-30W-4K-350MA-SH-1-1B-H-1-150-1-180W-P20L-BK-5/40DIM

PART 1- GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solar Powered Outdoor Lighting

B. Related Sections:

1. Section [260130 – Operating and Maintenance of Electrical Storing Devices]
2. Section [260913 – Electrical Power Monitoring and Control]

1.2 REFERENCES

A. American National Standards Institute / Institute of Electrical and Electronic Engineers (ANSI/IEEE)

1. ANSI/ESD S20.20-2007 Development of an Electrostatic Discharge Control Program

B. International Electrotechnical Commission

1. (IEC) 801-2 Electrostatic Discharge Testing Standard

C. International Organization for Standardization (ISO)

1. 9001-2008 – Quality Management Systems

D. National Electrical Manufacturers Association (NEMA)

1. ANSI/IEC 60529-2004 – Degrees of Protection Provided by Enclosures

1.3 DESCRIPTION

Solar Powered Outdoor Lighting Systems

1.4 SUBMITTALS

A. Specification Conformance Document:

1. Meets specification exactly as stated.
2. Meets specification via an alternate means and indicate the specific methodology used.

B. Product Data: Catalog cut sheets with performance specifications demonstrating compliance with specified requirements.

C. IES electronic files of lamp output or Photometric Plots on a surface from a defined lamp height compliant with IES LM-79.

D. Calculation of Effective Projected Area (EPA) and weight of the solar lighting system, and EPA rating of the pole (if provided).

E. Days of battery back-up must be based on an assumption of no sun and Battery cycle life taking into account temperature impact on cycle life.

- F. PV sizing based on worst-case average insolation data from an accredited source (e.g. NREL TMY2), with an additional safety factor to account for worst-case conditions. Consideration given for temperature, PV obstruction and other obstructions.
- G. Line drawing or photograph of lighting system(s).
- H. Wiring diagram(s).
- I. Customer references of at least 50 installation sites.
- J. Installation Instructions.

1.5 QUALITY ASSURANCE

- A. Manufacturer: Minimum 10 years of experience in manufacture of solar powered lighting systems.
- B. Manufacturer's Quality System: Registered to ISO 9001:2008 Quality Standards, including in-house engineering for product design activities.

1.6 OTHER COMPLIANCES

- A. Charge Controller complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.
- B. Battery shall be rated "non-spillable" by ICAO/IATA/DOT

1.7 PROJECT CONDITIONS

- A. Ambient temperature: -5° to 45° C.
- B. Relative humidity: 0 to 100%.
- C. Pole (if provided) and all coupling components exceed maximum specified EPA ratings required for local wind loading conditions.
- D. Photo Voltaic Panel rated to withstand hailstone impact described in ASTM E1038-93 and surface Cut Susceptibility tests (UL 1703-24).

1.8 WARRANTY

- A. Provide manufacturer's warranty covering 5 years on solar lighting system from date of purchase.
- B. Solar Voltaic Panel covered for 10 years.
- C. Mounting hardware, arms & brackets covered for a minimum of 5 years.
- D. Pole and associated components covered by original manufacturer's warranties.
- E. LED light engine, lamps and fixtures covered for a minimum of 5 years.
- F. Wire harnessing, connectors and terminals covered for a minimum of 5 years.
- G. Electronics: LED driver, charge controller, communications covered for a minimum of 5 years.
- H. Batteries have a 5-year replacement warranty
- I. Optional 10-year full warranty availability

1.9 REGULATORY REQUIREMENTS

- A. Solar lighting system meets or exceeds NEC 2011 code requirements.
- B. [Local regulatory requirements]

1.10 FACTORY CERTIFIED INSTALLATION SERVICES

- A. Manufacturer offers and provides pre-installation site survey to certify the proposed system locations and/or provides design assistance for locating systems for photometrics and insolation.
- B. Manufacturer offers and provides factory-certified field service engineer to a site visit to ensure proper installation and operation under following parameters:

1. Qualifications for factory-certified field service engineer:
 - a. Minimum experience of 2 years training in the electrical/electronic field.
 - b. Certified by the equipment manufacturer on the system installed.
2. Make a visit upon completion of installation to:
 - a. Verify connection of system components
 - b. Validate performance
 - c. Train owner or owner's representative on system operation and support

1.11 BATTERY STORAGE AND SHIPPING

- A. Battery(ies) approved for shipping via ground, air, or sea.
- B. Battery(ies) retains 80% charge or higher from 2 months of shipment.
- C. Battery(ies) ship sufficiently charged to operate the light 2 nights without any solar charging.
- D. If storing batteries for future installation: must be stored inside above ground level or covered with tarp or other material to prevent weather damage.

1.12 MAINTENANCE

- A. Make ordering of new equipment for expansions, replacements, and spare parts available to end user twenty-four hours a day, seven days a week
- B. Make replacements available for minimum of five years from date of manufacture.
- C. Provide factory direct technical support hotline 24 hours per day, 7 days per week with a response time within 24 hours.
- D. Provide on-site service support within three (3) days anywhere in continental United States and within five (5) days worldwide except where special visas are required.

PART 2-PRODUCTS

2.1 MANUFACTURER(S)

- A. Acceptable Manufacturer: Greenshine New Energy
- B. Basis of design product: Greenshine New Energy, LLC or subject to compliance and prior approval with specified requirements of this section, one of the following:
 1. Greenshine New Energy: www.streetlights-solar.com
- C. Substitutions:
 1. Proposed substitutes must be accompanied by a review of the specification noting compliance on a line-by-line basis.
 2. Any substitutions provided by the contractor shall be reviewed at the contractor's expense by the electrical engineer at a rate of \$200.00 per hour.
 3. By using pre-approved substitutions, the contractor accepts responsibility and associated costs for all required modifications to circuitry, devices, and wiring.
 4. Provide complete engineered shop drawings with deviations from the original design highlighted in an alternate color to the engineer for review and approval prior to installation.

2.2 GENERAL – Solar Powered Light Systems

A. Solar Powered Light System consists of twenty eight (28) components and assemblies:

- (1) Photovoltaic (PV) Module(s) and mounting structure
- (2) Charge Controller/LED Driver
- (3) LED Luminaire
- (4) Battery(ies)
- (5) Battery Enclosure
- (6) Quick Connect Wire Harnessing with Fuse
- (7) Pole & Arm

1. Photovoltaic (PV) Module – GS-MP-180

a. Construction:

- 1) Mono-Crystalline silicon solar cells
- 2) Framed in an all-aluminum structure
- 3) Sealed behind UV stabilized tempered glass
- 4) Covered by a 20-year power warranty
- 5) Meet or exceed IEC61215 (if required)
- 6) RoHS compliant
- 7) Harnessing and cabling is 12 AWG THHN stranded wire with over molded insulation with UV stabilized polymer rated for exterior usage
- 8) Photo Voltaic Panel rated to withstand hailstone impact described in ASTM E1038-93 and surface Cut Susceptibility tests (UL 1703-24)
- 9) Water-tight wire junction box on PV module

b. Performance:

- 1) PV generates adequate power to fully recharge system batteries within two and one-half (2.5) days at the installation location given that minimum insolation is available on those days as defined by NREL (National Renewable Energy Laboratories).
- 2) PV is fastened to support system at a minimum of four locations.

2. Charge Controller/LED Driver- GS-LED-CTRL-1 (PC-CIS-10)

a. Construction:

- 1) Enclosed within the light system with touch-proof covers to prevent damage
- 2) Fully resin potted design and suitable for wet locations.
- 3) The device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.
- 4) Approved by a Nationally Recognized Testing Laboratory -TÜV listed to UL 60950 1:2007 and CSA C22.2.60950-1:2007.
- 5) Charge controller/ LED driver is designed without electrolytic capacitors.
- 6) All other capacitor devices are de-rated by at least 20° C below the capacitor's maximum temperature rating under fully-loaded conditions and ambient temperature of 30° C.
- 7) Charge controller/ LED driver must be capable of controlling and dimming one or two outdoor LED light systems.
- 8) Complies with FCC part 15 noise threshold requirements
- 9) Ten day/night memory averaging to ensure accurate turn on and turn off lights to prevent false response due to weather variations.
- 10) Over Voltage Protection.
- 11) LED Short Circuit Protection.
- 13) Internal PV Disconnect (no external Diodes required).

- 14) Test button and diagnostic LEDs.
- 15) Self Test mode.
- 16) Reverse battery polarity protection.
- 17) Self calibrating load, timing, and charging circuitry.
- 18) Minimum 10 year operational life when operating at minimum or maximum rated system environmental specifications (10° C to 50° C at 0 – 100% relative humidity, non-condensing).
- 19) Designed and tested to withstand electrostatic discharges up to 15,000 V without impairment per IEC 801-2.
- 20) Withstand up to a 6,000 Volt surge without impairment of performance as defined by ANSI C62.41 Category A.
- 21) Manufactured in a facility that employ ESD reduction practices in compliance with ANSI/ESD S20.20. 22) Connects to all system components via a quick-connect – latching connector.

b. Performance

- 1) Operates in the following mode: Full brightness at dusk for 5 hours, then dims to 40% for remainder of the night
- 2) Perform Power Management to increase a system's run-time even with inclement weather conditions.
- 3) Charge Controller operates with temperature compensated limits ensuring battery charging algorithm protects battery (ies) from over and under voltage stress a) Charge controller adapts maximum (charged) voltage based on temperature (14V max at 21° C).
- 4) Charge controller prevents discharge below temperature compensated battery Low Voltage Disconnect (LVD) limit (11.5V at 21° C)
- 5) Operate the light for a minimum of at least five [5] nights without adequate insolation during the day to charge the batteries.
- 6) Charge controller never discharges more than 20% depth of discharge per night.
- 7) Charge Controller differentiates between actual sunlight and solar panel illumination from the system's own LED light.

3. LED Luminaire - GS-LED-LI-16-T3-30W-40K-BK

a. Construction:

- 1) UV stabilized powder coated.
- 2) clear lens finish.
- 3) IP 65 sealed and rain-proof LED chamber.
- 4) Wet location listed.
- 5) Designed and factory-installed LED light source only.

b. Performance:

- 1) LED source designed for 65,000 hour performance with over 70% initial lumen maintenance.
- 2) LED chamber of the luminaire provides IP65 protection.
- 3) Use of reflectors or lenses to produce high efficacy lighting patterns.
- 4) Type III photometric distribution.
- 5) LED junction temperature does not exceed 100 °C in worst-case site temperature conditions
- 6) High brightness LEDs only rated at a typical minimum of 136 delivered lumens/watt by manufacturer). 5 mm type LEDs are not acceptable.
- 7) Bright white LEDs with a color temperature no greater than 4000K.
- 8) Manufacturer provides relevant .IES files to indicate light dispersion and intensity of LED source.
- 9) IES file is measured using the IESNA LM-79 testing method for LED luminaires by a laboratory approved by the US DOE's CALiPER program. Scaled photometric testing files are not acceptable.
- 10) IDA approved- Dark Sky Compliant

4. Battery GS-GEL-H150

a. Construction:

- 1) Sealed valve regulated Gel cell type.
- 2) Maintenance free.
- 3) Air shippable.
- 4) Battery shall be rated "non-spillable" by ICAO/IATA/DOT. 5) 100% recyclable.

b. Performance

- 1) Capable of over 2000 cycles.
- 2) Deep cycle technology.
- 3) Maintains over 80% of charge after 2 months if left disconnected.
- 4) Batteries should provide no less than 5 days of back up in no-sun conditions.
- 5) Warranted for a minimum of two (2) years, and an additional pro-rated warranty to cover five (5) years.

5. (1) Battery Enclosure – LA-BB-S-1-150-BK

a. Construction:

- 1) All steel vented enclosure.
- 2) Steel doors and body powder coated to match the system color.
- 3) Installed below the solar panels on the panel support structure with a minimum 4" of air-barrier to prevent overheating.
- 4) Holds up to 1 large-size (200 Ah) battery to a maximum enclosure weight of 150 lbs.
- 5) All battery wire terminals and harnessing connect via quick-connect type with keyed connections to prevent miswiring.
- 6) Most feature hinged front cover and additional locking device.

b. Performance:

- 1) Access provided for battery service via two (2) bolts for hinged covers or four (2) bolts for non-hinged covers.
- 2) Wire harness is 12AWG THHN wire and finished to prevent accidental shorts. 3) Terminal covers, ring washers, terminals, etc. are non-corrosive non-rusting.

6. Wire Harnessing & Fuse – GS-WH-80S

a. Wire Harnesses Construction

- 1) All UV stabilized jacketed wiring and connectors.
- 2) Quick disconnect connector plugs have latch to ensure secure connection.
- 3) Provided with in-line fuse and holder in water tight enclosures.
- 4) Provided in variable lengths to eliminate all field wiring.
- 5) Color coded connectors make circuit purpose identification simple.
- 6) Individually matched quick disconnect plugs for battery, PV and luminaire to charge controller/LED driver.

b. Wire Harness Performance:

- 1) Sealed gasketed connectors prevent dust intrusion IP 66.
- 2) All wire gauges exceed NEC 2009 wire gauge and maximum current draw by 25%.

7. Solar Lighting Pole, PV Structure – LY-LP-20S-LUMINA-BK

a. Pole Construction:

- 1) All galvanized, hot-dipped, steel 20 ft round poles
- 2) Stainless steel or zinc plated steel hardware for rust-proof and corrosion resistant mounting equipment.
- 3) Factory supplied with powder coating (Black) thickness of a minimum of 3 Mils to match luminaire and battery enclosure precisely.
- 4) Provided with 3.5" aluminum alloy tenon to support direct mounting of the PV array and battery box.
- 5) Pole meets ANSI C136.36A-2010, for Roadway and Area Lighting Equipment- Steel Lighting Poles.

b. Pole Performance 145 mph wind zone:

- 1) Maximum EPA of 13 square feet.
- 2) Maximum Weight of 190 lbs (incl. base and tenon) and 500 lbs (entire solar light system).
- 3) Independently verified pole strength and base details by licensed Professional Engineer and Test Lab.

c. PV Support Structure Construction

- 1) Extruded high strength Aluminum alloy body.
- 2) Powder coated to match the battery box and luminaire color.

d. PV Support Structure Performance:

- 1) Supports up to 4 PV modules for up to 140mph wind zone.
- 2) Top of Pole mount provides selectable tilt options of 5, 15, 30, 45, and 60 degrees.
- 3) Side of Pole mount provides selectable tilt options of 15 and 45 degrees.

2.3 SOURCE QUALITY CONTROL

- A. Perform full-function testing on 100% of all lighting systems at the factory.
- B. Manufactured by an ISO 9001:2008 listed manufacturer

PART 3-EXECUTION

3.1 INSTALLATION

- A. Install equipment in accordance with manufacturer's installation instructions.
- B. Provide complete installation of system in accordance with Contract Documents.

END OF SECTION

Section 265629

Written Specification

LU-1-LI-T3-40W-4K-525MA-SH-1-1B-H-1-200-1-180W-P20L-BK-5/40DIM

PART 1- GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solar Powered Outdoor Lighting

B. Related Sections:

1. Section [260130 – Operating and Maintenance of Electrical Storing Devices]
2. Section [260913 – Electrical Power Monitoring and Control]

1.2 REFERENCES

A. American National Standards Institute / Institute of Electrical and Electronic Engineers (ANSI/IEEE)

1. ANSI/ESD S20.20-2007 Development of an Electrostatic Discharge Control Program

B. International Electrotechnical Commission

1. (IEC) 801-2 Electrostatic Discharge Testing Standard

C. International Organization for Standardization (ISO)

1. 9001-2008 – Quality Management Systems

D. National Electrical Manufacturers Association (NEMA)

1. ANSI/IEC 60529-2004 – Degrees of Protection Provided by Enclosures

1.3 DESCRIPTION

Solar Powered Outdoor Lighting Systems

1.4 SUBMITTALS

A. Specification Conformance Document:

1. Meets specification exactly as stated.
2. Meets specification via an alternate means and indicate the specific methodology used.

B. Product Data: Catalog cut sheets with performance specifications demonstrating compliance with specified requirements.

C. IES electronic files of lamp output or Photometric Plots on a surface from a defined lamp height compliant with IES LM-79.

D. Calculation of Effective Projected Area (EPA) and weight of the solar lighting system, and EPA rating of the pole (if provided).

E. Days of battery back-up must be based on an assumption of no sun and Battery cycle life taking into account temperature impact on cycle life.

- F. PV sizing based on worst-case average insolation data from an accredited source (e.g. NREL TMY2), with an additional safety factor to account for worst-case conditions. Consideration given for temperature, PV obstruction and other obstructions.
- G. Line drawing or photograph of lighting system(s).
- H. Wiring diagram(s).
- I. Customer references of at least 50 installation sites.
- J. Installation Instructions.

1.5 QUALITY ASSURANCE

- A. Manufacturer: Minimum 10 years of experience in manufacture of solar powered lighting systems.
- B. Manufacturer's Quality System: Registered to ISO 9001:2008 Quality Standards, including in-house engineering for product design activities.

1.6 OTHER COMPLIANCES

- A. Charge Controller complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.
- B. Battery shall be rated "non-spillable" by ICAO/IATA/DOT

1.7 PROJECT CONDITIONS

- A. Ambient temperature: -5° to 45° C.
- B. Relative humidity: 0 to 100%.
- C. Pole (if provided) and all coupling components exceed maximum specified EPA ratings required for local wind loading conditions.
- D. Photo Voltaic Panel rated to withstand hailstone impact described in ASTM E1038-93 and surface Cut Susceptibility tests (UL 1703-24).

1.8 WARRANTY

- A. Provide manufacturer's warranty covering 5 years on solar lighting system from date of purchase.
- B. Solar Voltaic Panel covered for 10 years.
- C. Mounting hardware, arms & brackets covered for a minimum of 5 years.
- D. Pole and associated components covered by original manufacturer's warranties.
- E. LED light engine, lamps and fixtures covered for a minimum of 5 years.
- F. Wire harnessing, connectors and terminals covered for a minimum of 5 years.
- G. Electronics: LED driver, charge controller, communications covered for a minimum of 5 years.
- H. Batteries have a 5-year replacement warranty
- I. Optional 10-year full warranty availability

1.9 REGULATORY REQUIREMENTS

- A. Solar lighting system meets or exceeds NEC 2011 code requirements.
- B. [Local regulatory requirements]

1.10 FACTORY CERTIFIED INSTALLATION SERVICES

- A. Manufacturer offers and provides pre-installation site survey to certify the proposed system locations and/or provides design assistance for locating systems for photometrics and insolation.
- B. Manufacturer offers and provides factory-certified field service engineer to a site visit to ensure proper installation and operation under following parameters:

1. Qualifications for factory-certified field service engineer:
 - a. Minimum experience of 2 years training in the electrical/electronic field.
 - b. Certified by the equipment manufacturer on the system installed.
2. Make a visit upon completion of installation to:
 - a. Verify connection of system components
 - b. Validate performance
 - c. Train owner or owner's representative on system operation and support

1.11 BATTERY STORAGE AND SHIPPING

- A. Battery(ies) approved for shipping via ground, air, or sea.
- B. Battery(ies) retains 80% charge or higher from 2 months of shipment.
- C. Battery(ies) ship sufficiently charged to operate the light 2 nights without any solar charging.
- D. If storing batteries for future installation: must be stored inside above ground level or covered with tarp or other material to prevent weather damage.

1.12 MAINTENANCE

- A. Make ordering of new equipment for expansions, replacements, and spare parts available to end user twenty-four hours a day, seven days a week
- B. Make replacements available for minimum of five years from date of manufacture.
- C. Provide factory direct technical support hotline 24 hours per day, 7 days per week with a response time within 24 hours.
- D. Provide on-site service support within three (3) days anywhere in continental United States and within five (5) days worldwide except where special visas are required.

PART 2-PRODUCTS

2.1 MANUFACTURER(S)

- A. Acceptable Manufacturer: Greenshine New Energy
- B. Basis of design product: Greenshine New Energy, LLC or subject to compliance and prior approval with specified requirements of this section, one of the following:
 1. Greenshine New Energy: www.streetlights-solar.com
- C. Substitutions:
 1. Proposed substitutes must be accompanied by a review of the specification noting compliance on a line-by-line basis.
 2. Any substitutions provided by the contractor shall be reviewed at the contractor's expense by the electrical engineer at a rate of \$200.00 per hour.
 3. By using pre-approved substitutions, the contractor accepts responsibility and associated costs for all required modifications to circuitry, devices, and wiring.
 4. Provide complete engineered shop drawings with deviations from the original design highlighted in an alternate color to the engineer for review and approval prior to installation.

2.2 GENERAL – Solar Powered Light Systems

A. Solar Powered Light System consists of twenty eight (28) components and assemblies:

- (1) Photovoltaic (PV) Module(s) and mounting structure
- (2) Charge Controller/LED Driver
- (3) LED Luminaire
- (4) Battery(ies)
- (5) Battery Enclosure
- (6) Quick Connect Wire Harnessing with Fuse
- (7) Pole & Arm

1. Photovoltaic (PV) Module – GS-MP-180

a. Construction:

- 1) Mono-Crystalline silicon solar cells
- 2) Framed in an all-aluminum structure
- 3) Sealed behind UV stabilized tempered glass
- 4) Covered by a 20-year power warranty
- 5) Meet or exceed IEC61215 (if required)
- 6) RoHS compliant
- 7) Harnessing and cabling is 12 AWG THHN stranded wire with over molded insulation with UV stabilized polymer rated for exterior usage
- 8) Photo Voltaic Panel rated to withstand hailstone impact described in ASTM E1038-93 and surface Cut Susceptibility tests (UL 1703-24)
- 9) Water-tight wire junction box on PV module

b. Performance:

- 1) PV generates adequate power to fully recharge system batteries within two and one-half (2.5) days at the installation location given that minimum insolation is available on those days as defined by NREL (National Renewable Energy Laboratories).
- 2) PV is fastened to support system at a minimum of four locations.

2. Charge Controller/LED Driver- GS-LED-CTRL-1 (PC-CIS-10)

a. Construction:

- 1) Enclosed within the light system with touch-proof covers to prevent damage
- 2) Fully resin potted design and suitable for wet locations.
- 3) The device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.
- 4) Approved by a Nationally Recognized Testing Laboratory -TÜV listed to UL 60950 1:2007 and CSA C22.2.60950-1:2007.
- 5) Charge controller/ LED driver is designed without electrolytic capacitors.
- 6) All other capacitor devices are de-rated by at least 20° C below the capacitor's maximum temperature rating under fully-loaded conditions and ambient temperature of 30° C.
- 7) Charge controller/ LED driver must be capable of controlling and dimming one or two outdoor LED light systems.
- 8) Complies with FCC part 15 noise threshold requirements
- 9) Ten day/night memory averaging to ensure accurate turn on and turn off lights to prevent false response due to weather variations.
- 10) Over Voltage Protection.
- 11) LED Short Circuit Protection.
- 13) Internal PV Disconnect (no external Diodes required).

- 14) Test button and diagnostic LEDs.
- 15) Self Test mode.
- 16) Reverse battery polarity protection.
- 17) Self calibrating load, timing, and charging circuitry.
- 18) Minimum 10 year operational life when operating at minimum or maximum rated system environmental specifications (10° C to 50° C at 0 – 100% relative humidity, non-condensing).
- 19) Designed and tested to withstand electrostatic discharges up to 15,000 V without impairment per IEC 801-2.
- 20) Withstand up to a 6,000 Volt surge without impairment of performance as defined by ANSI C62.41 Category A.
- 21) Manufactured in a facility that employ ESD reduction practices in compliance with ANSI/ESD S20.20. 22) Connects to all system components via a quick-connect – latching connector.

b. Performance

- 1) Operates in the following mode: Full brightness at dusk for 5 hours, then dims to 40% for remainder of the night
- 2) Perform Power Management to increase a system's run-time even with inclement weather conditions.
- 3) Charge Controller operates with temperature compensated limits ensuring battery charging algorithm protects battery (ies) from over and under voltage stress a) Charge controller adapts maximum (charged) voltage based on temperature (14V max at 21° C).
- 4) Charge controller prevents discharge below temperature compensated battery Low Voltage Disconnect (LVD) limit (11.5V at 21° C)
- 5) Operate the light for a minimum of at least five [5] nights without adequate insolation during the day to charge the batteries.
- 6) Charge controller never discharges more than 20% depth of discharge per night.
- 7) Charge Controller differentiates between actual sunlight and solar panel illumination from the system's own LED light.

3. LED Luminaire - GS-LED-LI-16-T3-40W-40K-BK

a. Construction:

- 1) UV stabilized powder coated.
- 2) clear lens finish.
- 3) IP 65 sealed and rain-proof LED chamber.
- 4) Wet location listed.
- 5) Designed and factory-installed LED light source only.

b. Performance:

- 1) LED source designed for 65,000 hour performance with over 70% initial lumen maintenance.
- 2) LED chamber of the luminaire provides IP65 protection.
- 3) Use of reflectors or lenses to produce high efficacy lighting patterns.
- 4) Type III photometric distribution.
- 5) LED junction temperature does not exceed 100 °C in worst-case site temperature conditions
- 6) High brightness LEDs only rated at a typical minimum of 136 delivered lumens/watt by manufacturer). 5 mm type LEDs are not acceptable.
- 7) Bright white LEDs with a color temperature no greater than 4000K.
- 8) Manufacturer provides relevant .IES files to indicate light dispersion and intensity of LED source.
- 9) IES file is measured using the IESNA LM-79 testing method for LED luminaires by a laboratory approved by the US DOE's CALiPER program. Scaled photometric testing files are not acceptable.
- 10) IDA approved- Dark Sky Compliant

4. Battery GS-GEL-H200

a. Construction:

- 1) Sealed valve regulated Gel cell type.
- 2) Maintenance free.
- 3) Air shippable.
- 4) Battery shall be rated "non-spillable" by ICAO/IATA/DOT. 5) 100% recyclable.

b. Performance

- 1) Capable of over 2000 cycles.
- 2) Deep cycle technology.
- 3) Maintains over 80% of charge after 2 months if left disconnected.
- 4) Batteries should provide no less than 5 days of back up in no-sun conditions.
- 5) Warranted for a minimum of two (2) years, and an additional pro-rated warranty to cover five (5) years.

5. (1) Battery Enclosure – LA-BB-S-1-200-BK

a. Construction:

- 1) All steel vented enclosure.
- 2) Steel doors and body powder coated to match the system color.
- 3) Installed below the solar panels on the panel support structure with a minimum 4" of air-barrier to prevent overheating.
- 4) Holds up to 1 large-size (200 Ah) battery to a maximum enclosure weight of 150 lbs.
- 5) All battery wire terminals and harnessing connect via quick-connect type with keyed connections to prevent miswiring.
- 6) Most feature hinged front cover and additional locking device.

b. Performance:

- 1) Access provided for battery service via two (2) bolts for hinged covers or four (2) bolts for non-hinged covers.
- 2) Wire harness is 12AWG THHN wire and finished to prevent accidental shorts. 3) Terminal covers, ring washers, terminals, etc. are non-corrosive non-rusting.

6. Wire Harnessing & Fuse – GS-WH-80S

a. Wire Harnesses Construction

- 1) All UV stabilized jacketed wiring and connectors.
- 2) Quick disconnect connector plugs have latch to ensure secure connection.
- 3) Provided with in-line fuse and holder in water tight enclosures.
- 4) Provided in variable lengths to eliminate all field wiring.
- 5) Color coded connectors make circuit purpose identification simple.
- 6) Individually matched quick disconnect plugs for battery, PV and luminaire to charge controller/LED driver.

b. Wire Harness Performance:

- 1) Sealed gasketed connectors prevent dust intrusion IP 66.
- 2) All wire gauges exceed NEC 2009 wire gauge and maximum current draw by 25%.

7. Solar Lighting Pole, PV Structure – LY-LP-20S-LUMINA-BK

a. Pole Construction:

- 1) All galvanized, hot-dipped, steel 20 ft round poles
- 2) Stainless steel or zinc plated steel hardware for rust-proof and corrosion resistant mounting equipment.
- 3) Factory supplied with powder coating (Black) thickness of a minimum of 3 Mills to match luminaire and battery enclosure precisely.
- 4) Provided with 3.5" aluminum alloy tenon to support direct mounting of the PV array and battery box.
- 5) Pole meets ANSI C136.36A-2010, for Roadway and Area Lighting Equipment- Steel Lighting Poles.

b. Pole Performance 145 mph wind zone:

- 1) Maximum EPA of 13 square feet.
- 2) Maximum Weight of 190 lbs (incl. base and tenon) and 500 lbs (entire solar light system).
- 3) Independently verified pole strength and base details by licensed Professional Engineer and Test Lab.

c. PV Support Structure Construction

- 1) Extruded high strength Aluminum alloy body.
- 2) Powder coated to match the battery box and luminaire color.

d. PV Support Structure Performance:

- 1) Supports up to 4 PV modules for up to 140mph wind zone.
- 2) Top of Pole mount provides selectable tilt options of 5, 15, 30, 45, and 60 degrees.
- 3) Side of Pole mount provides selectable tilt options of 15 and 45 degrees.

2.3 SOURCE QUALITY CONTROL

- A. Perform full-function testing on 100% of all lighting systems at the factory.
- B. Manufactured by an ISO 9001:2008 listed manufacturer

PART 3-EXECUTION

3.1 INSTALLATION

- A. Install equipment in accordance with manufacturer's installation instructions.
- B. Provide complete installation of system in accordance with Contract Documents.

END OF SECTION

(0.01 to 0.03 mm) (0.0004")

NOTE

Use the roughness average (Ra) value shown on the product label.

APPLICATION

Apply over the substrate and fill the remaining space with a compatible primer or sealant as required.

IMPORTANT

Do not use in applications where the substrate is subjected to impact or high temperature. Do not use in applications where the substrate is subjected to high humidity or high salt content.

COVERAGE

Yield distribution may be different from the theoretical value due to the difference in the surface roughness of the substrate.

0.5 to 0.07 per cent (0.0002 to 0.0003)

DRYING TIME

Apply the product in a thin layer. The drying time is approximately 24 hours. The product is not suitable for use in applications where the substrate is subjected to high humidity or high salt content.

CAUTIONS

Do not use in applications where the substrate is subjected to high humidity or high salt content. Do not use in applications where the substrate is subjected to high humidity or high salt content.

2.02 PRODUCT WARRANTIES

1. The manufacturer warrants that the product is free from defects in material and workmanship at the time of shipment. The manufacturer shall not be liable for any damage or loss resulting from the use of the product in applications where the substrate is subjected to high humidity or high salt content.
2. The manufacturer shall not be liable for any damage or loss resulting from the use of the product in applications where the substrate is subjected to high humidity or high salt content.

**SECTION 02790
ARTIFICIAL TURF**

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications apply to this section.

1.2 DESCRIPTION OF WORK

A. Provide all materials, labor, equipment and services required to accomplish related work in accordance with the drawings and specifications. The turf system shall be specifically designed, manufactured and installed for high use, public playgrounds. The turf system shall be IPEMA Certified and 100% wheelchair accessible (ASTM F 1951) in the field. The turf system shall drain up to 130 inches per hour (ASTM F 1551), excluding the crushed stone base. The system's shock attenuation shall have a G-max value of less than 200 and a Head Injury Criteria (HIC) less than 1,000 (ASTM F 1292). The turf system shall consist of, but not necessarily be limited to, the following:

1. Synthetic turf consisting of nominal one and a half inch (1.50") long polyethylene fibers with thatch that is tufted into a single, dimensionally stable, three component primary backing with a secondary backing consisting of a minimum of 17 ounces of urethane per square yard. Southwest Greens Playsafe 50 (GB043) or equivalent.
2. Closed cell foam underlayment pads that meet or exceed the standard specification for impact attenuation of surfacing materials within the use zone of playground equipment (ASTM F 1292). Either Brock PlayBase or Brock SSP20 or equivalent depending on various fall height requirements.
3. Synthetic Turf Infill that is designed to cool the playing surface 30-50 degrees as well as prolong the life of the turf fibers shall be used. A combination of two (2) pounds of HydroChill sand (by Southwest Greens) and one (1) pound of clean silica per square foot shall be mixed and installed via power broom in at the jobsite.

B. Work included in this Section includes grading necessary to shape and drain the area and base preparation and installation of the synthetic turf in areas shown on Drawings.

PART 2 - PRODUCTS

2.1 SYNTHETIC TURF SAFETY SURFACE

A. Aggregate Base – Crushed angular hard stone, ¾" minus compactible stone (not clean). (Refer to Section 3.2-B)

B. Synthetic Turf: A nominal 1.50 inch turf specifically designed for high use public park and public school playgrounds and play areas. Playsafe 50 (GB043) by Southwest Greens, 185 South Industrial Blvd, Calhoun GA 30701: Phone (404) 432-6185, or Architect approved equal.

- a. Fiber Type: Polyethylene Slit Tape
- b. Fiber Mass: 8000 denier
- c. Thatch: 6 ply TXT, 7300 denier

- d. Tufted Pile Height: 1.50 inches
- e. Color: Olive with olive thatch
- f. Tufting Gauge: ¼"
- g. Primary Backing: 7 oz/yd2 (Stabilized dual layered woven polypropylene)
- h. Secondary Backing: 17 oz/yd2 (100% Urethane)
- i. Tufted Face Weight: 50 oz/yd2 (ASTM D 418).
- j. Total Product Weight: 74 oz/yd2 (ASTM D 418)
- k. Finished Roll Width: 15 feet
- l. Finished Roll Length: Up to 100 feet (standard)
- m. Warranty: 5 year wear, 10-year fade

C. Pad Underlayment System: Bacteria resistant, porous, expanded polypropylene in various thicknesses depending on Critical Fall Height Requirements (ASTM F 1292). Foam pads engineered by Brock International (303) 544-5800 or Architect approved equal.

Brock #SSP20 pad (for 2'-5' falls-ASTM F 1292)

- a. Expanded polypropylene
- b. 20mm thick (approximately ¾")
- c. 15.90 square feet (net coverage per pad)
- d. 100% wheelchair accessible (ASTM F 1951)
- e. 100% recyclable
- f. Rainfall capacity: 730 inches per hour (ASTM F 1551)
- g. Life expectancy when used under synthetic turf: 16 years

Brock # PlayBase (for 6'-8' falls-ASTM F 1292)

- a. Expanded polypropylene
- b. 2.0" thick with impact absorbing pistons and drainage channels
- c. 16.88 square feet (net coverage per pad)
- d. 100% wheelchair accessible (ASTM F 1951)
- e. 100% recyclable
- f. Rainfall capacity: 280 inches per hour (ASTM F 1551)
- g. Life expectancy when used under synthetic turf: 20 years

NOTE: All seams between pads must be taped before synthetic turf is added.

NOTE: A minimal 1 inch per 1 foot slope shall be installed as a smooth transition between fall zones requiring different sized pads. This can be accomplished by staggering the crushed stone base or by mixing and troweling SBR/aromatic binder.

D. Synthetic Turf Infill: HydroChill™ with Bac-Shield from Southwest Greens, 185 South Industrial Blvd., Calhoun, GA 30701. Phone (404) 432-6185 or Architect approved equal.

- a. Color: Light Brown/Buff
- b. Anti-Microbial
- c. Non-toxic
- d. Grain shape: Hardness: 6-8 Mohs
- e. Krumbein Roundness: 0.8
- f. Krumbein Sphericity: 0.8
- g. Specific Gravity: 2.65 lb per cf
- h. Bulk Density: 97.4 lb/ft3
- i. Mesh Size: 16/30
- j. Porosity: 10-15%

- k. Acid Solubility: < 2.0%
- l. Turbidity (FTU): <250
- m. Temperature Stability Fahrenheit: 1400
- n. Angle of Repose: +-30 degrees
- o. Dust: Negligible

NOTE: HydroChill sand shall be mixed with clean silica sand at the jobsite as follows: Two (2) pounds of HydroChill and one (1) pound of clean silica per square foot. Both shall be installed with drop spreader and power broom. NOTE: Irrigation (sprinklers) can be set to water the synthetic turf surface (after hours) once every 3.5 days during the summer months.

E. Splicing Material (seaming tape): Kingsport BV-Holland® 12" wide minimum, spun-bonded polyester or Architect approved equal.

F. Adhesive: Nordot 34G as manufactured by Synthetic Surfaces Inc., Scotch Plains, New Jersey (908-496-6000) or Architect approved equal.

G. Adhesive: Mapei PU2K, 2 part OD adhesive as manufactured by MAPEI Corporation, Deerfield Beach, FL. (800-992-6273) or Architect approved equal.

H. Molded rubber mats: For under all swings and slide exits. Green, 3' x 3' x 2", Beveled or flush edges, 67 lbs., flat back (for glue down). RB Rubber Products, 904 McMinnville, Oregon, 504-472-4691 or Architect approved equal.

PART 3 – EXECUTION

3.1 GROUND PREPARATION

- A. General: The ground area to receive synthetic turf safety surface is indicated on the Drawings.
- B. Leveling and Site Preparation: All organic material and organic debris to be removed. Soil to be graded level and stabilized (compacted). Compaction shall be done with mechanical compactors, including vibratory compactors, and/or powered tampers, and rollers.

3.2 BASE AND SYNTHETIC TURF CONSTRUCTION

- A. General: The area to be smooth and graded to allow proper drainage. Refer to grading plan. The overall grade of the playground is not to exceed 3%.
- B. Compacted Aggregate Base: Place 4 inches of aggregate base as leveling layer compacted to 90% of max density per AASHTO T99. Compaction shall be done with mechanical compactors, including vibratory compactors, and/or powered tampers, and rollers. Aggregate size should be ¾" minus (compactable).
- C. Synthetic Turf: Place turf and cut to fit configuration as shown on Drawings. Splice seams. All seams must be attached with splicing film/fabric and adhesive as approved by the manufacturer for this type of installation of their product.
- D. Infill: Apply layers of synthetic turf infill evenly with a spreader and broom the turf fibers with stiff bristle broom to stand fibers up and allow infill to settle into the bottom. Broom in two (2) pounds of HydroChill sand and one (1) pound of clean silica per square foot.
- E. Anchoring/Edging: Edges of turf will be secured to ground or concrete curb with mechanical fasteners, stakes or edging.

PART 4 – WARRANTY

4.1 WARRANTY

Commercial Playground Limited Warranty for Playsafe 50 (GB043) Turf

The following is the Commercial Playground Limited Warranty issued by Shaw Industries, Inc. ("Shaw") for our Playsafe 50 (GB043) Turf made with poly-ethylene sports performance fibers, and coated with a polyurethane unitary backing system.

This Commercial Playground Limited Warranty applies when the turf is purchased from an authorized Shaw distributor and is installed and maintained in accordance with Shaw Industries, Inc. installation guidelines and specifications. The turf must be maintained in accordance with Shaw Industries, Inc. maintenance (turf care) recommendations and must be installed and maintained in accordance with the Shaw Industries, Inc. installation guidelines.

This Warranty is in full force and effect for the period of time the turf is owned and maintained by the original purchaser. The basis of any warranty-related claim is the original authorized Shaw distributor invoice. Damage resulting from the failure to follow the so-called "turf care" will not be covered under this warranty. Installation guidelines and specifications apply to all Shaw Industries, Inc. products. For a complete list of Shaw products, visit www.shawindustries.com.

Ten year limited warranty coverage:

Fiber – Fiber Degradation - Shaw warrants that the Playsafe 50 (GB043) Turf, when installed and maintained as recommended by Shaw Industries, Inc. for proper build and use, will not develop visible UV degradation resulting in a noticeable yellow or loss.

(Yellowing is defined as the loss of at least 10% of the initial product's color when compared to the original product. Yellowing is defined as the loss of at least 10% of the initial product's color when compared to the original product.)

Shaw Industries, Inc. warrants that the Playsafe 50 (GB043) Turf will meet industry standards for UV degradation when installed and maintained in accordance with Shaw Industries, Inc. installation and maintenance guidelines. Shaw Industries, Inc. warrants that the Playsafe 50 (GB043) Turf will meet industry standards for UV degradation when installed and maintained in accordance with Shaw Industries, Inc. installation and maintenance guidelines.

Five year limited warranty coverage:

Binding – Bind - Shaw warrants that the Playsafe 50 (GB043) Turf, when installed and maintained as recommended by Shaw Industries, Inc. under normal use, will meet industry standards for turf bind.

Backing - Integrity/Delamination - Shaw warrants that the Playsafe 50 (GB043) Turf, when installed and maintained as recommended by Shaw Industries, Inc. under normal use, will not delaminate from the face of the turf.

Note: The construction, fiber and backing system used in these products are designed and engineered for use when installed in playground and general play area applications.

This warranty is void if the turf is not installed and maintained in accordance with Shaw Industries, Inc. installation and maintenance guidelines. Shaw Industries, Inc. warrants that the Playsafe 50 (GB043) Turf will meet industry standards for UV degradation when installed and maintained in accordance with Shaw Industries, Inc. installation and maintenance guidelines.

Shaw Industries, Inc. warrants that the Playsafe 50 (GB043) Turf will meet industry standards for UV degradation when installed and maintained in accordance with Shaw Industries, Inc. installation and maintenance guidelines. Shaw Industries, Inc. warrants that the Playsafe 50 (GB043) Turf will meet industry standards for UV degradation when installed and maintained in accordance with Shaw Industries, Inc. installation and maintenance guidelines.

Shaw's artificial turf design is not intended to be used as a playground safety surface. Please refer to the following information:

What Shaw's artificial turf will do should be explained to you and your child's school:

Shaw's artificial turf is not intended to be used as a playground safety surface. Shaw's artificial turf is designed to be used as a decorative surface. It is not intended to be used as a playground safety surface. It is not intended to be used as a playground safety surface. It is not intended to be used as a playground safety surface.

Shaw's artificial turf is not intended to be used as a playground safety surface. Shaw's artificial turf is designed to be used as a decorative surface. It is not intended to be used as a playground safety surface. It is not intended to be used as a playground safety surface.

What Shaw's artificial turf will do should be explained to you and your child's school - **Playsafe 50 (GB043)**

Turf:

This is a warning of playground violations, specifically concerning:

- a) Turf not installed in accordance with Shaw installation guidelines.
- b) Stained sodas, discoloration and degradation of base, due to absorption of oils or products due to spills/droplets.
- c) Disinfectant being in contact with the turf, which degrades or destroys the face fiber or the color of the turf.
- d) Turf installed on stairs/landings or in areas subject to abnormal use.
- e) Turf exposed to abusive wear from abrasion or from pivot points when using inappropriate foot wears i.e. ski boots, metal cleats, hard plastic cleats, metal golf spikes, or sports equipment.
- f) Turf installed in inappropriate applications. I.e. under playground swings, slide exit landing areas or other high friction play equipment like "merry go rounds" etc., unless molded rubber mats are placed over the Playsafe 50 (GB043) Turf and underneath each of these.
- g) Turf installed where standing water, floods and/or flooding conditions exist.
- h) Turf installed on outdoor sports fields i.e. football, soccer, lacrosse, etc., unless these fields are designed for general purpose recreational play. Example: There is a big difference between a general recreation play area where elementary school kids play soccer during recess and a regulation soccer field that hosts high school, college and professional team competitions.
- i) Burns, cuts, accidents, vandalism, abuse, negligence or neglect.
- j) Improper design or failure of the base or sub-base of the landscape.
- k) Wear or abrasion caused by inadequate base or sub-base.
- l) Wear or movement of product due to lack of infill on infilled products.
- m) Use of improper infill products.
- n) Use of improper cleaning agents, pesticides, herbicides, or chemicals, and maintenance methods not recommended by Shaw.
- o) Failure to properly maintain, protect or repair the turf.
- p) Damage caused by reflection (melting) or other flammable materials.
- q) As with any manufactured flooring product, there can be occasional slight differences in color between "dye lots". Shaw cannot be responsible for any color shading differences between different rolls of turf.

Shaw's artificial turf is not intended to be used as a playground safety surface. Shaw's artificial turf is designed to be used as a decorative surface. It is not intended to be used as a playground safety surface. It is not intended to be used as a playground safety surface. It is not intended to be used as a playground safety surface.

Shaw's artificial turf is not intended to be used as a playground safety surface. Shaw's artificial turf is designed to be used as a decorative surface. It is not intended to be used as a playground safety surface. It is not intended to be used as a playground safety surface.

all types of variables, including an implied variability of marsh stability or failure for a particular purpose, or that the failure of the other two variables is not a necessary consequence of the production or maintenance of implied variables in the limitation of horizontal or consequential damages, as the stated independence of production may not apply to the production. The variance also affects the ability to apply the implied warranty of fitness, as it may not apply to the implied warranty.

Artificial Turf

SECTION 13169

PART 1 – GENERAL

1.01 DESCRIPTION

- A. The work in this section consists of furnishing all labor, materials, equipment, supplies and accessories needed for the completion of the work as shown on drawings. This includes installation of all water features, water distribution system, controller for water features, activator, piping, fittings, hardware, concrete footings, backfill, electrical and finishes as required, in accordance with the plans, specifications and directions of the owner's representative.

1.02 QUALITY ASSURANCE

- A. The aquatic play products shall be suitable for installation in municipal and commercial aquatic facilities and public play areas. Products shall be specifically designed for use by children and adults and follow the ASTM F2461-09 norm.
- B. The manufacturer shall have a minimum of ten (10) years' experience in the design, engineering and manufacture of children's aquatic play features and components. The contractor/installer shall have completed a minimum of five (5) similar Splashpad projects. Provide references and project lists as requested by the owner and/or owner's representative.
- C. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
- D. All Splashpad equipment and components shall be installed in conformance to the manufacturer's specifications and recommendations.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's descriptive literature for specified system including all components.
- B. Show Drawings: Indicate component connection details and details of interface with adjacent construction.
- C. Certificates: Certify that products of this section meet or exceed specified requirements.
- D. Manufacturer's Instructions: Include installation instructions for specified equipment, including each component.
- E. Operation and Maintenance Data: Submit manufacturer's maintenance instructions and parts list for specified equipment.

1.04 DELIVERY, STORAGE AND HANDLING

- A. All aquatic play products and associated equipment must be properly wrapped and secured in place while in transport to the project site. Care shall be observed during offloading and handling to prevent excessive stress and abrasions.
- B. At the site, the play products and associated equipment are to be stored in safe areas, out of the way of traffic and other construction activities, until the actual time of installation. If required, safety barricades or other like precautions must be taken for the protection of public and adjacent property.
- C. Protective wrapping on the aquatic play features must be left in place until construction work for the Splashpad is complete.

PART 2 – PRODUCTS

2.01 MANUFACTURER

- A. The contractor shall supply and install the following aquatic play features, activators, water distribution system and system controller as manufactured by Vortex Aquatic Structures. Contact Local Representative: Power Play (918) 728-9978.

2.02 PRODUCT WARRANTIES

- A. A 25 Year Warranty on stainless steel tubing.
- B. A 10 Year Warranty on structural stainless steel and weld workmanship.
- C. A 5 Year Warranty on aluminum, brass and polymer panels.
- D. A 2 Year Warranty on finishes, galvanized steel structures, plumbing components, mechanisms and hardware, and polymer.
- E. A 1 Year Warranty on concrete components, electrical components, paint graphics and decal, polymer and composite.

2.03 PRODUCT CONSTRUCTION

- A. **Play Products:** All aquatic play products installed above and below grade shall be manufactured from 304/304L stainless steel. The anchoring system and associated fastening hardware shall be manufactured from 304/304L stainless steel. Rigid centricast fiber reinforced (FRP) and/or molded fiberglass, PVC, filament wound tubing, Galvanized Steel, or Aluminum shall **not** be utilized for any above or below grade play product structures.
- B. **Mounting and Assembly Hardware:** All hardware and anchoring systems shall be 304/304L or 316 stainless steel. All Play Products and Ground Spay systems shall include an integrated anchoring and leveling system facilitating installation and a flush surface finish. All exposed Play Product anchoring bases shall include a soft-touch elastomer cover that provides high impact, UV and chemical resistance while providing a soft, non-slip surface to absorb unintentional bumps from toes and feet. Exposed and accessible hardware shall be tamper resistant, requiring a special tool for removal to deter vandalism and theft.
- C. **Spray nozzles, caps and heads:** Shall be manufactured from C360 brass, stainless steel or UHMWPE and shall use tamper resistant tools for installation and removal. PVC, Nylon, and Delrin™, shall not be utilized. All grade level play products are to be furnished with appropriate winterization caps.
- D. **Painted Finish:** Shall be a polyester smooth glossy heat-cured powder coat that is UV and chemical resistant and suitable for public spaces. Airbrush graphics shall be applied over the powder coated base and shall be clear-coated for UV resistance and physical durability. Urethane surface finish, smooth, textured and/or gel coat shall not be used for any of the play feature coatings.
- E. **Material for Paneling, Signage, Water Deflection, and Toe Guards:** All Polyethylene, HDPE, Polyurethane, Elastomers, and Seeflow Polymers used for paneling, signage or water deflection shall be resistant to chlorinated water and be ultraviolet stabilized to inhibit sunlight fading.
- F. **Safety & Craftsmanship:** All accessible edges shall be machined to a rounded finish. All welds shall be watertight, buffed smooth, or polished to a non-visible finish and factory pressure tested. Accessible nozzles and spray heads shall be recessed to ensure a completely safe play environment with no pinch points, head entrapments or protrusion hazards. All products shall be designed in accordance with ASTM F1487, ASTM F-2461 and CSA Z614-98 regulations for public playgrounds.
- G. **Lexan Polymer:** The Lexan Polymer shall be specially selected for aquatic play products and shall have the following characteristics: translucent, highly resistant to shock and impact, vandalism and must be non-flammable. The polymer shall present dimensional stability a high resistance towards chemical products, ultra violets rays and be transparent presenting crystal clear surface throughout.

- H. **Seeflow Polymer:** The Seeflow Polymer shall be specially selected for aquatic play products and shall have the following characteristics: translucent, highly resistant to shock and impact, vandalism and must be non-flammable. The polymer shall present dimensional stability a high resistance towards chemical products, ultra violets rays and be transparent presenting crystal clear surface throughout.

2.04 PRODUCT INSTALLATION

- A. Install all equipment in accordance with shop drawings and manufacturer's printed installation instructions, comply with standards required by authorities having jurisdiction.
- B. **Safeswap Anchoring and Leveling Systems:** The Stainless Steel Safeswap Anchoring System shall provide the ability to add/remove/interchange select play products without having to incur any additional infrastructure costs. The anchoring system shall have an integrated leveling system facilitating installation and a flush finished to the activity deck surface without any protruding bolts or hardware. The Play Product shall be fastened directly to the Safeswap Anchoring system. The dead and live loads shall be distributed onto the Safeswap Anchoring system flange plate. A neoprene sealing gasket shall provide a water tight seal between the play product flange and Safeswap flange. Mechanical fastening of the Play Products to the activity deck slab shall be prohibited unless used on elevation with Toe Guards.
- C. **Embedded Anchoring and leveling Systems:** The anchoring system shall have an integrated leveling system facilitating installation, ensuring product is plumb and installed at the desired height.
- D. When applicable, templates shall be supplied to facilitate the installation of embedded anchoring equipment.
- E. All play products shall have electrical grounding studs incorporated into their associated anchoring equipment. All play products shall be grounded by the installer per local codes.
- F. All installation conduit wiring including electrical supply panel, PVC connections, piping, elbows, tees, play product assembly if required and other items relating to the installation shall be supplied by the general contractor.
- G. **Drawings and Instructions:** Product drawings and installation manuals shall be supplied by the manufacturer for ease of installation.

2.05 WATER FEATURES

- A. **COREOPLAY RAINBOW (VOR-7061):** is a circle configuration of eight (8) Lumiflow modules (VOR-7059) made of 304/304L stainless steel with an outside diameter of 10.75" inches and a wall thickness of 0.188" inches for the enclosure. The Lumiflow shall consist of a ring LED Light with 6 ft of power cable, a cover with drain opening, a spray nozzle, submersible junction box housing and cable gland. The ring LED shall be 3x 7.5W type high power LED RGB-in one. The ring LED shall be constructed of 18-8 stainless steel and bronze casting, the lens is made of Optical Clear 0.5" inch (12 mm) Polycarbonate plastic. The inside LED power cable shall be 108" with 5 conductor SOOW Cable AWG 16-5. The power requirement for the ring LED has to be 12 VAC. All the connections are made inside the junction box and need to respect the National Electrical Code requirements. For cable gage in between the junction box and the controller please refer to the installation drawing. The brass spray cap shall be threaded into the stainless steel spray head housing using a tamper-resistant tool. A polymer winter cap shall be included. The top cover shall have a painting finish with an anti-skid finish. The anchoring system shall have an integrated leveling system facilitating installation. The module VOR-7059 must not be used in pool or underwater application (permanently submerged). The overall height of the play product shall be 0" (0 cm) above ground. The overall height of the Lumiflow module shall be no less than 13.5". Overall circle shape dimensions shall be a diameter of 180" (457 cm). The Play Product shall create a visual display composed of illuminated water columns. CoreoPlay™ Rainbow is a circle shape feature producing bursting water effects in a Vibrant color mood. VOR 7061 includes a predesigned water and light play choreography programmed for Vortex's MaestroPro™ controller. This predesigned sequence is engineered and tested by play experts in our state-of-the-art water lab. The Play Product's choreography is created by a thoughtful design process combining the

water jet layout, color scheme, and light and color timing. Each spray cap shall have 10 spray holes of 0.125" (3 mm) projecting a soft water column effect. The hydraulic requirements shall be per module 4-6 gpm @ 3-5psi, reach a recommended height of 4ft. Overall hydraulic requirements for entire item 32-48 gpm @ 3-5psi. Water management requirements for pre-set choreography: regular valves.

- B. **GLOMIST (VOR-7247):** shall be constructed of 304/304L stainless steel structural tubing with an outside diameter of 3 1/2" (8.9 cm) and a wall thickness of 0.120" (3 mm). The top tube shall be constructed of 3 1/8" (7.9 cm) transparent polymer. The Glomist shall have five (5) fine mist nozzles secured to the post. The specific recessed in ground SAFESWAP™ anchoring and levelling system (Glomist installation kit) shall be used. A base cover in two pieces shall be fixed to the anchoring system and shall be made of 304/304L stainless steel 3/16" sheet powder coated the color as the post. A solar lighting casing placed at the top of the tubing shall be constructed of polymer and top with a 304-304L stainless steel 3/16" sheet ring. This casing will contain one (1) night sensor, one (1) circular solar panel, six (6) LEDs, cold white soft ambient light, luminous intensity of 324 lumens and four (4) rechargeable AA batteries. Battery nimh 1.2v 1.9ah AA, discharge rate 380ma, with a standard charge current of 190ma (the product will misperform if specification are not meet). This casing can easily be disassembled for battery maintenance, or replacement. Customer shall contact Vortex Customer service for Vortex battery replacements. With appropriate care and use of this solar lighting casing (South facing sun, avoiding shadows, trees/structure above) the life expectancy is approximately 5 years. Two (2) extra fine mist nozzles shall be provided with each item sold. The Glomist above ground height shall be 108" (274cm) and shall create visual interest as fine mist water sprays from five (5) places circular along the post. The solar lighting will create an ambient glow at sundown and until sunup. Each nozzle shall produce a fine mist effect. The hydraulic requirements shall be 0.3-0.5 gpm @ 20-30 psi. The Glomist water feature shall only be used with potable water systems (flow-through systems). Nozzle maintenance frequency is dependent on potable water hardness level. Drainage valve and Backflow preventer are required (provided by others on the main water line). Fine mist nozzles may require more maintenance in hard water areas. The recommended potable water hardness should be below 8.5 GPG (Grains per Gallon) to consider installation without a water softener system. This would help minimize maintenance needs and reduce the likelihood of clogging. Slightly hard water area (below 3.5 GPG) should require minimal cleaning. Moderate hard water area (3.5-7 GPG) would require more frequent cleaning. Hard water area (7-8.5 GPG) will require frequent cleaning. Very hard water area (8.5+ GPG) should not allow installation of such fine mist nozzles without a water softener system (by others on main water source).
- C. **GLOMIST NANO (VOR-7248):** shall be constructed of 304/304L stainless steel structural tubing with an outside diameter of 3 1/2" (8.9 cm) and a wall thickness of 0.120" (3 mm). The top tube shall be constructed of 3 1/8" (7.9 cm) transparent polymer. The feature shall have three (3) fine mist nozzles secured to the post. The custom SAFESWAP™ anchoring and levelling system shall be used. A base cover in two pieces shall be fix to the anchoring system and shall be made of 304/304L stainless steel 3/16" sheet painted like the tubing. A solar lighting casing placed at the top of the tubing shall be constructed of polymer and top with a 304-304L stainless steel 3/16" sheet ring. This casing will contain one (1) night sensor, one (1) circular solar panel, six (6) LEDs, cold white soft ambient light, luminous intensity of 324 lumens and four (4) rechargeable AA batteries. Battery nimh 1.2v 1.9ah AA, discharge rate 380ma, with a standard charge current of 190ma (the product will misperform if specification are not meet). This casing can easily be disassembled for battery maintenance, or replacement. Customer shall contact Vortex Customer service for Vortex battery replacements. With appropriate care and use of this solar lighting casing (South facing sun, avoiding shadows, trees/structure above) the life expectancy is approximately 5 years. Two (2) extra fine mist nozzles shall be provided with each item sold. The Glomist Nano above ground height shall be 86" (274cm) and shall create visual interest as fine mist water sprays from three (3) places circular along the post. The solar lighting will create an ambient glow at sundown and until sunup. Each nozzle shall produce a fine mist effect. The hydraulic requirements shall be 0.1-0.3 gpm @ 20-30 psi. The Glomist Nano water feature shall only be used with potable water systems (flow-through systems). Nozzle maintenance frequency is dependent on potable water hardness level. Drainage valve and Backflow preventer are required (provided by others on the main water line). Fine mist nozzles may require more maintenance in hard water areas. The

recommended potable water hardness should be below 8.5 GPG (Grains per Gallon) to consider installation without a water softener system. This would help minimize maintenance needs and reduce the likelihood of clogging. Slightly hard water area (below 3.5 GPG) should require minimal cleaning. Moderate hard water area (3.5-7 GPG) would require more frequent cleaning. Hard water area (7-8.5 GPG) will require frequent cleaning. Very hard water area (8.5+ GPG) should not allow installation of such fine mist nozzles without a water softener system (by others on main water source).

2.05 WATER DISTRIBUTION SYSTEM

- A. **SUBTERRANEAN COMMAND CENTER (VOR-16XX):** The Subterranean Command Center shall be a pre-fabricated water distribution system containing piping, valves and electrical wiring. It shall be factory assembled; water pressure tested, and shall be delivered from the Splashpad equipment manufactures facility. It shall be equipped with threaded connections for the water inlet and slip-on for water outlets. The solenoid valves shall be pre-wired to the controller when the controller is located in the command center. Should the controller be located remotely, Vortex shall supply 10 feet of wire for the controller to each of the solenoid valves; the installer shall supply additional wire if required. Wire connections from the controller to each of the solenoid valves shall be by the installer. The controller shall be grounded per local codes by the installer. The installer shall provide the plumbing equipment required from the water source to the water inlet or backflow device and pressure regulator if so configured. The installer shall provide the plumbing equipment required from the water outlets to the Splashpad water features. The Subterranean Command Center shall consist of aluminum reinforced frame and access hatch suitable for use in public spaces. The side walls shall be paneled with ABS sheets predrilled for all applicable water line inlets and outlets. The access hatch shall be constructed of 1/4" thick, reinforced; powder coat painted aluminum checker plate, and shall be lockable using a standard padlock. For equipment servicing, an integrated corrosion resistant step down pedestal/seat shall be included. All hardware shall be stainless steel. If called out on plans, a 2" backflow preventer and 2" pressure reducing valve shall be included and installed in the command center. The Water Distribution Manifold shall be constructed of 3 1/2" outside diameter stainless steel structural tubing with a powder coat painted finish. Each water distribution port shall be a 1-1/2" NPT connection. The manifold shall be equipped with a pressure gauge. All welded joints shall be watertight and pressure tested to 150 psi. There shall be one (1) solenoid valve installed on each of the water distribution ports for the water features. They shall be a normally closed 24 VAC 50/60 cycle solenoid actuated globe/angle pattern design. The valve pressure rating shall not be less than 150 psi. The valve body and bonnet shall be constructed of PVC with stainless steel fasteners. The valve shall have a manual override capability (manual open/close control). It shall house a fully encapsulated, one-piece solenoid. Each Solenoid valve shall have in integrated flow control adjustment valve stem for fine tuning water spray effects. All piping and fittings shall be at least schedule 80 PVC. All factory-assembled components, fitting and connections shall be water pressure tested prior to delivery. All electrical wiring shall be # 14 AWG with a 600V rating. All electrical connections, enclosures, and conduit shall be NEMA 4x watertight.
- B. **MAESTROPRO™ CONTROLLER (VOR 33907.32XX):** The equipment enclosures shall be constructed of corrosion resistant hot compression molded fiberglass reinforced polyester which does not contain halogens. Enclosures shall be UL listed per UL Standard 508A, NEMA 4X; CSA Certified per Standard C22.2-0, 0.4, 0.7, 0.6, 94 Type 3, 3R, 4, 4X, 12 and 13. The MaestroPRO™ shall operate in an ambient temperature range of 32°F (0°C) to 131°F (55°C). **The MaestroPRO™ Main Controller (33907.12B2)** shall be constructed of corrosion resistant hot compression molded fiberglass reinforced polyester which does not contain halogens. The MaestroPRO™ control panel shall be supplied with a 10.4" touch screen user interface with controls for each output, activation device(s), and operation hours. These selector settings allow the user to select the operational mode of the components (i.e. Manual, Off and Automatic). The MaestroPRO™ control panel shall be supplied by power through a MaestroPRO™ Power Box : providing power through two 100VA transformers 120 VAC primary / 24 VAC secondary OR 240 VAC primary / 24 VAC secondary, depending on MaestroPRO™ Power Box associated, with built- in electrostatic shield protection, and by a power supply 120/240 VAC primary to 24 VDC secondary and 100 VA. The MaestroPRO™ control panel shall integrate 24 digital outputs with 24 VAC

(per output : max 1.6 Amp inrush, max 0.3 Amp nominal) and 12 digital inputs with selectable 5 or 24 VDC (1A max over all inputs). The MaestroPRO™ control panel shall surge at any time a maximum of 4 Amp over each of its two 12 digital outputs sets. The MaestroPRO™ control panel shall have the capacity to receive digital signals from activation devices or sensors, operating on 5 or 24VDC. (Activator, Rain Sensor,...). The MaestroPRO™ control panel shall have the ability to provide a 24VAC auxiliary signal. This signal can be used to trigger a relay for Pumps, Chemical, UV system, or any other item following electrical specification. All outputs are electrically protected against over consumption with resettable fuses. The MaestroPRO™ control panel shall have the capacity to operate a Rain Diverter Valve with a 24V AC max 1.6 Amp signal to prevent rain water to go into the sewer network when the Splashpad® is not in function. That requires 2 outputs from MaestroPRO™ control panel. The MaestroPRO™ main control panel shall have the ability to control Fast Acting Valves supplied by 24 VAC max 1.6 Amp inrush each. MaestroPRO™ control panel shall have the capacity to receive pulse signal from items compatible with 24 VDC (Paddle wheel water meter, Anemometer). The MaestroPRO™ control panel shall have capability to be interconnected with any MaestroPRO™ Expansion (33907.22B2) using a dedicated RJ45 connector (located on I/O board). The MaestroPRO™ control panel shall have capability to be interconnected with max 1 Ethernet based item like the Maestro Light Controller (33908.0xxx) by using an Ethernet RJ45 Cat5 cable. If more than 1 Ethernet based items need to be connected, an Ethernet switch junction box (44900.0011) must be used. The MaestroPRO™ control panel shall have removable terminal blocks for easy wiring. The MaestroPRO™ firmware shall be factory programmed with spray and light sequences designed according to the requirements of the project. Users shall have the flexibility to modify sequence duration specifically to each operation schedule directly through the interface. New sequences (created by Vortex) shall be added into the program using either a transportable USB Key or with an internet connection. A 24hr/7day user programmable Agenda, which shall allow the user to set the operational hours of the facility. Sequence quantity is not limited. For further details about user interface, please refer to the Vortex MaestroPRO™ Manual. Operation schedule shall be set by week day or by specific date (month and day number). For both cases, schedule is set by hours in the day (start/end time). Operation schedule quantity is not limited, and all different schedules will be displayed in a paginated style. The MaestroPRO™ firmware operates in English, French and Spanish. The MaestroPRO™ firmware shall have the ability to soft start ramp up the Splashpad® to minimize potential water hammer. The MaestroPRO™ firmware shall have the ability to automatically purge all water lines based on the user selected time and duration (i.e. every day at 5 am). It shall also be configured to purge all lines after a user defined period of inactivity (i.e. after 4 hours of inactivity). The MaestroPRO™ firmware in the interface lets the user modify easily the water consumption while keeping the sequence capability. The MaestroPRO™ firmware shall have the ability to handle automatic Backwash process once connected to a multi positions valves. **MAESTROPRO™ CONTROLLER EXPANSION – 33907.22B2:** The MaestroPRO™ control panel is TYPE 1, housed in a fiberglass corrosion resistant NEMA 4X Enclosure. The MaestroPRO™ Expansion control panel shall be physically connected to the MaestroPRO™ main (33907.12B2) or to another MaestroPRO™ Expansion (33907.22B2). All MaestroPRO™ control panels are connected together following a daisy-chain pattern. Cat 5 Ethernet cable with RJ-45 connector must be used. The MaestroPRO™ Expansion control panel shall be supplied by two 100VA transformers 120V AC primary / 24 VAC secondary or 240 VAC primary / 24 VAC secondary, depending on MaestroPRO™ Power Box associated, with built- in electrostatic shield protection, and by a power supply 120/240 VAC primary to 24 VDC secondary and 100 VA. The MaestroPRO™ Expansion control panel shall integrate 24 digital outputs with 24VAC (per output : max 1.6A inrush, max 0.3A nominal) and 12 digital inputs with selectable 5 or 24 VDC (1A max over all inputs). The MaestroPRO™ Expansion control panel shall have the capacity to receive digital signals from activation devices or sensors, operating on 5 or 24 VDC. The MaestroPRO™ Expansion control panel shall have the ability to provide a 24VAC auxiliary signal. This signal can be used to trigger a relay for Pumps, Chemical, UV system, or any other item following electrical specification. All outputs are electrically protected against over consumption with resettable fuses. The MaestroPRO™ Expansion control panel shall have the ability to control Fast Acting Valves supplied by 24V AC max 1.6Amp (inrush) each. The MaestroPRO™ Expansion control panel shall have removable terminal blocks for easy wiring. In case of emergency, pushing the Red Emergency Button will power down the entire controller. **The MaestroPRO™ Power**

Box (33907.13BX) shall be housed in a fiberglass corrosion resistant NEMA 4X rated enclosure. Power consumption : Maximum power fully loaded forced manually is 200W. Power while in standard sequence in operation hours shall be approx. 100W, Power while in idle mode shall be approx. 10W – i.e. out of operation hours or without sequence running. MaestroPRO™ control panel shall be protected by fuses sized according to voltage and transformer size. In case of emergency, pushing the Red Emergency Button will power down the associated controller. The MaestroPRO™ Power Box shall be powered using whether a 120VAC 60Hz or 240VAC 50Hz power input with a maximum of 5Amps. **REMOTE CONNECTION:** If remote connection ability is required, the operating system shall be connected to internet. A hard connection to an existing network can be set. MaestroPRO™ control panel integrates a LAN port set by default as DHCP client with RJ45 physical connector. MaestroPRO™ control panel shall include a built-in LTE/4G cellular module. In order to connect to internet, a NANO-SIM card previously activated by carrier must be inserted into the control panel on the Main board. **SAFEGUARD MODULE (VOR-33923.XXXX) (APPLICABLE FOR WATER QUALITY MANAGEMENT SYSTEMS WQMS OR WATER RE-CIRCULATED SYSTEMS):** The contractor shall provide and install the following Water Quality Management System Module as manufactured by VORTEX AQUATIC STRUCTURES INTL. The Water Quality Management System Module shall be factory assembled and water pressure tested before delivery. The Water Quality Management System Module shall be fully serviceable and accessible for ease of maintenance and use. All electrical equipment, including flow switches, shall be tested before delivery. All equipment shall be mounted directly onto a galvanized steel base using galvanized steel hardware prior to delivery. Controller shall control electrical solenoid valves for play features and bypass with a 24V AC max 1.6Amp signal with a total of 10Amp over all 24 outputs with the included 200VA transformer. The chemical controller shall have an alarm system that shall close all valves to the aquatic play features in case of a loss of proper water chemistry. The 120V AC from the chemical controller will switch a relay connected to the controller. The chemical controller shall be wired to the Safeguard Module on site. Controller shall control UV system (part of the UV module) with a 24V AC max 250mA signal and shall be wired on site. A flow switch shall be present on the feature pump to monitor flow and shut down the feature system in the event of no flow. It shall be wired to the Safeguard Module on site. A flow switch shall be present on the flow cell located on the filter loop module to monitor flow and shut down the filter pump in the event of no flow. All valves to the aquatic play features will be closed until the filter no flow event is cleared. Modular WQMS has to be installed inside a closed room protected from the elements. **Electrical Connections:** All main power electrical connections to the Splashpad Controller are to be performed per local codes. Product drawings and installation manuals shall be supplied by the manufacturer for ease of installation. As per Electrical Construction and Safety Codes: Controller and/or LED power panels and/or any other electrical equipment must be hard-wired to a ground fault circuit interrupter (GFCI) from the input power source. All electrical work should be performed by a license electrician in accordance to local electrical construction and safety codes.

- C. **PLAYSAFE™ DRAIN No4 (VOR-1004.4000):** consists of a basin and a removable cover. The basin shall be constructed in Polyethylene (PE) 22.5" outside diameter X 10" height. The drain grate cover shall be constructed of stainless steel with 22" diameter and 1/4" thickness. The gap openings in the grate cover shall be 1/4 in. The removable cover shall have an anti-skid surface. The Playsafe™ Drain No4 shall have an optional strainer basket. A concrete levelling base (supplied by installer) with the Playsafe™ drain which has the capabilities to be levelled shall be inserted in the hole to create a concrete drain box pit. The Water line outlet connected to the drain basin shall be a maximum of 6" in diameter at a minimum slope of 1%. The drainage recommended capacity is 240 GPM, 300 GPM maximum. The overall height of the grate cover shall be 0" above ground. The diameter shall be not less than 22.5".
- D. **ACTIVATOR No4 (VOR-0622):** shall be constructed of 304/304L stainless steel structural tubing with an outside diameter of 4½" (11.4cm) and a wall thickness of 0.120" (3mm). The upper part housing of the feature is constructed with a soft touch polyurethane that is durable polymer, engineered for impact resistance, UV protection, and anti-fungus properties. This housing will hold the Playstart activator. The Playstart™ activator shall have no moving parts and run on a low voltage electrical supply. An electrical switch sensor to be used as an interface for processing user input activation. The activation cap shall of

304/304L stainless steel with powder coating and laser engraving. It shall be secured in place using tamper-resistant fasteners. This post activator shall be surface mounted only with the provided anchors secured in concrete with epoxy following installation instructions. The Activator shall have an overall height of 37" (94cm) above the final grade. The Activator shall be the direct interface between the users of the aquatic play area and the aquatic play products. The pre-programmed sequence of the water features shall be activated only when the Activator No4 is touched by the user and during the owner's preset operational hours.

- E. **PUSH BUTTON ACTIVATOR (VOR-0604):** Shall be constructed of 304/304L stainless steel structural tubing with an outside diameter of 4½" (11.4cm) and a wall thickness of 1/8" (3mm). The activator shall consist of a PVC hydraulic valve and a stainless-steel push-button activator. The hydraulic solenoid valve and push-button activator shall be factory assembled and recessed into the upper portion of the tubular post. The hydraulic valve assembly shall control the operation of the water features. Once activated the water flow will commence for a period of 1-2 minutes, before re-activation is required. The mechanical vault shall be a prefabricated unit attached to the lower portion of the tubular section and act as the anchoring system for the entire unit. It shall house one (1) main water inlet that shall have a 1½" (3.8cm) National Pipe Thread connection that shall be pre-assembled to a 1½" (3.8cm) hydraulic solenoid valve. The drainage system shall consist of a 4" (1.3cm) PVC ball valve in the vault. The vault shall also house one (1) 1½" (3.8cm) National Pipe Thread water outlet for the water features. The vault shall be accessible via removable stainless steel access panels. The overall height of the Push Button Activator shall be 38" (96 cm) above ground.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify that required utilities are in correct location and are of correct capacities for specified products.
- B. Verify equipment rough-in before proceeding with work.

3.02 INTERFACE WITH OTHER WORK

- A. Coordinate with other trades for proper installation of plumbing, electrical services and concrete work.
- B. Verify equipment rough-in before proceeding with work.

3.03 STARTING EQUIPMENT AND SYSTEMS

- A. Adjust for proper operation within manufacturer's published tolerances.
- B. The manufacturer and/or manufacturer's local representative shall furnish the purchaser with an installation manual and an owner/operator manual.
- C. Upon completion, the general contractor/installer shall provide the owner/operator adequate training on facility operations and maintenance. The contractor may request that the equipment manufacturer and/or manufacturer's local representative provide on-site start-up and training for the owner/operator.

Section 096230

Micro-Top Guideline Specification

DIVISION 09

FINISHES

Notes:

1) A specifier is within his rights to issue a proprietary specification that names only one brand. If in the informed and professional judgment of the specifier, his client's needs will be best served by naming a particular brand, then he has the responsibility to limit his specification to one source. This practice is even acceptable on publicly funded projects. This principle of proprietary specification has found legal support in the case of Whitten Corp. v. Paddock Pool Builders, Inc., a Federal District Court case from Massachusetts (376 F. Supp. 125). Further support came in 1975 when the U.S. Supreme Court rejected further appeal and review.

2) This specification applies only to Micro-Top. Bomanite is most often installed as a monolithic slab on grade with a thickness of 4" or greater (which is covered by separate specifications from these). Micro-Top offers the unique ability to thinly cover a variety of surfaces such as concrete, wood, metal, plastic and asphalt with a full spectrum of cementitious color choices.

1.0 GENERAL

1.01 Description - Micro-Top includes:

Applications:

- 1) Interior and exterior renovation projects requiring resurfacing of damaged concrete.
- 2) New construction surfaces where elaborate design and color choices require costly multiple forming and pouring phases.
 - a. Materials: Micro-Top Liquid and Micro-Top Powder
 - b. Substrate inspection and preparation
 - c. Sealer application

1.02 References and Standards - The licensed Bomanite Contractor is normally a subcontractor, and the Bomanite Micro-Top process is called out in a separate section from the balance of regular concrete work in Division 9. Depending on the project, the Micro-Top may also be included in Divisions 2 or 3. The contractor for this work shall be the following Bomanite licensed contractor who has been trained and equipped by The Bomanite Company:

Name of Bomanite contractor _____
Address _____
Telephone _____
Fax _____

1.03 Definitions - Micro-Top by Bomanite, a system that employs the use of a troweled-on integrally colored cementitious topping to resurface vertical and horizontal surfaces on both indoor and outdoor applications. Micro-Top is approximately 20 mils thick (about the thickness of a credit card) and utilizes a full spectrum of color choices that can incorporate simple or elaborate graphic design. The work is performed on the job site by trained and experienced technicians.

1.04 Scope - The work designated in this section shall be specified Micro-Top by Bomanite. The work shall include all labor, material, equipment and transportation required to install the Micro-Top. The contractor for this work shall be licensed, tooled and trained by The Bomanite Company to use the materials and processes specified as Micro-Top. The contractor shall be required to provide a foreman or supervisor who has done at least three Micro-Top projects.

1.05 Quality Assurance

- a. All work shall be installed by a Licensed Bomanite Contractor who shall provide a foreman or supervisor who has experience with and knowledge of special processes used to install Micro-Top. Evidence that the Bomanite Contractor is qualified to complete the project as specified herein shall be submitted to, and subject to approval of, the Architect/Designer.

- b. The Licensed Bomanite Contractor shall provide a job-site sample (100 square feet or 9.3 square meters minimum) to be approved by the Architect prior to the start of the construction. Said sample shall be the standard for the balance of the work installed, and shall be protected against damage until final approval from the Architect. The cost for the construction and protection of the referee sample shall be borne by the owner/agent and shall be part of the contractor's bid.

2.00 PRODUCTS AND MATERIALS

2.01 Concrete Mix Design

- a. (Optional) For new construction, the concrete shall have a minimum compressive strength of 3000 psi in non-freeze areas, 3500 psi in moderate freeze-thaw areas and 4000 psi in severe freeze-thaw areas. Portland cement shall conform to ASTM C 150 Type I, II, or V, depending on soil conditions. Aggregates shall conform to ASTM C 33. Mixing water shall be fresh, clean and potable. In freeze-thaw areas only, an air-entraining admixture complying to ASTM C 260 shall be used to achieve an entrained air content for the particular mix used in accordance with the published recommendations of the Portland Cement Association and the American Concrete Institute. No admixtures containing calcium chloride shall be permitted.

2.02 Coloring, Application and Sealing Materials

- a. (Optional) Reinforcement for new construction: All slabs shall conform to the guidelines and recommendations of the American Concrete Institute for reinforcement of cast-in-place concrete slabs.
- b. (Optional) Curing for new construction: All slabs shall be cured properly using conventional 5-day water cures or using membrane-forming curing agents such as Bomanite's Cure & Seal. (Note: When membrane-forming curing agents are used, it is necessary to lightly abrade the surface with a 20-grit sanding disk prior to Micro-Top application.)
- c. A semi-rigid elastomeric crack filler, _____ manufactured by _____, shall be used to fill "working" cracks and construction joints.
- d. Micro-Top Color: The surface shall be colored with the following Micro-Top color(s):
_____.
- e. Sealer: All Micro-Top surfaces shall be sealed in accordance with the manufacturer's recommendations.

3.00 EXECUTION

3.01 Installation Procedures

- a. (Optional) For new construction, concrete shall be installed in accordance with the standards and specifications of the American Concrete Institute (ACI).
- b. Concrete shall be tested in accordance with ASTM F 1869-98 and/or ASTM E 1907-97. (If concrete does not conform, call Bomanite Corporation for technical assistance.)
- c. Interior Concrete: Concrete shall be tested for vapor emission levels in accordance with ASTM D 4263. If vapor emission levels exceed 5 lbs., Bomanite Con-Shield shall be applied according to manufacturer's recommendations.
- d. Exterior Concrete: Concrete cannot be effectively tested for vapor emission levels outdoors. If moisture problems are suspected, apply Bomanite Con-Shield following manufacturer's recommendations. Concrete subject to freeze/thaw conditions shall be treated with Bomanite Con-Shield according to manufacturer's recommendations.
- e. Concrete shall have a pH level between 7-9. (If concrete does not conform, call The Bomanite Company for technical assistance.)
- f. Concrete shall not be soft/"dusty" due to poor curing or execution of the initial concrete installation. If found to be "dusty", apply Bomanite Con-Shield per manufacturer's recommendations.

- g. Concrete shall be a minimum temperature of 40 °F throughout application and during initial 24-hour cure.
- h. Construction joints shall be transferred through the finished surface by tooling them into the finished surface. {Optional} Construction joints may be filled using a semi-rigid elastomeric material in accordance with manufacturer's recommendations. Any working cracks should be anticipated to show through.
- i. If the surface is found to be "shiny" due to burnished concrete or high-shine type sealers, abrade the surface using a 20-grit sanding disk on a floor machine or shot blast as required.
- j. A single base-coat of Micro-Top shall be applied in accordance with the manufacturer's recommendations.
- k. After the first coat is dry to the touch, a second coat shall be applied to reach a thickness of 20 mils.
- l. A third application of Micro-Top finish coat is optional depending on desired finish and texture. This application is used primarily to achieve a smooth troweled finish.
- m. After the initial curing (10-12 hours), a sufficient build of a protective water-based acrylic sealer shall be applied to the surface.
- n. On exterior horizontal walking surfaces, a non-skid additive shall be used in the acrylic sealer.

3.02 Protection and Maintenance - Newly completed surfaces should be protected from water until sealed by the Bomanite Contractor. Water left on the surface before sealing could result in a white film. This will not affect the adhesion or durability and can be cleaned prior to sealing. Acids or solvent materials should not be used over the finished Micro-Top.

Regular cleaning and maintenance of interior floors shall be done in accordance with job requirements. This will vary depending on a number of factors including volume and intensity of traffic, UV exposure, geographical location and weather conditions. For instance, interior applications will require a different routine maintenance program than exterior products. Residential applications typically require less cleaning and maintenance than commercial and municipal projects. In large commercial applications, a qualified floor maintenance contractor is recommended for routine cleaning.

All Micro-Top installations should be professionally cleaned and resealed periodically by your local Bomanite contractor or a qualified floor maintenance contractor in order to maintain a top-quality appearance. In general, expect the need for professional maintenance to occur every 12-24 months. Protective maintenance coats of sealer shall be applied periodically to assure the base acrylic is protected and the desired level of gloss is maintained. Exterior Micro-Top surfaces should be resealed annually depending on traffic, especially in freeze-thaw locations. Contact your local Bomanite contractor for the proper maintenance program in your area.

LIMITATIONS

Micro-Top will bond tenaciously to foreign materials that are bonded to the substrate, such as cut-back adhesives, thinset grouts or high-performance coatings, but the ultimate bond strength of Micro-Top is dependent on the bond strength of the foreign material. Any questionable low-strength coatings such as release agents, bond breakers or gypsum-based material should be removed completely. When using Micro-Top over high-performance glossy coatings, the surface should be roughed up with a sanding disk. Though Micro-Top will bridge hairline cracks well and leave them less noticeable than they were originally, working cracks or control joints will reappear and should be filled with a semi-rigid elastomeric material prior to applying Micro-Top.

CODES AND CERTIFICATION

All materials manufactured by The Bomanite Company are warranted to be of uniform quality within manufacturing tolerances. Since control is not exercised over their use, no warranty, expressed or implied, is made as to the effects of such use. The Bomanite Company obligation under this warranty shall be limited to refunding the purchase price of that portion of the material proven to be defective. Please contact your local Bomanite contractor for available warranties on workmanship. The Bomanite Company makes no warranty, expressed or implied, as to the quality of the workmanship by local Bomanite contractors.



International Society
OVER 225 CONTRACTORS WORLDWIDE

The Bomanite International Society of licensed contractors is a network of specially trained and equipped professionals. Through constant exchange of new ideas, re-education and development programs, members of the Bomanite International Society continue to increase already high standards of quality and service. The activities of the Bomanite International Society are coordinated by The Bomanite Company. The Bomanite Company also provides services and technical assistance to its member licensees, and to architects, designers and engineers specifying Bomanite products. For more information, including a list of members of the Bomanite International Society, contact:

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Granite Bay, CA 95746
Tel: (303) 369-1115
Fax: (303) 291-0282

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MANUFACTURER'S SPECIFICATIONS:

DuraBound Surfacing System

Part 1 – GENERAL

1.01 SCOPE:

Provide all materials, labor and equipment necessary to install the DuraBound Surfacing System, a poured-in-place, one-layer safety surface system.

1.02 DESCRIPTION:

DuraBound Surfacing System is a single layer poured-in-place safety surface which complies with CPSC standards, ADA accessibility, ASTM F1292 Impact Attenuation. The surface is comprised of a shredded pigmented post-consumer rubber mixed with a single component polyurethane binder that is troweled in place to produce a smooth, seamless safety surface.

1.03 COMPOSITION:

DuraBound Surfacing System consists of 100% recycled pigmented styrene butadiene rubber (SBR) mixed with a single component polyurethane binder.

1.04 QUALITY ASSURANCE:

A. Product:

1. The Applicator/ Installer shall be trained and certified by DuraPlay, Inc.
2. All components of the DuraBound Surfacing System shall be obtained from DuraPlay, Inc. or its authorized distributors. No substitutions or additions of other materials shall be submitted without prior written consent from DuraPlay, Inc.
3. Acceptable substrates for the DuraBound Surfacing System include asphalt, concrete and compacted stone. See construction detail.
4. Other substrates shall be approved by DuraPlay, Inc. prior to application.
5. Systems to be considered equal to those specified herein shall be approved by the Architect, in writing, at least ten working days prior to the project bid date.

B. Qualifications:

1. The manufacturer must be in business for at least 5 years.
2. The applicator/installer shall be trained and certified by DuraPlay, Inc. and must have installed a minimum of 10 applications.

C. Application:

1. Ambient air temperature shall be 40°F (4°C) or greater and rising at the time of installation of the DuraBound Surfacing System.
2. Adjacent materials and the DuraPlay, Inc. System shall be protected during installation while curing and/or unattended from weather and other damage.

3. Accessibility of Surface System. ASTM F1951: All playground surfacing products must pass testing to ensure wheelchair access.
4. Impact Attenuation: Playground shall comply with all performance requirements set forth by CPSC, ASTM F1292 and / or CSA Z614-98.

1.05 SUBMITTALS:

- A. Material Product data
- B. DuraBound Color Chart
- C. Sample colors if needed
- D. Warranty
- E. Product Liability Insurance Certificate

1.06 DELIVERY & STORAGE:

- A. Deliver all materials in original unopened packages with labels intact
- B. Store all materials protected from weather and at temperatures not less than 32° F (4° C)

1.07 JOB CONDITIONS:

- A. Ambient air temperature shall be 40° or greater and rising at the time of installation of the surface and shall remain at 40° F or greater for at least 48 hours after application.
- B. Adjacent materials and the surface shall be protected during installation, while curing and unattended, from weather and other damage, and is the contractor, and/or owner's responsibility.

1.08 ALTERNATES & ALLOWANCES:

- A. Systems to be considered equal to those specified herein shall be approved by the architect, in writing, at least ten working days prior to the project bid date.

Part 2 - PRODUCTS

2.01 MATERIALS:

- A. DuraPlay Primer: (only when concrete is the substrate) A single component moisture curing polyurethane.
- B. DuraPlay Binder: An elastic single component polyurethane pre-polymer, MDI based, low odor, capable of excellent weathering and binding characteristics. Binder shall contain no TDI Monomers (Toluene Diphenyl Isocyanate). Color treated binder will not be allowed.
- C. DuraBound Colored Rubber Mulch: a combination of +4 SBR recycled rubber, colored with a pigmented colorant and coated with a UV sealant. DuraBound Rubber Mulch is clean and free of foreign matter.
 1. Thicknesses: 2.25 inches to 5.25 inches, depending on the critical fall height of playground equipment. When applying over a compacted stone surface there is a 2.25" minimum thickness.
 2. Colors: Beige, Red, Brown, Black, Blue, Green & Yellow. Combinations of colors are allowable.

2.02 TECHNICAL INFORMATION:

A. Applicable Standards

1. Shock attenuation under ASTM-F-1292 – GMAX less than 200
2. ADA Accessibility - ASTM 1951
3. Head Injury Criteria – less than 1000
4. Non-slip characteristics under ASTM-E-303
5. Flammability under 8S -5696 and ASTM-D-2859

B. Physical properties:

1. Tensile Strength (ASTM D412) 60 psi
2. Elongation at break (ASTM D412) 40% minimum
3. Flammability: pass (ASTM D285)
4. Coefficient of friction
 - i. Wet 0.9 min
 - ii. Dry 0.1 min
5. Water permeability 0.4 gal./89.yd/sec. min.

C. Chemical properties:

1. 80% EPDM Rubber Granules, 20% Polyurethane Binder

2.03 INSTALLATION:

A. Inspection: Prior to application of DuraBound Surfacing System, the substrates shall be examined by DuraPlay installation technician for compliance with the contract document of DuraPlay specifications. The general contractor and architect shall be advised of all discrepancies. Work shall not proceed until unsatisfactory conditions are corrected.

B. DuraPlay Primer:

1. Apply primer by spray or short nap roller at the rate of 300 square feet per gallon. Do not over saturate substrate. Prime area 1 1/2-2 feet around perimeter and any adjacent vertical barriers such as playground equipment support legs, curbs or edging that will contact the surfacing system. NOTE: Do not use DuraPlay primer over compacted stone.

C. DuraBound Surface:

1. Apply mixed binder/SBR at desired thickness using a screed bar that is 1/8" thicker than the finished thickness.
2. Using a steel pool trowel, even binder/SBR mixture. Be sure to continuously lubricate trowel with kerosene, diesel fuel or soapy water. Do not saturate surface with these lubricants.
3. As the mixture is leveled apply a downward pressure onto the surface so that the mixture compacts tightly.
4. Check surface to be level.
5. Allow to cure for 48 hours.

2.04 WARRANTY:

Our standard warranty period is 3 years from the date of completion. See DuraBound Warranty.

2.05 PROTECTION:

It is the responsibility of the customer to provide security to protect the drying surface from footprints and vandalism while surface is curing.

2.06 CLEANING AND MAINTENANCE:

DuraPlay Surfaces are self-sufficient; therefore, excessive cleaning is needed only in some cases. Applying two clear coats of DuraSeal every two years will prolong the life of the DuraBound Surface.

2.07 WARNING:

High surface temperatures may occur due to the absorption of solar energy. To assure child safety and comfort, shade structures are recommended over all poured in place surfacing. All individuals must wear adequate foot protection while on a poured in place surface.

END OF SECTION

If any questions arise do not hesitate to contact DuraPlay Inc. for technical assistance
512.847.2473

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