

The Enclosed Document Is Provided For Your Convenience.

Please Email ALL Questions:
[MailTo:ContractAdministration@TampaGov.net](mailto:ContractAdministration@TampaGov.net)

City of Tampa
Contract Administration Department
306 E. Jackson St. #280A4N
Tampa, FL 33602
(813)274-8456

CITY OF
TAMPA, FLORIDA

NOTICE TO BIDDERS, INSTRUCTIONS TO BIDDERS
PROPOSAL, BID BOND, FORM OF NOTICE OF AWARD,
AGREEMENT, PERFORMANCE BOND AND
SPECIFICATIONS

FOR

Contract 18-C-00036

Madison Street Park

City of Tampa
CONTRACT ADMINISTRATION DEPARTMENT
TAMPA MUNICIPAL OFFICE BUILDING
306 E. JACKSON STREET - 4TH FLOOR NORTH
TAMPA, FLORIDA 33602

JANUARY 2019

CITY OF TAMPA
CONTRACT ADMINISTRATION DEPARTMENT
306 E. Jackson Street 280A4N
Tampa, FL 33602

BID NOTICE MEMO

Bids will be received no later than 1:30 p.m. on the indicated Date(s) for the following Project(s):

CONTRACT NO.: 18-C-00036; Madison Street Park

BID OPENING: 1:30PM, Tuesday, February 19, 2019 **ESTIMATE:** \$2,500,000 **SCOPE:** The project comprises furnishing labor, materials, and equipment for management of contaminated soil, including removal, hauling and replacement with clean soil; installation of concrete walks, decorative seating wall, entertainment pavilion, dog park, shuffle board court, play equipment, multi-sports court, drinking fountains, benches, bike rack, golf putting green, lighting, fencing, picnic tables, landscaping, irrigation with all associated work required for a complete project in accordance with the Contract Documents. **PRE-BID CONFERENCE:** 2:00PM, Tuesday, February 5, 2019. Attendance is not mandatory, but recommended.

Bids will be opened in the 4th Floor Conference Room, Tampa Municipal Office Building, 306 E. Jackson Street, Tampa, Florida 33602. Pre-Bid Conference is held at the same location unless otherwise indicated. Plans and Specifications and Addenda for this work may be examined at, and downloaded from, www.demandstar.com. Backup files are available at <http://www.tampagov.net/contract-administration/programs/construction-project-bidding>. Email Questions to: contractadministration@tampagov.net.

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NOTICE TO BIDDERS
CITY OF TAMPA, FLORIDA
Contract 18-C-00036; Madison Street Park

Sealed Proposals will be received by the City of Tampa no later than 1:30 P.M., February 19, 2019, in the 4th Floor Conference Room, Tampa Municipal Office Building, 306 E. Jackson Street, Tampa, Florida, there to be publicly opened and read aloud.

The proposed work is to include, but not be limited to, furnish all labor, materials, and equipment for management of contaminated soil, including removal, hauling and replacement with clean soil; installation of concrete walks, decorative seating wall, entertainment pavilion, dog park, shuffle board court, play equipment, multi-sports court, drinking fountains, benches, bike rack, golf putting green, lighting, fencing, picnic tables, landscaping, irrigation with all associated work required for a complete project in accordance with the Contract Documents.

The Instructions to Bidders, Proposal, Form of Bid Bond, Agreement, Form of Public Construction Bond, Specifications, Plans and other Contract Documents are posted at DemandStar.com. Backup files may be downloaded from <http://www.tampagov.net/contract-administration/programs/construction-project-bidding>. One set may be available for reference at the office of the Contract Administration Department, Municipal Office Building, Fourth Floor North, City Hall Plaza, Tampa, Florida 33602.

Each Proposal must be submitted on the Proposal form included in the Specifications and must be accompanied by a certified check or cashier's check on a solvent bank or trust company in compliance with Section 255.051, Florida Statutes, made payable to the City of Tampa, in an amount of not less than five per cent of the total bid, or a Bid Bond, of like amount, on the form set forth in the Contract Documents, as a guarantee that, if the Proposal is accepted, the Bidder will execute the Proposed Contract and furnish a Public Construction Bond within twenty (20) days after receipt of Notice of Award of Contract.

To be eligible to submit a proposal, a Bidder must hold the required and/or appropriate current license, certificate, or registration (e.g. DBPR license/certificate of authorization, etc.) in good standing at the time of receipt of Bids. **Per Section 489.131, Florida Statutes, Proposals submitted for the construction, improvement, remodeling, or repair of public projects must be accompanied by evidence that the Bidder holds the required and/or appropriate current certificate or registration, unless the work to be performed is exempt under Section 489.103, Florida Statutes.**

The City of Tampa reserves the right to reject any or all Bids and to waive any informalities in the Bid and/or Bid Bond. Acceptance or rejection of Proposals will be made as soon as practicable after the Proposals are received, but the City reserves the right to hold Proposals for ninety (90) days from the date of Opening.

Bid Protest Procedures: Unless subsequently indicated otherwise, in a revised posting on the Department's web page for Construction Project Bidding, the City of Tampa intends to award the referenced project to the lowest bidder listed in the tabulation posted on or about the date of Bid Opening. A bidder aggrieved by this decision may file a protest not later than 4:30 P.M., five (5) business days from the first posting thereof, pursuant to City of Tampa Code Chapter 2, Article V, Division 3, Section 2-282, Procurement Protest Procedures. Protests not conforming therewith shall not be reviewed.

Pursuant to Section 2-282, City of Tampa Code, during the solicitation period, including any protest and/or appeal, NO CONTACT with City officers or employees is permitted from any bidder or proposer, other than as specifically stated in this solicitation and as follows:
Director of the Contract Administration Department (CAD)
Contracts Management Supervisor, Jim Greiner
Contract Officer, Jody Gray
City legal department

Any Requests For Information must be submitted by email to ContractAdministration@tampagov.net

A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list." Refer to Section 287.133, Florida Statutes.

Pursuant to Section 287.087, Florida Statutes, under certain circumstances preference may be given to businesses with a drug-free workplace program that meets the requirements of said Section.

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

I-1.01 GENERAL:

The proposed work is the Madison Street Park in the City of Tampa, as required for a complete project, as shown on the plans and detailed in the specifications. The work is located on land owned or controlled by the City of Tampa.

To be eligible to submit a proposal, a Bidder must hold the required and/or appropriate current license, certificate, or registration (e.g. DBPR license/certificate of authorization, etc.) in good standing at the time of receipt of Bids. **Per Section 489.131, Florida Statutes, Proposals submitted for the construction, improvement, remodeling, or repair of public projects must be accompanied by evidence that the Bidder holds the required and/or appropriate current certificate or registration, unless the work to be performed is exempt under Section 489.103, Florida Statutes.**

I-1.02 FORM PREPARATION AND PRESENTATION OF PROPOSALS: Replace the second sentence with the following: Submission of the entire specification book is not required.

I-1.03 ADDENDA – Section I-2.03 is replaced with the following: No interpretation of the meaning of the Plans, Specifications, or other Contract Documents will be made to any Bidder orally.

Every request for such interpretation must be in writing, addressed to the City of Tampa, Contract Administration Department, 306 E. Jackson St., 4th Floor, Tampa, Florida 33602 and then emailed to ContractAdministration@tampagov.net. To be given consideration, such request must be received at least seven (7) days prior to the date fixed for the opening of the Proposals. Any and all such interpretations and any supplemental instructions will be in the form of written addenda which, if issued, will be posted on DemandStar.Com and on the Department's web page. Failure of any Bidder to receive any such addenda shall not relieve said Bidder from any obligation under his Proposal as submitted. All addenda so issued shall become part of the Contract Documents.

I-1.04 INSTRUCTIONS TO BIDDERS

SECTION 2 – GENERAL INSTRUCTIONS. Section I-2.07 SIGNATURE AND QUALIFICATIONS OF BIDDERS is replaced with the following:

Proposals must be signed in ink by the Bidder with signature in full. When firm is a Bidder, the Proposal shall be signed in the name of the firm by one or more partners. When a corporation is a bidder the officer signing shall set out the corporate name in full beneath which he shall sign his name and give the title of his office.

If the bidder referred to in Section I-2.07 is a corporation, it must submit; upon request, a copy of its filed Articles of Incorporation. In addition, if the bidder was incorporated in another state, it must establish that it is authorized to do business in the State of Florida. If the bidder is using a fictitious name, it must submit upon request, proof of registration of such name with the Clerk of the Circuit Court of the County where its principal place of business is. Failure to submit what is required is grounds to reject the bid of that bidder.

SECTION 2 – GENERAL INSTRUCTIONS. Section I-2.14 NONDISCRIMINATION IN EMPLOYMENT is changed to add the following to the end of the existing text:

The following provisions are hereby incorporated into any contract executed by or on behalf of the City. Contractor shall comply with the following Statement of Assurance: During the performance of the Contract, the Contractor assures the City, that the Contractor is in compliance with Title VII of the 1964 Civil Rights Act, as amended, the Florida Civil Rights Act of 1992, and the City of Tampa Code of Ordinances, Chapter 12, in that Firm/Contractor does not on the grounds of race, color, national origin, religion, sex, sexual orientation, gender identity or expression, age, disability, familial status, or marital status, discriminate in any form or manner against said Firm's/Contractor's employees or applicants for employment. Contractor understands and agrees that the Contract is conditioned upon the veracity of this Statement of Assurance, and that violation of this condition shall be considered a material breach of the Award/Contract. Furthermore, Contractor herein assures the City that said Contractor will comply with Title VI of the Civil Rights Act of 1964 when federal grant(s) is/are

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

involved. This Statement of Assurance shall be interpreted to include Vietnam-Era Veterans and Disabled Veterans within its protective range of applicability. Firm/Contractor further acknowledges and agrees to provide the City with all information and documentation that may be requested by the City from time to time regarding the solicitation, selection, treatment and payment of subcontractors, suppliers and vendors in connection with this Award/Contract. Firm/Contractor further acknowledges that it must comply with City of Tampa Code of Ordinances, Chapter 26.5, as enacted by Ordinance No. 2008-89.

I-1.05 TIME FOR COMPLETION:

The work shall be arranged to be completed in accordance with a progress schedule approved by the Construction Engineer.

The time for completion of this project, referred in Article 4.01 of the Agreement, shall be 240 consecutive calendar days. The period for performance shall start from the date indicated in the Notice To Proceed.

I-1.06 LIQUIDATED DAMAGES:

The amount of liquidated damages, referred to in Article 4.06 of the Agreement, for completion of this project shall be \$500 per calendar day.

I-1.07 BASIS OF AWARD OF CONTRACT:

The basis of award referred to in Item I-2.11 of Instructions to Bidders shall be the greatest amount of work, which can be accomplished within the funds available as budgeted. The award may be made on the basis of the total bid, base bid, alternates(s) if any, unit bids if any, or any combination thereof deemed to be in the best interest of the City.

Unless all bids are rejected, the award will be made within 90 days after opening proposals.

I-1.08 GROUND BREAKING CEREMONY:

Arrangement may be made by the City in coordination with the Contractor, for construction to commence with a Ground Breaking Ceremony. Details will be discussed at the pre-construction conference.

I-1.09 INSURANCE:

The insurance required for this project shall be as indicated on the attached and incorporated Special Instructions pages beginning with page INS-1 entitled CITY OF TAMPA INSURANCE REQUIREMENTS, which among other things requires the Contractor to provide a Certificate of Insurance to the City prior to commencing work. The City may from time to time use a third party vendor to manage its insurance certificates and related documentation which vendor may periodically initiate contact, requests for information, etc. on the City's behalf.

INSTRUCTIONS TO BIDDERS
SECTION 1 – SPECIAL INSTRUCTIONS

I-1.10 EQUAL BUSINESS OPPORTUNITY PROGRAM (EBO) REQUIREMENTS / PROJECT SUBCONTRACTING GOAL(S)

BIDDERS MUST SUBMIT COMPLETED AND SIGNED CITY OF TAMPA FORMS MBD-10 AND MBD-20 WITH THEIR BIDS. BIDS SUBMITTED WITHOUT THESE COMPLETED FORMS (INCLUDING SIGNATURES) WILL BE DEEMED NON-RESPONSIVE. INSTRUCTIONS ON COMPLETING THE FORMS ARE INCLUDED AFTER EACH FORM IN THIS BID PACKAGE.

THE CHECKED BOX INDICATES SECTION THAT APPLIES TO THIS BID.



SUBCONTRACTING GOAL – (WMBE and SLBE)

In accordance with the City of Tampa's EBO Program, Chapter 26.5, City of Tampa Code, the subcontracting goal(s) has/have been established for subcontracting with City-certified underutilized WMBEs (Women and Minority Business Enterprises) and/or SLBEs (Small Local Business Enterprises) on this project (hereinafter "Goal"). *The Goal is based, in part, upon the availability of City-certified firms to perform the anticipated scope of work (Bid is subject to the subcontracting project goal(s) section for which a corresponding numerical percent is indicated).* Project Industry Category: Construction

Project Goal(s): _____% U-WMBE (Underutilized Woman and Minority Business Enterprise) (EBO Program)
per MBD Form-70 the U-WMBE subcontract Classification for Construction is African American (BBE)
_____% SLBE (Small Local Business Enterprise) (EBO Program) only City-certified SLBEs
28.7% U-WMBE/SLBE Combined (EBO Program)
per MBD Form-70 the U-WMBE subcontract Classification for Construction is African American (BBE)
together with City-certified SLBEs
_____% WMBE/SLBE ASPIRATIONAL (EBO Program) An all-inclusive SLBE/WMBE goal; any City certified firm counts towards goal attainment.

BIDDERS MUST SOLICIT ALL COMPANIES ON THE ATTACHED AVAILABILITY CONTACT LIST at least **five (5) City business days or more prior to bid opening as a first step** to demonstrate Good Faith Efforts to achieve the Goal. Substantive documentation that demonstrates Good Faith Efforts to achieve the Goal **must be submitted with the bid**, including emails, faxes, phone calls, letters, and other communication with City-certified firms. Bidders may explore other potential opportunities for subcontracting by consulting the current directory of all certified firms posted by the City of Tampa at <https://tampa.diversitysoftware.com> as the Availability Contact List may not be inclusive of all firms that could count toward Goal attainment. However, ONLY SUBCONTRACTING with those specific WMBEs designated as "underutilized" by Classification in the appropriate industry category (and, if made applicable by being specifically included in the above Goal, SLBEs) will count toward meeting the Goal. Making Good Faith Efforts through these and other means (not pro-forma) is the responsibility of the Bidder. See the attached Good Faith Effort Compliance Plan (GFCEP) (MBD Form-50) for specific requirements.

GOOD FAITH EFFORT COMPLIANCE PLAN (GFCEP) REQUIRED (MBD FORM-50). When a Goal has been established, the Bidder **must submit** with its bid a Good Faith Effort Compliance Plan (GFCEP) using the attached MBD Form-50 together with supporting documentation as specified therein. **Submittals that do not contain MBD Form-50 when a Goal has been established will be deemed non-responsive.** Additional explanation and documentation is required whenever a City-certified subcontractor's quote is not utilized. Any additional information regarding GFCEP (post-bid) shall be only upon the City's request for clarification of information submitted with bid and not to "cure" omissions or deficiencies of the bid.

NOTE: When U-WMBEs are included in a Goal, only those City-certified subcontractors whose WMBE Classification is designated "underutilized" will count toward Goal attainment. Refer to **MBD Form-70** to identify underutilized WMBEs by subcontract Classification for the applicable project industry category. A prime bidder who is a City-certified WMBE and/or SLBE is not exempt from the **GFCEP MBD Form-50** requirements.



SUBCONTRACTING GOAL – (DBE) FDOT DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

The City of Tampa is required to use the Florida Department of Transportation (FDOT) Disadvantaged Business Enterprise (DBE) program on contracts with Federal Highway Administration (FHWA) funds. Effective October 1, 2017 through to September 30, 2020, the overall FDOT DBE aspirational goal is **10.65%** and is *race neutral*, meaning that FDOT believes the aspirational DBE goal may be achieved entirely through ordinary, competitive procurement methods. Despite the absence of a contract specific DBE goal on this project, the City encourages bidders to seek out and use DBEs and other minority, small businesses. For assistance in identifying certified DBEs, FDOT offers the use of its supportive services program accessed via FDOT's Equal Opportunity Office at <http://www.fdot.gov/equalopportunity/serviceproviders.shtm>. FDOT DBE rules and regulations apply to this solicitation, including the requirement to report bidder opportunity information in the FDOT Equal Opportunity Compliance (EOC) web-based application within three (3) business days of submission of the bid for ALL subcontractors who quoted bidder for this specific project. The five (5) char/digit LAP Agreement Contract Number for this project is G_____. The web address to the EOC system is: <https://fdotwp1.dot.state.fl.us/EqualOpportunityCompliance/Account.aspx/LogIn?ReturnUrl=%2fEqualOpportunityCompliance>

NOTE: Regardless of FDOT DBE program applicability, for data collection purposes bidder still **must submit** City Forms MBD-10 and MBD-20 completed and signed with its bid or the bid will be deemed non-responsive.

DIVERSITY MANAGEMENT INITIATIVE (DMI) DATA REPORTING FORMS REQUIRED FOR ALL CONTRACTS

Bidder **must submit**, with its bid, completed and signed Forms MBD-10 and MBD-20 to be considered a responsive bid. Specifically, the 'Schedule of All Solicited Sub-(Contractors/Consultants/Suppliers) (Form MBD-10)' listing all subcontractors (including non-certified) solicited and 'Schedule of All -To Be Utilized Sub-(Contractors/Consultants/Suppliers) (Form MBD-20)' listing all subcontractors (including non-certified) to be utilized. Supplemental forms, such as 'Form MBD-40 Official Letter Of Intent' (LOI), can be submitted with the bid or once declared lowest-responsive bidder. After an award, 'DMI Sub-(Contractors/Consultants/Suppliers) Payment Form (Form MBD-30)' is to be submitted with payment requests to report payments to subcontractors and using the on-line automated MBD compliance software system available at <https://tampa.diversitysoftware.com>

For additional information about the WMBE and SLBE programs contact the Minority and Small Business Development Office at 813-274-5522. (3-18)

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

I-1.11 BID SECURITY:

Surety companies shall have a rating of not less than B+ Class VI as evaluated in the most recently circulated Best KeyRating Guide Property/Casualty.

I-1.12 PUBLIC CONSTRUCTION BOND:

The Bidder who is awarded the Contract will be required to furnish a Public Construction Bond upon the form provided herein, equal to 100 percent of the Contract price, such Bond to be issued and executed by (a) surety company(ies) acceptable to the City and licensed to underwrite contracts in the State of Florida. After execution of the Agreement and before commencing work, the Contractor must provide the City a certified copy of the officially recorded Bond.

I-1.13 AGREEMENT

SECTION 2 – POWERS OF THE CITY'S REPRESENTATIVES, new Article 2.05:

Add the following:

Article 2.05 CITY'S TERMINATION FOR CONVENIENCE:

The City may, at any time, terminate the Contract in whole or in part for the City's convenience and without cause. Termination by the City under this Article shall be by a notice of termination delivered to the Contractor, specify the extent of termination and the effective date.

Upon receipt of a notice of termination, the Contractor shall immediately, in accordance with instructions from the City, proceed with performance of the following duties regardless of delay in determining or adjusting amounts due under this Paragraph:

- (a) cease operations as specified in the notice;
- (b) place no further orders and enter into no further subcontracts for materials, labor, services or facilities except as necessary to complete continued portions of the Contract;
- (c) terminate all subcontracts and orders to the extent they relate to the Work terminated;
- (d) proceed to complete the performance of Work not terminated; and
- (e) take actions that may be necessary, or that the City may direct, for the protection and preservation of the terminated Work.

The amount to be paid to the Contractor by the City because of the termination shall consist of:

- (a) for costs related to work performed on the terminated portion of the Work prior to the effective date including termination costs relative to subcontracts that are properly chargeable to the terminated portion of the Work;
- (b) the reasonable costs of settlement of the Work terminated, including accounting, legal, clerical and other expenses reasonable necessary for the preparation of termination settlement proposals and supporting data; additional costs of termination and settlement of subcontracts excluding amounts of such settlements; and storage, transportation, and other costs incurred which are reasonably necessary for the preservation, protection or disposition of the terminated Work; and
- (c) a fair and reasonable profit on the completed Work unless the Contractor would have sustained a loss on the entire Contract had it been completed.

Allowance shall be made for payments previously made to the Contractor for the terminated portion of the Work, and claims which the City has against the Contractor under the Contract, and for the value of materials supplies, equipment or other items that are part of the costs of the Work to be disposed of by the Contractor.

SECTION 5 – SUBCONTRACTS AND ASSIGNMENTS, Article 5.01, Page A-7, last paragraph:

Change "...twenty-five (25) percent..." to "...fifty-one (51) percent..."

SECTION 8 – CONTRACTOR'S EMPLOYEES, Article 8.03, Page A-9, delete Article 8.03 in its entirety and

Replace with the following new article:

ARTICLE 8.03 EMPLOYMENT OPPORTUNITIES

The Contractor shall, in the performance of the work required to be done under this Contract, employ all workers without discrimination and must not maintain, provide or permit facilities that are segregated.

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

SECTION 10 – PAYMENTS, Article 10.05, Page A-10, 1st Paragraph, 1st Sentence:
Change "...fair value of the work done, and may apply for..." to "...fair value of the work done, and shall apply for..."

SECTION 11 – MISCELLANEOUS PROVISIONS, Article 11.02, Page A-12, 1st Paragraph, 2nd Sentence:
Delete the 2nd Sentence in its entirety and replace it with the following new 2nd Sentence:

Without limiting application of Article 11.07, below, whenever the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall indemnify, defend, and hold harmless the City Indemnified Parties (as defined below) from any and all Claims (as defined below) for infringement by reason of the use of any such patented design, device, tool, material, equipment, or process, to be performed under the Contract and damages which may be incurred by reason of such infringement at any time during the prosecution or after completion of the work.

SECTION 11 – MISCELLANEOUS PROVISIONS, Article 11.03, Page A-12:
Delete Article 11.03 in its entirety and replace with the following new article:
ARTICLE 11.03 INTENTIONALLY OMITTED.

SECTION 11 – MISCELLANEOUS PROVISIONS, Article 11.07, Page A-12:
Delete Article 11.07 in its entirety and replace with the following new article:

ARTICLE 11.07 INDEMNIFICATION PROVISIONS

Whenever there appears in this Agreement, or in the other Contact Documents made a part hereof, an indemnification provision within the purview of Chapter 725.06, Laws of Florida, the monetary limitation on the extent of the indemnification under each such provision shall be One Million Dollars or a sum equal to the total Contract price, whichever shall be the greater.

Contractor releases and agrees to defend, indemnify and hold harmless the City, its officers, elected and appointed officials, employees, and/or agents (collectively, "City Indemnified Parties") from and against any and all losses, liabilities, damages, penalties, settlements, judgments, charges, or costs (including without limitation attorneys' fees, professional fees, or other expenses) of every kind and character arising out of any and all claims, liens, is entitled to indemnification hereunder. This obligation shall in no way be limited in any nature whatsoever by any limitation on the amount or type of Contractor's insurance coverage.

The parties agree that to the extent the written terms of this indemnification are deemed by a court of competent jurisdiction to be in conflict with any provisions of Florida law, in particular Sections 725.06 and 725.08, Florida Statutes, the written terms of this indemnification shall be deemed by any court of competent jurisdiction to be modified in such a manner as to be in fully and complete compliance with all such laws and to contain such limiting conditions or limitations of liability, or to not contain any unenforceable or prohibited term or terms, such that this indemnification shall be enforceable in accordance with and to the maximum extent permitted by Florida law.

The obligation of Contractor under this Article is absolute and unconditional; it is not conditioned in any way on any attempt by a City Indemnified Party to collect from an insurer any amount under a liability insurance policy, and is not subject to any set-off, defense, deduction, or counterclaim that the Contractor might have against the City Indemnified Party. The duty to defend hereunder is independent and separate from the duty to indemnify, and the duty to defend exists regardless of any ultimate liability of Contractor, the City, and any City Indemnified Party. The duty to defend arises immediately upon presentation of a Claim by any party and written notice of such Claim being provided to Contractor. Contractor's defense and indemnity obligations hereunder will survive the expiration or earlier termination of this Contract.

Contractor agrees and recognizes that the City Indemnified Parties shall not be held liable or responsible for any Claims which may result from any actions or omissions of Contractor in which the City Indemnified Parties participated either through providing data or advice and/or review or concurrence of Contractor's actions. In

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

reviewing, approving or rejecting any submissions by Contractor or other acts of Contractor, the City in no way assumes or shares any responsibility or liability of Contractor or any tier of subcontractor/subconsultant/supplier, under this Contract.

In the event the law is construed to require a specific consideration for such indemnification, the parties agree that the sum of Ten Dollars and 00/100 (\$10.00), receipt of which is hereby acknowledged, is the specific consideration for such indemnification and the providing of such indemnification is deemed to be part of the specifications with respect to the services provided by Contractor.

SECTION 11 – MISCELLANEOUS PROVISIONS, Article 11.12, Page A-13:
Change Article 11.12 to add the following new language after existing text:

The City of Tampa is a public agency subject to Chapter 119, Florida Statutes. In accordance with Florida Statutes, 119.0701, Contractor agrees to comply with Florida's Public Records Law, including the following:

1. Contractor shall keep and maintain public records required by the City to perform the services under this Agreement;
2. Upon request by the City, provide the City with copies of the requested records, having redacted records in total on in part that are exempt from disclosure by law or allow the records to be inspected or copied within a reasonable time (with provision of a copy of such records to the City) on the same terms and conditions that the City would provide the records and at a cost that does not exceed that provided in Chapter 119, Florida Statutes, or as otherwise provided by law;
3. Ensure that records, in part or in total, that are exempt or that are confidential and exempt from disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term and following completion (or earlier termination) of the Agreement if Contractor does not transfer the records to the City;
4. Upon completion (or earlier termination) of the Agreement, Contractor shall within 30 days after such event either transfer to the City, at no cost, all public records in possession of the Contractor or keep and maintain the public records in compliance with Chapter 119, Florida Statutes. If Contractor transfers all public records to the City upon completion (or earlier termination) of the Agreement, Contractor shall destroy any duplicate records that are exempt or confidential and exempt from public records disclosure requirements. If Contractor keeps and maintains public records upon completion (or earlier termination) of the Agreement, Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the agency.

The failure of Contractor to comply with Chapter 119, Florida Statutes, and/or the provisions set forth in this Article shall be grounds for immediate unilateral termination of the Agreement by the City; the City shall also have the option to withhold compensation due Contractor until records are received as provided herein.

IF CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 813-274-8598, JIM.GREINER@TAMPAGOV.NET, AND CONTRACT ADMINISTRATION DEPARTMENT, TAMPA MUNICIPAL OFFICE BUILDING, 4TH FLOOR, 306 E. JACKSON ST. TAMPA, FLORIDA 33602.

I-1.14 Contractors must utilize the U.S. Department of Homeland Security's E-Verify Systems to verify the employment eligibility of all persons employed during the term of the Contract to perform employment duties within the State of Florida and all persons, including subcontractors, assigned by Contractor to perform work pursuant to the contract.

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

I-1.15 GENERAL PROVISIONS; G-2.02 Copies Furnished to Contractor: Replace the first paragraph with the following:

The Contractor shall acquire for its use copies of the plans and specifications as needed, which may be downloaded from the City's web site, at <http://www.tampagov.net/contract-administration/programs/construction-project-bidding>.

Bidder as part of the solicitation process (and as Contractor if Bidder is successful) may hold, come into possession of, and/or generate certain building plans, blueprints, schematic drawings, including draft, preliminary, and final formats, which depict the internal layout and structural elements of a building, facility, or other structure owned or operated by the City or an agency (singularly or collectively "Exempt Plans"), which pursuant to Section 119.071(3), Florida Statutes, are exempt from Section 119.07(1), Florida Statutes and Section 24(a), Art. I of the Florida State Constitution. Contractor certifies it has read and is familiar the exemptions and obligations of Section 119.071(3), Florida Statutes; further that Contractor is and shall remain in compliance with same, including without limitation maintaining the exempt status of such Exempt Plans, for so long as any Exempt Plans are held by or otherwise in its possession.

I-1.16 PAYMENT DISPUTE RESOLUTION

Any dispute pertaining to pay requests must be presented to the City pursuant to Executive Order 2003-1.

I-1.17 SCRUTINIZED COMPANIES CERTIFICATION

Section 287.135, Florida Statutes, prohibits agencies or local governmental entities from contracting for goods or services of any amount with companies that are on the Scrutinized Companies that Boycott Israel List or are engaged in a boycott of Israel, and of \$1 million or more with companies that are on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or are engaged in business operations in Cuba or Syria. Specifically, Section 287.135(2), Florida Statutes, states: "A company is ineligible to, and may not, bid on, submit a proposal for, or enter into or renew a contract with an agency or local governmental entity for goods or services of: (a) Any amount if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to s. 215.4725, or is engaged in a boycott of Israel; or (b) One million dollars or more if, at the time of bidding on, submitting a proposal for, or entering into or renewing such contract, the company: 1. Is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473; or 2. Is engaged in business operations in Cuba or Syria."

Upon submitting its bid or proposal, a bidder/proposer: (i) certifies the company is not in violation of Section 287.135, Florida Statutes, and shall not be in violation at the time the company enters into or renews any resulting contract; and (ii) agrees any such resulting contract shall be deemed to contain a provision that allows the City, at its option, to terminate such contract for cause if the company is found to have submitted a false certification, been placed on one or any of the foregoing Lists, been engaged in a boycott of Israel, or been engaged in business operations in Cuba or Syria.

I-1.18 FLORIDA'S PUBLIC RECORDS LAW; DATA COLLECTION

Pursuant to Section 119.071(5)(a)2a, Florida Statutes, social security numbers shall only be collected from Bidders and/or Contractor by the City should such number be needed for identification, verification, and/or tax reporting purposes. To the extent Bidder and/or Contractor collects an individual's social security number in the course of acting on behalf of the City pursuant to the terms and conditions of its Proposal or, if awarded, the Agreement, Bidder and/or Contractor shall follow the requirements of Florida's Public Records Law.

INSTRUCTIONS TO BIDDERS

SECTION 2 GENERAL INSTRUCTIONS

I-2.01 BIDDER'S RESPONSIBILITY

Before submitting Proposals, Bidders shall carefully examine the entire site of the proposed work and adjacent premises and the various means of approach and access to the site, and make all necessary investigations to inform themselves thoroughly as to the facilities necessary for delivering, placing and operating the necessary construction equipment, and for delivering and handling materials at the site, and inform themselves thoroughly as to all difficulties involved in the completion of all the work in accordance with the Contract Documents.

Bidders must examine the Plans, Specifications, and other Contract Documents and shall exercise their own judgment as to the nature and amount of the whole of the work to be done, and for the bid prices must assume all risk of variance, by whomsoever made, in any computation or statement of amounts or quantities necessary to complete the work in strict compliance with the Contract Documents.

Elevations of the ground are shown on the Plans and are believed to be reasonably correct, but are not guaranteed to be absolutely so and are presented only as an approximation. Bidders shall satisfy themselves as to the correctness of all elevations.

The City may have acquired, for its own use, certain information relating to the character of materials, earth formations, probable profiles of the ground, conditions below ground, and water surfaces to be encountered at the site of the proposed work. This information, if it exists, is on file at the offices of the Department of Public Works and Bidders will be permitted to see and examine this information for whatever value they consider it worth. However, this information is not guaranteed, and Bidders should satisfy themselves by making borings or test pits, or by such other methods as they may prefer, as to the character, location, and amounts of water, peat, clay, sand, quicksand, gravel, boulders, conglomerate, rock, gas or other material to be encountered or work to be performed.

Various underground and overhead structures and utilities are shown on the plans. The location and dimensions of such structures and utilities, where given, are believed to be reasonably correct, but do not purport to be absolutely so. These structures and utilities are plotted on the Plans for the information of the Bidders, but information so given is not to be construed as a representation or assurance that such structures will be found or encountered as plotted, or that such information is complete or accurate.

I-2.02 FORM, PREPARATION AND PRESENTATION OF PROPOSALS

Each Proposal shall be submitted upon the Proposal Form and in accordance with the instructions included herein. The Proposal Form must not be detached herefrom. All blank spaces for bid prices must be filled in, in both words and figures, with the unit or lump sum prices, or both, for which the Proposal is made. The computed total price for each unit price Contract Item shall be determined by multiplying the estimated quantity of the item, as set forth in the Proposal Form, by the corresponding unit price bid for such item. The resulting product shall be entered in the appropriate blank space under the column headed "Computed Total Price for Item". The lump sum price bid for each lump sum price Contract Item shall also be entered in the column headed "Computed Total Price for Item". If a Proposal contains any omissions, erasures, alterations, additions, or items not called for in the itemized Proposal, or contains irregularities of any kind, such may constitute sufficient cause for rejection of the Proposal. In case of any discrepancy in the unit price or amount bid for any item in the Proposal, the price as expressed in written words will govern. In no case is the Agreement Form to be filled out or signed by the Bidder.

In the case of certain jobs bid Lump Sum a "Schedule of Unit Prices" must be filled out as an attachment to the Lump Sum proposal. These prices may be used as a guide for the negotiation of change orders, at the City's option.

The proposal must be signed and certified and be presented on the prescribed form in a sealed envelope on/or before the time and at the place stated in the Notice of Bidders, endorsed with the name of the person, firm or corporation presenting it, the date of presentation, and the title of the work for which the Proposal is made.

Unless the apparent low bidder is now engaged in or has recently completed contract work for the City of Tampa, he, if requested, shall furnish to the City, after the opening of bids and prior to award, a summary statement of record of construction experience over the past three (3) years with proper supporting evidence, and, if required by the City, shall also furnish a list of equipment and other facilities pertinent to and available for the proper execution of the proposed work, and a statement of financial resources to the extent necessary to establish ability to carry on the proposed work. The City may make further investigations as considered necessary with respect to responsibility of the Bidder to whom it appears may be awarded the Contract.

If forwarded by mail, the sealed envelope containing the Proposal, endorsed as directed above, must be enclosed in another envelope addressed as specified in the Notice to Bidders and sent by registered mail.

I-2.03 ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the Plans, Specifications, or other Contract Documents will be made to any Bidder orally.

Every request for such interpretation must be in writing, addressed to the Contract Administration Department, Tampa Municipal Office Building, 4th Floor North, City Hall Plaza, Tampa, Florida 33602. To be given consideration, such request must be received at least seven (7) days prior to the date fixed for the opening of the Proposals. Any and all such interpretations and any supplemental instructions will be in the form of written addenda which, if issued, will be sent by certified mail, with return receipt requested, to all prospective bidders at the respective addresses furnished, for such purposes, not later than three (3) working days prior to the date fixed for the opening of the Proposals, and if requested, a copy will be delivered to the prospective bidder's representative. Failure of any Bidder to receive any such addenda shall not relieve said Bidder from any obligation under his Proposal as submitted. All addenda so issued shall become part of the Contract Documents.

I-2.04 BID SECURITY

Each Proposal must be accompanied by a certified or cashier's check issued by a solvent bank or trust company and payable at sight to the City of Tampa, in compliance with Section 255.051 Florida Statutes, or a Bid Bond upon the form provided herein, in an amount of not less than five percent of the sum of the computed total amount of the Bidder's Proposal as a guarantee that if the Proposal is accepted, the Bidder will execute and fill in the proposed Contract and Public Construction Bond within twenty (20) days after notice of award of the Contract. Certified checks shall have all necessary documentary revenue stamps attached if required by law. Surety on Bid Bonds shall be a duly authorized surety company authorized to do business in the State of Florida, and all such Bonds shall be issued or countersigned by a local resident producing agent, and satisfactory evidence of the authority of the person or persons executing such Bond to Execute the same shall be submitted with the Bond. Bid Bonds shall be issued by a surety company acceptable to the City.

Within ten (10) days after the opening of Proposals, the bid security of all but the three lowest Bidders will be returned. The bid security of the remaining two Bidders whose Proposals are not accepted will be

returned within ten (10) days after the execution of the Contract, or, if no such Contract has been executed, within ninety (90) days after the date of opening Proposals. The bid security of the Bidder whose Proposal is accepted will be returned only after he has duly executed the Contract and furnished the required Public Construction Bond and insurance.

Should it be necessary for the City to retain the bid security and said bid security is in the form of checks, the checks of these Bidders will be returned if replaced by Bid Bonds in an amount equal to the amount of the checks of such Bidders in such form and issued by a surety company acceptable to the City.

A Bidder may withdraw his Proposal before the time fixed for the opening of Proposals, without prejudice to himself, by communicating his purpose, in writing, to the Mayor and City Council, and when his communication is received, the Proposal will be handed to him or his authorized agent unopened. No Bidder may withdraw his Proposal within ninety (90) days after the day of opening Proposals.

The Bidder whose Proposal is accepted shall enter into a written contract, upon the Agreement form included herein, for the performance of the work and furnish the required Public Construction Bond within twenty (20) days after written notice by the City of Award of Contract has been served on such Bidder personally or after receipt of the written notice by registered mail to such Bidder at the address given in his Proposal.

If the Bidder to whom a Contract is awarded refuses or neglects to execute it or fails to furnish the required Public Construction Bond within twenty (20) days after receipt by him of the Notice of Award of Contract, the amount of his bid security shall be forfeited and shall be retained by the City as liquidated damages, and not as a penalty, it being now agreed that said sum is a fair estimate of the amount of damages that the City will sustain in case said Bidder fails to enter into a Contract and furnish the required Public Construction Bond. If a Bid Bond was furnished, the full amount of the Bond shall become due and payable as liquidated damages caused by such failure. The full amount of the bid security shall be forfeited as liquidated damages without consideration of the fact that an award may be less than the full amount of the Bidder's Proposal, excepting that the award shall be within the conditions of said Proposal relating to the basis of consideration for an award. No plea of mistake in the bid or misunderstanding of the conditions of forfeiture shall be available to the Bidder for the recovery of his deposit or as a defense to any action based upon the neglect or refusal to execute a contract.

I-2.05 LAWS AND REGULATIONS

The Bidder who is awarded the Contract must comply with all laws of the State of Florida, and all applicable Ordinances of the City of Tampa respecting labor and compensation and with all other statutes, ordinances, rules and regulations applicable and having the force of law.

I-2.06 PUBLIC CONSTRUCTION BOND

The Bidder who is awarded the Contract will be required to furnish a Public Construction Bond upon the form provided herein, equal to 100 percent of the Contract price, such Bond to be executed by a surety company acceptable to the City of Tampa and licensed to underwrite contracts in the State of Florida. Surety companies shall have a rating of not less than: B+ Class VI as evaluated in the most recently circulated BEST'S KEY RATING GUIDE PROPERTY-LIABILITY.

I-2.07 SIGNATURE AND QUALIFICATIONS OF BIDDERS

Proposals must be signed in ink by the Bidder with signature in full. When a firm is a Bidder, the Proposal shall be signed in the name of the firm by one or more of the partners. When a corporation is a Bidder the officer signing shall set out the corporate name in full beneath which he shall sign his name and give the title of his office. The Proposal shall also bear the seal of the corporation attested by its secretary. Anyone signing the Proposal as agent must file with it legal evidence of his authority to do so.

Bidders who are nonresident corporations shall furnish to the City a

duly certified copy of their permit to transact business in the State of Florida, signed by the Secretary of State, within ten days of the notice to do so. Such notice will be given to Bidders who are nonresident corporations, to whom it appears an award will be made, and the copy of the permit must be filed with the City before the award will be made. Failure to promptly submit this evidence of qualification to do business in the State of Florida may be basis for rejection of the Proposal.

I-2.08 REJECTION OF PROPOSALS

The City reserves the right to reject any Proposal if investigation of the Bidder fails to satisfy the City that such Bidder is properly qualified to carry out the obligations and to complete the work contemplated therein. Any or all Proposals will be rejected if there is reason to believe that collusion exists among Bidders. Proposals will be considered irregular and may be rejected if they show serious omissions, alterations in form, additions not called for, conditions or unauthorized alternates, or irregularities of any kind. The City reserves the right to reject any or all Proposals and to waive such technical errors as may be deemed best for the interests of the City.

I-2.09 QUANTITIES ESTIMATED ONLY

The estimate of quantities of the various items of work and materials, if set forth in the Proposal Form, is approximate only and is given solely to be used as a uniform basis for the comparison of Proposals.

The quantities actually required to complete the Contract work may be less or more than so estimated, and if awarded a Contract for the work specified, the Contractor agrees that he will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work assumed for comparison of Proposals and quantities of work actually performed. The City further reserves the right to vary the quantities in any amount.

I-2.10 COMPARISON OF PROPOSALS

Except jobs bid on a "One Lump Sum" basis, proposals will be compared on the basis of a total computed price arrived at by taking the sum of the estimated quantity of each item and the corresponding unit price of each item, and including any lump sum prices on individual items.

The computed total prices for individual Contract Items and the total computed price for the entire Contract, as entered by the Bidder in the Proposal Form, are for convenience only and are subject to correction in the tabulation and computation of the Proposals.

I-2.11 BASIS OF AWARD

The Contract will be awarded, if at all, to the lowest responsible Bidder or Bidders, as determined by the City and by the terms and conditions of the Contract Documents. Unless all bids are rejected, the award will be made within ninety (90) days after the opening of Proposals. The successful Bidder will be required to possess, or obtain, a valid City Occupational License.

I-2.12 INSURANCE REQUIRED

The successful Bidder and his subcontractors will be required to procure and pay for insurance covering the work in accordance with the provisions of Article 6.02 of the Agreement as indicated on special instructions pages beginning with INS-1.

I-2.13 NO ASSIGNMENT OF BID

No Bidder shall assign his bid or any rights thereunder.

I-2.14 NONDISCRIMINATION IN EMPLOYMENT

Contracts for work under this Proposal will obligate the contractors and subcontractors not to discriminate in employment practices.

Bidders must, if requested, submit with their initial bid a signed statement as to whether they have previously performed work subject to the President's Executive Order Nos. 11246 and 11375.

Bidders must, if requested, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive the award of the Contract.

Successful Bidders must, if requested, submit a list of all subcontractors who will perform work on the project and written,

signed statement from authorized agents of the labor pools with which they will or may deal for employees on the work together with supporting information to the effect that said labor pools practices and policies are in conformity with Executive Order No. 11246 and that said labor pools will affirmatively cooperate in or offer no hindrance to the recruitment, employment and equal treatment of employees seeking employment and performing work under the Contract, or a certification as to what efforts have been made to secure such statements when such agents or labor pools have failed or refused to furnish them prior to the award of the Contract.

I-2.15 LABOR STANDARDS

The Bidder's attention is directed to the Contract Provisions of the Labor Standards for federally assisted projects which may be attached to and made a part of the Agreement.

I-2.16 NOTICE TO LABOR UNIONS

If applicable, the successful Bidder will be required to provide Labor Unions and other organizations of workers a completed copy of the form entitled "Notice to Labor Unions or Other Organizations of Workers", and such form may be made a part of the Agreement.

I-2.17 NOTICE TO PROSPECTIVE FEDERALLY-ASSISTED CONSTRUCTION CONTRACTORS

A Certification of Nonsegregated Facilities, as required by the May 9, 1967, Order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted to said Secretary prior to the award of a federally-assisted construction and Contract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity Clause. The form of certification may be bound herein following the form of Bid Bond.

Contractors receiving federally-assisted construction Contract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractor for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause:

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES

"A Certification of Nonsegregated Facilities, as required by the May 9, 1967, Order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity Clause."

"Contractors receiving subcontract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide from the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause."

The United States requires a pre-award conference if a proposed construction contract exceeds one million dollars to determine if the the prospective contractor is in compliance with the Equal Employment Opportunity requirements of Executive Order 11246 of September 24, 1965. In such instances, a meeting may be scheduled at which the prospective contractor must specify what affirmative action he has taken or proposed to take to assure equal employment opportunity which must be approved by the United States before award of the contract will be authorized.

Bidders must be prepared to submit an Equal Employment Opportunity (EEO) plan at a pre-award conference. The plan must include bidding opportunities offered by the Bidder to minority subcontractors.

On October 13, 1971, President Nixon issued Executive Order 11246 emphasizing the government's commitment to the promotion of minority business enterprise. Accordingly, the United States is firmly

committed to the utilization of available resources to support this important program. U.S. agencies are most interested in realizing minority participation on the subject. Achieving equal employment opportunity compliance is required through Executive Order 11246. WE cannot emphasize too strongly that minority subcontractors be extended subcontractors bidding opportunities as but one step in your affirmative action policy.

Due to the importance of this contract, U.S. Agencies may conduct an EEO Conference prior to the award of the Contract. It is suggested that the responsive Bidder confirm the minority subcontractors he contacted for bids or quotations in his EEO plan submitted at the conference.

I-2.18 EEO AFFIRMATIVE ACTION REQUIREMENTS

By the submission of a Proposal, each Bidder acknowledges that he understands and will agree to be bound by the equal opportunity requirements of Federal regulations which shall be applicable throughout the performance of work under any contract awarded pursuant to solicitation. Each Bidder agrees that if awarded a contract, he will similarly bind contractually each subcontractor. In policies, each Bidder further understands and agrees that if awarded a contract, he must engage in Affirmative Action directed to promoting and ensuring equal employment opportunity in the work force used under the contract (and he must require contractually the same effort of all subcontractors whose subcontracts exceed \$100,000). The Bidder understands and agrees that "Affirmative Action" as used herein shall constitute a good faith effort to achieve and maintain minority employment in each trade in the on-site work force used on the project. ***** END of SECTION *****

CITY OF TAMPA INSURANCE REQUIREMENTS

Prior to commencing any work or services or taking occupancy under that certain written agreement or award (for purposes of this document, Agreement) between the City of Tampa, Florida (City) and Firm/Awardee/Contractor/Consultant/Lessee/non-City party, etc. (for purposes of this document, Firm) to which this document is attached and incorporated as an Exhibit or otherwise, and continuing during the term of said Agreement (or longer if the Agreement and/or this document so requires), Firm shall provide, pay for, and maintain insurance against claims for injuries to persons (including death) or damages to property which may arise from or in connection with the performance of the Agreement (including without limitation occupancy and/or use of certain property/premises) by Firm, its agents, representatives, employees, suppliers, subtenants, or subcontractors (which term includes sub-consultants, as applicable) of any tier subject to the terms and conditions of this document. Firm's maintenance of insurance coverage as required herein is a material element of the Agreement and the failure to maintain or renew coverage or provide evidence of same (defined to include without limitation Firm's affirmative duty to provide from time to time upon City's request certificates of insurance, complete and certified copies of Firm's insurance policies, forms, and endorsements, information on the amount of claims payments or reserves chargeable to the aggregate amount of coverage(s) whether during the term of the Agreement or after as may be requested by the City in response to an issue or potential claim arising out of or related to the Agreement to which Firm's insurance obligations hereunder may apply or possibly help mitigate) may be treated as a material breach of the Agreement. Should at any time Firm not maintain the insurance coverages required, City at its sole option (but without any obligation or waiver of its rights) may (i) terminate the Agreement or (ii) purchase such coverages as City deems necessary to protect itself (charging Firm for same) and at City's option suspending Firm's performance until such coverage is in place. If Firm does not reimburse City for such costs within 10 days after demand, in addition to any other rights, City shall also have the right to offset such costs from amounts due Firm under any agreement with the City. All provisions intended to survive or to be performed subsequent to the expiration or termination of the Agreement shall survive, including without limitation Firm's obligation to maintain or renew coverage, provide evidence of coverage and certified copies of policies, etc. upon City's request and/or in response to a potential claim, litigation, etc.

The City reserves the right from time to time to modify or waive any or all of these insurance requirements (or to reject policies) based on the specific nature of goods/services to be provided, nature of the risk, prior experience, insurer, coverage, financial condition, failure to operate legally, or other special circumstances. If Firm maintains broader coverage and/or higher limits than the minimums shown herein, the City requires and shall be entitled to such broader coverage and/or higher limits maintained by Firm. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City. No representation is made that the minimum insurance requirements are sufficient to cover Firm's interests, liabilities, or obligations. Required insurance shall not limit Firm's liability.

Firm acknowledges and agrees Firm and not the City is the party in the best position to determine applicability (e.g. "IF APPLICABLE"), confirm, and/or verify its insurance coverage. Acceptance by the City, or by any of its employees, representatives, agents, etc. of certificates or other documentation of insurance or policies pursuant to the terms of this document and the Agreement evidencing insurance coverages and limits does not constitute approval or agreement that the insurance requirements have been met or that coverages or policies are in compliance. Furthermore, receipt, acceptance, and/or approval of certificates or other documentation of insurance or policies or copies of policies by the City, or by any of its employees, representatives, agents, etc., which indicate less coverage than required does not constitute a waiver of Firm's obligation to fulfill these insurance requirements.

MINIMUM SCOPE AND LIMIT OF INSURANCE ¹

A. Commercial General Liability (CGL) Insurance on the most current Insurance Services Office (ISO) Form CG 00 01 or its equivalent on an "occurrence" basis (Modified Occurrence or Claims Made forms are not acceptable without prior written consent of the City). Coverage must be provided to cover liability contemplated by the Agreement including without limitation premises and operations, independent contractors, contractual liability, products and completed operations, property damage, bodily, personal and advertising injury, contractual liability, explosion, collapse, underground coverages, personal injury liability, death, employees-as-insureds. Products and completed operations liability coverage maintained for at least 3 years after completion of work. Limits shall not be less than \$1M per occurrence and \$2M general aggregate for Agreements valued at \$2M or less; if valued over \$2M, a general aggregate limit that equals or exceeds the Agreement's value. If a general aggregate limit applies; it shall apply separately to the project/location (ISO CG 2S 03 or 2S 04 or equivalent). **(ALWAYS APPLICABLE)**

B. Automobile Liability (AL) Insurance in accordance with Florida law, as to the ownership, maintenance, and use of all owned, non-owned, leased, or hired vehicles. AL insurance shall not be less than: (a) \$500,000 combined single limit each occurrence bodily injury and property damage for Agreements valued at \$100,000 or less or (b) \$1M combined single limit each occurrence bodily injury and property damage for Agreements valued over \$100,000. If transportation of hazardous material involved, the MCS-90 endorsement (or equivalent). **(ALWAYS APPLICABLE)**

C. Worker's Compensation (WC) & Employer's Liability Insurance for all employees engaged under the Agreement, Worker's Compensation as required by Florida law. Employer's Liability with minimum limits of (a) \$500,000 bodily injury by accident and each accident, bodily injury by disease policy limit, and bodily injury by disease each employee for Agreements valued at \$100,000 and under or (b) \$1M bodily injury by accident and each accident, bodily injury by disease policy limit, and bodily injury by disease each for all other Agreements. **(ALWAYS APPLICABLE)**

D. Excess (Umbrella) Liability Insurance for Agreements valued at \$2M or more, at least \$4M per occurrence in excess of underlying limits and no more restrictive than underlying coverage for all work performed by Firm. May also compensate for a deficiency in CGL, AL, or WC. **(ALWAYS APPLICABLE)**

E. Builder's Risk Insurance for property loss exposure associated with construction/renovation/additions to buildings or structures, including materials or fixtures to be incorporated. Must be "All Risk" form with limits of no less than the project's completed value, have no coinsurance penalties, eliminate the "occupancy clause", cover Firm (together with its contractors, subcontractors of every tier, and suppliers), and name City as a Loss Payee. **(IF APPLICABLE)**

F. Installation Floater coverage for property (usually highly valued equipment or materials such as compressors, generators, etc.) during its installation. Coverage must be "All Risk" including installation and transit for no less than 100% of the installed replacement cost value. **(IF APPLICABLE)**

G. Architects & Engineers Liability/ Professional Liability (E&O)/ Contractors Professional Liability (CPL)/ Medical Malpractice Insurance where Agreement involves Florida-regulated professional services (e.g. architect, engineer, design-builder, CM, accountant, appraiser, investment banker medical professional) at any tier, whether employed or independent, vicarious design liability exposure (e.g. construction means & methods, design supervision), value engineering, constructability assessments/reviews, BIM process, and/or performance specifications. Limits of at least \$1M per occurrence and \$2M aggregate; deletion of design/ build liability exclusions, as applicable, and maintained for at least 3 years after completion of work/services and City's acceptance of same. **(IF APPLICABLE)**

H. Railroad Protective Liability CRPL Insurance for construction within 50ft of operated railroad track(s) or where affects any railroad bridge, trestle, tunnel, track(s) roadbed, or over/under pass. Subject to involved rail road's approval prior to commencement of work. **(IF APPLICABLE)**.

I. Pollution and/or Asbestos Legal Liability Insurance where Agreement involves asbestos and/or environmental hazards/contamination risks (defined broadly, e.g. lead, mold, bacteria, fuel storage, underground work, cleanup (owned or non-owned sites), pollutant generation/transportation, marine/natural resource damage, contamination claim, restitution, business interruption, mold, fungus, lead-based paint, 3rd party claims/removal, etc.), with limits of at least \$1M per occurrence and \$2M aggregate, maintained for at least 3 years after Agreement completion. **(IF APPLICABLE)**

J. Cyber Liability Insurance where Agreement involves portals allowing access to obtain, use, or store data; managed dedicated servers; cloud hosting services; software/hardware; programming; and/or other IT services

¹ "M" indicates million(s), for example \$1M is \$1,000,000

and products are involved. Limits of not less than \$2M per occurrence and \$2M aggregate. Coverage sufficiently broad to respond to duties and obligations undertaken by Firm, and shall include, but not be limited to, claims involving infringement of intellectual property/copyright, trademark, trade dress, invasion of privacy violations, damage to or destruction of electronic information, information theft, release of confidential and/or private information, alteration of electronic information, extortion, virus transmission, and network security. Coverage, as applicable and with sufficient limits to respond, for breach response costs, regulatory fines and penalties, credit monitoring expenses. **(IF APPLICABLE)**

K. Drone/UAV Liability Insurance where Agreements involves unmanned aerial vehicles/drones. Coverage to include products and completed operations, property damage, bodily injury with limits no less than \$1M per occurrence, and \$2M aggregate; may be provided by CGL endorsement subject to City's prior written approval. **(IF APPLICABLE)**

L. Longshore & Harbor Workers' Compensation Act/Jones Act for work being conducted near, above, or on "navigable waters" for not less than the above Employer's Liability Insurance limit. **(IF APPLICABLE)**

M. Garagekeeper/Hangerkeeper/Marina Operator Legal Liability Insurance and/or Hull/P&I Insurance where parking lot, valet, dealership, garage services, towing, etc. and/or operation of a hangar, marina, or air

plane/ship repairer, providing safe berth, air/watercraft storage/docking (on land/ in water), fueling, tours, charters, ferries, dredges, tugs, mooring, towing, boat/aircraft equipment/repair/alteration/maintenance, etc.; cover- age against liability for damage to vehicles air/watercraft, their machinery in Firm's care, custody, or control both private & commercial. Limits at least equal to greater of \$1M, value of max number of vehicles that may be in Firm's custody, or of most costly object in Firm's custody. **(IF APPLICABLE)**

N. Property Insurance and Interruption of Business CIOB) Insurance where premises, building, structure, or improved real property is leased, licensed, or otherwise occupied by Firm. Property Insurance against all risks of loss to any occupant/tenant improvements at full replacement cost with no coinsurance penalty, including fire, water, leak damage, and flood, as applicable, vandalism and malicious mischief endorsements. IOB by which minimum monthly rent will be paid to City for up to 1 year if premises are destroyed, rendered inaccessible or untenable, including disruption of utilities, water, or telecommunications. **(IF APPLICABLE)**

O. Liquor Liability/Host Liquor Liability where Firm directly or indirectly provides alcoholic beverages, limits of at least \$1M per occurrence and \$1M aggregate. **(IF APPLICABLE)**

P. Educators Legal Liability Insurance where day care, after school program, recreational activities, etc. limits per G above. **(IF APPLICABLE)**

ADDITIONAL REQUIREMENTS

ACCEPTABILITY OF INSURERS- Insurance is to be placed with insurers admitted in the State of Florida and who have a current A.M. Best rating of no less than **A-:VII** or, if not rated by A.M. Best, as otherwise approved by the City in advance and in writing.

ADDITIONAL INSURED - **City, its elected officials, departments, officers, officials, employees, and volunteers together with, as applicable, any associated lender of the City shall be covered as additional insureds on all liability coverage** (e.g. CGL, AL, and Excess (Umbrella) Liability) as to liability arising out of work or operations performed by or on behalf of Firm including materials, parts, or equipment furnished in connection with such work or operations and automobiles owned, leased, hired, or borrowed by or on behalf of Firm. Coverage can be provided in the form of an endorsement to Firm's insurance (at least as broad as ISO Form CG 20 10 11 85 or **both** CG 10 20, CG 20 26, CG 20 33, or CG 20 38 **and** CG 20 37 if later revisions used).

CANCELLATION/NON-RENEWAL – Each insurance policy shall provide that at least 30 days written notice must be given to City of any cancellation, intent to non-renew, or material reduction in coverage (except aggregate liability limits) and at least 10 days' notice for non-payment of premium. Firm shall also have an independent duty to notify City in like manner, within 5 business days of Firm's receipt from its insurer of any notices of same. If any policy's aggregate limit is reduced, Firm shall directly take steps to have it reinstated. Notice and proof of renewal/continued coverage/certifications, etc. shall be sent to the City's notice (or Award contact) address as stated in the Agreement with a copy to the following:

- Contract Administration Department, 306 E Jackson St, Tampa, FL 33602 Purchasing Department, 306 E Jackson Street, Tampa, FL 33602
 Other: _____

CERTIFICATE OF INSURANCE (COI) – to be provided to City by insurance carrier prior to Firm beginning any work/services or taking occupancy and, if the insurance expires prior to completion of the work or services or Agreement term (as may be extended), a renewal COI at least 30 days before expiration to the above address(es). COIs shall specifically identify the Agreement and its subject (project, lease, etc.), shall be sufficiently comprehensive to insure City (named as additional insured) and Firm and to certify that coverage extends to subcontractors' acts or omissions, and as to permit the City to determine the required coverages are in place without the responsibility of examining individual policies. **Certificate Holder must be The City of Tampa, Florida.**

CLAIMS MADE – If any liability insurance is issued on a claims made form, Firm agrees to maintain such coverage uninterrupted for at least 3 years following completion and acceptance of the work either through purchase of an extended reporting provision or purchase of successive renewals. The Retroactive Date must be shown and be a date not later than the earlier of the Agreement date or the date performance/occupancy began thereunder.

DEDUCTIBLES/ SELF-INSURED RETENTIONS (SIR) – must be disclosed to City and, if over \$500,000, approved by the City in advance and in writing, including at City's option being guaranteed, reduced, or eliminated (additionally if a SIR provides a financial guarantee guaranteeing payment of losses and related investigations, claim administration, and defense expenses). Firm shall be fully responsible for any deductible or SIR (without limiting the foregoing a policy with a SIR shall provide or be endorsed to provide that the SIR may be satisfied by either the City or named insured). In the event of loss which would have been covered but for a deductible or SIR, City may withhold from any payment due Firm, under any agreement with the City, an amount equal to same to cover such loss should full recovery not be obtained under the policy.

PERFORMANCE- All insurance policies shall be fully performable in Hillsborough County, Florida (the County), and construed in accordance with Florida law. Further, all insurance policies must expressly state that the insurance company will accept service of process in the County and that the exclusive venue for any action concerning any matter under those policies shall be in the appropriate state court of the County.

PRIMARY POLICIES - Firm's insurance coverage shall be primary insurance coverage at least as broad as ISO CG 20 01 04 13 as to the City, its elected officials, departments, officers, employees, and volunteers. Any insurance or self-insurance maintained by the City, its elected officials, departments, officers, employees, and volunteers shall be excess of the Firm's insurance and shall not contribute with it.

SUBCONTRACTORS/INDEPENDENT ASSOCIATES/CONSULTANTS/SUBTENANTS/SUBLICENSEE - **Firm shall require and verify that all such entities maintain insurance meeting all requirements stated herein with the City as an additional insured** by endorsement (ISO FORM CG 20 38, or broader) or otherwise include such entities within Firm's insurance policies. Upon City's request, Firm shall furnish complete and certified copies of copies of such entities' insurance policies, forms, and endorsements.

SUBCONTRACTOR DEFAULT INSURANCE CONTROLLED INSURANCE PROGRAM, WRAP-UP. Use requires express prior written consent of City Risk Manager.

UNAVAILABILITY- To the fullest extent permitted by law, if Firm is out of business or otherwise unavailable at the time a claim is presented to City, Firm hereby assigns to the City all of its right, title and interest (but not any liabilities or obligations) under any applicable policies of insurance.

WAIVER OF SUBROGATION – With regard to any policy of insurance that would pay third party losses, Firm hereby grants City a waiver of any right to subrogation which any insurer of Firm may acquire against the City by virtue of the payment of any loss under such insurance. Firm agrees to obtain any endorsement that may be necessary to affect such waiver, but this provision shall apply to such policies regardless.

WAIVER/RELEASE AGREEMENT – Where Firm has a defined group of persons who might be exposed to harm (e.g. participants in an athletic event/program, volunteers) any waiver or release agreement used by Firm whereby such persons (and their parent/guardian as applicable) discharge Firm from claims and liabilities, shall include the City, its elected officials, departments, officers, officials, employees, and volunteers to the same extent as Firm.

Procurement Guidelines To Implement Minority & Small Business Participation

Underutilized WMBE Primes by Industry Category

FORMAL PROCUREMENT	Construction	Construction-Related	Professional	Non-Professional	Goods
	Black	Asian	Black	Black	Black
	Hispanic	Native Am.	Hispanic	Asian	Hispanic
	Native Am.	Woman	Asian	Native Am.	Asian
	Woman		Native Am.		Native Am.
			Woman		Woman

Underutilized WMBE Sub-Contractors / Sub-Consultants

SUB WORK	Construction	Construction-Related	Professional	Non-Professional	Goods
	Black	Black	Black	Black	Black
		Asian	Hispanic	Asian	Asian
		Native Am.	Asian	Native Am.	Native Am.
		Woman	Native Am.		Woman
			Woman		

Policy

The Guidelines apply to formal procurements and solicitations. WMBE participation will be narrowly-tailored.

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- Black = Black/African-American Business Enterprise
- Hispanic = Hispanic Business Enterprise
- Asian = Asian Business Enterprise
- Native Am. = Native American Business Enterprise
- Woman = Woman Business Enterprise (Caucasian)

Industry Categories

Construction is defined as: new construction, renovation, restoration, maintenance of public improvements and underground utilities.

Construction-Related Services are defined as: architecture, professional engineering, landscape architecture, design build, construction management services, or registered surveying and mapping.

Professional Services are defined as: attorney, accountant, medical doctor, veterinarian, miscellaneous consultant, etc.

Non-Professional Services are defined as: lawn maintenance, painting, janitorial, printing, hauling, security guard, etc.

Goods are defined as: all supplies, materials, pipes, equipment, machinery, appliances, and other commodities.

MBD Form-70

**Madison Street Park
Project #18-C-00036
U-WMBE Availability Contact List**

(The Underutilized WMBE Industry Category for Construction Subcontracts is BBE)

#'s	Business Name	Phone	Fax	Email	Address 1	City	State	Zip	Business			Cert. Type	Ethnicity
									Description	FEIN			
1	E Johnson Hauling and Construction LLC	813-417-9116		johnsonhauling78@gmail.com	709 E.Lake Ave.	Tampa	FL	33603	Trucking	13301557	BBE	African American	
1	PAR Development Partners, Inc.	813-374-2856		Yancy@pardevelop.com	2109 E. Palm Ave., Suite 312	Tampa	FL	33605	Trucking	05657414	BBE	African American	
1	Provision Trucking Company Inc	813-898-3632	813-898-3632	provisiontrucking@yahoo.com	20405 Berrywood Lane	Tampa	FL	33647	Trucking	00922228	BBE	African American	
1	Renew Construction Services	813-990-7700	813-315-6279	jrd.renew@gmail.com	5508 N 50th St N	Tampa	FL	33610	Trucking	71907700	BBE	African American	
1	Sabrina's Trucking, LLC	813-629-7210	813-986-1124	jtrucker151@aol.com	6707 trixie dr	seffner	FL	33584	Trucking	04083765	BBE	African American	
1	Wiggins Hauling & Transfer LLC	813-562-3798	813-562-3798	Dooley813@aol.com	7016 Conifer Dr.	Tampa	FL	33637	Trucking	05011331	BBE	African American	
3	Spectra Engineering & Research, Inc.	407-951-8844	850-942-2717	spectra@spectraengr.com	1060 Maitland Center Commons	Maitland	FL	32751	Survey	93009648	BBE	African American	
4	AAJ Lawn Care Services, Inc.	813-220-8533	888-277-1860	aajlawncare@gmail.com	3716 E. Idlewild Avenue	Tampa	FL	33610	Landscaping	60254393	BBE	African American	
4	BUN Construction Co., Inc.	813-931-8270	813-931-9185	bunconstruction@tampabay.rr.com	4135 E. Hillsborough Avenue	Tampa	FL	33610	Landscaping	93362663	BBE	African American	
4	Cutups Lawn Service	813-361-8871	813-238-2397	cutupslawnservice@yahoo.com	3217 East Powhatan Ave.	Tampa	FL	33610	Landscaping	11241291	BBE	African American	
4	Dean's Environmental Services, Inc.	863-595-8255	904-791-9060	deank8859@gmail.com	2644 Whispering Trails Dr	Winter Have	FL	33884	Landscaping	30461047	BBE	African American	
4	Fresh Start Development, Inc.	813-758-5345	813-333-5949	freshstartdevelop@yahoo.com	601 S Falkenburg Rd	Tampa	FL	33619	Landscaping	03857845	BBE	African American	
4	Promise Construction and Repair Solutions LLC	813-988-8633	813-988-1555	promisecarellc@outlook.com	10711 North 53rd Street	TAMPA	FL	33617	Landscaping	64723775	BBE	African American	
4	T.C.C Enterprise Inc	813-606-9148	813-237-0396	tcc_inc@live.com	3902 E POWHATAN AVE	TAMPA	FL	33610	Landscaping	63223645	BBE	African American	
4	WC Boxes, Inc.	813-478-1102	813-864-4386	wcindustries2003@gmail.com	17620 Lake Key Drive	Odessa	FL	33556	Landscaping	72682190	BBE	African American	
6	Fresh Start Development, Inc.	813-758-5345	813-333-5949	freshstartdevelop@yahoo.com	601 S Falkenburg Rd	Tampa	FL	33619	Fencing	03857845	BBE	African American	
7	All In One Electric Inc	813-849-6331	813-514-0473	rjones@aioelectric.com	1201 W WATERS AVENUE	TAMPA	FL	33604	Electrical	43689273	BBE	African American	
7	Brown & Brown Electric, Inc.	954-938-8986	954-938-9272	Hermine.Brown@brownandbrownelectric.com	1150 SW 30th Avenue	Pompano Beach	FL	33069	Electrical	92283934	BBE	African American	
7	Fennell Electric, Inc.	407-466-9408	866-514-3716	fennellelectric@yahoo.com	604 Glenfield Ct	Apopka	FL	32712	Electrical	10557754	BBE	African American	
7	MDH Enterprises, Inc.	386-789-2672	866-681-5026	matize@my-es.com	281 East C Street	Orange City	FL	32763	Electrical	50849332	BBE	African American	
8	DRD Enterprises LLC	813-476-9933	866-850-1332	ddeenah@drdenterprisec.com	4104 Yellowwood Dr.,	Valrico	FL	33594	Pipe Supply	04675317	BBE	African American	
8	MANZI METALS INC	352-799-8211	352-754-9735	bmanzi@manzimetals.com	15293 FLIGHT PATH DR	BROOKSVILLE	FL	34604	Pipe Supply	93245008	BBE	African American	
8	Suca Pipe Supply, Inc.	813-249-7902	813-249-7384	slmau44@yahoo.com	4910 Lowell Rd	Tampa	FL	33624	Pipe Supply	92499571	BBE	African American	
8	Suca Pipe Supply, Inc. One	813-249-7902	813-249-7384	sucapipesupply1@yahoo.com	4910 Lowell Road	Tampa	FL	33624	Pipe Supply	63669556	BBE	African American	
8	Terrell Industries, Inc.	727-823-4424	727-823-3977	gradyterrell@terrellindustries.com	2067 1ST AVENUE NORTH	ST PETERSBURG	FL	33713	Pipe Supply	50530148	BBE	African American	

African American/Black Business Enterprises (BBE) shall count toward the subcontract goal. Refer to MBD Form 70 - Procurement Guidelines

**Madison Street Park
Project #18-C-00036
SLBE Availability Contact List**

#'s	Business Name	Phone	Fax	Email	Address 1	City	State	Zip	Business		Cert. Type	Ethnicity
									Description	FEIN		
1	Cordova Transport Inc	813-284-6953	813-284-6952	cordovatransport@aol.com	7006 E. 9th Ave.	Tampa	FL	33619	Trucking	272503834	SLBE	Hispanic American
1	E Johnson Hauling and Construction LLC	813-417-9116		johnsonhauling78@gmail.com	709 E.Lake Ave.	Tampa	FL	33603	Trucking	13301557	SLBE	African American
1	Jansay Trucking, LLC	813-300-1846	813-885-4214	jansaytrucking@gmail.com	2021 N 61st Street	Tampa	FL	33619	Trucking	72179144	SLBE	Hispanic American
1	Odessa Trucking Inc	813-918-1715	813-920-8673	odessatrucking@msn.com	18136 GUNN HWY	ODESSA	FL	33556	Trucking	93334628	SLBE	Hispanic American
1	Ortzak Construction Group, LLC	813-961-6023	813-961-6023	dcaastro@ortzak.com	13014 N. Dale Mabry Hwy, Suite 623	Tampa	FL	33618	Trucking	54837502	SLBE	Hispanic American
1	PAR Development Partners, Inc.	813-374-2856		Yancy@pardevelop.com	2109 E. Palm Ave., Suite 312	Tampa	FL	33605	Trucking	205657414	SLBE	African American
1	Provision Trucking Company Inc	813-898-3632	813-898-3632	provisiontrucking@yahoo.com	20405 Berrywood Lane	Tampa	FL	33647	Trucking	909222228	SLBE	African American
1	Renew Construction Services	813-990-7700	813-315-6279	jrd.renew@gmail.com	5508 N 50th St N	Tampa	FL	33610	Trucking	71907700	SLBE	African American
1	Sabrina's Trucking, LLC	813-629-7210	813-986-1124	jtrucker151@aol.com	6707 trixie dr	seffner	FL	33584	Trucking	204083765	SLBE	African American
1	Wiggins Hauling & Transfer LLC	813-569-9534	813-562-3798	Dooley813@aol.com	7016 Conifer Dr.	Tampa	FL	33637	Trucking	205011331	SLBE	African American
2	SAFETY ZONE SPECIALIST INC	863-984-1385	863-984-0058	DAVID@SAFETYZONESPECIALISTS.COM	8341 Epicenter Blvd	LAKELAND	FL	33809	MOT	93122879	SLBE	Caucasian
3	Ferguson Land Surveyors, PLLC	727-230-9606		Ben@FLsurveyors.com	806 Franklin Street	Clearwater	FL	33756	Survey	75661955	SLBE	Caucasian
3	Independence Acquisition & Appraisal, LLC	813-773-5400	813-315-6211	kjoslin@iaallc.com	11030 NORTH US HIGHWAY 301	THONOTOSASS	FL	33592	Survey	204003934	SLBE	Caucasian
3	Land Precision Corporation	727-796-2737	727-796-3326	vcorbitt@landprecision.com	2683 SUNSET POINT ROAD	CLEARWATER	FL	33759	Survey	93088679	SLBE	Caucasian
3	Leftcoast Surveyors, Inc.	727-576-2877	727-576-6602	leftcoast@tampabay.rr.com	2363 1st Avenue North	St. Petersburg	FL	33713	Survey	93655470	SLBE	Caucasian
3	MacSurvey, Inc.	727-725-3269	000-000-0000	info@macsurvey.com	22091 US Highway 19 North	Clearwater	FL	33765	Survey	54022937	SLBE	Caucasian
3	Northwest Surveying, Inc.	813-889-9236	813-886-3315	jsilva@nstitampa.com	8409 SUNSTATE STREET	TAMPA	FL	33634	Survey	92899240	SLBE	Hispanic American
3	RTD Group, LLC	727-430-3552	727-521-3822	rdoyle@rdtgroup.us	1957 Arrowhead Dr., N.E.	St. Petersburg	FL	33793	Survey	71328121	SLBE	Caucasian
3	Suncoast Design Services, Inc.	813-286-7395	813-286-7394	masoudf@suncoast-design.com	1211 N. Westshore Blvd., Suite 500	Tampa	FL	33607	Survey	43649689	SLBE	Caucasian
3	Suncoast Land Surveying, Inc.	813-854-1342	813-354-3435	mariesis@tampabay.rr.com	111 Forest Lakes Blvd. S.	Oldsmar	FL	34677	Survey	92733609	SLBE	Caucasian
3	W.C. Sherrill and Company, LLC.	813-345-4270	813-345-4270	rick.weigl@gmail.com	26232 Wesley Chapel Blvd.	Lutz	FL	33559	Survey	11606347	SLBE	Caucasian
4	AAJ Lawn Care Services, Inc.	813-220-8533	888-277-1860	aajlawncare@gmail.com	3716 E. Idlewild Avenue	Tampa	FL	33610	Landscaping	26254393	SLBE	African American
4	Baron's Landscaping Services, Inc.	813-404-1509	813-476-6255	baronslawncare@aol.com	P.O. Box 4047	Tampa	FL	33677	Landscaping	50837654	SLBE	Hispanic American
4	BUN Construction Co., Inc.	813-931-8270	813-931-9185	bunconstruction@tampabay.rr.com	4135 E. Hillsborough Avenue	Tampa	FL	33610	Landscaping	93362663	SLBE	African American
4	Cardinal Landscaping Services of Tampa, Inc.	813-915-9696	813-915-9695	Mark@cardinallandscape.com	817 E. Okaloosa Ave.	Tampa	FL	33604	Landscaping	93394554	SLBE	Caucasian
4	Cutups Lawn Service	813-361-8871	813-238-2397	cutupslawnservice@yahoo.com	3217 East Powhatan Ave.	Tampa	FL	33610	Landscaping	11241291	SLBE	African American
4	D & J LAWN SERVICES OF LAKE LAND LLC	863-859-3525	863-853-1044	DANDJLAWNSERVICES@HOTMAIL.COM	575 OLD POLK CITY ROAD	LAKELAND	FL	33809	Landscaping	73279070	SLBE	Hispanic American
4	Dean's Environmental Services, Inc.	863-595-8255	904-791-9060	deank8859@gmail.com	2644 Whispering Trails Dr	Winter Haven	FL	33884	Landscaping	830461047	SLBE	African American
4	Evolve Professional Landscape Management, LLC	863-537-7537	863-223-0275	jillian.evolve@gmail.com	897 E. Lemon Street	Bartow	FL	33830	Landscaping	72323571	SLBE	Caucasian
4	Florida Natives Nursery, Inc.	813-754-1900	813-754-4001	office@floridanativesnursery.com	4115 NATIVE GARDEN DR	PLANT CITY	FL	33565	Landscaping	933561539	SLBE	Caucasian
4	Fresh Start Development, Inc.	813-758-5345	813-333-5949	freshstartdevelop@yahoo.com	601 S Falkenburg Rd	Tampa	FL	33619	Landscaping	203857845	SLBE	African American
4	Gardensmith	813-352-3008		gardensmith@me.com	4113 Henderson Blvd	tampa	FL	33629	Landscaping	73649269	SLBE	Caucasian
4	Green Seeds Inc	813-858-7765		dbrior@ourgreenseed.com	3387 Antigua lane, UNIT 303	tampa	FL	33614	Landscaping	811867821	SLBE	Hispanic American
4	Johnson's Excavation & Services, Inc.	813-752-7097	813-719-9052	sales@jescontracting.com	1706 East Trapnell Road	Plant City	FL	33566	Landscaping	933031174	SLBE	Caucasian

**Madison Street Park
Project #18-C-00036
SLBE Availability Contact List**

#s	Business Name	Phone	Fax	Email	Address 1	City	State	Zip	Business		Cert.	
									Description	FEIN	Type	Ethnicity
4	JTCM Inc	813-935-7724		office@lawnsulptures.net	817 S MacDill Ave	Tampa	FL	33609	Landscaping	62418914	SLBE	Caucasian
4	Morelli Landscaping, Inc	727-536-6855	727-536-6855	vjmorelli@tampabay.rr.com	6370 146th Avenue North	Clearwater	FL	33760	Landscaping	991877993	SLBE	Caucasian
4	Promise Construction and Repair Solutions LLC	813-988-8633	813-988-1555	promisecarel@outlook.com	10711 North 53rd Street	TAMPA	FL	33617	Landscaping	44723775	SLBE	African American
4	Rooms by Rooms Design	813-479-5353		roomsbyroomsdesign@hotmail.com	3101 21st ct east	palmetto	FL	34221	Landscaping	831536268	SLBE	Hispanic American
4	Sunbelt Sod & Grading Company	813-641-9855	813-645-7263	sunbeltsod@verizon.net	819 - 9th St. N.E.	Ruskin	FL	33570	Landscaping	34250933	SLBE	Caucasian
4	T.C.C Enterprise Inc	813-606-9148	813-237-0396	tcc_inc@live.com	3902 E POWHATAN AVE	TAMPA	FL	33610	Landscaping	463223645	SLBE	African American
4	WC Boxes, Inc.	813-478-1102	813-864-4386	wcindustries2003@gmail.com	17620 Lake Key Drive	Odessa	FL	33556	Landscaping	72682190	SLBE	African American
4	Williams Landscape Management Co., Inc.	813-628-8048	813-628-8041	tonywilliams@wmlandscape.com	5710 N 50th St	Tampa	FL	33610	Landscaping	993516370	SLBE	African American
5	2 Meyer Corp.	813-210-4864	813-645-5634	Renatonjr@aol.com	6308 Lake Sunrise Dr.	Apollo Beach	FL	33572	Irrigation	62384669	SLBE	Caucasian
5	Aqua Pro Irrigation & Outdoor Services, LLC	813-814-4437	813-814-9710	ken@aquaproirrigation.com	375 Douglas Road East	Oldsmar	FL	34677	Irrigation	900843885	SLBE	Caucasian
6	Best Made Enterprises, Inc.	813-248-5266	813-248-1299	BestMadeEntInc@gmail.com	4133 Causeway Blvd.	Tampa	FL	33619	Fencing	993498525	SLBE	Hispanic American
6	Communication Support Network, Inc	727-433-2200	727-683-9220	csn2sara@gmail.com	2550 28th Ave N	St. Petersburg	FL	33713	Fencing	030379746	SLBE	Caucasian
6	Fresh Start Development, Inc.	813-758-5345	813-333-5949	freshstartdevelop@yahoo.com	601 S Falkenburg Rd	Tampa	FL	33619	Fencing	203857845	SLBE	African American
6	Green Seeds Inc	813-858-7765		dbriion@ourgreenseed.com	3387 Antigua lane, UNIT 303	tampa	FL	33614	Fencing	11867821	SLBE	Hispanic American
6	JEB Management Inc.	813-968-1921	813-241-6070	info@fence4u.biz	5804 N. Occident Street	Tampa	FL	33614	Fencing	030416868	SLBE	Caucasian
6	Rooms by Rooms Design	813-479-5353		roomsbyroomsdesign@hotmail.com	3101 21st ct east	palmetto	FL	34221	Fencing	831536268	SLBE	Hispanic American
7	All In One Electric Inc	813-849-6331	813-514-0473	rjones@aioelectric.com	1201 W WATERS AVENUE	TAMPA	FL	33604	Electrical	043689273	SLBE	African American
7	Crevello Electric, Inc.	813-986-6106	813-986-9633	crevelloelectric@gmail.com	3305 N. Stanley Rd.	Plant City	FL	33565	Electrical	993559003	SLBE	Caucasian
7	Dolphin Constructors LLC	813-925-9609	813-510-4946	matt@dolphinllc.com	13966 W Hillsborough Ave.	Tampa	FL	33635	Electrical	12193468	SLBE	Caucasian
7	Manatee Electric, Inc.	813-645-7000	813-654-7568	john@reliableelectricusa.com	845 Thompson Rd.	Lithia	FL	33547	Electrical	993454485	SLBE	Caucasian
7	Reliability Consulting Services, Inc.	813-298-2617	813-645-2272	bwoolbright@reliabilityconsulting.net	748 Kingston Ct.	Apollo Beach	FL	33572	Electrical	201126584	SLBE	Caucasian
7	ROB MICHAEL INC	813-323-0304	813-968-1036	RJMICHAEL74@AOL.COM	16204 SAGEBRUSH RD	TAMPA	FL	33618	Electrical	264389755	SLBE	Caucasian
7	Above Electric LLC	727-726-5484	801-894-3084	aboveelec@gmail.com	13529 Prestige Pl #105	Tampa	FL	33635	Electrical	453611228	SLBE	Hispanic American
7	Agulia Electrical Services, Inc.	813-515-6999	813-884-4092	sales@aguliaelectrical.com	5708 N 56TH ST	Tampa	FL	33610	Electrical	200818128	SLBE	Hispanic American
7	Electric World Corp	813-785-5265	866-593-5921	Electricworldcorp@gmail.com	5708 N 56th St	tampa	FL	33610	Electrical	831112415	SLBE	Hispanic American
7	ELECTRICAL HANDYMAN SERVICES INC	813-901-8185	813-884-5060	ehs915@aol.com	7046-B West Hillsborough Ave	Tampa	FL	33634	Electrical	272406369	SLBE	Hispanic American
7	TAMCO Electric, Inc.	813-986-3472	813-986-5979	atruijll@tampabay.rr.com	4022 W South Avenue	Tampa	FL	33614	Electrical	991396630	SLBE	Hispanic American
8	2 Meyer Corp.	813-210-4864	813-645-5634	Renatonjr@aol.com	6308 Lake Sunrise Dr.	Apollo Beach	FL	33572	Pipe Supply	62384669	SLBE	Caucasian
8	Castco Construction, Inc.	727-585-4714	727-585-5091	constr@tampabay.rr.com	9001 126TH AVE N	LARGO	FL	33773	Pipe Supply	992348614	SLBE	Hispanic American
8	DRD Enterprises LLC	813-476-9933	866-850-1332	ddeenah@drdententerprise.com	4104 Yellowwood Dr.,	Valrico	FL	33594	Pipe Supply	204675317	SLBE	African American
8	Mar Supply Co.	941-286-3240	941-761-6500	info@marsupplyco.com	1660 63rd Avenue East	Bradenton	FL	34203	Pipe Supply	270206845	SLBE	Hispanic American
8	MBE Supply of Florida, Inc.	813-781-6583		mbesupplyofflorida@gmail.com	4306 W. Osborne Avenue	Tampa	FL	33613	Pipe Supply	463284565	SLBE	Caucasian
8	Suca Pipe Supply, Inc.	813-249-7902	813-249-7384	slmau44@yahoo.com	4910 Lowell Rd	Tampa	FL	33624	Pipe Supply	992499571	SLBE	African American
8	Suca Pipe Supply, Inc. One	813-249-7902	813-249-7384	sucapipesupply1@yahoo.com	4910 Lowell Road	Tampa	FL	33624	Pipe Supply	263669556	SLBE	African American
8	The Holmes Agency	727-369-0881	727-522-1064	Lou@theholmesagency.com	721 11th street North	St Petersburg	FL	33705	Pipe Supply	20542783	SLBE	Hispanic American
8	TTCS INC	813-871-2000	813-441-6291	jzamora@ttcsengineering.com	4710 N Grady Ave	Tampa	FL	33614	Pipe Supply	461844430	SLBE	Hispanic American

Instructions Regarding Use of the WMBE/SLBE Availability Contact List

Bidders must solicit a subcontracting bid from ALL of the firms listed on the WMBE/SLBEs list provided within the Specifications, and provide documentation of emails, faxes, phone calls, letters, or other communication with the firms as a first step in demonstrating Good-Faith Efforts to achieve the goal set for WMBE/SLBE participation on this contract.

The list is formatted to facilitate e-mailing of a solicitation to the listed firms by copying and pasting the email addresses.

The WMBE/SLBE participation Goal is based upon the availability of the certified firms indicated on the contact list. The Goal and Requirements of the City's Equal Business Opportunity Program are stated in the Bid/Contract Document, Specifications.

PROPOSAL

To the Mayor and City Council of the City of Tampa, Florida:

Legal Name of Bidder: _____

Bidder's Fictitious Name, *if applicable*: _____

Bidder is a/an: Individual Partnership* Joint Venture* LLC Corp. Other:

Bidder is organized under the laws of: State of Florida Other:

Bidder Mailing Address: _____

Bidder's Federal Employee Identification No. (FEI/EIN): _____

Bidder's License No.: _____ Bidder's FDOS (SUNBIZ) Doc. No.: _____
(See Ch. 489. FS; use entity's, individual's only if applicable)

Bidder Contact Name**: _____ Email: _____ Phone: (____) _____

Bidder's own initial application for employment has criminal history screening practices similar in nature to the practices contained in Chapter 12, Article VI, City of Tampa Code (*Responses, whether "Yes" or "No", are for informational purposes only and will not be used as a basis of award or denial, nor as a basis for any protest*): Yes No

The below named person, appearing before the undersigned authority and after being first duly sworn, for him/herself and on behalf of the entity submitting this Proposal does hereby affirm and declare as follows:

- (1) He/She is of lawful age and is authorized to act on behalf of Bidder (the individual, partnership, corporation, entity, etc. submitting this Proposal) and that all statements made in this document are true and correct to the best of my knowledge.
- (2) If Bidder is operating under a fictitious name, Bidder has currently complied with any and all laws and procedures governing the operation of businesses under fictitious names in the State of Florida
- (3) No person or entity other than Bidder has any interest in this Proposal or in the Contract proposed to be entered into.
- (4) This Proposal is made without any understanding, agreement, or connection with any person or entity making Proposal for the same purposes, and is in all respects fair and without collusion or fraud.
- (5) Bidder is not in arrears to the City of Tampa, upon debt or contract, and is not a defaulter, as surety or otherwise, upon any obligation to the City of Tampa.
- (6) That no officer or employee or person whose salary is payable in whole or in part from the City Treasury is, shall be or become interested, directly or indirectly, as a contracting party, partner, stockholder, surety or otherwise, in this Proposal, or in the performance of the Contract, or in the supplies, materials, or equipment and work or labor to which it relates, or in any portion of the profits thereof.
- (7) Bidder has carefully examined and fully understands the Solicitation and has full knowledge of the scope, nature, and quality of the work to be performed; furthermore, Bidder has carefully examined the site of the work and that, from his own investigations, he has satisfied himself as to the nature and location of the work, the character, quality, and quantity of materials and the kinds and extent of equipment and other facilities needed for the performance of the work, the general and local conditions and all difficulties to be encountered, and all other items which may, in any way, affect the work or its performance.
- (8) Bidder (including its principals) has | has NOT been debarred or suspended from contracting with a public entity.
- (9) Bidder has | has NOT implemented a drug-free workplace program that meets the requirements of Section 287.087, Florida Statutes.
- (10) Bidder has carefully examined and fully understands all the component parts of the Contract Documents and agrees Bidder will execute the Contract, provide the required Public Construction Bond, and will fully perform the work in strict accordance with the terms of the Contract and Contract Documents therein referred to for the following prices, to wit:

* If a Partnership or Joint Venture, attach Partnership or Joint Venture Agreement.

** Someone the City may contact with questions/correspondence regarding this Solicitation and/or permits.

Item No. Description Unit Approx. Quantity Unit Price in Words Unit Price Total Computed Price

SCHEDULE A -- CONTRACT PAY ITEMS						
Item No.	Description	Unit	Approx. Quantity	Unit Price in Words	Unit Price	Total Computed Price
1000	EARTHWORK / GENERAL CONDITIONS				\$	\$
1001	MOBILIZATION / GENERAL CONDITIONS	LS	1		\$	\$
1002	CLEARING AND GRUBBING (INCL TREE REMOVAL)	AC	0.55		\$	\$
1003	STAKED SILT FENCE	LF	725		\$	\$
1004	DEMO EXISTING STRUCTURES	LS	1		\$	\$
1005	MAINTENANCE OF TRAFFIC	LS	1		\$	\$
1006	IMPORT FILL DIRT	CY	700		\$	\$
1007	FINAL GRADE	LS	1		\$	\$
1008	EROSION CONTROL / NPDES COMPLIANCE	LS	1		\$	\$
1009	CONST. STAKEOUT / RECORD DRAWINGS	LS	1		\$	\$
1011	REMOVING CONTAMINATED SOIL	CY	3,093		\$	\$
1012	TRANSPORTATION & DISPOSAL OF CONTAMINATED SOIL	TON	4,331		\$	\$
1013	DEWATERING DISCHARGE DISPOSAL	LS	1		\$	\$
1014	IMPORT AND PLACE CLEAN SOIL	CY	3,712		\$	\$
2000	PAVING				\$	\$
2001	HEAVY SANDBLAST FINISH CONCRETE SIDEWALK-6" DEPTH	SF	9,037		\$	\$
2002	HEAVY SANDBLAST FINISH WITH SPECIAL AGGR-6" DEPTH	SF	2,100		\$	\$
2003	SAW CUT CONCRETE - 6" DEPTH	SF	2,500		\$	\$
2004	SYNTHETIC LAWN: K-9 TURF	SF	4,445		\$	\$

Item No. Description Unit Approx. Quantity Unit Price in Words Unit Price Total Computed Price

Item No.	Description	Unit	Approx. Quantity	Unit Price in Words	Unit Price	Total Computed Price
2005	SYNTHETIC LAWN: GOLF FRINGE TURF STYLE	SF	522		\$	
2006	SYNTHETIC LAWN: PIN SEEKER TURF STYLE	SF	495		\$	
2007	MULTI SPORT COURT	SF	2,800		\$	
2008	SHUFFLEBOARD COURT	EA	2		\$	
2009	BONDED RUBBER PLAY SURFACE	SF	503		\$	
2010	6" CONCRETE BAND	LF	300		\$	
2011	12" CONCRETE BAND	LF	66		\$	
2012	CONCRETE SEAT WALL	LF	51		\$	
2013	SHELL PAVING W / WEED FABRIC	SF	172		\$	
2014	METAL EDGING	LF	80		\$	
2015	6" CURB	LF	135		\$	
2016	SIDEWALKS: SAW-CUT AND SHELL AGGREGATE	SF	200		\$	
3000	STORM SEWER				\$	
3001	12" STORM PIPE	LF	380		\$	
3002	8" STORM PIPE	LF	117		\$	
3003	6" STORM PIPE	LF	90		\$	
3004	4" STORM PIPE	LF	58		\$	
3005	15" PVC INLET	EA	11		\$	
3006	12" PVC INLET PED GRATE	EA	1		\$	
3007	CLEANOUT	EA	2		\$	

Item No. Description Unit Approx. Quantity Unit Price in Words Unit Price Total Computed Price

Item No.	Description	Unit	Approx. Quantity	Unit Price in Words	Unit Price	Total Computed Price
3008	3" EZ-FLOW UNDERDRAIN	LF	388		\$	
4000	WATER				\$	
4001	1" WATER SERVICE	LF	623		\$	
4002	1" RPZ IRRIGATION BACKFLOW DEVICE	EA	1		\$	
4003	1" SERVICE CONNECTION	EA	2		\$	
4004	QUICK COUPLERS	EA	9		\$	
4005	NEW WATER METER	EA	1		\$	
6000	PARK ELEMENTS				\$	
6001	STACKED ROOF PERFORMANCE PAVILION	LS	1		\$	
6002	STACKED ROOF (LARGE) ENTERTAINMENT PAVILION	LS	1		\$	
6003	DOG PARK SHADE PAVILION	LS	1		\$	
6004	DOG PARK ENTRY SIGN	EA	2		\$	
6005	DEDICATION PLAQUE AND SIGN	EA	1		\$	
6006	LIGHTING (Pole, Fixture, & Appurtenances)	EA	18		\$	
6007	LIGHTING (LED in Pavilions)	EA	6		\$	
6008	PARK SIGN	EA	1		\$	
6009	DECORATIVE FENCE AND GATES	LS	1		\$	
6010	PARK BENCH (STAY 35)	EA	7		\$	
6011	PARK BENCH BACKLESS (STAY 35)	EA	9		\$	
6012	CONCRETE FORM BENCH (LUNGO MARE)	EA	2		\$	

Item No. Description Unit Approx. Quantity Unit Price in Words Unit Price Total Computed Price

Item No.	Description	Unit	Approx. Quantity	Unit Price in Words	Unit Price	Total Computed Price
6013	CONCRETE BACKLESS BENCH (TWIG)	EA	2		\$	
6014	LOUNGE CHAIR (CHILL)	EA	6		\$	
6015	PLAY EQUIPMENT	EA	1		\$	
6016	DRINKING FOUNTAIN	EA	2		\$	
6017	DRINKING FOUNTAIN WITH DOG BOWL	EA	2		\$	
6018	DOG PICK UP STATION	EA	2		\$	
6019	BIKE RACK LOOP	EA	5		\$	
6020	PICNIC TABLES (URBAN SPACE)	EA	8		\$	
6021	TRASH RECEPTACLE (PITCH)	EA	5		\$	
6022	SHUFFLEBOARD SCORE BOARD	EA	4		\$	
6023	SKATEBOARD DETERRENT: CONCRETE BACKLESS BENCH	EA	5		\$	
6024	ADJUSTABLE HEIGHT VOLLEYBALL NET SLEEVING SYSTEM	EA	1		\$	
6025	GOLF PUTTING GREEN W/FLAGS AND HOLES W/ CUPS	EA	1		\$	
6026	TREE GRATE: CAST IRON, 5' DIAMETER	EA	5		\$	
6027	METAL PICKET PERIMETER FENCE (4.5' AND 5' PANELS)	LF	440		\$	
6028	SINGLE POST SIGN (F&I)	EA	5		\$	
6029	RELOCATE EXISTING SIGN (SINGLE POST)	EA	5		\$	
7000	ELECTRICAL	LS	1		\$	
8000	LANDSCAPE				\$	
8001	CRAPE MYRTLE	EA	10		\$	

Item No. Description Unit Approx. Quantity Unit Price in Words Unit Price Total Computed Price

8002	LIVE OAK	EA	15		\$	
8003	SABAL PALM - REGENERATED	EA	32		\$	
8004	MAMMEY CROTON	EA	46		\$	
8005	NORA GRANT IXORA	EA	173		\$	
8006	XANADU PHILODENDRON	EA	235		\$	
8007	AGAPANTHUS	EA	142		\$	
8008	LIRIOPE	EA	1,164		\$	
8009	WHITE FOUNTAIN GRASS	EA	684		\$	
8010	DWARF ASIAN JASMINE	EA	332		\$	
8011	CONFEDERATE JASMINE	EA	114		\$	
8012	HELICONIA	EA	55		\$	
8013	MUHLY GRASS	EA	217		\$	
8014	CELEBRATION BERMUDA SOD	SF	7,300		\$	
8015	HARDWOOD MULCH	CY	90		\$	
8016	STRUCTURAL SOIL	CY	200		\$	
8017	IRRIGATION SYSTEM	LS	1		\$	
8008	90-DAY MAINTENANCE	LS	1		\$	
9001	CONTINGENCY	LS	1	Two Hundred Seventy-Five Thousand and no cents	\$ 275,000.00	275,000.00
9002	PUBLIC ART ALLOWANCE	LS	1	Twenty Thousand and no cents	\$ 20,000.00	20,000.00
				TOTAL ESTIMATED COST	\$	

Computed Total Price in Words: _____
_____ dollars and _____ cents.

Computed Total Price in Figures: \$ _____

Bidder acknowledges that the following addenda have been received and that the changes covered by the addendum(s) have been taken into account in this proposal: #1 ____ #2 ____ #3 ____ #4 ____ #5 ____ #6 ____ #7 ____ #8 ____.

Bidder acknowledges the requirements of the City of Tampa's Equal Business Opportunity Program.

Bidder acknowledges that it is aware of Florida's Trench Safety Act (Sections 553.60-553.64, Florida Statutes), and agrees that Bidder together with any involved subcontractors will comply with all applicable trench safety standards. Bidder further acknowledges that included in the various items of this Proposal and the total bid price (as applicable) are costs for complying with the Trench Safety Act. Bidder further identifies the costs and methods summarized below:

	Trench Safety Measure (Description)	Unit of Measure (LF, SY)	Unit Quantity	Unit Cost	Extended Cost
A.	_____	_____	_____	_____	_____
B.	_____	_____	_____	_____	_____
C.	_____	_____	_____	_____	_____
Total Cost: \$				_____	

Accompanying this Proposal is a certified check, cashier's check or Tampa Bid Bond (form included herein must be used) for at least five percent (5%) of the total amount of the Proposal which check shall become the property of the City, or which bond shall become forthwith due and payable to the City, if this Proposal shall be accepted by the City and the Bidder shall fail to enter into a legally binding contract with and to furnish the required Public Construction Bond to the City within twenty (20) days after the date of its receipt of written Notice of Award by the City so to do.

FAILURE TO COMPLETE THE ABOVE MAY RESULT IN THE PROPOSAL BEING DECLARED NON-RESPONSIVE.

[SEAL] Name of Bidder: _____
Authorized Signature: _____
Signer's Printed Name: _____
Signer's Title: _____

STATE OF _____
COUNTY OF _____

For an entity: The forgoing instrument was sworn (or affirmed) before me this ____ day of _____, 20____ by _____ as _____ of _____, a/n Partnership Joint Venture LLC Corp Other: _____, on behalf of such entity. Such individual is personally known to me or produced a/n _____ state driver's license as identification.

For an individual: The forgoing instrument was sworn (or affirmed) before me this ____ day of _____, 20____ by _____, who is personally known to me or produced a/n _____ state driver's license as identification.

[NOTARY SEAL] _____
Notary Public, State of _____
Notary Printed Name: _____
Commission No.: _____
My Commission Expires: _____



Good Faith Effort Compliance Plan Guidelines

for Women/Minority Business Enterprise/Small Local Business Enterprise Participation
City of Tampa - Equal Business Opportunity Program
(MBD Form 50 – detailed instructions on page 2 of 2)

Contract Name _____ Bid Date _____

Bidder/Proposer _____

Signature _____ Date _____

Name _____ Title _____

The Compliance Plan with attachments is a true account of Good Faith Efforts (GFE) made to achieve the participation goals as specified for Women/Minority Business Enterprises/Small Local Business Enterprises (WMBE/SLBE) on the referenced contract:

The WMBE/SLBE participation **Goal is Met or Exceeded**. See DMI Forms 10 and 20 which accurately report all subcontractors solicited and all subcontractors to-be-utilized.

The WMBE/SLBE participation Goal is **Not Achieved**. The following list is an overview of the baseline GFE action steps already performed. Furthermore, it is understood that these GFE requirements are weighted in the compliance evaluation based on the veracity and demonstrable degree of documentation provided with the bid/proposal:

(Check applicable boxes below. Must enclose supporting documents accordingly with remarks)

- (1) Solicited through reasonable and available means the interest of WMBE/SLBEs that have the capability to perform the work of the contract. The Bidder or Proposer must solicit this interest within sufficient time to allow the WMBE/SLBEs to respond. The Bidder or Proposer must take appropriate steps to follow up initial solicitations with interested WMBE/SLBEs. See DMI report forms for subcontractors solicited. See enclosed supplemental data on solicitation efforts. Qualifying Remarks:
- (2) Provided interested WMBE/SLBEs with adequate, specific scope information about the plans, specifications, and requirements of the contract, including addenda, in a timely manner to assist them in responding to the requested-scope identified by bidder/proposer for the solicitation. See enclosed actual solicitations used. Qualifying Remarks:
- (3) Negotiated in good faith with interested WMBE/SLBEs that have submitted bids (e.g. adjusted quantities or scale). Documentation of negotiation must include the names, addresses, and telephone numbers of WMBE/SLBEs that were solicited; the date of each such solicitation; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why agreements could not be reached with WMBE/SLBEs to perform the work. Additional costs involved in soliciting and using subcontractors is not a sufficient reason for a bidder/proposer's failure to meet goals or achieve participation, as long as such costs are reasonable. Bidders are not required to accept excessive quotes in order to meet the goal. DMI Utilized Forms for sub-(contractor/consultant) reflect genuine negotiations This project is an RFO/RFP in nature and negotiations are limited to clarifications of scope/specifications and qualifications. See enclosed documentation. Qualifying Remarks:
- (4) Not rejecting WMBE/SLBEs as being unqualified without justification based on a thorough investigation of their capabilities. The WMBE/SLBEs standing within its industry, membership in specific groups, organizations / associations and political or social affiliations are not legitimate causes for rejecting or not soliciting bids to meet the goals. Not applicable. See attached justification for rejection of a subcontractor's bid or proposal. Qualifying Remarks:
- (5) Made scope(s) of work available to WMBE/SLBE subcontractors and suppliers; and, segmented portions of the work or material consistent with the available WMBE/SLBE subcontractors and suppliers, so as to facilitate meeting the goal. Sub-Contractors were allowed to bid on their own choice of work or trade without restriction to a pre-determined portion. See enclosed comments. Qualifying Remarks:
- (6) Made good faith efforts, despite the ability or desire of Bidder/Proposer to perform the work of a contract with its own forces/organization. A Bidder/Proposer who desires to self-perform the work of a contract must demonstrate good faith efforts if the goal has not been met. Sub-Contractors were not prohibited from submitting bids/proposals and were solicited on work typically self-performed by the prime. Qualifying Remarks:
- (7) Segmented portions of the work to be performed by WMBE/SLBEs in order to increase the likelihood that the goals will be met. This includes, where appropriate, breaking out contract work items into economically feasible units (quantities/scale) to facilitate WMBE/SLBE participation, even when the Bidder/Proposer might otherwise prefer to perform these work items with its own forces. Sub-Contractors were allowed to bid on their own choice of work or trade without restriction to a pre-determined portion. Sub-Contractors were not prohibited from submitting bids/proposals and were solicited on work typically self-performed by the prime. See enclosed comments. Qualifying Remarks:
- (8) Made efforts to assist interested WMBE/SLBEs in obtaining bonding, lines of credit, or insurance as required by the city or contractor. See enclosed documentation on initiatives undertaken and methods to accomplish. Qualifying Remarks:
- (9) Made efforts to assist interested WMBE/SLBEs in obtaining necessary equipment, supplies, materials, or related assistance or services, including participation in an acceptable mentor-protégé program. See enclosed documentation of initiatives and/or agreements. Qualifying Remarks:
- (10) Effectively used the services of the City and other organizations that provide assistance in the recruitment and placement of WMBE/SLBEs. See enclosed documentation. The following services were used:

Note: Provide any unsolicited information that will support the Bid/RFP Compliance Evaluation. Named Documents Are:



Participation Plan: Guidance for Complying with Good Faith Efforts Outreach
(page 2 of 2)

1. All firms on the WMBE/SLBE Goal Setting List must be solicited and documentation provided for email, fax, letters, phone calls, and other methods of outreach/communication with the listed firms. The DMI Solicited and DMI-Utilized forms must be completed for all firms solicited or utilized. Other opportunities for subcontracting may be explored by consulting the City of Tampa MBD Office and/or researching the on-line Diversity Management Business System Directory for Tampa certified WMBE/SLBE firms.
2. Solicitation of WMBE/SLBEs, via written or electronic notification, should provide specific information on the services needed, where plans can be reviewed and assistance offered in obtaining these, if required. Solicitations should be sent a minimum of a week (i.e. 5 business days or more) before the bid/proposal date. Actual copies of the bidder's solicitation containing their scope specific instructions should be provided.
3. With any quotes received, a follow-up should be made when needed to confirm detail scope of work. For any WMBE/SLBE low quotes rejected, an explanation shall be provided detailing negotiation efforts.
4. If a low bid WMBE/SLBE is rejected or deemed unqualified the contractor must provide an explanation and supporting documentation for this decision.
5. Prime shall break down portions of work into economical feasible opportunities for subcontracting. The WMBE/SLBE directory may be useful in identifying additional subcontracting opportunities and firms not listed in the "WMBE/SLBE Goal Setting Firms List."
6. Contractor shall not preclude WMBE/SLBEs from bidding on any part of work, even if the Contractor may desire to self-perform the work.
7. Contractor shall avoid relying solely on subcontracting out work-scope where WMBE/SLBE availability is not sufficient to attain the pre-determined subcontract goal set for the Bid or when targeted sub-consultant participation is stated within the RFP/RFQ.
8. In its solicitations, the Bidder should offer assistance to WMBE/SLBEs in obtaining bonding, insurance, et cetera, if required of subcontractors by the City or Prime Contractor.
9. In its solicitation, the Bidder should offer assistance in obtaining equipment for a specific job to WMBE/SLBEs, if needed.
10. Contractor should use the services offered by such agencies as the City of Tampa Minority and Small Business Development Office, Hillsborough County Entrepreneur Collaborative Center, Hillsborough County Economic Development Department's MBE/SBE Program and the NAACP Empowerment Center to name a few for the recruitment and placement of WMBEs/SLBEs.



Failure to Complete, Sign and Submit Both Forms 10 & 20 SHALL render the Bid or Proposal Non-Responsive

**Page 1 of 4 – DMI Solicited/Utilized Schedules
City of Tampa – Schedule of **All Solicited** Sub-(Contractors/Consultants/Suppliers)
(FORM MBD-10)**

Contract No.: _____ Contract Name: _____
Company Name: _____ Address: _____
Federal ID: _____ Phone: _____ Fax: _____ Email: _____

Check applicable box(es). Detailed Instructions for completing this form are on page 2 of 4.

No Firms were contacted or solicited for this contract.

No Firms were contacted because: _____

See attached list of additional Firms solicited and all supplemental information (List must comply to this form)

Note: Form MBD-10 must list ALL subcontractors solicited including Non-minority/small businesses

NIGP Code Categories: Buildings = 909, General = 912, Heavy = 913, Trades = 914, Architects = 906, Engineers & Surveyors = 925, Supplier = 912-77

S = SLBE W=WMBE O = Neither	Company Name Address Phone, Fax, Email	Type of Ownership (F=Female M=Male) BF BM = African Am. HF HM = Hispanic AF AM = Asian Am. NF NM = Native Am. CF CM = Caucasian	Trade or Services NIGP Code (listed above)	Contact Method L=Letter F=Fax E=Email P=Phone	Quote or Response Received Y/N

Failure to Complete, Sign and Submit
this form with your Bid or Proposal
Shall render the Bid Non-Responsive
(Do Not Modify This Form)

It is hereby certified that the information provided is an accurate and true account of contacts and solicitations for sub-contracting opportunities on this contract.

Signed: _____ Name/Title: _____ Date: _____

**Failure to Complete, Sign and Submit Both Forms 10 & 20 SHALL render the Bid or Proposal Non-Responsive
Forms must be included with Bid / Proposal**



Instructions for completing The Sub-(Contractors/Consultants/ Suppliers) Solicited Form (Form MBD-10)

This form must be submitted with all bids or proposals. All subcontractors (regardless of ownership or size) solicited and subcontractors from whom unsolicited quotations were received must be included on this form. The instructions that follow correspond to the headings on the form required to be completed. Note: Ability or desire to self-perform all work shall not exempt the prime from Good Faith Efforts to achieve participation.

- **Contract No.** This is the number assigned by the City of Tampa for the bid or proposal.
- **Contract Name.** This is the name of the contract assigned by the City of Tampa for the bid or proposal.
- **Contractor Name.** The name of your business and/or doing business as (dba) if applicable.
- **Address.** The physical address of your business.
- **Federal ID.** FIN. A number assigned to your business for tax reporting purposes.
- **Phone.** Telephone number to contact business.
- **Fax.** Fax number for business.
- **Email.** Provide email address for electronic correspondence.
- **No Firms were contacted or solicited for this contract.** Checking the box indicates that a pre-determined Subcontract Goal or Participation Plan Requirement was not set by the City resulting in your business not using subcontractors and will self-perform all work. If during the performance of the contract you employ subcontractors, the City must pre-approve subcontractors. Use of the “Sub-(Contractors/Consultants/Suppliers) Payments” form (MBD Form-30) must be submitted with every pay application and invoice. Note: Certified **SLBE or WMBE firms** bidding as Primes **are not exempt** from outreach and solicitation of subcontractors.
- **No Firms were contacted because.** Provide brief explanation why no firms were contacted or solicited.
- **See attached documents.** Check box, if after you have completed the DMI Form in its entirety, you need more space to list additional firms and/or if you have supplemental information/documentation relating to the form. All DMI data not submitted on the MBD Form-10 must be in the same format and have all requested data from MBD Form-10 included.

The following instructions are for information of any and all subcontractors solicited.

- **“S” = SLBE, “W” = WMBE.** Enter “S” for firms Certified by the City as Small Local Business Enterprises and/or “W” for firms Certified by the City as either Women/Minority Business Enterprise; **“O” = Non-certified others.**
- **Federal ID.** FIN. A number assigned to a business for tax reporting purposes. This information is critical in proper identification and payment of the contractor/subcontractor.
- **Company Name, Address, Phone & Fax.** Provide company information for verification of payments.
- **Type of Ownership.** Indicate the Ethnicity and Gender of the owner of the subcontracting business.
- **Trade, Services, or Materials** indicate the trade, service, or materials provided by the subcontractor. NIGP codes aka “National Institute of Governmental Purchasing” are listed at top section of document.
- **Contact Method L=letter, F=fax, E=Email, P=Phone.** Indicate with letter the method(s) of soliciting for bid.
- **Quote or Resp. (response) Rec’d (received) Y/N.** Indicate “Y” Yes if you received a quotation or if you received a response to your solicitation. Indicate “N” No if you received no response to your solicitation from the subcontractor. Must keep records: log, ledger, documentation, etc. that can validate/verify.

If additional information is required or you have questions, please contact the Equal Business Opportunity Program - Minority and Small Business Development Office at (813) 274-5522.



Failure to Complete, Sign and Submit Both Forms 10 & 20 SHALL render the Bid or Proposal Non-Responsive

**Page 3 of 4 – DMI Solicited/Utilized Schedules
City of Tampa – Schedule of **All To-Be-Utilized** Sub-(Contractors/Consultants/Suppliers)
(FORM MBD-20)**

Contract No.: _____ Contract Name: _____
 Company Name: _____ Address: _____
 Federal ID: _____ Phone: _____ Fax: _____ Email: _____

Check applicable box(es). Detailed Instructions for completing this form are on page 4 of 4.

See attached list of additional Firms Utilized and all supplemental information (List must comply to this form)

Note: Form MBD-20 must list ALL subcontractors To-Be-Utilized including Non-minority/small businesses

No Subcontracting/consulting (of any kind) will be performed on this contract.

No Firms are listed to be utilized because: _____

NIGP Code General Categories: Buildings = 909, General = 912, Heavy = 913, Trades = 914, Architects = 906, Engineers & Surveyors = 925, Supplier = 912-77

Enter "S" for firms Certified as Small Local Business Enterprises, "W" for firms Certified as Women/Minority Business Enterprise, "O" for Other Non-Certified

S = SLBE W=WMBE O =Neither	Company Name Address Phone, Fax, Email	Type of Ownership (F=Female M=Male) BF BM = African Am. HF HM = Hispanic Am. AF AM = Asian Am. NF NM = Native Am. CF CM = Caucasian	Trade, Services, or Materials NIGP Code Listed above	\$ Amount of Quote. Letter of Intent (LOI) if available	Percent of Scope or Contract %

Failure to Complete, Sign and Submit
this form with your Bid or Proposal
Shall render the Bid Non-Responsive.
(Do Not Modify This Form)

Total ALL Subcontract / Supplier Utilization \$ _____
 Total SLBE Utilization \$ _____
 Total WMBE Utilization \$ _____
 Percent SLBE Utilization of Total Bid/Proposal Amt. _____% Percent WMBE Utilization of Total Bid/Proposal Amt. _____%

It is hereby certified that the following information is a true and accurate account of utilization for sub-contracting opportunities on this Contract.

Signed: _____ Name/Title: _____ Date: _____

**Failure to Complete, Sign and Submit Both Forms 10 & 20 SHALL render the Bid or Proposal Non-Responsive
Forms must be included with Bid / Proposal**



Page 4 of 4 DMI – Solicited/**Utilized**

Instructions for completing **The Sub-(Contractors/Consultants/ Suppliers) to be Utilized Form (Form MBD-20)**

This form must be submitted with all bids or proposals. All subcontractors (regardless of ownership or size) projected to be utilized must be included on this form. Note: Ability or desire to self-perform all work shall not exempt the prime from Good Faith Efforts to achieve participation.

Contract No. This is the number assigned by the City of Tampa for the bid or proposal.

- **Contract Name.** This is the name of the contract assigned by the City of Tampa for the bid or proposal.
- **Contractor Name.** The name of your business and/or doing business as (dba) if applicable.
- **Address.** The physical address of your business.
- **Federal ID. FIN.** A number assigned to your business for tax reporting purposes.
- **Phone.** Telephone number to contact business.
- **Fax.** Fax number for business.
- **Email.** Provide email address for electronic correspondence.
- **No Subcontracting/consulting (of any kind) will be performed on this contract.** Checking box indicates your business will not use subcontractors when no Subcontract Goal or Participation Plan Requirement was set by the City, but will self-perform all work. When subcontractors are utilized during the performance of the contract, the “Sub-(Contractors/Consultants/Suppliers) Payments” form (MBD Form-30) must be submitted with every pay application and invoice. Note: certified **SLBE or WMBE firms** bidding as Primes **are not exempt** from outreach and solicitation of subcontractors, including completion and submitting Form-10 and Form-20.
- **No Firms listed To-Be-Utilized.** Check box; provide brief explanation why no firms were retained when a goal or participation plan requirement was set on the contract. Note: mandatory compliance with Good Faith Effort outreach (GFECF) requirements applies (MBD Form-50) and supporting documentation must accompany the bid.
- **See attached documents.** Check box, if after completing the DMI Form in its entirety, you need more space to list additional firms and/or if you have supplemental information/documentation relating to the scope/value/percent utilization of subcontractors. Reproduce copies of MBD-20 and attach. All data not submitted on duplicate forms must be in the same format and content as specified in these instructions.

The following instructions are for information of Any and All subcontractors To Be Utilized.

- **Federal ID. FIN.** A number assigned to a business for tax reporting purposes. This information is critical in proper identification of the subcontractor.
- **“S” = SLBE, “W” = WMBE.** Enter “S” for firms Certified by the City as Small Local Business Enterprises and/or “W” for firms Certified by the City as Women/Minority Business Enterprise; **“O” = Non-certified others.**
- **Company Name, Address, Phone & Fax.** Provide company information for verification of payments.
- **Type of Ownership.** Indicate the Ethnicity and Gender of the owner of the subcontracting business.
- **Trade, Services, or Materials (NIGP code if Known)** Indicate the trade, service, or material provided by the subcontractor. Abbreviated list of NIGP is available at <http://www.tampagov.net/mbd> “Information Resources”.
- **Amount of Quote, Letters of Intent** (required for both SLBEs and WMBEs).
- **Percent of Work/Contract.** Indicate the percent of the total contract price the subcontract(s) represent. For CCNA only (i.e. Consultant A/E Services) you must indicate subcontracts as percent of total scope/contract.
- **Total Subcontract/Supplier Utilization.** – Provide total dollar amount of all subcontractors/suppliers projected to be used for the contract. (Dollar amounts may be optional in CCNA depending on solicitation format).
- **Total SLBE Utilization.** Provide total dollar amount for all projected SLBE subcontractors/Suppliers used for this contract. (Dollar amounts may be optional in CCNA proposals depending on the solicitation format).
- **Total WMBE Utilization.** Provide total dollar amount for all projected WMBE subcontractors/Suppliers used for this contract. (Dollar amounts may be optional in CCNA proposals depending on the solicitation format).
- **Percent SLBE Utilization.** Total amount allocated to SLBEs divided by the total bid/proposal amount.
- **Percent WMBE Utilization.** Total amount allocated to WMBEs divided by the total bid/proposal amount.

If additional information is required or you have questions, please contact the Equal Business Opportunity Program - Minority and Small Business Development Office at (813) 274-5522.

TAMPA BID BOND
Contract 18-C-00036; Madison Street Park

KNOW ALL MEN BY THESE PRESENTS, that we, _____

(hereinafter called the Principal) and _____

(hereinafter called the Surety) a Corporation chartered and existing under the laws of the State of _____, with its principal offices in the City of _____, and authorized to do business in the State of Florida, are held and firmly bound unto the City of Tampa, a Municipal Corporation of Hillsborough County, Florida, in the full and just sum of 5% of the amount of the (Bid) (Proposal) good and lawful money of the United States of America, to be paid upon demand of the City of Tampa, Florida, to which payment will and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally and firmly these presents.

WHEREAS, the Principal is about to submit, or has submitted to the City of Tampa, Florida, a Proposal for the construction of certain facilities for the City designated Contract 18-C-00036, Madison Street Park.

WHEREAS, the Principal desires to file this Bond in accordance with law, in lieu of a certified Bidder's check otherwise required to accompany this Proposal.

NOW, THEREFORE: The conditions of this obligation are such that if the Proposal be accepted, the Principal shall, within twenty (20) days after the date of receipt of written Notice of Award, execute a contract in accordance with the Proposal and upon the terms, conditions and price set forth therein, in the form and manner required by the City of Tampa, Florida and execute a sufficient and satisfactory Public Construction Bond payable to the City of Tampa, Florida in an amount of one hundred percent (100%) of the total contract price, in form and with security satisfactory to said City, then this Bid Bond obligation is to be void; otherwise to be and remain in full force and virtue in law, and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to the aforesaid City, upon demand, the amount thereof, in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

IN TESTIMONY THEREOF, the Principal and Surety have caused these presents to be duly signed and sealed this _____ day of _____, 20__.

Principal

BY _____

TITLE _____

BY _____

TITLE _____

(SEAL)

Producing Agent

Producing Agent's Address

Name of Agency

The addition of such phrases as "not to exceed" or like import shall render the (Bid) (Proposal) non-responsive.

AGREEMENT

For furnishing all labor, materials and equipment, together with all work incidental thereto, necessary and required for the performance of the work for the construction of Contract 18-C-00036 in accordance with your Proposal dated _____, amounting to a total of \$ _____ as completed in accordance with subsections I-2.09 and I-2.10 of the Instruction to Bidders.

This AGREEMENT, made and entered into in triplicate, between the City of Tampa, Florida, hereinafter called the City, and _____ hereinafter called the Contractor, as of the _____ day of _____, 20__ when the City Council of the City of Tampa, Florida adopted a Resolution authorizing, among other things, the Mayor's execution of this Agreement.

WITNESSETH that, in consideration of the mutual stipulations, agreements, and covenants herein contained, the parties hereto have agreed and hereby agree with each other, the Party of the First Part for itself, its successors and assigns, and the Party of the Second Part for itself, or himself, or themselves, and its successors and assigns, or his or their executors, administrators and assigns, as follows:

Contract 18-C-00036; Madison Street Park, shall include, but not be limited to, furnish all labor, materials, and equipment for management of contaminated soil, including removal, hauling and replacement with clean soil; installation of concrete walks, decorative seating wall, entertainment pavilion, dog park, shuffle board court, play equipment, multi-sports court, drinking fountains, benches, bike rack, golf putting green, lighting, fencing, picnic tables, landscaping, irrigation with all associated work required for a complete project in accordance with the Contract Documents.

Contract Documents referred to in Article 1.01 of this Agreement also includes this volume, applicable standard drawings, the plans and any provisions referred to whether actually attached or not.

TAMPA AGREEMENT

SECTION 1 GENERAL

ARTICLE 1.01 THE CONTRACT

Except for titles, subtitles, headings, running headlines, and tables of contents (all of which are printed herein merely for convenience), the following, except for such portions thereof as may be specifically excluded, constitute the Contract:

The Notice to Bidders;
The Instructions to Bidders, including Special Instructions and General Instructions;
The Proposal;
The Bid Bond;
The Certification of Nonsegregated Facilities;
The Notice of Award;
The Agreement;
The Performance Bond;
The Notice To Proceed;
The Specifications, including the General Provisions, the Workmanship and Materials, the Specific Provisions or the Contract Items
The Plans;
All Supplementary Drawings Issued after award of the Contract;
All Addenda issued by the City prior to the receipt of proposals;
All provisions required by law to be inserted in this Contract, whether actually inserted or not.

ARTICLE 1.02 DEFINITIONS

The following words and terms, or pronouns used in their stead, shall, wherever they appear in this Contract, be construed as follows, unless different meaning is clear from the context:

(a)"City" shall mean the City of Tampa, Florida, represented by its Mayor and City Council, Party of the First Part, or such other City official as shall be duly empowered to act for the City on matters relating to this Contract.

(b)"Contractor" shall mean the Party of the Second Part hereto, whether corporation, firm or individual, or any combination thereof, and its, their, or his successors, personal representatives, executors, administrators, and assigns, and any person, firm or corporation who or which shall at any time be substituted in the place of the Party of the Second Part under this Contract.

(c)"Engineer" shall mean the Director of the Department or his duly authorized representative.

(d)"Consultant" shall mean the engineering or architectural firm or individual employed by the City to consult with and advise the City in the construction of the project.

(e)"Surety" shall mean any person, firm or corporation that has executed as Surety the Contractor's Performance Bond securing the performance of this Contract.

(f)"The Work" shall mean everything expressly or implied required to be furnished and done by the Contractor under the Contract, and shall include both Contract Work

and Extra Work.

(g)"Contract Work" shall mean everything expressly or implied required to be furnished and done by the Contractor by any one or more of the Contract parts referred to in Article 1.01 hereof, except Extra Work, as hereinafter defined; it being understood that, in case of any inconsistency in or between any part or parts of this Contract, the Engineer shall determine which shall prevail.

(h)"Contract" or "Contract Documents" shall mean each of the various part of the Contract referred to in Article 1.01 hereof, both as a whole and severally.

(i)"Extra Work" shall mean work other than that required either expressly or implied by the contract in its present form.

(j)"Plans" shall mean only those drawings specifically referred to as such in these documents, or in any Addendum. Drawings issued after the execution of the Contract to explain further, or to illustrate, or to show changes in the work, will be known as "Supplementary Drawings" and shall be binding upon the Contractor with the same force as the Plans.

(k)"Specifications" shall mean all of the directions, requirements, and standards of performance applying to the work, as hereinafter detailed and designated as such, or which may be issued in an addendum.

(l)"Addendum or Addenda" shall mean the additional contract provisions issued in writing prior to the receipt of bids.

(m)"Notice" shall mean written notice. Notice shall be served upon the Contractor, either personally or by leaving the said notice at his residence or with any employee found on the work, or addressed to the Contractor at the residence or place of business given in his proposal and deposited in a postpaid wrapper in any post office box regularly maintained by the United States Post Office.

(n)"Project" shall mean the entire improvement package or related work. The "project" may consist of several different, but related, contracts.

(o)"Site" shall mean, and be limited to, the area upon or in which the Contractor's operations are carried on and such other appropriate areas as may be designed as such by the Engineer.

(p)"Subcontractor" shall mean any person, firm, or corporation, other than employees of the Contractor, who or which contracts with the Contractor to furnish, or actually furnishes labor, or labor and materials, or labor and equipment or labor, materials, and equipment at the site.

(q)Whenever in the Contract the words "directed", "required", "permitted", "ordered", "designated", "prescribed", and words of like import are used, they shall imply the direction, requirement, permission, order, designation, or prescription of the Engineer; and "approved", "acceptable", "satisfactory", "in the judgement of", and words of like import shall mean approved by, or acceptable to, or satisfactory to, or in the judgment of the Engineer.

(r)Whenever in the Contract the word "day" is used, it shall mean calendar day.

(s)"Final Acceptance" shall mean acceptance of the

work as evidenced by an official resolution of the City. Such acceptance shall be deemed to have taken place only if and when an approving resolution has been adopted by the City Council. The final acceptance shall be signed only after the City has assured itself by tests, inspection, or otherwise, that all of the provisions of the Contract have been carried out to its satisfaction.

(t)"Eastern Standard Time" shall be construed as the time being observed in the City on the day proposals are received or other documents issued or signed.

SECTION 2 POWERS OF THE CITY'S REPRESENTATIVES

ARTICLE 2.01 THE ENGINEER

It is covenanted and agreed that the Engineer, in addition to those matters elsewhere herein expressly made subject to his determination, direction, or approval, shall have the power, subject to such express provisions and limitations herein contained as are not in conflict herewith, and subject to review by the Mayor and City Council:

(a)To monitor the performance of the work.

(b)To determine the amount, kind, quality, sequence, and location of the work to be paid for hereunder and, when completed, to measure such work for payment.

(c)To determine all questions of an engineering character in relation to the work, to interpret the Plans, Specifications and Addenda.

(d)To determine how the work of this Contract shall be coordinated with the work of other contractors engaged simultaneously on this project.

(e)To make minor changes in the work as he deems necessary, provided such changes do not result in a net increase in the cost to the City or to the Contractor of the work to be done under the Contract.

(f)To amplify the Plans, add explanatory information and furnish additional Specifications and Drawings consistent with the intent of the Contract Documents.

The power of the Engineer shall not be limited to the foregoing enumeration, for it is the intent of this Contract that all of the work shall be subject to his determinations and approval, except where the determination or approval of someone other than the Engineer is expressly called for herein and except as subject to review by the Mayor and City Council. All orders of the Engineer requiring the Contractor to perform work as Contract work shall be promptly obeyed by the Contractor.

The Engineer shall not, however, have the power to issue an extra work order, and the performance of such work on the order of the Engineer without previously obtaining written confirmation thereof from the Mayor in accordance with Article 7.02 hereof may constitute a waiver of any right to extra compensation therefor. The Contractor is warned that the Engineer has no power to change the terms and provisions of this Contract, except minor changes where such change results in no net increase in the Contract Price.

ARTICLE 2.02 DIRECTOR

The Director of the Department in addition to those matters

expressly made subject to his determination, direction or approval in his capacity as "Engineer", shall also have the power:

(a)To review any and all questions in relation to this Contract and its performance, except as herein otherwise specifically provided, and his determination upon such review shall be final and conclusive upon the Contractor.

(b)With the approval of the Mayor and City Council to authorize modifications or changes in the Contract so as to require: (1) the performance of extra work, or (2) the omission of Contract work whenever he deems it in the interest of the City to do so, or both.

(c)To suspend the whole or any part of the work whenever, in his judgment, such suspension is required: (1) in the interest of the City generally, or (2) to coordinate the work of the various Contractors engaged on this project, or (3) to expedite the completion of the entire project, even though the completion of this particular Contract may be thereby delayed, without compensation to the Contractor for such suspension other than extending the time for the completion of the work, as much as it may have been, in the opinion of the City, delayed by such a suspension.

(d)If, before the final acceptance of all the work contemplated herein, it shall be deemed necessary to take over, use, occupy, or operate any part of the completed or partly completed work, the Engineer shall have the right to do so and the Contractor will not, in any way, interfere with or object to the use, occupation, or operation of such work by the City after receipt of notice in writing from the Engineer that such work or part thereof will be used by the City on and after the date specified in such notice. Such taking over, use, occupancy or operation of any part of the completed or partially completed work shall not constitute final acceptance or approval of any such part of the work.

ARTICLE 2.03 NO ESTOPPEL

The City shall not, nor shall any department, officer, agent, or employee thereof, be bound, precluded, or estopped by any determination, decision, acceptance, return, certificate, or payment made or given under or in connection with this Contract by any officer, agent or employee of the City at any time either before or after final completion and acceptance of the work and payment therefor: (a) from showing the true and correct classification, amount, quality, or character of the work done, or that any determination, decision, acceptance, return certificate or payment is untrue, incorrect or improperly made in any particular, or that the work or any part thereof does not in fact conform to the requirements of the Contract Documents, and (b) from demanding and recovering from the Contractor any overpayments made to him or such damages as it may sustain by reason his failure to comply with the requirements of the Contract of Documents, or both.

ARTICLE 2.04 NO WAIVER OF RIGHTS

Neither the inspection, nor any order, measurements or certificate of the City or its employees, officers, or agents, nor by any order of the City for payment of money, nor any money, nor payments for or acceptance of the whole or any part of the work by the City, nor any extension of time, nor any changes in the Contract, Specifications or Plans, nor any possession by the City or its employees shall operate as a

waiver of any provisions of this Contract, nor any power herein provided nor shall any waiver of any breach of this Contract be held as a waiver of any other subsequent breach.

Any remedy provided in this Contract shall be taken and construed as cumulative, namely, in addition to each and every other suit, action, or legal proceeding. The City shall be entitled as of right to an injunction against any breach of the provisions of this Contract.

SECTION 3 PERFORMANCE OF WORK

ARTICLE 3.01 CONTRACTOR'S RESPONSIBILITY

The Contractor shall do all the work and furnish, at his own cost and expense, all labor, materials, equipment, and other facilities, except as herein otherwise provided, as may be necessary and proper for performing and completing the work under this Contract. The Contractor shall be responsible for the entire work until completed and finally accepted by the City.

The work shall be performed in accordance with the true intent and meaning of the Contract Documents. Unless otherwise expressly provided, the work must be performed in accordance with the best modern practice, with materials as specified and workmanship of the highest quality, all as determined by and entirely to the satisfaction of the Engineer.

Unless otherwise expressly provided, the means and methods of construction shall be such as the Contractor may choose, subject, however, to the approval of the Engineer. Only adequate and safe procedure, methods, structures and equipment shall be used. The Engineer's approval or the Engineer's failure to exercise his right thereon shall not relieve the Contractor of obligations to accomplish the result intended by the Contract, nor shall such create a cause of action for damages.

ARTICLE 3.02 COMPLIANCE WITH LAWS

The Contractor must comply with all local, State and Federal laws, rules, ordinances and regulations applicable to this Contract and to the work done hereunder, and must obtain, at his own expense, all permits, licenses or other authorization necessary for the prosecution of the work.

No work shall be performed under this Contract on Sundays, legal holidays or after regular working hours without the express permission of the Engineer. Where such permission is granted, the Engineer may require that such work be performed without additional expense to the City.

ARTICLE 3.03 INSPECTION

During the progress of the work and up to the date of final acceptance, the Contractor shall, at all times, afford the representatives of the City, the Florida Department of Environmental Regulation, and if applicable, the Federal Environmental Protection Agency and the Federal Department of Labor every reasonable, safe and proper facility for inspecting the work done or being done at the

site. The inspection of any work shall not relieve the Contractor of any of his obligations to perform proper and satisfactory work as herein specified. Finished or unfinished work found not to be in strict accordance with the Contract shall be replaced as directed by the Engineer, even though such work may have been previously approved and payment made therefor.

The City shall have the right to reject materials and workmanship which are defective or require their correction. Rejected work and materials must be promptly removed from the site, which must at all times be kept in a reasonably clean and neat condition.

Failure or neglect on the part of the City to condemn or reject bad or inferior work or materials shall not be construed to imply an acceptance of such work or materials, if it becomes evident at any time prior to the final acceptance of the work by the City. Neither shall it be construed as barring the City at any subsequent time from the recovery of damages of such a sum of money as may be needed to build anew all portions of the work in which inferior work or improper materials were used, wherever found.

Should it be considered necessary or advisable by the City at any time before final acceptance of the entire work to make examinations of work already completed, by removing or tearing out all or portions of such work, the Contractor shall, on request, promptly furnish all necessary facilities, labor, and material for that purpose. If such work is found to be defective in any material respect, due to the fault of the Contractor or his subcontractors, he shall defray all expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the cost of examination and restoration of the work shall be considered an item of extra work to be paid for in accordance with the provisions of Article 7.02 hereof.

ARTICLE 3.04 PROTECTION

During performance and until final acceptance, the Contractor shall be under an absolute obligation to protect the finished and unfinished work against any damage, loss, or injury. The Contractor shall take proper precaution to protect the finished work from loss or damage, pending completion and the final acceptance of all the work included in the entire Contract, provided that such precaution shall not relieve the Contractor from any and all liability and responsibility for loss or damage to the work occurring before final acceptance by the City. Such loss or damage shall be at the risk of and borne by the Contractor, whether arising from acts or omissions of the Contractor or others. In the event of any such loss or damage, the Contractor shall forthwith repair, replace, and make good the work without extension of time therefor, except as may be otherwise provided herein.

The provisions of this Article shall not be deemed to create any new right of action in favor of third parties against the Contractor or the City.

ARTICLE 3.05 PRESERVATION OF PROPERTY

The Contractor shall preserve from damage all property along the line of the work, or which is in the vicinity of or is in anywise affected by the work, the removal or destruction of which is not called for by the Plans. This applies, but is not limited, to the public utilities, trees, lawn areas, building monuments, fences, pipe and underground structures, public streets (except natural wear and tear of streets resulting from legitimate use thereof by the Contractor), and wherever such property is damaged due to the activities of the Contractor, it shall be immediately restored to its original condition by the Contractor and at his own expense.

In case of failure on the part of the Contractor to restore such property, or make good such damage or injury, the City may, upon forty-eight (48) hour written notice, proceed to repair, rebuild, or otherwise restore such property as may be deemed necessary, and the cost thereof will be deducted from any monies due or which may become due the Contractor under this Contract. Nothing in this clause shall prevent the Contractor from receiving proper compensation for the removal, damage, or replacement of any public or private property not shown on the Plans, when this is made necessary by alteration of grade or alignment authorized by the Engineer, provided that such property has not been damaged through fault of the Contractor, his employees or agents.

ARTICLE 3.06 BOUNDARIES

The Contractor shall confine his equipment, apparatus, the storage of materials, supplies and apparatus of his workmen to the limits indicated on the plans, by law, ordinances, permits or direction of the Engineer.

ARTICLE 3.07 SAFETY AND HEALTH REGULATIONS

The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91- 596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL91-54).

ARTICLE 3.08 TAXES

All taxes of any kind and character payable on account of the work done and materials furnished under this Contract shall be paid by the Contractor and shall be deemed to have been included in his bid. The laws of the State of Florida provide that sales and use taxes are payable by the Contractor upon the tangible personal property incorporated in the work and such taxes shall be paid by the Contractor and shall be deemed to have been included in his bid.

ARTICLE 3.09 ENVIRONMENTAL CONSIDERATIONS

The Contractor, in the performance of the work under this Contract, shall comply with all Local, State and Federal laws, statutes, ordinances, rules and regulations applicable to protection of the environment; and, in the event he violates any of the provisions of same, he shall be answerable to the Local, State and Federal agencies designated by law to protect the environment. In the event the City receives, from any of the environmental agencies, a citation which is occasioned by an act or omission of the Contractor or his

subcontractor or any officers, employees or agents of either, it is understood and agreed that the Contractor shall automatically become a party-respondent under said citation; and the City immediately shall notify the Contractor and provide him with a copy of said citation.

The Contractor shall comply with the requirements of the citation and correct the offending conditions(s) within the time stated in said citation and further shall be held fully responsible for all fines and/or penalties.

**SECTION 4
TIME PROVISIONS**

ARTICLE 4.01 TIME OF START AND COMPLETION

The Contractor must commence work within thirty (30) days subsequent to the date of the receipt of the "Notice to Proceed" by the City unless otherwise provided in the Specific Provisions and Special Instructions. Time being of the essence of this Contract, the Contractor shall thereafter prosecute the work diligently, using such means and methods of construction as well as secure its full completion in accordance with the requirements of the Contract Documents no later than the date specified therefor, or on the date to which the time for completion may be extended.

The Contractor must complete the work covered by this Contract in the number of consecutive calendar days set forth in the Instructions to Bidders, unless the date of completion is extended pursuant to the provisions of Article 4.05 hereof.

The period for performance shall start from the date of signing of this Agreement by the City.

The actual date of completion will be established after a final inspection as provided in Article 4.07 hereof.

ARTICLE 4.02 PROGRESS SCHEDULE

To enable the work to be laid out and prosecuted in an orderly and expeditious manner, the Contractor shall submit to the Engineer a proposed progress schedule within fifteen (15) days after the award of this Contract.

The schedule shall state the Contract starting date, time for completion and date of completion and shall show the anticipated time of starting and completion of each of the various operations to be performed under this Contract, together with all necessary and appropriate information regarding sequence and correlation of work and an estimated time required for the delivery of all materials and equipment required for the work. The proposed schedule shall be revised as directed by the Engineer until finally approved by him, and, after such approval, shall be strictly adhered to by the Contractor. The approved progress schedule may be changed only with the written permission of the Engineer.

If the Contractor shall fail to adhere to the approved progress schedule or the schedule as revised, he shall promptly adopt such other or additional means and methods of construction as will make up for the time lost, and will assure completion in accordance with the contract time.

ARTICLE 4.03 APPROVAL REQUESTS

From time to time, as the work progresses and in the sequence indicated by the approved schedule, the Contractor must submit to the Engineer a specific request, in writing, for each item of information or approval required of him by the Contract. These requests must be submitted sufficiently in advance of the date upon which the information or approval is actually required by the Contractor to allow for the time the Engineer may take to act upon such submissions or resubmissions. The Contractor shall not have any right to an extension of time on account of delays due to his failure to submit his requests for the required information or the required approval in accordance with these requirements.

ARTICLE 4.04 COORDINATION WITH OTHER CONTRACTORS

During progress of the work, other Contractors may be engaged in performing other work on this project or on other projects on the site. In that event, the Contractor shall coordinate the work to be done hereunder with the work of such other Contractors in such manner as the Engineer may direct.

ARTICLE 4.05 EXTENSION OF TIME

If such an application is made, the Contractor shall be entitled to an extension of time for delay in completion of the work should the Contractor be obstructed or delayed in the commencement, prosecution or completion of any part of said work by any act or delay of the City, or by acts or omissions of other Contractors on this project, or by a riot, insurrection, war, pestilence, acts of public authorities, fire, lightning, hurricanes, earthquakes, tornadoes, floods, extremely abnormal and excessive inclement weather as indicated by the records of the local weather bureau for a five-year period preceding the date of the Contract, or by strikes, or other causes, which causes of delay mentioned in this Article, in the opinion of the City, are entirely beyond the expectation and control of the Contractor.

The Contractor shall, however, be entitled to an extension of time for such causes only for the number of days of delay which the City may determine to be due solely to such causes and only to the extent that such occurrences actually delay the completion of the project and then only if the Contractor shall have strictly complied with all of the requirements of Articles 4.01, 4.02, 4.03 and 4.04 hereof. It is hereby understood that the determination by the Engineer as to the order and sequence of the work shall not in itself constitute a basis for extension of time.

The determination made by the City on an application for an extension of time shall be binding and conclusive on the Contractor.

Delays caused by failure of the Contractor's materialmen, manufacturers, and dealers to furnish approved working drawings, materials, fixtures, equipment, appliances, or other fittings on time or failure of subcontractors to perform their work shall not constitute a basis of extension of time.

The Contractor agrees to make no claim for damages for delay in the performance of this Contract occasioned by any

act or omission to act of the City or any of its representatives or because of any injunction which may be brought against the City or its representatives and agrees that any such claim shall be fully compensated for by an extension of time to complete performance of the work as provided herein.

ARTICLE 4.06 LIQUIDATED DAMAGES

It is mutually agreed between the parties that time is the essence of this Contract and that there will be on the part of the City considerable monetary damage in the event the Contractor should fail to complete the work within the time fixed for completion in the Contract or within the time to which such completion may have been extended.

The amount per day set forth in the Instructions to Bidders is hereby agreed upon as the liquidated damages for each and every calendar day that the time consumed in completing the work under this Contract exceeds the time allowed.

This amount shall, in no event, be considered as a penalty or otherwise than as the liquidated and adjusted damages to the City because of the delay and the Contractor and his Surety agree that the stated sum per day for each such day of delay shall be deducted and retained out of the monies which may become due hereunder and if not so deductible, the Contractor and his Surety shall be liable therefor.

ARTICLE 4.07 FINAL INSPECTION

When the work has been completed in accordance with the requirements of the Contract and final cleaning up performed, a date for final inspection of the work by the Engineer shall be set by the Contractor in a written request therefor, which date shall be not less than ten (10) days after the date of such request. The work will be deemed complete as of the date so set by the Contractor if, upon such inspection, the Engineer determines that no further work remains to be done at the site.

If such inspection reveals interms of work still to be performed, however, the Contractor shall promptly perform them and then request a reinspection. If, upon such inspection, the Engineer determines that the work is complete, the date of final completion shall be deemed to be the last day of such reinspection.

**SECTION 5
SUBCONTRACTS AND ASSIGNMENTS**

ARTICLE 5.01 LIMITATIONS AND CONSENT

The Contractor shall not assign, transfer, convey, sublet or otherwise dispose of this Contract or of his right, title, or interest therein, or his power to execute such Contract, or to assign any monies due or to become due thereunder to any other person, firm or corporation unless the previous written consent of the City shall first be obtained thereto and the giving of any such consent to a particular subcontract or assignment shall not dispense with the necessity of such consent to any further or other assignment.

Before making any subcontract, the Contractor must submit a

written statement to the Engineer, giving the name and address of the proposed contractor, the portion of the work and materials which he is to perform and furnish and any other information tending to prove that the proposed subcontractor has the necessary facilities, skill, integrity, past experience and financial resources to perform the work in accordance with the terms and conditions of this Contract.

If the City finds that the proposed subcontractor is qualified, the Contractor will be notified in writing. The City may revoke approval of any subcontractor when such subcontractor evidences an unwillingness or inability to perform his work in strict accordance with these Contract Documents. Notice of such revocation of approval will be given in writing to the Contractor.

The Contractor will promptly, upon request, file with the City a conformed copy of the subcontract. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of these Contract Documents, insofar as applicable to the work of subcontractors, and to give the Contractor the same power as regards terminating any subcontracts that the City may exercise over the Contractor under provisions of these Contract Documents.

The Contractor shall be required to perform with his own forces at least twenty-five (25) percent of the work, unless written consent to subcontract a greater percentage of the work is first obtained from the City.

ARTICLE 5.02 RESPONSIBILITY

The approval by the City of a subcontractor shall not relieve the Contractor of any of his responsibilities, duties, and liabilities hereunder. The Contractor shall be solely responsible to the City for the acts or defaults or omissions of his subcontractor and of such subcontractor's officers, agents, and employees, each of whom shall for all purposes be deemed to be the agent or employee of the Contractor. Nothing contained in the Contract Documents shall create any contractual relationship between any subcontractor and the City.

**SECTION 6
SECURITY AND GUARANTY**

ARTICLE 6.01 CONTRACT SECURITY

The Contractor shall execute and deliver to the City a Performance Bond on the form as provided herein, in an amount at least equal to one hundred (100) percent of the full Contract price, such Bond to be executed by a surety company acceptable to the City. The surety on such Performance Bond shall be a surety company duly authorized to do business in the State of Florida, and the Bond shall be issued or countersigned by a local resident producing agent of such surety company who is a resident of the State of Florida, regularly commissioned and licensed in said State, and satisfactory evidence of the authority of the person or persons executing such Bond shall be submitted with the Bond. The Performance Bond shall serve as security for the faithful performance of this Contract, including

maintenance and guaranty provisions, and for the payment of all persons performing labor and furnishing materials in connection with the Contract. The premiums on the Performance Bond shall be paid by the Contractor.

If, at any time, the City shall become dissatisfied with any surety or sureties then upon the Performance Bond, or if for any other reason such bond shall cease to be adequate security for the City, the Contractor shall, within five days after notice so to do, substitute an acceptable Bond in such form and sum and signed by such other sureties as may be satisfactory to the City. The premiums on such Bond shall be paid by the Contractor. No further partial payments shall be deemed due or shall be made until the new sureties have qualified.

ARTICLE 6.02 CONTRACTORS INSURANCE

Insurance required shall be as indicated on Special Instructions pages beginning with "INS-1"

ARTICLE 6.03 AGAINST CLAIMS AND LIENS

The City may withhold from the Contractor as much as any approved payments to him as may, in the opinion of the City, be necessary to secure (a) just claims of any persons supplying labor or materials to the Contractor or any of his subcontractors for the work then due and unpaid; (b) loss due to defective work not remedied, or (c) liability, damage, or loss due to injury to persons or damages to the work or property of other contractors, subcontractors, or others, caused by the act or neglect of the Contractor or of any of his subcontractors. The City shall have the right, as agent for the Contractor, to apply any such amounts so withheld in such manner as the City may deem proper to satisfy such claims or to secure such protection. Such application of such money shall be deemed payments for the account of the Contractor.

ARTICLE 6.04 MAINTENANCE AND GUARANTY

The Contractor hereby guarantees all the work furnished under this Contract against any defects in workmanship and materials for a period of one year following the date of final acceptance of the work by the City. Under this guarantee, the Contractor hereby agrees to make good, without delay, at his own expense, any failure of any part of the work due to faulty materials or manufacture, construction, or installation, or the failure of any equipment to perform satisfactorily all the work put upon it within the limits of the Contract Documents, and further, shall make good any damage to any part of the work caused by such failure. It is hereby agreed that the Performance Bond shall fully cover all guarantees contained in this Article.

It is also agreed that all warranties, expressed or implied, inure to the benefit of the City and are enforceable by the City.

**SECTION 7
CHANGES**

ARTICLE 7.01 MINOR CHANGES

The City reserves the right to make such additions, deductions, or changes to this Contract from time to time as

it deems necessary and in a manner not materially affecting the substance thereof or materially changing the price to be paid in order to carry out and complete more fully and perfectly the work herein agreed to be done and performed. This Contract shall in no way be invalidated by any such additions, deductions, or changes, and no claim by the Contractor shall be made for any loss of anticipated profits thereby.

Construction conditions may require that minor changes be made in the location and installation of the work and equipment to be furnished and other work to be performed hereunder, and the Contractor when ordered by the Engineer, shall make such adjustments and changes in said locations and work as may be necessary, without additional cost to the City, provided such adjustments and changes do not alter the character, quantity of cost of the work as a whole, and provided further that Plans and Specifications showing such adjustments and changes are furnished to the Contractor by the City within a reasonable time before any work involving such adjustment and changes is begun. The Engineer shall be the sole judge of what constitutes a minor change for which no additional compensation shall be allowed.

ARTICLE 7.02 EXTRA WORK

The City may at any time by a written order and without notice to the sureties require the performance of such extra work as it may find necessary or desirable. An order for extra work shall be valid only if issued in writing and signed by the Mayor and the work so ordered must be performed by the Contractor.

The amount of compensation to be paid to the Contractor for any extra work as so ordered shall be determined as follows:

(a) By such applicable unit prices, if any, as are set forth in the Proposal; or

(b) If no such unit prices are set forth then by a lump sum or other unit prices mutually agreed upon by the City and the Contractor; or

(c) If no such unit prices are set forth in the Proposal and if the parties cannot agree upon a lump sum or other unit prices then by the actual net cost in money to the Contractor of the extra work performed, which cost shall be determined as follows:

(1) For all labor and foreman in direct charge of the authorized operations, the Contractor shall receive the current local rate of wages to be agreed upon, in writing, before starting such work for each hour that said labor and foremen are actually engaged thereon, to which shall be added an amount equal to 25 percent of the sum thereof which shall be considered and accepted as full compensation for general supervision, FICA taxes, contributions under the Florida Unemployment Compensation Act, insurance, bond, subcontractor's profit and overhead, the furnishing of small tools and miscellaneous equipment used, such as picks, shovels, hand pumps, and similar items.

(2) For all materials used, the Contractor shall receive the actual cost of such materials delivered at the site or previously approved delivery point as established by original receipted bills. No percentage shall be added to this cost.

(3) For special equipment and machinery such as power-driven pumps, concrete mixers, trucks, and tractors, or other equipment, required for the economical performance of the authorized work, the Contractor shall receive payment based on the average local area rental price for each item of equipment and the actual time of its use on the work. No percentage shall be added to this sum.

(4) Records of extra work done under this procedure shall be reviewed at the end of each day by the Contractor or his representative and the Engineer. Duplicate copies of accepted records shall be made and signed by both Contractor or his representative and the Engineer, and one copy retained by each.

Request for payment for approved and duly authorized extra work shall be submitted in the same form as Contract work or in the case of work performed under paragraph (c) (1) above upon a certified statement supported by receipted bills. Such statement shall be submitted for the current Contract payment for the month in which the work was done.

ARTICLE 7.03 DISPUTED WORK

If the Contractor is of the opinion that any work required, necessitated, or ordered violates the terms and provisions of this Contract, he must promptly notify the Engineer, in writing, of his contentions with respect thereto and request a final determination thereof. If the Engineer determines that the work in question is Contract work and not extra work or that the order complained of is proper, he will direct the Contractor to proceed and the Contractor shall promptly comply. In order, however, to reserve his right to claim compensation for such work or damages resulting from such compliance, the Contractor must, within five (5) days after receiving notice of the Engineer's determination and direction, notify the City in writing that the work is being performed or that the determination and direction is being complied with under protest. Failure of the Contractor to notify shall be deemed as a waiver of claim for extra compensation or damages therefor.

Before final acceptance by the City, all matters of dispute must be adjusted to the mutual satisfaction of the parties thereto. Final determinations and decisions, in case any questions shall arise, shall constitute a condition precedent to the right of the Contractor to receive the money therefor until the matter in question has been adjusted.

ARTICLE 7.04 OMITTED WORK

The City may at any time by a written order and without notice to the sureties require the omission of such Contract work as it may find necessary or desirable.

An order for omission of work shall be valid only if signed by the Mayor and the work so ordered must be omitted by the Contractor. The amount by which the Contract price shall be reduced shall be determined as follows:

(a) By such applicable unit prices, if any, as are set forth in the Contract; or

(b) By the appropriate lump sum price set forth in the Contract; or

(c) By the fair and reasonable estimated cost to the City

of such omitted work as determined by the Engineer and approved by the City.

SECTION 8 CONTRACTOR'S EMPLOYEES

ARTICLE 8.01 CHARACTER AND COMPETENCY

The Contractor and his subcontractors shall employ upon all parts of the work herein contracted for only competent, skillful, and trustworthy workers. Should the Engineer at any time give notice, in writing, to the Contractor or his duly authorized representative on the work that any employee in his opinion is incompetent, unfaithful, disorderly, careless, unobservant of instructions, or in any way a detriment to the satisfactory progress of the work, such employee shall immediately be dismissed and not again allowed upon the site.

ARTICLE 8.02 SUPERINTENDENCE

The Contractor shall give his personal supervision to the faithful prosecution of the work and in case of his absence shall have a competent, experienced, and reliable supervisor or superintendent, acceptable to the Engineer on the site who shall follow without delay all instructions of the Engineer in the prosecution and completion of the work and every part thereof, in full authority to supply workers, material, and equipment immediately. He shall keep on hand at all times copies of the Contract Documents.

ARTICLE 8.03 EMPLOYMENT OPPORTUNITIES

The Contractor shall, in the performance of the work required to be done under this Contract, employ all workers without discrimination regarding race, creed, color, sex or national origin and must not maintain or provide facilities that are segregated on the basis of race, color, creed or national origin.

ARTICLE 8.04 RATES OF WAGES

On federally assisted projects, the rates of wages to be paid under this Contract shall not be less than the rates of wages set forth in Section 12 of this Agreement.

On other projects, no wage rate determination is included. Florida's Prevailing Wage Law (Section 215.19, Florida Statutes) was repealed effective April 25, 1979.

ARTICLE 8.05 PAYROLL REPORTS

The Contractor and each subcontractor shall, if requested to do so, furnish to the Engineer a duly certified copy of his payroll and also any other information required by the Engineer to satisfy him that the provisions of the law as to the hours of employment and rate of wages are being observed.

Payrolls shall be prepared in accordance with instructions furnished by the City and on approved forms. The Contractor shall not carry on his payroll any persons not employed by him. Subcontractor's employees shall be carried only on the payrolls of the employing subcontractor.

SECTION 9 CONTRACTOR'S DEFAULT

ARTICLE 9.01 CITY'S RIGHT AND NOTICE

It is mutually agreed that: (a) if the Contractor fails to begin work when required to do so, or (b) if at any time during the progress of the work it shall appear to the Engineer that the Contractor is not prosecuting the work with reasonable speed, or is delaying the work unreasonably and unnecessarily, or (c) if the force of workmen or quality or quantity of material furnished are not sufficient to insure completion of the work within the specified time and in accordance with the Specifications hereto attached, or (d) if the Contractor shall fail to make prompt payments for materials or labor or to subcontractors for work performed under the Contract, or (e) if legal proceedings have been instituted by others than the City in such manner as to interfere with the progress of the work and may subject the City to peril of litigation or outside claims of (f) if the Contractor shall be adjudged a bankrupt or make an assignment for the benefit of creditors, or (g) if in any proceeding instituted by or against the Contractor an order shall be made or entered granting an extension of time of payment, composition, adjustment, modification, settlement or satisfaction of his debts or liabilities, or (h) if a receiver or trustee shall be appointed for the Contractor or the Contractor's property, or (i) if the Contract or any part thereof shall be sublet without the consent of the City being first obtained in writing, or (j) if this Contract or any right, monies, or claim thereunder shall be assigned by the Contractor, otherwise than as herein specified, or (k) if the Contractor shall fail in any manner of substance to observe the provisions of this Contract, or (l) if any of the work, machinery, or equipment shall be defective, and shall not be replaced as herein provided, or (m) if the work to be done under this Contract shall be abandoned, then such fact or conditions shall be certified by the Engineer and thereupon the City without prejudice to any other rights or remedies of the City, shall have the right to declare the Contractor in default and so notify the Contractor by a written notice, setting forth the ground or grounds upon which such default is declared and the Contractor must discontinue the work, either as a portion of the work or the whole thereof, as directed.

ARTICLE 9.02 CONTRACTOR'S DUTY UPON DEFAULT

Upon receipt of notice that his Contract is in default, the Contractor shall immediately discontinue all further operations on the work or such part thereof, and shall immediately quit the site or such part thereof, leaving untouched all plant, materials, equipment, tools, and supplies.

ARTICLE 9.03 COMPLETION OF DEFAULTED WORK

The City, after declaring the Contractor in default, may then have the work completed or the defective equipment or machinery replaced or anything else done to complete the work in strict accordance with the Contract Documents by such means and in such manner, by Contract with or without public letting, or otherwise, as it may deem advisable,

utilizing for such purpose without additional cost to the City such of the Contractor's plant, materials, equipment, tools, and supplies remaining on the site, and also such subcontractors as it may deem advisable.

The City shall reimburse all parties, including itself, for the expense of such completion, including liquidated damages, if any, and the cost of reletting. The City shall deduct this expense from monies due or to become due to the Contractor under this Contract, or any part thereof, and in case such expense is more than the sum remaining unpaid of the original contract price, the Contractor and his sureties shall pay the amount of such deficiency to the City.

ARTICLE 9.04 PARTIAL DEFAULT

In case the City shall declare the Contractor in default as to a part of the work only, the Contractor shall discontinue such part, shall continue performing the remainder of the work in strict conformity with the terms of the Contract, and shall in no way hinder or interfere with any other contractor or person whom the City may engage to complete the work as to which the Contractor was declared in default.

SECTION 10 PAYMENTS

ARTICLE 10.01 PRICES

For the Contractor's complete performance of the work, the City will pay and the Contractor agrees to accept, subject to the terms and conditions hereof, the lump sum prices or unit prices in the Contractor's Proposal and the award made therein, plus the amount required to be paid for any extra work ordered under Article 7.02 hereof, less credit for any work omitted pursuant to Article 7.04 hereof. Under unit price items, the number of units actually required to complete the work under the Contract may be more than stated in the Proposal. The Contractor agrees that no claim will be made for any damages or for loss of profits because of a difference between the quantities of the various classes of work assumed and stated in the Proposal Form as a basis for comparing Proposals and the quantities of work actually performed.

The sum as awarded for any lump sum Contract or lump sum Contract Item shall represent payment in full for all of the various classes of work, including materials, equipment, and labor necessary or required to complete, in conformity with the Contract Document, the entire work shown, indicated or specified under the lump sum Contract or lump sum Contract Item.

The amount as awarded as a unit price for any unit price Contract Item shall represent payment in full for all the materials, equipment, and labor necessary to complete, in conformity with the Contract Documents, each unit of work shown, specified, or required under the said unit price Contract Item.

No payment other than the amount as awarded will be made for any class of work included in a lump sum Contract Item or a unit price Contract Item, unless specific provision is

made therefor in the Contract Documents.

ARTICLE 10.02 SUBMISSION OF BID BREAKDOWN

Within fifteen (15) days after the execution of this Contract, the Contractor must submit to the Engineer in duplicate an acceptable breakdown of the lump sums and unit prices bid for items of the Contract, showing the various operations to be performed under the Contract, as described in the progress schedule required under Article 4.02 hereof, and the value of each of such operations, the total of such items to equal the total price bid. The Contractor shall also submit such other information relating to the bid prices as may be required and shall revise the bid breakdown as directed. Thereafter, the breakdown may be used for checking the Contractor's applications for partial payments hereunder but shall not be binding upon the City or the Engineer for any purpose whatsoever.

ARTICLE 10.03 REPORTS, RECORDS AND DATA

The Contractor shall furnish to the Engineer such schedules of quantities and costs, progress schedules, reports, invoices, delivery tickets, estimates, records, and other data as the Engineer may request concerning work performed or to be performed and the materials furnished under the Contract.

ARTICLE 10.04 PAYMENTS BY CONTRACTOR

The Contractor shall pay (a) for all transportation and utility services not later than the 20th day of the calendar month following that in which such services are rendered, (b) for all materials, tools, and equipment delivered at the site of the project, and the balance of the cost thereof not later than the 30th day following the completion of that part of the work in or on which such materials, tools, and equipment are incorporated or used, and (c) to each of his subcontractors, not later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the work performed by his subcontractors, to the extent of each subcontractor's interest therein; and proof of such payments or releases therefor shall be submitted to the Engineer upon request.

ARTICLE 10.05 PARTIAL PAYMENTS

On or about the first of each month, the Contractor shall make and certify an estimate, on forms prescribed by the City, of the amount and fair value of the work done, and may apply for partial payment therefor. The Contractor shall revise the estimate as the Engineer may direct. When satisfactory progress has been made, and shows that the value of the work completed since the last payment exceeds one percent (1%) of the total Contract price in amount, the Engineer will issue a certificate that such work has been completed and the value thereof. The City will then issue a voucher to the Contractor in accordance with the following schedule:

FOR CONTRACT AMOUNTS UNDER \$250,000

(A) In the amount of ninety percent (90%) of the value of the work completed as certified until construction is one hundred percent (100%) complete (operational or beneficial occupancy), the withheld amount may be reduced below ten percent (10%), at the Engineer's option, to only that amount necessary to assure completion.

FOR CONTRACT AMOUNTS OVER \$250,000

(A) In the amount of ninety percent (90%) of the value of the work completed as certified until construction is fifty percent (50%) complete.

(B) When the dollar value, as determined by the Engineer, of satisfactorily completed work in place is greater than fifty percent (50%) of the original contract price, vouchers for partial payment will be issued by the City to the Contractor in the amount of one hundred percent (100%) of the value of the work, above 50%, completed as certified for that payment period.

(C) If the Contractor has performed satisfactorily and the work is substantially complete (operational or beneficial occupancy) the withheld amount may be reduced, at the Engineer's option, to only that amount necessary to assure completion.

In addition to the Conditions set forth in (A), (B), and (C) above, payments will always be less any sums that may be retained or deducted by the City under the terms of any of the contract documents and less any sums that may be retained to cover monetary guarantees for equipment, materials or progress performance.

Payment on estimates made on or about the first of the month may be expected on or about the 20th of the month.

Unless specified otherwise in the Contract Items, the delivered cost of equipment and nonperishable materials suitably stored at the site of the work and tested for adequacy may be included in the Contractor's application for partial payment provided, however, that the Contractor shall furnish evidence satisfactory to the City that the Contractor is the unconditional owner and in possession of such materials or equipment. The amount to be paid will be 90 percent of the invoice cost to the Contractor which cost shall be supported by receipted bills within 30 days of the date of payment by the City to the Contractor. Such payment shall not relieve the Contractor from full responsibility for completion of the work and for protection of such materials and equipment until incorporated in the work in a permanent manner as required by the Contract Documents.

Before any payment will be made under this Contract, the Contractor and every subcontractor, if required, shall deliver to the Engineer a written, verified statement, in satisfactory form, showing in detail all amounts then due and unpaid by such Contractor or subcontractor to all laborers, workmen, and mechanics, employed by him under the Contract for the performance of the work at the site thereof, for daily or weekly wages, or to other persons for materials, equipment, or supplies delivered at the site of the work during the period covered by the payment under consideration.

ARTICLE 10.06 FINAL PAYMENT

Under determination of satisfactory completion of the work under this Contract as provided in Article 4.07 hereof, the Engineer will prepare the final estimate showing the value of the completed work. This estimate will be prepared within 30 days after the date of completion or as soon thereafter as the necessary measurements and computations can be made.

All prior certificates and estimates, being approximate only, are subject to correction in the final estimate and payment.

When the final estimate has been prepared and certified by Engineer, he will submit to the Mayor and City Council the final certificate stating that the work has been completed and the amount based on the final estimate remaining due to the Contractor. The City will then accept the work as fully completed and will, not later than 30 days after the final acceptance, as defined in Article 1.02, of the work done under this Contract, pay the Contractor the entire amount so found due thereunder after deduction of all previous payments and all percentages and amounts to be kept and retained under provisions of this Contract; provided, however, and it is understood and agreed that, as a precedent to receiving final payment, the Contractor shall submit to the City a sworn affidavit that all bills for labor, service, materials, and subcontractors have been paid and that there are no suits pending in connection with this work. The City, at its option, may permit the Contractor to execute a separate surety bond in a form satisfactory to the City. The surety bond shall be in the full amount of the suit or suits.

Neither the final payment nor any part of the retained percentage shall be paid until the Contractor, if required, shall furnish the City with a complete release from any should remain unsatisfied after all payments are made, the Contractor shall refund to the City all monies which the City may be compelled to pay in discharging such claim, including incidental costs and attorney's fees.

ARTICLE 10.07 ACCEPTANCE OF FINAL PAYMENT

The acceptance by the Contractor, or by anyone claiming by or through him, of the final payment shall operate as and shall be a release to the City and every officer and agent thereof from any and all claims and liability to the Contractor for anything done or furnished in connection with the work or project and for any act or neglect of the Contractor or of any others relating to or affecting the work. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from any obligations under this Contract or the Performance Bond.

SECTION 11 MISCELLANEOUS PROVISIONS

ARTICLE 11.01 CONTRACTOR'S WARRANTIES

In consideration of, and to induce the award of this contract to him, the Contractor represents and warrants:

- (a) That he is not in arrears to the City upon debt or contract, and he is not a defaulter, as surety, contractor, or otherwise.
- (b) That he is financially solvent and sufficiently experienced and competent to perform the work.
- (c) That the work can be performed as called for by the Contract Documents.
- (d) That the facts stated in his proposal and the information given by him are true and correct in all respects.
- (e) That he is fully informed regarding all the conditions affecting the work to be done and labor and materials to be

furnished for the completion of this Contract, and that his information was secured by personal investigation and research.

ARTICLE 11.02 PATENTED DEVICES, MATERIAL AND PROCESSES

It is mutually understood and agreed that Contract prices include all royalties and costs arising from patents, trademarks, and copyrights in any way involved in the work. Whenever the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall indemnify and save harmless the City, its officers, agents and employees from any and all claims for infringement by reason of the use of any such patented design, device, tool, material, equipment, or process, to be performed under the Contract, and shall indemnify the said City, its officers, agents, and employees for any costs, expenses, and damages which may be incurred by reason of such infringement at any time during the prosecution or after completion of the work.

ARTICLE 11.03 SUITS AT LAW

In case any action at law or suit in equity may or shall be brought against the City or any of its officers, agents, or employees for or on account of the failure, omission, or neglect of the Contractor or his subcontractors, employees, or agents, to do or perform any of the covenants, acts, matters, or things by this Contract undertaken to be done or performed by the Contractor or his subcontractors, employees, or agents, or from any injuries done to property or persons and caused by the negligence or alleged negligence of the Contractor or his subcontractors, employees, or agents, or in any other manner arising out of the performance of this Contract, then the Contractor shall immediately assume and take charge of the defense of such actions or suits in like manner and to all intents and purposes as if said actions or suits have been brought directly against the Contractor, and the Contractor shall also indemnify and save harmless the City, its officers, agents, and employees from any and all loss, cost or damage whatever arising out of such actions or suits, in like manner and to all intents and purposes as if said actions or suits have been brought directly against the Contractor.

The Contractor shall and does hereby assume all liability for and agrees to indemnify the City or its Engineer against any or all loss, costs, damages, and liability for any or by reason of any lien, claims or demands, either for materials purchased or for work performed by laborers, mechanics, and others and from any damages, costs, actions, or causes of action and judgement arising from injuries sustained by mechanics, laborers, or other persons by reason of accidents or otherwise, whether caused by the carelessness or inefficiency or neglect of said Contractor, his subcontractors, agents, employees, workmen or otherwise.

ARTICLE 11.04 CLAIMS FOR DAMAGES

If the Contractor shall claim compensation for any damage sustained, other than for extra or disputed work covered by Article 7.02 and 7.03 hereof, by reason of any act or omission of the City, its agents, or any persons, he shall, within five days after sustaining such damage, make and

deliver to the Engineer a written statement of the nature of the damage sustained and of the basis of the claim against the City. On or before the 15th of the month succeeding that in which any damage shall have been sustained, the Contractor shall make and deliver to the Engineer an itemized statement of the details and amounts of such damage, duly verified by the Contractor. Unless such statements shall be made delivered within the times aforesaid, it is stipulated that and all claims for such compensation shall be forfeited and invalidated, and the Contractor shall not be entitled to payment on account of such claims.

ARTICLE 11.05 NO CLAIMS AGAINST INDIVIDUALS

No claim whatsoever shall be made by the Contractor against any officer, agent, employee of the City for, or on account of, anything done or omitted to be done in connection with this Contract.

ARTICLE 11.06 LIABILITY UNAFFECTED

Nothing herein contained shall in any manner create any liability against the City on behalf of any claim for labor, services, or materials, or of subcontractors, and nothing herein contained shall affect the liability of the Contractor or his sureties to the City or to any workmen or materialsmen upon bond given in connection with this Contract.

ARTICLE 11.07 INDEMNIFICATION PROVISIONS

Whenever there appears in this Agreement, or in the other Contract Documents made a part hereof, an indemnification provision within the purview of Chapter 725.06, Laws of Florida, the monetary limitation on the extent of the indemnification under each such provision shall be One Million Dollars or a sum equal to the total Contract price, whichever shall be the greater.

ARTICLE 11.08 UNLAWFUL PROVISIONS DEEMED STRICKEN

If this contract contains any unlawful provisions not an essential part of the Contract and which shall not appear to have a controlling or material inducement to the making thereof, such provisions shall be deemed of no effect and shall, upon notice by either party, be deemed stricken from the Contract without affecting the binding force of the remainder.

ARTICLE 11.09 LEGAL PROVISIONS DEEMED INCLUDED

Each and every provision of any law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein and if, through mistake or otherwise, any such provision is not inserted or is not correctly inserted, then upon application of either party the Contract shall forthwith be physically amended to make such insertion.

ARTICLE 11.10 DEATH OR INCOMPETENCY OF CONTRACTOR

In the event of death or legal incompetency of a Contractor who shall be an individual or surviving member of a contracting firm, such death or adjudication of incompetency

shall not terminate the Contract, but shall act as default hereunder to the effect provided in Article 9.01 hereof and the estate of the Contractor and his surety shall remain liable hereunder to the same extent as though the Contractor had lived. Notice of default, as provided in Article 9.01 hereof, shall not be required to be given in the event of such death or adjudication of incompetency.

ARTICLE 11.11 NUMBER AND GENDER OF WORDS

Whenever the context so admits or requires, all references herein in one number shall be deemed extended to and including the other number, whether singular or plural, and the use of any gender shall be applicable to all genders.

ARTICLE 11.12 ACCESS TO RECORDS

Representatives of Federal Agencies, if applicable, and the State of Florida shall have access to the work whenever it is in preparation of progress. On federally assisted projects the Federal Agency, the Comptroller General of the United States, or any authorized representative shall have access to any books, documents, papers, and records of the Contractor which are pertinent to the project for the purpose of making audit, examination, excerpts, and transcription thereof.

**SECTION 12
LABOR STANDARDS**

ARTICLE 12.01 LABOR STANDARDS

The Contractor shall comply with all of the regulations set forth in "Labor Standards Provisions for Federally Assisted Construction Contracts", which may be attached, and any applicable Florida Statutes.

ARTICLE 12.02 NOTICE TO LABOR UNIONS

If required, the Contractor shall provide Labor Unions and other organizations of workers, and shall post, in a conspicuous place available to employees or applicants for employment, a completed copy of the form entitled "Notice to Labor Unions or Other Organizations of Workers" attached to and made a part of this Agreement.

ARTICLE 12.03 SAFETY AND HEALTH REGULATIONS

The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91- 596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54). Nothing in these Acts shall be construed to supersede or in any manner affect any worker's compensation law or statutory rights, duties, or liabilities of employers and employees under any law with respect to injuries, diseases, or death of employees arising out of, or in the course of, employment.

ARTICLE 12.04 EEO AFFIRMATIVE ACTION REQUIREMENTS

The Contractor understands and agrees to be bound by the equal opportunity requirements of Federal regulations which shall be applicable throughout the performance of work under this Contract. The Contractor also agrees to similarly

bind contractually each subcontractor. In policies, the Contractor agrees to engage in Affirmative Action directed at promoting and ensuring equal employment opportunity in the work force used under the Contract (and the Contractor agrees to require contractually the same effort of all subcontractors whose subcontractors exceed \$100,000). The Contractor understands and agrees that "Affirmative Action" as used herein shall constitute a good faith effort to achieve and maintain minority employment in each trade in the on-site work force used on the Contract.

ARTICLE 12.05 PREVAILING RATES OF WAGES

Florida's prevailing wage law was repealed effective April 25, 1979.

For Federally assisted projects, appropriate prevailing wage rate determinations are indicated on pages beginning with WR-1.

* * * * *

IN WITNESS THEREOF, the parties have hereunto set their hands and seals, and such of them as are corporation have caused these present to be signed by their duly authorized officers.

CITY OF TAMPA, FLORIDA

Bob Buckhorn, Mayor
(SEAL)

ATTEST:

City Clerk

Approved as to Form:
The execution of this document was authorized
by Resolution No. _____

Rachel S. Peterkin, Assistant City Attorney

Contractor

By: _____
(SEAL)

Title:

ATTEST:

Witness

TAMPA AGREEMENT (ACKNOWLEDGMENT OF PRINCIPAL)

STATE OF _____)
) SS:
COUNTY OF _____)

For a Corporation:

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ of _____, 20__ by _____ of _____, a _____ corporation, on behalf of the corporation. He/she is ____ personally known or has ____ produced _____ as identification.

Notary

My Commission Expires:

For an Individual:

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ of _____, 20__ by _____ who is ____ personally known to me or has ____ produced _____ as identification.

Notary

My Commission Expires:

For a Firm:

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ of _____, 20__ by _____ who signed on behalf of the said firm. He/she is ____ personally known or has ____ produced _____ as identification.

Notary

My Commission Expires:

PUBLIC CONSTRUCTION BOND

Bond No. (enter bond number) _____

Name of Contractor: _____

Principal Business Address of Contractor: _____

Telephone Number of Contractor: _____

Name of Surety (if more than one list each): _____

Principal Business Address of Surety: _____

Telephone Number of Surety: _____

Owner is The City of Tampa, Florida

Principal Business Address of Owner: _____ 306 E Jackson St, Tampa, FL 33602

_____ Contract Administration Department (280A4N)

Telephone Number of Owner: _____ 813/274-8456

Contract Number Assigned by City to contract which is the subject of this bond: _____

Legal Description or Address of Property Improved or Contract Number is: _____

General Description of Work and Services: _____

KNOW ALL MEN BY THESE PRESENTS That we, _____

(Name of Contractor)

as Principal, hereinafter called CONTRACTOR, of the State of _____, and

(Name of Surety)

a corporation organized and existing under and by virtue of the laws of the State of _____, and regularly authorized to do business in the State of Florida, as SURETY, are held and firmly bound unto the City of Tampa, a municipal corporation organized and existing under the laws of the State of Florida, hereinafter called Owner, in the penal sum of _____ Dollars and _____ Cents (\$ _____), lawful money of the United States of America, for the payment whereof well and truly to be made, we bind ourselves, our heirs, executors, and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the contract dated _____, _____, 20____, between Principal and Owner for construction of _____, the contract being made a part of this bond by reference, in the time and in the manner prescribed in the contract; and
2. Promptly makes payments to all claimants, as defined in Section 255.05(1) (Section 713.01), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the contract; and
3. Pays Owner all losses, damages, expenses, costs, and attorney's fees, including appellate proceedings, that Owner sustains because of a default by Principal under the contract; and
4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this bond is void; otherwise it remains in full force.
5. Contractor and Surety acknowledge that the Work for which this bond has been issued may be one of several such contract documents for a group of projects. This bond does not secure covenants to pay for or to perform design services survey or program management services. The Owner/Obligee is expected to reasonably account for damages that are caused to Owner with respect to Principal's (Contractor's) default in performance of the scope of the Work incorporated by reference into the bond, and notwithstanding any contractual or common law remedy permitted to Owner as against Contractor, the obligation of Surety for any damages under this bond shall be determined by the cost of completion of the Work less the contract balance unpaid upon default of Contractor for the Work plus liquidated damages at the rate of \$500.00 per day for delays by the Contractor and/or Surety in reaching substantial completion.
6. The notice requirements for claimants and conditions for entitlement to payment set forth in Section 255.05, Fla. Stat. and the limitations period to actions upon Section 255.05, Fla. Stat. bonds apply to claimants seeking payment from surety under this bond. Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05, Florida Statutes.
7. The Surety, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the contract documents or other Work to be performed hereunder, or the specifications referred to therein shall in any way affect its obligations under this bond, and it does hereby waive notice of any such changes, extensions of time, alterations or additions to the terms of the Contract or to Work or to the specifications.

8. The above SURETY states that it has read all of the Contract Documents made by the CONTRACTOR with the CITY, hereto attached, and the terms and conditions of the contract and work, and is familiar therewith and in particular those portions of the Agreement concerning the guaranty of such CONTRACTOR for a period of one year following the date of the final acceptance of the completed work under the Contract by the CITY, all of which this BOND includes.

DATED ON _____, 20__

(Name of Principal)

(Name of Surety)

(Principal Business Address)

(Surety Address)

By _____

By _____
(As Attorney in Fact)*

Title _____

Telephone Number of Surety

Telephone Number of Principal

Approved as to legal sufficiency:

Countersignature:

By _____
Assistant City Attorney

(Name of Local Agency)

(Address of Resident Agent)

By _____

Title _____

Telephone Number of Local Agency

*(As Attorney in Fact) attach Power of Attorney and Current Certificate with Original Signature

SPECIFICATIONS GENERAL PROVISIONS

SECTION 1 SCOPE AND INTENT

G-1.01 DESCRIPTION

The work to be done consists of the furnishing of all labor, materials and equipment, and the performance of all work included in this Contract.

G-1.02 WORK INCLUDED

The Contractor shall furnish all labor, superintendence, materials, plant, power, light, heat, fuel, water, tools, appliances, equipment, supplies, and other means of construction necessary or proper for performing and completing the work. He shall obtain and pay for all required permits. He shall perform and complete the work in the manner best calculated to promote rapid construction consistent with safety of life and property and to the satisfaction of the Engineer, and in strict accordance with the Contract Documents. The Contractor shall clean up the work and maintain it during and after construction, until accepted, and shall do all work and pay all costs incidental thereto. He shall repair or restore all structures and property that may be damaged or disturbed during performance of the work.

The cost of incidental work described in these General Provisions, for which there are no specific Contract Items, shall be considered as part of the overhead cost of doing the work and shall be included in the prices for the various Contract Items. No additional payment will be made therefor.

The Contractor shall provide and maintain such modern plant, tools, and equipment as may be necessary, in the opinion of the Engineer, to perform in a satisfactory and acceptable manner all the work required by this Contract. Only equipment of established reputation and proven efficiency shall be used. The Contractor shall be solely responsible for the adequacy of his plant and equipment, prior approval of the Engineer notwithstanding.

G-1.03 PUBLIC UTILITY INSTALLATIONS AND STRUCTURES

Public utility installations and structures shall be understood to include all poles, tracks, pipes, wires, conduits, house service connections, vaults, manholes, and all other appurtenances and facilities pertaining thereto whether owned or controlled by the City, other governmental bodies or privately owned by individuals, firms, or corporations, and used to serve the public with transportation, traffic control, gas, electricity, telephone, sewerage, drainage, water or other public or private property which may be affected by the work.

The Contract Documents contain data relative to existing public utility installations and structures above and below the ground surface. These data are not guaranteed as to their completeness or accuracy and it is the responsibility of the Contractor to make his own investigations to inform himself

fully of the character, condition and extent of all such installations and structures as may be encountered and as may affect the construction operations.

The Contractor shall protect all public utility installations and structures from damage during the work. Access across any buried public utility installation or structure shall be made only in such locations and by means approved by the Engineer. The Contractor shall so arrange his operations as to avoid any damage to these facilities. All required protective devices and construction shall be provided by the Contractor at his expense. All existing public utilities damaged by the Contractor which are shown on the Plans or have been located in the field by the utility shall be repaired by the Contractor, at his expense, as directed by the Engineer. No separate payment shall be made for such protection or repairs to public utility installations or structures.

Public utility installations or structures owned or controlled by the City or other governmental body which are shown on the Plans to be removed, relocated, replaced or rebuilt by the Contractor shall be considered as a part of the general cost of doing the work and shall be included in the prices bid for the various Contract Items. No separate payment shall be made therefor.

Where public utility installations or structures owned or controlled by the City or other governmental body are encountered during the course of the work, and are not indicated on the Plans or in the Specifications, and when, in the opinion of the Engineer, removal, relocation, replacement or rebuilding is necessary to complete the work under this Contract, such work shall be accomplished by the utility having jurisdiction or such work may be ordered, in writing by the Engineer, for the Contractor to accomplish. If such work is accomplished by the utility having jurisdiction it will be carried out expeditiously and the Contractor shall give full cooperation to permit the utility to complete the removal, relocation, replacement or rebuilding as required. If such work is accomplished by the Contractor, it will be paid for as extra work as provided for in Article 7.02 of the Agreement.

The Contractor shall, at all times in performance of the work, employ approved methods and exercise reasonable care and skill so as to avoid unnecessary delay, injury, damage or destruction of public utility installations and structures; and shall, at all times in the performance of the work, avoid unnecessary interference with, or interruption of, public utility services, and shall cooperate fully with the owners thereof to that end.

All City and other governmental utility departments and other owners of public utilities, which may be affected by the work, will be informed in writing by the Engineer within two weeks after the execution of the Contract or Contracts covering the work. Such notice will set out, in general, and direct attention to, the responsibilities of the City and other governmental

utility departments and other owners of public utilities for such installations and structures as may be affected by the work and will be accompanied by one set of Plans and Specifications covering the work under such Contract or Contracts.

In addition to the general notice given by the Engineer, the Contractor shall give written notice to all City and other governmental utility departments and other owners of public utilities of the location of his proposed construction operations, at least forty-eight (48) hours in advance of breaking ground in any area or on any unit of the work. This can be accomplished by making the appropriate contact with the "Underground Utility Notification Center for Excavators (Call Candy)".

The maintenance, repair, removal, relocation, or rebuilding of public utility installations and structures, when accomplished by the Contractor as herein provided, shall be done by methods approved by the Engineer.

SECTION 2 PLANS AND SPECIFICATIONS

G-2.01 PLANS

The Plans referred to in the Contract Documents bear the general project name and number as shown in the Notice To Bidders.

When obtaining data and information from the Plans, figures shall be used in preference to scaled dimensions, and large scale drawings in preference to small scale drawings.

G-2.02 COPIES FURNISHED TO CONTRACTOR

After the Contract has been executed, the Contractor will be furnished with five sets of paper prints, the same size as the original drawings, of each sheet of the Plans and five copies of the Specifications. Additional copies of the Plans and Specifications, when requested, may be furnished to the Contractor at cost of reproduction.

The Contractor shall furnish each of the subcontractors, manufacturers, and material suppliers such copies of the Contract Documents as may be required for his work.

G-2.03 SUPPLEMENTARY DRAWINGS

When, in the opinion of the Engineer, it becomes necessary to explain more fully the work to be done or to illustrate the work further or to show any changes which may be required, drawings known as Supplementary Drawings, with specifications pertaining thereto, will be prepared by the Engineer and five paper prints thereof will be given to the Contractor.

The Supplementary Drawings shall be binding upon the Contractor with the same force as the Plans. Where such Supplementary Drawings require either less or more than the estimated quantities of work, credit to the City or compensation therefor to the Contractor shall be subject to the terms of the Agreement.

G-2.04 CONTRACTOR TO CHECK PLANS AND DATA

The Contractor shall verify all dimensions, quantities, and details shown on the Plans, Supplementary Drawings, Schedules, Specifications, or other data received from the Engineer, and shall notify him of all errors, omissions, conflicts, and discrepancies found therein. Failure to discover or correct errors, conflicts or discrepancies shall not relieve the Contractor of full responsibility for unsatisfactory work, faulty construction or improper operation resulting therefrom nor from rectifying such conditions at his own expense. He will not be allowed to take advantage of any errors or omissions as full instructions will be furnished by the Engineer, should such errors or omissions be discovered. All schedules are given for the convenience of the Engineer and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility for the making of estimates of the size, kind, and quality of materials and equipment included in work to be done under the Contract.

G-2.05 SPECIFICATIONS

The specifications consist of four parts, the General Provisions, the Technical Specifications, the Special Provisions and the Contract Items. The General Provisions and Technical Specifications contain general requirements which govern the work. The Special Provisions and the Contract Items modify and supplement these by detailed requirements for the work and shall always govern, whenever there appears to be conflict.

G-2.06 INTENT

All work called for in the Specifications applicable to this Contract, but not shown on the Plans in their present form, or vice versa, shall be of like effect as if shown or mentioned in both. Work not specified in either the Plans or in the Specifications, but involved in carrying out their intent or in the complete and proper execution of the work, is required and shall be performed by the Contractor as though it were specifically delineated or described.

The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.

SECTION 3 WORKING DRAWINGS

G-3.01 SCOPE

The Contractor shall promptly prepare and submit layout, detail and shop drawings to insure proper construction, assembly, and installation of the work using those materials and methods as hereafter specified under the Technical Specifications, Special Provisions and Contract Items.

These drawings shall accurately and distinctly present the following:

- a. All working and erection dimensions.
- b. Arrangements and sectional views.
- c. Necessary details, including complete information for making connections between work under this Contract and work under other Contracts.
- d. Kinds of materials and finishes.
- e. Parts listed and description thereof.

Drawings for mechanical equipment shall present, where applicable, such data as dimensions, weight and performance characteristics. These data shall show conformance with the performance characteristics and other criteria incorporated in the Plans and Specifications.

Each drawing shall be dated and shall contain the name of the project, Division number and description, the technical specifications section number, names of equipment or materials and the location at which the equipment or materials are to be installed. Location shall mean both physical location and location relative to other connected or attached material. The Engineer will return unchecked any submittal which does not contain complete data on the work and full information on related matters.

Stock or standard drawings will not be accepted for review unless full identification and supplementary information is shown thereon in ink or typewritten form.

The Contractor shall review all working drawing submittals before transmitting them to the Engineer to determine that they comply with requirements of the Specifications. Drawings which are incomplete or are not in compliance with the Contract Documents shall not be submitted for processing by the Engineer. The Contractor shall place his stamp of approval on all working drawings submitted to the Engineer to indicate compliance with the above.

G-3.02 APPROVAL

If the working drawings show departures from the Contract requirements, the Contractor shall make specific mention thereof in his letter of submittal; otherwise approval of such submittals shall not constitute approval of the departure. Approval of the drawings shall constitute approval of the subject matter thereof only and not of any structure, material, equipment, or apparatus shown or indicated.

The approval of drawings will be general and shall not relieve the Contractor of responsibility for the accuracy of such drawings, nor for the proper fitting and construction of the work, nor for the furnishing of materials or work required by the Contract and not indicated on the drawings. No work called for by working drawings shall be done until such drawings have been approved by the Engineer.

The procedure in seeking approval of the working drawings shall be as follows:

1. The Contractor shall submit four complete sets of drawings

and other descriptive data together with one copy of a letter of transmittal to the Engineer for approval. The letter of transmittal shall contain the name of the project, contract number, technical specifications section number, the name of the Contractor, a list of drawings with numbers and titles, and any other pertinent information.

2. Drawings or descriptive data will be stamped "Approved", "Approved Subject to Corrections Marked", or "Examined and Returned for Correction" and one copy with a letter of transmittal will be returned to the Contractor.

3. If a drawing or other data is stamped "Approved", the Contractor shall insert the date of approval on five additional copies of the document and transmit the five copies to the Engineer together with one copy of a letter of transmittal containing substantially the same information as described in Instruction 1. above.

4. If a drawing or other data is stamped "Approved Subject to Corrections Marked", the Contractor shall make the corrections indicated and proceed as in Instruction 3., above.

5. If a drawing or data is stamped "Examined and Returned for Correction", the Contractor shall make the necessary corrections and resubmit the documents as set forth in Instruction 1., above. The letter of transmittal shall indicate that this is a resubmittal.

The Contractor shall revise and resubmit the working drawings as required by the Engineer, until approval thereof is obtained.

SECTION 4 MATERIALS AND EQUIPMENT

G-4.01 GENERAL REQUIREMENTS

All materials, appliances, and types or methods of construction shall be in accordance with the Specifications and shall, in no event, be less than that necessary to conform to the requirements of any applicable laws, ordinances, and codes.

All materials and equipment shall be new, unused, and correctly designed. They shall be of standard first grade quality, produced by expert personnel, and intended for the use for which they are offered. Materials or equipment which, in the opinion of the Engineer, are inferior or of a lower grade than indicated, specified, or required will not be accepted.

The quality of Workmanship and Materials entering into the work under this Contract shall conform to the requirements of the pertinent sections, clauses, paragraphs, and sentences, both directly and indirectly applicable thereto, of that part of the Technical Specifications, whether or not direct reference to such occurs in the Contract Items.

Equipment and appurtenances shall be designed in conformity with ANSI, ASME, IEEE, NEMA and other

generally accepted standards and shall be of rugged construction and of sufficient strength to withstand all stresses which may occur during fabrication, testing, transportation, installation, and all conditions of operation. All bearings and moving parts shall be adequately protected against wear by bushings or other approved means and shall be fully lubricated by readily accessible devices. Details shall be designed for appearance as well as utility. Protruding members, joints, corners, gear covers, and the like, shall be finished in appearance. All exposed welds shall be ground smooth and the corners of structural shapes shall be mitered.

Equipment shall be of the approximate dimensions as indicated on the Plans or as specified, shall fit the spaces shown on the Plans with adequate clearances, and shall be capable of being handled through openings provided in the structure for this purpose. The equipment shall be of such design that piping and electrical connections, ductwork, and auxiliary equipment can be assembled and installed without causing major revisions to the location or arrangement of any of the facilities.

Machinery parts shall conform exactly to the dimensions shown on the working drawings. There shall be no more fitting or adjusting in setting up a machine than is necessary in assembling high grade apparatus of standard design. The equivalent parts of identical machines shall be made interchangeable. All grease lubricating fittings on equipment shall be of a uniform type. All machinery and equipment shall be safeguarded in accordance with the safety codes of the ANSI and applicable state and local codes.

G-4.02 MANUFACTURER

The names of proposed manufacturers, suppliers, material, and dealers who are to furnish materials, fixtures, equipment, appliances or other fittings shall be submitted to the Engineer for approval, as early as possible, to afford proper investigation and checking. Such approval must be obtained before shop drawings will be checked. No manufacturer will be approved for any materials to be furnished under this Contract unless he shall be of good reputation and have a plant of ample capacity. He shall, upon the request of the Engineer, be required to submit evidence that he has manufactured a similar product to the one specified and that it has been previously used for a like purpose for a sufficient length of time to demonstrate its satisfactory performance.

All transactions with the manufacturers or subcontractors shall be through the Contractor, unless the Contractor shall request, in writing to the Engineer, that the manufacturer or subcontractor deal directly with the Engineer. Any such transactions shall not in any way release the Contractor from his full responsibility under this Contract.

Any two or more pieces of material or equipment of the same kind, type or classification, and being used for identical types of service, shall be made by the same manufacturer.

G-4.03 REFERENCE TO STANDARDS

Whenever reference is made to the furnishing of materials or

testing thereof to conform to the standards of any technical society, organization or body, it shall be construed to mean the latest standard, code, specification or tentative specification adopted and published at the date of advertisement for proposals, even though reference has been made to an earlier standard, and such standards are made a part hereof to the extent which is indicated or intended.

Reference to a technical society, organization or body may be made in the Specifications by abbreviations, in accordance with the following list:

AASHTO for American Association of State Highway and Transportation Officials (formerly AASHO)
ACI for American Concrete Institute
AGMA for American Gear Manufacturer's Association
AFBMA for Anti-Friction Bearing Manufacturer's Association
AISC for American Institute of Steel Construction
AISI for American Iron and Steel Institute
ANSI for American National Standards Institute
ASCE for American Society of Civil Engineers
ASTM for American Society for Testing and Materials
ASME for American Society of Mechanical Engineers
AWS for American Welding Society
AWWA for American Water Works Association
AWPA for American Wood Preservers Association
CEMA for Conveyor Equipment Manufacturers Association
CIPRA for Cast Iron Pipe Research Association
IEEE for Institute of Electrical and Electronic Engineers
IPCEA for Insulated Power Cable Engineers Association
NEC for National Electrical Code
NEMA for National Electrical Manufacturers Association
SAE for Society of Automotive Engineers
SHBI for Steel Heating Boiler Institute
Fed.Spec. for Federal Specifications
Navy Spec. for Navy Department Specifications
U.L.,Inc. for Underwriters' Laboratories, Inc.

When no reference is made to a code, standard or specification, the Standard Specifications of the ANSI, the ASME, the ASTM, the IEEE, or the NEMA shall govern.

G-4.04 SAMPLES

The Contractor shall, when required, submit to the Engineer for approval typical samples of materials and equipment. The samples shall be properly identified by tags and shall be submitted sufficiently in advance of the time when they are to be incorporated into the work, so that rejections thereof will not cause delay. A letter of transmittal, in duplicate, from the Contractor requesting approval must accompany all such samples.

G-4.05 EQUIVALENT QUALITY

Whenever, in the Contract Documents, an article, material, apparatus, equipment, or process is called for by trade name or by the name of a patentee, manufacturer, or dealer or by reference to catalogs of a manufacturer or dealer, it shall be understood as intending to mean and specify the article, material, apparatus, equipment or process designated, or any

equal thereto in quality, finish, design, efficiency, and durability and equally serviceable for the purposes for which it is intended.

Whenever material or equipment is submitted for approval as being equal to that specified, the decision as to whether or not such material or equipment is equal to that specified shall be made by the Engineer.

Upon rejection of any material or equipment submitted as the equivalent of that specifically named in the Contract, the Contractor shall immediately proceed to furnish the designated material or equipment.

Neither the approval by the Engineer of alternate material or equipment as being equivalent to that specified nor the furnishing of the material or equipment specified, shall in any way relieve the Contractor of responsibility for failure of the material or equipment, due to faulty design, material, or workmanship, to perform the functions required of them by the Specifications.

G-4.06 DELIVERY

The Contractor shall deliver materials in ample quantities to insure the most speedy and uninterrupted progress of the work so as to complete the work within the allotted time. The Contractor shall also coordinate deliveries in order to avoid a delay in, or impediment of, the progress of the work of any related Contractor.

G-4.07 CARE AND PROTECTION

The Contractor shall be solely responsible for properly storing and protecting all materials, equipment, and work furnished under the Contract from the time such materials and equipment are delivered at the site of the work until final acceptance thereof. He shall, at all times, take necessary precautions to prevent injury or damage by water, freezing, or by inclemencies of the weather to such materials, equipment and work. All injury or damage to materials, equipment, or work resulting from any cause whatsoever shall be made good by the Contractor.

The Engineer shall, in all cases, determine the portion of the site to be used by the Contractor for storage, plant or for other purposes. If, however, it becomes necessary to remove and restack materials to avoid impeding the progress of any part of the work or interference with the work to be done by any other Contractor, the Contractor shall remove and restack such materials at his own expense.

G-4.08 TOOLS AND ACCESSORIES

The Contractor shall, unless otherwise stated in the Contract Documents, furnish with each type, kind or size of equipment, one complete set of suitably marked high grade special tools and appliances which may be needed to adjust, operate, maintain, or repair the equipment. Such tools and appliances shall be furnished in approved painted steel cases, properly labeled and equipped with good grade cylinder locks and duplicate keys.

Spare parts shall be furnished as specified.

Each piece of equipment shall be provided with a substantial nameplate, securely fastened in place and clearly inscribed with the manufacturer's name, year of manufacture, serial number, weight and principal rating data.

G-4.09 INSTALLATION OF EQUIPMENT

The Contractor shall have on hand sufficient proper equipment and machinery of ample capacity to facilitate the work and to handle all emergencies normally encountered in work of this character.

Equipment shall be erected in a neat and workmanlike manner on the foundations at the locations and elevations shown on the Plans, unless directed otherwise by the Engineer during installation. All equipment shall be correctly aligned, leveled and adjusted for satisfactory operation and shall be installed so that proper and necessary connections can be made readily between the various units.

The Contractor shall furnish, install and protect all necessary anchor and attachment bolts and all other appurtenances needed for the installation of the devices included in the equipment specified. Anchor bolts shall be as approved by the Engineer and made of ample size and strength for the purpose intended. Substantial templates and working drawings for installation shall be furnished.

The Contractor shall, at his own expense, furnish all materials and labor for, and shall properly bed in non-shrink grout, each piece of equipment on its supporting base that rests on masonry foundations. Grout shall completely fill the space between the equipment base and the foundation.

G-4.10 OPERATING INSTRUCTIONS

The Contractor, through qualified individuals, shall adequately instruct designated employees of the City in the operation and care of all equipment installed hereunder, except for equipment that may be furnished by the City.

The Contractor shall also furnish and deliver to the Engineer three complete sets for permanent files, identified in accordance with Subsection G-3.01 hereof, of instructions, technical bulletins and any other printed matter, such as diagrams, prints or drawings, containing full information required for the proper operation, maintenance, and repair, of the equipment installed and the ordering of spare parts, except for equipment that may be furnished by the City.

In addition to the above three copies, the Contractor shall furnish any additional copies that may be required for use during construction and start-up operations.

G-4.11 SERVICE OF MANUFACTURER'S ENGINEER

The Contract prices for equipment shall include the cost of furnishing a competent and experienced engineer or superintendent who shall represent the manufacturer and shall assist the Contractor, when required, to install, adjust, test and place in operation the equipment in conformity with the Contract Documents. After the equipment is placed in

permanent operation by the City, such engineer or superintendent shall make all adjustments and tests required by the Engineer to provide that such equipment is in proper and satisfactory operating condition, and shall instruct such personnel as may be designated by the City in the proper operation and maintenance of such equipment.

SECTION 5 INSPECTION AND TESTING

G-5.01 GENERAL

The Contractor's attention is hereby directed to Article 3.03 of the Agreement.

Inspection and testing of materials will be performed by the City unless otherwise specified.

For tests specified to be made by the Contractor, the testing personnel shall make the necessary inspections and tests and the reports thereof shall be in such form as will facilitate checking to determine compliance with the Contract Documents. Five copies of the reports shall be submitted and authoritative certification thereof must be furnished to the Engineer as a prerequisite for the acceptance of any material or equipment.

If, in the making of any test of any material or equipment, it is ascertained by the Engineer that the material or equipment does not comply with the Contract, the Contractor will be notified thereof and he will be directed to refrain from delivering said material and equipment, or to remove it promptly from the site or from the work and replace it with acceptable material, without cost to the City.

Tests of electrical and mechanical equipment and appliances shall be conducted in accordance with recognized test codes of the ANSI, ASME, or the IEEE, except as may otherwise be stated herein.

The Contractor shall be fully responsible for the proper operation of equipment during tests and instruction periods and shall neither have nor make any claim for damage which may occur to equipment prior to the time when the City formally takes over the operation thereof.

G-5.02 COSTS

All inspection and testing of materials furnished under this Contract will be performed by the City or duly authorized inspection engineers or inspection bureaus without cost to the Contractor, unless otherwise expressly specified.

The cost of shop and field tests of equipment and of certain other tests specifically called for in the Contract Documents shall be borne by the Contractor and such costs shall be deemed to be included in the contract price.

Materials and equipment submitted by the Contractor as the equivalent to those specifically named in the Contract may be tested by the City for compliance. The Contractor shall reimburse the City for the expenditures incurred in making

such tests on materials and equipment which are rejected for noncompliance.

G-5.03 INSPECTIONS OF MATERIALS

The Contractor shall give notice, in writing to the Engineer, sufficiently in advance of his intention to commence the manufacture or preparation of materials especially manufactured or prepared for use in or as part of the permanent construction. Such notice shall contain a request for inspection, the date of commencement and the expected date of completion of the manufacture or preparation of materials. Upon receipt of such notice the Engineer will arrange to have a representative present at such times during the manufacture as may be necessary to inspect the materials or he will notify the Contractor that inspection will be made at a point other than the point of manufacture, or he will notify the Contractor that inspection will be waived. The Contractor must comply with these provisions before shipping any material. Such inspection shall not release the Contractor from the responsibility for furnishing materials meeting the requirements of the Contract Documents.

G-5.04 CERTIFICATE OF MANUFACTURE

When inspection is waived or when the Engineer so requires, the Contractor shall furnish to him authoritative evidence in the form of Certificates of Manufacture that the materials to be used in the work have been manufactured and tested in conformity with the Contract Documents. These certificates shall be notarized and shall include copies of the results of physical tests and chemical analyses, where necessary, that have been made directly on the product or on similar products of the manufacturer.

G-5.05 SHOP TESTS OF OPERATING EQUIPMENT

Each piece of equipment for which pressure, duty, capacity, rating, efficiency, performance, function, or special requirements are specified shall be tested in the shop of the maker in a manner which shall conclusively prove that its characteristics comply fully with the requirements of the Contract Documents. No such equipment shall be shipped to the work until the Engineer notifies the Contractor, in writing, that the results of such tests are acceptable.

Five copies of the manufacturer's actual test data and interpreted results thereof, accompanied by a certificate of authenticity sworn to by a responsible official of the manufacturing company, shall be forwarded to the Engineer for approval.

The cost of the shop tests and of furnishing manufacturer's preliminary and shop test data of operating equipment shall be borne by the Contractor.

G-5.06 PRELIMINARY FIELD TESTS

As soon as conditions permit, the Contractor shall furnish all labor, materials, and instruments and shall make preliminary field tests of equipment. If the preliminary field tests disclose any equipment furnished under this Contract which does not comply with the requirements of the Contract Documents, the Contractor shall, prior to the acceptance tests, make all changes, adjustments, and replacements required.

TEMPORARY STRUCTURES

G-5.07 FINAL FIELD TESTS

Upon completion of the work and prior to final payment, all equipment and appliances installed under this Contract shall be subjected to acceptance tests as specified or required to prove compliance with the Contract Documents.

The Contractor shall furnish labor, fuel, energy, water and all other materials, equipment, and instruments necessary for all acceptance tests, at no additional cost to the City.

G-5.08 FAILURE OF TESTS

Any defects in the materials and equipment or their failure to meet the tests, guarantees or requirements of the Contract Documents shall be promptly corrected by the Contractor by replacements or otherwise. The decision of the Engineer as to whether or not the Contractor has fulfilled his obligations under the Contract shall be final and conclusive. If the Contractor fails to make those corrections or if the improved materials and equipment, when tested, shall again fail to meet the guarantees or specified requirements, the City, notwithstanding its partial payment for work, and materials and equipment, may reject the materials and equipment and may order the Contractor to remove them from the site at his own expense.

In case the City rejects any materials and equipment, then the Contractor shall replace the rejected materials and equipment within a reasonable time. If he fails to do so, the City may, after the expiration of a period of thirty calendar days after giving him notice in writing, proceed to replace such rejected materials and equipment, and the cost thereof shall be deducted from any compensation due or which may become due the Contractor under this Contract.

The City agrees to obtain other equipment within a reasonable time and the Contractor agrees that the City may use the equipment furnished by him without rental or other charges until the new equipment is obtained.

Materials or work in place that fails to pass acceptability tests shall be retested at the direction of the construction engineer all such retests shall be at the Contractor's expense. The rates charged shall be in accordance with the Department of Public Works current annual inspection contract which is available for inspection at the offices of the Department of Public Works.

G-5.09 FINAL INSPECTION

The procedures for final inspection shall be in accordance with the provisions of Article 4.07 of the Agreement. During such final inspections, the work shall be clean and free from water. In no case will the final estimate be prepared until the Contractor has complied with all the requirements set forth and the Engineer has made his final inspection of the entire work and is satisfied that the entire work is properly and satisfactorily constructed in accordance with the requirements of the Contract Documents.

SECTION 6

G-6.01 GENERAL

All false work, scaffolding, ladders, hoistways, braces, pumping plants, shields, trestles, roadways, sheeting, centering forms, barricades, drains, flumes, and the like, any of which may be needed in the construction of any part of the work and which are not herein described or specified in detail, must be furnished, maintained and removed by the Contractor, and he shall be responsible for the safety and efficiency of such works and for any damages that may result from their failure or from their improper construction, maintenance, or operation.

G-6.02 PUBLIC ACCESS

At all points in the work where public access to any building, house, place of business, public road, or sidewalk would be obstructed by any action of the Contractor in executing the work required by this Contract, the Contractor shall provide such temporary structure, bridges or roadway as may be necessary to maintain public access at all times. At least one lane for vehicular traffic shall be maintained in streets in which the Contractor is working. Street closure permits are required from the Department of Public Works.

The Contractor shall provide suitable temporary bridges, as directed by the Engineer, at street intersections when necessary for the maintenance of vehicular and pedestrian traffic.

Prior to temporarily cutting of access to driveways and garages, the Contractor shall give twelve (12) hours notice to affected property owners. Interruptions to use of private driveways shall be kept to a minimum.

G-6.03 CONTRACTOR'S FIELD OFFICE

The Contractor shall erect, furnish and maintain a field office with a telephone at the site during the entire period of construction. He or an authorized agent shall be present at this office at all times while his work is in progress. Readily accessible copies of both the Contract Documents and the latest approved working drawings shall be kept at this field office.

G-6.04 TEMPORARY FENCE

If, during the course of the work, it is necessary to remove or disturb any fence or part thereof, the Contractor shall, at his own expense, if so ordered by the Engineer, provide a suitable temporary fence which shall be maintained until the permanent fence is replaced. The Engineer shall be solely responsible for the determination of the necessity for providing a temporary fence and the type of temporary fence to be used.

G-6.05 RESPONSIBILITY FOR TEMPORARY STRUCTURES

In accepting the Contract, the Contractor assumes full responsibility for the sufficiency and safety of all temporary structures or work and for any damage which may result from their failure or their improper construction, maintenance, or operation and will indemnify and save harmless the City from

all claims, suits or actions and damages or costs of every description arising by reason of failure to comply with the above provisions.

SECTION 7 TEMPORARY SERVICES

G-7.01 WATER

The Contractor shall provide the necessary water supply at his own expense. He shall, if necessary, provide and lay necessary waterlines from existing mains to the place of using, shall secure all necessary permits and pay for all taps to water mains or hydrants and for all water used at the established rates.

G-7.02 LIGHT AND POWER

The Contractor shall provide, at his own expense, temporary lighting and power facilities required for the proper prosecution and inspection of the work. If, in the opinion of the Engineer, these facilities are inadequate, the Contractor will not be permitted to proceed with any portion of the work affected thereby.

G-7.03 SANITARY REGULATIONS

The Contractor shall prohibit and prevent the committing of nuisances on the site of the work or on adjoining property and shall discharge any employee who violates this rule.

Ample washrooms and toilet facilities and a drinking water supply shall be furnished and maintained in strict conformity with the law by the Contractor for use by his employees.

G-7.04 ACCIDENT PREVENTION

Precautions shall be exercised at all times for the protection of persons and property. The safety provisions of applicable laws, building and construction codes shall be observed. The Contractor shall comply with the U. S. Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596), and under Section 107 of the Contract Work. Hours and Safety Standards Act (PL 91-54), except where state and local safety standards exceed the federal requirements and except where state safety standards have been approved by the Secretary of Labor in accordance with provisions of the Occupational Safety and Health Act.

G-7.05 FIRST AID

The Contractor shall keep upon the site, at each location where work is in progress, a completely equipped first aid kit and shall provide ready access thereto at all times when men are employed on the work.

G-7.06 HEATING

The Contractor shall provide temporary heat, at his own expense, whenever required on account of work being carried on during cold weather and to prevent freezing of water pipes and other damage to the work.

SECTION 8

LINES AND GRADES

G-8.01 GENERAL

All work done under this Contract shall be constructed in accordance with the lines and grades shown on the Plans, or as given by the Engineer. The full responsibility for keeping alignment and grade shall rest upon the Contractor.

The Engineer will establish bench marks and base line controlling points. Reference remarks for lines and grades as the work progresses will be located to cause as little inconvenience to the prosecution of the work as possible. The Contractor shall so place excavation and other materials as to cause no inconvenience in the use of the use of the reference marks provided. He shall remove any obstructions placed by him contrary to this provision.

G-8.02 SURVEYS

The Contractor shall furnish and maintain, at his own expense, stakes and other such materials, and give such assistance, including qualified helpers, as may be required by the Engineer for setting reference marks. The Contractor shall check such reference marks by such means as he may deem necessary and, before using them, shall call the Engineer's attention to any inaccuracies. The Contractor shall, at his own expense, establish all working or construction lines and grades as required from the reference marks set by the Engineer, and shall be solely responsible for the accuracy thereof. He shall, however, be subject to the check and review of the Engineer.

The Contractor shall keep the Engineer informed a reasonable time in advance as to his need for line and grade reference marks, in order that they may be furnished and all necessary measurements made for record and payment with the minimum of inconvenience to the Engineer or of delay to the Contractor.

It is the intention not to delay the work for the establishment of reference marks but, when necessary, working operations shall be suspended for such reasonable time as the Engineer may require for this purpose.

G-8.03 SAFEGUARDING MARKS

The Contractor shall safeguard all points, stakes, grade marks, monuments and bench marks made or established on the work, bear the cost of reestablishing them if disturbed, and bear the entire expense of rectifying work improperly installed due to not maintaining or protecting or to removing without authorization such established points, stakes and marks.

The Contractor shall safeguard all existing and known property corners, monuments and marks adjacent to but not related to the work and, if required, shall bear the cost of reestablishing them if disturbed or destroyed.

G-8.04 DATUM PLANE

All elevations indicated or specified refer to the Mean Sea Level Datum of the U.S.C. & G.S. (N.O.S.) which is 0.80 feet above the Mean Low Water Datum of the U. S. Army

Corps of Engineers.

SECTION 9 ADJACENT STRUCTURES AND LANDSCAPING

G-9.01 RESPONSIBILITY

The responsibility for removal, replacement, relocation, repair, rebuilding or protection of all public utility installations, including poles, tracks, pipes, wires, conduits, house service connections, vaults, manholes, sewers, traffic control and fire alarm signal circuit installations and other appurtenances and facilities shall be in accordance with G-1.02 and G-1.03.

The Contractor shall also be entirely responsible and liable for all damage or injury as a result of his operations to all other adjacent public and private property, structures of any kind and appurtenances thereto met with during the progress of the work. The cost of protection, replacement in their original locations and conditions or payment of damages for injuries to such adjacent public and private property and structures affected by the work, whether or not shown on the Plans, and the removal, relocation, and reconstruction of such items called for on the Plans or specified shall be included in the various Contract Items and no separate payment will be made therefor. Where such public and private property, structures of any kind and appurtenances thereto are not shown on the Plans and when, in the opinion of the Engineer, removal or relocation and reconstruction is necessary to avoid interference with the work, payment therefor will be made as provided for extra work in Article 7.02 of the Agreement.

G-9.02 PROTECTION OF TREES

All trees and shrubs shall be adequately protected by the Contractor with boxes or otherwise and, within the City of Tampa, in accordance with ordinances governing the protection of trees. No excavated materials shall be placed so as to injure such trees or shrubs. Trees or shrubs destroyed by negligence of the Contractor or his employees shall be replaced by him with new stock of similar size and age, at the proper season, and at the sole expense of the Contractor.

Beneath trees or other surface structures, where possible, pipelines may be built in short tunnels, backfilled with excavated materials, except as otherwise specified, or the trees or structures carefully supported and protected from damage.

The City may order the Contractor, for the convenience of the City, to remove trees along the line of trench excavation. If so ordered, the City will obtain any permits required for removal of trees. Such tree removal ordered shall be paid for under the appropriate Contract Items.

G-9.03 LAWN AREAS

Lawn areas shall be left in as good condition as before the starting of the work. Where sod is to be removed, it shall be carefully removed and later replaced, or the area where sod has been removed shall be restored with new sod in the

manner described in the Technical Specifications section.

G-9.04 RESTORATION OF FENCES

Any fence, or part thereof, that is damaged or removed during the course of the work shall be replaced or repaired by the Contractor and shall be left in as good a condition as before the starting of the work. The manner in which the fence is repaired or replaced and the materials used in such work shall be subject to the approval of the Engineer. The cost of all labor, materials, equipment, and work for the replacement or repair of any fence shall be deemed included in the appropriate Contract Item or Items, or if no specific Item is provided therefor, as part of the overhead cost of the work, and no additional payment will be made therefor.

SECTION 10 PROTECTION OF WORK AND PUBLIC

G-10.01 TRAFFIC REGULATIONS

The Contractor shall arrange his work to comply with Article G-6.02. The work shall be done with the least possible inconvenience to the public and to that end the work may be confined by the Engineer to one block at a time.

G-10.02 BARRIERS AND LIGHTS

During the prosecution of the work, the Contractor shall put up and maintain at all times such barriers, and lights, as will effectually prevent accidents. The Contractor shall provide suitable barricades, red lights, "danger" or "caution" or "street closed" signs and watchmen at all places where the work causes obstructions to the normal traffic or constitutes in any way a hazard to the public. Such barriers and signs shall be constructed to State of Florida Department of Transportation standards and placed as recommended by the Traffic Division of the City's Department of Public Works.

No open fires will be permitted.

G-10.03 SMOKE PREVENTIONS

The Contractor shall use hard coal, coke, oil or gas as fuel for equipment generating steam. A strict compliance with ordinances regulating the production and emission of smoke will be required.

G-10.04 NOISE

The Contractor shall eliminate noise to as great an extent as practicable at all times. Air compressing plants shall be equipped with silencers and the exhaust of all gasoline motors or other power equipment shall be provided with mufflers. In the vicinity of hospitals and schools, special care shall be used to avoid noise or other nuisances. The Contractor shall strictly observe all local regulations and ordinances covering noise control.

Except in the event of an emergency, no work shall be done between the hours of 7:00 p.m. and 7:00 a.m., or on Sundays. If the proper and efficient prosecution of the work requires operations during the night, the written permission of the Engineer shall be obtained before starting such items of the work.

**SECTION 13
CLEANING**

G-10.05 ACCESS TO PUBLIC SERVICES

Neither the materials excavated nor the materials or plant used in the construction of the work shall be so placed as to prevent free access to all fire hydrants, valves or manholes.

G-10.06 DUST PREVENTION

The Contractor shall prevent dust nuisance from his operations or from traffic by keeping the streets sprinkled with water at all times.

G-10.07 PRIVATE PROPERTY

The Contractor shall so conduct the work that no equipment, material, or debris will be placed or allowed to fall upon private property in the vicinity of the work unless he shall have obtained the owner's written consent thereto and shall have shown this consent to the Engineer.

**SECTION 11
SLEEVES AND INSERTS**

G-11.01 COORDINATION

When the Contract requires the placing of conduits, saddles, boxes, cabinets, sleeves, inserts, foundation bolts, anchors, and other like work in floors, roofs, or walls of buildings and structures, they shall be promptly installed in conformity with the construction program. The Contractor who erects the floors, roofs, and walls shall facilitate such work by fully cooperating with the Contractors responsible for installing such appurtenances. The Contractor responsible for installing such appurtenances shall arrange the work in strict conformity with the construction schedule and avoid interference with the work of other contractors.

G-11.02 OPENINGS TO BE PROVIDED

In the event timely delivery of sleeves and other materials cannot be made and to avoid delay, the affected Contractor may arrange to have boxes or other forms set at the locations where the appurtenances are to pass through or into the floors, roofs, walls, or other work. Upon the subsequent installation of these appurtenances, the Contractor erecting the structure shall fill around them with materials as required by the Contract. The necessary expenditures incurred for the boxing out and filling in shall be borne by the Contractor or Contractors required to furnish the sleeves and inserts. Formed openings and later installation of sleeves will not be permitted at locations subject to hydrostatic pressure.

**SECTION 12
CUTTING AND PATCHING**

G-12.01 GENERAL

The Contractor shall do all cutting, fitting, or patching of his portion of the work that may be required to make the several parts thereof join and coordinate in a manner satisfactory to the Engineer and in accordance with the Plans and Specifications. The work must be done by competent workmen skilled in the trade required by the restoration.

G-13.01 DURING CONSTRUCTION

During construction of the work, the Contractor shall, at all times, keep the site of the work and adjacent premises as free from material, debris, and rubbish as is practicable and shall remove the same from any portion of the site if, in the opinion of the Engineer, such material, debris, or rubbish constitutes a nuisance or is objectionable.

The Contractor shall remove from the site all of his surplus materials and temporary structures when no further need therefor develops.

G-13.02 FINAL CLEANING

At the conclusion of the work, all erection plant, tools, temporary structures and materials belonging to the Contractor shall be promptly taken away, and he shall remove and promptly dispose of all water, dirt, rubbish or any other foreign substances.

The Contractor shall thoroughly clean all equipment and materials installed by him and shall deliver such materials and equipment undamaged in a bright, clean, polished, and new appearing condition.

**SECTION 14
MISCELLANEOUS**

G-14.01 PROTECTION AGAINST SILTATION AND BANK EROSION

The Contractor shall arrange his operations to minimize siltation and bank erosion on construction sites and on existing or proposed watercourses and drainage ditches.

G-14.02 EXISTING FACILITIES

The work shall be so conducted to maintain existing facilities in operation insofar as is possible. Work shall be scheduled to minimize bypassing during construction. Requirements and schedules of operations for maintaining existing facilities in service during construction shall be as described in the Special Provisions.

G-14.03 USE OF CHEMICALS

All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions.

SPECIFIC PROVISIONS

SP- 1.01 DPW TECHNICAL SPECIFICATIONS:

The work on this project shall comply with the FDOT Standard Specifications for Road and Bridge Construction (2017), and the FDOT Roadway and Traffic Design Standards (2017), except as noted herein. The Engineer shall be notified of any discrepancy between either the FDOT Standard Specifications for Road and Bridge Construction or FDOT Roadway and Traffic Design Standards and these Technical Specifications or City specifications and standards.

It is required that the maintenance of the traffic conform to the Manual of Uniform Minimum Standards For Design, Construction and Maintenance For Streets and Highways (Florida Greenbook), the FDOT Standard Specifications for Road and Bridge Construction (2013), and the FDOT Roadway and Traffic Design Standards (2013).

SP- 2.01 BID ITEMS:

It is the intent of these Contract Documents that any items of work and all costs for which compensation is not directly provided by a bid item but are incidental to various project items of work, shall be prorated and included in the bid item for which they are required. Failure of the Contractor to follow this procedure shall be basis for rejection of its bid. Items related to the construction of the park shall be included in the lump sum bid amount for the park.

SP-2.02 LINES AND GRADES:

The General Provisions Section G-8.01 through G-8.04 are revised to read as follows:

G-8.01 GENERAL

All work done under this contract shall be constructed in accordance with the lines and grades as shown on the plans or as directed by the Engineer. The full responsibility for keeping alignment and grade shall rest upon the Contractor.

The Engineer will establish Bench Marks and baseline controlling points only. All elevations indicated or specified refer to the North American Vertical Datum of 1988.

G-8.02 SURVEYS

The Contractor shall furnish and maintain stakes and other such material as may be required for setting reference marks, and shall establish all working or construction lines and grades as required from the reference marks set by the Engineer’s Surveyor, and shall be solely responsible for the accuracy thereof. The Contractor shall, however, be subject to check and review by the Engineer’s Surveyor. The cost of this work shall be included in the pay item for Mobilization, and no separate payment shall be made.

Pay items requiring survey information, such as embankment or excavation, shall be documented by a Florida Registered Professional Surveyor and Mapper hired and/or employed by the Contractor. In addition, plotted cross sections and quantity computations must be supplied and certified. All surveys shall be performed using electronic data collection for data acquisition. All drawings shall be submitted in the most current version of AutoCAD being used by the COT department requiring the survey. All surveys shall be in accordance with the Minimum Technical Standards set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 61G17-6 or 5J-17, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes. All surveys must also meet any standards or specifications which may be included as part of the scope of contract.

Payment shall be made under:

Item No. 1009	Const. Stakeout / Record Drawings	Lump Sum
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G-8.03 SAFEGUARDING MARKS

Add the following paragraph to General Provision Section G-8.03:

The Contractor shall, with no additional payment, furnish and install reference stakes at all even and half-stations along the project survey baseline. These stakes shall be maintained for the duration of construction for the purpose of the Engineer's reference

G-8.04 DATUM PLANE

All elevations indicated or specified refer to the North American Vertical Datum of 1988 (NAVD88).

SP-2.03 REQUIREMENTS FOR CONTROL OF THE WORK:

Prior to the start of the work included in this contract, a Pre-construction Conference will be held by the Engineer to be attended by the Contractor and representatives of the various utilities and others for the purpose of establishing a schedule of operations which will coordinate the work to be done under this contract with all related work to be done by others within the limits of the project. The Contractor shall be prepared for this meeting and shall present a comprehensive construction schedule for all items of work to be accomplished, which will be used as the basis for the development of an overall operational schedule and a list of subcontractors and material suppliers to be used on this work.

All items of work in this contract shall be coordinated so that progress on each related work item will be continuous from week to week. The progress of the work will be reviewed by the Engineer at the end of each week, and if the progress on any item of work during that week is found to be unsatisfactory, the Contractor shall be required to adjust the rate of progress on that item or other items as directed by the Engineer.

The Contractor shall conduct operations in such a manner as will result in the minimum of inconvenience to occupants of adjacent homes and business establishments and shall provide temporary access as directed or as conditions in any particular location may require.

Access to adjacent residential, public and commercial properties shall be provided at all times during the contract period. The Contractor shall restore to its previous condition as directed by the Engineer any private property, City property, or utilities damaged by its construction. No payment shall be made to the Contractor for any required restoration of private property, City property or utilities, unless otherwise noted.

SP-2.04 CONTRACTOR'S REPRESENTATIVE:

Add the following paragraph to Article 8.02 of the Agreement:

"The Contractor shall submit in writing to the Engineer the name of its duly authorized representative who will be present on the job during all work activities and is authorized to make decisions for the Contractor. Any change in the contractor's representative shall require written notification to the Engineer prior to such change".

SP-2.05 DAMAGE TO ADJACENT STREETS:

Any streets (including detour routes) consisting of travel lanes, curbs, gutters and shoulders, outside the project area (not designated for construction), which are determined by the Engineer to have been damaged due to construction related operations and/or equipment, shall be restored by the Contractor to its original or better condition without any cost to the City and to the satisfaction of the Engineer.

SP-2.06 PROJECT PHOTOGRAPHS:

The Contractor will not be required to furnish photographs of the project; however, the Engineer may or may not take photographs of the area immediately prior to and after completion of the construction for record and information. To assure that there will not be any conflict with this photography, the Contractor shall not perform

clearing operations or actions which will disturb any street or area within the project until the Engineer has been advised thereof and has had adequate opportunity to perform the desired photography.

SP-2.07 PROJECT PRECONSTRUCTION VIDEOTAPES:

The Contractor shall submit to the Engineer for approval prior to commencing work a DVD containing a continuous color video recording including complete coverage of pre-construction conditions of all surface features within the construction's zone of influence, (including detour routes) simultaneously produced audio commentary and electronic display of time and date. The video recording shall be sufficient to fulfill the technical and forensic requirements of the project and provide continuous unedited coverage, establishing locations and viewer orientation with clear, bright, steady and sharp video images with accurate colors free of distortion or other imperfections. The video must be accompanied by a detailed log of the recorded contents including date, locations, track numbers and features. No work shall be allowed to commence until the completed video and Log are approved by the Engineer.

Payment for this work shall be made under:

Item No. 1001	Mobilization	Lump Sum
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SP-2.08 PROJECT CLEAN-UP:

Clean-up on this project is extremely important and the Contractor will be responsible for keeping the construction site neat and clean with debris being removed regularly as the work progresses.

If project cleanliness and/or dust control reaches an unacceptable level in the opinion of the Engineer, the Engineer will notify the Contractor in writing. If the Contractor does not act to correct the situation within 4 hours in the case of dust control or within 24 hours in the case of general cleanliness, the Engineer may call upon outside forces to provide the appropriate services. Cost of all such activities shall be charged to the Contractor via contract change order.

SP-2.09 PERMITS:

The Contractor shall be responsible for obtaining all applicable City permits for this project. These can include but may not be limited to: Rights-of-Way permit(s), Site Clearing/Tree Removal permit(s), and Drainage /Earthwork permit(s). The Contractor shall supply any required plans or other information to the issuing department.

The time required to prepare, submit, review, and issue the permits shall be included in the contract time and no payment shall be made for any delay incurred by this process.

Cost for obtaining City permits will be paid for by the City. The fee for a Rights-of-Way Construction Permit shall be waived by the City. The Contractor is responsible for obtaining permits and scheduling inspections through the City's Construction Service Division.

Copies of the Southwest Florida Water Management District Environmental Resource Permit and City Site Permit will be provided to the Contractor prior to commencement of construction.

SP-2.10 AS-BUILT PLANS:

The Contractor shall provide the Engineer with "As-Built" plans, as follows:

1. All As-Built information shall be annotated by a Florida Registered Professional Surveyor and Mapper on a separate layer of each AutoCAD drawing file as provided on a disk by the City. Annotation of the new drawing files shall be in accordance with City of Tampa DPW drafting standards, as well as the Minimum Technical Standards set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 61G17-6, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes. Settings shall be as follows: Color: CYAN, Linetype: CONTINUOUS, Font: ROMANS, Layer Name: AS-BUILT, AutoCAD Menu Name: ACAD.MNU, and File Format: AUTOCAD latest version.

2. All surveys shall be completed and certified by a Florida Registered Professional Surveyor and Mapper hired and/or employed by the Contractor, and shall be in accordance with the Minimum Technical Standards set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 61G17-6, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes. Survey data shall be submitted as an electronic data file in AutoCad latest version. The Contractor shall also include as supporting data the ASCII files of digital raw survey data, closure reports, adjustment reports, and/or copies of any hand-written field notes or sketches.

3. "As-Built", or "Record", surveys, as may be required by contract, or agreement, shall consist of survey data collected on all constructed improvements, so they may be compared to and contrasted with the design plans and/or construction drawings. The annotated disk shall delineate all changes and deviations to the planned improvements within the project limits, to include, but not be limited to, pavement, curb & gutter, sidewalk, driveways, inlets, manholes, all piping, inverts, ditches, ponds, valves, hydrants, water meters, signalization, hand holes, signing & pavement marking, landscaping, and irrigation. All changes and deviations shall be delineated by Station-Offset and vertical alignment values and shall be clearly shown on the drawing files.

4. The Contractor shall comply with the above requirements and shall submit one check print set of the plans at the same scale as the construction plans, and all the supporting survey data files, to the Engineer for review within three weeks of substantial completion of the project. Final payment for the project shall not be made until the As-Built information is received for review, any corrections are made, and approval granted by the Engineer. Upon approval, the Contractor shall provide the final As-Built drawings on the disk, at the same scale as the construction plans. These files shall be

AutoCad Drawings or AutoCad Design Web Format and Adobe PDF

The cost for this work shall be included in the contract price for Mobilization and no separate payment shall be made for meeting the above As-Built requirements.

Payment shall be made under:

Item No. 1001	Mobilization	Lump Sum
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SP-3.01 STREET CLOSURE AND MAINTENANCE OF TRAFFIC:

A temporary street closure permit, to be secured by the Contractor, will be required for closure of a street, lane, or sidewalk within Rights-of-Way under the jurisdiction of the City of Tampa, Florida Department of Transportation, and Tampa Hillsborough Expressway Authority.

These permits will establish the requirements for the closure related to number of lanes and/or time of day lanes or street may be closed. The Contract shall adhere to the requirements as described in the permit(s). The cost for obtaining temporary street closure permits shall be included in the pay item for Maintenance of Traffic and no separate payment will be made.

Maintenance of Traffic (MOT) on Meridian Avenue is restricted. There will be no lane closures between the hours of 5:00 AM and 9:00 AM and 3:00 PM through 7:00 PM, Monday through Friday. In addition, due to the Amelie Arena event schedule, other restrictions may apply. Contractor shall coordinate any lane closures with the respective agencies a minimum of Forty-Eight (48) Hours in advance.

Vehicular (both personal and commercial) and pedestrian access to adjacent properties shall be maintained at all times. Unless approved otherwise by the City of Tampa one lane of traffic shall remain open during construction.

The cost for the various items associated with maintenance of traffic shall reflect the cost for placing and maintaining the item for the duration of construction.

The Contractor shall furnish and maintain all necessary signs, pavement markings, barricades, lights, and flagmen necessary to control traffic and provide for safety of the public, all in compliance with the current Florida

Department of Transportation Roadway and Traffic Design Standards and the FHWA Manual on Uniform Traffic Control Devices.

The Contractor shall observe traffic movements through the work site and inspect all traffic control devices on a regular basis to ensure that all devices are properly installed and functioning as intended.

In cases of closure for street, lane, or sidewalk on the City of Tampa Functionally Classified Network (collectors, minor arterials, and principal arterials), including all State Roads, the Contractor shall provide a maintenance of traffic plan to the City of Tampa, Transportation Division. This plan shall be provided at least seventy-two hours in advance of the closure (excluding weekends) and shall contain the following:

- 1. Proposed detour routes.
- 2. Signing of the complete construction area and detour routes.

Advance notice information signs advising the public of scheduled closure of major roadways and/or information signs advising the public of points of closure and detour routes may be required by the Engineer and will be installed at the Contractor's expense.

Payment shall be full compensation for all work, equipment, materials, tools, labor and any incidentals required to maintain safe traffic routes past the work site.

Payment shall be made under:

Item No. 1005	Maintenance of Traffic	Lump Sum
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SP-3.02 TRAFFIC INFORMATION SIGNS:

The Contractor's attention is directed to Section 10 of the General Provisions, PROTECTION OF WORK AND PUBLIC, and to the consideration therein for providing Advanced Notice information signs advising the public of scheduled closures, thereby creating better understanding and relations during the construction. Variable message signs shall be set in-place at least two weeks prior to the closing.

Payment shall be made under:

Item No. 1001	Mobilization	Lump Sum
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SP-3.03 PROJECT SIGN:

The Contractor shall furnish one (1) project signs in conformance with the general configuration and dimensions as shown on the attachment SIGN-1 and SIGN-2, which is made a part of these specifications. The signs shall be maintained in good condition until the completion of the project, and shall be located as instructed by the Engineer.

The cost of furnishing and maintaining the signs shall be included in the pay item for Mobilization and no separate payment shall be made.

Payment shall be made under:

Item No. 1001	Mobilization	Lump Sum
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SP-3.04 NIGHT WORK:

No work shall be performed at night unless approved by the City and/or Engineer prior.

SP-4.01 DENSITY REQUIREMENTS:

Refer to applicable sections of FDOT Standard Specifications (2017). Soil density testing shall be provided by the City of Tampa.

SP-4.02 SOIL STABILIZATION:

Refer to applicable sections of FDOT Standard Specifications (2013).

Payment shall be made under:

Item No. 2001	Stabilization Type B (12")	SY
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SP-4.03 SOIL BORING INFORMATION:

A subsurface geotechnical investigation has been completed and is included with the contract documents. Refer to Geotechnical Engineering Report East Madison Street by Terracon Consultants, Inc dated August 12, 2013. Additional investigation required during construction will be at no cost to the City of Tampa.

SP-4.04 TEMPORARY STOCKPILING:

For temporary stockpiling of the excavated material within project limits (and anywhere within City limits) the Contractor shall adhere to the following procedure:

Public Right of Way

- A. The Contractor will not be allowed to stockpile suitable, excavated material within right- of-way for a period in excess of 30 calendar days. Unsuitable excavated material shall not be stockpiled within public right-of-way for a period in excess of 7 calendar days.

Location other than Public Right-of-Way

- B. The Contractor shall:
 1. Obtain written permission from the owner of the property where stockpiling is desired.
 2. At its own expense present the above letter and a contour plan of the site to the Engineer for approval of stockpiling site.
 3. At the conclusion of the stockpiling activity, the Contractor shall obtain a signed letter of release from the property owner that he/she is completely satisfied with the stockpiling operation and with the restoration of their property. A copy of the letter shall be furnished to the Engineer.

The time periods of stockpiling shall be specified by the Contractor in writing. Upon removal of stockpiled material, the Contractor shall clean up and grade the site to its original contours and conditions.

The City of Tampa shall not be a party to any agreement between the Contractor and private property owner(s). Regardless of the location of stockpiling, it shall be the Contractor's responsibility to make sure that stockpiling in no way constitutes a public hazard, nuisance and does not interfere with the natural surface runoff in the area.

SP-4.05 DEWATERING:

Dewatering operations shall be performed with consideration to possible effects to adjacent structures. The condition of adjacent structures and surrounding areas that may be affected by the lowering of the groundwater level shall be surveyed and documented prior to beginning dewatering operations. Upon completion of dewatering activities, the contractor shall inspect adjacent structure and surrounding areas to determine if any damage may have occurred. Contractor shall document the results of this inspection.

The dewatering shall be done by an experienced contractor, with references that demonstrate at least (3) similar project site and conditions. The Contractor shall submit a dewatering plan signed and sealed by a professional engineer registered in the state of Florida detailing the proposed methodology by which dewatering is to be accomplish and shall include a list of the structures and areas to be surveyed for potential damage.

Discharges from dewatering activities shall meet State and Federal regulatory criteria. Dewatering permitting, as regulated by the Southwest Florida Water Management District, shall be the responsibility of the Contractor.

Any dewatering requiring discharge to the City of Tampa sanitary sewer system shall be metered. The Contractor shall submit the meter details and specifications to the Engineer for approval prior to installation. The discharge shall not exceed 250 gallons per minute as directed by the City of Tampa Wastewater Department. The dewatering discharge connection to a sewer manhole or pipe shall meet the City of Tampa criteria.

Dewatering will only be allowed for one (1) calendar year from the issuance of a Service Commitment by the City of Tampa Wastewater Department. Should the dewatering activities need to extend past this date, the Contractor is to notify the Engineer 30-days in advance of the expiration of the Commitment to allow sufficient time for the Service Commitment to be extended. A copy of the Service Commitment will be provided to the Contractor prior to commencement of dewatering activities on Madison Street. The Contractor will be required to create a temporary customer service account with the City of Tampa for to allow for meter reading and inspection of the meter. The Contractor shall provide the City with the meter serial number and the meter shall be maintained and used on-site throughout the duration of the project dewatering activities. The City may, at its discretion, sample the discharge into the sewer system. Payment will be made to the Contractor for the fee paid to the City for the disposal of the discharge on the City sanitary sewer system.

Notwithstanding anything herein to the contrary, any charge or increase to allowance amounts must be approved by the City in advance and in writing. If not so approved, the charge will be deemed to be at the Firm’s sole cost without reimbursement. The only allowance allowed are those clearly identified in the Agreement (including this and other incorporated exhibits). Any remaining allowance amounts shall belong 100% to the City.

Payment shall be made under:

Item No. 1013	Dewatering Discharge Disposal	Lump Sum
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SP-4.06 MANAGEMENT OF CONTAMINATED SOIL :

Refer to Geotechnical Engineering Report East Madison Street by Terracon Consultants, Inc dated August 12, 2013; Technical Specifications for the Management of Contaminated Soils dated November 30, 2018 prepared by Terracon and included with the contract documents for contaminated soil and locations. The Contractor shall be responsible for excavation, removal, and disposal of all contaminated, and replace with suitable backfill. Payment will be made to the Contractor per ton of contaminated soil removed and per cubic yard of clean backfill returned to Site. .

Copies of all completed manifest signed by the Transporter and Disposal Facility, with all certified weight tickets must be provided to the City of Tampa.

Payment shall be made under:

Item No. 1011	Removing of Contaminated Soil	CY
Item No. 1012	Transportation and Disposal of Contaminated Soil	TON
Item No. 1014	Import and Place Clean Soil	CY

SP-4.07 DEMOLITION OF EXISTING STRUCTURES:

Payment shall be made under:

Item No. 1004	Demo Existing Structures	LS
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SP-5.01 UTILITY PROTECTION CONSIDERATIONS:

The Contractor shall protect all utilities and other facilities within and adjacent to the construction area, unless a utility firm has conclusively indicated, or such is shown on the plans, that the certain adjustment, removal, reconstruction, or protection of the utility's facility will be performed by that respective utility.

The Contractor shall make every effort to protect all water mains. If the main is damaged or lost, the Contractor shall replace the affected line in strict accordance with the City of Tampa Water Department Specifications and Construction Standards, latest, edition, at no extra cost to the City, and he shall assure that service is maintained at all times.

The Contractor shall make every effort to protect all sanitary sewer lines. If the main is damaged or lost, the Contractor shall replace the affected line in strict accordance with the City of Tampa Wastewater Specifications and Construction Standards, latest edition, at no extra cost to the City.

It will be the Contractor's responsibility to preserve all existing sanitary sewer services without interruption--unless noted otherwise--during the construction of storm sewers or the repairs or reconstruction of sanitary sewers. When the construction of storm sewers, repair or reconstruction of sanitary sewers has been completed, all temporary connections shall be removed. Sewers shall be cleaned of all settled solids and debris removed and disposed of properly.

The cost of handling sanitary sewers during construction, including cost of all labor, materials, and equipment or other items incidental to completing the job, shall be included in the contract price as bid for the contract items and no separate payment shall be made.

It will be the Contractors responsibility to preserve all existing ditches, swales, force main, gravity main, laterals, etc., and other stormwater appurtenances and facilities pertaining thereto whether owned or controlled by City, other governmental bodies or privately owned by individuals, firms or corporations.

Any temporary measures constructed shall first be approved by the Engineer. The cost of such temporary measures shall be included in the contract price for storm sewer items and no separate payment shall be made.

The Contractor shall furnish, install, and remove sheeting and shoring and other protective measures as may be necessary to satisfactorily accomplish the construction of this project. The cost of such sheeting and shoring and other protective measures shall be included in the unit prices as bid for the storm sewer items and no separate payment shall be made.

In the event that a utility line is located within the limits shown in Diagram P of these specifications, the following exceptions may be made:

- a) If the utility is incorrectly shown on the plans and the actual location is found to be completely within the limits of Zone B, the Contractor will be eligible to receive compensation for steel sheeting and shoring to be furnished, installed, and removed to protect the portions of such utility line lying within Zone B as directed and approved by the Engineer.
- b) If the utility is incorrectly shown on the plans and the actual location is found to be within the limits of Zone A so that relocation will be necessary, as determined by the Engineer, the Contractor will be compensated for performing the relocation construction when directed and approved by the Engineer, at applicable contract unit prices.

The above provisions shall only apply to water, sanitary sewer and drainage lines, which are, in general parallel to the lines under construction.

The limits and the definitions of Zones A and B are not intended to define any excavation requirements and shall in no way cause any conflict with any authorized safety requirements or applicable governmental laws and regulations.

Utility lines which are correctly located on the plans and fall within the limits of Zone B or A of Diagram P shall not be considered as being either exception (a) or (b) and are not eligible for compensation.

Compensation for steel sheeting and shoring furnished, installed and removed shall be paid for as extra work in accordance with Article 7.02, EXTRA WORK, on Page A-8 of the Tampa Agreement when approved for use by the Engineer. Such approval shall be for its use only, and the Contractor shall have full responsibility for the design, installation, and removal of the sheeting and shoring. The Contractor shall obtain the services of a registered Professional Engineer to design and certify the sheeting and shoring plans.

SP-5.02 ADJUSTMENT OF UTILITIES AND PUBLIC SERVICE INSTALLATIONS:

Storm and sanitary sewer manhole covers, valve covers or boxes, water meter boxes, fire hydrants, and vaults located within the limits of construction of the pavement or sidewalk area to be constructed, reconstructed or overlaid shall be relocated or adjusted by the Contractor to conform with the new pavement or sidewalk elevation as a part of the work of constructing or reconstructing the pavement or sidewalk and no separate payment will be made.

Appurtenances of other utilities will be relocated or adjusted by the utility company owning or having jurisdiction over the respective utility.

SP-5.03 REMOVAL OR ADJUSTMENT OF PUBLIC UTILITIES:

The Contractor will make necessary arrangements with public utility companies for removal or adjustments of existing utilities, whether shown or not shown on the plans, where such removal or adjustment is determined by the Engineer to be essential to the performance of the required construction, provided normal construction procedures are used by the Contractor.

Relocations or adjustments requested by the Contractor on the basis of the use of a particular method of construction or a particular type of equipment shall not be considered as being essential to the construction of the project if other commonly used methods or equipment could be employed without the necessity of relocating or adjusting the utility. The Engineer will determine the responsibility for any such adjustment of utilities.

Relocations or adjustments requested for the Contractor's convenience or because of delivery of materials to the job site shall be the responsibility of and at the expense of the Contractor.

The Contractor shall be required to coordinate its activities with relocation work by the utilities. This schedule may be adjusted to "fit" the Contractor's proposed schedule, but it will include periods during which the Contractor's ability to perform work in the relocation area will be limited, with no additional compensation.

SP-5.04 UNDERGROUND ELECTRICAL

The Contractor shall provide all labor, equipment, and other incidentals necessary to install 2-inch, 4-inch, and 6-inch diameter "SCH 40" PVC pipe and appurtenances at the locations shown on the Utility Adjustment Plans. The material is being furnished by Tampa Electric Company (TECO) including the PVC Conduit Pipe, Couplings, Elbows, Glue, and Mule Tape (aka Pull Tape). The Contractor is required to pick up the material at the TECO storage yard at the NE corner of 78th Street and Palm River Road. TECO is requesting that the contractor provide 45 days' notice prior to the date the contractor wants the material so they can order it and have it on-site for the day when the contractor desires to pick it up. The cost of transporting the material to the job site shall be included in the unit price for installing the conduit.

Where shown on the plan, the Contractor shall "Stub-out" the conduit runs aboveground at each light pole location and at the locations of future handholes to be installed by TECO. Mule tape shall be installed with compressed air after the complete installation of conduit with the appropriate size mandrel or "rabbit" blown through the conduit with mule tape attached to it. After installation of each stub-out, the pipes shall be supported by tying to a wooden or metal stake and the ends of pipe above ground shall be sealed off from the elements.

The cost for installing the conduits shall also include the capping of existing service conduits indicated in the plans to be abandoned.

Payment shall be made under:

Item No. 7000	Electrical	LS
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SP-6.01 USE OF CITY WATER SYSTEM:

A Tampa Water Department portable meter shall be utilized when obtaining water from the City system. The Contractor will be responsible for obtaining the meter from the City and no separate payment will be made for the meter or water usage.

SP-6.02 WATER MAIN CONSTRUCTION:

All materials and workmanship shall be in accordance with the Specific Provisions, Contract Pay Items, Construction Details, & Material Specifications for Water Main Relocation (WR) made a part of these specifications. The Contractor shall also comply with any applicable sections of the City of Tampa Water Department Technical Specifications and Construction Standards and Materials Specifications, latest edition available from the Tampa Water Department, with the exception that pipe joint gaskets shall be made of EPDM Rubber.

Use only brass or cast-iron fittings for 3" and less water main tapped connections. Use of galvanized fittings for 3" and less water main tapped connections are not allowed.

SP-7.01 FILLING LOW AREAS WITHIN CITY LIMITS:

The Contractor under Sec. 21-27 (Permit Requirements) of the City of Tampa Code is prohibited from filling any area public or private (except where shown on the construction plans) within the project limits or anywhere within the City limits without a permit.

For filling and/or grading any area, the owner of such area shall obtain a permit from the Stormwater Department, City of Tampa. The owner shall submit existing and proposed contour plans of the area to be filled and the adjacent land for determination if a permit could be issued. Drainage patterns cannot be altered to the detriment of neighboring property owners or public rights-of-way.

Concurrently the permit application will be reviewed by the Parks Department. The Contractor will be required to verify with City of Tampa Transportation Department the extent of the work covered under the Right-of-Way use permit and seek additional permits from the City of Tampa as necessary.

The Contractor shall not deposit any fill material within the City limits without an approved permit. A copy of the permit shall be submitted to the Engineer, by the Contractor prior to any filling or grading operation.

SP-7.02 ENVIRONMENTAL PROTECTION:

The Contractor will be held liable for the violation of any and all environmental regulations. Violation citations carry civil penalties, and in the event of willful violation, could result in criminal penalties. Even though permits are issued to the City does not relieve the Contractor in any way of its environmental obligations and responsibilities associated with environmental protection under the law.

The City will secure the NPDES permit prior to commencement of construction. The contractor will be responsible for compliance with the conditions of the permit. The conditions of the permit may include and are not limited to: installation, maintenance of erosion control devices and other best management practices and filing a NPDES Stormwater Notice of Termination with the FDEP upon completion of construction and once stormwater discharges associated with construction activity have ceased.

SP-7.03 REINFORCED CONCRETE PIPE/BOX:

All reinforced concrete pipe, storm drain, and sewer pipe, all reinforced concrete elliptical pipe and all pre-cast reinforced concrete box sections shall be inspected and accepted by a testing laboratory approved by the Engineer.

Each pipe/box shall bear the stamp of acceptance of the testing laboratory and the Engineer shall be supplied with a copy of each inspection report, including a certification of "D-load", absorption test and conformance to the dimensional and all other designations of ASTM specifications. The cost of such inspection services shall be included in the unit prices for the respective pipe/box items.

Unless specified otherwise on plans or specifications, or directed by the Engineer, all storm sewer and culvert pipes shall be ASTM Class III, B wall thickness. All steel shall be grade 60.

All joints in elliptical concrete pipe and round R.C.P. shall be provided with filter fabric or concrete jacket as per FDOT Standard Index No. 280 and as directed by the Engineer. Filter fabric shall be provided at all joints, except the last two joints not supported by a structure; these joints shall be provided with a concrete collar.

The cost of the filter fabric jackets and concrete collars shall be included in the unit cost of pipe. No separate payment will be made for such jackets or collars.

All round and elliptical reinforced concrete pipe and all pre-cast concrete box sections shall be manufactured and installed without lift holes. The Contractor shall install the pipe/box with the use of slings, hooks or other methods approved by the Engineer.

All round and elliptical reinforced concrete pipe shall be manufactured without visible corrugations on the internal wall. Any pipe with visible corrugations on the internal wall shall be rejected.

The City does not require stormwater pipes to be televised and/or laser profiled, nor does the City allow resilient connectors.

Prior to any putting the system into operation or allowing the flow of any discharges, the stormwater system shall be cleaned thoroughly of soil, debris, and any fine particles, subject to the Engineer's approval.

The Contractor shall provide all labor, equipment, and materials to furnish and install the reinforced concrete pipe. The furnish and installation of the reinforced concrete pipe shall include, but may not be limited to:

1. Excavating the trench and removal of excess material if necessary;
2. Maintaining the trench which shall include de-watering and sheeting and bracing as required by OSHA or as directed by the Engineer;
3. Cleaning dirt and foreign material from within pipe and bell;
4. Furnishing and installing approved pipe and pipe shorts as part of the pipeline;
5. Backfilling, compaction and consolidation shall be done in accordance with the requirements of the FDOT Standard Specifications for Road and Bridge Construction;
6. All necessary restoration including but not limited to sod, landscaping, curb, sidewalk, and restoring the roadway or right-of-way in conformance with the Standard Details;
7. Cleaning up and removing excess water main pipe and appurtenances;

Payment shall be made under:

Item No. 3001	12" Storm Pipe	LF
Item No. 3002	8" Storm Pipe	LF
Item No. 3003	6" Storm Pipe	LF
Item No. 3004	4" Storm Pipe	LF

SP-7.04 DRAINAGE STRUCTURES:

1. All inlets and manholes will be constructed according to the FDOT Standard Specifications, Section 425 and according to the specifications herein. All manholes shall be traffic bearing type.
 - a) The minimum distance from the top of the opening for the highest pipe to the bottom of the top slab shall be ten inches (10"); 12"+ from top of pipe to bottom of top slab, before "stack" is used.
 - b) The minimum diameter for stacks shall be as follows:
 - Twenty-four inches (24") for four feet (4') heights, Thirty-six inches (36") for four feet (4') to six feet (6') heights, and Forty-eight inches (48") for heights over six feet (6').
 - The stacks shall be symmetrical about the openings, five inches (5") minimum wall thickness, reinforced, and keyed (unless constructed of brick) as per the appropriate FDOT standard.
 - c) The minimum distance between pipe openings shall be nine inches (9").
 - d. For four-sided structures having openings in one or more corners, individual shop drawings must be submitted for prior approval.
2. If warranted by field conditions and directed by the Engineer, the Contractor shall, at such locations, construct rectangular brick drainage structures (in place of concrete drainage structures), according to the standards specified below:

Brick construction shall be as follows:

 - a. Wall thickness minimum eight inches (8") up to eight feet (8') height, unless specified otherwise.
 - b. Wall thickness minimum twelve inches (12") up to twelve feet (12') height, unless specified otherwise.
 - c. Brick shall be laid in 1:2 (Portland cement-sand) mortar.
 - d. Before laying the bricks in mortar, the bricks shall be thoroughly sprinkled with clean water (not to saturation extent).
 - e. Brick for manhole and inlet structures shall be laid in stretcher courses, with every sixth course a header course.
 - f. All brick structures shall be plastered smooth inside and outside with 1/2" thick, 1:2 (Portland cement-sand) mortar.
 - g. No "unsound" brick shall be used. As a test, if a light hammer blow, with the brick held lightly in hand, does not produce a uniform crisp ringing sound, the brick shall be construed to have crack(s), or otherwise unsound and shall be rejected.
 - h. All bricks shall be solid clay.
3. No additional compensation shall be paid for brick structures.
4. For all types of manholes, the top and bottom slabs shall be as per applicable FDOT standards, even if brick is allowed to be used in the manhole walls. The following criteria shall apply to slab thicknesses and steel reinforcements:

- a. Top and bottom slabs shall have the same thicknesses and reinforcements in any manhole structure.
 - b. The minimum slab thickness and reinforcement shall be: 8" thick and #6 bars at 6" centers both ways.
 - c. 4'x6' or larger manholes including circular manholes with inside diameter of 5.0' or larger shall have 10" thick slabs with #7 bars at 6" centers both ways.
 - d. Unless specified on the plans, four sided structures with both inside dimensions in excess of 8.0' and circular structures with inside diameter in excess of 8.0' shall not be covered by D.O.T. and the above criteria.
5. All grate inlets shall conform to the City of Tampa design standards.
 6. Grates on inlets, as well as all other structures, shall be Traffic Bearing Type, unless specified otherwise, and subject to approval of the Engineer. All grate inlets shall be fitted with an approved metal frame at the top to seat the grates.
 7. All Type-P and Type-J manholes shall be bid at one average unit price regardless of size and shape unless indicated otherwise in the proposal.
 8. Vertical support columns (one in case of Type 5 inlet) shall be constructed by the contractor, as a part of the FDOT Type 5 and 6 curb inlets, where and as directed by the Engineer.
 9. Side openings in curb and grate type inlets may be specified in the plans to meet site conditions. The Contractor shall provide such openings as part of the required work and no separate payment shall be made.
 10. When precast drainage structures are requested as substitutions for poured in place concrete structures, Contractor shall meet the following additional requirements:
 - a. Minimum height of the base structure (manhole or inlet barrel) unless restricted by design, shall be 5'-0" before extending the structure height by another precast "barrel". The minimum height of the top (extension) precast "barrel" shall be 1'-6". "Barrel" extensions of less than 1'-6" height shall be cast in place with continuous reinforcement.
 - b. Four-side structures may be considered as an alternate to circular structures, but not the reverse.
 - c. For City type curb inlets, unless specified otherwise, directed by the Engineer, or to accommodate larger pipes, the Contractor may use 3'x4' (inside dimensions) substructures. This structure shall have same slab and wall thicknesses and steel reinforcing as specified for "Type E" grate inlet.
 - d. When circular structures are precast in accordance with ASTM C478, the following limitations will apply:
 - (i) Maximum inside diameter shall not exceed 96".
 - (ii) Minimum wall thickness for 42" and 48" diameter substructures shall be 6"; 7" for 72" diameter, 8" for 84" and 96" diameters.
 - (iii) Vertical reinforcement in walls shall be equal in area to the required circumferential reinforcement area. Reinforcement spacing shall not exceed 12" O.C. in either direction.
 - e. The location of the pipe holes and adequate basic substructures height, unless directed otherwise by the Engineer, shall be the responsibility of the Contractor.
 - f. Contractor shall submit shop drawings only as specified below:

- (i) One each-typical for different type of structures.
 - (ii) For structures directed by the Engineer, and/or requiring change with respect to design plans, or as otherwise required by these specifications.
- g. No compensation shall be paid to the Contractor for precast drainage structures which are unusable due to site conditions or changes in plans.
- h. Provide material testing acceptance reports by a licensed private laboratory verifying:
- (i) That the structures were constructed in accordance with detail shown on the plans and/or typical Drawings.
 - (ii) Specific reference shall be made to the exact design criteria adhered to; if more than one, identify which criteria applies to which structures.
 - (iii) Identify the project title, project number, file number, date cast, structure, plan sheet number and station.
 - (iv) Reinforcement size, spacing, amount and cover.
 - (v) Concrete placement, curing and strength.
 - (vi) The testing laboratory stamp shall be placed on each structure prior to shipment.
11. All manhole and inlet structures shall be set on a minimum of a six-inch thick layer of compacted # 57 size coarse aggregate unless noted otherwise in the plans or specifications or unless the Engineer determines a thicker layer is required due to soil and/or water conditions. The layer of stone shall be wrapped in a filter fabric in accordance with SP-7.05 of these Specifications. Payment for the stone shall be included in the price of the structure.
12. Yard drain inlets shall be PVC structures as manufactured by Nyloplast or approved equivalent, with cast iron frame and grates.
13. All excavation for structures is included under these pay items.

Payment shall be made under:

Item No. 3001	15" PVC Inlet	EA
Item No. 3003	12" PVC Inlet Ped Grate	EA
Item No. 3007	Cleanout	EA
Item No. 3008	3" EZ-FLOW Underdrain	LF

SP-7.05 SPECIALTY DRAINAGE STRUCTURES

Payment shall be made under:

Item No. 3007	Cleanout	EA
Item No. 3008	3" EZ-FLOW Underdrain	LF

SP-7.06 STANDARD FOR FILTER FABRIC:

Unless specified otherwise on the plans, filter fabric shall be nonwoven fabric per FDOT Standard Specification, Sections 514 and 985. Payment for furnishing and placing the filter fabric shall be included in the contract price for the item or items to which it is incidental.

SP-7.07 CONNECTION TO EXISTING INLET OR MANHOLE:

The Contractor shall provide all labor, equipment and materials necessary to connect the proposed pipeline into an existing inlet or manhole as shown on the Plans, or as specified, and directed by the Engineer.

The work includes all excavation, breaking into the existing structure, closing of the existing slot, removal and disposal of rubble and excess materials, installation of storm sewer pipe, sealing the voids around the pipe, backfilling, compacting and all other work incidental to connection to existing inlet or manhole.

The cost of this work shall be included in the contract unit price for the size of pipe installed and no separate payment shall be made.

SP-7.08 EROSION CONTROL:

The Contractor shall implement erosion control measures as shown on the Construction Plans. The Contractor shall be required to submit an erosion control plan to the Engineer at the time of the pre-construction conference.

The erosion control plan shall indicate in detail all measures proposed by the Contractor to meet its erosion control obligations, including all items required to meet permitting conditions for the project. Any phasing of the erosion control plan shall also be shown.

Inspection reports shall be done by the Engineer in compliance with the SWPPP, and the Contractor will be notified of any activities that are not in compliance. In accordance with the SWPPP, the Contractor is required to initiate any necessary repairs within 24 hours of notification of Non-compliance. If the Contractor does not comply, then the Contractor shall cease work on the project until the repairs are made to the satisfaction of the Engineer.

The cost of providing, revising, updating, implementing the erosion control plan and maintaining of the Best Management Practices for the work on E Madison Street detailed in the plan shall be made under:

Item No. 1003	Staked Silt Fence	LF
Item No. 1008	Erosion Control/NPDES Compliance	LS

SP-7.09 DRAINAGE STRUCTURE AND PIPE BEDDING:

The Contractor shall furnish and install Bedding Material consisting of compacted FDOT #57 crushed stone material as approved by the Engineer.

For Drainage Structures:

- All manhole and inlet structures shall be set on a minimum of a six-inch thick layer of compacted # 57 size coarse aggregate unless the Engineer determines a thicker layer is required due to soil and/or water conditions. The layer of stone shall be wrapped in a filter fabric.

For Pipe Bedding:

- All pipe shall be set on City of Tampa Class B bedding consisting of a layer of compacted #57 size coarse aggregate the width of the trench at a depth that is a minimum of 4” below the outside diameter of the pipe to a height of one half of the outside diameter of the pipe. The bedding and pipe shall be wrapped in filter fabric and AASHTO Class A-1 or A-3 sands shall be placed the width of the trench to a height of 6” above the outside diameter of the pipe.

All filter fabric shall be in accordance with SP-7.06 of these specifications. Payment for the bedding material shall be included with the unit price for the structure or pipe contract item.

SP-8.01 WATER:

The cost shall include furnishing, installation and all required appurtenances for completing the work.

Payment shall be made under:

Item No. 4001	1" Water Service	LF
Item No. 4002	1" RPZ Irrigation Backflow Device	EA
Item No. 4003	1" Service Connection	EA
Item No. 4004	Quick Couplers	EA
Item No. 4005	New Water Meter	EA

SP-8.01 GRADING:

Payment shall be made under:

Item No. 1006	Imported Fill Dirt	CY
Item No. 1007	Final Grade	LS

SP-8.02 PAVEMENT SURFACES:

Where shown on the plans the Contractor shall meet existing sidewalks, driveways and parking areas (concrete or asphalt) when possible with the proposed street replacement. At locations where existing sidewalks and driveways are not at the same elevations as the new grades, the Contractor may be required to reconstruct a portion of the sidewalk or driveway as directed by the Engineer. There will be no payment if existing sidewalks or driveways must be reconstructed due to negligence of the Contractor.

New pavement surfaces shall meet applicable sections of the FDOT Standard Specifications (2017) and the requirements of Sections 321316.13 – Saw-Cut Concrete Sidewalk, 321316.20 Shell Aggregate Concrete Sidewalk. Any areas of impact to existing pavers shall be reinstalled according to the appropriate details on the streetscape design plans.

Payment shall be made under:

Item No. 2017	Sidewalks: Saw-Cut and Shell Aggregate	SF
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SP-8.03 PRIME/TACK COAT:

Refer to applicable sections of the FDOT Standard Specifications (2013).

SP-8.04 BASE MATERIAL:

Refer to applicable sections of the FDOT Standard Specifications (2017).

SP-8.05 PEDESTRIAN RAMPS:

Refer to applicable sections of the FDOT Standard Specifications (2017).

SP-8.06 CONCRETE CURB AND CURB AND GUTTER

Refer to applicable sections of the FDOT Standard Specifications (2017).

SP-8.07 TURNOUTS

Concrete turnouts shall meet FDOT design standards and standard specifications. Refer to applicable sections of the FDOT Standard Specifications (2017).

SP-9.01 RESTORATION OF LANDSCAPING WITHIN RIGHT-OF-WAY:

Existing landscaping including small trees and shrubbery, walkways, planters, and irrigation systems may need to be removed or relocated to facilitate construction. The Contractor shall make provision for relocating and/or reconstructing any existing landscaping items as directed by the Engineer.

Cost of removing, relocating, and/or reconstructing the above items shall be included in the lump sum price for Clearing and Grubbing, and no separate payment shall be made.

Payment shall be made under:

Item No. 1002	Clearing and Grubbing	AC
---------------	-----------------------	----

SP-9.02 TREE PROTECTION:

The Contractor shall make provisions for tree protection to the satisfaction of the Engineer prior to any excavation or clearing and grubbing. All applicable site inspections by the City of Tampa Parks Department and all permits required for tree work shall be obtained by the Contractor prior to commencing work.

Tree barricades shall be constructed and maintained at the locations indicated on the Demolition Plan and/or as directed by the Engineer. Generally, barricades are to be placed ten (10) feet from the trunk of each protected tree, but a minimum of six (6) feet is acceptable when in conflict with the proposed construction and when approved by the City.

Barricades shall be constructed of commercially available pine lumber, as follows: Vertical members shall be 2" x 2" or larger, generally spaced six (6) feet apart. Horizontal members shall consist of one (1) 1" x 2" board.

Payment for tree protection shall be included in the lump sum price bid for Clearing and Grubbing and no separate payment shall be made.

Payment shall be made under:

Item No. 1002	Clearing and Grubbing	AC
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SP-9.03 TREE TRIMMING:

The Contractor shall provide the services of an approved Certified Arborist when it is necessary to trim or cut a branch from a tree.

Payment for tree cutting or trimming shall be included in the lump sum price bid for clearing and grubbing and no separate payment shall be made.

Payment shall be made under:

Item No. 1002	Clearing and Grubbing	AC
---------------	-----------------------	----

SP-9.04 LANDSCAPE INSTALLATION:

The Contractor shall provide all labor, equipment and materials necessary to furnish and install plant material and mulch as shown on the Planting and Irrigation Plans. The work shall be in accordance with City of Tampa Parks Department Specification Section 32 90 00 that is made a part of these specifications.

Any costs associated with the work that is not directly provided for by a bid item, but incidental to completion of the Landscaping, shall be prorated and included in the various contract pay items, and no separate payment shall be made.

Payment shall be made under:

Item No. 8001	White Crape Myrtle	EA
Item No. 8002	Live Oak	EA
Item No. 8003	Sabal Palm - Regenerated	EA
Item No. 8004	Mammey Croton	EA
Item No. 8005	Nora Grant Ixora	EA
Item No. 8006	Xanadu Philodendron	EA
Item No. 8007	Agapanthus	EA
Item No. 8008	Liriope	EA
Item No. 8009	White Fountain Grass	EA
Item No. 8010	Dwarf Asian Jasmine	EA
Item No. 8011	Confederate Jasmine	EA
Item No. 8012	Heliconia	EA
Item No. 8013	Muhly Grass	EA
Item No. 8014	Celebration Bermuda Sod	SF
Item No. 8015	Hardwood Mulch	CY
Item No. 8016	Structural Soil	CY
Item No. 8018	90-Day Maintenance	LS

Planting Soil Mix shall be subservient to each individual planting item.

SP-9.05 IRRIGATION SYSTEM CONSTRUCTION:

The Contractor shall provide all labor, equipment and materials necessary to construct irrigation systems as shown on the Landscape and Irrigation Plans. The work shall be in accordance with the City of Tampa Parks Department Specification Section 02440 that is made a part of these specifications.

Payment shall be made under:

Item No. 8017	Irrigation System	LS
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SP-10.01 EXISTING PUBLIC FACILITIES:

Existing public facilities as defined in G-1.03 that are removed by the Contractor to facilitate construction operations shall be properly stored to protect from damage and returned in good condition to a location designated by the Engineer. These items shall also include, but not be limited to, all public benches, light poles, shelters, roadway signs, etc., and removal/reinstallation of all public facilities shall be considered incidental to the cost of construction and no separate payment will be made.

SP-10.02 WATER FOR DUST CONTROL:

The work specified in this section consists of the application of water within the limits of construction or on streets used as detour routes in connection with the project. All dust control operations shall be performed by the Contractor at the time, location, and in the amount ordered by the Engineer. The application of water shall be under the control of the Engineer at all times. No water will be used to control dust without authorization of the Engineer. Water ordered by the Engineer to be applied on Saturdays, Sundays, or legal holidays will be considered part of the required work and no additional compensation will be allowed therefore.

Water used for dust control shall be free from pollution to the extent that its use will not constitute a nuisance or health hazard to anyone living in close proximity to the areas where it is used.

Cost of providing water shall be considered incidental to the project and included in the lump sum price for Maintenance of Traffic, and no separate payment shall be made.

SP-10.03 RESTORATION OF EXISTING FENCE:

The Contractor shall re-establish any existing fence that was damaged, destroyed, or removed in the course of the construction project, and no separate payment will be made.

SP-10.04 RESTORATION OF MONUMENTATION:

The Contractor shall re-establish any permanent survey or mapping monumentation, which is disturbed or destroyed in the course of the construction project, and no separate payment will be made.

SP-11.00 SIGNAGE:

Refer to applicable sections of the FDOT Standard Specifications (2010). Replace if necessary at locations shown in the Construction Plans.

Payment shall be made under:

Item No. 6028	Single Post Sign (F&I)	EA
Item No. 6029	Relocate Existing Sign (Single Post)	EA

SP-12.01 SITE FURNISHINGS

Refer to drawings for specifications. Payment shall include furnish and installation and be made under:

Item No. 6001	Stacked Roof Performance Pavilion	EA
Item No. 6002	Stacked Roof (Large) Entertainment Pavilion	EA
Item No. 6003	Dog Park Shade Pavilion	EA
Item No. 6004	Dog Park Entry Sign	EA
Item No. 6005	Dedication Plaque and Sign	EA
Item No. 6006	Lighting - Pole Fixture & Appurtenances	EA
Item No. 6007	Lighting - LED Lights in Pavilions	EA
Item No. 6008	Park Sign	EA
Item No. 6009	Decorative Fences and Gates	EA
Item No. 6010	Park Bench – Stay 35	EA
Item No. 6011	Park Bench Backless – Stay 35	EA
Item No. 6012	Concrete Form Bench – Lungo Mare	EA
Item No. 6013	Concrete Backless Bench – Twig	EA
Item No. 6014	Lounge Chair – Chill	EA
Item No. 6015	Play Equipment	EA
Item No. 6016	Drinking Fountain	EA
Item No. 6017	Drinking Fountain with Dog Bowl	EA
Item No. 6018	Dog Pick Up Station	EA
Item No. 6019	Bicycle Rack - Loop	EA
Item No. 6020	Picnic Table – Urban Space	EA
Item No. 6021	Trash Receptacle - Pitch	EA
Item No. 6022	Shuffleboard Scoreboard	EA
Item No. 6023	Skateboard Deterrent: Concrete Backless Bench	EA
Item No. 6024	Adjustable Height Volleyball Net Sleeving	EA
Item No. 6025	Golf Putting Green w/Flags and Holes w/Cups	EA
Item No. 6026	Tree Grates	EA

SP-12.02 PAVING

Refer to drawings for specifications. Payment shall be made under:

Item No. 2002	Heavy Sandblast Finish Concrete Sidewalk – 6” depth	SF
Item No. 2003	Heavy Sandblast Finish with Special Aggr – 6” depth	SF
Item No. 2004	Saw-Cut Concrete – 6” depth	SF
Item No. 2005	Synthetic Lawn: K-9 Turf	SF
Item No. 2006	Synthetic Lawn: Golf Fringe Turf Style	SF
Item No. 2007	Synthetic Lawn: Pin Seeker Turf Style	SF
Item No. 2008	Multi-Sport court	SF
Item No. 2009	Shuffleboard Court	EA
Item No. 2010	Bonded Rubber Play Surface	SF
Item No. 2011	6” Concrete Band	LF
Item No. 2012	12” Concrete Band	LF
Item No. 2013	Concrete Seat Wall	LF
Item No. 2014	Shell Paving with Weed Fabric	SF
Item No. 2015	Metal Edging	LF
Item No. 2016	D-Curb at Back Property Line	LF

SP-12.03 PUBLIC ART ALLOWANCE

An owner’s public art allowance has been included to cover any unforeseen costs regarding the installation of public art for this project. This allowance is to be used at the sole digression of the Engineer.

Notwithstanding anything herein to the contrary, any charge or increase to allowance amounts must be approved by the City in advance and in writing. If not so approved, the charge will be deemed to be at the Firm’s sole cost without reimbursement. The only allowance allowed are those clearly identified in the Agreement (including this and other incorporated exhibits). Any remaining allowance amounts shall belong 100% to the City.

Payment shall be made under:

Item No. 9002	Public Art Allowance	LS
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SP-13.0 CONTINGENCY

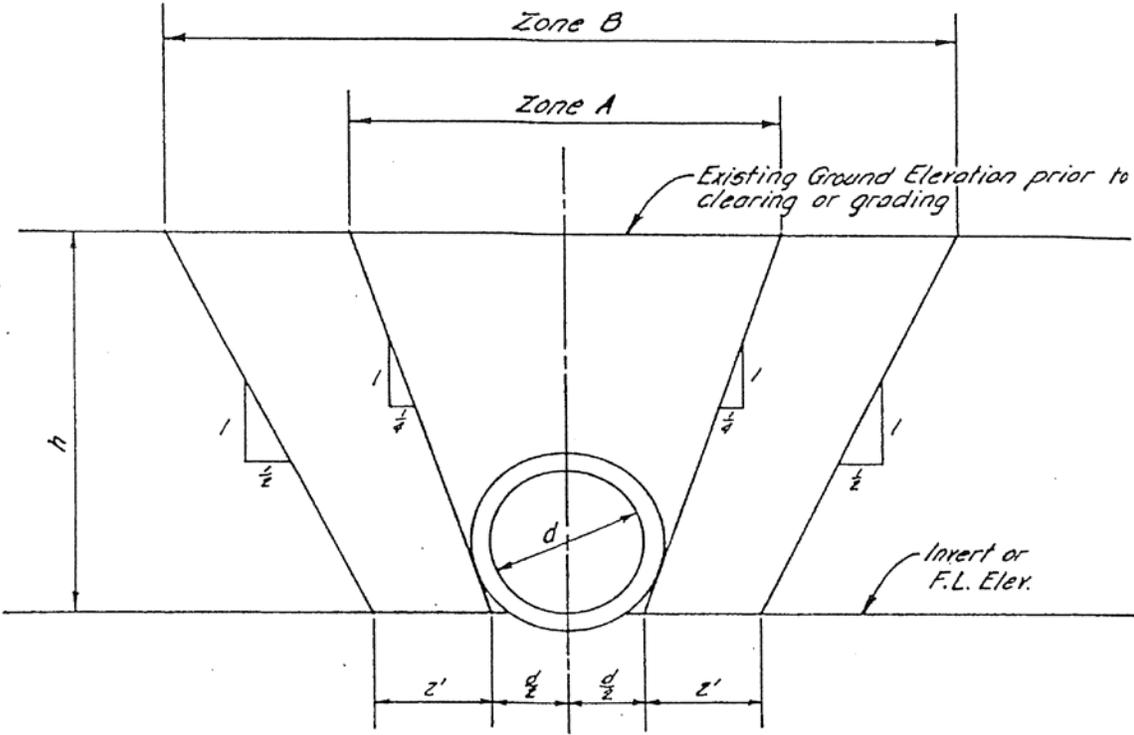
The contractor shall include a Two Hundred Seventy - Five Thousand Dollar (\$275,000) contingency sum, to be included as part of the total bid amount for this contract. The contingency is for the purpose of compensating the contractor for any incidental work that may arise as construction operations proceed and was not addressed as part of the original work portrayed in the plans and specifications.

The contingency sum is an upset limit. Any amount of the contingency shall be paid only after negotiation and approval by the Engineer.

Notwithstanding anything herein to the contrary, any charge or increase to contingency amount must be approved by the City in advance and in writing. If not so approved, the charge will be deemed to be at the Firm’s sole cost without reimbursement. The only contingency allowed are those clearly identified in the Agreement (including this and other incorporated exhibits). Any remaining contingency amounts shall belong 100% to the City.

Payment shall be made under:

Item No. 9001	Contingency	LS
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$A = d + 0.5h$
 $B = 4' + d + h$

d = Inside diameter of storm sewer pipe or inside width of box culvert.

h = Depth per existing gravel to invert or flow line elevation.

DIAGRAM P

END OF SECTION SPECIFIC PROVISIONS



Page 1 of 2 –DMI Payment
City of Tampa – DMI Sub-(Contractors/Consultants/Suppliers) Payments
(FORM MBD-30)

[] Partial [] Final

Contract No.: _____ WO#,(if any): _____ Contract Name: _____

Contractor Name: _____ Address: _____

Federal ID: _____ Phone: _____ Fax: _____ Email: _____

GC Pay Period: _____ Payment Request/Invoice Number: _____ City Department: _____

Total Amount Requested for pay period: \$ _____ Total Contract Amount(including change orders):\$ _____

Type of Ownership - (F=Female M=Male), BF BM = African Am., HF HM = Hispanic Am., AF AM = Asian Am., NF NM = Native Am., CF CM = Caucasian S = SLBE

Type	Company Name Address Phone & Fax	Total Sub Contract Or PO Amount	Amount Paid To Date	Amount To Be Paid For This Period
Trade/Work Activity			Amount Pending Previously Reported	Sub Pay Period Ending Date
[]Sub []Supplier				
Federal ID				
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$

(Modifying This Form or Failure to Complete and Sign May Result in Non-Compliance)

Certification: I hereby certify that the above information is a true and accurate account of payments to sub – contractors/consultants on this contract.

Signed: _____ Name/Title: _____ Date: _____



Page 2 of 2 – DMI Payment

Instructions for completing The DMI Sub-(Contractors/Consultants/ Suppliers) Payment Form (Form MBD-30)

This form must be submitted with all invoicing or payment requests where there has been subcontracting rendered for the pay period. If applicable, after payment has been made to the subcontractor, “Waiver and Release of Lien upon Progress Payment”, “Affidavit of Contractor in Connection with Final Payment”, or an affidavit of payment must be submitted with the amount paid for the pay period. The following will detail what data is required for this form. The instructions that follow correspond to the headings on the form required to be completed. **(Modifying or omitted information from this form my result in non-compliance).**

- **Contract No.** This is the number assigned by the City of Tampa for the bid or proposal.
- **W.O.#** If the report covers a work order number (W.O.#) for the contract, please indicate it in that space.
- **Contract Name.** This is the name of the contract assigned by the City of Tampa for the bid or proposal.
- **Contractor Name.** The name of your business.
- **Address.** The physical address of your business.
- **Federal ID.** A number assigned to a business for tax reporting purposes.
- **Phone.** Telephone number to contact business.
- **Fax.** Fax number for business.
- **Email.** Provide email address for electronic correspondence.
- **Pay Period.** Provide start and finish dates for pay period. (e.g. 05/01/13 – 05/31/13)
- **Payment Request/Invoice Number.** Provide sequence number for payment requests. (ex. Payment one, write 1 in space, payment three, write 3 in space provided.)
- **City Department.** The City of Tampa department to which the contract pertains.
- **Total Amount Requested for pay period.** Provide all dollars you are expecting to receive for the pay period.
- **Total Contract Amount (including change orders).** Provide expected total contract amount. This includes any change orders that may increase or decrease the original contract amount.
- **Signed/Name/Title/Date.** This is your certification that the information provided on the form is accurate.
- **See attached documents.** Check if you have provided any additional documentation relating to the payment data. Located at the bottom middle of the form.
- **Partial Payment.** Check if the payment period is a partial payment, not a final payment. Located at the top right of the form.
- **Final Payment.** Check if this period is the final payment period. Located at the top right of the form.

The following instructions are for information of any and all subcontractors used for the pay period.

- **(Type) of Ownership.** Indicate the Ethnicity and Gender of the owner of the subcontracting business or SLBE.
- **Trade/Work Activity.** Indicate the trade, service, or material provided by the subcontractor.
- **SubContractor/SubConsultant/Supplier.** Please indicate status of firm on this contract.
- **Federal ID.** A number assigned to a business for tax reporting purposes. This information is critical in proper identification of the subcontractor.
- **Company Name, Address, Phone & Fax.** Provide company information for verification of payments.
- **Total Subcontract Amount.** Provide total amount of subcontract for subcontractor including change orders.
- **Amount Paid To Date.** Indicate all dollars paid to date for the subcontractor.
- **Amount Pending, Previously Reported.** Indicate any amount previously reported that payments are pending.
- **Amount To Be Paid for this Period.** Provide dollar amount of dollars requested for the pay period.
- **Sub Pay Period Ending Date.** Provide date for which subcontractor invoiced performed work.

Forms must be signed and dated or will be considered incomplete. The company authorized representative must sign and certify the information is true and accurate. Failure to sign this document or return the document unsigned can be cause for determining a company is in non-compliance of Ordinance 2008-89.

If any additional information is required or you have any questions, you may call the Minority Business Development Office at (813) 274-5522.

0 1 2 3 4 5 6 7 8

Sign Information

Building a Better Tampa

Downtown Riverwalk
Creates a waterfront pedestrian walkway connecting the south edge of the CapTrust building with MacDill Park.

\$1.5 Million investment
 Scheduled for completion in October, 2012

Orion Marine Construction, Inc.

Improvement Project



Mayor Bob Buckhorn

Project Contact:
 Albert Calloway
 Contract Administration
 City of Tampa
 Albert.Calloway@tampagov.net

For information call:
 (813) 635-3400



Building a Better Tampa

David L. Tippin Water Treatment Facility Caustic Soda Piping Improvements

Project provides for improvements at the David L. Tippin Water Treatment Facility to improve the reliability and safety of the Sodium Hydroxide System of the water distribution system within the facility.

\$TBD investment
 Scheduled for completion in TBD 2014

TBD

Colors

Blue: Sherwin Williams Naval SW6244
 Green: Sherwin Williams Center Stage SW6920
 White: Sherwin Williams Pure White SW7005

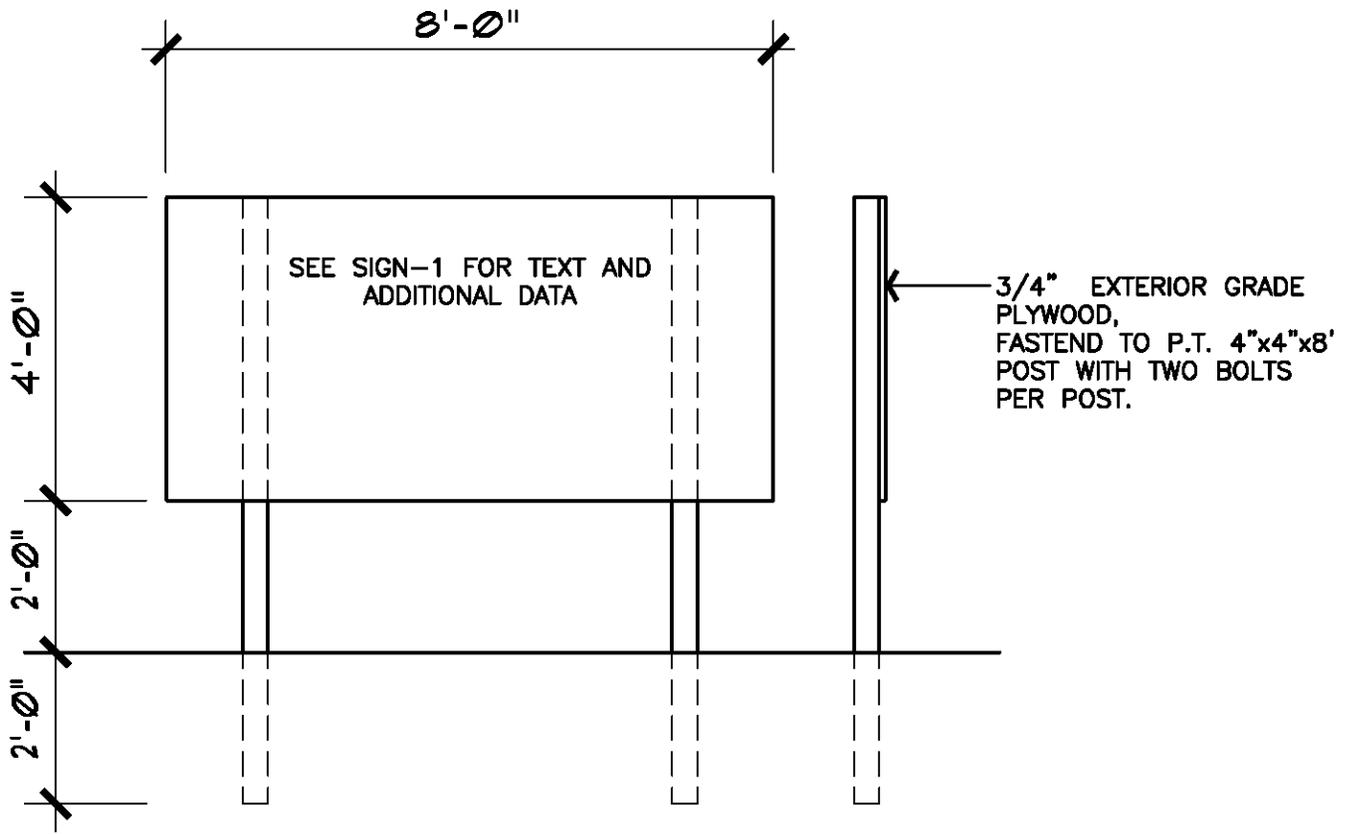
SIGN EXAMPLE ONLY GRAPHIC TO BE DEVELOPED BY CONTRACTOR

3"

scale: 3"

Font

Franklin Gothic



TECHNICAL SPECIFICATIONS FOR THE MANAGEMENT OF CONTAMINATED SOIL

Madison Street Park Portions of Parcel 1 & 2, and Parcel 3
1224 East Madison Street, Tampa, Hillsborough County City of Tampa / Contract No: 16-D-61901
November 30, 2018

These Technical Specifications have been prepared by the City of Tampa's consultant, Terracon Consultants, Inc. (Terracon), for the purpose of detailing the management of non-hazardous petroleum hydrocarbon and Resource Conservation and Recovery Act (RCRA) metal contaminated soil with the development of the proposed Madison Street Park. The proposed Madison Street Park is located at 1224 East Madison Street, Tampa, Hillsborough County.

These Technical Specifications apply to a portion of Parcel 1 and 2, because the Developer TM Tampa, LLC, in accordance with City of Tampa Resolution 2016-660, removed and disposed of contaminated soil, installed a drainage facility (stormwater vault and associated piping), and backfilled with clean fill material. The remaining contaminated soil surrounding the stormwater vault in Parcel 1 and 2, and the contaminated soils within Parcel 3 must be managed as detailed in these Technical Specifications.

The Contractor will be responsible for all work regardless of whether performed by the prime Contractor or by other subcontractors. All labor, materials, equipment, and supplies necessary to complete the work shall be provided by the Contractor. All work must be performed in accordance with standard industry procedures and Florida Department of Environmental Protection (FDEP) Standard Operating Procedures.

Specific details regarding the activities required for this project are outlined below, with reference to the Contaminated Soil Management Technical Specification Drawings.

1.0 Site Description

The Madison Street Park (Site) consists of 40,075 square feet, or 0.92-acres. The Site is owned by City of Tampa and is identified by Hillsborough County Folio No. 190174-0000. The western portion of the property was formerly used as a staging area during construction of the adjacent private high-rise. The stormwater vault and associated piping were recently installed on the western portion of the site (Parcel 1 and 2).

Location: 1224 East Madison Street, Tampa, Hillsborough County. The site has access on Madison Street.

Surface Cover: The surface cover of the west portion of the site is gravel/limerock and is used for staging of equipment and supplies during construction, the surface cover on the eastern portion of the site is primarily grass.

Utilities: Contractor will be responsible to identify all utilities on the Site.

Lithology: As described in the boring logs included in the Phase II Environmental Site Assessment (ESA), prepared by Solana Environmental Associates, Inc., (Solana) dated February 2014, the general lithology of the site includes brown, gray fine sand to a depth of 24 inches below ground surface (bgs), with intermittent debris (glass, brick pieces, black sand, lime rock pieces). Below 24 inches is a clayey sand to gray clay in some areas to a white coarse sand in other areas, to a reported depth of 8 feet bgs. Depth to groundwater at the site was

documented at 5 feet bgs.

Contaminated Soil: The Phase II ESA (Solana, 2014) reported the presence of petroleum hydrocarbons and RCRA metals (arsenic, lead, chromium, cadmium, selenium) and copper in soil at concentrations exceeding the residential direct exposure soil cleanup target levels (SCTLs) provided in Chapter 62-777, Florida Administrative Code (F.A.C.). This Technical Specification has been prepared to address the management of these contaminated soils.

Contaminated Groundwater: The Phase II ESA (Solana, 2014) reported low levels of the contaminants of concern, at concentrations below the Groundwater Cleanup Target Levels (GCTLs), referenced in Chapter 62-777, F.A.C.

2.0 Contaminated Soil Management Summary

The intent of the Contaminated Soil Management Summary is to obtain closure in accordance with Chapter 62-780, F.A.C under a Risk Management Option II. The top 2-feet of soil across the site, must be excavated, disposed in accordance with the specifications provided herein, and replaced with a minimum of 2 feet of clean fill material. The minimum top 2 feet of clean fill material will serve as an engineering control to minimize direct exposure to the public. It is understood that select areas of the site will require excavation to 4 feet bgs to accommodate utility and deep excavation at foundations. These soils removed below 2 feet bgs shall be assumed contaminated and will also be required to be managed in accordance with the specification provided herein

There are portions of the Site that prohibit the removal of the 2 feet of surface soil, such as the northern portion of Parcel 1, or adjacent to the historical structure to the north of Parcels 2 and 3. Under those circumstances, where surface soil cannot be removed, an engineering control that prevents human exposure and prevents water infiltration will be required. The engineering control

is necessary to prevent access and exposure to the contaminated soil and prevent the water infiltration through contaminated soil that could contribute to groundwater contamination. The engineering control may consist of an asphalt cap, concrete cap, or other similar impermeable material. Areas that are designated for an engineering cap, in lieu of soil excavation and placement of 2 ft of clean fill material, are also required to be identified on a Site-Specific Survey.

The estimated limits of the contaminated soil excavation of the top 2-feet of soil across the site is shown on **Sheet 1** of the Technical Specification Drawings. Select areas of the site will require excavation to 4 feet bgs to accommodate utility and foundation structures, these assumed areas of excavation to 4 feet bgs are illustrated on **Sheet 1**, and a cross-section is provided as **Sheet**

2. Please note there are additional deep foundations that require excavation below 2 ft bgs and are not shown on these drawings. All soils below 2 ft bgs are assumed contaminated and will be managed in the same manner as the soils excavated from 0-2 ft bgs.

At the completion of the contaminated soil removal activities, and the subsurface utility infrastructure placement, the excavation area will be backfilled with clean fill material to the surface and will be tested for compaction, as detailed in the next Section.

3.0 Contaminated Soil Volume Estimate

The contaminated soil volume estimates consider the completion of the stormwater vault and replacement of clean fill material already completed on some of the western portions of the Site (an approximately 6,682 square foot area). The contaminated soil estimate does not include areas that are to be capped with an engineering control with no soil excavation performed.

The summary table below provides an estimate of the remaining soil that requires excavation and off-site disposal. For each of the parcels, the area of excavation within the 0-2 ft and 2-4 ft bgs interval were assessed, and then based on a 2 ft depth interval, the volume of soil to be excavated is provided. The total volume of soil to be excavated and disposed off-site is estimated at 3,093 cubic yards, or 4,311 tons.

Estimated Remaining Soil Excavation Volume by Parcel					
Units:		ft²	ft³	yd³	tons
Parcel 1	0-2 ft bgs	3536	7071	762	367
	2-4 ft bgs	338	676	25	35
Parcel 2	0-2 ft bgs	5268	10,535	390	546
	2-4 ft bgs	1,728	3,456	128	179
Parcel 3	0-2 ft bgs	24,565	49,130	1,820	2,547
	2-4 ft bgs	6,325	12,650	469	656
Total Estimated Cubic Yards				3,093	
Total Estimated Tons					4,331

Notes: ft. - feet
 yd. - yard
 bgs. - below ground surface
 A 1.4 conversion factor was used to convert yd.³ to tons

4.0 Technical Specification

The Technical Specification are based on the following tasks:

Task 1: Pre- Excavation Activities.

Task 2: Contaminated Soil Excavation and Management.

TASK 1: PRE-EXCAVATION ACTIVITIES

- 1) A site-specific Health and Safety Plan (HASP) will be prepared by the Contractor that conforms to all safety requirements per the OSHA Guidelines for Hazardous Waste Operations, 29 CFR Part 1910. All personnel working on-site shall be OSHA 40-hour HAZWOPER certified and abide by OSHA rules as listed in 29 CFR 1910, 29 CFR 1926, and OSHA General Duty Clause – Section 5, where applicable. A list of the proposed personnel to work on the project along with a copy of their current HAZWOPER certification shall be provided to the Owner. Contractor is responsible for worker safety and maintenance of traffic during construction. Contractor will provide a “competent person”, in accordance with OSHA requirements, that will be present on-site during the entire source removal activities. This “competent person” will be responsible for excavation safety, traffic control, and maintenance of traffic.
- 2) Permitting and Fees – Contractor shall obtain and provide local, city, county, and state permits for the scope of work prior to the commencement of any site preparation and source removal activities. Copy of permits must be submitted to Terracon one week prior to scheduled mobilization of the contractor.
- 3) Utility Clearance - The contractor shall be responsible for locating and marking overhead, aboveground and underground utilities. All known utilities that are present in the area of excavation or remediation will need to be clearly marked and all necessary precautions shall be taken, including but not limited to hand-digging or clearing with a post-hole digger during those activities. Any utilities damaged during or as a consequence of remedial implementation will be repaired at the expense of the contractor.
- 4) Pre-burn or Waste Characterization Sampling – Terracon, and/or representatives from the City of Tampa, will collect waste characterization soil samples for disposal purposes.
- 5) Backfill Sampling – The imported clean fill used to backfill the excavated area must be tested prior to its transport to the project site. A representative soil sample shall be collected at the borrow pit by Terracon personnel and analyzed in accordance with the FDEP Backfill Sampling Memo, dated October 1, 2010 as follows:
 - One grab soil sample must be analyzed for volatile organic compounds (VOCs) by EPA method 8260,
 - One grab sample must be analyzed for semi volatile organic compounds (SVOCs) by EPA Methods 8270, organochlorine pesticides by EPA Method 8081 and PCBs by EPA Method 8082 and Total Recoverable Petroleum Hydrocarbon (TRPH) by the FL-PRO Method, and
 - One composite sample must be analyzed for the eight (8) RCRA metals by EPA Method 6010/6020 and EPA Method 7471.

The analytical results must be reported below the lowest of the Residential Direct Exposure or Leachability Based on Groundwater Criteria as stated in Chapter 62-777,

F.A.C. Any soil that does not meet the applicable SCTLs will be rejected.

- 6) Site Specific Survey - The City of Tampa will provide survey points of the excavation limits defined within the project. The survey information will include associated property boundary limits and excavation depth limits. The City of Tampa will provide as-built drawings for the stormwater vault system and all associated piping, including cross- section drawings showing the depth of clean fill.
- 7) Tree removal – The Contractor is responsible for tree removal, as necessary, and obtaining any necessary City of Tampa - Tree Removal and Site Clearing Permits.
- 8) Stormwater/Erosion Control - Erosion control consisting of hay bales and/or silt fencing will be constructed in accordance with standard stormwater control measures. Depending on site conditions and weather, other controls may be necessary. The Contractor will be equipped with such devices to be able to respond to conditions that may change at a moment's notice.
- 9) Dewatering – Groundwater that is recovered during any dewatering activities requires special handling. All extracted groundwater from the Contractor installed dewatering system will require disposal to the City of Tampa sanitary sewer system. All applicable permits must be obtained from the City of Tampa Wastewater Department. All groundwater monitoring sampling and analysis must be performed in accordance with the City of Tampa Commitment for Wastewater Service. The City of Tampa also requires the installation of a discharge meter that is suitable for measuring the volume of water discharged. Discharge of groundwater to the local stormwater system will not be permitted.

TASK 2: CONTAMINATED SOIL EXCAVATION AND MANGAGEMENT

- 1) Site Security – Contractor shall install lighted barricades, safety fencing, and caution tape around the work areas for the duration of the project to increase safety and minimize the impact on the surrounding area. Additional site security shall be provided as required by permits obtained. The site must be secured when the contractor is not present to prevent access to the area of construction during the entire site preparation and source removal activities. Security equipment will remain in place throughout implementation of the project, and shall not be removed until the excavation backfilling, and compaction to the existing grade has been completed.
- 2) Dust control - Contractor shall take appropriate measures to control dust or particulate matter during site preparation, and source removal activities at the Site. Sediment control devices shall be placed around the Site and storm drain structures to control soil particles from getting on the street or in storm drains during excavation.
- 3) Odor control - Contractor shall take appropriate measure to mitigate petroleum odors during source removal activities.
- 4) Contaminated Soil Removal – Contractor will perform excavation activities in a manner that safeguards areas not intended for excavation (i.e. shoring, trench-boxing, etc.).

The contaminated soil across the site must be excavated to a minimum of not less than 2 feet (24 inches) across the site. If drainage pipe, footers, etc. are required at depths greater than 2 feet bgs and require the excavation of soil below 2 feet bgs, that soil must be managed as contaminated soil. The Contractor will be responsible for providing as-built drawings illustrating the limits of the contaminated soil removed, and the depth of clean fill material.

There are portions of the Site where removal of the 2 feet of surface soil will not be possible, such as the

northern portion of Parcel 1, or adjacent to the historical structure to the north of Parcels 2 and 3. Under those circumstances, an engineering control will be required. The engineering control is necessary to prevent human exposure to the contaminated soil and may consist of an asphalt, concrete, or other similar impermeable material.

The Contractor will not be required to collect confirmation soil samples during the excavation process.

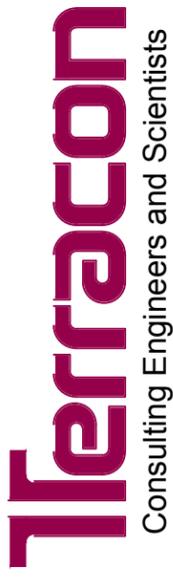
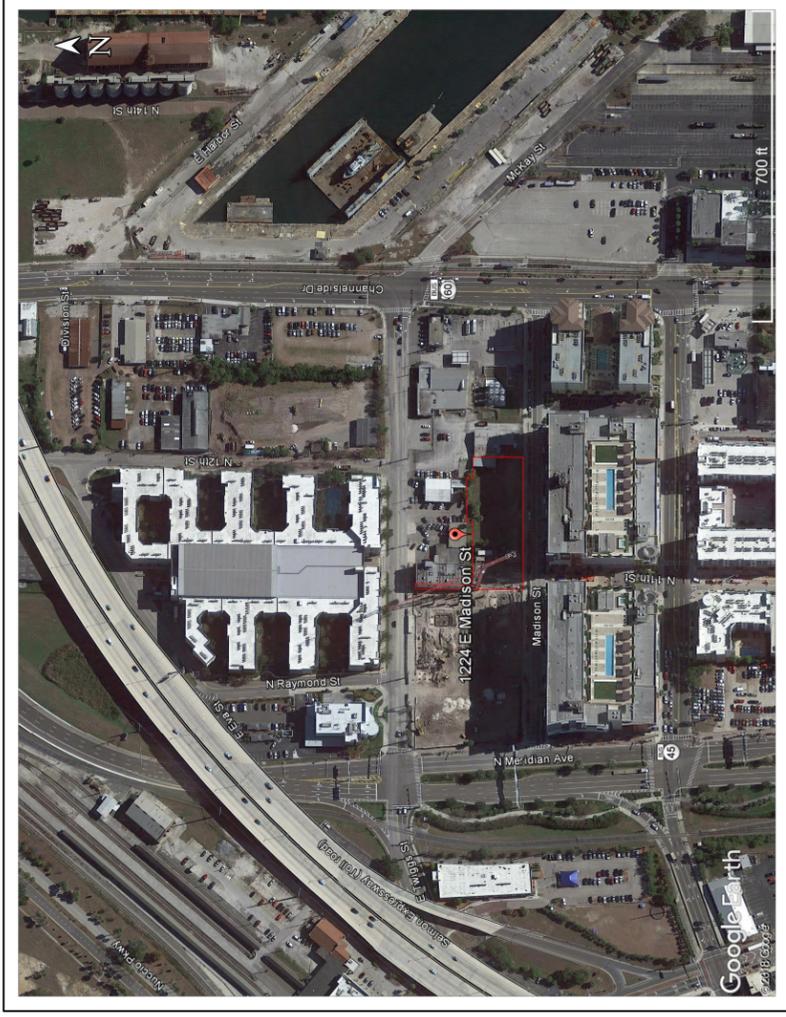
The preferred method to handle contaminated soil is direct load from excavation to truck. If it must be stockpiled, all piles will be constructed on minimum 40 mil polyethylene sheeting with bermed edges to prevent run-off. When not in use and during rain events, the stockpiles will be required to be covered with polyethylene sheeting.

- 5) Soil Transportation and Disposal – Contaminated soils will be transported by a licensed transporter to an FDEP approved Subtitle D, Class I Solid Waste Landfill in accordance with state and federal regulations. Manifests for soil transport and certificates of destruction / disposal will be signed by the City of Tampa as the Generator. **Copies of all completed manifests, signed by the Transporter and Disposal Facility, with all associated weight tickets must be provided to the City of Tampa.** The manifests and weight tickets document the volume of contaminated soils that are removed and document the proper disposal of these soils.
- 6) Backfill – Clean sand per Florida Department of Transportation (FDOT) specifications shall be used as backfill to 6" +/- below final grade per Park Construction Plans as recommended by Stantec. Coordination with the utility subcontractors, and placement of utility structures, will be required before placement of backfill material. Prior to backfill being brought to the site, the soils from the receiving borrow pit must have been tested and approved by the City of Tampa for use on-site.
- 7) Compaction – Backfill to be compacted and tested by Contractor per FDOT specifications as recommended by Stantec as a requirement of the park construction.
- 8) Restoration – Site restoration will be complete with the completion of compaction activities, and grades being restored to original conditions. The installation of sod or other ground cover will be the responsibility of others.
- 9) Final Submittals – Copies of all final signed waste manifests and certified landfill weight ticket must be provided to the City of Tampa prior to payment being received.

Schedule: Contractors should specify the duration and or timeline to complete the above listed tasks. Also, specify time to startup date if authorized.

MADISON STREET PARK
1224 EAST MADISON STREET
TAMPA, HILLSBOROUGH COUNTY, FLORIDA
CITY OF TAMPA/CONTRACT NO. 16-D-61901

CONTAMINATED SOIL MANAGEMENT TECHNICAL SPECIFICATION DRAWINGS



5463 W. WATERS AVE., STE 830 TAMPA, FLORIDA 33634
PH. (813) 221-0050 FAX. (813) 221-0051

TERRACON PROJECT NO. H4167214

SHEET 1: LIMITS OF CONTAMINATED SOIL EXCAVATION AREA
SHEET 2: SOURCE EXCAVATION CROSS-SECTION

TS-7

Project Mgr:	DMC
Drawn By:	VMC
Checked By:	DMC
Approved By:	SDG

Project No.	H4167214
Scale:	AS SHOWN
File No.	H4167214-C
Date:	NOV-2018



5463 W. Waters Ave., Ste 830 Tampa, Florida
PH. (813) 221-0050 FAX. (813) 221-0051

INTERIM SOURCE REMOVAL
MADISON STREET PARK
1224 EAST MADISON STREET
TAMPA, HILLSBOROUGH COUNTY, FLORIDA

COVER PAGE



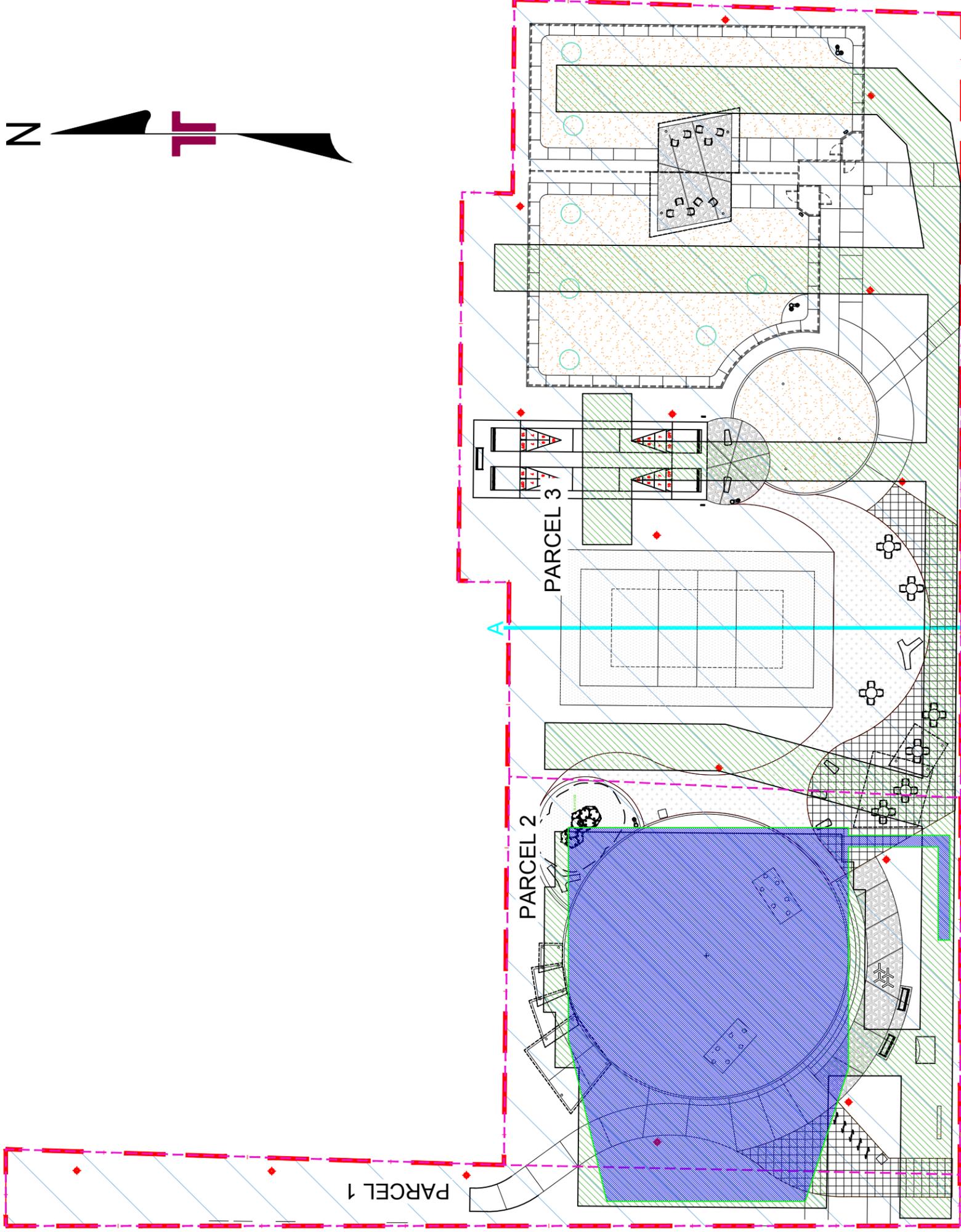
LEGEND

- SITE BOUNDARY
- PARCEL BOUNDARY
- 0 - 2 FT SOIL EXCAVATION AREA = 40,075 SF
- 2 - 4 FT SOIL EXCAVATION AREA = 14,830 SF
- COMPLETED CONTAMINATED SOIL EXCAVATION AND DRAINAGE STRUCTURE INSTALLATION AREA

Estimated Remaining Soil Excavation Volume by Parcel					
Units:	ft ²	ft ³	yd ³	tons	
Parcel 1	0-2 ft bgs	3,535	7,070	262	367
	2-4 ft bgs	338	676	25	35
Parcel 2	0-2 ft bgs	5,268	10,536	390	546
	2-4 ft bgs	1,728	3,456	128	179
Parcel 3	0-2 ft bgs	24,565	49,130	1,820	2,547
	2-4 ft bgs	6,325	12,650	469	656
Total Estimated Cubic Yards (yd³)				3,093	
Total Estimated Tons				4,331	

Notes:

- ft - feet
- yd - yard
- bgs - below ground surface
- A 1.4 conversion factor was used to convert yd³ to tons



MADISON STREET

BASE MAP PROVIDED BY STANTEC

SHEET
1

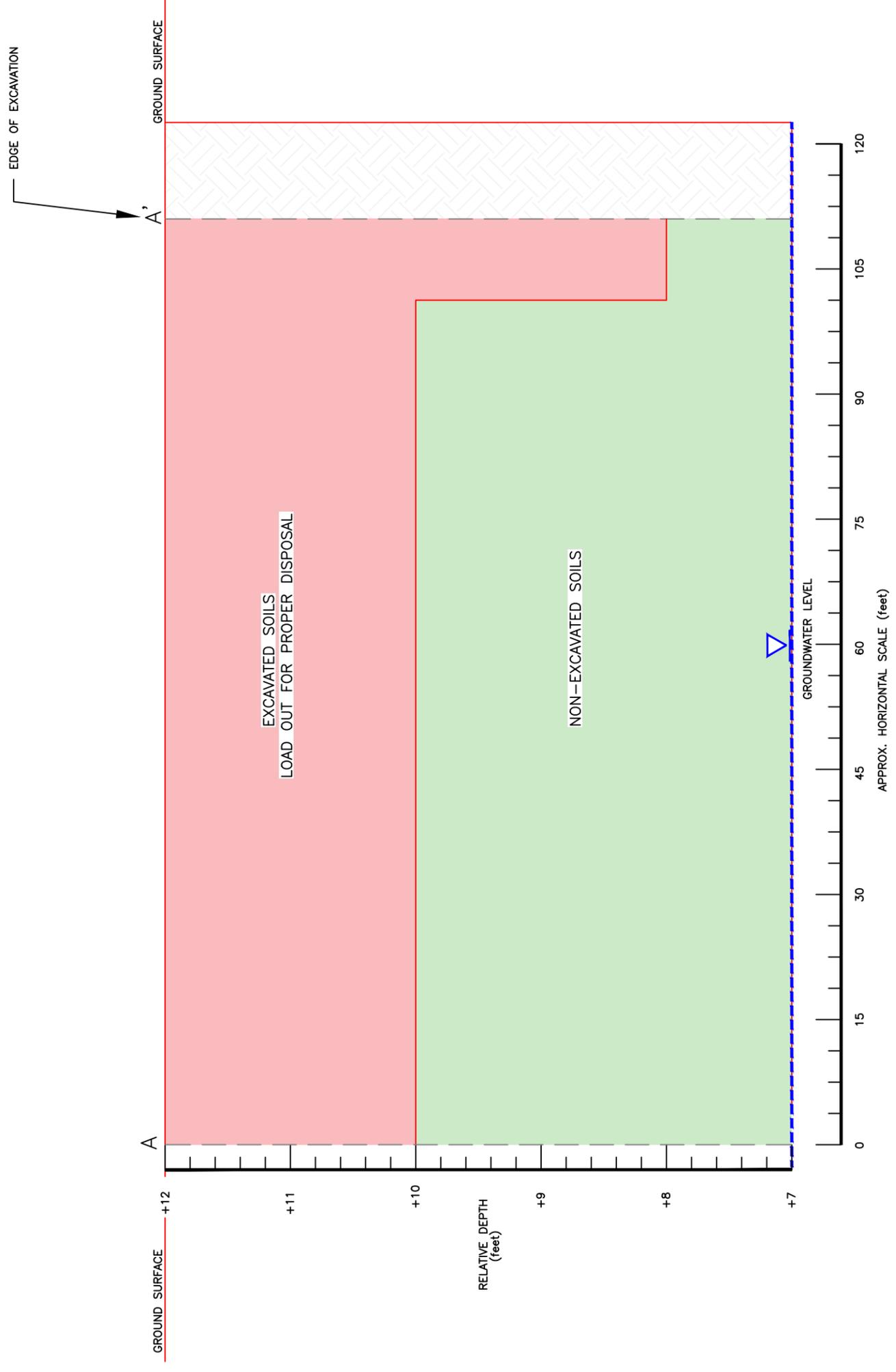
LIMITS OF PROPOSED SOIL EXCAVATION
 INTERIM SOURCE REMOVAL PLAN
 MADISON STREET PARK
 1224 EAST MADISON STREET
 TAMPA, HILLSBOROUGH COUNTY, FLORIDA

Terracon
 Consulting Engineers and Scientists
 Tampa, Florida
 5463 W. Waters Ave., Ste 830
 PH: (813) 221-0050
 FAX: (813) 221-0051

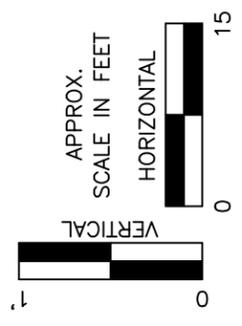
Project No.	H4167214
Scale:	1" - 30'
File No.	H4176214-1
Date:	NOV-2018

Project Mngr:	DMC
Drawn By:	VMC
Checked By:	DMC
Approved By:	SDG

TS-8



CROSS SECTION VIEW NOTES:
 THE CROSS-SECTION VIEW IS BASED ON EXHIBIT 1 -
 SOURCE REMOVAL AREA, PLAN VIEW



WATER TABLE BASED ON PHASE II ESA FROM SOLANA ENVIRONMENTAL ASSOCIATES, INC

Project Mngjr:	DMC
Drawn By:	VMC
Checked By:	DMC
Approved By:	SDG

Project No.	H4167214
Scale:	AS SHOWN
File No.	H4176214-2
Date:	NOV-2018

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SOURCE REMOVAL CROSS-SECTION
 INTERIM SOURCE REMOVAL PLAN
 MADISON STREET PARK
 1224 EAST MADISON STREET
 TAMPA, HILLSBOROUGH COUNTY, FLORIDA

SECTION 03 30 00 CONCRETE

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The work included under this section consists of furnishing all materials, forms, transportation and equipment, and performing all necessary labor to do all the plain and reinforced concrete work shown on the Drawings, or incidental to the proper execution of the work, or as herein specified.
- B. Composition: Concrete shall be composed of cement, fine aggregate, coarse aggregate, and water, so proportioned and mixed as to produce a plastic workable mixture in accordance with all requirements under this section suitable to the specific conditions of placement.

1.02 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including, but not limited to, General Provisions and Specific Provisions sections apply to work specified in this section.

1.03 SUBMITTALS

- A. All materials specified shall be certified by the producer or manufacturer that the furnished material meets the specific requirements of the specifications.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Cement:
 - 1. Cement: Cement for all concrete shall be domestic Portland cement that conforms to the requirements of ASTM Designation C 150, Type I, Type II or Type III. Type III cement for high early strength concrete shall be used only for special locations and only with the approval of the Engineer. Type II cement shall be used in the construction of manholes.
 - 2. Only one brand of cement shall be used in any individual structure unless approved by the Engineer. Cement which has become damaged, partially set, lumpy or caked shall not be used and the entire contents of the sack or container which contains such cement will be rejected. No salvaged or reclaimed cement shall be used.
- B. Fine Aggregate: Fine aggregate shall conform to the requirements of Section 902 of the Florida Department of Transportation "Standard Specifications for Road and Bridge Construction", latest edition and supplements thereto.
- C. Coarse Aggregate: Coarse aggregate shall conform to the requirements of Section 901 of the Florida Department of Transportation "Standard Specifications for Road and Bridge Construction", latest edition and supplements thereto, except that slag shall not be used and the gradation shall be grade 5 or grade 9 as approved by the Engineer.
- D. Water: Water shall be taken from a potable water supply and shall be fresh, clean and free from injurious amounts of oil, acid, alkali or organic matter.

- E. Admixtures: No admixtures shall be used except by specific approval of the City or Engineer.
- F. Expansion Joint Filler:
1. Preformed expansion joint filler shall be of the non-extruding and resilient bituminous type and conform to the requirements of AASHTO Designation M 213 or AASHTO Designation M 153.
 2. Expansion joint filler shall be gray neoprene sponge rubber that conforms to AASHTO Designation M 153, Type I.
- G. Separation Board: Separation board shall be closed cell, non-extruding, PVC foam Grade #327 as manufactured by AC Horn, Inc., with a 20 psi maximum compressive strength to compress to 75% of thickness.
- H. Reinforcing Steel:
1. Reinforcing steel shall conform to the requirements of ASTM Designation A 615, Deformed Grade 60, except where otherwise indicated.
 - a. The name of the manufacturer of the reinforcing steel shall be called out in the shop drawings together with a sketch showing the pattern of the deformation, including the mill mark.
 - b. Bar reinforcement shall be accurately fabricated in accordance with the latest CRSI Manual of Standard Practice. The Contractor shall have prepared and shall submit to the Engineer, necessary shop drawings and bar lists. The Contractor shall be responsible for errors made in shop drawings even though approved by the Engineer.
 2. Welded wire fabric for concrete reinforcement shall conform to the requirements of ASTM Designation A 185 and shall be formed with smooth cold-drawn wire.
 3. Cold-drawn wire for spirals shall be plain and shall conform to the requirements of ASTM Designation A 82 with a minimum yield strength of 70,000 psi.
 4. Bar Supports:
 - a. Bar supports for reinforcing steel shall conform to the requirements of CRSI Manual of Standard Practice, Chapter 3 and shall be of a height to furnish the concrete cover called for on Drawings. High chairs shall be furnished for bent or top bars in solid slabs. Bar supports to be in contact with exterior surfaces of concrete shall be Class C with plastic caps at least 1-inch in length on the leg tips, or Class E with stainless steel legs. Bar supports shall be spaced not more than 100 times the diameter of the bars to be supported, with not more than 1/4 spacing from the end of the supported bars to the first chair.
 - b. Bar supports for slabs on grade shall be plain concrete blocks, 3 inches high by 4 inches square with tie wires embedded in support. Concrete strength shall be at 3,000 psi at time of use.
- I. Fiber Reinforcing:
1. Reinforcing Fiber shall conform with ASTM A820-16 – Standard Specification for Fiber-Reinforced Concrete and ASTM C1018-97 Standard Test Method for Flexural Toughness and First-Crack Strength of Fiber-Reinforced Concrete.
 2. A blend of steel and either natural cellulose or polymeric fibers is required and shall be Solomon Colors UltraFiber 500 Natural Cellulose Fiber blend with CFS Cold

Drawn Steel Fibers or approved equal.

- J. Forms: Forms shall be of wood, steel or other approved materials. The sheeting for all exposed surfaces shall be 5-ply plywood, unless otherwise specifically authorized. Forms of like character shall be used for similarly exposed surfaces in order to produce a uniform appearance. Forming for exposed exterior concrete from 1-foot below finished exterior grade to top of structure shall be carefully fabricated so as to provide a smooth finish without defects. The type, size, shape, quality and strength of all materials of which the forms are made shall be subject to the approval of the Engineer. If it is his opinion that the interior surfaces of the forms are too irregular to produce the specified finish, they shall be lined with smooth, dense, moisture resistant hardboard or other material of which he approves.
- K. Non-shrink Grout: Non-shrink grout shall be nonmetallic, pre-mixed type and shall be Sauereisen F-100 Level Fill, Master Builders Masterflow 713, Burke Non-Ferrous, Non-Shrink Grout or approved equal.

2.02 CLASSIFICATION AND STRENGTH OF CONCRETE

- A. Class and minimum strength requirements for concrete shall be as tabulated below. Unless otherwise specified, Class B concrete shall be used.
- B. Strength Requirements: Concrete class and strength shall meet the minimum compressive strength requirements at the age of 7 and 28 days as shown in the following table. The compressive strengths shall be as determined by standard laboratory cylinder tests in accordance with the procedure set forth in ASTM Designation C 31 and C 39. (See Article 3.03 of this Section for quantity and testing of cylinders.)

Compressive Strength In Pounds Per Square Inch

Class	For Design Purposes	Cylinder Average		3 Consecutive Low Cylinders	
		7 days	28 days	7 days	28 days
A	4000	2950	4250	2600	3750
B	3000	2100	3200	1850	2800
C	2500	1800	2700	1550	2300

2.03 PROPERTIES AND DESIGN OF CONCRETE MIX

- A. Tests And Design Mix:
 1. The Contractor, 30 days before the beginning of concrete work, shall advise the City or Engineer of the proposed sources of the materials, or ready-mixed concrete, which the Contractor intends to use in the work. A design mix which has been used by the concrete supplier before may be submitted for approval provided the proportions and strengths meet the requirements of this specification.
 2. The source and manufacturer of material after once having been approved shall not be changed by the Contractor, except as approved by the Engineer, and additional laboratory tests may be required by the Engineer to prove conformance with specification requirements.
 3. If during the progress of the work, tests indicate that concrete is not being produced in accordance with these Specifications, the Engineer may order changes in the materials or their proportions so as to secure concrete as specified.

- B. Slump: Slumps shall be as low as possible consistent with proper placing. Low slump concrete shall be used for footing and slabs on grade. Medium slump concrete shall be used for walls, columns and suspended slabs. Concrete shall conform to the limits specified in the following schedule:

Class of Concrete	Medium Slump	Low Slump
A	4 to 5 in.	2 to 3 in.
B	4 to 5 in.	2 to 3 in.
C	5 to 6 in.	3 to 4 in.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Concrete Mixing:
1. Equipment: The concrete shall be ready-mixed and the equipment shall conform to the applicable requirements of ASTM Designation C 94.
 2. Measurement: Equipment necessary to positively determine and control the actual amounts of all materials entering the concrete shall be provided by the Contractor or the concrete manufacturer. All materials shall be measured by weight, except that water may be measured by volume. A bag of cement weighs 94 pounds.

3.02 INSTALLATION

- A. Forms:
1. Construction:
 - a. Forms shall be built true to line and grade, and shall be mortar tight and sufficiently rigid to prevent displacement or sagging between supports. Particular attention shall be given to adequacy of supports and shoring, which is the Contractor's responsibility. The surfaces of forms used for permanently exposed surfaces shall be smooth and free from irregularities, dents, sags, or holes. Forms for surfaces to receive stucco finish shall be suitable for its application. Bolts and rods used for internal ties shall be so arranged that, when the forms are removed, all metal is at least 1-1/2 inches from any concrete surface. Form ties shall be removed immediately after removal of forms, and holes shall be thoroughly plugged with grout within 24 hours after form removal and kept damp for 4 days to prevent shrinking.
 - b. Wire ties will not be permitted. All forms shall be so constructed that they can be removed without hammering or prying against the concrete. Unless otherwise indicated, suitable moldings shall be placed to bevel or round exposed edges at expansion joints or at any other corners that are to remain. Beams below grade shall have forms at both sides.
 2. Coating: Prior to the placing of steel reinforcement or concrete, forms for exposed surfaces shall be coated with a nonstaining paraffin base oil or mineral oil. Forms for unexposed surfaces may be thoroughly wetted in lieu of oiling, immediately before the placing of concrete.

3. Removal: Forms and/or form supports shall not be removed from any concrete until it has obtained sufficient strength to support itself and any live loads it may be subjected to, and then only with the approval of the Engineer.
- B. Reinforcing Steel: When placed in the forms, reinforcement shall be clean and free of all rust, scale, dust, dirt, paint, oil or other foreign material and shall be accurately and securely positioned in the forms as shown on the Drawings before the placing of concrete. Reinforcing steel shall be wired or otherwise fastened together at intersections and shall be supported by concrete or metal supports, spacers or hangers. Bar supports, where adjacent to the ground, shall be set on pre-cast concrete pads compressed into the subgrade. The Contractor shall obtain the Engineer's approval before fastening reinforcing steel at intersections by welding methods.
1. Splicing of reinforcement shall be held to a minimum and shall be placed at points of minimum stress. Bars shall be lapped at splices a minimum of 24 bar diameters unless otherwise shown on the Drawings or directed by the Engineer, and shall be rigidly wired or clamped.
 2. Wire fabric shall be straightened before placing and shall overlap one full space of mesh at ends and edges and shall be securely fastened. Fabric shall be supported so as to occupy its proper location in the concrete as shown on the Drawings. Fabric shall not cross any expansion joints.
- C. Fiber Reinforcing: Fiber shall be mixed at the plant for site installation.
- D. Embedded Items: In addition to steel reinforcement, pipes, inserts and other metal objects as shown, specified or ordered shall be built into, set in or attached to the concrete. All necessary precautions shall be taken to prevent these objects from being displaced, broken or deformed. Before concrete is placed, care shall be taken to determine that all embedded parts are firmly and securely fastened in place as indicated. They shall be thoroughly clean and free from paint or other coating, rust, scale, oil, or any foreign matter. No wood shall be embedded in concrete. The concrete shall be packed tightly around pipes and other metal work to prevent leakage and to secure perfect adhesion. Drains shall be adequately protected from intrusion of concrete.
- E. Concrete:
1. General: Reinforcement shall be secured in position, inspected and approved before placing concrete. Runways for transporting concrete shall not rest on reinforcing steel. Concrete not placed within 90 minutes from the time mixing is started will be rejected and shall be removed from the job by the Contractor. Concrete shall be deposited as nearly as practicable in final position. Concrete shall not be allowed to drop freely more than six feet. All concrete shall be placed in daylight and (excepting seal concrete) shall be placed in the dry unless otherwise authorized by the Engineer in writing.
 2. Slabs Placed On Subgrade: Slab concrete placed on earth or fill subgrade shall be separated from direct contact with the subgrade by 6 mil polyethylene film or other approved material. Sidewalks and walkways will not require a separation sheet. Polyethylene film shall be lapped 4 inches on sides and 12 inches on ends.
 3. Compaction: Concrete shall be compacted by internal vibrating equipment, supplemented by hand rodding and tamping as required. Vibrators shall in no case be used to move the concrete laterally inside the forms. Internal vibrators shall maintain a speed of at least 5000 impulses per minute when submerged in concrete.

(At least one spare vibrator in working condition shall be maintained at the site during concrete placing operations.) Duration of vibration shall be limited to time necessary to produce satisfactory consolidation without causing segregation. Vibrator shall be moved constantly and placed in each specific spot only once.

4. Bonding: Before depositing new concrete on or against concrete that has set, the surfaces of the set concrete shall be thoroughly cleaned so as to expose the coarse aggregate and be free of laitance, coatings, foreign matter and loose particles. Forms shall be retightened. The cleaned surfaces shall be dampened, but not saturated, and then thoroughly covered with a coat of cement grout of similar proportions to the mortar in the concrete. The grout shall be as thick as possible on vertical surfaces and at least 1/2 inch thick on horizontal surfaces. The fresh concrete shall be placed before the grout has attained its initial set.
5. Protection: Rainwater shall not be allowed to increase the ratio of mixing water nor to damage the surface finish. Concrete shall be protected from disfigurement, damage, vibration, internal fractures and construction overloads.

F. Curing:

1. All concrete shall be water cured by covering with water or wet sand. The forms shall be kept wet until removed and upon removal, the curing specified herein shall be started immediately. Concrete shall be cured for a period of 7 days for normal Portland cement or 4 days for high early strength cement. Concrete poured in the dry shall not be submerged until it has attained sufficient strength to adequately sustain the stress involved nor shall it be subjected to flowing water across its surface until it has cured 4 days. Curing of gunite shall be started as soon as possible without damaging surface and not later than 2 hours after placing.
2. Concrete surfaces which will not be coated, painted, plastered, stuccoed, stained or otherwise colored, may be cured by means of a curing compound in lieu of the wet cure method. The curing compound shall be applied immediately after a satisfactory surface finish has been completed or forms have been removed. The rate of application of a curing compound shall adhere to manufacturer's specification for the curing product. The curing compound shall be continuous and without defects and shall retain the required moisture in the concrete. Curing compounds that become damaged by rain, foot traffic or other conditions within 5 days of application shall be re-applied.

G. Finishes:

1. As soon as forms can safely be removed, all irregular projections shall be chipped off flush with the concrete surfaces. All voids produced by spacers or any honeycombing shall be pointed up with grout and troweled flush with the concrete surface immediately after removal of forms and water cured to prevent shrinkage. Honeycombing shall be cut out to expose a sound concrete surface prior to pointing. The use of mortar pointing or patching shall be confined to the repair of small defects in relatively green concrete. Where in the opinion of the Engineer substantial repairs are required, the defective concrete shall be cut out to sound concrete and repaired with gunite or the concrete shall be removed and reconstructed as directed.
2. Floor slabs shall be brought to a true and even finish by power or hand floating in a manner that will not bring excess fines to the surface. The consistency of the concrete shall be such that water does not accumulate at the surface. Unless otherwise shown on the Drawings, the surface shall be floated with a wood float and/or be steel troweled to a smooth finish. Troweling shall be the minimum to obtain a smooth,

dense surface and shall not be done until the mortar has hardened sufficiently to prevent excess fine material from being worked to the surface. If so directed, the surface shall be brushed lightly with a push broom so as to produce a nonslip surface.

3. Concrete surfaces that are not exposed in the completed work will require no special finish other than such pointing up and rubbing as is necessary to leave them smooth and impervious.
4. Other surfaces which will be exposed in the completed work shall be finished by being rubbed smooth with a float and water or a carborundum brick. The final surface shall be smooth and dense, without pits, irregularities, blow holes or bubbles.

H. Grout:

1. Grout for pointing and patching shall consist of cement and fine aggregate mixed in the proportions used in the concrete and a minimum amount of water to produce a workable grout.
2. Material for grouting column base plates, anchor bolts, reinforcing bars, pipe sleeves and pump base plates shall be of the non-shrink type and shall be mixed and placed as recommended by the manufacturer. Machinery set on grout pads shall not be operated until the grout has cured for at least 24 hours.

3.03 FIELD QUALITY CONTROL

- A. General: The quality of the concrete as to conformance to the specifications is the entire responsibility of the Contractor until it is accepted in place in the structure and verified by the final cylinder tests made by the laboratory. Arrangements for field testing shall be made by the Contractor with the laboratory as approved by the City and Engineer.
- B. Compressive Tests: Standard laboratory compressive test cylinders will be obtained by the laboratory when concrete is discharged from the mixer at the site of the work. A set of 6 cylinders will be obtained for each 60 cubic yards or fraction thereof placed each day, for each type of concrete. The cylinders will be cured under laboratory conditions and will be tested in two groups of three at 7 and 28 days of age, respectively.
- C. Slump Tests: The laboratory will make slump tests of Class A and Class B concrete as it is discharged from the mixer at the site of the work. Slump tests will be made for each 25 cubic yards or "pour" of concrete placed. Slump tests may be made on any batch and failure to meet specified slump requirements will be sufficient cause for rejection of that batch.
- D. Reports: Proper reports of all tests performed by the laboratory will be prepared by the laboratory and submitted promptly to the Engineer. Such reports shall be properly labeled so as to identify the portions of the project into which the materials have been placed, and the results of the test indicating whether or not the test met the requirements of these specifications.

END OF SECTION 033000

SECTION 11 68 13 PLAYGROUND EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Playground Equipment.

1.02 REFERENCES

- A. ASTM Testing Standards:
 - 1. ASTM B 1487
- B. IPEMA: International Play Equipment Manufacturers Association

1.03 SUBMITTALS

- A. Qualification Data: For installer, manufacturer (Kompan or equivalent), and testing agency.
- B. Product Certificates: For each type of playground equipment.
- C. Shop Drawings: For each type of playground equipment.
 - 1. Include plans, elevations, sections, and attachment details
 - 2. Include fall heights and use zones for playground equipment, coordinated with the critical-height values of protective surfacing specified in Section 321816 "Playground Protective Surfacing."
- D. Material Certificates: For the following items:
 - 1. Shop finishes.
 - 2. Wood-Preservative Treatment: Include certification by treating plant that states type of preservative solution and pressure process used, net amount of preservative retained, and compliance with applicable standards.
- E. Field Quality-Control Reports.
- F. Sample Warranty: Manufacturer's standard warranty.

1.04 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For playground equipment and finishes to include in maintenance manuals.

1.05 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: A firm whose playground equipment components have been certified by IPEMA's third-party product certification service.
- B. Installers Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.06 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of playground equipment that fail in materials or workmanship within specified warranty period
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures.
 - b. Deterioration of metals, metal finished, and other materials beyond normal weathering and use.
 - 2. Warranty Period: 52 years from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Kompan, Website www.kompan.us.com; Contact: Kellie Moore, Email: kmoore@landscapeforms.com, (800) 441-1945 ext1322. Or equivalent.

2.02 Play Equipment

- A. “BloqX3” or approved equal or better.
- B. Dimensions: 3 modules
 - 1. 12’-3” long; 7’-0” wide; 9’-10” tall (highest module); 5’-7” (lowest module)
- B. Custom Style:
 - 1. Custom red and navy paneling. Contact Kellie Moore.

2.03 MATERIALS

- A. Contact manufacturer for installation instructions. Including footing requirements.
- B. Aluminum: Material, alloy, and temper recommended by manufacturer for type of use and finish indicated.
- C. Steel: Material types, alloys, and forms recommended by manufacturer for type of use and finish indicated.
- D. Stainless Steel Sheet: Type 304; finished on exposed faces with No. 2B finish.
- E. Opaque Plastics: Color impregnated, UV stabilized, and mold resistant.
- F. Transparent Plastic: Abrasion-resistant, UV-stabilized polycarbonate sheet.
- G. Iron Castings and Hangers: Malleable iron, ASTM A 47/A 47M, Grade 32510, hot-dip galvanized,
- H. Hardware: Manufacturer's standard; commercial-quality; corrosion-resistant; hot-dip galvanized steel and iron, stainless steel, or aluminum; of a vandal-resistant design.
- I. Fasteners: Manufacturer's standard; corrosion-resistant; hot-dip galvanized or zinc-plated steel and iron, or stainless steel; permanently capped; and theft resistant.

2.04 CAST-IN-PLACE CONCRETE

- A. Concrete Materials and Properties: Comply with requirements in Section 033000 Concrete for normal weight concrete with minimum 28-day compressive strength of 3000 psi, 3-inch slump, and 1-inch maximum size aggregate.

2.05 FINISHES

- A. Aluminum Finishes: Baked-Enamel or Powder-Coat Finish: Minimum dry film thickness of 1.5 mils, medium gloss. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
- B. PVC Finishes: UV-stabilized, mold-resistant, slip-resistant, matte-textured, dipped or sprayed-on PVC finish, with flame retardant added, and with minimum dry film thickness of 80 mils. Comply with coating manufacturer's written instructions for pretreatment and application.
- C. Stainless-Steel Finishes:
 - 1. Surface Preparation: Remove tool and die marks and stretch lines, or blend to finish.
 - 2. Bright, Cold-Rolled, Unpolished Finish: No.2B

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for earthwork, subgrade elevations, surface and subgrade drainage, and other conditions affecting performance of the Work.
 - 1. Do not begin installation before final grading required for placing playground equipment and protective surfacing is completed.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Comply with manufacturer's written installation instructions for each equipment type unless more stringent requirements are indicated. Anchor playground equipment securely, positioned at locations and elevations indicated.

1. Maximum Equipment Height: Coordinate installed fall heights of equipment with finished elevations and critical-height values of protective surfacing. Set equipment so fall heights and elevation requirements for age group use and accessibility are within required limits. Verify that playground equipment elevations comply with requirements for each type and component of equipment.
- B. Post and Footing Excavation: Excavate holes for posts and footings as indicated in firm, undisturbed or compacted subgrade soil.
- C. Post Set on Subgrade: Level bearing surfaces with drainage fill to required.
- D. Post Set with Concrete Footing: Comply with Section 033000 Concrete for measuring, batching, mixing, transporting, forming, and placing concrete.
 1. Set equipment posts in concrete footing. Protect portion of posts above footing from concrete splatter. Verify that posts are set plumb or at the correct angle, alignment, height, and spacing.
 - a. Place concrete around posts and vibrate or tamp for consolidation. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.
 2. Embedded Items: Follow equipment manufacturer's written instructions and drawings to ensure correct installation of anchorages for equipment.
 3. Finishing Footings: Smooth top, and shape to shed water.

3.03 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Playground equipment items will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.
- D. Notify Owner 48 hours advance of date(s) and times(s) of testing and inspection.

END OF SECTION 11 68 13

SECTION 12 93 13 BICYCLE RACKS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Bicycle Rack.

1.02 REFERENCES

- A. ASTM Testing Standards:
 1. ASTM B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
 2. ASTM D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
 3. ASTM D 523 – Standard Test Method for Specular Gloss.
 4. ASTM D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
 5. ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
 6. ASTM D 3363 – Standard Test Method for Film Hardness by Pencil Test.
 7. ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.
- B. ISO Testing Standards:
 1. ISO 1520 – Paints and Varnishes – Cupping Test.
 2. ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- B. Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions.
- C. Samples: Submit manufacturer's samples of materials, finishes, and colors.
- D. Warranty: Manufacturer's standard warranty.

1.04 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged in manufacture of site furnishings since 1969.
- B. Product Support: Products are supported with complete engineering drawings and design patents.
- C. Base Worth: An installed base of products worth in excess of one hundred million dollars.
- D. Assets: Excess of twenty million dollars in assets.
- E. Production: Orders are filled within a 40-day schedule.
- F. Facility Operator: Welders and machine operators are certified.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- C. Handling: Protect materials and finish during handling and installation to prevent damage.

1.06 WARRANTY

- A. Warranty Information:
 - Products will be free from defects in material and/or workmanship for a period of three years from the date of invoice.
 - The warranty does not apply to damage resulting from accident, alteration, misuse, tampering, negligence, or abuse.

- Landscape Forms, Inc. shall, at its option, repair, replace, or refund the purchase price of any items found defective upon inspection by an authorized Landscape Forms service representative.

-Purchasers should be aware that normal use of these high quality products can result in superficial damage affecting the finish. Scratches, nicks, and dents are to be considered normal wear and tear, and are not the responsibility of the manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Landscape Forms, Inc., 7800 E. Michigan Ave, Kalamazoo, Michigan 49048.
Phone: (800) 521-2546. Fax (269) 381-3455. Website www.landscapeforms.com
Contact: Kellie Moore, E-mail: kmoore@landscapeforms.com, or equivalent.

2.02 BICYCLE RACKS

- A. “Loop” Bicycle Rack, or approved equal or better.
B. Mounting:
1. Embedded

2.03 MATERIALS

- A. Frame: Aluminum Casting – A356 ASTM B108 or A360 ASTM B108 & LFI 7.4.2-A1.
B. Embedded Hardware Pack: (4) 5/16-18 UNC-2A fully threaded rods, 4” length, with Magni-coat.

2.04 RECYCLED CONTENT

- A. Loop Bicycle Rack:
-Total recycled content: 99%; Post-consumer: 97%; Pre-consumer: 2%; Recyclable: 100%

2.05 FABRICATION

- A. Shop assembled bicycle rack.

2.06 FINISHES

- A. Finish on Metal: Landscape Forms, Inc. “Pangard II”.
1. Primer: Rust inhibitor.
2. Topcoat: Thermosetting TGIC polyester powder coat. UV, chip, and flake resistant.
3. Test Results: “Pangard II”.
a. Gloss Consistency, Gardner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
e. Erichsen Cupping, ISO 1520: 8 mm.
f. Impression Hardness, Buchholz, ISO 2815: 95.
g. Impact Test, ASTM D 2794: 60 inch-pounds at 2.5 mils.
h. Pencil Hardness, ASTM D 3363: 2H minimum.
i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max undercutting 1 mm.
j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max blisters 1 mm.
4. Color: Silver

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas to receive racks.
- B. Notify Landscape Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Install level.
- C. Anchor securely in place.

3.03 ADJUSTING

- A. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
- B. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

3.04 CLEANING

- A. Clean rack promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that could damage finish.

3.05 PROTECTION

- A. Protect installed racks to ensure that, except for normal weathering, racks will be without damage or deterioration at time of Substantial Completion.

END OF SECTION 12 93 13

SECTION 12 93 23 TRASH AND LITTER RECEPTACLES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Litter receptacles.

1.02 REFERENCES

A. ASTM Testing Standards:

1. ASTM B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
2. ASTM D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
3. ASTM D 523 – Standard Test Method for Specular Gloss.
4. ASTM D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
5. ASTM D 2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
6. ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
7. ASTM D 3363 – Standard Test Method for Film Hardness by Pencil Test.
8. ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

B. ISO Testing Standards:

1. ISO 1520 – Paints and Varnishes – Cupping Test.
2. ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- B. Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions.
- C. Samples: Submit manufacturer's samples of materials, finishes, and colors.
- D. Warranty: Manufacturer's standard warranty.

1.04 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged in manufacture of site furnishings for at least 15 years.
- B. Product Support: Products are supported with complete engineering drawings.
- C. Production: Orders are filled within a 40-day schedule.
- D. Facility Operator: Welders and machine operators are certified.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- C. Handling: Protect materials and finish during handling and installation to prevent damage.

1.06 WARRANTY

A. Warranty Information:

- Products will be free from defects in material and/or workmanship for a period of three years from the date of invoice.

-The warranty does not apply to damage resulting from accident, alteration, misuse, tampering, negligence, or abuse.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Landscape Forms, Inc., 7800 E. Michigan Ave, Kalamazoo, Michigan 49048.
Phone: (800) 521-2546. Fax (269) 381-3455. Website www.landscapeforms.com
Contact: Kellie Moore, Email: kmoore@landscapeforms.com, or equivalent.

2.02 TRASH AND LITTER RECEPTORS

- A. "Pitch" Litter Receptacles or approved equal or better.
- B. Style:
1. Side Opening litter receptacle:
 - Height: 34 inches.
 - Top: 25 inches square.
 - Base: 17-1/2 inches square.
 - Capacity: 28 gallon.
 - Opening: Two 5 inch x 13 inch rectangular openings in the aluminum side panels.
- C. Mounting:
1. Surface Mounted
- D. Liners Color: Black

2.03 MATERIAL

- A. Litter Frame Assembly: the assembly consists of (4) extruded aluminum corners, welded to (4) 3/16" thick aluminum side panels. The aluminum assembly is attached to an iron base with carbon steel magni-coated fasteners.
- B. Top: Tops are molded from linear medium density polyethylene with 0.200" wall thickness. Tops are attached to receptacle with a cable.
- C. Liners: the liners are molded from 100% recycled medium density polyethylene.

2.04 ACCESSORIES

- A. Anchor Bolts: Corrosion resistant recommended, not supplied by manufacturer.

2.05 RECYCLED CONTENT

- A. Litter Receptacle:
- Recycled Material Content: Minimum 67 percent.
 - Post-Consumer Material Content: Minimum 33 percent.
 - Pre-Consumer Material Content: Minimum 34 percent.
 - Recyclable: 100 percent.

2.06 FABRICATION

- A. Shop assembled litter receptacles.

2.07 FINISHES

- A. Finish on Metal: Landscape Forms, Inc. "Pangard II".
1. Primer: Rust inhibitor on all metal components.
 2. Topcoat: Thermosetting TGIC polyester powder coat. UV, chip, and flake resistant.
 3. Test Results: "Pangard II".
 - a. Gloss Consistency, Gardner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
 - b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
 - c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.

- d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
- e. Erichsen Cupping, ISO 1520: 8 mm.
- f. Impression Hardness, Buchholz, ISO 2815: 95.
- g. Impact Test, ASTM D 2794: 60 inch-pounds at 2.5 mils.
- h. Pencil Hardness, ASTM D 3363: 2H minimum.
- i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max. undercutting 1 mm.
- j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max. blisters 1 mm.
- 4. Color: Silver
- B. Polyethylene:
 - 1. Color: Otter

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas to receive litter receptacles.
- B. Notify Landscape architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

3.02 INSTALLATION

- A. Install litter receptacles in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Install litter receptacles level and plumb.
- C. Anchor litter receptacles securely in place.

3.03 ADJUSTING

- A. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
- B. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

3.04 CLEANING

- A. Clean litter receptacles promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that could damage finish.

3.05 PROTECTION

- A. Protect installed litter receptacles to ensure that, except for normal weathering, receptacles will be without damage or deterioration at time of Substantial Completion.

END OF SECTION 12 93 23

**SECTION 12 93 43.12 BENCHES
CHILL LOUNGE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Benches.

1.02 REFERENCES

- A. ASTM Testing Standards:
1. ASTM D 256 – Izod Impact Resistance.
 2. ASTM D 638 – Tensile Strength.
 3. ASTM D 648 – Heat Deflection Temperature.
 4. ASTM D 790 – Flexural Modulus.
 5. ASTM D 792 – Density.
 6. ASTM D 1693 – Environmental Stress Crack Resistance, Condition B.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- B. Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions.
- C. Samples: Submit manufacturer's samples of materials, finishes, and colors.
- D. Warranty: Manufacturer's standard warranty.

1.04 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged in manufacture of site furnishings since 1969.
- B. Product Support: Products are supported with complete engineering drawings and design patents.
- C. Base Worth: An installed base of products worth in excess of one hundred million dollars.
- D. Assets: Excess of twenty million dollars in assets.
- E. Production: Orders are filled within a 40-day schedule.
- F. Facility Operator: Welders and machine operators are certified.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- C. Handling: Protect materials and finish during handling and installation to prevent damage.

1.06 WARRANTY

- A. Warranty Information:
- Products will be free from defects in material and/or workmanship for a period of three years from the date of invoice.
 - The warranty does not apply to damage resulting from accident, alteration, misuse, tampering, negligence, or abuse.
 - Landscape Forms, Inc. shall, at its option, repair, replace, or refund the purchase price of any items found defective upon inspection by an authorized Landscape Forms service representative.

-Purchasers should be aware that normal use of these high-quality products can result in superficial damage affecting the finish. Scratches, nicks, and dents are to be considered normal wear and tear and are not the responsibility of the manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Landscape Forms, Inc., 7800 E. Michigan Ave, Kalamazoo, Michigan 49048.
Phone: (800) 521-2546. Fax (269) 381-3455. Website www.landscapeforms.com
Contact: Kellie Moore, Email: kmoore@landscapeforms.com or equivalent.

2.02 BENCHES

- A. “Chill Lounge” Benches or approved equal or better.
1. Size:
 - a. Depth: 27-3/4inches.
 - b. Overall Height: 32-1/2 inches.
 - c. Length: 62 inches.
 2. Mounting:
 - a. Free Standing.

2.03 MATERIALS

- A. Composition: Chill is a one piece lounge with a 0.312” nominal wall thickness, made from 100% linear medium density polyethylene (LMDPE) molded from ground powder to form finished products. Pigment and UV stabilizer are added in the molding process to give the desired color and resist fading from UV rays.
1. Resistance to Environmental Stresses: Because Chill is made from LMDPE, it has exceptional resistance to moisture, corrosive substances, insects, and other environmental stresses. It does not absorb moisture, so it will not rot, splinter or crack. It requires no waterproofing, staining or similar maintenance and can handle extreme temperature changes. Chill has excellent weathering resistance; however, as with other polyolefins, it is possible that the material will fade slightly over the service life of the product.
 2. Melt Temperature and Flash Point: Chill has a melt temperature of approximately 262oF and a flash point of approximately 620oF. This is a higher flash point than wood and Chill must be exposed to a severe combustion source for a longer period than wood to ignite. But, like wood, when exposed to a combustion source for a long enough period of time, it will burn.
- B. Test Results:
1. Density: 0.0338 lbs/in³; ASTM D-792
 2. Heat Deflection Temperature (@ 66 psi): 140oF; ASTM D-648
 3. Tensile Strength: 2,500-4,000 psi; ASTM D-638
 4. Flexural Modulus: 89,000 psi; ASTM D-790
 5. Izod Impact Resistance (125 mil sample notched): 9.9 ft-lb/in; ASTM D 256
 6. ESCR: >1,000 f50 hr; ASTM D-1693

2.04 RECYCLED CONTENT

- A. Polyethylene: Chill has no recycled content but is 100% recyclable.

2.05 FABRICATION

- A. Shop assembled benches.

2.06 FINISHES

- A. Finish: Chill lounge appears with a #230 shot peen texture and light flame treatment. Unit is molded with UV stabilizer, which is resistant to UV rays.

1. Color: Red

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas to receive benches.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

3.02 INSTALLATION

- A. Install benches in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Install benches level.

3.03 ADJUSTING

- A. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
- B. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

3.04 CLEANING

- A. Clean benches promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that could damage finish.

3.05 PROTECTION

- A. Protect installed benches to ensure that, except for normal weathering, benches will be without damage or deterioration at time of Substantial Completion.

END OF SECTION 12 93 43.12

**SECTION 12 93 43.13 BENCHES
LUNGO MARE BENCH**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Benches.

1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- B. Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions.
- C. Samples: Submit manufacturer's samples of materials, finishes, and colors.
- D. Warranty: Manufacturer's standard warranty.

1.03 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged in manufacture of site furnishings since 1969.
- B. Product Support: Products are supported with complete engineering drawings and design patents.
- C. Base Worth: An installed base of products worth in excess of one hundred million dollars.
- D. Assets: Excess of twenty million dollars in assets.
- E. Production: Orders are filled within a 40-day schedule.
- F. Facility Operator: Welders and machine operators are certified.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- C. Handling: Protect materials and finish during handling and installation to prevent damage.

1.05 WARRANTY

- A. Warranty Information:
 - Products will be free from defects in material and/or workmanship for a period of three years from the date of invoice.
 - The warranty does not apply to damage resulting from accident, alteration, misuse, tampering, negligence, or abuse.
 - Landscape Forms, Inc. shall, at its option, repair, replace, or refund the purchase price of any items found defective upon inspection by an authorized Landscape Forms service representative.
 - Purchasers should be aware that normal use of these high quality products can result in superficial damage affecting the finish. Scratches, nicks, and dents are to be considered normal wear and tear, and are not the responsibility of the manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Landscape Forms, Inc., 7800 E. Michigan Ave, Kalamazoo, Michigan 49048. Phone:
(800) 521-2546. Fax (269) 381-3455. Website www.landscapeforms.com Contact:
Kellie Moore, Email: kmoore@landscapeforms.com or equivalent.

2.02 BENCHES

- A. "Lungo Mare" Benches or approved equal or better.
- B. Bench:

1. Module A, 158"w X 79"d X 35" h

2.03 MATERIALS

- A. Reinforced cast stone (concrete): Manufacturer's proprietary blend of portland cement, sand, aggregate, and color admixture.
 - Use only one brand, type and source of cement for entire Project.
 - Provide integral colored concrete with lightfast (UV and fade resistant) color pigments.
 - Reinforced with steel bar framework.
- B. Water: Clean and potable.

2.04 RECYCLED CONTENT

- A. Bench:
 - Recycled Material Content: Minimum 0 percent.
 - Post-Consumer Material Content: Minimum 0 percent.
 - Pre-Consumer Material Content: Minimum 0 percent.
 - Recyclable: 100 percent.

2.05 FABRICATION

- A. Formwork: Fabricate forms sufficiently rigid to meet casting tolerances. Coat formwork with form release agent.
- B. Casting: Fabricate units to required profiles and sizes. Execute work accurately to specified tolerances and free of broken edges.
- C. Curing: Protect units from exposure to weather until concrete strength is adequate for form removal. Cure under identical conditions.

2.06 FINISHES

- A. Color: Beige

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas to receive benches.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

3.02 INSTALLATION

- A. Install benches in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Install benches level and plumb.

3.03 ADJUSTING

- A. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.

3.04 CLEANING

- A. Clean benches promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that could damage finish.

3.05 PROTECTION

- A. Protect installed benches to ensure that, except for normal weathering, benches will be without damage or deterioration at time of Substantial Completion.

END OF SECTION 12 93 43.13

**SECTION 12 93 43.14 BENCHES
STAY BENCH**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Benches.

1.02 REFERENCES

- A. ASTM Testing Standards:

1. ASTM B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
2. ASTM D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
3. ASTM D 523 – Standard Test Method for Specular Gloss.
4. ASTM D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
5. ASTM D 2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
6. ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
7. ASTM D 3363 – Standard Test Method for Film Hardness by Pencil Test.
8. ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

- B. ISO Testing Standards:

1. ISO 1520 – Paints and Varnishes – Cupping Test.
2. ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- B. Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions.
- C. Samples: Submit manufacturer's samples of materials, finishes, and colors.
- D. Warranty: Manufacturer's standard warranty.

1.04 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged in manufacture of site furnishings since 1969.
- B. Product Support: Products are supported with complete engineering drawings and design patents.
- C. Base Worth: An installed base of products worth in excess of one hundred million dollars.
- D. Assets: Excess of twenty million dollars in assets.
- E. Production: Orders are filled within a 40-day schedule.
- F. Facility Operator: Welders and machine operators are certified.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- C. Handling: Protect materials and finish during handling and installation to prevent damage.

1.06 WARRANTY

- A. Warranty Information:

- Products will be free from defects in material and/or workmanship for a period of three years from the date of invoice.
- The warranty does not apply to damage resulting from accident, alteration, misuse, tampering, negligence, or abuse.

- Landscape Forms, Inc. shall, at its option, repair, replace, or refund the purchase price of any items found defective upon inspection by an authorized Landscape Forms service representative.
- Purchasers should be aware that normal use of these high-quality products can result in superficial damage affecting the finish. Scratches, nicks, and dents are to be considered normal wear and tear and are not the responsibility of the manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Landscape Forms, Inc., 7800 E. Michigan Ave, Kalamazoo, Michigan 49048. Phone: (800) 521-2546. Fax (269) 381-3455. Website www.landscapeforms.com Contact: Kellie Moore, Email: kmoore@landscapeforms.com or equivalent.

2.02 BENCHES

- A. “Stay” Benches or approved equal or better.
- B. Style:
1. Backed:
 - a. With Arms:
 - Depth: 23-1/4 inches.
 - b. Surface Mount:
 - Overall Height: 32 inches.
 - Arm Height: 25-1/4 inches.
 2. Backless:
 - a. Without Arms:
 - Depth: 18-1/2 inches.
 - b. Surface Mount with dividers:
 - Overall Height: 19-3/4 inches.
- C. Length: 68-1/2 inches.

2.03 MATERIALS

- A. Supports: End supports are type 319 ASTM B 26 aluminum sand castings.
- B. Frame: Front seat rail is 1.5” OD x .120” wall normalized 4130 welded steel tubing with type 304 ASTM A 276 stainless steel threaded inserts welded inside each end. Rear seat rail is 1.5” OD x .120” wall ASTM A 513 type 1 steel tubing. Seat panel connections are .250” x .75” x .80” type 304 ASTM A 276 stainless steel flat bar welded to rails. Upper and lower back rails are 6061-T6 or 6005A-T5 ASTM B 211 aluminum extrusions. Upper rail is 1.375” dia.; lower rail is .875” dia.
- C. Seat and Back Panels: Seat panel is .120” thick ASTM A 1011 hot rolled pickled and oiled commercial steel type B perforated and formed. Seat panel connections are .188” x 1” x 1.5” type 304 ASTM A 276 stainless steel flat bar welded to panel. Back panel is .125” thick 3003-H14 ASTM B 209 aluminum sheet perforated and formed. Back panel is welded to back rails.
- D. Surface Mount Hardware: Plates are .375” thick 6061-T6511 ASTM B 221 aluminum flat bar. Anchors are 1/2” x 4 3/4” stainless steel sleeve anchors.
- E. Seat Dividers: Optional seat dividers are type 319 ASTM B 26 aluminum sand castings.
- F. Fasteners: All threaded fasteners are stainless steel or Magni 565 coated carbon steel. Seat dividers are attached with nylon shoulder and flat washers to protect the seat panel finish.

2.04 RECYCLED CONTENT

- A. Stay Backed Benches:
- Post-Consumer Material Content: Minimum 38 percent.
 - Pre-Consumer Material Content: Minimum 25 percent.
 - Recyclable: 100 percent.
- A. Stay Backless Benches:
- Post-Consumer Material Content: Minimum 45 percent.
 - Pre-Consumer Material Content: Minimum 27 percent.
 - Recyclable: 100 percent.

2.05 FABRICATION

- A. Shop assembled benches.

2.06 FINISHES

- A. Finish on Metal: Landscape Forms, Inc. "Pangard II".
1. Primer: Rust inhibitor.
 2. Topcoat: Thermosetting polyester powder coat. UV, chip, and flake resistant.
 3. Test Results: "Pangard II".
 - a. Gloss, Garner 60 Degrees, ASTM D 523: Plus or minus 5.
 - b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
 - c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
 - d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
 - e. Erichsen Cupping, ISO 1520: 8 mm.
 - f. Impression Hardness, Buchholz, ISO 2815: 95.
 - g. Impact Test, ASTM D 2794: 60 inches/pound at 2.5 mils
 - h. Pencil Hardness, ASTM D 3363: 2H minimum.
 - i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max. undercutting 1 mm.
 - j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max. blisters 1 mm.
 4. Color: Silver

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas to receive benches.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

3.02 INSTALLATION

- A. Install benches in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Install benches level.
- C. Anchor benches securely in place.

3.03 ADJUSTING

- A. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
- B. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

3.04 CLEANING

- A. Clean benches promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that could damage finish.

3.05 PROTECTION

- A. Protect installed benches to ensure that, except for normal weathering, benches will be without damage or deterioration at time of Substantial Completion.

END OF SECTION 12 93 43.14

**SECTION 12 93 43.15 BENCHES
TWIG BENCH**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Benches.

1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
B. Shop Drawings: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions.
C. Samples: Submit manufacturer's samples of materials, finishes, and colors.
D. Warranty: Manufacturer's standard warranty.

1.03 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Manufacturer regularly engaged in manufacture of site furnishings since 1969.
B. Product Support: Products are supported with complete engineering drawings and design patents.
C. Base Worth: An installed base of products worth in excess of one hundred million dollars.
D. Assets: Excess of twenty million dollars in assets.
E. Production: Orders are filled within a 40-day schedule.
F. Facility Operator: Welders and machine operators are certified.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
C. Handling: Protect materials and finish during handling and installation to prevent damage.

1.05 WARRANTY

- A. Warranty Information:
-Products will be free from defects in material and/or workmanship for a period of three years from the date of invoice.
-The warranty does not apply to damage resulting from accident, alteration, misuse, tampering, negligence, or abuse.
- Landscape Forms, Inc. shall, at its option, repair, replace, or refund the purchase price of any items found defective upon inspection by an authorized Landscape Forms service representative.
-Purchasers should be aware that normal use of these high-quality products can result in superficial damage affecting the finish. Scratches, nicks, and dents are to be considered normal wear and tear and are not the responsibility of the manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Landscape Forms, Inc., 7800 E. Michigan Ave, Kalamazoo, Michigan 49048. Phone:
(800) 521-2546. Fax (269) 381-3455. Website www.landscapeforms.com Contact:
Kellie Moore, Email: kmoore@landscapeforms.com or equivalent.

2.02 BENCHES

- A. "Twig" Benches or approved equal or better.
B. Style:

1. Backless, 93-1/4" x 76-1/8" x 18-1/8"h

2.03 MATERIALS

- A. Reinforced cast stone (concrete): Manufacturer's proprietary blend of portland cement, sand, aggregate, and color admixture.
 - Use only one brand, type and source of cement for entire Project.
 - Provide integral colored concrete with lightfast (UV and fade resistant) color pigments.
 - Reinforced with steel bar framework.
- B. Water: Clean and potable.

2.04 RECYCLED CONTENT

- A. Bench:
 - Recycled Material Content: Minimum 0 percent.
 - Post-Consumer Material Content: Minimum 0 percent.
 - Pre-Consumer Material Content: Minimum 0 percent.
 - Recyclable: 100 percent.

2.05 FABRICATION

- A. Formwork: Fabricate forms sufficiently rigid to meet casting tolerances. Coat formwork with form release agent.
- B. Casting: Fabricate units to required profiles and sizes. Execute work accurately to specified tolerances and free of broken edges.
- C. Curing: Protect units from exposure to weather until concrete strength is adequate for form removal. Cure under identical conditions.

2.06 FINISHES

- A. Acid-etched finish.
- B. Color: Beige

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas to receive benches.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

3.02 INSTALLATION

- A. Install benches in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Install benches level and plumb.

3.03 ADJUSTING

- A. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.

3.04 CLEANING

- A. Clean benches promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that could damage finish.

3.05 PROTECTION

- A. Protect installed benches to ensure that, except for normal weathering, benches will be without damage or deterioration at time of Substantial Completion.

END OF SECTION 12 93 43.15

**SECTION 12 93 43.16 PICNIC TABLE
URBAN SPACE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Picnic Table.

1.02 REFERENCES

- A. ASTM Testing Standards:
1. ASTM D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
 2. ASTM D 523 – Standard Test Method for Specular Gloss.
 3. ASTM D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
 4. ASTM D 2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
 5. ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
 6. ASTM D 3363 – Standard Test Method for Film Hardness by Pencil Test.
 7. ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.
- B. ISO Testing Standards:
1. ISO 1520 – Paints and Varnishes – Cupping Test.
 2. ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer’s product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- B. Shop Drawings: Submit manufacturer’s shop drawings, including plans and elevations, indicating overall dimensions.
- C. Samples: Submit manufacturer’s samples of materials, finishes, and colors.
- D. Warranty: Manufacturer’s standard warranty.

1.04 QUALITY ASSURANCE

- A. Product Support: Products are supported with complete engineering drawings and design patents.
- B. Base Worth: An installed base of products worth in excess of one hundred million dollars.
- C. Assets: Excess of twenty million dollars in assets.
- D. Production: Orders are filled within a 40-day schedule.
- E. Facility Operator: Welders and machine operators are certified.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer’s original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area in accordance with manufacturer’s instructions. Keep materials in manufacturer’s original, unopened containers and packaging until installation.
- C. Handling: Protect materials and finish during handling and installation to prevent damage.

1.06 WARRANTY

- A. Warranty Information:
Wishbone Ltd. Provides an extended 10-year limited warranty from the date of invoice.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Wishbone Site Furnishings. #210-27090 Gloucester Way, Langley, BC Canada V4W 3Y5.
Phone: (604) 626-0476. Fax: (604) 626-0496 Website www.wishboneltd.com
Contact: Robin Ruddock, (604) 626-0433, Email: robin@wishboneltd.com or equivalent.

2.02 PICNIC TABLE

- A. “Urban Space Round” Picnic Table or approved equal or better.

1. Regular Version: Model number: USPT-70
2. Wheel Chair Accessible Version: Model Number: USPTWC-70

B. Style:

1. Round Table:
 - a. Surface Mount: Inst – 2.75 Stainless Steel Wedge Anchor Bold Down Kit
 - b. Aluminum.
 - c. Top surfaces are perforated to reduce the temperature of the metal in direct sunlight by direct sunlight by decreasing surface area and increasing air flow. This feature also discourages graffiti.
 - d. Seat sections can be removed easily.
2. Dimensions:
 - a. Table height: 30 inches
 - b. Table Top: 40 inches
 - c. Seat Height: 18 inches
 - d. Seat Depth: 12 inches
 - e. Total Outside Diameter: 70 inches
3. Weight: 125 pounds

C. Options:

1. Wheel Chair Accessible Option

2.03 MATERIALS

- A. Stainless Steel Hardware
- B. Aluminum Frame

2.04 FINISHES

- A. Powder Coated Aluminum Frame
 4. Color: Bengal Textured Silver

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas to receive Picnic Table.
- B. Notify Architect of conditions that would adversely affect installation or subsequent use.
- C. Do not begin installation until unacceptable conditions are corrected.

3.02 INSTALLATION

- A. Install Picnic Table in accordance with manufacturer’s instructions at locations indicated on the Drawings.
- B. Install Picnic Table level.
- C. Anchor Picnic Table securely in place.

3.03 ADJUSTING

- A. Finish Damage: Repair minor damages to finish in accordance with manufacturer’s instructions and as approved by Architect.
- B. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

3.04 CLEANING

- A. Clean Picnic Table promptly after installation in accordance with manufacturer’s instructions.
- B. Do not use harsh cleaning materials or methods that could damage finish.

3.05 PROTECTION

- A. Protect installed Picnic Table to ensure that, except for normal weathering, Picnic Table will be without damage or deterioration at time of Substantial Completion.

END OF SECTION 12 93 43.16

**SECTION 32 01 90
MAINTENANCE OF PLANTING**

PART 1 - GENERAL

1.01 WORK INCLUDED

Description covers routine maintenance guidelines for onsite planting and irrigation system before Final Acceptance. Maintenance guidelines to include the initial 90-day maintenance periods after Final Acceptance.

1.02 RELATED DOCUMENTS

- A. Drawings and General Provisions of the contract, including but not limited to General and Specific Provisions, apply to this section.
- B. Section 32 84 00: Irrigation System.
- C. Section 32 90 00: Trees, Plants and Groundcovers.
- D. Section 32 92 00: Sodding

1.03 PROTECTION

Protect all plants, site furniture, paved surfaces, and buildings during maintenance procedures and protect all plants in the application of chemicals. Use chemicals and equipment in accordance with manufacturer's directions and specifications. Repair or replace any damage caused through improper use of equipment or application of chemicals. Apply all chemicals in such a manner that the public will not be in contact with or have any real or imagined harm done to them by the application.

1.04 RECORD

- A. Weekly checklists shall be completed by the maintenance personnel in the course of their work. The checklists shall indicate the tasks completed, including mowing schedule, observations of damages, plant materials requiring special care or replacement, and situations detrimental to health and vigor of plantings.
- B. Record monthly the use of all fertilizers, herbicides, insecticides and disease control chemicals used for the project.
- C. Records shall be submitted to, and / or kept by the City of Tampa Parks and Recreation Department Maintenance Division.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Water: Clean, potable and fresh
- B. Fertilizers:
 - 1. Tightly-compressed, slow-release and long-lasting complete fertilizer tablets bearing manufacturer's label of guaranteed analysis of chemicals present.
 - 2. Balanced, yearly application of controlled-release fertilizers with a blend of coated pills which supply controlled-release nitrogen, phosphorus and potassium,

and uncoated, rapidly soluble pills containing nitrogen and phosphorus.

3. Top Dress Fertilizer: "Gro-Power" 5-3-1 and Gro-Power Control Release 12-8-8.
- C. Herbicides, Insecticides, and Fungicides:
1. Obtain best quality materials with original manufacturers' containers, properly labeled with guaranteed analysis.
 2. Use non-staining materials.
- D. Replacement Tree Staking: Match existing materials on the site until trees are established; a minimum of one year.
- E. Mulch: Shredded hardwood mulch, clean, bright and free of weeds, moss, sticks and other debris.

PART 3 - EXECUTION

3.01 GENERAL

Maintain all plantings in a healthy, vigorous and attractive condition.

3.02 TREES, SHRUBS

- A. Watering Basins:
1. Maintain all watering basins around plants so that enough water can be applied to establish moisture through major root zones.
 2. In rainy season, open basins to allow surface drainage away from the root crown where excess water may accumulate. Restore watering basins at end of rainy season or until plants are established.
 3. For supplemental hand watering of watering basins, use a water wand to break the water force. Do not permit crown roots to become exposed to air through dislodging of soil and mulch.
 4. Maintain 3" depth of mulch to reduce evaporation and frequency of watering.
 5. Check for moisture penetration throughout the root zone at least once per week.
- B. Resetting: Reset plants to proper grades or upright position.
- C. Weed Control:
1. Control weeds, preferably by hand weeding; or with pre-emergent herbicides and with selective systemic herbicides.
 2. All areas between plants, including watering basins, shall be made weed free on a continuous 14-day cycle.
 3. Use only recommended and legally approved herbicides to control weed growth.
 4. Avoid frequent soil cultivation that destroys shallow roots and breaks the seal of pre-emergent herbicides.
- D. Pruning: Ensure all pruning equipment is clean and sharp. Clean equipment between the

pruning of different plant types.

1. Trees: Prune trees according to ANSI A300 standards. Maintain a natural shape. As tree matures, trim bottom branches to maintain 7' clear height.
2. Prune trees to select and develop permanent scaffold branches that are smaller in diameter than the trunk or branch to which they are attached, and which have vertical spacing of 18 in. to 48 in. and radial orientation so as not to overlay one another.
3. Prune trees to eliminate diseased or damaged growth, and narrow V-shaped branch forks that lack strength. Reduce toppling and wind damage by thinning out crowns.
4. Prune trees to maintain growth within space limitations balancing crown with roots.
5. No stripping of lower branches ("raising up") of young trees will be permitted.
6. Retain lower branches in a "tipped back" or pinched condition to promote caliper trunk growth (tapered trunk). Do not cut back to fewer than six buds or leaves on such branches. Only cut lower branches back after the tree is able to stand erect without staking or other support.
7. Thin out and shape evergreen trees when necessary to prevent wind and storm damage. Do primary pruning of deciduous trees during the dormant season. Do not permit any pruning of trees prone to excessive "bleeding" during growth season.
8. Prune damaged trees or those that constitute health or safety hazards at any time of year as required.
9. Make all cuts clean and close to the trunk, without cutting into the branch collar. "Stubbing" will not be permitted. Cut smaller branches flush with trunk or lateral branch. Make larger cuts (1 in. in diameter or larger) parallel to shoulder rings, with the top edge of the cut at the trunk or lateral branch.
10. Branches too heavy to handle shall be precut in three stages to prevent splitting or peeling of bark. Make the first two cuts 18 in. or more from the trunk to remove the branch. Make the third cut at the trunk to remove the resulting stub.
11. "Drop Crotch" pruning shall be used to prune all trees and shrubs. No hedging of plant material shall be allowed. Specific trees and shrubs shall be shaped to meet the design intent as noted below:
 - Sabal Palms: Remove dead branches from the palms only after they are completely brown and dry. No over pruning shall occur.
 - Crape Myrtles: Tree limbs shall not be cut back in the winter. Only necessary pruning required to meet good arboreal practices and maintain shape should occur.
 - Ixora: Shrubs shall be pruned yearly to a height of 36". Only "drop crotch" pruning should occur. No hedging shall be permitted.

3.3 GROUNDCOVERS

- A. Watering:
 - 1. Check for moisture penetration throughout the root zone at least twice (2x) a month.
 - 2. Water according to watering schedule in Technical Maintenance Plan on Landscape Notes sheet.
- B. Weed Control:
 - 1. Control weeds, preferably with pre-emergent herbicides and with selective systemic herbicides on a continuous weekly basis.
 - 2. Minimize hoeing of weeds in order to avoid plant damage.
- C. Pruning:
 - 1. White Fountain Grass: Trim back in the late winter prior to Spring flush.
 - 2. Dwarf Asian Jasmine: Maintain in a manicured form with edges “hedged” to keep from encroaching on sidewalk and other plants within the plant bed. After the last chance of freeze and prior to new spring growth, cut back jasmine to encourage flush of fresh growth. Trim planting at edge of bed with professional grade edger. Ensure clean cuts with minimal fraying.
 - 3. Trim grass edges at least two times per month or as required for neat appearance. Edging shall be performed with a blade type mechanical edger. String whips shall not be permitted. Vacuum clippings

3.4 SOD

- A. Refer to Specification 32 92 00 Sodding for maintenance requirements

3.5 INSECTS, PESTS, AND DISEASE CONTROL

- A. Inspection: Inspect all plant materials for signs of stress, damage and potential trouble from the following:
 - 1. Presence of insects, fungus, moles, snails and slugs in planting areas.
 - 2. Discolored or blotching leaves or needles.
 - 3. Unusually light green or yellowish green color inconsistent with normal green color of leaves.
- B. Personnel: Perform spraying for insect, pest and disease control only by qualified, trained personnel.
- C. Application: Spray with extreme care to avoid all hazards to any person or pet in the area or adjacent areas.

3.6 IRRIGATION SYSTEM

- A. General:
 - 1. Set and program automatic controllers for seasonal water requirements.

4. Twice (2x) a month, use a probe or other acceptable tool to check the rootball moisture of representative plants as well as the surrounding soil.

B. Water Use Guidelines

Amount of Water Applied

Trees Saturate soil to a depth of 3'. Apply water according to watering schedule in Technical Maintenance Plan on Landscape Notes Sheet. Water applied should be a slow soaking at 4 GPM maximum.

Groundcover plants Apply a minimum of 2 gallons of water per plant at each application.

Sod Refer to Specification 32 90 00 Sodding for watering requirements.

C. Cleaning and Monitoring the System:

1. Continually monitor the irrigation systems to verify that they are functioning properly as designed. Make program adjustments required by changing field conditions.
2. Clean filters as often as necessary to keep the irrigation systems free of sand and other debris.

END OF SECTION 32 01 90

**SECTION 32 05 16
STRUCTURAL SOIL**

PART 1 - GENERAL

1.01 SECTION INCLUDES

The work of this section consists of all Structural Soil work and related items as indicated on the drawings or as specified herein.

1.02 RELATED DOCUMENTS

Drawings and General Provisions of the contract, including but not limited to General and Specific Provisions, apply to this section.

1.03 REFERENCES AND STANDARDS

The following references are used herein and shall mean:

ASTM: American Society of Testing Materials

USDA: United States Department of Agriculture

AASHTO: American Association of State Highway and Transportation Officials

Standard Specifications: Regional or Municipal Standard Specifications Documentation for the location of proposed usage

AOAC: Association of Official Agricultural Chemists

1.04 SAMPLES AND SUBMITTALS

At least 30 days prior to ordering materials, the Contractor shall submit to the Engineers representative samples, and certified tests for materials specified below. No materials shall be ordered until the required samples, and test results have been reviewed and approved by the Engineer. Delivered materials shall closely match the approved samples. Approval shall not constitute final acceptance. The engineer reserves the right to reject, on or after delivery, any material that does not meet these specifications.

Submit a one-half cubic foot representative samples of the City of Tampa Mix for Structural Soil. This consists of a homogenous mix of 45% ¾” aggregate, 35% builder’s sand and 20% organic topsoil.

Submit soil test analysis reports for the sample of the City of Tampa Mix from an approved soil-testing laboratory. The test results shall report the following:

Submit a bulk density of the sample and particle size analysis including the following gradient of mineral content:

<u>USDA Designation</u>	<u>Size in inches.</u>
Gravel	¾”
Sand	.002-.08”

Composition of organic topsoil including pH and buffer pH, Percent organic matter as determined by the loss of ignition of oven dried samples. Test samples shall be oven dried to a constant weight at a temperature of 230 degrees F, plus or minus 9 degrees.

Analysis for nutrient levels by parts per million including nitrate nitrogen, ammonium nitrogen, phosphorus, potassium, magnesium, manganese, iron, zinc, calcium and extractable aluminum. Nutrient test shall include the testing laboratory recommendations for supplemental additions to

the soil as calculated by the amount of material to be added per volume of soil for the type of plants to be grown in the soil.

Analysis for levels of toxic elements and compounds including arsenic, boron, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, zinc and PCB. Test results shall be cited in milligrams per kilogram.

Soluble salt by electrical conductivity of a 1:2 soil/water sample measured in Millimho per cm. Cation Exchange Capacity (CEC).

Carbon/Nitrogen Ratio.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Delivered soil shall be protected from exposure to excess water and sun exposure. Cover material after delivered to the site.

1.06 EXAMINATION OF CONDITIONS

- A. All areas to receive the City of Tampa Mix shall be inspected by the installing contractor before starting work and all defects such as incorrect grading, compaction, and inadequate drainage shall be reported to the landscape architect prior to beginning work.

1.07 QUALITY ASSURANCE

- A. The contractor providing this service shall have installed structural soil in tree planting applications for a minimum of five (5) projects. Provide two references from two (2) different projects where this soil was installed.

1.08 UNDERGROUND UTILITIES AND SUBSURFACE CONDITIONS

- A. Any conditions that will impact the installation of the soil as outlined in the drawings must be immediately reported to the Landscape Architect.
- B. The contractor must locate all utilities and underground obstructions prior to excavating for the soil.
- C. The contractor must repair any damaged utilities or structures damaged by the installation of the soil.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Material shall consist of the City of Tampa Mix for Structural Soil. This consists of a homogenous mix of 45% ¾” aggregate, 35% builder’s sand and 20% organic topsoil.

- B. The soil shall meet the following standards:

<u>USDA Designation</u>	<u>Size in inches.</u>
Gravel	¾”
Sand	.002-.08”

Composition of organic topsoil including pH and buffer pH, Percent organic matter as determined by the loss of ignition of oven dried samples. Test samples shall be oven dried to a constant weight at a temperature of 230 degrees F, plus or minus 9 degrees.

Analysis for nutrient levels by parts per million including nitrate nitrogen, ammonium nitrogen, phosphorus, potassium, magnesium, manganese, iron, zinc, calcium and extractable aluminum. Nutrient test shall include the testing laboratory recommendations for supplemental additions to the soil as calculated by the amount of material to be added per volume of soil for the type of plants to be grown in the soil.

Analysis for levels of toxic elements and compounds including arsenic, boron, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, zinc and PCB. Test results shall be cited in milligrams per kilogram.

Soluble salt by electrical conductivity of a 1:2 soil/water sample measured in Millimho per cm.

Test Cation Exchange Capacity (CEC).

Test Carbon/Nitrogen Ratio.

PART 3 - EXECUTION

3.01 SITE PREPARATION

- A. Install City of Tampa mix only after all utility work is complete and curb lines have been installed.
- B. Excavate and compact the proposed subgrade to the depth, width and slope as shown on plans. Maintain the angle of repose so that soil is stabilized. Do not over excavate compacted subgrades.
- C. Clear the excavation of all construction debris, trash, rubble and foreign matter. Remove all materials that are harmful to plants and fill excavation with approved topsoil.
- D. Protect adjacent utilities, buildings, walks, curbs and roadways from damage. Clean up any soil that spills onto adjacent surfaces at the end of each day.
- E. Any damage to adjacent elements caused by the contractor shall be repaired or replaced by the contractor at no cost to the owner.

3.02 WATER

- A. The contractor shall be responsible for providing his own water. Water shall be free of impurities.

3.03 INSTALLATION OF SOIL

- A. Install the Tampa Mix in 6" lifts and compact after each lift.
- B. Compact all material to at least 90% Proctor Density from a standard compaction curve AASHTO T99 (ASTM D 698). No compaction shall occur when soil is saturated.
- C. Bring Tampa Mix to finished grades as shown on drawings. Protect soil from contamination.
- D. The landscape architect shall be notified during the installation to review the quality and consistency of the application.

3.04 FINE GRADING

- A. Prior to commencing the fine grading, the landscape architect shall approve the rough grading of the soil.

- B. Adjust the finish grades to meet field conditions as directed. Provide a smooth transition between grades. Fill all dips with the Tampa Mix and remove any bumps. All fine grading is to be reviewed by the Landscape Architect prior to acceptance.
- C. The contractor shall request the inspection a min. of two weeks prior to the inspection date.

3.05 CLEAN UP

- A. Upon completion of the installation, clean areas impacted by the installation. Remove and dispose of all waste material in a legal manner. Sweep area to remove dirt. Do not use water until finish areas have been protected.

END OF SECTION 32 05 16

**SECTION 32 13 16.13
SAW-CUT CONCRETE SIDEWALK**

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The work included in this Section consists of furnishing all labor, material equipment and transportation for the construction of the sidewalks to the lines and grades as shown on the Drawings.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including but not limited to, General and Specific Provisions, apply to this Section.
- B. Section 03 30 00 – Concrete Specifications
- C. Section 32 13 16.20 – Shell Aggregate Concrete Sidewalk

1.03 QUALITY ASSURANCE

- A. Work to be done by qualified contractor regularly engaged in doing decorative concrete. Contractor shall have completed a minimum of ten (10) projects with a similar scope and must have been doing similar work for a minimum of five (5) years.

1.04 SUBMITTALS

- A. A List of projects of a similar nature that have been completed with pictures of completed work, and location shall be submitted to the City for Approval. Provide references for work completed and demonstrate years of experience.
- B. All materials specified shall be certified by the producer or manufacturer that the furnished material meets the specific requirements of the specifications.
- C. Ten foot by ten foot (10' x 10') mock up with finish and jointing.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Concrete: Concrete shall be Class A that conforms to the requirements of Section 03 30 00
- B. Preformed Joint Filler: Preformed joint filler shall be non-extruding and resilient bituminous type and shall conform to the requirements of AASHTO Designation M 153 or AASHTO Designation M 213. It shall be gray in color to match concrete.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Subgrade Condition:
 - 1. The finished subgrade shall be maintained in a smooth, compact condition and any areas which are disturbed prior to placing of the concrete shall be restored at the Contractor's expense. The subgrade shall be moist at the time the concrete is placed. Water shall be uniformly applied ahead of the pouring operations as directed by the Engineer. Large rocks

and other obstructions shall be removed to a minimum depth of 6 inches below the finished subgrade elevation, and the space shall be backfilled with sand, base course material or other suitable material which shall be thoroughly compacted by rolling or tamping.

2. The subgrade shall be accurately trimmed to the required elevation with a 1/4-inch tolerance. High areas shall be trimmed to proper elevation. Low areas may be filled with suitable material and compacted to the specified density or filled with concrete integrally with the placing of the pavement.
- B. Setting Forms: The forms shall be accurately set to line and grade and such that they rest firmly, throughout their entire length upon the compacted subgrade surface. Forms shall be joined neatly and tightly and braced to resist the pressure of the concrete and the finished operations. The alignment and grade of all forms shall be approved before and immediately prior to the placing of concrete.
- C. Mixing Concrete: Concrete shall be mixed in accordance with the requirements of Section 03 30 00.
- D. Concrete Testing: All testing shall be done in accordance with Specification Section 03 30 00. The City of Tampa will perform the concrete testing. Notify City five (5) days prior to required testing.

3.02 INSTALLATION

- A. Placing Concrete:
1. The concrete shall be distributed on the subgrade to such depth that, when it is consolidated and finished, the thickness required by the Drawings will be obtained at all points and the surface will at no point be below the grade specified for the finished surface. The concrete shall be deposited on the subgrade in a manner which will require as little re-handling as possible. Placing of the concrete shall be continuous between transverse joints, without the use of intermediate bulkheads.
 2. Concrete shall be thoroughly consolidated against and along the faces of all forms by means of vibrators. Vibrators shall not be permitted to come in contact with the subgrade or a side form. Vibration at any one location shall not continue so long as to produce puddling or the accumulation of excessive grout on the surface. In no case shall the vibrator be operated longer than 15 seconds in any one location.
- B. Striking-off, Consolidating and Finishing Concrete: Immediately after the placing, the concrete shall be struck off, consolidated and finished, to produce a finished product conforming to the cross section, width and surface finish required by the Drawings and Specifications.
- C. Straight edging and Surface Corrections: After floating has been completed and the excess water removed, but while the concrete is still in a plastic state, the surface of the concrete shall be tested for trueness with an accurate 10-foot straight edge. The straight edge shall be furnished by the Contractor. The straight edge shall be held in successive positions parallel to the walk center line, in contact with the surface, and the whole area tested from one side of the slab to the other, as necessary. The advance along the walk shall be in successive stages of not more than one-half the length of the straight edge. Any depressions shall be immediately filled with freshly mixed concrete and struck-off, consolidated and refinished. High areas shall be cut down and refinished. Straight edge testing and surface correction shall continue until the entire surface appears to conform to the required grade and cross section. All surface irregularities exceeding 1/4 inch in 10 foot shall be corrected.
- D. Final Finish: As soon as the water sheen has disappeared and just before the concrete becomes non-plastic, all edges, including expansion joint edges, shall be finished with an edging tool having a radius of 1/8 inch. Finally the top shall be given a float finish. Within four (4) to twelve (12) hours

after the concrete has been finished, a two foot by two foot grid shall be cut into the pavement. Every four feet the saw-cut shall be a contraction joint, see section E. below. Non-contraction joints shall be cut to a depth of 1/2". All saw-cutting, unless otherwise indicated, shall be perpendicular to the right-of-way and performed using a double blade. A ten foot by ten foot sample shall be submitted prior to construction for approval. The sample shall be half saw-cut concrete and half shell aggregate concrete, and contain the curve between the two surfaces as shown on the plan.

- E. Joints: All joints, unless otherwise indicated, shall be perpendicular to the right-of-way.
1. Transverse Construction Joints: Transverse construction joints shall be constructed at the end of all pours and at other locations where the pouring operation are stopped for as long as 30 minutes. Construction joints, however, shall not be placed within four feet of any other transverse joint or of either end of a section of walk. If sufficient concrete has not been placed to form a slab at least four feet long, the excess concrete, back to the last preceding joint, shall be removed. The joints shall be formed by placing a wood or metal bulkhead accurately and securely in place, in a plane perpendicular to the profile and center line of the walk. Construction joints shall have tooled edges with a 1/8-inch radius.
 2. Transverse Contraction Joints: Transverse contraction joints shall be saw-cut at ten foot by ten foot intervals and shall provide planes of weakness created by a concrete saw blade. The cut in the concrete shall be perpendicular to the surface of the walk and shall extend to a depth of 1 1/2 inches below the top surface. See Section D. above for additional saw-cutting instructions.
 3. Transverse Expansion Joints: One half-inch expansion joints shall be formed by placing preformed joint filler around all structures and at intervals not exceeding 30 feet on center. Place an expansion joint between different types of concrete finishes.
- F. Curing:
1. After the finishing operations have been completed and as soon as the concrete has hardened sufficiently that marring of the surface will not occur, the entire surface and the edges of the newly placed concrete shall be water cured by misting or covering with an approved curing material kept thoroughly saturated with water.
 2. The forms shall be kept wet until removed and upon removal, the curing specified herein shall be started immediately.
 3. Concrete shall be cured for a period of 7 days for normal Portland cement or 4 days for high early strength cement.
 4. Concrete poured in the dry shall not be submerged until it has attained sufficient strength to adequately sustain the stress involved, nor shall it be subjected to flowing water across the surface for 4 days.
- G. Form Removal: After the concrete has sufficiently set a minimum of 12 hours, the Contractor shall remove the forms and shall backfill the space on each side. The earth shall be compacted and graded in a satisfactory manner without damage to the concrete work. Honeycombs shall be filled with sand cement mortar. Plastering will not be allowed on the face of the walk. Rejected walk shall be removed and replaced without additional compensation.

END OF SECTION 32 13 16.20

**SECTION 32 13 16.20
SHELL AGGREGATE CONCRETE SIDEWALK**

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The work included in this Section consists of furnishing all labor, material equipment and transportation for the construction of the sidewalks to the lines and grades as shown on the Drawings.
- B. This section shall apply to all surface finishes indicated in Decorative Concrete Paving on the plans.

1.02 RELATED DOCUMENTS

- A. Drawings and General Provisions of the contract, including General and Supplementary General Provisions, Special Conditions and Division 1 Specifications sections, apply to this section.
- B. Section 03 30 00 – Concrete Specifications.
- C. Section 32 13 16 – Decorative Concrete Paving
- C. Section 32 13 16.13 – Saw-Cut Concrete Sidewalk

1.03 QUALITY ASSURANCE

- A. **WORKMANSHIP:** All concrete work which does not conform to the specified requirements, including strength, tolerances, and finishes, shall be removed and replaced or corrected as directed by the Architect/Engineer at the Contractor's expense, without extension of time.
- B. **SPECIALTY SUBCONTRACTOR:** Shell aggregate application shall be furnished and applied only by an applicator who can present positive proof of having successfully applied materials and used methods specified herein under comparable conditions over a period of at least five (5) years.

1.04 SUBMITTALS

- A. A List of projects of a similar nature that have been completed with pictures of completed work, and location shall be submitted to the City for Approval. Provide references for work completed and demonstrate years of experience.
- B. All materials specified shall be certified by the producer or manufacturer that the furnished material meets the specific requirements of the specifications.
- C. Aggregate: Submit a one (1) quart sample of the washed tri-color color coquina shell aggregate for approval prior to preparation of mock up.
- D. The Contractor shall furnish a ten foot by ten foot (10' x 10') mock up with finish and jointing for approval prior to construction. The approved panel shall constitute an example of minimum workmanship for all work specified under the s section. If the sample panel is disapproved, additional sample panels shall be made until approval is obtained. The approved sample panel shall be kept at the jobsite for comparison with the finished work. See Section D, Final Finish for description.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Concrete: Concrete shall be Class A that conforms to the requirements of Section 03 30 00 and shall be 4000 psi #57 limestone aggregate concrete with L.M. Scofield integral color #5130, Spring Beige per manufacturer's specifications or approved equal.

- B. Shell Aggregate: Washed, coquina shell blend. $\frac{3}{4}$ natural buff colored shell and $\frac{1}{4}$ brown pea gravel. All aggregate shall be free of deleterious materials.
- C. Preformed Joint Filler: Preformed joint filler shall be non-extruding and resilient bituminous type and shall conform to the requirements of AASHTO Designation M 153 or AASHTO Designation M 213.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Subgrade Condition:
 - 1. The finished subgrade shall be maintained in a smooth, compact condition and any areas which are disturbed prior to placing of the concrete shall be restored at the Contractor's expense. The subgrade shall be moist at the time the concrete is placed. Water shall be uniformly applied ahead of the pouring operations as directed by the Engineer. Large boulders and other obstructions shall be removed to a minimum depth of 6 inches below the finished subgrade elevation, and the space shall be backfilled with sand, base course material or other suitable material which shall be thoroughly compacted by rolling or tamping.
 - 2. The subgrade shall be accurately trimmed to the required elevation with a 1/4-inch tolerance. High areas shall be trimmed to proper elevation. Low areas may be filled with suitable material and compacted to the specified density or filled with concrete integrally with the placing of the pavement.
- B. Setting Forms: The forms shall be accurately set to line and grade and such that they rest firmly, throughout their entire length upon the compacted subgrade surface. Forms shall be joined neatly and tightly and braced to resist the pressure of the concrete and the finished operations. The alignment and grade of all forms shall be approved before and immediately prior to the placing of concrete.
- C. Mixing Concrete: Concrete shall be mixed in accordance with the requirements of Section 03000, with these special provisions; the application shall be 4000 psi #57 aggregate concrete with L.M. Scofield integral color #5130, Spring Beige or approved equal.
- D. Aggregate: Prior to the concrete placing operation, all select seeding aggregate shall be washed thoroughly so that it is free of all dust, dirt, and clay particles. The aggregate shall be in a damp condition but without free surface water at the time of seeding application. There shall be sufficient select aggregate on hand to complete the seeding once it has started.
- F. Concrete Testing: All testing shall be done in accordance with Specification 03 30 00. The City of Tampa will perform the concrete testing. Notify City five (5) days prior to required testing.

3.02 INSTALLATION

- A. Placing Concrete:
 - 1. The landscape architect shall be notified of concrete placement sufficiently in advance of start of operation to allow the architect's representative to complete preliminary inspection of the work, including subgrade and forms. Normal concrete placement procedures shall be followed. Concrete shall arrive at the jobsite so that no additional water will be required to produce the desired slump of no greater than 5". When conditions develop that require addition of water to produce the desired slump, permission of the landscape architect's representative must be obtained. The concrete shall be transported from the mixer to its place of deposit by a method that will prevent segregation or loss of material.
 - 2. Concrete shall be consolidated by suitable means to eliminate voids and pockets.

The strikeoff and darby or bull- float operations should be such that a level or flat, plane surface is obtained sufficiently below the final finish grade to allow for volume growth due to the addition of the seeding aggregate.

3. The concrete shall be distributed on the subgrade to such depth that, when it is consolidated and finished, the thickness required by the drawings will be obtained at all points and the surface will at no point be below the grade specified for the final finished surface. Take into account the shell aggregate seeding when placing concrete. The concrete shall be deposited on the subgrade in a manner which will require as little rehandling as possible. Placing of the concrete shall be continuous between transverse joints, without the use of intermediate bulkheads.
4. Concrete shall be thoroughly consolidated against and along the faces of all forms by means of vibrators. Vibrators shall not be permitted to come in contact with the subgrade or a side form. Vibration at any one location shall not continue so long as to produce puddling or the accumulation of excessive grout on the surface. In no case shall the vibrator be operated longer than 15 seconds in any one location.

B. Seeding and Embedment:

1. The seeding operation shall start immediately after the placement of concrete as described above. The select coquina aggregate mix shall be carefully and uniformly seeded by suitable means so that the entire surface has a 100% uniform coverage of shell mixture imbedded in the concrete. Care shall be taken not to over-embed and deform the surface. Under no circumstances shall areas lacking sufficient mortar be filled with small quantities of the base concrete mix. The finishing method is more particularly described below.
2. Finish: While the concrete is still in a fluid state:
 - a. A 50% surface coverage of triple washed coquina shell blend is hand or mechanically broadcast and floated into the surface.
 - b. A second 50% coverage of the mixture is then immediately applied and floated into the surface.
 - c. The finished surface is to be troweled smooth and edged with a 1/8" radius edger to maintain clean crisp edges post blasting.
 - d. Once the concrete has reached 75% of the desired compressive strength, the surface is to be mist-blasted with a non-silica blasting sand to expose the shell aggregate. All adjacent surfaces shall be protected in this process.
 - e. Do not use a surface retardant.

C. Joints:

1. Transverse Construction Joints: Transverse construction joints shall be constructed at the end of all pours and at other locations where the pouring operation are stopped for as long as 30 minutes. Construction joints, however, shall not be placed within four feet of any other transverse joint or of either end of a section of walk. If sufficient concrete has not been placed to form a slab at least four feet long, the excess concrete, back to the last preceding joint, shall be removed. The joints shall be formed by placing a wood or metal bulkhead accurately and securely in place, in a plane perpendicular to the profile and center line of the walk. Construction joints shall have tooled edges with a 1/8-inch radius.
2. Transverse Contraction Joints: Transverse contraction joints shall be saw-cut at ten foot by ten foot intervals and shall provide planes of weakness created by a concrete saw blade. The cut in the concrete shall be perpendicular to the surface of the walk and shall extend to a depth of 1 1/2 inches below the top surface.
3. Transverse Expansion Joints: One half-inch expansion joints shall be formed by

placing preformed joint filler around all structures and at intervals not exceeding 30 feet on center. Place an expansion joint between different types of concrete finishes.

D. Curing:

As soon as the washing operation ceases, the curing operation shall begin. The concrete shall be kept in continuously moist condition by wet coverings, plastic sheeting, or continuous saturation by sprinkling, for 7 days. The temperature of the concrete shall not be allowed to fall below 50 deg. F. during the curing period.

E. Form Removal: After the concrete has sufficiently set a minimum of 12 hours, the Contractor shall remove the forms and shall backfill the space on each side. The earth shall be compacted and graded in a satisfactory manner without damage to the concrete work. Honeycombs shall be filled with sand cement mortar. Plastering will not be allowed on the face of the walk. Rejected walk shall be removed and replaced without additional compensation.

F. Sealing: After concrete has cured at least 28 days, seal with SCOFIELD® Repello® Water & Stain Repellant. Apply according to manufacturer's specifications.

END OF SECTION 32 13 16.20

**SECTION 32 31 16
DECORATIVE CONCRETE PAVING**

PART 1 GENERAL

1.01 SUMMARY

- A. Sandblasted concrete paving pattern with sponge float finish concrete.
- B. Related Requirements:
 - 1. Section 03 30 00 Concrete for general building applications of concrete.

1.02 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash, slag cement, and other pozzolans.
- B. W/C Ratio: The ratio by weight of water to cementitious.

1.03 PREINSTALLATION MEETINGS

- A. Pre-installation Conference: Arrange to conduct conference at project site.
 - 1. Review methods and procedures related to decorative concrete paving, including but not limited to the following:
 - a. Concrete mixture design.
 - b. Quality control of concrete materials and decorative concrete paving construction practices.

1.04 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples for Initial Selection: For each type of product, ingredient, or admixture requiring color, pattern, or texture selection.
- C. Samples for Verification: For each type of exposed color, pattern, or texture indicated.
- D. Design Mixtures: For each decorative concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.05 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Material Certificates: For the following, from manufacturer:
 - 1. Cementitious materials.
 - 2. Steel reinforcement and reinforcement accessories.
 - 3. Fiber reinforcement.
 - 4. Admixtures.
 - 5. Curing compounds.
 - 6. Applied finish materials.
 - 7. Bonding agent or epoxy adhesive.
 - 8. Joint fillers.
- C. Material Test Reports: For each of the following:
 - 1. Aggregates.
- D. Field quality-control reports.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by manufacturer of decorative concrete paving systems.
- B. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities" (Quality Control Manual - Section 3, "Plant Certification Checklist").
- C. Testing Agency Qualifications: Qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
- D. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 1. Build mockups of full-thickness sections of decorative concrete paving to demonstrate typical joints; surface color, pattern, and texture; curing; and standard of workmanship.
 2. Build mockups of decorative concrete paving in the location and of the size indicated or, if not indicated, build mockups where directed by Architect and not less than 96 inches (2400 mm) by 96 inches (2400 mm).
 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 4. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.07 PRECONSTRUCTION MEETING

- A. Preconstruction Testing Service: Engage a qualified independent testing agency to perform preconstruction testing on decorative concrete paving mixtures.

1.08 FIELD CONDITIONS

- A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.
- B. Hot-Weather Concrete Placement: Comply with ACI 301 (ACI 301M) and as follows when hot-weather conditions exist:
 1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F (32 deg C) at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated in total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 2. Cover steel reinforcement with water-soaked burlap, so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
 3. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.
- C. Cold-Weather Concrete Placement: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing, or low temperatures. Comply with ACI 306.1 and the following:
 1. When air temperature has fallen to or is expected to fall below 40 deg F (4.4 deg C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and not more than 80 deg F (27 deg C) at point of placement.
 2. Do not use frozen materials or materials containing ice or snow.
 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in design mixtures.

PART 2 PRODUCTS

2.01 CONCRETE, CENGERAL

- A. ACI Publications: Comply with ACI 301 (ACI 301M) unless otherwise indicated.

2.02 FORMS

- A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.
 - 1. Use flexible or uniformly curved forms for curves of a radius of 100 feet (30.5 m) or less. Do not use notched and bent forms.
- B. Forms for Textured Finish Concrete: Units of face design, size, arrangement, and configuration indicated. Provide solid backing and form supports to ensure stability of textured form liners. Refer to details for pattern.
- C. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

2.03 STEEL REINFORCEMENT

- A. Plain-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, fabricated from as-drawn steel wire into flat sheets.
- B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420); deformed.
- C. Steel Bar Mats: ASTM A 184/A 184M; with ASTM A 615/A 615M, Grade 60 (Grade 420) deformed bars; assembled with clips.
- D. Plain-Steel Wire: ASTM A 1064/A 1064M, as drawn.
- E. Joint Dowel Bars: ASTM A 615/A 615M, Grade 60 (Grade 420) plain-steel bars. Cut bars true to length with ends square and free of burrs.
- F. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded-wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified, and as follows:
 - 1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.

2.04 CONCRETE MATERIALS

- A. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.
- B. Cementitious Materials:
 - 1. Portland Cement: ASTM C 150/C 150M, gray portland cement Type I.
 - 2. Fly Ash: ASTM C 618, Class C or F.
 - 3. Slag Cement: ASTM C 989/C 989M, Grade 100 or 120.
- C. Fine Aggregates: Aggregate: Fine aggregate shall conform to the requirements of Section 902 of the Florida Department of Transportation "Standard Specifications for Road and Bridge Construction", latest edition and supplements thereto.
- D. Course Aggregates: Coarse aggregate shall conform to the requirements of Section 901 of the Florida Department of Transportation "Standard Specifications for Road and Bridge Construction", latest edition and supplements thereto, except that slag shall not be used and the gradation shall be grade 5 or grade 9 as approved by the Engineer.
- E. Air-Entraining Admixture: ASTM C 260/C 260M.
- F. Water: Potable and complying with ASTM C 94/C 94M.

2.05 FIBER REINFORCEMENT

- A. Reinforcing Fiber shall conform with ASTM A820-16 – Standard Specification for Fiber-Reinforced Concrete and ASTM C1018-97 Standard Test Method for Flexural Toughness and First-Crack Strength of Fiber-Reinforced Concrete.
- B. A blend of steel and either natural cellulose or polymeric fibers is required and shall be Solomon Colors UltraFiber 500 Natural Cellulose Fiber blend with CFS Cold Drawn Steel Fibers or approved equal.

2.06 STENCIL MATERIALS

- A. Stencils: Manufacturer's standard, moisture-resistant paper or reusable plastic stencils, designed for use on plastic concrete.
- B. See details for pattern.

2.07 FINISHES

- A. Stencil Pattern: To have a heavy, sandblast finish, salt and pepper granite.
- B. Outside of Stencil Pattern: To have a sponge float finish.

2.08 RELATED MATERIALS

- A. Joint Fillers: ASTM D 1751, asphalt-saturated cellulosic fiber in preformed strips.
- B. Bonding Agent: ASTM C 1059/C 1059M, Type II, non-redisperseable, acrylic emulsion or styrene butadiene.
- C. Epoxy-Bonding Adhesive: ASTM C 881/C 881M, two-component epoxy resin capable of humid curing and bonding to damp surfaces; of class suitable for application temperature, of grade complying with requirements, and of the following types:
 - 1. Types I and II, nonload bearing, for bonding hardened or freshly mixed concrete to hardened concrete.
- D. Polyethylene Film: ASTM D 4397, 1 mil (0.025 mm) thick, clear.

2.09 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M[and ASTM C 1116/C 1116M]. Furnish batch certificates for each batch discharged and used in the Work.
 - 1. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.
- B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Mix concrete materials in appropriate drum-type batch machine mixer.
 - 1. For concrete batches of 1 cu. yd. (0.76 cu. m) or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
 - 2. For concrete batches larger than 1 cu. yd. (0.76 cu. m), increase mixing time by 15 seconds for each additional 1 cu. yd. (0.76 cu. m).
 - 3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixing time, quantity, and amount of water added.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.
- B. Proof-roll prepared subbase surface below [decorative concrete paving] <Insert locations> to identify soft pockets and areas of excess yielding.
 - 1. Completely proof-roll subbase in one direction[and repeat in perpendicular direction]. Limit vehicle speed to 3 mph (5 km/h).
 - 2. Proof-roll with a pneumatic-tired and loaded, 10-wheel, tandem-axle dump truck weighing not less than 15 tons (13.6 tonnes).
 - 3. Correct subbase with soft spots and areas of pumping or rutting exceeding depth of [1/2 inch (13 mm)] <Insert dimension> according to requirements in Section 312000 "Earth Moving."
- C. Proceed with installation only after unsatisfactory conditions have been corrected

3.02 PREPARATION

- A. Remove loose material from compacted subbase surface immediately before placing concrete.
- B. Protect adjacent construction from discoloration and spillage during application of color hardeners, release agents, stains, curing compounds, and sealers.

3.03 EDGE FORMS AND SCREEED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.04 STEEL REINFORCEMENT INSTALLATION

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
- C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
- D. Install welded-wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
- E. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum 2-inch (50-mm) overlap to adjacent mats.

3.05 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
 - 1. When joining existing paving, place transverse joints to align with previously placed joints unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
 - 1. Continue steel reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of paving strips unless otherwise indicated.
 - 2. Keyed Joints: Provide preformed keyway-section forms or bulkhead forms with keys unless otherwise indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.
 - 3. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
 - 1. Locate expansion joints at intervals of 50 feet (15.25 M) unless otherwise indicated.
 - 2. Extend joint fillers full width and depth of joint.
 - 3. Terminate joint filler not less than 1/2 inch (13 mm) or more than 1 inch (25 mm) below finished surface if joint sealant is indicated.

4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
 5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 6. During concrete placement, protect top edge of joint filler with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:
1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 3/16-inch wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.
- E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4-inch (6-mm) radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

3.06 CONCRETE PLACEMENT

- A. Before placing concrete, inspect and complete formwork installation and items to be embedded or cast-in.
- B. Remove snow, ice, or frost from subbase surface before placing concrete. Do not place concrete on frozen surfaces.
- C. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- D. Comply with ACI 301 (ACI 301M) requirements for measuring, mixing, transporting, and placing concrete.
- E. Do not add water to concrete during delivery or at Project site. Do not add water to fresh concrete after testing.
- F. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- G. Consolidate concrete according to ACI 301 (ACI 301M) by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
 1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement, dowels, and joint devices.
- H. Screed paving surface with a straightedge and strike off.
- I. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleedwater appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

3.07 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.

3.08 STENCILING

- A. Cut stencils to slab width and lay on dry concrete which has a sponge float finish. Overlap "mortar joint" on trailing edge of each section of stencil onto leading "mortar joint" of previous section.
- B. Trim stencils to fit slab and adjacent patterns.
- C. Fasten stencil securely to concrete so sandblasting doesn't shift the pattern.
- D. Sandblast within the stenciled pattern: heavy sandblast, salt and pepper granite.
- E. Clean/remove remaining debris.

3.09 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Compound: Apply immediately after final finishing. Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating, and repair damage during curing period.
- F. Curing and Sealing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating, and repair damage during curing period.
- G. Curing Paper: Cure with unwrinkled curing paper in pieces large enough to cover the entire width and edges of slab. Do not lap sheets. Fold curing paper down over paving edges and secure with continuous banks of earth to prevent displacement or billowing due to wind. Immediately repair holes or tears in paper.

3.10 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172/C 172M shall be performed according to the following requirements:
 - 1. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. (76 cu. m) or fraction thereof of each concrete mixture placed each day.
 - 2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
 - 3. Air Content: ASTM C 231/C 231M, pressure method; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 - 4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F (4.4 deg C) and below and when it is 80 deg F (27 deg C) and above, and one test for each composite sample.
 - 5. Compression Test Specimens: ASTM C 31/C 31M; cast and laboratory cure one set of three standard cylinder specimens for each composite sample.
 - 6. Compressive-Strength Tests: ASTM C 39/C 39M; test one specimen at seven days and two specimens at 28 days.

- a. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at 28 days.
- C. Strength of each concrete mixture will be satisfactory if average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa).
- D. Test results shall be reported in writing to Architect, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
- E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
- F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect.
- G. Decorative concrete paving will be considered defective if it does not pass tests and inspections.
- H. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- I. Prepare test and inspection reports.

3.11 REPAIR AND PROTECTION

- A. Remove and replace decorative concrete paving that is broken or damaged or does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.
- B. Detailing: Grind concrete "squeeze" left from tool placement. Color ground areas with slurry of color hardener mixed with water and bonding agent. Remove excess release agent with high-velocity blower.
- C. Protect decorative concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- D. Maintain decorative concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 32 31 16

**SECTION 32 18 16
PLAYGROUND PROTECTIVE SURFACING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Playground Protective Surfacing.

1.02 REFERENCES

- A. Critical Height: Standard measure of shock attenuation. According to CPSC No. 325, this means "the fall height below which a life-threatening head injury would not be expected to occur."
 B. TPV: TPV by Rosehill only, a proprietary synthetic rubber.
 C. Impact Attenuation: According to ASTM F 1292-17 or latest version.
 D. Accessibility of Surface Systems: According to ASTM F 1951-14 or latest version.
 E. IPEMA certified: Product and crew chiefs must be IPEMA certified

1.03 SUBMITTALS

- A. Product Data: For each type of product indicated.
 B. Shop Drawings: For each playground surface system, include materials, plans, cross sections, drainage, installation, and edge termination. Include patterns made by varying colors of surfacing. Include details of graphics.
 C. Samples for Initial Selection:
 1. Include similar samples of playground surface system and accessories involving color selection.
 D. Samples for Verification: For each type of playground surface system indicated.
 E. Retain list below to suit Project.
 1. Minimum 4-inch disc Sample of synthetic rubber seamless surface.
 2. Product Schedule: For playground surface systems.

1.04 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from Installers of the items involved:
 1. Extent of surface systems and use zones for equipment.
 2. Critical heights for playground surfaces and fall heights for equipment.
 B. Qualification Data: For qualified Installer and testing agency.
 C. Product Certificates: For each type of unitary synthetic playground surface system, from manufacturer.
 D. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each unitary synthetic playground surface system. Product must be IPEMA certified.
 E. Field quality-control reports.
 F. Warranty: Sample of Warranty. Minimum of 5 years not pro-rated.

1.05 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For playground surface system to include in maintenance manuals.
 B. Material Certificates: Material certificates will be filled out and signed by specified manufacturer/supplier that specified materials were shipped and in proper amounts for square footage/thickness/color.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
 B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.

- C. Handling: Protect materials and finish during handling and installation to prevent damage.

1.07 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit playground surface system installation to be performed according to manufacturers' written instructions and warranty requirements.

1.08 WARRANTY

- A. Warranty Period: Five years from Substantial date of completion.
1. Failures include, but are not limited to, the following:
 - a. Failure for impact attenuation as per ASTM 1292-17
 - b. Deterioration of surface and other materials beyond normal weathering and wear
 - c. Excessive UV fade/Loss of color
 2. Impact attenuation warranted for 5 years

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Sport Surface Specialties, DuraTurf PIP, PO Box 577, East Aurora, NY 14052.
Phone: (717) 652-2039. Fax (716) 805-1450. Website www.sportssurface.net
Contact: Christ Kunkel, E-mail: chirs@sportssurface.net or equivalent.

2.02 UNITARY SYNTHETIC DUAL-DENISTY SEAMLESS SURFACE

- A. Surface System: Poured-in-place, two-layer system with wearing course over cushion course. Provide manufacturer's standard thickness for each layer as required for overall thickness indicated, tested for impact attenuation according to ASTM F 1292-17 and for accessibility according to ASTM F 1951-14.
1. Products: Subject to compliance with requirements, provide the following: Sport Surface Specialties, DuraTurf[®] PIP or approved equal or better.
 2. Wearing Course: Minimum ½" thick after troweling using TPV granules 1-3.5mm manufactured by Rosehill Polymers as distributed by American Recycling Center in Owosso, Michigan. A 5/8" rod will be used to level the material so that when troweled it will be ½" thick. Urethane shall be 11.5 lbs. per 55 lbs. bag or 21% of the weight of the rubber used if partial bags are required. All colors must be UV stable for a minimum of 5 years. Polymer content must be 25% minimum. EPDM is not an equal. Aliphatic grout or .5 to 1.5mm granules will be applied under all high impact areas. Tiles will not be allowed. Wear mats will not be allowed.
Cushion Course: Manufacturer's standard formulation of 5/8" chunk rubber with correct amount of urethane for impact attenuation and longevity. Rubber may not be recycled SBR rubber from tires, it must be high quality rubber that is pre-consumer virgin product.
 3. Binder: Weather-resistant, flexible, non-hardening, 100 percent solids polyurethane complying with requirements of authorities having jurisdiction for nontoxic and low VOC content. Binders allowed are Prem Arc urethanes as distributed by American Recycling Center in Owosso, Michigan. No TDI urethanes will be permitted.
 4. Critical Height 10 feet. Actual dimension: 9'-10"
 5. Overall Thickness: Not less than 4-1/2 inches (10').
 6. Primer/Adhesive: Manufacturer's standard primer and weather-resistant, moisture-cured polyurethane adhesive suitable for unit, substrate, and location indicated.
 7. Wearing Course Color(s): Beige and Bright Red
 - a. Color pattern/graphics as indicated on Drawings.
 - b. Leveling and Patching Material: Portland cement-based grout or epoxy- or polyurethane-based formulation suitable for exterior use and approved by playground surface system manufacturer

PART 3 EXECUTION**3.01 EXAMINATION**

Examine substrates and conditions, with Installer present, for compliance with requirements for maximum moisture content, sub grade and substrate conditions, drainage, and other conditions affecting performance of the Work. Drainage at the low end of the site is of the utmost importance. Any brick or concrete walls or curbs at the low end of the area to receive the play surface must have drainage access via weep holes. Weep holes must extend a minimum of 2 inches above the top of the new concrete slab and a minimum of 1/8" below the top of the new concrete slab. The latter is necessary because the rubber surfacing system is porous and water will permeate (drain downward) to the concrete slab.

- A. Hard-Surface Substrates: Verify that substrates are satisfactory for unitary playground surface system installation and that substrate surfaces are dry, cured, and uniformly sloped to drain within recommended tolerances according to playground surface system manufacturer's written requirements for cross-section profile.
 - 1. Concrete Substrates: Verify that substrates are dry, free from surface defects, and free of laitance, glaze, efflorescence, curing compounds, form-release agents, hardeners, dust, dirt, loose particles, grease, oil, and other contaminants incompatible with playground surface system or that may interfere with adhesive bond. Determine adhesion, dryness, and acidity characteristics by performing procedures recommended in writing by playground surface system manufacturer.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. General: Prepare substrates to receive surfacing products according to playground surface system manufacturer's written instructions. Verify that substrates are sound and without high spots, ridges, holes, and depressions
- B. Concrete Substrates: Provide sound surface free of laitance, efflorescence, curing compounds, and other contaminants incompatible with playground surface system.
 - 1. Repair unsatisfactory surfaces and fill holes and depressions.
 - 2. Mechanically scarify or otherwise prepare concrete substrates to achieve recommended degree of roughness.
 - 3. Saw cut concrete for terminal edges of playground surface systems as indicated.
 - 4. Treat control joints and other nonmoving substrate cracks to prevent telegraphing through playground surface system.

Confirm slope and drainage are correct and in place.

3.03 INSTALLATION, GENERAL

- A. General: Comply with playground surface system manufacturer's written installation instructions. Install playground surface system over area and in thickness indicated.

3.04 INSTALLATION OF SEAMLESS PLAYGROUND SURFACE SYSTEMS

- A. Seamless Surface: Mix and apply components of playground surface system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface and impact-attenuating system of total thickness indicated.
 - 1. Poured Cushion Course: Spread evenly over primed substrate to form a uniform layer applied at manufacturer's standard spreading rate in one continuous operation, with a minimum of cold joints. Thickness of cushion course should meet ASTM 1292-04 guidelines and shall be a minimum of 1" thick. Varying thickness is not allowed to match fall height.
 - 2. Wearing Course: Spread over primed base course to form a uniform layer applied at manufacturer's standard spreading rate in one continuous operation and, except where color changes, with cold joints. Finish surface to produce manufacturer's standard

wearing-surface texture. Minimum thickness of wear course shall be ½” after being trowled. A minimum of 5/8 screed rod shall be used when leveling wear course.

- a. Where colored pattern/graphics are indicated, place adjacent colored material as soon as placed colored material is sufficiently cured, using primer or adhesive if required by manufacturer's written instructions.
3. Edge Treatment: Extended surface course. Fully adhere edges to substrate with full coverage of substrate. Maintain fully cushioned thickness required to comply with safety performance requirements.

3.05 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Testing Services: Testing and inspecting of completed applications of playground surface system shall take place according to ASTM F 1292-17 or latest version.
- C. Remove and replace applications of playground surface system where test results indicate that it does not comply with requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with requirements.

3.06 PROTECTION

- A. Provide protection of surface during curing process.

END OF SECTION 32 18 16

**SECTION 32 31 19
DECORATIVE METAL FENCES AND GATES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Decorative aluminum fences.
- B. Swing gates.

1.02 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For fencing and gates.
 - 1. Include plans, elevations, sections, gate locations, post spacing, and mounting attachment details, and grounding details.
 - 2. Gate Operator: Show locations and details for installing operator components, switches, and controls. Indicate motor size, electrical characteristics, drive arrangement, mounting, and grounding provisions.
 - 3. Wiring Diagrams: Include diagrams for power, signal, and control wiring.
- C. Samples: For each fence material and for each color specified.
 - 1. Provide Samples 12 inches in length for linear materials.
 - 2. Provide Samples 24 inches square for bar grating and sheet or plate materials.

1.03 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.
- B. Product Test Reports: For decorative metallic-coated-steel tubular picket fences, including finish, indicating compliance with referenced standard **and other specified requirements**.

1.04 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For gate operators to include in maintenance manuals.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator of products.
- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation.
 - 1. Include 10-foot length of fence complying with requirements.
 - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Wind Loading: Per current State of Florida building code.
 - 1. Fence Height: 50" from finish grade to top of rail.
 - 2. Wind Exposure Category: C.
 - 3. Design Wind Speed: 140 mph.
- B. Lightning-Protection System: Maximum grounding-resistance value of 25 ohms under normal dry conditions.

2.02 DECORATIVE ALUMINUM FENCES

- A. Decorative Aluminum Fences: Fences made from aluminum extrusions.
- B. Posts: Square extruded tubes.
 - 1. Line Posts: 1-1/2" X 3" with 0.125-inch wall thickness.

2. End and Corner Posts: 1-1/2" X 3" with 0.125-inch wall thickness.
3. Swing Gate Posts: 1-1/2" X 3" with 0.125-inch wall thickness.
- C. Post Caps: 2"X3" rounded aluminum top, 1/2" exposure t
- D. Rails: Extruded-aluminum channels, 1-1/2" X 2" with 0.125-inch wall thickness.
- E. Pickets: Aluminum mesh panels, 1-1/2" grid of flat woven 0.25 gauge mesh by McNichols.com or approved equal.
 1. Panel Spacing: 4' on center.
 2. Every other panel to include a decorative panel with dog paw and bone theme filigree. Water cut metal panels, weld to panel frame. Refer to details.
- F. Fasteners: Manufacturer's standard concealed fastening system.
- G. Fasteners: Manufacturer's standard corrosion-resistant, color-coated fasteners matching fence components.
- H. Fabrication: Assemble fences into sections by welding pickets to rails.
 1. Fabricate sections with clips welded to rails for field fastening to posts.
 2. Drill clips for fasteners before finishing.
- I. Finish exposed welds to comply with NOMMA Guideline 1, Finish #4 - good-quality, uniform undressed weld with minimal splatter.
- J. Finish: Baked enamel or powder coating. Color Black.

2.03 SWING GATES

- A. Gate Configuration: Single leaf, as indicated on drawings.
- B. Gate Frame Height: 50" from finish grade to top of rail.
- C. Gate Opening Width: 4'
- D. Aluminum Frames and Bracing: Fabricate members from square extruded-aluminum tubes 1-1/2" X 2" with 0.080-inch wall thickness.
- E. Frame Corner Construction: Welded
- F. Additional Rails: Provide as indicated, complying with requirements for fence rails.
- G. Infill: Comply with requirements for adjacent fence.
- H. Picket Size, Configuration, and Spacing: Comply with requirements for adjacent fence.
 1. Treillage: Provide iron castings of pattern indicated between each pair of pickets.
- I. Hardware: Latches permitting operation from both sides of gate, hinges, and keepers for each gate leaf more than 5 feet wide.
- J. Spring Hinges: BHMA A156.17, Grade 1, suitable for exterior use.
 1. Function: 320 - Gate spring pivot hinge. Adjustable tension.
 2. Material: Malleable iron; galvanized.
- K. Hinges: BHMA A156.1, Grade 1, suitable for exterior use.
 1. Function: 39 - Full surface, triple weight, antifriction bearing.
 2. Material: Wrought steel, forged steel, cast steel, or malleable iron; galvanized.
- L. Finish exposed welds to comply with NOMMA Guideline 1, Finish #4 - good-quality, uniform undressed weld with minimal splatter.
- M. Galvanizing: For items other than hardware that are indicated to be galvanized, hot-dip galvanize to comply with ASTM A 123/A 123M. For hardware items, hot-dip galvanize to comply with ASTM A 153/A 153M.
- N. Aluminum Finish: Baked enamel or powder coating.

2.04 ALUMINUM

- A. Aluminum, General: Provide alloys and tempers with not less than the strength and durability properties of alloy and temper designated in paragraphs below for each aluminum form required.
- B. Extrusions: ASTM B 221 (ASTM B 221M), Alloy 6063-T5.
- C. Tubing: ASTM B 429/B 429M, Alloy 6063-T6.
- D. Plate and Sheet: ASTM B 209 (ASTM B 209M), Alloy 6061-T6.
- E. Die and Hand Forgings: ASTM B 247 (ASTM B 247M), Alloy 6061-T6.
- F. Castings: ASTM B 26/B 26M, Alloy A356.0-T6.

2.05 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
 - 1. For aluminum, provide type and alloy as recommended by producer of metal to be welded and as required for strength and compatibility in fabricated items.
- B. Concrete: Normal-weight, air-entrained, ready-mix concrete complying with requirements in Section 033000 "Concrete" with a minimum 28-day compressive strength of 3000 psi (20 MPa), 3-inch (75-mm) slump, and 1-inch (25-mm) maximum aggregate size.
- C. Nonshrink Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M and specifically recommended by manufacturer for exterior applications.

2.06 GROUNDING MATERIALS

- A. Comply with requirements of Section 260526 "Grounding and Bonding for Electrical Systems."
- B. Grounding Conductors: Size as indicated on Drawings. Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.
 - 1. Material above Finished Grade: Aluminum.
 - 2. Material on or below Finished Grade: Copper.
 - 3. Bonding Jumpers: Braided copper tape, 1-5/8 inch (41 mm) wide and 1/16 inch (1.6 mm) thick, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.
- C. Grounding Connectors and Grounding Rods: Comply with UL 467.
 - 1. Connectors for Below-Grade Use: Exothermic-welded type.
 - 2. Grounding Rods: Copper-clad steel.
 - a. Size: 5/8 by 96 inches (16 by 2440 mm).

2.07 ALUMINUM FINISHES

- A. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 2 mils (0.05 mm). Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
 - 1. Color and Gloss: Black, Medium gloss

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting performance of the Work.
- B. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet (152.5 m) or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.
 - 1. Construction layout and field engineering are specified in Section 017300 Execution.

3.03 DECORATIVE FENCE INSTALLATION

- A. Install fences according to manufacturer's written instructions.
- B. Install fences by setting posts as indicated and fastening rails and infill panels to posts.
- C. Post Excavation: Drill or hand-excavate holes for posts in firm, undisturbed soil. Excavate holes to a diameter of not less than 4 times post size and a depth of not less than 24 inches (600 mm) plus 3 inches (75 mm) for each foot (300 mm) or fraction of a foot (300 mm) that fence height exceeds 4 feet (1.2 m).

- D. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
 - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
 - 2. Concrete Fill: Place concrete around posts and sleeves and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
 - a. Exposed Concrete: Extend 2 inches (51 mm) above grade. Finish and slope top surface to drain water away from post.
 - 3. Posts Set in Concrete: Extend post to within 6 inches (150 mm) of specified excavation depth, but not closer than 3 inches (75 mm) to bottom of concrete.
 - 4. Space posts uniformly at 4' o.c.

3.04 GATE INSTALLATION

- A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.05 GROUNDING AND BONDING

- A. Comply with Section 260526 "Grounding and Bonding for Electrical Systems."
- B. Fence Grounding: Install at maximum intervals of [1500 feet (450 m)] <Insert a lesser distance if grounding resistance is high> except as follows:
 - 1. Fences within 100 Feet (30 m) of Buildings, Structures, Walkways, and Roadways: Ground at maximum intervals of [750 feet (225 m)] <Insert a lesser distance if grounding resistance is high>.
 - a. Gates and Other Fence Openings: Ground fence on each side of opening.
 - 1) Bond metal gates to gate posts.
 - 2) Bond across openings, with and without gates, except at openings indicated as intentional fence discontinuities. Use No. 2 AWG wire and bury it at least 18 inches (460 mm) below finished grade.
- C. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a maximum distance of 150 feet (45 m) on each side of crossing.
- D. Fences Enclosing Electrical Power Distribution Equipment: Ground as required by IEEE C2 unless otherwise indicated.
- E. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches (150 mm) below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at grounding location.
- F. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.
- G. Connections: Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact are galvanically compatible.
 - 1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
 - 2. Make connections with clean, bare metal at points of contact.
 - 3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
 - 4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
 - 5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
- H. Bonding to Lightning-Protection System: If fence terminates at lightning-protected building or structure, ground the fence and bond the fence grounding conductor to lightning-protection down conductor or lightning-protection grounding conductor, complying with NFPA 780.

3.06 FIELD QUALITY CONTROL

- A. Testing Agency: [Owner will engage] [Engage] a qualified testing agency to perform tests and inspections.
 - 1. Grounding-Resistance Tests: Subject completed grounding system to a megger test at each grounding location. Measure grounding resistance not less than two full days after last trace of precipitation, without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural grounding resistance. Perform tests by two-point method according to IEEE 81.
 - 2. Excessive Grounding Resistance: If resistance to grounding exceeds specified value, notify Architect promptly. Include recommendations for reducing grounding resistance and a proposal to accomplish recommended work.
 - 3. Report: Prepare test reports of grounding resistance at each test location certified by a testing agency. Include observations of weather and other phenomena that may affect test results.

3.07 ADJUSTING

- A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Lubricate hardware, gate operators, and other moving parts.

3.08 DEMONSTRATION

- A. Train Owner's personnel to adjust, operate, and maintain gates.

END OF SECTION 32 31 19

**SECTION 32 84 00
UNDERGROUND SPRINKLER**

PART 1 - GENERAL

1.01 WORK INCLUDED

Furnish all materials, equipment and labor as necessary for the installation of an irrigation system per the drawings and specifications. All work should meet City of Tampa standards for materials and workmanship.

1.02 RELATED DOCUMENTS

- A. Drawing and General Provisions of the contract, including but not limited to, General and Specific Provisions, apply to this section.
- B. Section 32 90 00: Trees, Plants, and Groundcovers.
- C. Section 32 01 90: Maintenance of Plantings.

1.03 DESCRIPTION OF WORK

- A. Location of underground sprinkler system is shown on drawings if provided.
- B. Design and Installation of system is included in this section.

1.04 QUALITY ASSURANCE:

- A. Workmanship: All work shall be installed by skilled personnel, proficient in the trades required, in a neat, orderly and responsible manner with recognized standards of workmanship. The Contractor shall have had considerable experience and demonstrated ability in the installation of sprinkler irrigation systems of this type.

1.05 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for all materials and installation instructions for underground sprinkler system prior to starting work on the project site.
- B. Drawings: Provide Design drawings that will include plan layout and details illustrating location and type of heads, valves, piping circuits, controls and accessories. If requested by the City, provide design calculations demonstrating how system component sizes were derived.
 - 1. Format: The irrigation system design plans shall be done in AutoCAD to scale. These plans shall be provided to the City of Tampa prior to final acceptance of the project. Provide CD containing AutoCad (DWG files) 2014 version minimum along with the requirements of the general provisions of the contract.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Irrigation Pipe: All main and lateral lines shall be PVC pipe ASTM D1785 1120 schedule 40. Exception would be galvanized steel pipe, when specified, and if exposed paint with 2 coats of forest green enamel.

1. Pipe Size: Increased to allow expansion or nozzle size change.
 - a. No flow shall exceed 4' per second.
 - b. All laterals to heads will be 1" or larger on rotors and ¾" or larger on pop-ups.
 - c. Nozzle and zone size will be calculated to provide maximum precipitation rate to reduce watering time based on meter size.
 - d. No pipe smaller than ¾".

- B. Sleeving: Sleeving shall be installed for all hardscape surfaces including, but not limited to sidewalks, courts, etc. Contractor to verify schedule 40 or HDPE. Sleeve size shall be 2 times irrigation pipe size minimum. For all sleeves containing lateral pipe and wiring, all wire to be in its own conduit. Mark sleeve locations on curb with permanent curb mounted location marker.

- C. Adhesives: All connections, 4" and less, shall be Weld-On PVC-64 purple primer and Weld-On PVC 702 clear cement.

- D. Pipe Fittings:
 1. ASTM D 2466 socket fittings schedule 40 shall be used for PVC pipe. Put purple primer first, cement after
 2. ANSI B 16.3 galvanized malleable iron screwed fittings shall be used for all galvanized pipe.

- E. Manual Valves: Manufactured as follows: PVC Schedule 40 ball valves unless otherwise indicated.

- F. Quick Coupling Valve: Standard is Rainbird #3RC with minimum lateral size ¾". Ensure 2" of clearance of all valve handles. (See "Quick Coupling Valve Detail" for installation.)

- G. Electric Valves: Irritrol 200B series electric valve with flow control. AC or DC depending upon power source. If DC is specified a separate common wire for each 6 zones must be installed. Master valve to be used with more than 2 zones or if main line crosses a roadway. No pressure regulator on valves

- H. Automatic Valve Wiring: 14 gauge direct burial wire, color coded as follows: red for zones, blue for master valve and black for extras. Two black extra wires to be run to the furthest valve in each direction. Wire splices shall be made at a common location, contained in a valve box and spliced using greased filled King wire nuts. All wire to be brought to timer location with 6' pigtail to facilitate hook-up.
 1. Provide 12 gauge white common wire for any runs over 100'.

- I. Sprinkler Heads: Manufacturer's standard unit designed to provide uniform coverage over entire area of spray shown on drawings at available water pressure and installed using K-Flex pipe and schedule 40 PVC connectors as follows:
 1. Rainbird Bubbler: #1402 – 0.5 GPM on K-Flex pipe (2 per tree).
 2. Rainbird Pop-up: 1800 series with nozzle to match application (No PRS).
 3. Hunter rotor: Hunter I-20 or I-25 (athletic fields) with nozzle to match application.
 4. Micro (Maxi-Jet): to be matched to job and used only with Parks & Recreation Department approval.

- J. Valve Box: Provide plastic valve box with cover, size as needed, or as specified on drawings. Place level on brick or stone blocks. Provide a minimum of 2" of #57 stone below exposed PVC pipes. Top of valve installed flushed with finished grade.
- K. Computerized Irrigation Controller: Computerized irrigation controller and cabinet are located at the SE corner of the site. Ex. controller currently controls Madison Street Streetscape. Hook up to the controller shall be by the City of Tampa. Coordination with the City will be required.
- L. Water Source: Existing city water meter.

PART 3 – EXECUTION

3.01 SYSTEM DESIGN

- A. System design shall take into account existing physical and cultural features and all proposed site improvements to avoid conflicts and ensure an efficient optimal system.
- B. Design Pressures: Verify available water source and pressure prior to system design. Design system throughout, to be compatible with available water source. Use reclaimed water whenever available. Athletic fields to be on a well system whenever possible.
- C. Location of Heads: Design locations in accordance with accepted sprinkler practice to provide 100% head to head coverage. Make minor adjustments as necessary to avoid structures and other obstructions.
- D. Minimum Water Coverage: 100% Coverage

Layout may be modified, if necessary to obtain coverage, and to suit manufacturer's standard heads. Do not decrease number of heads indicated unless otherwise acceptable to Engineer and/or Architect. Any proposed decrease must be approved by the City of Tampa.
- E. Group valves close to water source in 1 or 2 locations. Planting beds, trees and turf areas shall be on separate zones.
- F. Minimize wiring runs. Maximize use of lateral lines. Keep valves 5' from closest hardscape.
- G. No flow shall exceed 4 feet per second.
- H. Top of pipe to grade shall be:
 - 1. Manifolds: 6"
 - 2. Laterals: 12"
 - 3. Mainlines: 18"
- I. Design zones to have matched precipitation rates.
- J. Do not use pressure-regulating sprinklers.
- K. Insert sprinklers 3 inches from curbs, hardscapes and structures to allow for edging.
- L. Computerized irrigation system controller is located at Washington Street Park. Coordinate with City of Tampa for any expansion modules that may be needed.
- M. No pipe smaller than ¾"

- N. Quick Coupler Valve (Rainbird #3RC or 44RC for athletic field applications) shall be located in a valve box (to grade). Provide 3" of galvanized main line up to and after a galvanized T. Provide 2' of vertical galvanized pipe, capped at bottom. Mount QC valve on galvanized nipple, length as required. (See Quick Coupler valve detail).
- O. Coordinate and confirm exact water source and electric source.

3.02 TRENCHING AND BACKFILLING:

- A. General: Protect existing utilities, paving, plants, trees and other facilities caused by irrigation operations. Contractor shall be responsible for the repair of any damage to existing utilities and paving. Excavate straight and true with bottom uniformly sloped to low point.
- B. Sunshine: Contractor shall be responsible for notifying underground utilities 48 hours prior to beginning work at (800) 432-4770. No site work shall commence until all underground utilities have been properly located and identified
- C. Backfill: Backfill with clean material from excavation. Remove organic material as well as rocks and debris larger than 1" diameter. Place acceptable backfill material in 6" lifts, compacting each lift.
- D Pavements:
 1. Boring is the preferred method. Open cuts must be approved by City of Tampa representative. Where existing pavements must be crossed to install landscape irrigation system, saw cut straight clean lines 6" wider than trench.
 2. Excavate trench to required depth and width.
 3. Remove cut out pavement and excavated material from the site.
 4. Backfill with dry sand fill material, placing in 6" lifts to meet City of Tampa compaction requirements.
 5. Repair or replace pavement cuts with equivalent materials and finishes.
 6. If a concrete sidewalk is cut or damaged, the full section must be replaced.
 7. Piping under hardscape that is 5' wider or greater shall be sleeved.
 8. Contractor is responsible for daily clean-up of operations to include debris, directional bore slurry and any hydraulic fluids.

3.04 INSTALLATION: (see details on construction drawings)

- A. A pre-construction meeting will occur on site prior to commencement of work.
- B. General: Contractor shall be responsible for filing and obtaining any and all agency permits. All work must conform to City of Tampa and the uniform plumbing code. Any work taking place along a city, county or state road or median must comply with appropriate regulating authority guidelines for Traffic Control for Construction and Maintenance Operations.
- C. Required Inspections:
 1. Piping: prior to covering.
 2. All materials prior to planting and/or mulching.
 3. 24 hour notice of inspection required.
- D. Control Valves: Install in valve box. Arrange in box for easy adjustment and removal.
 1. Adjust size of automatic control valves to provide flow rate of rated operating pressure required for each sprinkler zone.

2. All zone wiring and Maxi-com cable to be installed under the main line or in conduit. Wiring that shares a sleeve with irrigation water lines shall be contained in its own conduit.
- E. Piping: Lay pipe on solid subbase uniformly sloped.
 1. Install PVC pipe in dry weather when temperature is above 40 degrees F in strict accordance with manufacturer's instructions. Allow joints to cure at least 24 hours at temperatures above 40 degrees F (4 degrees C) before testing, unless otherwise recommended by manufacturer. All PVC connections will be cleaned with purple primer prior to cementing.
 - a. Mainline depth shall be 18"
 - b. Lateral line depth shall be 12".
- F. Sprinkler Heads: Flush circuit lines with full pressure and install nozzles after hydrostatic test is completed.
 1. Install all heads at manufacturer's recommended heights.
 2. Locate part-circle heads to maintain a minimum distance of 3" from curbs, hardscape and structures.
 3. After completion of grading, seeding or sodding, and rolling of the grass areas, carefully adjust lawn sprinkler heads so they will be flush with grade.
 4. Pop-ups installed on ½" flex hose using schedule 40 PVC connectors.
 5. Rotors to be installed on appropriate size flex hose using schedule 40 PVC connectors.
 6. Ensure sprayer rotor water does not directly contact existing structures or hardscape areas.
- G. Dielectric Protection: Use dielectric fittings at connection where pipes of dissimilar metal are joined.
- H. Wiring: All wiring shall be performed by the contractor as shown on drawings. All wiring shall be run from point of connection back to the controller. Provide 6' pig tail.
- I. Quick Coupler Valves: Build and install per details on construction drawings. Valve box shall be adequately sized and installed so as not to interfere with the operation of the quick coupler key.

3.05 ACCEPTANCE:

- A. Maintenance: Contractor is responsible for all maintenance of the system until final acceptance by City of Tampa, and for the maintenance period specified in section Trees, Shrubs and Ground covers.
- B. Final Inspection: The inspection of irrigated areas will be made by the City of Tampa representative upon contractor's request. Provide notification at least 2 working days prior. The City of Tampa representative will provide a punch list of those items which must be corrected before re-inspection for final acceptance. The City of Tampa representative will set an appropriate time period in which the punch list items must be corrected.
 1. Contractor to provide notification of at least two working days prior to inspection.
 2. System to be run through electronically for all zones to ensure all components are working properly.
 3. System to be run through with City programming for one week prior to final acceptance.

C. As-Built Drawings: At project closeout, the Contractor shall submit complete electronic drawings showing any changes from approved shop drawing. These shall be included as part of required As-Built/Record Drawing requirement of the general provision.

1. As-built drawings shall include the following:
 - i. Irrigation system as installed.
 - ii. Power source location.
 - iii. Changes to controller type or location.
 - iv. Changes in type or location of flow meter or master valve.
 - v. Any wiring changes in location, number, type, color.
 - vi. Valve locations should be dimensioned, and areas controlled identified.
 - vii. Manifold locations, depth and whether it is a header or footer.
 - viii. Direction of dripline and spacing.
 - ix. Location, depth and size of main line and feeder lines. Off-set to main line requested.
 - x. Location of maxi-com cable.
 - xi. Location and depth of all directional bores.

3.05 ACCEPTANCE

A. Final Acceptance: Is the point in time when all requirements of the project drawings and specification are completed, including any punch list items, to the satisfaction of the City of Tampa representative. A City of Tampa representative shall notify the contractor in writing of final acceptance.

3.06 GUARANTEE

- A. Guarantee: All work shall be guaranteed by contractor for one year from date of final acceptance against all defects and malfunctions in materials, equipment and workmanship, and shall be included as a part of the project closeout document requirements.
1. The guarantee shall also cover repair of damage to any part of the premises resulting from leaks or other defects in materials, equipment and workmanship, to the satisfaction of the City of Tampa. Repairs, if required, shall be done promptly at no cost to the City of Tampa. The Contractor shall not be responsible for damage to the irrigation system by others. The guarantee shall state the name of the owner, provide full guarantee terms, effective and termination date, name and license number. It shall be signed by the chief executive of the Contracting firm and notarized. Manufacturer's warranties shall not relieve the Contractor of his liability under the guarantee. Such warranties shall only supplement the guarantee.
 2. The Contractor will make necessary repairs within 72 hours' notice. If the contractor neglects to make or undertake the repairs with the due diligence, the City of Tampa may make such repairs at the Contractors expense. In the case of emergency where, in the judgment of the City of Tampa, delay would cause serious loss or damage, repairs or replacement may be made without notice being sent to the contractor, and the Contractor shall pay the cost thereof.

END OF SECTION 32 84 00

**SECTION 32 90 00
TREES, PLANTS AND GROUNDCOVERS**

PART 1 - GENERAL

1.01 WORK INCLUDED

Furnish all materials, equipment and labor as necessary for preparation of planting areas, soil treatment, planting of trees, shrubs, groundcovers and grass, relocation of designated plants, protection of plants, maintenance, guarantee and replacement of plants, and related items as required to complete the work as indicated on the drawings and specified herein.

1.02 RELATED DOCUMENTS

- A. Drawings and General Provisions of the contract, including, but not limited to General and Specific Provisions, apply to this section.
- B. Section 32 84 00: Underground Sprinkler.
- C. Section 32 05 16: Structural Soil.
- D. Section 32 01 90: Maintenance of Plantings.
- E. Section 32 92 00: Sodding

1.03 DEFINITIONS

- A. The following words and terms or pronouns used instead shall wherever they appear in these specifications, be construed as follows, unless a different meaning is clear from the context:

"Final Acceptance" shall mean that point in time when all requirements of project drawings and specifications are completed, including any punch list items, to the satisfaction of the City of Tampa representative. The contractor shall be notified in writing of final acceptance by a City of Tampa representative.

"Warranty Period" shall be a one year period beginning at Final Acceptance.

"Maintenance Period" shall begin when plant material is installed and continue for ninety (90) days after notification of Final Acceptance.

"Final Maintenance Inspection" shall occur at the end of the ninety (90) day maintenance period.

1.04 QUALITY ASSURANCE

- A. The landscape installation shall be by a single firm specializing in landscape work.
- B. Plant names indicated shall comply with "Standardized Plant Names" as adopted by the latest edition of the American Joint Committee of Horticultural Nomenclature. Names of varieties not listed shall conform generally with names accepted by the nursery trade. Provide stock true to botanical name and legibly tagged.
- C. Comply with sizing and grading standards of the latest edition of "American Standard for Nursery Stock" (ANSI Z60 1) and, sizing and grading standards of the latest edition of "Grades and Standards for Nursery Plants: Part I and II" by the Florida Department of Agriculture and Consumer Services. All plant material shall be "Florida No. 1" or better.
 - 1. Caliber measurement shall be taken six (6) inches above ground level if four (4) inches or less. If greater than 4 (four) inches, caliber measurement will be taken at twelve (12) inches above ground level.

- D. Do not make substitutions. If specified landscape material is not obtainable submit to City of Tampa representative in writing, proof of non-availability and proposal for use of equivalent material. When authorized, adjustment of contract amount will be made.
- E. All plants shall be nursery grown and 100% acclimatized to local planting conditions.
- F. Stock furnished shall be at least the minimum size indicated. Larger stock is acceptable, at no additional cost, providing that the larger plants will not be cut back to size indicated or rootbound in pots. Provide plants indicated by two measurements so that only a maximum of 25% are of the minimum size indicated and 75% are of the maximum size indicated. Height and spread specified will prevail over container size specified, for groundcover and shrub material only.
- G. All trees will be inspected and approved by the City of Tampa representative at the place of growth, for compliance with specification requirements for quality, size, and variety. When trees cannot be obtained locally, provide sufficient photographs of the proposed plants for approval.
 - 1. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of the work.
 - 2. Tag trees at the source of supply prior to inspection by City of Tampa representative.

1.05 SUBMITTALS

- A. Submit planting schedule showing scheduled dates for each type of planting in each area of site two weeks prior to beginning work.
- B. Submit certificates of inspection, as required by governmental authorities, and manufacturers or vendors certified analysis for soil amendments, herbicides, anti-desiccants, insecticides and fertilizer materials, submit other data substantiating that materials comply with specified requirements.
- C. Submit the following material samples:
 - 1. Mulch
 - 2. Topsoil with verification of sterilization and source.
 - 3. One typical sample of each shrub and groundcover material as specified, prior to planting for approval.
 - a. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of the work.
- D. Upon final acceptance of plant material, submit two (2) written maintenance instructions recommending procedures for maintenance of plant materials for a one year period.
- E. Provide landscape planting as-built drawings:
 - 1. Legibly mark drawings to record actual installation.
 - 2. Identify field changes of dimension and detail and changes made by approving authority.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver fertilizer materials in original, unopened, and undamaged containers showing weight, analysis, and name of manufacturer. Store in manner to prevent wetting and deterioration.
- B. B&B Trees must be held and fully acclimatized over a period not less than eight (8) weeks prior

to delivery to site.

- C. Take all precautions customary in good trade practice in preparing plants for moving. Workmanship that fails to meet the highest standards will be rejected. Spray deciduous plants in foliage with an approved "Anti-Desiccant" immediately prior to digging to prevent dehydration. Dig, pack, transport, and handle plants with care to ensure protection against injury. Inspection certificates required by law shall accompany each shipment invoice or order. Upon arrival the certificate shall be filed with the appropriate City of Tampa department.

Protect all plants from drying out. If plants cannot be planted immediately upon delivery, properly protect them with soil, wet peat moss, or in a manner acceptable to the City of Tampa representative. Water heeled-in plantings daily. No plant shall be bound with rope or wire in a manner that could damage or break the branches.

- D. Plant material that is stored improperly shall receive a special review of acceptance/rejection, established on a case by case basis.
- E. Cover plants transported on open vehicles with a protective covering to prevent wind burn.
- F. Topsoil shall be kept dry and loose for planting bed mixes.
- G. Label at least one (1) tree and one (1) shrub of each variety with a securely attached waterproof tag bearing legible designation of botanical and common name.

1.07 PROJECT CONDITIONS

- A. Work notification: Notify City of Tampa representative at least seven (7) working days prior to installation of plant material. All plant samples to be reviewed for approval prior to notification.
- B. Protect existing utilities, paving, and other facilities from damage caused by landscaping operations. Notify any affected utilities 48 hours prior to beginning work, if applicable.
- C. A complete list of plants, including a schedule of sizes, quantities, and other requirements are shown on the drawings. In the event that quantity discrepancies or material omission occur in the plant materials list, the planting plans shall govern.
- D. Examine the subgrade, verify the elevations, observe the conditions under which work is to be performed, and examine unsatisfactory conditions before proceeding with the work.
 - 1. When conditions detrimental to plant growth are encountered such as rubble fill, adverse drainage conditions or obstructions, notify City of Tampa representative before planting to determine alternative action.
 - 2. Contractor shall be responsible for the removal of existing vegetation deemed necessary by City of Tampa representative to carry out scope of project.
- E. The irrigation system shall be installed prior to planting, if applicable. Locate, protect and maintain the irrigation system during planting operations. Repair irrigation system components, new and existing, damaged during planting operations with like materials. Test system prior to installation of plant material.
- F. Any work taking place along a city, county or state road or median must comply with appropriate regulating authorities' guidelines for "Traffic Controls for Construction and Maintenance Operations". Contractor shall be responsible to file and obtain any and all required agency permits.

PART 2 - PRODUCTS**2.01 MATERIALS**

- A. Plants: Provide plants typical of their species or variety; with normal, densely developed branches and vigorous, fibrous root systems. Provide only sound, healthy vigorous plants free from defects, disfiguring knots, sunscald injuries, frost cracks, abrasion of the bark, plant diseases, insect eggs, borers, and all forms of infestation. All plants shall have a fully developed form without voids and open spaces.
1. All plant material shall be "Florida No.1", or better.
 2. Dig balled and burlapped plants with firm, natural balls of earth of diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Provide ball sizes complying with the latest edition of the "American Standard for Nursery Stock". Cracked or mushroomed balls are not acceptable.
 3. Container-grown stock: Grown in container for sufficient length of time for the root system to have developed to hold its soil together, firm and whole.
 - a. No plants shall be loose in the container.
 - b. Container stock shall not be pot bound.
 4. Trees with included bark will not be accepted. Trees shall have a minimum of five (5) feet of trunk free from branching, unless otherwise specified.
 5. Plants planted in rows shall be matched in form.
 6. Plants larger than those specified in the plant list may be used when acceptable to the City of Tampa representative.
 - a. If the use of larger plants is acceptable, increase the spread of roots or root ball in proportion to the size of the plant.
 7. The height of the trees, measured from the crown of the roots to the average height of the top of the tree, shall not be less than the minimum size designated in the plant list. Container size designated, if any, shall be minimum size required.
 8. No pruning wounds shall be present with a diameter of more than 1" and such wounds must show vigorous bark on all edges.
 9. Height and spread requirements, of shrub and groundcover material, indicated in the plant list shall prevail over container size indicated, unless otherwise specified.
 10. Shrubs and small plants shall conform to the following standards:
 - a. The measurements for height shall be taken from the ground level to the average height of the top of the plant and not the longest branch.
 - b. Single stemmed or thin plants will not be accepted.
 - c. Side branches shall be generous, well-twigged, and the plant as a whole well-bushed to the ground, unless otherwise specified.
 - d. Plants shall be in a vigorous condition, free from dead wood, bruises, or other root or branch injuries.
 11. Any plant material showing signs of shock will be judged on a case by case basis for

acceptance or rejection.

2.02 ACCESSORIES

- A. Refer to drawings and other portions of specifications for accessories specifically used on this project.
- B. Topsoil for Planting Beds: Fertile, friable, natural topsoil of loamy character, without admixture of subsoil material, obtained from a well-drained arable site, reasonably free from clay, lumps, coarse sands, stones, plants, roots, sticks, and other foreign materials, with acidity range between pH 5.5 and 6.5. Mixture 50% course native sand and 40% humic topsoil and 10% Canadian peat as specified.
1. Expressly identify source location of topsoil and/or peat proposed for use on the project.
 2. Provide topsoil free of substances harmful to the plant material. Topsoil shall be sterilized.
- C. Peat: Brown to black in color, sterile, weed and seed free granulated raw peat, containing not more than 9% mineral on a dry basis.
- D. Fertilizer shall be complete with the following analysis and source compounds:
- 10% nitrogen derived from ammonium nitrate.
 - 2% phosphorous derived from super phosphate.
 - 10% potassium derived from potassium sulfate.
 - 4% magnesium derived from magnesium sulfate.
- The fertilizer shall be neutral and contain the essential micro-nutrients (Chelated Fe, Mn, Zn, Mo, Bo, Cu) in sulfates unless otherwise indicated in ppm. Fertilizer shall be slow release.
- E. Anti-Desiccant: Protective film emulsion providing a protective film over plant surfaces; permeable to permit transpiration. Mixed and applied in accordance with manufacturer's instructions.
- F. Mulch shall be derived from an invader tree species or from shredded hardwood scraps (unless specified otherwise on drawings) clean, bright and free from weeds, moss, sticks and other debris. Mulch shall be spread at minimum of three (3) inches deep and maximum of four (4) inches deep or as otherwise noted.
- G. Water: Free of substances harmful to plant growth. Water shall contain less than 300 ppm soluble salts and less than 10 ppm chlorine, fluoride and sodium. Hoses or other methods of transportation furnished by Contractor. Contractor shall furnish water supply from an acceptable source. Acceptable sources: deep wells, municipal potable supply and treated wastewater.
- H. Guys: All trees between 2" and 4" caliber shall be guyed using 2" biodegradable nylon strapping per details. Attach fluorescent flagging to guys, minimum 18" length.
- I. Pre-emergent weed killer: Apply 2: granular "Chipco" Ronstar or approved equal, at a rate recommended by manufacturer.
- J. Structural Soil: See specification Section 35 05 16 for material and method of installation.

PART 3 - EXECUTION

3.01 INSPECTION

Contractor shall examine proposed planting areas and conditions for installation. Do not start planting work until unsatisfactory conditions are corrected.

3.02 PREPARATION

- A. Time of planting:
Deciduous material: If deciduous trees are planted in-leaf, they shall be sprayed with an anti-desiccant prior to planting operation.
- B. Planting shall be performed only by experienced workmen familiar with planting procedures under the supervision of a qualified supervisor.
- C. Layout of individual tree locations shall be performed by the City of Tampa representative prior to starting work at each site. Give 48 hour notice of need for inspection. If obstructions are encountered that are not shown on the drawings, do not proceed with planting operations until alternate plant locations have been selected. Verify locations of existing utilities.
- D. Excavate beds and install Structural Soil per specification Section 35 05 16.
- E. Excavate circular plant pits with 1:1 sides, except for plants specifically indicated to be planted in beds. Provide shrub pits at least 12" greater than the diameter of the root system and 3 times greater than diameter of rootball for trees. Depth of pit shall accommodate the root system
- F. Provide pre-mixed planting mixture for use around the balls and roots of the plants consisting of topsoil and 1/2 lb. plant fertilizer as specified, for each cu. yd. of mixture.
- G. Provide pre-mixed ground cover bed planting mixture consisting of topsoil and 1/2 lb. Plant fertilizer as specified, per cu. yd. Prepare planting bed as specified on drawings.

3.03 INSTALLATION

- A. Set plant material in the planting pit to proper grade and alignment. Set plants upright, plumb, and faced to give the best appearance or relationship to each other or adjacent structure. Set plant material 2"-3" above the finish grade. No filling will be permitted around trunks of stems. Backfill the pit with planting mixture until approximately 2/3 full, then water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Do not use muddy mixtures for backfilling. Form a ring of soil around the edge of each planting pit to retain water.

After balled and burlapped plants are set, place soil mixture around bases of balls and fill all voids. Remove all burlap, ropes, and wires from the tops of balls.
- B. Space ground cover plants in accordance with indicated dimensions. Adjust quantities as necessary to evenly fill planting bed per indicated spacing of plants. Plant within 4' of the trunks of trees and shrubs within planting bed and to within 1' of edge of bed.
- C. Apply anti-desiccant using power spray to provide adequate film over trunks, branches, stems, twigs and foliage.
- D. Mulch:
 1. Apply pre-emergent weed killer over grade prior to mulching, as specified by City of Tampa representative. Use rates recommended for specified product.
 2. Mulch tree, shrub planting pits and shrub beds with required mulching material 3" deep or as otherwise noted immediately after planting. Thoroughly water mulched areas. After watering, rake mulch to provide a uniform finished surface.

- E. Staking/Guying:
 - 1. Guy all trees over 2" in caliber immediately after planting and prior to acceptance.
 - 2. Brace all palm trees with wooden braces per plan details.
 - 3. All work shall be acceptable to the City of Tampa representative.
- F. Pruning:
 - 1. Prune branches of B&B stock, prior to transplanting, to balance the loss of roots and preserve the natural character appropriate to the particular plant requirements. In general, remove 1/4 to 1/3 of the leaf bearing buds, proportion shall in all cases be acceptable to the City of Tampa representative. Remove or cut back broken, damaged, and unsymmetrical growth of new wood. Prune trees to retain required height and spread. Do not cut structural branches. Required sizes are the size after pruning.
 - 2. Multiple leader plants: Preserve the leader which will best promote the symmetry of the plant. Cut branches at branch collars.
- G. Care of Existing Trees:
 - 1. All existing trees, if any, shall be protected through the duration of this project as outlined in the Tree Protection Standards of the City of Tampa Site Clearing Ordinance. These are available in the City Hall Annex Building, Duplication office for a fee.
- H. Tree Relocation:
 - 1. Tree relocation shall be performed under the supervision of the City Arborist, 813-274-5158.

3.04 MAINTENANCE

- A. Begin maintenance immediately after planting. Maintain all plant material until final acceptance and for an establishment period of ninety (90) days after final acceptance.
- B. Maintenance shall include but is not limited to pruning, cultivating, mowing, weeding, fertilizing, watering, and application of appropriate insecticides and fungicides necessary to maintain plants free of insects and disease.
 - 1. Re-set settled plants to proper grade and position. Restore planting saucer and adjacent material and remove dead material.
 - 2. Tighten and repair guys and stakes as required.
 - 3. Correct defective work immediately after deficiencies become apparent and weather permits.
 - 4. **In addition to irrigation system** or if no system exists, water trees every other day saturating the soil to depth of three (3) feet for the first two (2) weeks. If no irrigation system exists, water plant material per the following schedule:
 - 1-30 days - water every other day, saturating the soil to a depth of 3 feet.
 - 30-90 days - water twice a week, saturating the soil to a depth of three (3) feet.Quantity of water applied should be adjusted in accordance to rainfall.

3.5 ACCEPTANCE

- A. Inspection to determine acceptance of planted areas will be made by the City of Tampa

representative upon Contractor's request. Provide notification at least 5 working days before requested inspection date.

Planted areas will be accepted provided all requirements, including maintenance, have been complied with and plant materials are alive and in a healthy, vigorous condition.

- B. The City of Tampa representative will prepare a "punch list" of those items which must be corrected before reinspection for final acceptance. The City of Tampa representative will determine an appropriate time period in which punch list items must be corrected. Provide 48 hour notification of need for reinspection.
- C. The owner will assume plant maintenance 90 days after final acceptance, at which time, the contractor shall request a final maintenance inspection for acceptance, where requirements as stated in 3.5 apply.

3.6 WARRANTY

- A. Warrant plant material to remain alive and be in healthy, vigorous condition for a period of 1 year after completion and final acceptance of entire project.
- B. Replace, in accordance with the drawings and specifications, all plants that are dead or as determined by the City of Tampa representative to be in an unhealthy or unsightly condition, and have lost their natural shape due to contractor's negligence. The cost of such replacement(s) is at Contractor's expense. Warrant all replacement plants for six months after final acceptance.
- C. Warranty shall not include damage or loss of trees, plants, or ground covers caused by fires, floods, freezing, rains, lightning storms or winds over 75 miles per hour, winter kill caused by extreme cold and severe winter conditions not typical of planting area; acts of vandalism or negligence on the part of the owner.
- D. Remove and replace immediately all plants found to be dead or in unhealthy condition as determined by City of Tampa representative at any time during warranty period. Make replacements within four (4) weeks of notification.
 - 1. An inspection will be conducted at the end of the warranty period. Contractor will replace any plants found to be dead or in poor condition at this time within four (4) weeks of inspection. Contractor will also remove any tree bracing or guying determined by the city representative to be unnecessary at this point in the trees development.

3.7 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, soil, debris, and equipment. Do not leave on site over night, unless arrangements have been made to do so with the City of Tampa representative. Coordinate with City Representative on site storage of debris and/or trash. Repair damage resulting from planting operations.

END OF SECTION 32 90 00

**SECTION 32 92 00
SODDING**

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide sodded lawn as shown and specified. The work includes:
 - 1. Soil preparation.
 - 2. Sodding lawns.
 - 3. Maintenance.

1.02 RELATED WORK

- 1. Section 32 84 00: Underground Sprinkler.
- 2. Section 32 93 00: Trees, Plants, and Ground Covers.
- 3. Section 32 01 90: Maintenance of Plantings.

1.03 QUALITY ASSURANCE

- A. Sod: Comply with American Sod Producers Association (ASPA) classes of sod material. Sod must be Certified Celebration Bermuda Grass or Argentine Bahia grass sod grown and maintained on a well-drained sandy root zone soil. The sod must be weed and insect free.
- B. Provide and pay for materials testing. Testing agency shall be acceptable to the Engineer and/or Landscape Architect. Provide the following date:
 - 1. Test representative materials samples proposed for use.
 - 2. Soil analysis of existing conditions.
 - a. Soil pH and recommendations for correction. Ideal pH for Bermuda and Bahia sod is 5.0 - 6.5.
 - b. Nematode infestation check and recommendation for eradication.
 - c. Organic matter check and recommendation.
 - d. Starter fertilizer check and recommendations.
- C. SUBMITTALS
 - 1. Submit sod growers certification of grass species. Identify source location.
 - 2. Submit the following material samples:
 - a. Topsoil with verification of sterilization and source.
 - 3. Submit the following material certification:
 - 1. Submit certificates of inspection as required by governmental authorities and manufacturers or vendors certified analysis for soil amendments, herbicides, insecticides and fertilizer materials; submit other data substantiating that materials comply with specified requirements.
 - 4. Submit soil analysis report.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Cut, deliver and install sod within a 24-hour period.
 - 1. Do not harvest or transport sod when moisture content may adversely affect Sod survival.
 - 2. Protect sod from sun, wind, and dehydration prior to installation.
 - 3. Do not tear, stretch, or drop sod during handling and installation.
 - 4. Topsoil shall be kept dry and loose for sod soil mixes.

1.05 PROJECT CONDITIONS

- A. Work notification: Notify City of Tampa representative at least 7 working days prior to start of sodding operations.
- B. Protect existing utilities, paving and other facilities from damage caused by sodding operations.
- C. Perform sodding work only after planting and other work affecting ground surface has been completed.
- D. Existing soil to be excavated and replaced or amended as determined necessary from soil analysis, including: soil pH, nematode infestation, organic matter check and starter fertilizer check.
- E. Restrict traffic from lawn areas until grass is established.
- F. Provide hose and lawn watering equipment as required.
- G. The irrigation system will be installed prior to sodding. Locate, protect and maintain the irrigation system during sodding operations. Repair irrigation system components damaged during sodding operations at this contractor's expense.

1.06 WARRANTY

- A. Provide a uniform stand of grass by watering, mowing and maintaining lawn areas until final acceptance and for a period of 30 days after acceptance. Re-sod areas, with specified materials, which fail to provide a uniform stand of grass until all affected areas are accepted by the City of Tampa representative.

PART 2: PRODUCTS

4.01 MATERIALS

- A. Sod: An "approved" nursery grown sod composed of Certified Celebration Bermuda grown on a well-drained sandy root zone soil.
 - 1. Provide well-rooted, healthy sod, free of diseases, nematodes and soil borne insects. Provide sod uniform in color, leaf texture, density, and free of weeds, undesirable grasses, stones, roots, thatch, and extraneous material; viable and capable of growth and development when planted.
 - 2. Furnish sod, machine stripped, and of supplier's standard width, length, and thickness: Uniformly 1-1/4" to 1-1/2" thick with clean cut edges. Mow sod before stripping.
- B. Fertilizer:
 - 1. Granular, non-burning product composed of not less than 50% organic slow acting, guaranteed analysis professional fertilizer.
 - a. Type A: Starter fertilizer containing 16% nitrogen, 4% phosphoric acid, and 8% potash by weight or similar approved composition.
 - b. Type B: Top dressing fertilizer containing 31% nitrogen, 3% phosphoric acid, and 10% potash by weight or similar approved composition.

- c. Ground Limestone: Containing not less than 85% of total carbonates and ground to such fineness that 50% will pass through a 100 mesh sieve and 90% will pass through a 20 mesh sieve.
- C. Stakes: Steel, tee shaped pins, 4" head x 8" leg.
- D. Water: Free of substance harmful to sod growth. Hoses or other methods of transportation furnished by contractor.
- E. Topsoil: Fertile, friable, natural topsoil of loamy character, without admixture of subsoil material, obtained from a well-drained arable site, reasonably free from clay, lumps, coarse sands, stones, plants, roots, sticks, and other foreign materials, with acidity range between pH 5.5 and 6.5. Mixture 50% coarse native sand and 40% humic topsoil and 10% Canadian peat as specified.
 - 1. Expressly identify source location of topsoil and/or peat proposed for use on the project.
 - 2. Provide topsoil free of substances harmful to the plant material. Topsoil shall be sterilized.
- F. Peat: Brown to black in color, sterile, weed and seed free granulated raw peat, containing not more than 9% mineral on a dry basis.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine finish surfaces, grades, topsoil quality, and depth. Do not start sodding work until unsatisfactory conditions are corrected.

3.02 PREPARATION

- A. If area to be sodded has existing grass or vegetative cover, apply a non-selective herbicide (Round-up) to area. Wait ten (10) days before continuing with prep work.
- B. Remove any existing sub-base or compacted materials to expose a friable soil layer.
- C. Loosen soil/topsoil of lawn areas to minimum depth of 8". Remove stones over 1" in any dimension and sticks, roots, rubbish, and extraneous matter.
- D. Add 4" topsoil. Till into top 8" of existing soil.
- E. Grade lawn areas to smooth, free draining and even surface with a loose, uniformly fine texture. Roll and rake, remove ridges and fill depressions as required to drain.
- F. Apply limestone at rate determined by the soil test, to adjust pH of topsoil as specified. Distribute evenly by machine and incorporate thoroughly into topsoil.
- G. Apply "Type A" fertilizer as specified by manufacturer. Apply fertilizer by mechanical rotary or drop type distributor, thoroughly and evenly incorporated with the soil to a depth of 3" by discing or other approved methods. Fertilize areas inaccessible to power equipment with hand tools and incorporate it into soil.
- H. Dampen dry soil prior to sodding.
- I. Restore prepared areas to specified condition if eroded, settled or otherwise distributed after fine grading and prior to sodding.

3.03 INSTALLATION

- A. Lay sod to form a solid mass with tightly-fitted joints. Butt ends and sides of sod Strips. Do not overlay edges. Stagger strips to offset joints in adjacent courses. Remove excess sod to avoid smothering of adjacent grass. Provide sod pad top flush with adjacent curbs, sidewalks, drains and seed areas.
- B. Do not lay dormant sod or install sod on saturated soil.

- C. Install initial row of sod in a straight line, beginning at bottom of slopes, perpendicular to direction of the sloped area. Place subsequent rows parallel to and lightly against previously installed row.
- D. Peg sod on slopes greater than 3 to 1 to prevent slippage at a rate of 2 stakes per yd. of sod.
- E. Water sod thoroughly with a fine spray immediately after laying.
- F. Roll with light lawn roller to ensure contact with subgrade.
- G. Sod indicated areas within contract limits and areas adjoining contract limits disturbed as a result of construction operations.
- H. Top dress all seams of sodded area with specified topsoil.

3.04 MAINTENANCE

- A. Maintain sodded lawns for a period of at least 90 days after completion and acceptance of sodding operations.
- B. Maintain sodded lawn areas, including watering, spot weeding, mowing, application of herbicides, fungicides, insecticides and resodding until a full, uniform stand of grass free of weed, undesirable grass species, disease, and insects is achieved and accepted by the City of Tampa representative.
 - 1. Water sod thoroughly ever 2 to 3 days, as required to establish proper rooting.
 - 2. Repair, rework, and re-sod all areas that have washed out or are eroded. Replace undesirable or dead areas with new sod.
 - 3. Mow lawn areas as soon as lawn top growth reaches a 3” height. Cut back to 2” height. Repeat mowing as required to maintain specified height. Not more than 40% of grass leaf shall be removed at any single mowing.
 - 4. Apply “Type B” fertilizer to lawns approximately 30 days after sodding at a rate specified by the manufacturer. Apply with a mechanical rotary or drop type distributor. Thoroughly water into soil.
 - 5. Apply herbicides as required to control weed growth or undesirable grass species.
 - 6. Apply fungicides and insecticides as required to control disease and insects.

3.05 ACCEPTANCE

- A. Inspection to determine acceptance of sodded lawns will be made by the Engineer and or the Engineer and/or Landscape Architect, upon contractor’s request. Provide notification at least five working days before requested inspection date.
 - 1. Sodded areas will be acceptable provided all requirements, including maintenance, have been complied with, and a healthy, even colored viable lawn is established, free of weeds, undesirable grass species, disease, and insects.
- B. Upon acceptance contractor shall maintain area for 90 days. At the end of this period contractor shall request a final request a final maintenance inspection for acceptance.
- C. Upon acceptance at end of maintenance period the City of Tampa will assume lawn maintenance.

3.06 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the Work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from sodding operations.

END OF SECTION 32 92 00

**SECTION 33 41 16 SUBDRAINAGE PIPING
EZ FLOW**

PART 1 GENERAL

1.01 GENERAL PROVISIONS

- A. The Conditions of the Contract are hereby made a part of this Section.

1.02 DESCRIPTION OF WORK

- A. Work included:
1. Prepare trench bottom to have continuous contact with pipe at specified elevation as shown in plans. Ensure trench is sloped as specified in plans to flow toward outlet.
 2. Provide EZ Flow product and install beginning at the low-point and work upstream using internal coupling to connect EZ Flow.
 3. Provide and install specified fill material over EZ Flow pipe.
 4. Provide and install grass, or other cover medium, by using method per plans.
 5. Supplying all labor, equipment, materials and apparatus not specifically mentioned herein or noted on the plans, but which are incidental and required to complete the work specified
- B. Related work:
1. Subgrade preparation –Refer to Sheet C-2 General Notes, when needed.
 2. Subsurface drainage materials – Refer to Sheet C-2 General Notes, when needed.
 3. Irrigation installation - Section 32 84 00 Underground Sprinkler, when needed.

1.03 QUALITY ASSURANCE

- A. Submit manufacturer's data as required by specifications.
- B. Installation: Performed only by skilled workpeople with satisfactory record of performance on landscaping or drainage projects of comparable size and quality.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Protect EZ Flow Pipe sections from damage during delivery and store under tarp to protect from sunlight, when time from delivery to installation exceeds one week.

1.05 PROJECT CONDITIONS

- A. Review installation procedures and coordinate EZ Flow work with other work affected. Generally, EZ Flow will be installed concurrent with other site drainage.
- B. Cold Weather: Do not use frozen materials or materials mixed or coated with ice or frost if in an area needing compaction or required to support load.
- C. Protect partially completed EZ Flow installations against damage from other construction traffic when work is in progress.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. NDS, Inc., 851 North Harvard Avenue, PO Box 339, Lindsay, California 93247. Toll Free (800) 726-1994. Toll Free Fax (800) 726-1998. Phone (559) 562-9888. Fax (559) 562-4488. Website: www.ndspro.com. E-Mail nds@ndspro.com.

2.02 MATERIALS

- A. EZ Flow Pipe

1. Pipe shall be manufactured from High Density Polyethylene and shall be both corrugated and perforated.
2. EZ Flow shall have Expanded Polystyrene Aggregate surrounding the pipe and enclosed by fabric mesh.
3. Expanded Polystyrene aggregate must be made from 100% Recycled Polyethylene.
4. Expanded Polystyrene aggregate shall have a measured void space of 57%
5. EZ Flow sections must be provided in 10 foot sections
6. Internal couplings shall be used to connect EZ Flow sections.

Part Number	Part Description	Dia.	Flow Rate	Length
EZ-0701F	EZ Flow with 3" Pipe	7"	80.8 gpm/ft	10'
3C05	3" Internal Coupling	7"	n/a	n/a

- B. Soil
 1. Obtain specified fill material as backfill over EZ Flow drain pipe.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine excavated trench for smoothness and ensure trench is free of debris. Inspect trench for correct slope and elevation in accordance with plans. Do not start EZ Flow installation until unsatisfactory conditions are corrected.
- B. Inspect EZ Flow product to ensure product has not been damaged during delivery. Inspect interior of pipe for debris, soil or other foreign objects, if found remove before installation.
- C. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance. If existing conditions are found unsatisfactory, contact Quality Control Manager for resolution.

3.02 PREPARATION

- A. Excavate trench as specified in plans to desired width accommodating the EZ Flow pipe system.
- B. Slope trench as specified in plans to flow toward outlet(s).
- C. Prepare and shape smooth trench bottom to have continuous contact with pipe at specified elevation as shown in plans.

3.03 INSTALLATION

- A. Provide EZ Flow product and install beginning at the outlet point and work upstream.
- B. Use internal couplings provided by NDS to connect EZ Flow sections together.
- C. To cut EZ Flow pipe to lengths other than ten foot intervals, mark the mesh where cut needs to be made and carefully make a cross-sectional cut in the mesh to access Polystyrene Aggregate. Remove and set aside sufficient aggregate to expose the pipe and to re-connect the mesh to the pipe. Using an appropriate connector such as a nylon wire tie, reattach the mesh to the pipe, making sure remaining aggregate is properly contained. Cut the exposed polyethylene pipe to the measured length. Dispose of remaining aggregate properly.

- D At the end of the work day all upstream open ends of EZ Flow shall be covered or plugged to prevent intrusion of dirt, debris and foreign objects.
- E Connection to onsite storm drain systems and structures shall be considered incidental to the completion of this specification section.
- F Provide and install specified fill material over EZ Flow pipe. Lift thickness and compaction density shall be in accordance with plans and specifications. Areas subject to H-25 traffic loading shall maintain 1' – 0" minimum cover to final subgrade elevation. Areas subject to construction traffic shall maintain 1' – 6" minimum cover while subject to construction traffic loading.
- G Install surface medium as specified in plans.

END OF SECTION 33 41 16