

The Enclosed Document Is Provided For Your Convenience.

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

Please Let Us Know If You Plan To Bid

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 14-C-00054

BLUE SINK WATER MAIN

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

MARCH 2015

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.: 14-C-00054; Blue Sink Water Main

BID DATE: April 7, 2015 **ESTIMATE:** \$3,400,000 **SCOPE:** The project comprises furnishing and installing approximately 17,530 lf of 16-inch and 30-inch dia. ductile iron pipe water main, approximately 392lf of 24-inch O.D. steel casing pipe, including wedge restraints and gaskets, ductile iron bends, sleeves and tees, gate valves and boxes, butterfly valves and boxes, air release/vacuum valve assemblies, roadway restoration, milling, paving, grading, signalization loops, restoration of driveways, curbs and sidewalks, sodding, landscaping, with all associated work required for a complete project in accordance with the Contract Documents. **PRE-BID CONFERENCE:** Tuesday, March 24, 2015, 3:00 p.m. 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>. Subcontracting opportunities may exist for City certified Small Local Business Enterprises (SLBEs). A copy of the current SLBE directory may be obtained at www.Tampagov.net. Phone (813) 274-8456 for assistance. **Email Technical Questions to:** contractadministration@tampagov.net.

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NOTICE TO BIDDERS
CITY OF TAMPA, FLORIDA
Contract 14-C-00054; Blue Sink Water Main

Sealed Proposals will be received by the City of Tampa no later than 1:30 P.M., April 07, 2015, 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} furnishing and installing approximately 17,530 lf of 16-inch and 30-inch dia. ductile iron pipe water main, approximately 392lf of 24-inch O.D. steel casing pipe, including wedge restraints and gaskets, ductile iron bends, sleeves and tees, gate valves and boxes, butterfly valves and boxes, air release/vacuum valve assemblies, roadway restoration, milling, paving, grading, signalization loops, restoration of driveways, curbs and sidewalks, sodding, landscaping, 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/dept_contract_administration/programs_and_services/construction_project_bidding/index.asp. 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.

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.

Communication with City Staff

Pursuant to City of Tampa Ordinance 2010-92, during the solicitation period, including any protest and/or appeal, NO CONTACT initiated by bidders or responders with City officers or employees, other than the individuals specified below is permitted:

Director of Contract Administration, David Vaughn

Contracts Management Supervisor, Jim Greiner

Contract Officer, Jody Gray

The City's Legal Department staff

The City's Contract Administration Department staff.

Technical Questions and Requests For Information should be directed to the Department via

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.

In accordance with the City of Tampa's Equal Business Opportunity Ordinance, a Goal may have been established for subcontracting with Small Local Business Enterprises, SLBEs, certified by the City. Links to further information and a list of SLBEs are on the Department's Construction Project Bidding Web page. A link to the current complete directory of SLBEs is on the Minority Business Development Office Website.

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

I-1.01 GENERAL:

The proposed work is the Blue Sink Water Main 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.

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, with notice given to all prospective bidders at the respective fax numbers or e-mail addresses furnished, for such purposes. 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 SIGNATURE OF BIDDERS: Section I-2.07 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. The Proposal shall also bear the seal of the corporation attested by its secretary.

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 Country where its principal place of business is. Failure to submit what is required is grounds to reject the bid of that bidder.

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 180 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 \$500.00 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.

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

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 Pages beginning with INS-1. Before commencing work, the Contractor shall provide the evidence of the insurance required on a Certificate of Insurance accompanied by evidence of authority to bind the insurance company or companies such as agents license, power of attorney, or letter of authority.

I-1.10 EQUAL BUSINESS OPPORTUNITY PROGRAM / SLBE / REQUIREMENTS

In accordance with the City of Tampa's Equal Business Opportunity Ordinance, a goal of 12.7% has been established for subcontracting with Small Local Business Enterprises, (SLBEs), certified by the City. The goal is based upon the availability of the firms listed on the Goal Worksheet and as posted in the "SLBEs" link under this Contract's notice on the Department's Construction Project Bidding web page.

BIDDERS MUST SOLICIT ALL SLBEs ON THAT LIST and provide documentation of emails, faxes, phone calls, letters, or other communication with the firms as a first step to demonstrate Good Faith Efforts to achieve the goal. The list is formatted to facilitate e-mail solicitations to the listed firms by copying and pasting e-mail addresses.

Bidders may explore other opportunities for subcontracting with SLBEs by consulting the current directory of all certified SLBEs posted on the Minority Business Development Office web page.

GOOD FAITH EFFORT COMPLIANCE PLAN REQUIRED - When a Goal has been established, the Bidder must submit, with its bid, completed to the fullest extent possible, a Good Faith Effort Compliance Plan using the form GFECF contained herein. Additional documentation is required whenever an SLBE subcontractor's low quote is not utilized. Supplemental information or documentation concerning the Bidder's Compliance Plan may be required prior to award as requested by the City.

DIVERSITY MANAGEMENT INITIATIVE, DMI, DATA REPORTING FORMS REQUIRED - Bidders must submit, with its bid, "DMI-Solicited" forms listing all subcontractors solicited and "DMI-Utilized" forms listing all subcontractors to be utilized. Supplemental forms, documentation, or information may be submitted at bid time or as requested by the City.

After an award, "DMI-Payments" forms are to be submitted with payment requests to report payments to subcontractors.

Bidders may visit the Minority Business Development Office's web page at TampaGov.net for other information about the SLBE program, FAQ's, and the latest SLBE directory of certified firms.

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 Key rating Guide Property-Liability.

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

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 of Tampa 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

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 Paragraph 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 Contract 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.

I-1.14 Section 5 – subcontracts and Assignments, Article 5.01, Page A-7, Last Paragraph:
Change "...twenty-five (25) percent..." to "fifty-one (51) percent..."

Section 10-Payments, Article .05 Partial Payments, 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..."

I-1.15 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 the contractor to perform work pursuant to the contract.

INSTRUCTIONS TO BIDDERS
SECTION 1 - SPECIAL INSTRUCTIONS

I-1.16 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. The documents may be downloaded from the City's web site, at

http://www.tampagov.net/dept_contract_administration/programs_and_services/construction_project_bidding/index.asp

I-1.17 PAYMENT DISPUTE RESOLUTION

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

I-1.18 SCRUTINIZED COMPANIES.

For Contracts \$1,000,000 and greater, if the City determines the Contractor submitted a false certification under Section 287.135(5) of the Florida Statutes, or if the Contractor has been placed on the Scrutinized Companies with Activities in the Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, the City shall either terminate the Contract after it has given the Contractor notice and an opportunity to demonstrate the City's determination of false certification was in error pursuant to Section 287.135(5)(a) of the Florida Statutes, or maintain the Contract if the conditions of Section 287.135(4) of the Florida Statutes are met.

I-1.19 FLORIDA'S PUBLIC RECORDS LAW

- 4.33.3 The City of Tampa is a public agency subject to Chapter 119, Florida Statutes. In accordance with Florida Statutes, 119.0701, if applicable, Contractor shall comply with Florida's Public Records Law. Specifically, the Contractor shall:
1. Keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service;
 2. Provide the public with access to such public records 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 public records that are exempt or that are confidential and exempt from public record requirements are not disclosed except as authorized by law;
 4. Meet all requirements for retaining public records and transfer to the City, at no cost, all public records in possession of the contractor upon termination of the contract and destroy any duplicate public records that are exempt or confidential and exempt. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the agency.
- 4.33.4 The failure of Contractor to comply with the provisions set forth in this Article shall constitute a Default and Breach of this award and the City shall enforce the Default in accordance with the provisions set forth in the DEFAULT/RE-AWARD section of this document.

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

During the life of the award/contract the Awardee/Contractor shall provide, pay for, and maintain insurance with companies authorized to do business in Florida, with an A.M. Best rating of B+ (or better) Class VII (or higher), or otherwise be acceptable to the City if not rated by A.M. Best. All insurance shall be from responsible companies duly authorized to do business in the State of Florida.

All commercial general liability insurance policies (and Excess or Umbrella Liability Insurance policies, if applicable) shall provide that the City is an additional insured as to the operations of the Awardee/Contractor under the award/contract including the additional insured endorsement, the subrogation waiver endorsement, and the Severability of Interest Provision. In lieu of the additional named insured requirement, if the Awardee/Contractor's company has a declared existing policy which precludes it from including additional insureds, the City may permit the Contractor to purchase an Owners and Contractors Protective Liability policy. Such policy shall be written in the name of the City at the same limit as is required for General Liability coverage. The policy shall be evidenced on an insurance binder which must be effective from the date of issue until such time as a policy is in existence and shall be submitted to the City in the manner described below as applicable to certificates of insurance.

The insurance coverages and limits required must be evidenced by a properly executed Acord 25 Certificate of Insurance form or its equivalent. Each Certificate must be personally manually signed by the Authorized Representative of the insurance company shown in the Certificate with proof that he/she is an authorized representative thereof. Thirty days' written notice must be given to the City of any cancellation, intent not to renew, or reduction in the policy coverages, except in the application of the aggregate liability limits provisions. Should any aggregate limit of liability coverage be reduced, it shall be immediately increased back to the limit required by the contract. The insurance coverages required herein are to be primary to any insurance carried by the City or any self-insurance program thereof.

The following coverages are required:

A. Commercial General Liability Insurance shall be provided on the most current Insurance Services Office (ISO) form or its equivalent. This coverage must be provided to cover liability arising from premises and operations, independent contractors, products and completed operations, personal and advertising injury, contractual liability, and XCU exposures (if applicable). Completed operations liability coverage shall be maintained for a minimum of one-year following completion of work. The amount of Commercial General Liability insurance shall not be less than the amount specified.

(a) \$1,000,000 per occurrence and a \$2,000,000 general aggregate for projects valued at \$2,000,000 or less. General aggregate limit for projects over that price shall equal or exceed the price of the project. An Excess or Umbrella Liability insurance policy can be provided to meet the required limit. Risk Management may be contacted for additional information regarding projects of this nature.

B. Automobile Liability Insurance shall be maintained in accordance with the laws of the State of Florida, as to the ownership, maintenance, and use of all owned, non-owned, leased, or hired vehicles. The amount of Automobile Liability Insurance shall not be less than the amount specified.

(a) \$500,000 combined single limit each occurrence bodily injury & property damage- for projects valued at \$100,000 and under

(b) \$1,000,000 combined single limit each occurrence bodily injury & property damage – for projects valued over \$100,000

C. Worker's Compensation and Employer's Liability Insurance shall be provided for all employees engaged in the work under the contract, in accordance with the Florida Statutory Requirements. The amount of the Employer's Liability Insurance shall not be less than:

(a) \$500,000 bodily injury by accident and each accident, bodily injury by disease policy limit, and bodily injury by disease each employee – for projects valued at \$100,00 and under

(b) \$1,000,000 bodily injury by accident and each accident, bodily injury by disease policy limit, and bodily injury by disease each –for projects valued over \$100,000

D. Excess Liability Insurance or Umbrella Liability Insurance may compensate for a deficiency in general liability, automobile, or worker's compensation insurance coverage limits. If the Excess or Umbrella policy is being provided as proof of coverage, it must name the City of Tampa as an additional insured (**IF APPLICABLE**).

E. Builder's Risk Insurance, specialized policy designed to cover the property loss exposures that are associated with construction of buildings. The amount of coverage should not be less than the amount of the project. **(IF APPLICABLE)**.

F. Installation Floater- a builder's risk type policy that covers specific type of property during its installation, is coverage required for highly valued equipment or materials such as compressors, generators, or other machinery that are not covered by the builder's risk policy **(IF APPLICABLE)**.

G. Longshoreman's & Harbor Worker's Compensation Act/Jones Act coverage shall be maintained for work being conducted upon navigable water of the United States. The limit required shall be the same limit as the worker's compensation/employer's liability insurance limit **(IF APPLICABLE)**.

H. Professional Liability shall be maintained against claims of negligence, errors, mistakes, or omissions in the performance of the services to be performed and furnished by the Awardee/Contractor or any of its subcontractors when it acts as a DESIGN PROFESSIONAL. The amount of coverage shall be no less than amount specified **(IF APPLICABLE)**.

(a) \$1,000,000 per incident and general aggregate. Note all claims made policies must provide the date of retroactive coverage.

The City may waive any or all of the above referenced insurance requirements based on the specific nature of goods or services to be provided under the award/contract.

ADDITIONAL INSURED - The City must be included as an additional insured by on the general and (Excess or Umbrella liability policies) if applicable. Alternatively, the Contractor may purchase a separate owners protective liability policy in the name of the City in the specified amount as indicated in the insurance requirements.

CLAIMS MADE POLICIES - If any liability insurance is issued on a claims made form, Contractor agrees to maintain uninterrupted coverage for a minimum of one year following completion and acceptance of the work either through purchase of an extended reporting provision, or through purchase of successive renewals with a retroactive

date not later than the beginning of performance of work for the City. The retroactive date must be provided for all claims made policies.

CANCELLATION/NON-RENEWAL - Thirty (30) days written notice must be given to the City of any cancellation, intent to non-renew or material reduction in coverages (except aggregate liability limits). However, ten (10) days notice may be given for non-payment of premium. Notice shall be sent to the City of Tampa Department of Public Works, 306 E. Jackson Street, Tampa, FL 33602.

NUMBER OF POLICIES - General and other liability insurance may be arranged under single policies for the full amounts required or by a combination of underlying policies with the balance provided by an excess or umbrella liability insurance policy.

WAIVER OF SUBROGATION - Contractor waives all rights against City, its agents, officers, directors and employees for recovery of damages to the extent such damage is covered under the automobile or excess liability policies.

SUBCONTRACTORS - It is the Contractor's responsibility to require all subcontractors to maintain adequate insurance coverage.

PRIMARY POLICIES - The Contractor's insurance is primary to the City's insurance or any self insurance program thereof.

RATING - All insurers shall be authorized to do business in Florida, and shall have an A.M. Best rating of B+ (or better), Class VII (or higher), or otherwise be acceptable to the City if not rated by A.M. Best.

DEDUCTIBLES - The Contractor is responsible for all deductibles. In the event of loss which would have been covered but for the presence of a deductible, the City may withhold from payment to Contractor an amount equal to the deductible to cover such loss should full recovery not be obtained under the insurance policy.

INSURANCE ADJUSTMENTS - These insurance requirements may be increased, reduced, or waived at the City's sole option with an appropriate adjustment to the Contract price.

Document updated on 12/22/2009 by RLD (Risk Management)

City of Tampa MBD Office
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7/28/14

ASPHALT MILLING

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4202 E. Martin Luther King Blvd.
Tampa, FL 33610

Phone (813) 931-8270
Fax (813) 931-9185

E-mail bunconstruction@tampabay.rr.com

Federal Number 59-3362663

Minority African American
Contact Bart Nwagbuo

Howard Sealcoating & Land Clearing

1911N. 57th St
Tampa, FL 33619

Phone (305) 693-8972
Fax (305) 693-8985

E-mail lhoward@asphaltfl.com

Federal Number 65-0802138

Minority African American
Contact Leroy Howard

City Wide Paving, LLC

2508 N. 32nd St.
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Phone (813) 325-4250
Fax (813) 849-1723

E-mail citywidepavingcwp@yahoo.com

Federal Number 27-0559624

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City of Tampa MBD Office
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7/28/14

BARRICADES, TRAFFIC CONES, LANE MARKERS, ETC

Sentry Barricades, Inc.

P.O. Box 3647
820 Creative Drive
Lakeland, FL 33802

E-mail admin@sentryb.com

Phone (863) 682-7098

Fax (863) 680-9901

Federal Number 59-3590342

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CONCRETE (CURBS & GUTTERS)

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E-mail paragonb@tampabay.rr.com

Phone (813) 935-1600

Fax (813) 932-1108

Federal Number 59-2464751

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Contact Al Davis

Denson Construction, Inc.

P.O. Box 3081
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E-mail Pete@denson-construction.com

Phone (863) 709-1001

Fax (863) 709-1071

Federal Number 59-3571944

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L.S. Curb Service, Inc.

4206 James L. Redman Pkwy
Plant City, FL 33567

E-mail lshakes@lscurb.com

Phone (813) 737-1524

Fax (813) 650-8654

Federal Number 59-3252745

Minority African American

Contact Leaford Shakes

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Fax (727) 821-5029

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Contact Al Davis

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U-WMBE Goal Setting Firms Report

7/28/14

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Phone (863) 438-4454
Fax (863) 496-1227

E-mail powellconcrete1@yahoo.com

Federal Number 83-0467921

Minority African American
Contact Earl Powell

Allen Masonry & General Contracting, Inc.

6215 Travis Blvd.
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Phone (813) 627-9231
Fax

E-mail allenmasonrygc@gmail.com

Federal Number 20-1580292

Minority African American
Contact Steve Allen

SOD, SEED SOIL, AND INOCULANTS

Bay Light, LLC d/b/a Professional Property Services

10105 11th Street North
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Phone (813) 972-4057
Fax (813) 971-0882

E-mail paulrobinson22@msn.com

Federal Number 59-1341451

Minority African American
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Fresh Start Development, Inc.

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Phone (813) 758-5345
Fax (813) 333-5949

E-mail freshstartdevelop@yahoo.com

Federal Number 20-3857845

Minority African American
Contact Katina McClinton

Sterling Silver Scape & Sod, Inc.

P.O. Box 450459
Kissimmee, FL 34745

Phone (407) 846-3225
Fax (407) 846-3207

E-mail dahlia@sterlingsilverlandscaping.com

Federal Number 59-3171150

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Contact Sterling Blake

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5608 Puritan Rd
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Phone (813) 927-2808
Fax (813) 374-0993

E-mail d.jones@on-pointgroupinc.com

Federal Number 38-3788119

Minority African American
Contact Daphne Jones

City of Tampa MBD Office
U-WMBE Goal Setting Firms Report

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VIDEO SERVICES, PHOTOGRAPHY

Kerrick Williams Photography, LLC

811 Hickory Glen Drive
Seffner, FL 33584

Phone (813) 571-3768
Fax (866) 571-7149

E-mail kerrick@kerrickwilliams.com

Federal Number 59-3225186

Minority African American
Contact Kerrick Williams

DeHa Multimedia, LLC

P.O. Box 23532
Tampa, FL 33623

Phone (813) 340-3017
Fax (813) 891-0332

E-mail hakeem@dehamagazine.com

Federal Number 26-0527750

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Contact Hakeem Ali

The Webb Works

3421 South Gardenia Drive
Tampa, FL 33629

Phone (813) 817-9840
Fax

E-mail jim@thewebbworks.com

Federal Number 55-0870869

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Contact James Webb

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Minority Small Business

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9001 126th Ave. North
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Phone (727) 585-4714

Fax (727) 585-5091

E-mail cconstr@tampabay.rr.com

Federal Number 59-2548614

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Contact Israel Castro

Parking Lot Striping Service

P.O. Box 11005
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Phone (813) 623-1454

Fax (813) 664-0140

E-mail lindaplss@aol.com

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Contact Fernando Llop

Mend It Asphalt & Concrete Services, Inc.

4915 15th Avenue South
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Fax (727) 327-4504

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SLBE Goal Setting Firms Report

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Fax (863) 680-9901

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E-mail lindaplss@aol.com

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Contact Ahmad Erchid

City of Tampa MBD Office

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Fax (727) 934-0568

E-mail netherlyWCAN@aol.com

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Contact Chet Netherly

Velez Concrete Construction, Inc.

3926 E. Eden Roc Circle
Tampa, FL 33634

Phone (813) 493-4762

Fax (813) 882-3455

E-mail velezconcrete99@gmail.com

Federal Number 83-0373603

Minority Small Business

Contact John Velez

Tagarelli Construction, Inc.

P.O. Box 681
Tarpon Springs, FL 34689

Phone (727) 937-6171

Fax (727) 937-6172

E-mail tagarelli@verizon.net

Federal Number 59-3339407

Minority Small Business

Contact Michael Tagarelli

Andras Construction Service, LLC

18449 Lake Iola Rd
Dade City, FL 33523

Phone (813) 482-2581

Fax (352) 588-2073

E-mail jeffandras@gmail.com

Federal Number 20-4468935

Minority Small Business

Contact Jeffrey Andras

Velocity Construction, Inc.

1320 E. 137th Ave
Tampa, FL 33613

Phone (813) 624-2117

Fax (800) 807-0314

E-mail bconnor@tampabay.rr.com

Federal Number 74-3082984

Minority Small Business

Contact William Connor

Kilgore Construction, LLC

11697 Walsingham Rd.
Largo, FL 33778

Phone (727) 755-2294

Fax (727) 581-5724

E-mail jo@kilgorellc.com

Federal Number 26-3771464

Minority Small Business

Contact Harold Kilgore

JMJ Site Development, Inc

P.O. Box 1095
Lithia, FL 33547

Phone (813) 927-2484

Fax

E-mail jmjsitedevelopment@gmail.com

Federal Number 27-3413832

Minority Small Business

Contact Jeff Joaquin

City of Tampa MBD Office

SLBE Goal Setting Firms Report

as of 7/28/2014



CONCRETE (SIDEWALKS, DRIVEWAYS, FORM & FINISH)

Castco Construction, Inc.

9001 126th Ave. North
Largo, FL 33773

Phone (727) 585-4714

Fax (727) 585-5091

E-mail cconstr@tampabay.rr.com

Federal Number 59-2548614

Minority Small Business

Contact Israel Castro

E.S. Concrete Services, Inc.

726 East Harbor Dr. South
St. Petersburg, FL 33705

Phone (727) 821-5029

Fax (727) 821-5029

E-mail enorisslysr@yahoo.com

Federal Number 59-3119582

Minority Small Business

Contact Enoris Sly

Parking Lot Striping Service

P.O. Box 11005
Tampa, FL 33680

Phone (813) 623-1454

Fax (813) 664-0140

E-mail lindaplss@aol.com

Federal Number 59-1522393

Minority Small Business

Contact Fernando Llop

Sunrise Utility Construction, Inc.

P.O. Box 272293
Tampa, FL 33688-2293

Phone (813) 949-3749

Fax (813) 949-0408

E-mail LMNBOSS@AOL.COM

Federal Number 59-3034012

Minority Small Business

Contact Lisa Nehrboss

Tampa Bay Construction & Engineering, Inc.

10503 Palm Cove Ave
Tampa, FL 33647

Phone (813) 984-9898

Fax (813) 907-0980

E-mail aerchid@tbcei.com

Federal Number 59-3713572

Minority Small Business

Contact Ahmad Erchid

Chet Netherly, LLC d/b/a Anything in Concrete

246 W Canal Drive
Palm Harbor, FL 34684

Phone (727) 945-7035

Fax (727) 934-0568

E-mail netherlyWCAN@aol.com

Federal Number 20-3926235

Minority Small Business

Contact Chet Netherly

Velez Concrete Construction, Inc.

3926 E. Eden Roc Circle
Tampa, FL 33634

Phone (813) 493-4762

Fax (813) 882-3455

E-mail velezconcrete99@gmail.com

Federal Number 83-0373603

Minority Small Business

Contact John Velez

City of Tampa MBD Office



SLBE Goal Setting Firms Report

as of 7/28/2014

CONCRETE (SIDEWALKS, DRIVEWAYS, FORM & FINISH)

Tagarelli Construction, Inc.

P.O. Box 681
Tarpon Springs, FL 34689

Phone (727) 937-6171

Fax (727) 937-6172

E-mail tagarelli@verizon.net

Federal Number 59-3339407

Minority Small Business

Contact Michael Tagarelli

Mend It Asphalt & Concrete Services, Inc.

4915 15th Avenue South
Gulfport, FL 33707

Phone (727) 327-7784

Fax (727) 327-4504

E-mail menditasphaltconcrete@yahoo.com

Federal Number 59-3274522

Minority Small Business

Contact Robert Mendez

CMK Construction, Inc.

2053 Mountain Ash Way
New Port Richey, FL 34655

Phone (727) 243-9234

Fax (727) 848-2026

E-mail manny@cmkconstructioninc.com

Federal Number 20-1609262

Minority Small Business

Contact Manuel Kavouklis

Powell Concrete, LLC

1410 Swift Ct.
Kissimmee, FL 34759

Phone (863) 438-4454

Fax (863) 496-1227

E-mail powellconcrete1@yahoo.com

Federal Number 83-0467921

Minority Small Business

Contact Earl Powell

Velocity Construction, Inc.

1320 E. 137th Ave
Tampa, FL 33613

Phone (813) 624-2117

Fax (800) 807-0314

E-mail bconnor@tampabay.rr.com

Federal Number 74-3082984

Minority Small Business

Contact William Connor

ARC Development, Inc.

5311 S. Falkenburg Rd., Ste. D-20
Tampa, FL 33619-0037

Phone (813) 952-3250

Fax (813) 952-3260

E-mail Rick@ARC-FL.com

Federal Number 20-0826206

Minority Small Business

Contact Richard Coyer

Kilgore Construction, LLC

11697 Walsingham Rd.
Largo, FL 33778

Phone (727) 755-2294

Fax (727) 581-5724

E-mail jo@kilgorellc.com

Federal Number 26-3771464

Minority Small Business

Contact Harold Kilgore

City of Tampa MBD Office

SLBE Goal Setting Firms Report

as of 7/28/2014



CONCRETE (SIDEWALKS, DRIVEWAYS, FORM & FINISH)

Tampa Bay Construction Group

12651 North Dale Mabry Hwy, Suite
272568
Tampa, FL 33688

Phone (813) 402-8827

Fax (813) 388-4554

E-mail get-it-done@mytbcgroup.com

Federal Number 26-4797153

Minority Small Business

Contact Joy Iurato

JMJ Site Development, Inc

P.O. Box 1095
Lithia, FL 33547

Phone (813) 927-2484

Fax

E-mail jmjstitedevelopment@gmail.com

Federal Number 27-3413832

Minority Small Business

Contact Jeff Joaquin

Allen Masonry & General Contracting, Inc.

6215 Travis Blvd.
Tampa, FL 33610

Phone (813) 627-9231

Fax

E-mail allenmasonrygc@gmail.com

Federal Number 20-1580292

Minority Small Business

Contact Steve Allen

Acclaim Service Group, Inc.

1324 Seven Springs Blvd., #325
New Port Richey, FL 34655

Phone (727) 848-3200

Fax (727) 848-3211

E-mail jamie@acclaimservicegroup.com

Federal Number 36-4668231

Minority Small Business

Contact Jamie Jones

SOD, SEED SOIL, AND INOCULANTS

Morelli Landscaping, Inc

4855 162nd Avenue North
Clearwater, FL 33762

Phone (727) 535-6263

Fax (727) 536-6855

E-mail vjmorelli@tampabay.rr.com

Federal Number 59-1877993

Minority Small Business

Contact Joe Morelli

Ed's Lawn & Landscaping, Inc.

P.O. Box 130744
Tampa, FL 33681

Phone (813) 254-8499

Fax (813) 250-3779

E-mail edslawn@verizon.net

Federal Number 59-3239828

Minority Small Business

Contact Susan Breit

City of Tampa MBD Office

SLBE Goal Setting Firms Report

as of 7/28/2014



SOD, SEED SOIL, AND INOCULANTS

Bay Light, LLC d/b/a Professional Property Services

10105 11th Street North
Tampa, FL 33612

Phone (813) 972-4057

Fax (813) 971-0882

E-mail paulrobinson22@msn.com

Federal Number 59-1341451

Minority Small Business

Contact Hyacinth Robinson

Baron's Landscaping Services, Inc.

P.O. Box 4047
Tampa, FL 33677

Phone (813) 404-1509

Fax (813) 476-6255

E-mail baronslawncare@aol.com

Federal Number 65-0837654

Minority Small Business

Contact Randy Conte

Sunbelt Sod & Grading Company

819 - 9th St. N.E.
Ruskin, FL 33570

Phone (813) 641-9855

Fax (813) 645-7263

E-mail sunbeltsod@verizon.net

Federal Number 13-4250933

Minority Small Business

Contact Lesley Silva

NPC Mowing & Landscaping

P.O. Box 292873 6441 Eureka Springs
Road
Tampa, FL 33687-2873

Phone (813) 967-4386

Fax (352) 668-3295

E-mail Jwoodho793@aol.com

Federal Number 03-0555858

Minority Small Business

Contact John Woodhouse

Fresh Start Development, Inc.

P.O. Box 310592
Tampa, FL 33680

Phone (813) 758-5345

Fax (813) 333-5949

E-mail freshstartdevelop@yahoo.com

Federal Number 20-3857845

Minority Small Business

Contact Katina McClinton

Cardinal Landscaping Services of Tampa, Inc.

817 E. Okaloosa Ave.
Tampa, FL 33604

Phone (813) 915-9696

Fax (813) 915-9695

E-mail Mike@cardinallandscape.com

Federal Number 59-3394554

Minority Small Business

Contact Mark Mantei

City of Tampa MBD Office



SLBE Goal Setting Firms Report

as of 7/28/2014

SOD, SEED SOIL, AND INOCULANTS

On-Point Group, Inc.

5608 Puritan Rd
Tampa, FL 33617

Phone (813) 927-2808

Fax (813) 374-0993

E-mail d.jones@on-pointgroupinc.com

Federal Number 38-3788119

Minority Small Business

Contact Daphne Jones

Jungle Scapes

1717 E. Busch Blvd., Suite 1101
Tampa, FL 33626

Phone (813) 516-9950

Fax (813) 902-7221

E-mail info@jungle-scapes.com

Federal Number 26-2517542

Minority Small Business

Contact Hulsey Ebanks, Jr.

VIDEO SERVICES, PHOTOGRAPHY

A Business Forms & Pegboard Systems, Inc.

123 W. Seneca Ave.
Tampa, FL 33612-6753

Phone (813) 933-2788

Fax (813) 935-9506

E-mail results@amediamarketing.com

Federal Number 59-1559977

Minority Small Business

Contact Victoria Jorgenson

Aerial Innovations, Inc.

3703 W. Azelee St.
Tampa, FL 33609-2807

Phone (813) 254-7339

Fax (813) 254-7239

E-mail colette@aerialinnovations.com

Federal Number 59-2802602

Minority Small Business

Contact Colette Eddy

Florida Contractors Video Service

P.O. Box 907
Valrico, FL 33594-0907

Phone (813) 737-1774

Fax (813) 737-6151

E-mail FCVSinc@aol.com

Federal Number 65-0373535

Minority Small Business

Contact Norma Oosting

Kerrick Williams Photography, LLC

811 Hickory Glen Drive
Seffner, FL 33584

Phone (813) 571-3768

Fax (866) 571-7149

E-mail kerrick@kerrickwilliams.com

Federal Number 59-3225186

Minority Small Business

Contact Kerrick Williams

City of Tampa MBD Office



SLBE Goal Setting Firms Report

as of 7/28/2014

VIDEO SERVICES, PHOTOGRAPHY

DeHa Multimedia, LLC

P.O. Box 23532
Tampa, FL 33623

Phone (813) 340-3017

Fax (813) 891-0332

E-mail hakeem@dehamagazine.com

Federal Number 26-0527750

Minority Small Business

Contact Hakeem Ali

Mercury Productions, Inc.

12463 92nd Terrace
Seminole, FL 33772

Phone (813) 287-8044

Fax (813) 287-8613

E-mail bill@mercurytampabay.com

Federal Number 59-3491905

Minority Small Business

Contact William McQueen

Scott Henderson Productions, Inc.

20208 Ravens End Dr.
Tampa, FL 33647

Phone (585) 820-5683

Fax

E-mail shenderson62@tampabay.rr.com

Federal Number 16-1416204

Minority Small Business

Contact Scott Henderson

Uppercase, Inc.

905 North Tampa Street
Tampa, FL 33602

Phone (813) 226-3096

Fax

E-mail matt@uppercaseincorporated.com

Federal Number 26-2817255

Minority Small Business

Contact Matthew Morgan

The Webb Works

3421 South Gardenia Drive
Tampa, FL 33629

Phone (813) 817-9840

Fax

E-mail jim@thewebbworks.com

Federal Number 55-0870869

Minority Small Business

Contact James Webb

SLBE Contract Goal

Goal
12.7%

Instructions Regarding Use of the SLBE Goal Setting List

Bidders must solicit a subcontracting bid from ALL of the firms listed on the SLBEs list provided on the City's web site, and provide documentation of emails, faxes, phone calls, letters, or other communication with the firms a first step in demonstrating Good-Faith Efforts to achieve the goal set for 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 SLBE participation Goal is based upon the availability of the certified firms indicated on the attached list. The Goal and Requirements of the City's Equal Business Opportunity Program are stated in the Bid/Contract Document, Specifications.

SOLICITATION FOR SUBCONTRACTOR QUOTES

From:
OUR COMPANY NAME:
TELEPHONE NUMBER:
ADDRESS:
FAX NUMBER:
E-MAIL ADDRESS:

To Subcontractor:

Our firm is in the process of preparing a bid for a **City of Tampa Contract**. Please accept this notice as our request for quotes for the scope of work identified below. Please respond to this request by filling in the information below and returning via e-mail or fax to the address or number provided. Please contact us if you need any assistance in obtaining bonding, lines of credit, insurance, assistance in obtaining necessary equipment, supplies, materials, participation in a City-sponsored mentor-protégé program, or if you have any questions.

Plans and Specs for this project are posted at:
http://www.tampagov.net/dept_contract_administration/programs_and_services/construction_project_bidding/

CONTRACT NO.:
CONTRACT NAME:
CITY'S BID OPENING DATE:
DEADLINE FOR YOUR SUBCONTRACTOR BID OR RESPONSE:
SPECIFIC SCOPE OF WORK:

Please complete and submit with your subcontract bid or response:

YOUR FIRM'S NAME:
MAILING ADDRESS:
CITY:
STATE:
ZIP:
FAX NUMBER:
E-MAIL ADDRESS:

Yes, my company is interested in quoting this project for the following items of work:

No, my company will not quote this project for the following reason(s):

(Sample Suggested Sub Solicitation 3-9-9 Tampa MBDO)

Contract 14-C-00054; Blue Sink Water Main

PROPOSAL

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

Name of Bidder _____

Business Phone Number and Email Address _____

Business Name and Mailing Address _____

Phone Number and Name of Contact Regarding Permits _____

Contractor/Qualifiers Name and Federal Identification Number _____

Date of Proposal _____

(If Bidder is a firm, fill in the following blanks):

Names and Residential Addresses of Partners _____

(If Bidder is a corporation, fill in the following blanks):

Organized under the laws of the State of _____

Names and Address of President _____

Name and Address of Vice President _____

Name and Address of Secretary _____

Names and Address of Treasurer _____

The above-named Bidder affirms and declares:

- (1) That the Bidder is of lawful age and that no other person, firm or corporation has any interest in this Proposal or in the Contract proposed to be entered into.
- (2) That this Proposal is made without any understanding, agreement or connection with any other person, firm, or corporation making Proposal for the same purposes, and is in all respects fair and without collusion or fraud.
- (3) That the 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.
- (4) 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.
- (5) That the 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.
- (6) That the Bidder
_____ Has; Treasury Number _____
_____ Has not
(Check applicable box)
previously performed work under the President's Executive Order Nos. 11246 and 11375.
- (7) That the undersigned, as Bidder, also declares that he has carefully examined and fully understands all the component parts of the Contract Documents and agrees that he will execute the Contract and finish the required Performance Bond and will completely perform the work in strict accordance with the terms of the Contract and the Contract Documents therein referred to for the following prices, to wit:

Item No.	Description	Unit	Approx. Quantity	Unit Price in Words	Unit Price	Total Computed Price
2101	F&I 16" ductile iron with more than 5' trench	LF	17,530		\$	\$
2102	F&I 30" ductile iron with more than 5' trench	LF	9		\$	\$
2103	F&I 30" Fabricated DI Flanged Pipe with 6" Flanged Outlet	EA	1		\$	\$
2201	Furnish & install 24" OD steel casing pipe	LF	392		\$	\$
3001	F&I 16" wedge-action or flange restraint	EA	163		\$	\$
3002	F&I 30" wedge-action or flange restraint	EA	6		\$	\$
3003	Furnish 16" push-on restraint gaskets	EA	260		\$	\$
4001	F&I 16" bends, offset, sleeves or reducers with DIP or CIP	EA	100		\$	\$
4002	F&I 30" bends, offsets, sleeves or reducers w/ DIP or CIP	EA	1		\$	\$
4003	F&I 30" ductile iron tee w/ DIP or CIP	EA	1		\$	\$
5001	F&I 16" Gate valve with box on DIP or CIP	EA	7		\$	\$
5002	F&I 30" butterfly valve with box on DIP or CIP	EA	1		\$	\$
6001	F&I 2" Air Vacuum Air Release Valve new 16" pipe	EA	12		\$	\$
6002	F&I 2" Air Vacuum Air Release Valve existing 30" pipe	EA	2		\$	\$
6003	F&I 3" Air Vacuum Air Release Valve	EA	2		\$	\$
6004	F&I 6" Air Vacuum Air Release Valve	EA	1		\$	\$

Item No.	Description	Unit	Approx. Quantity	Unit Price in Words	Unit Price	Total Computed Price
7101	Furnish, place and compact limerock	CY	3,523		\$	\$
7102	Furnish and install asphalt concrete surface Type S-1	TN	1,316		\$	\$
7103	Furnish, place, grade and compact Type SIII asphaltic concrete overlay	TN	1,644		\$	\$
7104	Mobilization to perform mechanical milling	EA	3		\$	\$
7105	Mechanical milling of asphalt roadways in 1-inch increments	SY-IN	18,133		\$	\$
7106	Restore 6" thick concrete driveway	SY	352		\$	\$
7107	Furnish materials & Install Signalization loops	EA	1		\$	\$
7108	Furnish and install Work Zone Signs	EA	100,000		\$	\$
7111	Furnish and install Barricades (Temporary - Type II)	ED	100,000		\$	\$
7112	Furnish and install Barricades (Temporary Type III) (6")	ED	100,000		\$	\$
7113	Furnish and install Advance Warning Arrow Panel	ED	1,000		\$	\$
7114	Furnish and install High Intensity Flashing Lights (Temporary-Type B)	ED	20,000		\$	\$
7115	Furnish and install Variable Message Sign (Temporary)	ED	1,000		\$	\$
7201	Grade and sod roadside, ditch bottoms and sides	SY	3,609		\$	\$
7202	Furnish and install Type "D" concrete curb	LF	1,000		\$	\$
7203	Video photography	LF	17,530		\$	\$
8000	Furnish and Install new project signs	EA	4		\$	\$

Item No.	Description	Unit	Approx. Quantity	Unit Price in Words	Unit Price	Total Computed Price
9000	Contingency allowance to be use as directed by the Engineer	EA	1	Three Hundred Thousand Dollars and No Cents	\$ 300,000.00	\$ 300,000.00
					TOTAL	

Computed Total Price In Words:

_____ dollars and _____ cents.

Computed Total Price in Figures: \$ _____

The 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 ___.

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

Bidder acknowledges that included in the various items of the proposal and the Total Bid Price are costs for complying with the Florida Trench Safety Act (90096), (Laws of Fla.) effective October 1, 1990. The bidder further identifies the costs to be summarized below:

	Trench Safety Measure (Description)	Unit of Measure (LF, SY)	Unit Quantity	Unit Cost	Extended Cost
A.	_____	_____	_____	_____	_____
B.	_____	_____	_____	_____	_____
C.	_____	_____	_____	_____	_____
D.	_____	_____	_____	_____	_____

Total Cost \$ _____

Signed _____

Failure to complete the above may result in the bid being declared non-responsive.

Accompanying this Proposal is a certified check, cashier's check or Bid Bond (form included herein must be used) on the form at least five (5) percent of the total amount of the Proposal which check shall become the property of the

_____ of _____
(Name of Bank or Surety) (City & State)

City of Tampa, or which bond shall become forthwith due and payable to the City of Tampa, if this Proposal shall be accepted by the City of Tampa and the undersigned shall fail to execute a contract with and to furnish the required Performance Bond and Payment Bond to the City of Tampa within twenty (20) days after the date of receipt of written Notice of Award by the City of Tampa to the undersigned so to do.

Dated _____, 2015

(Name of Bidder)

(Address of Bidder)

(Signature)

(Title)

Where Bidder is a Corporation:

Attest:

Secretary

AFFIX
CORPORATE
SEAL

(ACKNOWLEDGMENT OF PRINCIPAL)

STATE OF _____)
) SS:
COUNTY OF _____)

For a Corporation:

STATE OF _____
COUNTY OF _____

The foregoing instrument was acknowledged before me this ____ of _____, 2015 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 _____, 2015 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 _____, 2015 by _____ who signed on behalf of the said firm. He/she is ____ personally known or has ____ produced _____ as identification.

Notary

My Commission Expires:

Good Faith Effort Compliance Plan for Small Local Business Subcontracting
City of Tampa - Equal Business Opportunity Program

Contract _____ Bid Date _____

Bidder _____

Signature _____ Date _____

Name _____ Title _____

The following Compliance Plan is a true report of Good Faith Efforts made to accomplish subcontracting goals for Small Local Business Enterprises, SLBEs, on the referenced contract:

The goal for SLBE participation has been met or exceeded. See the DMI form reporting subcontractors to be utilized.
(Check Box, if appropriate; the remainder of the Compliance Plan need not be reported.)

The goal for SLBE participation has not been met. The following is a recap of Good Faith Efforts made:
(Check applicable boxes below. Enclose additional documents, and/or add remarks below as needed.)

- (1) Soliciting through reasonable and available means the interest of SLBEs that have the capability to perform the work of the contract. The Bidder or Contractor must solicit this interest within sufficient time to allow the SLBEs to respond. The Bidder or Contractor must take appropriate steps to follow up initial solicitations with interested SLBEs. See DMI report forms for subcontractors solicited. See enclosed supplemental data on solicitation efforts. Remarks:
- (2) Providing interested SLBEs with adequate information about the plans, specifications, and requirements of the contract, including addenda, in a timely manner to assist them in responding to the solicitation. See enclosed sample solicitation. Remarks:
- (3) Negotiating in good faith with interested SLBEs that have submitted bids. Documentation of negotiation must include the names, addresses, and telephone numbers of 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 SLBEs to perform the work. That there may be some additional costs involved in soliciting and using SLBEs is not a sufficient reason for a contractor's failure to meet the goals, as long as such costs are reasonable. Bidders are not required to accept higher quotes in order to meet the goal. DMI subcontractor-utilized forms reflect successful negotiations This project is of a low-bid nature and negotiations are limited to clarifications of scope and specifications. See enclosed document. Remarks:
- (4) Not rejecting SLBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The SLBEs standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations are not legitimate causes for rejecting or not soliciting bids to meet the goals. Not applicable. See attached explanation for rejection of a low-bidding subcontractor's bid. Remarks:
- (5) Making a portion of the work available to SLBE subcontractors and suppliers and to select those portions of the work or material consistent with the available 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. Remarks:
- (6) Making good faith efforts, despite the ability or desire of a Bidder or Contractor to perform the work of a contract with its own organization. A Bidder or Contractor who desires to self-perform the work of a contract must demonstrate good faith efforts unless the goal has been met. Sub-Contractors were not prohibited from submitting bids on work not usually sub-contracted. Remarks:
- (7) Selecting portions of the work to be performed by 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 to facilitate SLBE participation, even when the Bidder or Contractor 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 on work not usually sub-contracted. See enclosed comments. Remarks:
- (8) Making efforts to assist interested SLBEs in obtaining bonding, lines of credit, or insurance as required by the city or contractor. See enclosed sample solicitation see enclosed document. Remarks:
- (9) Making efforts to assist interested SLBEs in obtaining necessary equipment, supplies, materials, or related assistance or services, including participation in a City-sponsored mentor-protégé program. See enclosed sample solicitation. See enclosed document. Remarks:
- (10) Effectively using the services of the City and other organizations that provide assistance in the recruitment and placement of SLBEs. See enclosed document. The following services were used:

Other Supporting Good Faith Efforts: See enclosed document. Remarks:

GFCEP

Compliance Plan: Guidance For Meeting Good Faith Efforts

1. All firms on the SLBE Goal Setting List must be solicited and documentation provided for email, fax, letters, phone calls, and other 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 and/or Hillsborough County certification listings of SLBE's.
2. Solicitation of 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 typically be sent a week or more before the bid date. Sample copies of the bidder's solicitations should be provided.
3. With any quotes received, a follow-up should be made whenever needed to confirm scope of work. For any SLBE low quotes rejected, an explanation should be provided detailing negotiation efforts.
4. If a low bid SLBE is rejected or deemed unqualified the contractor must provide an explanation and supporting documentation for this decision.
5. Prime should break down portions of work into economical feasible opportunities for subcontracting. The SLBE directory can be useful in identifying additional subcontracting opportunities and firms not listed in the "SLBE Goal Setting Firms List."
6. Contractor should not preclude SLBEs from bidding on any part of work, even if the Contractor can self-perform the work.
7. Contractor should avoid relying solely on subcontracting out work where availability is not sufficient to attain pre-determined goal.
8. In its solicitations, the Bidder should offer assistance to SLBEs in obtaining bonding, insurance, etc, 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 SLBEs, if needed.
10. Contractor should use the services offered by such agencies as the Minority Business Development Office of the City of Tampa, Hillsborough County and the NAACP Empowerment Center for the recruitment and placement of SLBEs.



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 when Goal has been established.

- **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.
- **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/solicited for this contract.** Checking the box indicates that a pre-determined Subcontract Goal 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 must be submitted with your invoices. 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/solicited.
- **See attached documents.** Check box, if after you have completed the DMI Form in its entirety, you are providing any additional 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 Women/Minority Business Enterprise.
- **Federal ID.FIN.** 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.
- **Type of Ownership.** Indicate the Ethnicity and Gender of the owner of the subcontracting business.
- **Trade, Services, or Materials** Indicate the trade, service, or material provided by the subcontractor. NIGP codes are listed at top section of document.
- **Contact Method L=letter, F=fax, E=Email, P=Phone.** Indicate with letter the method 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.

If any additional information is required or you have any questions, you may call the Minority Business Development Office at (813) 274-5522.



Page 4 of 4DMI – 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 projected to be utilized must be included on this form.

- **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.
- **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 (of any kind) will be performed on this contract.** Checking box indicates your business will not use subcontractors when no Subcontract Goal has been 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 must be submitted with your invoices. Note: Certified SLBE or WMBE firms bidding as Primes are not exempt from outreach and solicitation of subcontractors.
- **See attached documents.** Check if you have provided any additional documentation relating to the utilization of subcontractors.
-

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.
- **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. NIGP codes are available at <http://www.tampagov.net/mbd>.
- **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.
- **Total Subcontract/Supplier Utilization.** – Provide total dollar amount of all subcontractors/suppliers projected to be used for the contract. (Dollar amounts may not apply to CCNA proposals.)
- **Total SLBE Utilization.** Provide total dollar amount for all projected SLBE subcontractors/Suppliers used for this contract. (Dollar amounts may not apply to CCNA proposals.)
- **Total WMBE Utilization.** Provide total dollar amount for all projected WMBE subcontractors/Suppliers used for this contract. (Dollar amounts may not apply to CCNA proposals.)
- **Percent SLBE Utilization.** Total amount allocated to SLBEs divided by the total bid amount. (Dollar amounts may not apply to CCNA proposals.)
- **Percent WMBE Utilization.** Total amount allocated to WMBEs divided by the total bid/proposal amount. (Dollar amounts may not apply to CCNA proposals.)

If any additional information is required or you have any questions, you may call the Minority Business Development Office at (813) 274-5522.

TAMPA BID BOND
Contract 14-C-00054; Blue Sink Water Main

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 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 14-C-00054, Blue Sink Water Main.

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 _____, 2015.

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 14-C-00054 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, this ____ day of _____, 2015, between the City of Tampa, Florida, hereinafter called the City, and hereinafter called the Contractor.

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 14-C-00054; Blue Sink Water Main, shall include, but not be limited to, furnish and install 16" and 30" ductile iron pipe, install 24" OD steel casing pipe, wedge restraints and gaskets, install ductile iron bend or sleeve and tee, gate valves and box, butterfly valve and box, air release/vacuum valve assembly, roadway restoration, milling, paving, grading, furnish and install signal loops, restoration of driveways, curbs and sidewalks, sodding and landscaping, 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 condition(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. _____

Justin R. Vaske, Assistant City Attorney

Contractor

By: _____
(SEAL)

Title:

ATTEST:

Secretary

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 _____, 2015 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 _____, 2015 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 _____, 2015 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

Accepted by City of Tampa:

Countersignature:

By _____
Bob Buckhorn, Mayor

(Name of Local Agency)

Date: _____ 20__

(Address of Resident Agent)

By _____

Approved as to legal sufficiency:

Title _____

By _____
Assistant City Attorney

Telephone Number of Local Agency

Date: _____, 20__

*(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

S-1.01 APPLICABLE CODES OR STANDARDS

When words with well-known technical or trade meanings are used to describe work, materials or equipment, such words shall be interpreted in accordance with such meaning.

S-1.02 MATERIALS

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

S-1.03 LAYOUT DATA

Prior to commencement of construction, City of Tampa Water Department representative must thoroughly check all construction stakes and/or offsets installed by the Contractor and indicate his acceptance in writing. Re-staking and/or re-offsetting, if required, shall be at the Contractor's expense.

S-1.04 CONFLICTS WITH PROPOSED WORK

It shall be the Contractor's responsibility to provide notice to the City of Tampa Water Department Engineer, at least 2 working days in advance of construction, of any conflicts or potential conflicts with the proposed work, including but not limited to conflicts with existing utilities.

S-1.05 TEMPORARY FACILITIES AND CONTROLS

All reasonable amounts of water required by the Contractor for the water main work to be constructed under this Agreement will be furnished by the City of Tampa Water Department from the existing water system without cost to the Contractor. The Contractor shall make any necessary water supply connections at his own expense at a point designated by the City of Tampa Water Department Engineer. These connections shall be maintained by the Contractor, who shall furnish all pipe, valves, and such other equipment necessary or required. Temporary piping may run above ground when there is no possibility of traffic, and it can be done safely. Otherwise, it must run underground and in such manner as to meet the approval of the Engineer, with technical assistance from the City of Tampa Water Department Engineer. No water shall be wasted. Unnecessary waste of water after notification of same will, at the discretion of the Engineer, with technical assistance from the City of Tampa Water Department Engineer, be cause for use of water to be discontinued. After temporary lines have served their purpose, they shall be removed by the Contractor and all connections closed or plugged to the satisfaction of the City of Tampa.

The Contractor will be required to pressure test the raw water main at reasonable intervals during the project.

S-1.06 CONTRACTOR'S SCHEDULE

The Contractor shall submit to the Engineer for the City of Tampa Water Department, a schedule indicating his proposed work. Such schedule shall be delivered to the City of Tampa Water Department Engineer a minimum 3 working days prior to the scheduled raw water main construction.

S-1.07 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.

When no reference is made to a code, standard or specification, the Standard Specifications of the American National Standards Institute (ANSI), the American Society of Mechanical Engineers (ASME), the American Society for Testing and Materials (ASTM), the (International Electrical and Electronics Engineers (IEEE), or the National Electrical Manufacturer's Association (NEMA) shall govern.

S-1.08 INSPECTION AND TESTING

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 Project Documents. Three copies of the reports shall be submitted and authoritative certification thereof must be furnished to the City of Tampa Water Department Engineer as a prerequisite for the acceptance of any material or equipment.

S-1.09 FINAL INSPECTION

The procedures for final inspection shall be as described in the Technical Specifications herein.

S-1.10 ACCESS TO PUBLIC SERVICES

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

S-1.11 RED-LINE AND RECORD DRAWINGS

For the construction of raw water main, red line drawings are defined as a copy of the plans maintained by the contractor showing changes and deviations from the raw water main construction plans during the project.

The raw water main project shall be substantially complete at the end of the construction shown on the plans.

Raw water main record drawings shall be a full version of the water main construction plans showing the changes and deviations from the construction plans.

The contractor shall maintain a set of red-line drawings during the construction of the raw water main. The red-line drawing shall be available for review at weekly meetings. At substantial completion, the contractor shall furnish a copy of the red-line drawing to the City of Tampa Water Department. At the conclusion of the roadway project the Contractor shall furnish a CD with the AutoCAD and PDF files of the record drawings and hard copy of the record drawings.



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.

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:
Jim Hudock, P.E.
Contract Administration
City of Tampa
jim.hudock@tampagov.net

For information call:
(813) 635-3400



Sign Information

Building a Better Tampa

Downtown Riverwalk

Creates a waterfront pedestrian walkway connecting the south edge of the CapTrust building with MacDill Park.

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Construction, Inc.*

Colors

Blue: Sherwin Williams Naval SW6244

Green: Sherwin Williams Center Stage SW6920

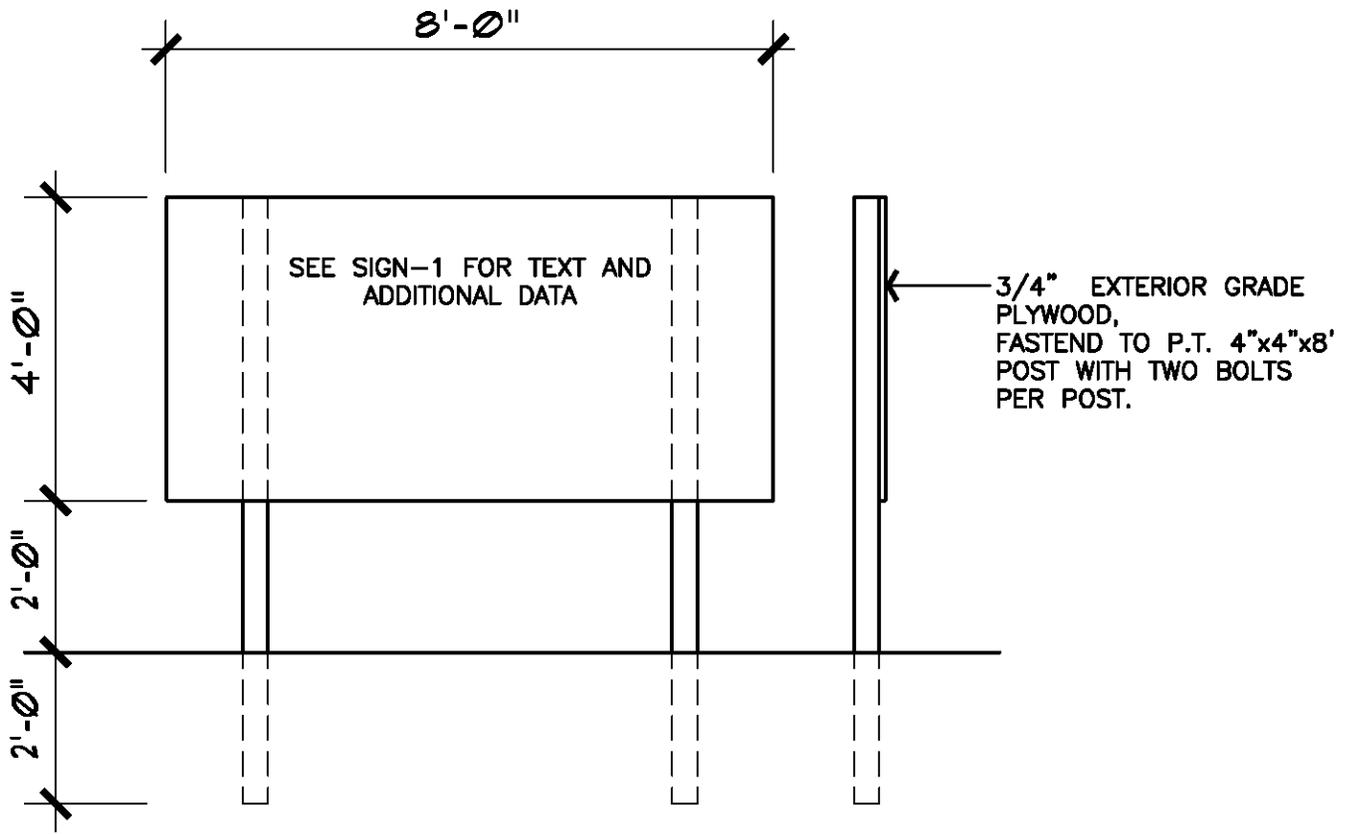
White: Sherwin Williams Pure White SW7005

Font

Franklin Gothic

SIGN EXAMPLE ONLY GRAPHIC TO BE DEVELOPED BY CONTRACTOR

scale: 3"



CONTRACT PAY ITEMS

C1.00 GENERAL

The Contractor shall receive and accept the compensation provided in the Proposal and the Contract as full payment for furnishing all materials and all labor, tools and equipment, for performing all operations necessary to complete the work under the Agreement, and also in full payment for all loss or damages arising from the nature of the work, or from any discrepancy between the actual quantities of work and quantities herein estimated by the City of Tampa Water Department Engineer, or from the action of the elements or from any unforeseen difficulties which may be encountered during the prosecution of the work until the final acceptance by the City of Tampa Water Department.

It is the intent of these contract documents that any cost for which compensation is not directly provided by a bid item shall be prorated and included in the bid item for which they are required.

The prices stated in the Proposal include all costs and expenses for taxes, labor, equipment, commissions, transportation charges and expenses, patent fees and royalties, labor for handling material during inspection together with any and all other costs and expenses for performing and completing the work as shown on the plans and specified herein. The basis of payment for any item at the unit price shown in the Proposal shall be in accordance with the description of that item in this Section.

No separate payment will be made for the following items and the cost of such work shall be included in the applicable contract pay items of work, including any charges for any mobilization/demobilization that may be required for compliance with FDEP or any other regulatory agency:

1. Clearing and grubbing.
2. Excavation, including necessary pavement/slab removal.
3. Shoring and sheeting as required by OSHA trench excavation safety standards.
4. Dewatering and disposal of surplus water.
5. Backfill and proper compaction, including suitable fill.
6. Grading.
7. Replacement or restoration of paved or unpaved roadways, grass and shrubbery plots outside of established pay limits.
8. Temporary facilities and controls during construction such as water/sanitary facilities, traffic control, informational signs and environmental protection, unless specifically provided for in a pay item.
9. Removing and disposing of waste material due to construction.
10. Cleanup.
11. Refill materials, including suitable fill except as hereinafter specified.
12. Testing and placing system in operation, including re mobilization for any failed testing.
13. Any material and equipment required to be furnished and installed and used for the tests.
14. Maintaining the existing quality of water service during construction.
15. Repair of sanitary sewer house laterals and water services damaged during construction.
16. Appurtenant work as required for a complete and operable system.
17. Coordination with all Federal, State and Local agencies and utilities.
18. Cleaning and flushing the new raw water main.
19. Tree trimming as required by the City of Tampa Parks Department (or any other

- agency).
20. Verification of pipe elevation.
21. Maintaining red line drawings during construction and furnishing AutoCAD and PDF As-Built drawings.

The Contractor's attention is again called to the fact that the quotations for the various items of work are intended to establish a total price for completing the work in its entirety. Should the Contractor feel that the cost for any item of work has not been established by the Contract's Contract Pay Items, s/he shall include the cost for that work in some other applicable bid item, so that his proposal for the project does reflect his total price for completing the work in its entirety.

The quantities for payment under this Agreement shall be determined by actual measurement of the completed items, in place, ready for service and accepted by the City, in accordance with the applicable method of measurement therefore contained herein. A representative of the City shall witness all field measurements.

All work shall be in accordance with the Technical Specifications and Standard Details herein. All materials shall be in accordance with the Material Specifications herein.

C2.00 PIPELINE INSTALLATION

C2.10 Ductile Iron

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

1. Excavating the trench;
2. Maintaining the trench which shall include dewatering and sheeting and bracing as required by OSHA or as directed by the City of Tampa Water Department Engineer;
3. Cleaning dirt and foreign material from within pipe and bell;
4. Beveling field-cut joints and pipe shorts;
5. Furnishing and installing City of Tampa Water Department approved pipe and any pipe shorts as part of the pipeline;
6. Furnishing and installing City of Tampa Water Department approved pipe in casing pipe when shown on the plans;
7. Backfilling and compacting the trench including regrading the terrain;
8. Cleaning up and removing excess water main pipe and appurtenances;
9. Pressure/leak testing the new water main pipe;
10. Furnishing and installing clary sage green polyethylene encasement;
11. Furnishing gasket-type "Gripper" restraint devices for restraint of new push-on joint DI Pipe as shown on the plans or as directed by the Engineer;
12. Remove and dispose of existing 12' length of water main at Sulphur springs pump station;
13. Furnish and install fabricated 12' length of 30" ductile iron flanged pipe with 6" flanged outlet. The Contractor shall verify length and flange class of existing pipe;
14. Furnish and apply paint for above ground pipe. Paint to be high-grade enamel, green to match existing paint, or as directed by the Engineer, with the technical assistance of the City of Tampa Water Department Engineer;
15. Cleaning up and restoring the job site which shall include re-grading the terrain; and
16. Removing and legally disposing all waste materials.

Payment for connecting new raw water mains to existing raw water mains will be made utilizing the contract unit price for furnishing and installing the fittings or valves used in the connection.

The cost to hydrostatically test the ductile iron water mains shall be prorated and included in the

pipeline construction unit prices. The prorated cost should include, but may not be limited to furnishing and installing all:

- 1) Material
- 2) Labor
- 3) Necessary pumps
- 4) Recorder charts
- 5) Gages (300 PSIG limit, oil-filled)
- 7) Temporary valves
- 8) Temporary plugs
- 9) Sample Taps, (including installation of brass dry-main plugs after sample tap removal)
- 10) Blow off assemblies (including removal after testing is complete)
- 11) Dry main plugs

necessary to pressure test the ductile iron pipe. Furthermore, no extra compensation shall be paid to the Contractor for:

1. Furnishing and installing brass, dry main plugs at the locations of all removed sample taps, or
2. Removing existing "end of line" or blow off valves after the pipeline has been hydrostatically tested and prior to connecting the newly installed pipeline to the existing water main.

All temporary materials or materials not remaining in the ground after the completion of the disinfection and pressure testing shall remain the property of the Contractor.

The pipe quantities to be paid for under this section shall be based on the size and the horizontal distance in linear feet of ductile iron pipe measured along the top centerline of the pipe in place complete and acceptable to the City of Tampa Water Department Engineer.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
2101	Furnish and install 16" ductile iron pipe	LF
2102	Furnish and install 30" ductile iron pipe	LF
2103	Furnish and install 30" ductile iron flanged pipe w 6" outlet	EA

C2.20 Casing Installation

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

1. Excavating the jacking and recovery pits;
2. Furnish the Design of Protective Systems for boring & receiving pits as follows:

Support systems, shield systems, and other protective systems to be utilized for the boring and receiving pits at the following jack and bore locations shall be approved by a registered professional engineer:

- a. 13th Street under Busch Boulevard and the CSX railroad track as shown on sheet 12,

- b. Bougainvillea Avenue under S.R. 45/North Nebraska Avenue as shown on sheet 21, and
- c. 109th Avenue under S.R. 685/North Florida Avenue as shown on sheet 27.

Designs shall be in written form and shall include the following:

- a. A plan indicating the sizes, types, and configurations of the materials to be used in the protective system; and
 - b. The identity of the registered professional engineer approving the design.
 - c. At least one copy of the design shall be maintained at the jobsite during construction of the protective system. After that time, the design may be stored off the jobsite.
- 3 Maintaining the jacking and recovery pits that shall include dewatering and sheeting and bracing where required or as directed by the Engineer;
 - 4 Protecting riding and walking public from accidents due to the pits.
 - 5 Scheduling a CSX inspector to monitor crossing the CSX rail on Busch Blvd;
 - 6 Scheduling a FDOT inspector to monitor crossing Florida Avenue, Nebraska Avenue and Busch Boulevard;
 - 7 Dewatering the roadway;
 - 8 Furnishing, cutting and full depth welding of the steel casing pipe;
 - 9 Jacking the steel casing pipe using a steering head to guide the auger to the locations specified on the drawings plan and profile;
 - 10 Furnishing and installing the approved pipe "casing spacers" on the carrier pipe;
 - 11 Furnishing and installing bulkheads inside the casing pipe ends to seal the inner space;
 - 12 Backfilling and compaction of jacking and recovery pits;
 - 13 Cleaning up and restoring the job site which shall include re-grading the terrain; and
 - 14 Removing and legally disposing all waste materials.

Compensation for installing the carrier pipe and restraints will be made under the appropriate Contract Pay Items.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
2201	Furnish and install 24" OD steel casing pipe	LF

C3.00 THRUST RESTRAINT

The Contractor shall provide for all labor, equipment and materials to completely furnish and/or install mechanical device thrust restraint. The installation of the thrust restraint shall include but not be limited to:

- 1. Excavating the trench;
- 2. Maintaining the trench which shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
- 3. Furnishing and installing approved wedge action restraint fitting or flanged-joint restraints;
- 5. Furnishing wedge action push-on gaskets where noted on the plans;
- 6. Furnishing and Installing approved restraining devices on existing pipe joints; and

7. Backfilling and compacting the trench;
8. Cleaning up and restoring the job site which shall include re-grading the terrain; and
9. Removing and legally disposing all waste materials.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
3001	Furnish and install 16" wedge-action restraint	EA
3002	Furnish and install 30" wedge-action restraint	EA
3003	Furnish 16" push-on wedge action restraint gaskets	EA

C4.00 FITTINGS

The Contractor shall provide all labor and equipment to completely furnish and install tees, bends, sleeves, or reducers, as required. The installation of ductile iron fittings shall include, but not be limited to:

1. Excavating the trench;
2. Maintaining the trench which shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
3. Furnishing and installing the appropriate fitting; and
4. Backfilling and compacting the trench.
5. Cleaning up and restoring the job site which shall include re-grading the terrain; and
6. Removing and legally disposing all waste materials

Payment will be made for the number of each size and type of fittings furnished and installed and incorporated into the piping system complete, working, and operating to the satisfaction of the Engineer.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
4001	Furnish and install 16" Ductile Iron bend or sleeve	EA
4002	Furnish and install 30" Ductile Iron bend or sleeve	EA
4003	Furnish and install 30" Ductile Iron tee	EA

C5.00 VALVES

The Contractor shall provide all labor, equipment and materials to completely furnish and install 16-inch gate valves. The valve installation shall include, but may not be limited to:

1. Excavating the trench;
2. Maintaining the trench that shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
3. Furnish and install a gate valve in a mainline of DIP, CIP or PVC with a valve box or a tapping valve on a tapping sleeve with a valve box;
4. Furnishing, forming and pouring a 6-inch thick concrete pad around each valve box in non-paved areas;

5. Furnishing paint and painting valve cover clary sage green;
6. Backfilling and compacting the trench;
7. Cleaning up and restoring the job site which shall include re-grading the terrain; and
8. Removing and legally disposing all waste materials

Payment shall be made for the number of each size valve and valve box installed and incorporated into the piping system complete, working and operating to the satisfaction of the Engineer.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
5001	Furnish and install 16" Gate Valve and Box	EA
5002	Furnish and install 30" Butterfly Valve and Box	EA

C6.00 COMBINATION AIR VACUUM/AIR RELEASE VALVES

The Contractor shall provide all labor, equipment and materials and shall remove and dispose of all waste material to:

1. Excavating the trench;
2. Maintaining the trench that shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
3. Furnish and install complete and functional combination air release/vacuum valve assembly in a standard Pedlock Fiber Optic Pedestal in accordance with the Standard Details on pipeline of various sizes and depths;
4. Backfilling and compacting the trench;
5. Cleaning up and restoring the job site which shall include re-grading the terrain; and
6. Removing and legally disposing all waste materials

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
6001	Furnish and install 2" air vacuum/release valve assembly (on new 16")	EA
6002	Furnish and install 2" air vacuum/release valve assembly (on existing 30")	EA
6003	Furnish and install 3" air vacuum/release valve assembly	EA
6004	Furnish and install 6" air vacuum/release valve assembly	EA

C7.00 Restoration And Miscellaneous Incidental Items

General

The Contractor shall furnish all labor, equipment, and materials to restore the construction area to an equal or better condition than that which existed prior to construction.

The Contractor shall not be compensated for restoration outside of the maximum pay limits that are defined as:

Maximum pay limits = Nominal Pipe Diameter (D) + 1 foot + 2 times the depth of cover (for mains in trenches 0-5' deep).

or = D + 3 times the depth of cover (for mains in trenches greater than 5' deep)

If an area greater than the maximum pay limit is disturbed during construction, the Contractor shall restore the disturbed area outside pay limits to a condition which is equal to or better than the original without additional compensation. The only exception to this shall involve milling and overlaying operations. The Contractor shall mill and overlay to those limits as directed by the Engineer and shall be compensated in conformance with the appropriate pay items for actual quantities furnished and installed.

As stated previously, upon final payment by the Department, the Contractor shall maintain the surface of the unpaved trenches, shrubbery, trees, fences, sod, and other surfaces disturbed for a period of 6 months thereafter and shall maintain the repaved areas, curbs, gutters, and sidewalks, if replaced by the Contractor for one year after final acceptance of the respective item. The cost of maintaining the restored areas shall be incidental to the cost of restoring the areas disturbed by the Contractor. These costs shall be prorated and included in the cost for the respective contract pay item.

C7.10 Pavement

The Contractor shall provide all labor, equipment and materials to remove and restore pavement and pavement bases that were cut and removed during the course of the pipeline construction. Pavement and pavement base restoration shall include roadways, driveways, parking lots, etc. Under this section, payment shall be made for:

1. Furnishing, placing, grading, and compacting approved crushed concrete base;
2. Furnishing, placing, grading, and compacting approved asphalt base course, ABC-3;
3. Furnishing, placing, grading and compacting approved "Type S-1" or asphaltic concrete surface course;
4. Restoring 6" thick concrete driveway;
5. Furnishing and installing roadway striping;
6. Furnishing, placing, and grading Type S-III asphaltic concrete overlay;
7. Mechanical milling of 1-inch of existing asphalt including proper disposal of the milled material;
8. Mobilization required for mechanical milling operations;
9. Furnishing and installing signalization loops as specified and directed by the Engineer;
10. Furnishing and installing work zone signs;
11. Furnishing and installing traffic control devices to right-of-way permit requirements;
12. Removing, transporting and disposing of pavement, concrete curb, asphaltic curb and other items removed during construction;

13. Cleaning up and restoring the job site which shall include re-grading the terrain; and
14. Removing and legally disposing of all waste materials.

All surface restoration shall be as directed by the Engineer or the regulatory agency having jurisdiction over the roadway. All areas requiring pavement restoration shall be saw cut prior to construction pavement removal. The costs to mechanically saw cut pavement joints and the cost to replace all striping and pavement markers are considered incidental to pavement restoration and should be included in the cost.

Asphalt shall be measured for payment based on the number of tons of asphalt furnished and installed. All pavement, concrete curb, asphaltic concrete curb or other items removed during the course of pipeline construction shall be disposed of by the Contractor in a manner satisfactory to the Department. The cost of removal and disposal associated with all items shall be included in the assigned restoration item.

City street pavement shall be in accordance with of Tampa's PAVEMENT/RIGHT OF WAY RESTORATION REQUIREMENTS – REV-2009 guidelines. See Technical specification T4.07.

Mobilization for milling shall only be paid for milling operations and shall only be paid three times unless otherwise approved in advance by the Engineer. Milling shall be made in thickness increments of one inch and shall include proper disposal of the milled material.

The Contractor shall furnish all labor, materials and equipment, necessary to replace and maintain complete the traffic signalization loops as specified and directed by the Engineer. The work includes all saw-cutting of pavement, placement of loop wires and lead-in cables, non-metallic wire hold downs, wire identification tags and sealants, splicing and termination strips, testing and all other work incidental to the installation of a signalization loop complete in place. All signalization loops shall conform to the requirements of the latest edition of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction. Payment for traffic signalization loops will be made at the appropriate contract item unit price per signalization loop installed.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
7101	Furnish, place, and compact Limerock	CY
7102	Furnish and install asphalt concrete surface Type S-1	TN
7103	Furnish, place and grade Type S-III asphaltic concrete overlay	TN
7104	Mobilization to perform milling operations	EA
7105	Mechanical milling of asphalt roadways in 1-inch increments	SY-IN
7106	Furnish and install 6" thick concrete driveway	SY
7107	Furnish and install signalization loops	EA

7108	Furnish and install Work Zone Signs	EA
7111	Furnish and install Barricades (Temporary – Type II)	EA
7112	Furnish and install Barricades (Temporary Type III) (6’)	EA
7113	Furnish and install Advance Warning Arrow Panel	EA
7114	Furnish and install High Intensity Flashing Lights (Temporary-Type B)	EA
7115	Furnish and install Variable Message Sign (Temporary)	EA

C7.20 ROADSIDE RESTORATION

The Contractor shall furnish all labor, equipment, and materials to restore the construction area to an equal or better condition than that which existed prior to construction. The Contractor shall not be compensated for restoration outside of the maximum pay limits that are defined as:

$$\begin{aligned} \text{Maximum pay limits} &= \text{Nominal Pipe Diameter (D) + 1 foot + 2 times} \\ &\quad \text{the depth of cover (for mains in trenches 0-5'} \\ &\quad \text{deep).} \\ &\text{or} \\ &= \text{D + 3 times the depth of cover (for mains in} \\ &\quad \text{trenches greater than 5' deep)} \end{aligned}$$

Calculations for the pay items shall be made for compacted material within the trench, not the yards of material delivered to the work site.

If an area greater than the maximum pay limit is disturbed during construction, the Contractor shall restore the disturbed area outside pay limits to a condition which is equal to or better than the original without additional compensation.

The Contractor shall provide for all labor, equipment and materials to restore the roadside areas disturbed during the course of the pipeline construction. Under this section, payment shall be made for:

1. Restoring typical concrete curb and gutter including stabilization of sub-base and installation of curb pads;
2. Restoring stone or pre-cast curb;
3. Furnishing and placing asphaltic concrete curb;
4. Remove and restoring 4-inch thick concrete sidewalk, including applicable sidewalk ramps;
5. Restoring the roadside areas with approved sod. Restoring the roadside area and ditch bottoms and sides with sod shall include furnishing, grading, and placing the sod; and
6. Furnishing and installing detectable warning on walking surfaces as directed by Engineer. The detectable warning surface will conform to the Florida Department of Transportation Standard Specification for Road and Bridge Construction, current edition. The detectable warnings shall be installed in conformance with FDOT Standard Indexes 304 and 310 or in conformance with the requirements of the right-of-way regulatory agency with responsibility

- of the affected right-of-way.
7. Furnishing professional quality video photography of pre-construction site conditions along proposed pipeline route as specified in these contract documents and as required.
 8. Cleaning up and restoring the job site which shall include re-grading the terrain; and
 9. Removing and legally disposing of all waste materials.

Payment for curb and sidewalk associated with pedestrian access ramps will be made under the appropriate sidewalk and curb pay items. Sidewalk and curb replacement pay quantities shall have maximum limits as specified in these documents, as shown on the plans or as directed by the Engineer. All linear foot units shall be measures along the curb line. In all cases, the sod or seed placed is to conform in kind to the existing at the particular location.

Payment shall be made under:

Item No.	Description	Unit
7201	Grade and sod roadside, ditch bottoms and sides	SY
7202	Furnish and install Type "D" concrete curb	LF
7203	Video Photography	LF

C8.00 Project Sign

Project signs shall be furnished for each project as directed by the engineer. The Contractor shall furnish and install a project sign which conforms to the Standard Detail at a location directed by the Engineer at least five (5) working days in advance of the start of construction. The unit price will include the cost of all labor, equipment and materials to furnish and install a new sign. or to re-letter and install a sign previously used elsewhere under this contract. The price shall also include the cost to remove and properly dispose of the sign once the work has been completed and accepted by the City of Tampa. The area on which the sign was placed shall be restored to original condition. This restoration shall be included in the cost of the sign.

Payment shall be made under:

Item No.	Description	Unit
8000	Furnish and install a new sign as directed by the Engineer	EA

C9.00 Contingency Allowance

The contingency allowance shall be used by the City of Tampa as directed by the Engineer. Payment shall be made as a lump sum to pay for furnishing and installing items not listed in the Contract. When directed to provide materials and services not listed in the contract, the Contractor shall provide an estimate of the cost as a lump sum item. The estimate shall include quotes for quantities of materials, subcontractors and equipment. To obtain payment, the Contractor shall

provide an invoice listing the quantities the materials, subcontractors, equipment along with the lump sum price. The Engineer may request a cost estimate for a contingency item from the Contractor prior to construction.

Payment shall be made under:

Item No.	Description	Unit
9000	Contingency Allowance	LS

* * *

END CONTRACT PAY ITEMS

TECHNICAL SPECIFICATIONS

T1.00 GENERAL REQUIREMENTS

T1.10 Summary of Work

The work shall include the furnishing of all services, labor, equipment and materials for the construction of complete operating of the City of Tampa owned raw water main as designed in the plans. Work associated with the City of Tampa raw water main shall be performed in a thorough and workmanlike manner, in accordance with City of Tampa Water Department Standards and Specifications. All items implied, usually included, or required for the construction of a complete operating system, shall be installed whether or not shown on the plans or specified herein.

T1.20 Coordination

The Contractor shall provide for the complete coordination of the construction effort including the work of subcontractors and the interrelated work with the City of Tampa Water Department where submittals, reviews, inspections, and tie-ins to existing facilities are required.

It shall be the Contractor's responsibility to alert the City of Tampa Engineer at least 3 working days in advance of construction, to any conflicts or potential conflicts with the proposed work. Failure of the Contractor to review the job site and alert the Engineer to any conflicts shall relieve the City from compensating the Contractor for any cost arising from any remedial action necessary to resolve the conflict with the proposed work.

Working adjacent to and crossing other utilities can be expected to be commonplace on this project. The Contractor shall coordinate his construction schedule with the various utility companies prior to starting the project, along with a minimum of 3 working days' notice to when construction will commence in an area, in order to permit field location of utility lines prior to construction. A toll free number, 1-800-432-4770 is available to assist in such coordination efforts. This number is for the Utility Notification Center, a program commonly referred to as "Call Sunshine", but may not totally represent all utilities involved in the construction area. The Contractor is responsible for contacting the Utility Notification Center and to immediately notify the City of Tampa's Chief Construction Engineer (635-3432) of the "Location Request Number" obtained.

All utilities shall be kept in operation except with the express written consent of the utility owner. All water lines, storm drains, sanitary sewer, gas or other pipe, telephone or power cables or conduits, all individual service connections and all other obstructions, whether or not shown on the plans, shall be supported where adjacent to or crossing the new water line excavation in a manner acceptable to the City, the County, and the respective utility owner. Approximate locations of known water, sanitary, drainage, power and telephone installations along the route of the new water main installation or in the vicinity of the new work have been shown, but must be verified in the field by the Contractor. Any discrepancies or differences found shall be brought to the attention of the Engineer, in order that necessary changes may be made to permit installation of the new pipe and actual locations recorded for the City's record drawings. It will be the Contractor's responsibility to preserve existing utilities.

Where connections are made to existing raw water main, permission must be obtained and arrangements must be made with the City of Tampa Water Department Engineer.

T1.30 Field Engineering

Each element of the work is subject to review by the Engineer, prior to proceeding with the next element; however, this shall not relieve the Contractor of the responsibility for delivering to the City a project completed in conformance with the contract plans and specifications and guaranteed as stipulated.

T1.40 Submittals, Shop Drawings, Product Data and Samples

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.

Certified shop drawings or product data shall be submitted for, but shall not be necessarily be limited to, the following:

- Ductile iron pipe and fittings, including restrained joint type,
- Gate valves and valve boxes
- Ductile iron MJ fittings (bends, solid sleeves, etc.)
- Air release/vacuum valves
- Casing pipe and jack and bores
- Pressure Testing procedure
- Pre-cast items, if used

The Engineer's review of a shop drawing is only for general conformance with the design concept of the project, and shall not relieve the Contractor from his responsibility for any deviation from the requirements of the contract documents or technical specifications, unless the Contractor has, in writing, called the Engineer's attention to such deviation at the time of the shop drawing submission and the Engineer has given written approval to the specific deviation. Any review by the Engineer shall not relieve the Contractor from his responsibility for errors or omissions in the shop drawings.

Whenever a standard of quality is established by a reference specification, the Contractor shall submit a certificate by the manufacturer that the material supplied meets the requirements of both these technical specifications and the referenced specifications and standards. If this documentation is omitted, material(s) may be rejected at the sole option of the City of Tampa Water Department representative.

T1.50 Quality Control

T1.51 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 of Tampa, Hillsborough County, the Florida Department of Transportation, OSHA, Southwest Florida Water Management District, the Florida Department of Environmental Regulation, CSX 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 therefore.

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

Failure or neglect on the part of the City of Tampa 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 or during the warranty period. 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, s/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.

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. Three 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 installation, it is ascertained by the Engineer that the material or installation does not comply with the Contract, the Contractor will be notified thereof and s/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 County or the City.

Tests of raw water main installations shall be conducted in accordance with recognized test codes of the ANSI or AWWA, 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.

T1.52 Inspection Costs

All inspection of materials furnished under this Contract will be performed by the City or duly authorized inspection engineers or regulatory agencies shall be 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.

The cost for CSX inspection of the railroad crossing shall be paid for by the City of Tampa Water Department.

T1.53 Field Tests

All water mains shall be leak tested prior to acceptance. Leakage testing depends upon the availability of water to perform the tests. The plans have been designed to begin work at Sitka Avenue and Brooks Street so that water is available from the Sulphur Springs pump station. Valves have been added to the plans so that pressure tests can be performed every ½ mile. The contractor shall furnish temporary cap with a tap and approved pressure gauge to perform the pressure test.

Upon completion of the work and prior to final payment, all raw water main and appurtenances installed under this Contract shall be subjected to leakage 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 leakage tests, at no additional cost to the City.

The City of Tampa shall perform compaction tests at locations designated by the field engineer. The contractor shall provide necessary equipment, materials and labor to obtain required compaction.

T1.54 Failure of Tests

Any defects in the materials and installation 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/or installations and may order the Contractor to remove them from the site at his own expense.

In the case of the City of Tampa rejecting any materials and/or installations, the Contractor shall replace the rejected materials and work so rejected within a reasonable time. If s/he fails to do so, the City may, subsequent to the expiration of a period of thirty calendar days after providing written notice, 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.

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.

T1.55 Polywrap Photographs

The Contractor shall provide photographic evidence that each bell joint have been properly taped and sealed. Each photograph shall be digitized documenting the location of each joint.

T1.56 Materials and Equipment

Materials and equipment for this raw water main work shall be in accordance with the requirements of these Technical Specifications.

The Contractor shall furnish satisfactory evidence of the quality and kind of materials and equipment as well as guarantees or warranties provided by the manufacturer. All materials shall be installed, connected, erected, used, cleaned, finished and conditioned in accordance with the instructions of the applicable manufacturer, fabricator or processor unless otherwise provided in these Contract Documents.

T2.00 CONSTRUCTION OF RAW WATER MAINS AND APPURTENANCES

Installation of the raw water mains shall be in accordance with the requirements of these Technical Specifications.

T2.10 Contractor Requirements

Contractors employed to construct water facilities for the City of Tampa must be approved for water main construction by the Department. If not previously approved by the Department, the Contractor must apply to the Construction Services Section for approval to perform the required water work. Minimum submittal requirements for review shall include the following:

Copy of current State of Florida Underground Utility License

Letter (on company letterhead) listing at least three (3) similar underground utility projects recently completed by the Contractor. Construction projects listed may have been outside of Hillsborough County, but preference is for projects in the City of Tampa area. For projects listed, include:

- i) Name of company or utility responsible for the project
- ii) Contact person with the company or utility including current phone number
- iii) Description of type of work completed and the type of materials installed

T2.20 Subsurface Investigation

The Contractor shall be responsible for having determined to his satisfaction, the nature and location of the work, and the ground conformation, the character and quality of the substrata, the types and quantity of materials to be encountered, the nature of the groundwater conditions, the character of equipment and facilities needed preliminary to and during the prosecution of the work,

the general and local conditions and all other matters which can, in any way affect the work under this Contract. The prices established for the work to be done will reflect all costs pertaining to the work.

T2.30 Dewatering

If subsurface water is encountered in trenching or structural excavation work, the Contractor shall adequately dewater the excavation at his expense. No additional payment shall be made for dewatering operations.

The contractor will be required to do any and all sampling that may be required to be in conformance with any NPDES discharge permit requirements, at no expense to the city.

Subsurface water shall be kept 2 feet or more below the working area until there is no danger of displacement of pipes or structures. All water collected and pumped shall be disposed of in a manner which will cause no health hazard, flooding or nuisance to the surrounding area and in a manner so as not to degrade the water quality of surrounding water or violate any environmental ordinances or requirements. Water containing debris, sand or heavy sediment shall not be discharged into the storm water system. All permits for the discharge of this water shall be obtained by the Contractor from the appropriate regulatory agency.

The Contractor will be required to dewater at all jack-and-bore roadway crossings.

T2.40 Trenching, Backfilling and Compacting

The Contractor performing trench excavation on this Contract, in excess of five feet in depth, shall comply with the Occupational Safety and Health Administration's (OSHA) trench excavation safety standards, 29 C.F.R., s. 1926.650, Subpart P, including all subsequent revisions or updates to these standards as adopted by the Department of Labor and Employment Security (DLES).

By submission of his bid and subsequent execution of this Contract, the Contractor certifies that all trench excavation done within his control in excess of five feet in depth shall be accomplished in strict adherence with OSHA trench safety standards contained in 29 C.F.R., s. 1926.650, Subpart P, including all subsequent revisions or updates to these standards as adopted by the Department of Labor and Employment Security.

The Contractor shall consider all available geotechnical information in his design of the trench excavation safety system.

Dewatering operations shall be maintained until water main pipe placement is complete and its trench back-filled sufficiently to prevent movement or flotation of the pipe, including passing required density tests.

The use of trench-digging machinery will be permitted except in places where its operation will cause damage to other utilities, trees, buildings, or existing structures above or below ground; in which case hand methods will be employed.

The trench width and trenching method may vary with, and depend upon the depth of the trench and the nature of the excavated material encountered; but in any case shall be of ample width to permit the pipe to be laid and jointed properly and the backfill to be placed and compacted properly. The minimum width of un-sheeted trench, at the bottom where the pipe is to be laid, shall be two foot greater than the nominal diameter of the pipe, except by consent of the City. The maximum clear width of trench and the trench support system shall be in accordance with OSHA requirements.

Where sheeting and bracing are used, the trench width shall be increased accordingly. Trench sheeting shall be cut off at a level of at least 1 foot above the top of the installed pipe and shall be left in place. Alternatively, the sheeting may be left in place until the pipe has been laid, tested for defects, repaired if necessary, and until the soil around the pipe compacted to a depth of 2 feet over the top of pipe, at which time sheeting may be removed.

The trench, unless otherwise specified, shall be AWWA C-600 Type 2 as shown on the appropriate City Water Department Standard Details "Typical Trench, Bedding and Backfill Detail...". The trench shall have a flat bottom conforming to the depth to which the pipe is to be laid. The pipe shall be laid upon sound soil, cut true and even, so that the barrel of the pipe will have equal bearing for its full length. Bell depressions of ample dimensions shall be dug at each joint to permit proper pipe jointing.

In the event the Contractor excavates below the elevation required without approval from the City, he shall refill with approved material and thoroughly consolidate. If, in the opinion of the Engineer, the trench bottom cannot support the pipe, a further depth and/or width shall be excavated and refilled to pipe foundation grade or other approved means shall be adopted to assure a firm foundation for the pipe.

All excavated material shall be piled in a manner that will not endanger the work and that will avoid obstructing sidewalks and driveways. Satisfactory provisions shall be made for street drainage.

Backfilling and compaction shall be conducted in a manner so as to prevent subsequent settlement and provide adequate support for the surface treatment, pavement, or structures to be placed thereon. Material removed from an unimproved area may be reused if, in the opinion of the Engineer, it is suitable and if local conditions permit reuse. All materials suitable for reuse must be stored separate from the general excavated material. All backfill material must be approved by Engineer prior to placement. If replacement backfill is required, the Contractor must supply the material at his expense.

Backfill material shall be free from cinders, ashes, refuse, organic matter, boulders, rocks or stones greater than 2-inch diameter, or other material that in the opinion of the Engineer is unsuitable.

All trenches shall be backfilled by hand, from the bottom of the trench to the centerline of the pipe in lifts not to exceed 6 inches (compacted thickness). Compaction from the bottom of the trench to the centerline of the pipe shall be performed by hand-tamping. Backfill material shall be deposited in the trench for the full width on each side of the pipe. From the centerline of the pipe to the final grade, the trench shall be backfilled and compacted by hand or by approved mechanical methods.

Compaction and consolidation shall be done in accordance with the requirements of the agency having jurisdiction. In the absence of specific standards, all compaction shall conform to the following: The space between the pipe and the trench sides shall be packed full by hand shoveled earth, free from lumps, carefully deposited in layers, not exceeding 6 inches in depth. Such material shall be placed equally on each side of the pipe, and at the same time tamped in a manner acceptable to the City, until enough fill has been so placed and compacted to provide a minimum cover of 12 inches above the pipe. All backfill placed to this elevation shall be compacted to a minimum density of 98% of the maximum modified proctor density. From this point, the backfill shall be compacted in uniform layers not exceeding 12 inches in depth to a minimum density of 98% of the maximum modified proctor density where it is to support paving, sidewalk, etc., or elsewhere as directed by the Engineer. All other backfill shall be compacted to 90% of the maximum modified proctor density.

T2.50 Pipeline Installation

T2.51 General

During shipping, delivery and installation of pipe and accessories, materials shall be handled in such a manner as to prevent any damage. Particular care shall be taken not to injure pipe coatings. All pipes, fittings, valves and other materials shall be subject to inspection and acceptance by the City of Tampa Water Department representative after delivery and no broken, cracked, misshapen, imperfectly coated, or otherwise damaged or unsatisfactory material shall be used. When a defect is discovered, the damaged portion shall not be installed.

Installation shall be according to AWWA Standard C 600, manufacturer's recommendations, and as described in these Technical Specifications.

All connections to existing piping systems shall be made as shown or indicated on the plans after consultation and cooperation with the City of Tampa Water Department representative. No such connection shall be made until all requirements of these Technical Specifications as to tests, cleaning, flushing and disinfection of new work have been met, and the planned cut-ins to the existing line has been approved by the City of Tampa Water Department representative. Where connections are made between new work and existing work, the connections shall be made in a thorough and workmanlike manner using proper fittings and specials (i.e., service lines, meters, valves, etc... as specified in the City of Tampa Water Department Standard Details shown in the plans).

T 2.52 Underground Pipelines

Proper implements, tools and facilities satisfactory to the City of Tampa Water Department representative shall be provided and used. Pipe, fittings, valves and appurtenances shall be carefully lowered into the trench piece by piece. Under no circumstances shall piping materials be dropped or dumped into the trench. Pipe and fittings shall be carefully examined for cracks and other defects while suspended above the trench immediately before installation in final position. If damage occurs to any pipe, fitting, valve or piping accessory in handling, the damage shall be immediately brought to the Chief Construction Engineer's attention. The Engineer shall prescribe

corrective repairs or rejection of the damaged items.

Lumps, blisters and excess coating shall be removed from the bell end and outside of the spigot end of each ductile iron pipe. The outside of the spigot and the inside of the bell shall be wire brushed and wiped clean, dry and free from oil and grease before the pipe is laid. Pipe joints shall be made up in accordance with manufacturer's recommendations.

Upon satisfactory excavation of the pipe trench and completion of the pipe bedding, a continuous trough for the pipe barrel and recesses for the pipe bells, or couplings, shall be excavated by hand digging. When the pipe is laid in the prepared trench, true to line and grade, the pipe barrel shall receive continuous, uniform support and no pressure will be exerted on the pipe joints from the trench bottom. Pipe and fittings shall be polywrapped and taped per City of Tampa Water Department's "Installation of Polyethylene Encasement" detail.

The interior of the pipe shall be thoroughly cleaned of all foreign matter before being gently lowered into the trench and shall be kept clean during laying operations by means of plugs or other approved methods. All pipe shall be thoroughly cleaned, by appropriate means, before placing it in the trench. During suspension of work for any reason at any time, including the end of each work day, a water tight plug shall be placed in the end of the pipe last laid to prevent mud or other foreign material from entering the pipe. Sufficient backfill material shall also be placed over the pipe to prevent flotation.

The work shall at all times progress with caution so as to prevent damage to underground obstructions, both known and unknown. Should an obstruction not shown on the plans be encountered, the City Engineer shall be immediately notified so that alteration to the plans can be made should realignment be necessary. The Contractor shall notify the City of Tampa Engineer far enough in advance to allow the realignment to be accomplished by deflection in the pipe joints.

Wherever it is necessary to deflect pipe from a straight line, either in the vertical or horizontal plane, the amount of deflection allowed shall not exceed 80% of that allowed under AWWA Standard C-600 for the type of joint being installed and in accordance with the manufacturer's recommendations. Deflection will be allowed only after the pipe has been properly homed.

Water mains crossing or parallel to storm sewer, sanitary sewer and gas mains shall have a minimum of 12-inch vertical and horizontal clearance. A minimum 3-foot pipe wall to pipe wall clearance shall be maintained between all utilities and water main. All exceptions to this minimum shall be acceptable to the City of Tampa Water Department representative.

Thrust Restraint

All tees, bends and other fittings on pressure pipelines shall be provided with mechanically restrained joints, restrained for the required restraint-lengths in accordance with the appropriate Restraint Length Table as provided in the attached Water Department Standard Detail "Restrained Joint Standard for Bends, Caps, and Plugs", except when reaction blocks are indicated on the plans or directed by the City of Tampa Water Department representative. Mechanical joint fittings shall be restrained with wedge-acting mechanical restraint devices, equal to or better than those approved by the City of Tampa Water Department.

Pipe Joints

The joints of all pipelines shall be made absolutely tight. The particular joint used shall be acceptable to the City of Tampa Water Department prior to installation. The gasket material for the joint shall be properly positioned before the pipe is lowered into the trench. The joining of the pipe shall proceed in accordance with the manufacturer's requirements.

a) Push-on Joints

In making up the push-on type joint, the gasket shall be placed in the socket with the large round end entering first so that the groove fits over the bend in the seat. A thin film of lubricant (approved by the manufacturer) shall then be applied to the inside surface of the gasket that will come in contact with the entering pipe. The plain end of the pipe to be entered shall be thoroughly brushed with a wire brush and placed in alignment with the bell of the pipe to which it is to be joined. The joint shall be made up by exerting sufficient force on entering pipe so that its plain end is moved past the gasket until it seats as per manufacturer's recommendations. Backhoe buckets or excavation equipment are not to be applied directly to the pipe.

b) Mechanical Joints

Where shown on the plans, or where in the opinion of the City, settlement or vibration is likely to occur, all pipe joints of pressure pipelines shall be bolted mechanical type as specified herein.

Mechanical joints shall be made up using high-strength, low-alloy steel bolts and rubber gaskets having either plain- or duck-tip as recommended by the manufacturer. All types of mechanical joint pipes shall be laid and jointed in full conformance with the manufacturer's recommendations. Only especially skilled workmen shall be permitted to make up mechanical joints.

Mechanical joints shall be centered in the bells. Soapy water shall be brushed over the gasket just prior to installation. The gasket and gland shall be placed in position, the bolts inserted, and the nuts tightened finger tight. Mechanical joints shall be assembled in accordance with AWWA Standards. The joints shall be tightened on opposite sides of the pipes by means of a torque wrench in such a manner that the gland shall be brought up evenly into the joint. The following range of bolt torque shall be applied:

<u>Bolt Size (Inches)</u>	<u>Range of Torque</u>
3/4" diameter	85 to 95 ft.-lbs.
1" diameter	95 to 100 ft.-lbs.

If effective sealing is not obtained at a maximum torque listed above, the joint shall be disassembled and reassembled after thorough cleaning. If the joint is defective, it shall be cut out and entirely replaced.

Polyethylene Encasement

Polyethylene encasement conforming to the requirements of AWWA C-105 Method-A, 8-mil thick, shall be installed on all buried ductile iron pipe, fittings, valves, and appurtenances where shown on the drawings, as directed by the Department, or as dictated by field conditions. Polyethylene encasement shall be installed in accordance with Department Standard Detail "Installation of Polyethylene Encasement". Polyethylene encasement installation shall be required on all pipes, and fittings. Contractor shall provide digital photographs of each pipe joint, valves and fittings documenting the location and correct taping and sealing of the encasement.

Pipe Identification

Polyethylene encasement shall be clary sage green and labeled "16" RAW WATER MAIN.

Completion

After the pipe has been laid, inspected by the City of Tampa Water Department representative and found to be satisfactory, sufficient backfill shall be placed per Department Standard Details (or per backfilling specifications of the applicable agency controlling the rights-of-way), and a hydrostatic test conducted, per Section T3.00 "Requirements for Acceptance". Installed water mains will not be accepted by the City until tests have been completed to the satisfaction of the City's Construction Engineer.

Upon satisfactory completion of the preliminary hydrostatic test, backfilling and compaction shall be completed.

T2.60 Fittings

Fittings shall be handled with care to avoid damage. All fittings shall be loaded and unloaded by lifting, and under no circumstances shall fittings be dropped, skidded, or rolled. Under no circumstances, shall fittings be placed against pipe or other fittings in such a manner that could result in damage. Slings, hooks, or tongs used for lifting shall be padded to prevent damage or exterior surface or interior lining of fittings. If any part of the fittings' coating or lining is damaged by the Contractor, the repair or replacement shall be made by the Contractor in a manner satisfactory to the City of Tampa Water Department representative before installing at no additional charge to the City. Fittings shall also be stored at all times in a safe manner to prevent damage and kept free of dirt, mud, or other foreign matter. All fitting gaskets shall be stored and placed in a cool location out of direct sunlight and out of contact with petroleum products. All gaskets shall be used on a first-in, first-out basis.

Adequate precautions shall be taken to prevent the separation of joints at bends, tees, and plugged ends.

Details of design, construction, applications, installations, and number of joints necessary for the restraint of a given thrust shall be as specified herein, as shown on the Tampa Water Department Standard Details 2.11 and 2.12, or as indicated on the plans. Under no circumstances will gray iron

pipe be used at restrained joints. Ductile iron pipe will be used unless otherwise specified by the City of Tampa Water Department.

Where reaction or thrust blocking is specified, it shall be of concrete meeting the following design criteria:

- Compressive Strength - 3,000 PSI
90% after 7 days, 110% after 28 days
- % Air Entrainment – 3 to 5%
- Water/Cement Ratio – 0.40
- Maximum Aggregate Size - 1½"
- Slump - 3" - 4"

Blocking shall be placed between undisturbed earth and the fitting to be anchored where firm support can be obtained. The area of bearing on the pipe and on the ground in each instance shall be that shown on the plans, the Tampa Water Department Standard Detail or as directed by the Engineer. The fittings shall be polyethylene encased in a manner acceptable to the City of Tampa Water Department representative prior to blocking. The blocking shall, unless otherwise shown or directed, be so placed that the pipe and fitting joints will be accessible for repair. If the soil does not provide firm support, then suitable tie rods, bridles, clamps and accessories as specified by the pipe manufacturer to brace the fitting properly shall be provided.

Precast thrust blocks may be used in-lieu of poured-in-place blocks on 8-inch and smaller water mains only. Precast blocks must be manufactured in accordance with these Technical Specifications. Size and bearing area of blocks will be as determined by the Department. The Department has the authority to reject any damaged block or any block considered of questionable quality. Placement will be in accordance with standard procedures for restraining thrust. Soils behind such blocks will be either undisturbed or compacted to a density that is a minimum 98% of the modified proctor density.

Tie-rods and pipe-clamps, when allowed by the Department, must be of adequate strength to prevent movement or other suitable means may be used as allowed by the Department. Steel rods, clamps, and washers shall be rustproof treated with bituminous material and polyethylene encased.

T2.70 Valves

Valves shall be handled with care to avoid damage. All valves shall be loaded and unloaded by lifting, and under no circumstances shall valves be dropped, skidded, or rolled. Valves shall not be placed, under any circumstances, against pipe or other fittings in such a manner that damage could result. Slings, hooks, or tongs used for lifting shall be padded in such a manner as to prevent damage. If any part of the valves' coating and lining is damaged by the Contractor, the repair and replacement shall be made by the Contractor at his expense in manner satisfactory to the City of Tampa Water representative before installing. Valves shall also be stored at all times in a safe manner to prevent damage and kept free of dirt, mud, or other foreign matter. All valve gaskets shall be stored and placed in a cool location out of direct sunlight and out of contact with petroleum products. All gaskets shall be used on a first-in, first-out basis.

Valves shall be set and joined to new pipe in a manner heretofore specified for cleaning, laying, and

joining pipe. Valves shall be installed such that the operating nut is plumb.

Cast iron valve boxes shall be firmly supported and maintained, centered and plumb, over the operating nut of the valve by the Contractor with box cover flush with the surface of the finished pavement or at such other levels as may be directed by the City representative. Valve boxes shall be installed in accordance with the attached Water Department Standard Detail "Typical Gate Valve, Valve Box, and Pad Installation". In non-paved areas, valve boxes shall have 6-inch thick wire mesh reinforced concrete pads poured around the top section of the valve box. The pad shall be 24 inches square and shall be centered on the valve box. All Tampa Water Department raw water box valve covers shall be painted clary sage green as prescribed by the American Public Works Association (APWA) uniform color code for utility systems.

The valve and valve box shall be installed so City of Tampa Water Department personnel can insert a valve key through the valve box and completely open and close the valve. This test will be accomplished before final acceptance of the valve and box into the water system.

T3.00 REQUIREMENTS FOR ACCEPTANCE

The installed raw water facilities must be constructed in accordance with all applicable Department Standards and Specifications, Standard Details, and City of Tampa Code requirements. A representative of the Department will inspect the construction for compliance.

The City's Construction Engineer will require the Contractor to perform the required tests to assure that all water main pipes installed meet the Tampa Water Department's standards. The required tests are as follows:

T3.10 Hydrostatic Testing

1. Pressure Testing

All newly laid pipe, including fittings, and valves shall be pressure tested in accordance with AWWA standard C-600.

The Contractor shall provide all necessary equipment and instrumentation required for flushing and testing of the piping systems. If requested by the City of Tampa Water Department representative, the Contractor shall furnish to the City Engineer certified test data for the pressure gauges and recorders used on hydrostatic equipment. Water for test purposes will be supplied by the City of Tampa. At the option of the City of Tampa representative, flow meters and/or pressure gauges used on hydrostatic testing equipped with approved strip or round chart recorders shall be supplied by the Contractor. Tests shall be made in sections not to exceed 1/2 mile.

Testing shall be conducted in the presence of and to the satisfaction of the City of Tampa Water Department representative as a condition precedent to the approval and acceptance of the system. Not less than 3 working days' notice shall be given prior to start of such tests, and such testing shall not be scheduled until preliminary testing by the Contractor has indicated that the test section is ready for testing. The schedule and procedures for testing shall be

determined by the Contractor and reviewed with the City of Tampa Water Department representative prior to testing.

The duration of each pressure test shall be at least 2 hours with a minimum test pressure in excess of 150 psi. At no time shall the test or line pressure exceed 190 psi. If required by the City of Tampa Water Department representative, pump test equipment will be equipped with pressure relief valves pre-set to 190 psi. Each valved section of pipe shall be slowly filled with water and a pump shall be connected to the low point of the section being tested.

Before conducting the test, the Contractor shall backfill all pipe and reaction blocking unless the City of Tampa Water Department representative directs certain joints or connections to be left uncovered. When reaction blocking is provided, the pressure test shall not be made until adequate curing time for the blocking has been allowed.

Before application of the test pressure, all air shall be expelled from the pipe. To accomplish this, taps will be made, if necessary, at points of highest elevation and afterward tightly stopped with tapered brass plugs, all at the Contractor's expense.

At the end of the 2-hour test period, the Contractor will be required to pump the lines back up to the highest pressure obtained during the duration of the test period.

Throughout the duration of the test, the Contractor is required to maintain a minimum pressure in excess of 150 psi. The Contractor is advised that, should the test pressure fall to or below 150 psi any time during the 2-hour test, the test will be considered invalid and a retest will be required. Therefore, it is advised that the Contractor should pump water into the line as the test pressure approaches 150 psi.

The Contractor is warned that pressure testing against existing valves is done at his own risk. Failure of these valves to hold test pressure will not relieve the Contractor of the pressure testing.

All exposed pipe, fittings, valves and joints shall be carefully examined for leaks. Any cracked or defective pipe, fittings, valves or other appurtenances discovered as a consequence of the pressure test shall be removed and replaced with acceptable material. All leaking or defective joints shall be repaired, corrected or replaced. After all necessary replacements and corrections have been made, the test shall be repeated to the satisfaction of the City of Tampa Water Department representative.

If the pipeline fails the pressure test twice, then the Contractor shall be required to retest the pipeline and provide to the City certification by a Professional Engineer registered in the State of Florida, that the pipeline has passed the test in accordance with these standards prior to the Water Department scheduling and witnessing the pressure test.

2. Leakage Tests for Pipelines

Concurrently with pressure testing, pipelines shall be subjected to leakage tests.

Leakage measurements shall not be started until a constant test pressure has been established in excess of 150 psi. The duration of each leakage test shall be at least 2 hours and the test pressure shall be as specified for the pressure tests. Leakage is defined as the quantity of water that must be supplied into the pipeline or section thereof to maintain the established test pressure after the air in the pipeline has been expelled and the pipe filled with water plus that volume of water required at the conclusion of the test to bring the line pressure back up to the highest pressure obtained during the duration of the test period.

The maximum allowable leakage shall not exceed the number of gallons per hour (gph) as determined by the following formula:

$$L = SD \times \sqrt{P/148,000} \text{ where,}$$

L - allowable leakage, gph
S - length of pipeline tested, feet
D - nominal diameter of the pipe, inches
P - average test pressure during the leakage test, psi gage

This equation is based on 18 foot lengths of pipe, and shall be adjusted accordingly for other lengths supplied.

AWWA Standard C-600-10 includes a table which provides the allowable amount of leakage in gph for various sizes of pipe under different test pressures. The Contractor is referred to that table as an alternative to actually calculating the values using the above formula.

When leakage exceeds the allowable limit, the defective pipe or joints shall be located and repaired. All visible leaks are to be repaired regardless of the amount of leakage. If the defective portions cannot be located, the Contractor shall remove and reconstruct as much of the work as is necessary until the leakage is within the allowable limits. Such corrective work or damages to other parts of the work as a result of such work shall be at the Contractor's expense.

Leakage detection at mechanical joints shall be stopped by tightening the gland (not to exceed required torque) and leaking slip joints shall be cut out and entirely replaced or if permission is given by the City of Tampa Water Department representative, it may be repaired by a suitable clamp. Any cracked or defective pipe, fittings, valves, or hydrants discovered as a result of this test shall be removed and replaced by the Contractor with sound material and then test shall be repeated.

If the pipeline fails the test twice, the Contractor shall be required to retest the pipeline and provide the City Engineer certification by a Professional Engineer registered in the State of Florida that the pipeline has passed the test in accordance with these standards.

T4.00 RESTORATION

T4.01 Waste Material Disposal

The Contractor shall remove and dispose of all debris and excess spoil resulting from clearing, demolition

and excavation operations. Natural waterways or bodies water shall not be used for disposal or debris.

All debris shall be disposed of at a site approved and permitted by the State for such disposal. Clean spoil may be disposed on private property only with written authorization of the property owner.

Burning of brush or debris may be permitted, if allowed by the City, subject to the Contractor's securing permits and providing such fire watch and notification of local fire companies as may be required by local law or ordinance. Such permits, however, shall not relieve the Contractor of his responsibilities or liabilities with regard to protecting public health or properties.

T4.02 Repair and Resurfacing

Where street paving, driveways, sidewalks or curb and gutter is disturbed, restoration shall be made to a condition at least equal to the original. All materials used for restoration shall conform to standard requirements of that particular agency responsible for roadway maintenance where construction takes place.

All restoration work shall also meet the requirements of both the permitting agency as well as the City. The Contractor shall determine, to his own satisfaction, any requirements and procedures, other than those set forth herein, which may affect the type, quality and method of carrying out the restoration to the satisfaction of the Department of areas to be restored.

Base material shall be of the type removed or of equal or greater structural strength as determined by the City Engineer. Existing base material from the excavation shall not be reused as base material, but may be used as a stabilizer, or for trench backfill after removal of existing asphalt, unless it is determined by the Engineer to be unsuitable.

Edges of pavement shall be mechanically sawed to provide a neat, straight edge to the width shown on the plans, or greater if necessary, prior to replacement. Base material shall be placed to the depths required by permitting agency and thoroughly compacted to the density required by the Department or to the standard of the governing permitting agency.

The Contractor shall pay careful attention to the proper reconstruction of the pavement adjacent to the gutters and at street intersections to obtain satisfactory drainage to inlets from the intersecting streets.

Pavement replacement shall be with the same materials as removed and installation methods and procedures shall comply with the appropriate procedures established by the FDOT Standards Specifications or the appropriate permitting agency.

In the absence of governing agency requirements, where asphaltic concrete overlays are performed, the overlays shall be 1 inch thick over the pipe trench area as directed by the Department so as to provide a smooth transition between the existing pavement and the overlay pavement. In the event that the contractor maintains his disturbed area within the maximum pay limits but the jurisdictional authority requires milling and overlaying in excess of the maximum pay limits, the contractor will be paid for the additional milling and overlaying at the appropriate contract unit prices.

Permanent pavement replacement shall not commence until acceptable to the Engineer. Until such replacement is completed, the Contractor shall maintain all trenches and disturbed areas, providing additional base materials as is necessary to maintain smooth transition of the areas by vehicular traffic and

providing dust control as necessary.

T4.03 Pavement Marking

Where shown or required for repaired/replaced pavement, pavement marking shall be painted with thermoplastic markings.

Thermoplastic compound sealing primer and glass spheres shall meet the requirements of FDOT Standard Specifications, Sections 711 and 971, or the requirements of the governing permitting agency.

Pavement marking of repairs/replacements shall match the previously existing pavement where applicable.

Where markings are required other than replacement of previously existing markings, the Contractor shall follow the requirements of the U.S. Department of Transportation, Manual of Uniform Traffic Control devices for streets and Highways. Application of thermoplastic markings shall comply with FDOT Standard Specifications, Section 711, or the requirements of the governing permitting agency. Reflective pavement markers (RPMs) shall be installed to match the pattern in place prior to the start of construction.

T4.04 Street Signs, Traffic Signs and Informational Signs

Removal and relocation of all street or traffic signs shall be approved through the appropriate permitting agency.

The Contractor will furnish and install project informational signs as indicated in the contract documents and as directed by the Engineer. The Contractor will remove the sign at the conclusion of the project. Compensation will be in conformance with the appropriate pay item(s).

T4.05 Seeding

All areas designated to be seeded by the Engineer shall be according to installation procedures and materials outlined herein.

Materials for top soils and seeding, including fertilization, shall comply with the applicable requirements of FDOT Standard Specifications, Sections 570 and 981, or the governing permitting agency.

Areas designed to be seeded shall first be fine graded to match the surrounding areas and shall be sown only where the soil is moist and in proper conditions to induce growth. Seeding operations shall not be undertaken when wind velocities exceed 15 mph or the soil is unduly wet or otherwise not in a tillable condition. Grass seed shall be in accordance with FDOT Standard Specifications, Section 570 or shall be of a quality acceptable to the Department. The Contractor shall properly water and otherwise maintain all seeded and mulched areas until final acceptance by the Engineer. Any areas that fail to show a "catch" or uniform stand shall be reseeded and such reseeded shall be repeated, at no additional cost to the Department, until final acceptance. Procedures for top soils and seeding, including fertilization, shall comply with the applicable requirements of FDOT Standard Specifications, Section 570, or the governing permitting agency.

T4.06 Sodding

All areas designated by the Engineer to be sodded shall be sodded according to installation procedures and materials outlined herein.

Sod shall be of the same type as the surrounding grassed areas (unless specified otherwise by the Department), be free of weeds, and have well matted roots. The sod shall be live, fresh, and uninjured at the time of placing. Materials for sodding shall meet the applicable requirements of Sections 575 and 981 of the FDOT Standard Specifications, or the requirements of the governing permitting agency. Except as required to match surrounding grassed areas, sod may be St. Augustine, Bahia, or other varieties as selected by the Department.

Areas designated to be sodded shall first be fine graded to match surrounding areas and scarified or loosen to a suitable depth. Sod shall be placed as soon as possible after being dug and shall be shaded and kept moist from the time it is dug until it is planted. Methods for sodding shall meet the applicable requirements of Section 575 of the FDOT Standard Specifications, or the governing permitting agency.

T4.07 PAVEMENT/RIGHT OF WAY RESTORATION REQUIREMENTS – Rev. 2009

SEE PAVEMENT STANDARD DETAILS

Pavement Options:

PAVEMENT *(Classification)	BASE MATERIAL (Section 1-2)	CONCRETE (Section 1-3)	ASPHALT SURFACE (Section 1-4)	FULL DEPTH ASPHALT (Section 1-5)
A	6”	4”	1”	5”
I	8”	6”	2”	7”
II	12”	8”	3”	10”

***Classification:**

Class A: Alleyways, Residential and Low Volume Commercial Driveways

Class I: 2-Lane Residential Streets and High Volume Commercial Driveways

Class II: Multi-Lane or High Volume 2-Lane Streets (most depicted by centerline markings)

Notes:

- 1) If existing roadway is stabilized, increase base material thickness by 50 %
- 2) If original pavement exceeds max. 3” ,match the existing asphalt thickness
- 3) Minimum 4” of shell marl, crush concrete, or asphalt millings placed in unimproved (dirt) trafficked right-of –way
- 4) Concrete shock pad required for any utility repaired/ installed less than 30” (needs C.O.T. Engineer approval)
- 5) Brick pavement shall be restored as specified in Section 1-6 Brick Replacement

SECTION 1

PAVEMENT RESTORATION SPECIFICATIONS

1.0 BACKFILL and SUBGRADE: Replace and compact clean sub-grade material classified as A-1, A-2, A-3. Backfill shall be free of objectionable material (bricks, broken pavement, concrete, clay,

muck, etc.). If flowable fill is used both mix and installation shall conform to FDOT Standard Specifications for Road and Bridge Construction (January 2000), Section 121-1 through 121-6.

- 1) **Density Requirements:** Material shall be compacted in lifts not to exceed 12". Densities are required at alternative 1' lifts of vertical fill above excavation bottom of trench and for each prepared trench segment, not to exceed 200'. Density test is not to be taken through succeeding layers. The final subgrade density test shall be taken at elevation beneath Base Material or Full depth.

1.2 Density Specification: Shall meet 98% compaction of AASHTO T-180.

- 1) **BASE MATERIAL:** Approved by a City of Tampa D.P.W. Engineer and/or meeting the FDOT Standard Specifications for Road and Bridge Construction (January 2000). Submittal may be requested by C.O.T.
- 2) **Acceptable Materials:** Limerock, Shell Marl, Crushed Concrete, Concrete (3000 min. PSI), and Asphalt Plant Mix.
- 3) **Density Requirements:** Place and compact in two lifts. Asphalt Plant Mix shall be compacted in accordance to Section 1-4. Densities are required for each trench segment at final grade, not to exceed 200'.

1.3 Density Specifications: Shall meet 98% compaction of AASHTO T-180.

- 1) **CONCRETE:** 3000 PSI minimum 28 days strength. Placed on compacted, moistened subgrade. Consolidate and cure. Do not load for 72 hours.
 - a. **Concrete Specifications:** Density test of subgrade may be required at the Inspector's discretion.

1-4 ASPHALT SURFACE: Saw cut all sides a minimum of 6" from replaced base. Paint with RC 70 (or equal) tack. Place and compact in lifts S-1 or S-3 type asphalt plant mix. The finished pavement is subject to inspection and approval by City of Tampa D.P.W. Engineer.

- 1) **Density Requirements:** Type S-1 lift to be 1 ¼" min. and 3" max. (if lift exceeds 2", compact with a drum roller type compactor). Type S-3 lift to be ¾" min. and 1 ½" max.
- 2) **Density Specifications:** Quality assurance testing of the asphalt may be required at the Inspector's discretion. (generally: 96 percent compaction of asphalt plant mix design bulk specific gravity)

1.5 FULL DEPTH ASPHALT: Same as requirements for Section 1-4 ASPHALT SURFACE

1) **BRICK REPLACEMENT:** Brick shall be re-laid according to Section 2 PROCEDURES. Place and grade 1 ½" of sand over base or concrete. Place brick uniformly, staggered with respect to the adjacent course. Any work area disturbing a street listed as a "Historical Street" shall be required to replace original brick. The contractor is responsible for safe storage of materials until such time the brick is re-laid.

2) Base Options:

- A. Limerock, Shell Marl: shall meet Section 1-2 BASE MATERIALS, requires brick joints to be sealed with Asphaltic Steep #7330 or Surebond 1300 Sealer.

- B. Crush Concrete: Shall meet Section 1-2 BASE MATERIALS, requires brick joints to be sealed with 1:4 sand cement mixture (slurry or moistened to ensure that cement sets).
- C. Concrete: shall meet Section 1-3 CONCRETE, 4” of concrete is used as base material, requires brick joints to be sealed with 1:4 sand cement mixture (slurry or moistened to ensure that cement sets).
- 3) **Density Requirements:** Subgrade material shall meet Section 1-1 BACKFILL and SUBGRADE. Base material shall meet Section 1-2 BASE MATERIAL.
- 4) **Density Specifications:** Shall meet 98% compaction of AASHTO T-180.

SECTION 2

PAVEMENT RESTORATION PROCEDURES

GENERAL:

The Permit holder is to contact D.P.W. Technical Services at (813) 635-1949 or Fax. 622-1956, 48 hours prior to starting permitted work. **The material testing results should be forwarded to the department/inspection group performing the inspection**

Testing/Inspection shall be scheduled with D.P.W. Materials Testing and Inspections on any part of the replacement work. Tests will be performed by the City’s Testing/Inspections Lab or an approved private engineering testing laboratory. **Contact: (813) 635-3408.**

The Foreman on each project shall maintain on-site, copies of the approved Department of Public Works “Application and Permit for Construction and Maintenance Operations within Public Rights of Way, including plans, drawings, and the Pavement Restoration Requirements – 2003.

Copies of all applicable material delivery tickets and copies of all test results not taken by D.P.W. Materials Testing and Inspections, shall be forwarded to D.P.W. Technical Services at 3806 26 Ave East, Tampa, Fla. 33605. Fax number (813)-622-1956.

EXCAVATION:

Utility installations shall be placed a minimum of 30” below grade. If, because of utility conflicts or unusual conditions, the 30” minimum depth requirement cannot be maintained, special authorization may be granted for installation at a lesser depth. Installations shall maintain the 30” depth, unless special authorization is granted in writing, by the D.P.W. Engineer.

All trench widths under pavement, including driveways, are to be a minimum of 18”, to allow mechanical compaction of backfill and base. Density tests are required and restoration shall meet SECTION 1.

Where pavement and/or base are undermined, disturbed, or otherwise damaged, such areas shall be cut away and the pavement replacement work extended to correct such conditions.

Tunneling under driveways, sidewalks, curbing, retaining walls, and pavement shall not be allowed unless approved prior to work is given by C.O.T. Engineer.

When obstructions are encountered in driving or jacking, pipe shall be cut off, left in place, and filled with a flowable fill type grout to prevent the formation of voids.

Edges of jacking pits, directional bore pits, exit pits, trenches, etc. shall be a minimum distance, equal to the depth of the pit excavation, from any pavement, curbs, sidewalks, or other structures. If this distance cannot be maintained, backfill shall be compacted in lifts not to exceed 12" and density tests taken as outlined in SECTION 1-1.

Ditches shall be restored promptly to prevent the formation of sediment in the existing drainage system. Erosion control shall be enforced. The existing ditch grade and cross section profile shall be maintained. The City will require sodding, sprigging, or seeding and mulching to restore stable cover of vegetation on ditch banks, shoulders, and other areas disturbed by construction. Vegetation restoration will be kept moist and maintained until well established. Staking of sod will be required if ditch slope exceeds 4:1.

Erosion control shall abide by Erosion Control Methods set forth in C.O.T: D.P.W. Standard Drawings where applicable

Lawn and landscaped areas shall be restored to original or better condition. Each situation may require individual attention and differing restoration procedures.

CONCRETE

Concrete sidewalks, driveways or pavement affected by construction operations will be corrected by removing and replacing full panels. Cuts in concrete sidewalks or driveways shall be sawed in straight lines at panel joints and replaced to full panels.

Concrete replacement shall be a minimum thickness of 6" for driveways and 4" for sidewalks. Concrete and density requirements shall meet SECTION 1-3.

Concrete curb and gutter will be formed and placed as a single unit to conform to City of Tampa Standards.

Expansion joints shall be provided at no more than 50' intervals on curb and sidewalk replacement work.

Expansion material shall be used where new concrete meets existing. Sidewalks shall have tooled construction joints or sawed control joints at 5' intervals for 5' wide sidewalk and 6' intervals for 6' wide sidewalk

BRICK:

Brick pavement shall be re-laid as called for by the street replacement schedule and on a complete and accepted base with a sand cushion and only clean whole, sound brick shall be used.

Brick replacement consists of bringing the area to be repaved to a subgrade and base conforming to the required grade and cross section of uniform density ready to receive the brick. Material and density requirements shall meet section T4.08.

Any part of the subgrade and base area inaccessible to the mechanical compactor shall be compacted by hand or power tamping in a manner acceptable to the engineer.

The brick shall be laid in straight courses, flat on the prepared sand cushion, with the better side of face upward.

The brick shall be laid in close contact and the joints of each course shall be uniformly staggered with respect to adjacent courses. Whole brick shall be used except in starting or finishing a course and in fitting around manhole tops or structures. In general, not less than ¼ of brick shall be used in batting.

The joints shall be filled in accordance with SECTION T4.08. The 1:4 sand/cement mixture shall be “soupy” and swept in with street brooms or may be dry mixed, swept in with street brooms, consolidated by vibratory methods, and sufficiently moistened to ensure that cement sets. Excess grout shall be removed from surface.

Joint filler shall take place immediately to prevent joints from filling with foreign matter.

ASPHALT:

Asphalt pavement edges of cuts are to be sawed in straight lines parallel and perpendicular to pavement edges. One uniform parallel line for paving shall exist along edge outside trenchline. When the existing asphalt is less than 3” thick, pavement shall be cut and removed for a minimum distance of 6” from edge of the trench.

Tack coat shall be applied to the surface of the pavement base and adjoining asphalt butted edge joint. *No* “feathering” of asphalt at the joint will be allowed. These areas are to be free of all loose material and foreign matter before applying tack coat.

Asphalt pavement installation shall be rolled in place in a controlled pattern with a mechanical compactor capable of sufficiently applying enough loads to meet density requirements in accordance with SECTION 1-4.2.

If an asphalt overlay is called for, a string line must be used while spreading the material, to obtain neat patches with straight edges. Where a cut is adjacent to or within 3’ of a previous patch, the pavement replacement and/or resurfacing shall be extended to include the previous patch.

Final surface restoration must be completed to the City’s standards and the City reserves the right to require the entire roadway surface width to be overlaid to lengths determined by the City.

Upon completion of the roadway surface, the contractor shall replace all damaged pavement markings per City standards.

TEMPORARY RESTORATION

Temporary pavement surfaces and sub-surface materials shall be restored conforming to all requirements regarding configuration, thickness, and density as detailed in SECTION 1. The pavement shall be temporary finished with a suitable grade of asphalt and sand to provide a temporary-wearing course and to eliminate a dust nuisance. Temporary pavement shall be restored with the proper **permanent** surface within specified time period stated in the legal Permit for Construction and Maintenance Operations within Public Rights of Way.

T4.08 VITRIFIED BRICK REPLACEMENT (REVISED 4/27/2009)

Subgrade:

This work consists of bringing the area to be repaved to a subgrade conforming to the required grade and

cross section surface of uniform density ready to receive the base course. This is to be accomplished by excavating or backfilling as needed, shaping, and then rolling the entire area with an approved self-propelled tandem roller weighing not less than 8 tons. Shaping and rolling to continue until subgrade has been properly prepared and shows that no further compaction of any practical benefit would result from continued rolling. It shall be tested as to cross section, crown and elevation. After being properly prepared, it shall be so maintained until the base course is constructed. A completed subgrade shall be maintained sufficiently in advance of the base course operations to permit of proper control. Any part of the subgrade area inaccessible to the roller shall be thoroughly compacted by hand or power tamping in a manner acceptable to the engineer. Subgrade shall be minimum 12" and be compacted to 98% per AASHTO T-180.

Base:

This work consists of placing 10" of crushed concrete base material atop the prepared and accepted subgrade. The base will be placed in at least two lifts. The 10" crushed concrete will have a minimum LBR of 100 and will be compacted to 98% per AASHTO T1-80.

Where a base is encountered under the brick pavement, it shall be restored to the same thickness with the approved crushed concrete material before relaying the brick pavement.

Sand Cushion:

A sand cushion shall be constructed on all completed bases for vitrified brick pavement. The sand cushion shall be sharp sand composed of clean sand, free from clay, loam and other foreign matter, and shall be constructed to a uniform thickness of 1-inch upon the completed crushed concrete base. The sand cushion shall be prepared at least 25 feet in advance of laying the brick where possible. Care shall be exercised that the sand cushion is not disturbed or compacted until the bricks are in place and are ready for rolling.

Vitrified Brick Pavement:

Vitrified brick pavement shall be re-laid at locations called for by replacement schedule for street paving disturbed by construction operations, as shown on the plans. Vitrified brick pavement shall be re-laid on a completed base with a sand cushion and only clean whole, sound bricks shall be used. Acceptable brick removed from the disturbed areas removed by the contractor and/or removed from the City of Tampa stock pile, will be used for this repaving and shall not be hauled or moved by the contractor for use elsewhere unless directed by the engineer.

The brick shall be laid on straight courses, flat on the prepared sand cushion, with the better side of the face upward. The brick shall be laid in close contact and the joints of each course shall be uniformly staggered with respect to adjacent courses. Whole brick shall be used except in starting or finishing a course and in fitting brick pavement around manhole tops or other structures. In general, not less than one-fourth of brick shall be used in batting.

A timber straight edge shall be driven against each fourth course of brick by light blows with a sledge or maul to straighten the lines and eliminate appreciable space between the bricks.

The surfaces shall be swept clean and rolled with a tandem static roller weighing not less than 5 and no

more than 8 tons in a manner to firmly embed each brick in the sand cushion so that the completed pavement shall conform to the required crown, grade, and cross section.

The joints of the vitrified brick pavement replacement shall then be filled with a 1:4 sand/cement mixture and/or pure sand. If pure sand, the pure sand must be sealed with Surebond SB-1300 Sealer or approved equal. The 1:4 sand/cement mixture of mortar grout shall be “soupy” and swept in with street brooms **or may be dry mixed, swept in with street brooms, consolidated by vibratory methods, and sufficiently moistened to ensure that cement sets.** If “soupy” application is used, then Contractor will blot the joints with sand after sweeping application to remove excess grout.

The application joint filler should take place immediately after laying the brick or as soon as possible thereafter to prevent joint from filling with other foreign matter.

* * *

END OF SECTION

MATERIAL SPECIFICATIONS

General Requirements

All materials shall be in accordance with the Material Standard and shall, in no event, be less than that necessary to conform to the requirements of any applicable law, ordinances and codes.

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

M1.00 POLYETHYLENE ENCASEMENT

1. GENERAL

Polyethylene encasement shall conform to the requirements of ANSI/AWWA C-105/A21.5 Method A and shall be 8 mil thick. Polyethylene encasement shall be installed on all buried ductile iron pipe, fittings, valves, and appurtenances where shown on the drawings or as directed by the Water Department as dictated by field conditions. It shall be clary sage green in color And labeled "Raw Water Pipeline."

2. PRODUCT

The raw material used to manufacture polyethylene encasement shall be Type 1, Class A Grade E-1 in accordance with ASTM D-1248

The polyethylene encasement shall meet the following test requirements:

Tensile Strength	1200 PSI minimum
Elongation	300% minimum
Dielectric Strength	800 V/Mil Thickness minimum
Thickness 0.008"	(8 mils) minimum nominal with minus tolerance not exceeding 10% of nominal
Melt Index	0.4 maximum

3. QUALITY CONTROL AND TESTING

When submitting for approval polyethylene not listed shown below, manufacturer shall include drawings and brochures that clearly indicate size, dimensions, weights, performance standards, etc. If this documentation is omitted, the polyethylene may be rejected at the sole option of the City.

4. MANUFACTURER

None specified, all polyethylene encasement shall be domestically manufactured.

M2.00 CASING SPACER SLEEVES

1. GENERAL

Casing spacer sleeves shall be used to cradle carrier pipe through casing pipe.

2. Product

Casing spacer sleeves provided shall be:

- a. a two-piece, 12-gauge stainless steel strap which is heat fused PVC coated. Sleeve runners shall be an ultra-high molecular weight polymer with high resistance to abrasion and sliding wear. Runners shall be 2-inch or 2-½ inch in height. Or,
- b. projection type spacers, composed of a single-piece HDPE strap providing constant projections around the entire circumference of the carrier pipe. The minimum number of projections to be provided around the circumference shall total the number of diameter inches of the carrier pipe. Manufacturer-provided double-backed tape shall be used to fasten the HDPE casing spacer strap tightly to the carrier pipe so that the spacers do not move during installation. Selection of spacer type and installation shall be in accordance with manufacturer's installation guidelines and recommendations.

Projection type spacers shall be ISO 9002 certified for strength and quality.

3. Quality Control and Testing

When submitting for approval of a casing spacer not listed shown below, include manufacturer drawings/brochures that clearly indicate size, dimensions, weights, performance standards, etc. If this documentation is omitted, the casing spacer sleeves may be rejected at the sole option of the City.

4. Manufacturer

Casing spacer sleeves shall be Cascade Manufacturing "CCS-450-1740" or "CCS-ER", Raci Spacers North America Inc. "RACI Projection-type HDPE Casing Spacer", or approved equal.

M3.00 Air Vacuum Air Release Valve

1. General

Air and vacuum valves shall be fully automatic capable of venting large quantities of air while pipeline is being filled, and allowing air to re-enter while pipeline is being drained or when negative pressure occurs.

They shall be of the size indicated, with flanged or screwed ends to match piping. Bodies shall be of high-strength cast iron. The float, seat, and moving parts subject wetting shall

be constructed of Type 316 stainless steel. Seat washers and gaskets shall be Buna-N seal to provide an initial contact to Buna-N with final metal contact to prevent over compression of the resilient seal. Valves shall be designed for minimum 150 psi water-working pressure, unless otherwise indicated.

Air vacuum air release valves shall be installed inside of a Charles Industries fiber optic pedestal (Part No. CP210-NLP), in accordance with Standard Detail 2.14 (Automatic Air Release Valve) and 2.15 (Pedestal for Automatic Air Release Valve), having a buried, split, square base with a low-profile above-grade dome.

2. PRODUCT

Air Vacuum and Air Release Valves shall be manufactured and tested in accordance with AWWA Standard C512 for clean water.

Combination Air and Vacuum Valves shall have the same general requirements as indicated above. Two inch and smaller combination air valves for clean water applications shall be of the integral type with a valve assembly which functions as both an air and vacuum valve and an air release valve.

3. QUALITY CONTROL AND TESTING

When submitting for approval of air vacuum air release valve not listed below, the Contractor shall include drawings and brochures that clearly indicate size, dimensions, weights, performance standards, etc. If this documentation is omitted, the air release valve may be rejected at the sole option of the City.

4. MANUFACTURER

Air Release Air Vacuum Valves: The 2" & 3" valves shall be dual body ValMatic VMC-101S/38 or approved equal.

Combination Air and Vacuum Valves: The 8" valve shall be ValMatic Dual Body Type. 8" valve shall be VCM-106S-38 or approved equal.

**M4.00 MECHANICAL RESTRAINT DEVICES, for DUCTILE IRON PIPE
(for Push-on Joint Pipe, Mechanical, and Flange Joint Pipe and Fittings)**

1. GENERAL

Mechanical restraint devices shall be used to restrain plain ends of ductile iron pipe to push-on, mechanical, or flange joints, or fittings which meet ANSI/AWWA C-110 and C-111/A21.10 and A21.11, latest revisions.

Wedge action restraint for mechanical and flange joint pipe and fittings shall be incorporated in the design of the follower gland and shall include a restraining mechanism (the lug) which, when activated, imparts multiple wedging actions against the pipe, thereby

increasing its restraint on the pipe as the joint tries to separate. "Twist-off nuts" shall be used to ensure proper actuating of the restraining device.

2. **PRODUCT**

a. **Push-on Joint Restraint (for 4" - 30" only)**

Restraint of push-on joint pipe shall be with "locking gaskets", consisting of a SBR rubber gasket with high-strength stainless steel locking elements vulcanized into the gasket, which when activated develop wedging action between the pairs of stainless steel elements spaced around the gasket.

b. **Flange Joint Restraint**

Flange joint restraint fittings shall include all individually activated gripping wedges and gaskets. Flange joint restraint fittings shall attach to the plain end of a pipe by wedge screws to produce a flange which joins to an existing integral companion flange. Flange joint restraint fittings shall be constructed of ductile iron meeting ASTM A536 and manufactured in accordance with ANSI/AWWA C-110/A21.10 and/or C-111/A21.11, latest revision. All flanges shall have bolt circle and bolt holes which match a Class 125 flange and are compatible with ANSI/AWWA C-115/A21.15.

c. **Mechanical Joint Restraint**

The wedge action follower glands shall be manufactured of ductile iron conforming to ASTM A536-80. The wedging lug and bolt shall be manufactured of ductile iron which has been heat-treated to a minimum hardness of 370 BHN.

Wedge action glands shall be dimensioned such that they can be used with standard mechanical joints and have tee-head bolts conforming to ANSI/AWWA C-111/A21.11 and ANSI/AWWA C-153/A21.53, latest revision.

d. **Coatings**

- (1) Flange Adapters shall be provided with painted "shop coat", or approved equal.
- (2) Retainer glands shall be provided with a bituminous coat.

3. **QUALITY CONTROL AND TESTING**

a. Pipe restrained with mechanical restraint devices specified shall be capable of withstanding the following pressures:

Push-on and Mechanical Joint Pipe -	4" - 16" min. 350 psi
	>16" min. 250 psi
Flange Joint Pipe -	4" - 36" min. 250 psi

- b. Burst pressure tests shall be performed as specified in ANSI/AWWA111/A21.11, latest revision.
- a. When submitting for approval of restraint devices not listed shown below, include manufacturer drawings and brochures that clearly indicate size, dimensions, weights, performance standards, etc. If this documentation is omitted, the restraint fittings may be rejected at the sole option of the City.
- b. Pipe restrained with retainer glands specified shall be capable of withstanding twice the rated pressure of the restraint device for five minutes with no leakage or movement.

4. MANUFACTURER

- a. Ductile iron pipe push-on joint restraint devices shall be approved, equal to, or better than U.S. Pipe "Field-lok" Gasket, American "Fast-Grip" Gasket, or McWane "Sure Stop 350".
- b. Ductile iron pipe flange joint restraint devices shall be approved, equal to, or better than EBAA Iron "Megaflange Series 2100" or "1000 EZ Flange", or Ford Meter Box Company "Uni-flange Series 400-C".
- c. Wedge action restraint for ductile iron pipe mechanical joints shall be equal to or better than EBAA Iron "Megalug, Series 1100-SD", Sigma One-Lok Model SLD,SIP Industries, EZ Grip, or approved equal.
- d. Split, wedge-action restraints devices for restraint of existing pipe and fitting joints shall be approved, equal to, or better than EBAA Iron "Megalug, Series 1100SD, or HD", or approved equal.

M5.00 DUCTILE IRON PIPE (Push-On, Mechanical, Flexible, and Manufactured Restrained Joint)

1. GENERAL

Ductile iron pipe shall be domestically manufactured in accordance with the latest revision of ANSI/AWWA C-151/A21.51. Pipe shall be furnished in 18 or 20 foot laying lengths. Pipe shall be lined with a standard thickness cement mortar lining and seal coated in accordance with the latest revision of ANSI/AWWA C-104/A21.4 and NSF 61. Pipe outside coating shall be an asphaltic coating in accordance with ANSI/AWWA C-151/A21.51, latest revision.

2. PRODUCTS

a. Push-on Joint Pipe

Push-on joint pipe shall be supplied with all joint accessories. Accessories shall include gaskets and lubricant in sufficient quantity for the proper assembly of each

joint. Gaskets for push-on joints shall be made of SBR rubber. All plain ends shall be painted with a circular stripe on the pipe barrel to allow a visual means of checking proper assembly.

- All push-on joints shall be in accordance with ANSI/AWWA C-111/A21.11, latest revision.

- Pressure Class shall be as follows:

<u>Diameter</u>	<u>Min. Pressure Class</u>
4" → 16"	350
> 16"	250

b. Mechanical Joint Pipe

- Mechanical joint pipe shall be supplied with all joint accessories. Accessories shall include lubricant, gaskets, ductile iron glands, bolts, and nuts, all in sufficient quantity for the assembly of each joint. The bolts and nuts shall be manufactured of high-strength, low-alloy steel such as "Corten", "Usalloy", or "Acipalloy". The follower gland shall be ductile iron. Gaskets for mechanical joints shall be made of SBR rubber.

- All mechanical joints shall be in accordance with ANSI/AWWA C-111/A21.11, latest revision.

- Pressure Class shall be as follows:

<u>Diameter</u>	<u>Min. Pressure Class</u>
4" → 16"	350
> 16"	250

c. Manufactured Restrained Joint Pipe

- Joints shall be push-on in accordance with ANSI/AWWA C-111/A21.11. Joints shall be secured by wedged locking shims or a follower gland which shoulder against a retaining ring permanently fastened to the spigot end of the pipe within the joint. Gaskets for manufactured restrained pipe joints shall be made of SBR rubber.

- Pressure Class shall be as follows:

<u>Diameter</u>	<u>Min. Pressure Class</u>
4 → 16"	350
> 16"	250

3. QUALITY CONTROL AND TESTING

- a. All pipe shall meet or exceed all hydrostatic, performance and acceptance tests as set forth in ANSI/AWWA C-151/A21.51, latest revision.

- b. When submitting for approval of ductile iron pipe not listed shown below, include

manufacturer drawings and brochures that clearly indicate size, dimensions, weights, pressure class or thickness class, performance standards, etc. If this documentation is omitted, the ductile iron pipe may be rejected at the sole option of the City.

4. MANUFACTURER

- a. All ductile iron pipe, unless specified below, shall be by U.S Pipe, American Cast Iron Pipe Company, McWane Cast Iron Pipe Company, Griffin Pipe Products Company, or approved equal.
- b. Flexible Joint pipe shall be American Ductile Iron “Flex-Lok Boltless Ball Joint Pipe”, U.S. Pipe “USI FLEX Boltless Flexible Joint Pipe”, Griffin Pipe Products “Snap-Lok River Crossing Pipe”, or approved equal.
- c. Manufactured Restrained Joint pipe shall be American Ductile Iron “Flexring”, U.S. Pipe “TR-Flex”, McWane Cast Iron Pipe Company: “Super-Lock” (20” & 24” pipe) and “Thrust-Lock” (30” & 36”), Griffin Pipe Products “Snap-Lok”, or approved equal.
- d. All ductile iron pipe shall be domestically manufactured in the United States.

5.01 DUCTILE IRON PIPE- FLANGED

1. GENERAL

The flanged pipe shall be ductile iron domestically manufactured in accordance with ANSI/AWWA C-151/A21.51 and the National Association of Pipe Fabricators (NAPF) Product Standard 300, latest revisions, in nominal 18 or 20 foot laying length. The pipe shall be minimum Special Thickness Class 53 rated for a maximum working pressure of 250 psi, per ANSI/AWWA C-115/A21.15, latest revision.

2. PRODUCT

- a. All flanges shall be ductile iron and shall be manufactured and installed on the ductile iron pipe in accordance with ANSI/AWWA Standard C-115/A21.15, and the National Association of Pipe Fabricators (NAPF) Product Standard 300-01, latest revisions. Bolt circle and bolt holes shall be drilled and faced to match American National Standards Institute (ANSI) B16.1, Class 125 Flanges. All necessary hex-head bolts and nuts, and full-faced gaskets for each joint size shall be furnished as a Flange Accessory Package. Bolts and nuts shall be high-strength, low-alloy steel such as "Corten", "Usalloy", or "AciPalloy". Gaskets shall be made from buna “n” rubber.
- b. Plain ends of flange ductile iron pipe shall be slightly beveled for use in a push-on joint assembly. A circular stripe painted on the pipe barrel shall be provided as a visual means of checking proper assembly when used in a push-on joint.

- c. All pipe interiors shall be lined with standard thickness cement mortar in accordance with ANSI/AWWA C-104/A21.4 latest revision. All pipe exterior surfaces shall be coated as specified in ANSI/AWWA C-151/A21.51, latest revision.

3. QUALITY CONTROL AND TESTING

- a. All tests as specified in ANSI/AWWA C-115/A21.15 latest revision are required.
- b. Submit in duplicate notarized certificates of conformance that all tests and inspections have been performed in accordance with ANSI/AWWA C-115/A21.15, latest revision.
- c. When submitting for approval of a ductile iron flange pipe not listed in Section 4, include manufacturer drawings and brochures that clearly indicate size, dimensions, weights, performance standards, etc. If this documentation is omitted, the ductile iron flange pipe may be rejected at the sole option of the City.

4. MANUFACTURER

All flanged ductile iron pipe shall be domestically manufactured by U.S. Pipe, American Cast Iron Pipe Company, McWane Cast Iron Pipe Company, or approved equal.

**M6.00 VALVE BOXES
(Class 35 Grey Iron)**

1. GENERAL

Valve boxes provided under this specification shall be designed to provide access to an underground valve 2-inch operating nut at a depth of 2-feet or greater. Valve boxes shall be suitable for installation in areas subject to heavy vehicle traffic loading.

2. PRODUCT

Valve boxes shall include removable valve box cover with "WATER" label as shown on the Standard Dimension detail titled "Valve Box". All valve boxes shall be manufactured of Class 35 grey iron. All valve boxes shall consist of four parts: valve box covers, risers, top sections, and bottom sections. All valve boxes shall be the same dimension, within manufacturing tolerances, as shown in Standard Dimension Detail "Valve Box".

3. QUALITY CONTROL AND TESTING

When submitting for approval of valve boxes not listed shown below, include manufacturer drawings and brochures that clearly indicate size, dimensions, weights, performance standards, etc. If this documentation is omitted, the valve boxes may be rejected at the sole option of the City.

4. MANUFACTURER

Valve box manufacturers shall have a domestic presence. Valve boxes shall be equal to or better than those made by Union Foundry, Sunshine Foundry, or Sigma Corporation

M7.00 COMPACT MECHANICAL JOINT FITTINGS-DUCTILE IRON

1. GENERAL

a. Ductile iron compact mechanical joint fittings shall be manufactured in accordance with ANSI/AWWA C-153/A21.53, latest revisions and the specifications stated herein. Fittings shall be listed by the National Sanitation Foundation (NSF) and shall conform to the requirements of NSF-61.

c. Whenever the word "fitting" is used in this specification, it shall mean "Compact Ductile Iron Mechanical Joint Fitting".

2. PRODUCT

For fittings larger than 16-inches physical and chemical properties shall be in accordance with ANSI/AWWA C153/A21.53, latest revision. The minimum working pressure for fittings shall be 350. The minimum wall thickness shall not be less than that of pressure class 350 ductile iron pipe.

Joints shall be Mechanical Joint in accordance with ANSI/AWWA C111/A21.11 and C153/A21.53, latest revision, with exceptions noted herein. Mechanical Joint bolts and nuts shall be domestically manufactured of high-strength, low-alloy steel such as "Corten", "Usalloy", or "Acipalloy". Joints requiring a shorter bolt than called for in ANSI/AWWA C111/A21.11 shall be supplied as required. Gaskets for mechanical joints shall be made of SBR.

Exterior Coating and Interior Lining

Mechanical Joint fittings furnished shall have either of the exterior coating and interior lining systems described below:

- (1) Cement Mortar Lining: Fittings furnished shall have a standard thickness cement mortar lining and be seal coated in accordance with ANSI/AWWA C-104/A21.4, latest revision. Fittings shall be listed by an approved certifying agency as conforming to all requirements of ANSI/NSF 61 and shall have an asphalt exterior coating which conforms to ANSI/AWWA C-153/A21.53.
- (2) Fusion-bonded Epoxy: Fittings shall be coated inside and out with fusion-bonded epoxy, and be in conformance with the requirements of ANSI/AWWA C-116/A21.16 and AWWA C-550, latest revisions. Fittings shall be listed by NSF or by an approved certifying agency as conforming to all requirements of ANSI/NSF 61.

3. QUALITY CONTROL AND TESTING

- a. All fittings specified herein shall meet or exceed all hydrostatic, performance, and acceptance tests in accordance with ANSI/AWWA C153/A21.53 latest revision.
- b. When submitting for approval ductile iron compact MJ fittings not listed shown below, include manufacturer drawings and brochures that clearly indicate size, dimensions, weights, performance standards, etc. If this documentation is omitted, the ductile iron compact MJ fittings may be rejected at the sole option of the City.

4. MANUFACTURER

All manufacturers of ductile iron compact MJ fittings specified herein shall have a domestic presence. The fittings shall be manufactured by Sigma or approved equal.

M8.00 SOLID SLEEVES (Ductile Iron, Compact, MJ)

1. GENERAL

Solid sleeves shall be used to join two plain ends of pipe or repair a damaged pipe.

2. PRODUCT

- a. Solid sleeve lengths shall be up to 24-inches. The solid sleeve shall be capable of having two plain ends of pipe inserted into opposite ends of the sleeve. The sleeve is then to be sealed to the pipe by a mechanical joint at each end of the sleeve.
- b. All sleeves shall be manufactured of ductile iron. Solid sleeves shall be manufactured in accordance with ANSI/AWWA Standard C-153/A21.53, latest revision. All sleeves shall be rated for a minimum working pressure of 350 psi.
- c. All solid sleeve sealing ends shall be mechanical joints in accordance with ANSI/AWWA C-111/A21.11, latest revision. All joint accessories shall be furnished with the fittings. All bolts and nuts shall be made of high-strength, low-alloy steel such as "Corten", "Usalloy", or "Acipalloy". The gasket shall be for a standard Mechanical Joint, in accordance with ANSI/AWWA C-111/A21.11, latest revisions, and be made of SBR rubber. The follower gland shall be manufactured from ductile iron at least ASTM A536, Grade 70-50-05 in accordance with ANSI/AWWA C-111/ A21.11, latest revision
- d. All ductile iron compact solid sleeves shall be furnished with a standard thickness cement mortar lining and seal coating in accordance with AWWA Standard C-104, latest revision.
- e. Fittings shall have an exterior, asphaltic coating which conforms to ANSI/AWWA C-153/A21.53.

3. QUALITY CONTROL AND TESTING

- a. All solid sleeves shall meet or exceed all testing requirements of ANSI/AWWA C-153/A21.53.
- b. When submitting for approval of solid sleeves not listed shown below, include manufacturer drawings and brochures that clearly indicate size, dimensions, weights, performance standards, etc. If this documentation is omitted, the solid sleeves may be rejected at the sole option of the City.

4. MANUFACTURER

- a. All ductile iron mechanical joint solid sleeves shall be manufactured by SIP Industries, Sigma Corporation, Star Pipe or approved equal.

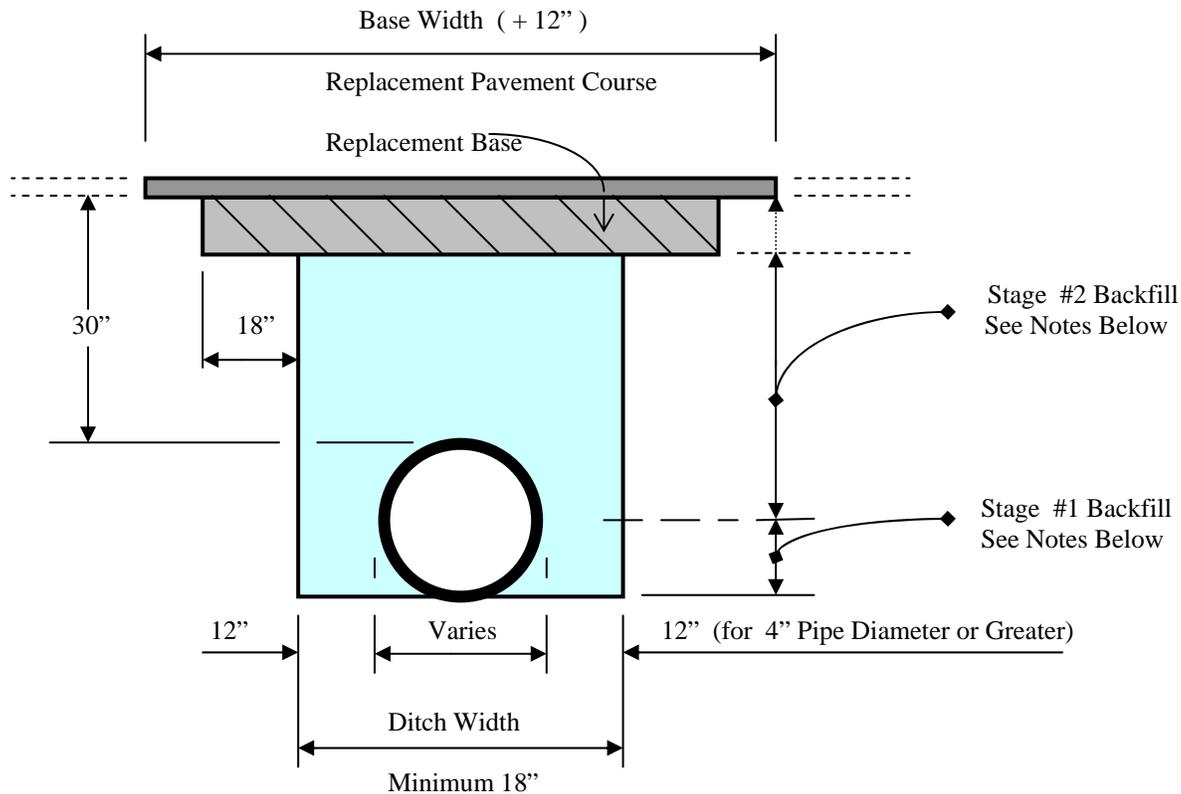
CITY OF TAMPA WATER DEPARTMENT STANDARD DETAILS

Pavement Standard Details

- 2.01 Pipe Cover Paved Areas
- 2.02 Pipe Cover Non Paved Areas
- 2.03 Jacking & Boring for Pavement Crossing
- 2.04 Jacking & Boring for Railroad Crossing
- 2.05 Polyethylene Encasement Detail
- 2.11 Restrained Joint Standard for Bends, Plugs, Caps
- 2.12 Restrained Joint Standard for Tees & Reducers
- 2.13 Tapped Connection from DI, CI or PVC to less than 4-inch Pipe
- 2.14 Automatic Air Release Valve
- 2.15 Pedestal for Automatic Air Release Valve
- 2.18 Temporary Sample Tap, DI, CI, PVC Pipe
- 2.19 Temporary Tap Installation for End of Line, DI, CI, PVC
- 3.01 Valve Installation W Valve Box and Pad, DI, CI, PVC
- 3.03 Butterfly Valve Installation with Valve Box & Pad
- 3.04 Valve Box, Slip-Type
- 5.01 Tapping Detail for 3/4", 1", 1.5", 2" W DI, CI or PVC Pipe

STANDARD DETAILS FOR RESTORATION WITHIN ROADWAY

(Details Modified From FDOT Design Standards Index 307))



FLEXIBLE PAVEMENT NOTES:

Pavement shall be mechanically sawed.

Pavement, Base, and Backfill material shall be placed in accordance with **City of Tampa Pavement Restoration Requirements – 2009**

In Stage #1, construct compacted fill beneath the haunches of the pipe, using mechanical tamps suitable for this purpose. This compaction applies to the material placed beneath the haunches of the pipe and above any bedding.

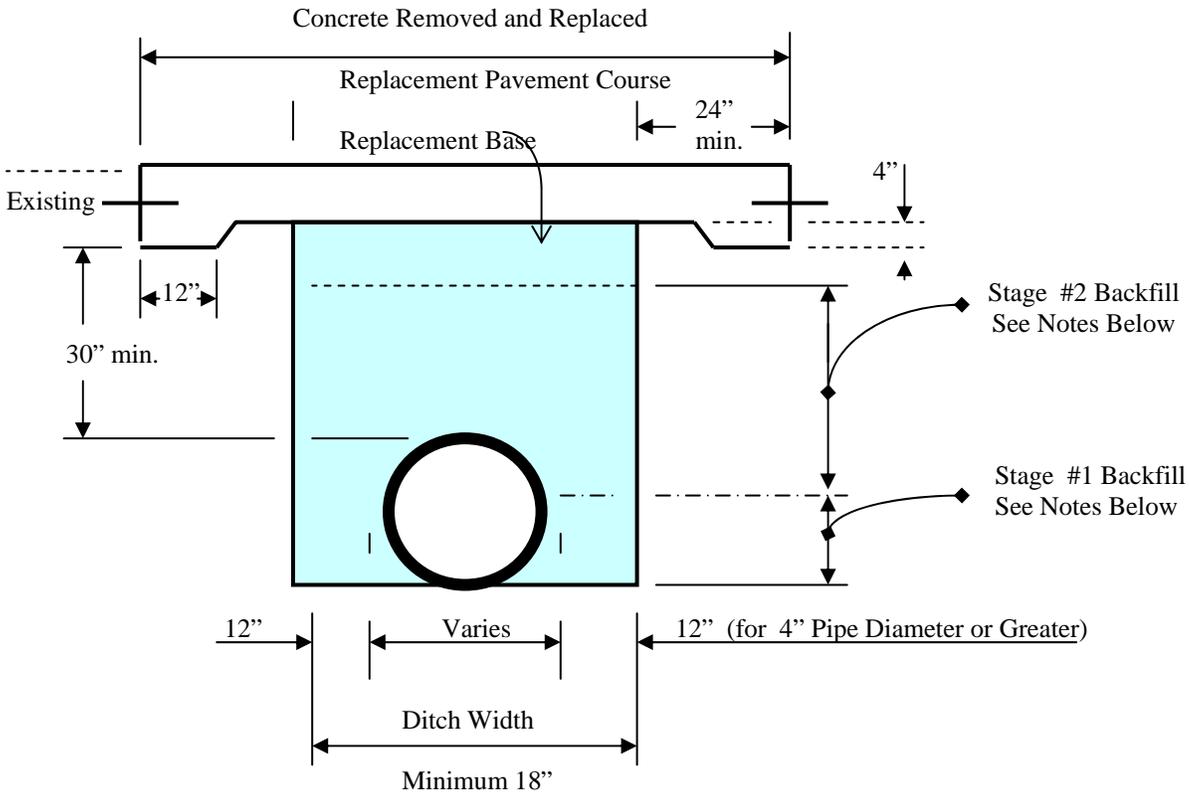
In Stage # 2, construct compacted fill along sides of the pipe and up to the bottom of the base. Compact material using mechanical tamps suitable to achieve Density meeting 98% of AASHTO T-180, lifts not to exceed 12'' compacted.

If mechanical compaction is difficult to achieve, then flowable fill may be used. In Stage #1, place flowable fill midway up on both sides of the utility. Allow to harden before placing Stage #2. If a method is provided to prevent floatation from occurring, Stage #1 and #2 can be combined, if approved by the Engineer.

Note: Specification Standards and Requirements not illustrated shall meet latest FDOT Standard Specifications.

STANDARD DETAILS FOR RESTORATION WITHIN ROADWAY

(Details Modified From FDOT Design Standards Index 307))



RIGID PAVEMENT NOTES:

Pavement shall be mechanically sawed and restored to conform with existing pavement joints.

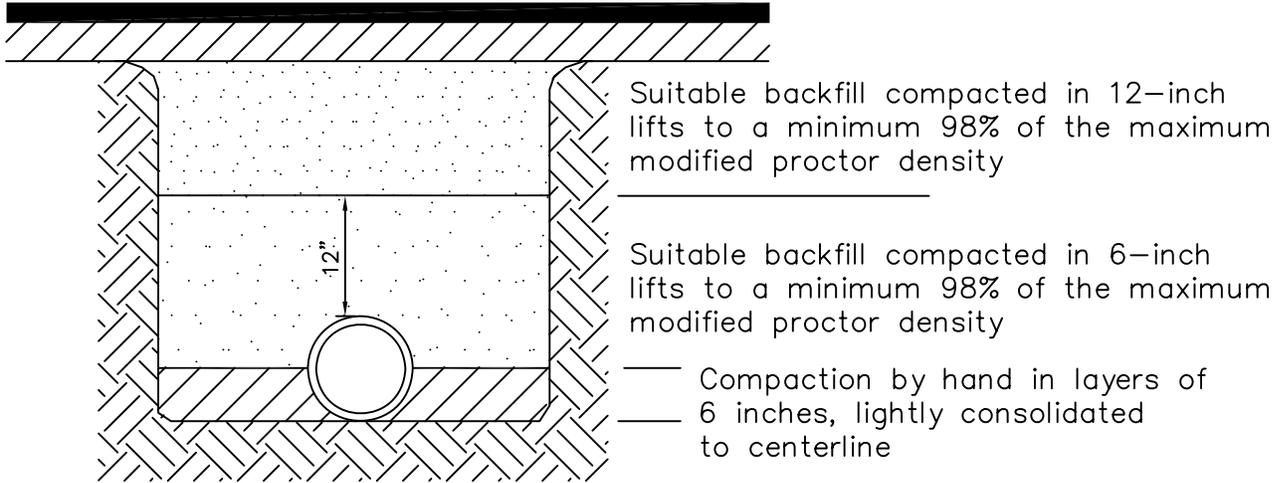
High early strength cement concrete (3000 psi) meeting the requirements of FDOT Standard Specification 346 shall be used for rigid pavement replacement.

Pavement, Base, and Backfill material shall be placed in accordance with **City of Tampa Pavement Restoration Requirements – 2009**

In Stage #1, construct compacted fill beneath the haunches of the pipe, using mechanical tamps suitable for this purpose. This compaction applies to the material placed beneath the haunches of the pipe and above any bedding.

In Stage #2, construct compacted fill along sides of the pipe and up to the bottom of the base. Compact material using mechanical tamps suitable to achieve Density meeting 98% of AASHTO T-180, lifts not to exceed 12" compacted.

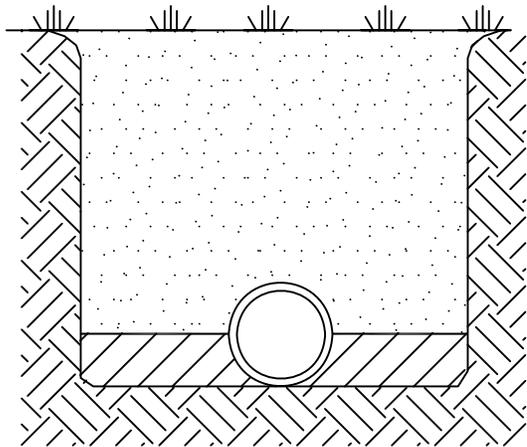
If mechanical compaction is difficult to achieve, then flowable fill may be used. In Stage #1, place flowable fill midway up on both sides of the utility. Allow to harden before placing Stage #2. If a method is provided to prevent floatation from occurring, Stage #1 and #2 can be combined, if approved by the Engineer.



NOTES:

1. Type 2 trench is defined as a flat-bottom trench. Lightly consolidate backfill to centerline of pipe.
2. This standard shall be utilized in the absence of specific standards. The standard of the agency controlling the Right-of-Way shall govern unless otherwise directed by the Engineer.
3. Suitable backfill shall be defined as material free from cinders, ashes, refuse, clay, organic matter, boulders, rocks or stones, or other material that in the opinion of the Engineer is unsuitable.
4. Non-pervious areas shall mean any concrete or asphalt curb, sidewalk, trail, driveway, or roadway.

<p>TAMPA WATER DEPARTMENT</p>	<p>APPROVED <u>Sept. 2011</u></p>	<p>REVISED _____ _____ _____</p>	<p>TRENCHING, BEDDING AND BACKFILL DETAIL FOR NON-PERVIOUS (paved) AREAS</p>	<p>2.01</p>
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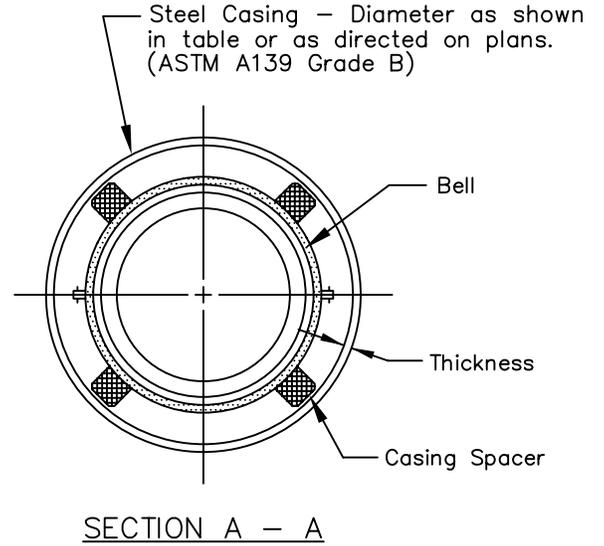
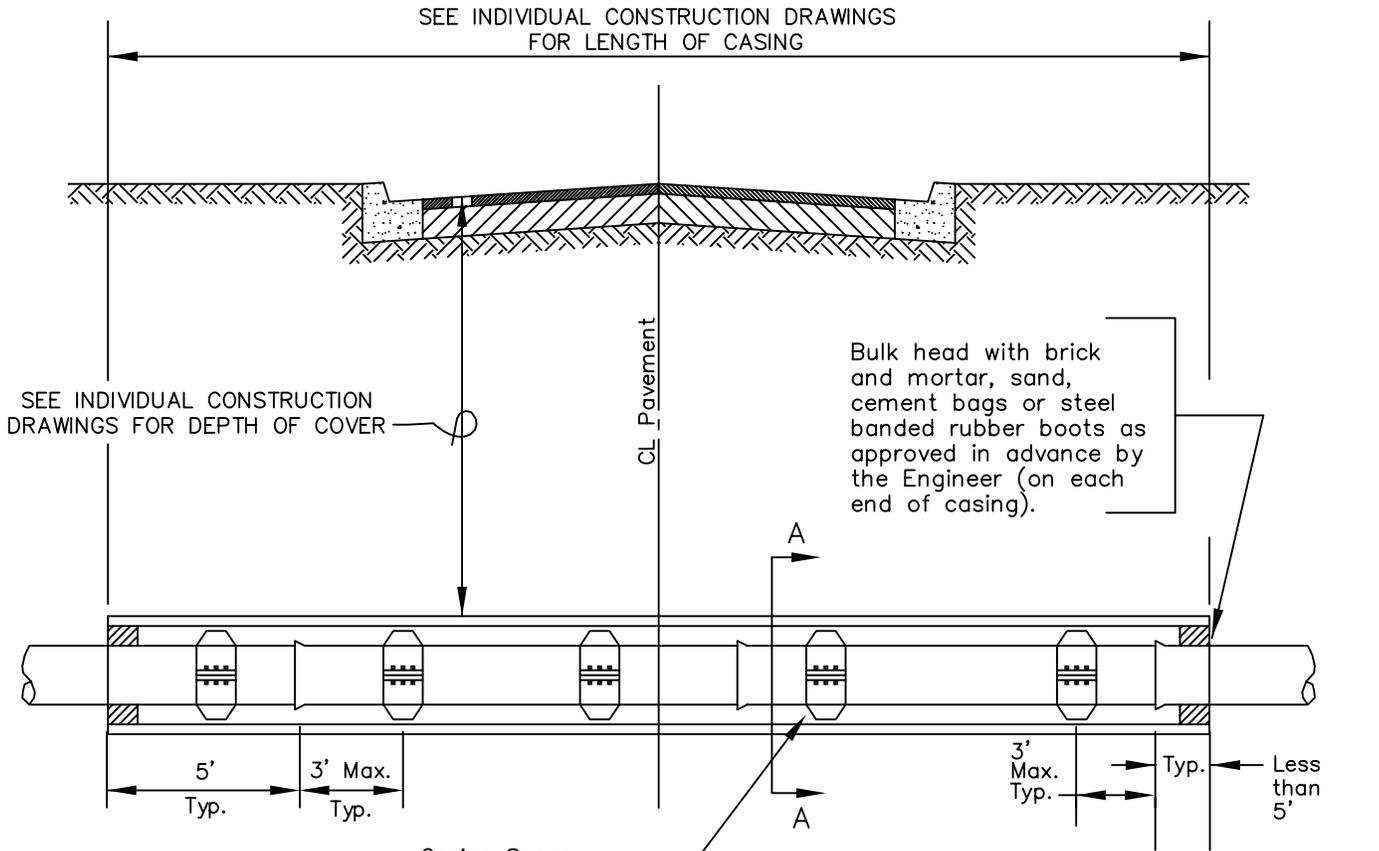
Suitable backfill compacted in 12-inch lifts to a minimum 95% of the maximum modified proctor density

— Compaction by hand in layers of 6 inches, lightly consolidated to centerline

NOTES:

1. Type 2 trench is defined as a flat-bottom trench. Lightly consolidate backfill to centerline of pipe.
2. This standard shall be utilized in the absence of specific standards. The standard of the agency controlling the Right-of-Way shall govern unless otherwise directed by the Engineer.
3. Suitable backfill shall be defined as material free from cinders, ashes, refuse, clay, organic matter, boulders, rocks or stones, or other material that in the opinion of the Engineer is unsuitable.
4. Non-paved area is a pervious area. If any part of the trench is within a concrete or asphalt curb, sidewalk, driveway, or roadway, then Standard Detail 2.01 applies.

<p>TAMPA WATER DEPARTMENT</p>	<p>APPROVED <u>Sept. 2011</u> _____</p>	<p>REVISED _____ _____ _____</p>	<p>TRENCHING, BEDDING AND BACKFILL DETAIL FOR PERVIOUS (non-paved) AREAS</p>	<p>2.02</p>
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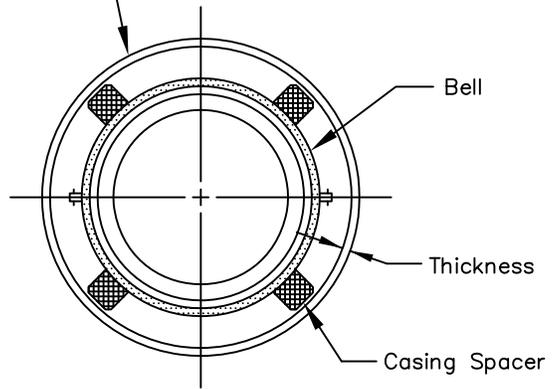
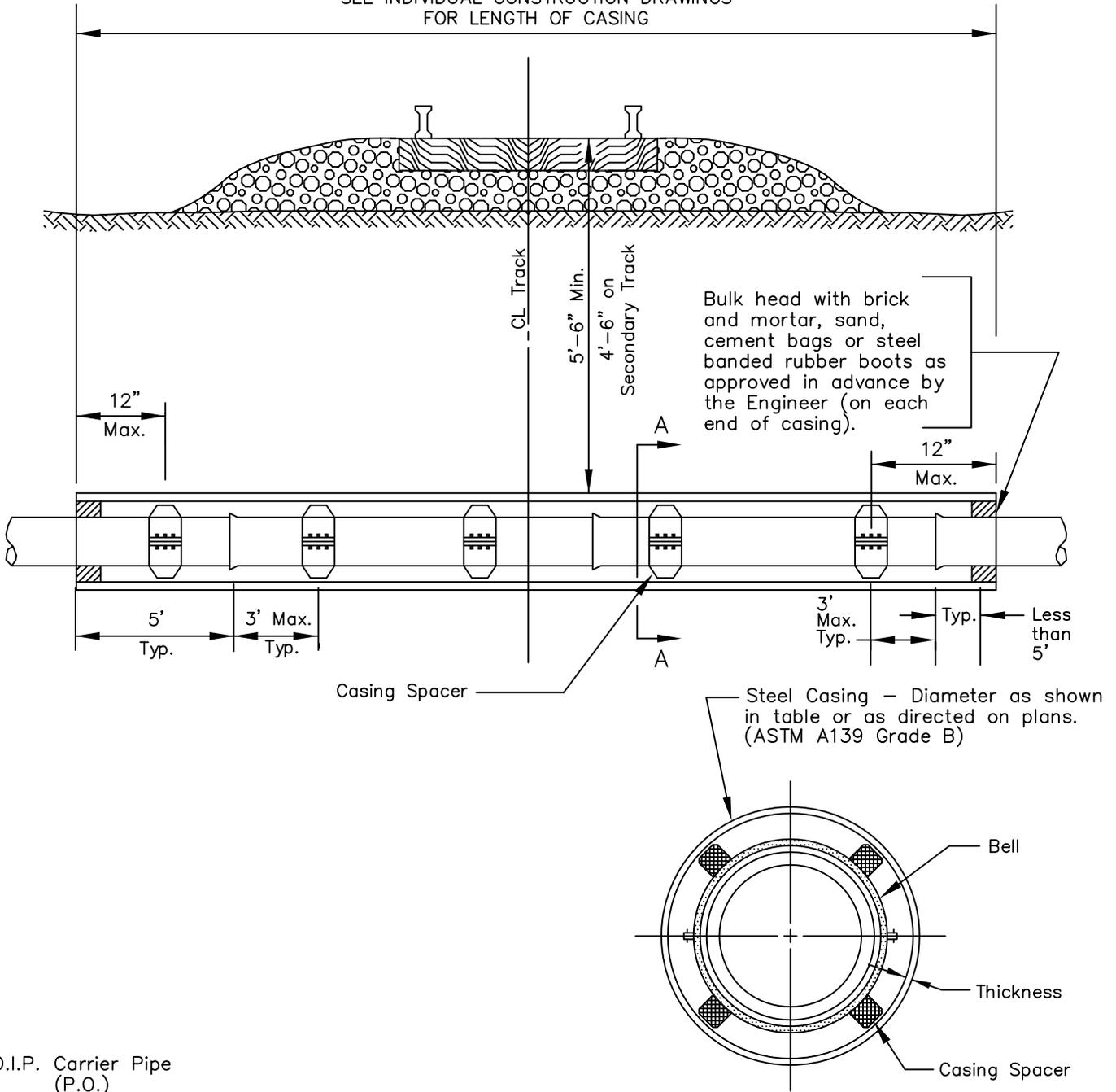


D.I.P. Carrier Pipe (P.O.) Nominal Diameter (inches)	Casing O.D. (inches)	Thickness
2	4	1/4"(.250)
4	12	1/4"(.250)
6	14	9/32"(.281)
8	16	9/32"(.281)
12	20	11/32"(.344)
16	24	13/32"(.406)
20	30	15/32"(.469)
24	36	17/32"(.531)
30	42	9/16"(.563)
36	48	9/16"(.563)
42	54	9/16"(.563)

- NOTES: 1. Pipelines with bends less than 20' from casing entrance shall be secured by both retainer glands and thrust blocks.
2. Casing pipe sizes listed are for push-on joint carrier pipe only.
3. Two spacers per joint minimum spaced as shown or as directed by the Engineer.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	JACKING & BORING FOR PAVEMENT CROSSING	2.03
	Sept, 2011	_____		
	_____	_____		

SEE INDIVIDUAL CONSTRUCTION DRAWINGS
FOR LENGTH OF CASING

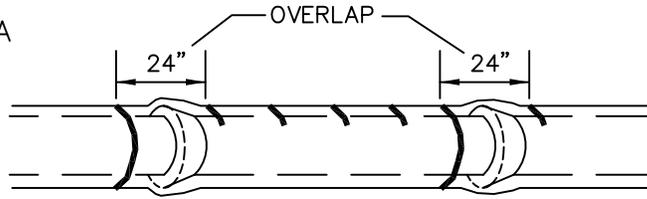


D.I.P. Carrier Pipe (P.O.) Nominal Diameter (Inches)	Casing O.D. (Inches)	Thickness
2	4	1/4"(.250)
4	12	1/4"(.250)
6	14	9/32"(.281)
8	16	9/32"(.281)
12	20	11/32"(.344)
16	24	13/32"(.406)
20	30	15/32"(.469)
24	36	17/32"(.532)
30	42	5/8"(.625)
36	48	11/16"(.688)
42	54	25/32"(.781)

- NOTES: 1. Pipelines with bends less than 20' from casing entrance shall be secured by both retainer glands and thrust blocks.
2. Casing pipe sizes listed are for push-on joint carrier pipe only.
3. Two spacers per joint minimum spaced as shown or as directed by the Engineer.

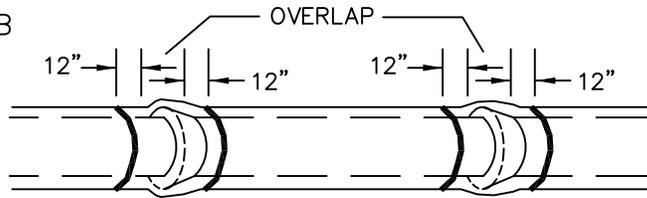
TAMPA WATER DEPARTMENT	APPROVED	REVISED	JACKING & BORING FOR RAILROAD CROSSINGS	2.04
	Feb. 2014	_____		
	_____	_____		

METHOD A



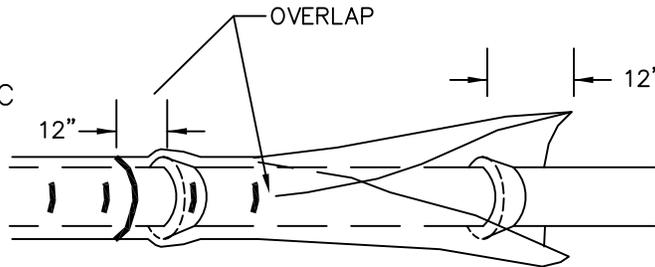
Polyethylene tube is cut into lengths approximately two feet longer than the pipe section and placed around it. After the pipe joint is assembled, the polyethylene tube is made to overlap the joint and the overlap secured in place. Since the tube is considerably larger than the barrel of pipe, it is made to fit snugly by folding over at the top and securing with tape every 24" along the pipe section.

METHOD B



Polyethylene tube is cut one foot shorter than the length of the pipe section. After placement of the pipe, it is folded and secured snugly overall. A three foot length of polyethylene tube placed over the end of the preceeding section is then pulled in place over the joint after assembly and secured.

METHOD C



Polyethylene sheet is cut to a length two feet longer than the pipe section. The sheet is wrapped around the pipe so that it overlaps circumferentially over the top quadrant of the pipe, then secured. After joint assembly, the surplus length of polyethylene film is secured around the joint, providing an overlap of each joint. Tape at each joint and at 3' intervals in between.

- NOTES: 1. Use green polyethylene film and tape only.
 2. Polyethylene film shall be a minimum of 8 mil. thickness.
 3. Spiral Wrap not required with polywrap.



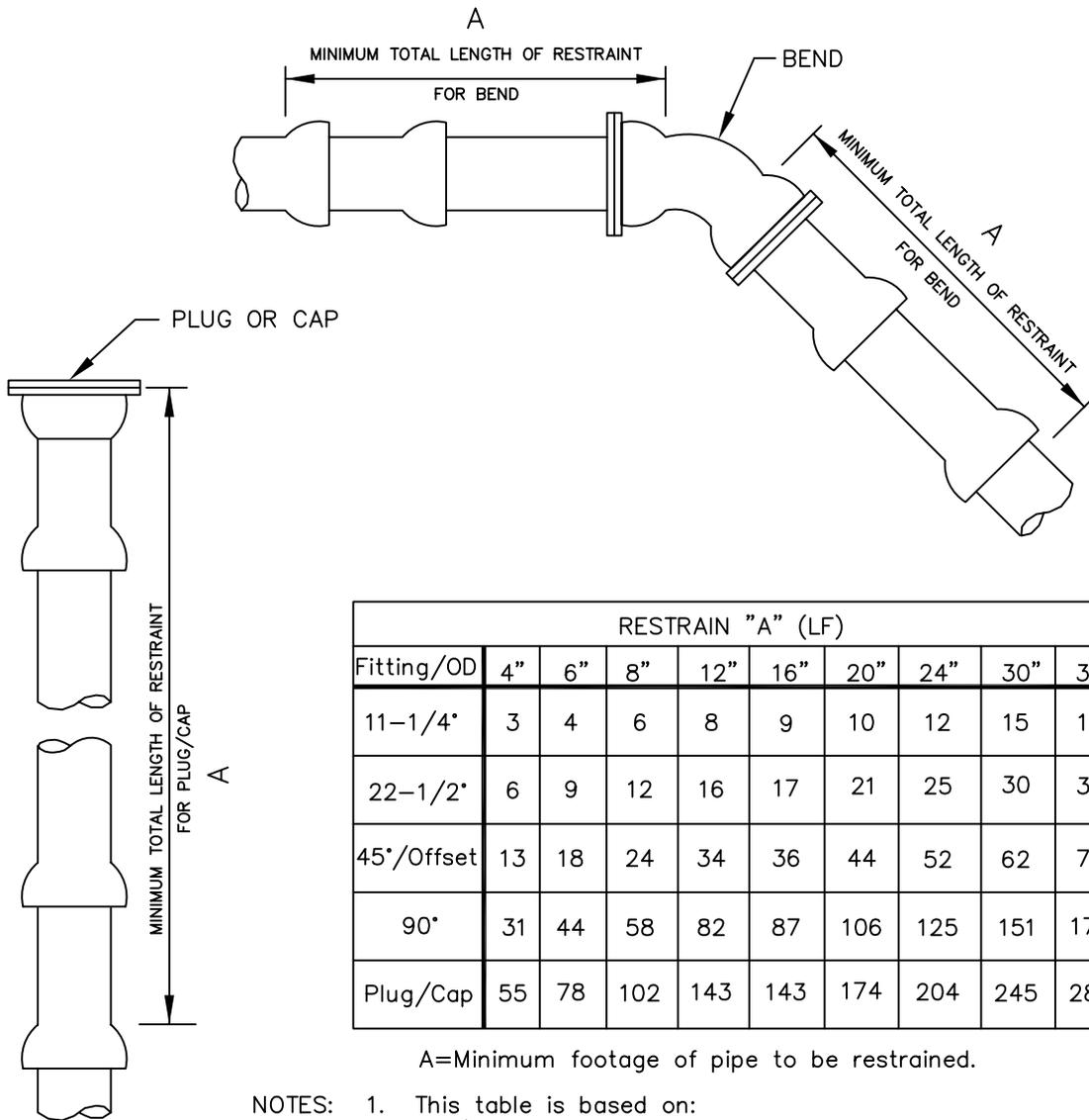
TAMPA
WATER
DEPARTMENT

APPROVED
April, 2014

REVISED
JRD 1/14

RAW WATER POLYETHYL.
ENCASEMENT
INSTALLATION DETAIL

2.05



RESTRAIN "A" (LF)									
Fitting/OD	4"	6"	8"	12"	16"	20"	24"	30"	36"
11-1/4"	3	4	6	8	9	10	12	15	17
22-1/2"	6	9	12	16	17	21	25	30	35
45°/Offset	13	18	24	34	36	44	52	62	73
90°	31	44	58	82	87	106	125	151	176
Plug/Cap	55	78	102	143	143	174	204	245	285

A=Minimum footage of pipe to be restrained.

- NOTES:
- This table is based on:
 - maximum test pressure of 190 psi
 - laying condition type 2 (see Details 2.01 and 2.02)
 - poor soil conditions
 - using D.I.P.
 - 3 feet of cover for 12" and smaller mains;
4 feet of cover for 16" and larger mains
 - Horizontal bends only – Engineer to submit calculations for vertical restraints
 - For polywrapped D.I.P., increase the footage to restrain by 25%.
 - For PVC pipe, increase the footage to restrain by 20%.
 - "Restrained" pipe shall be Manufactured Restrained Joint pipe, push-on joint pipe restrained w/gasket-type "Gripper Restraints", or mechanical joint pipe restrained by Megalug (or approved equivalent).
 - Any additional fittings within the restrained section shall be restrained accordingly.

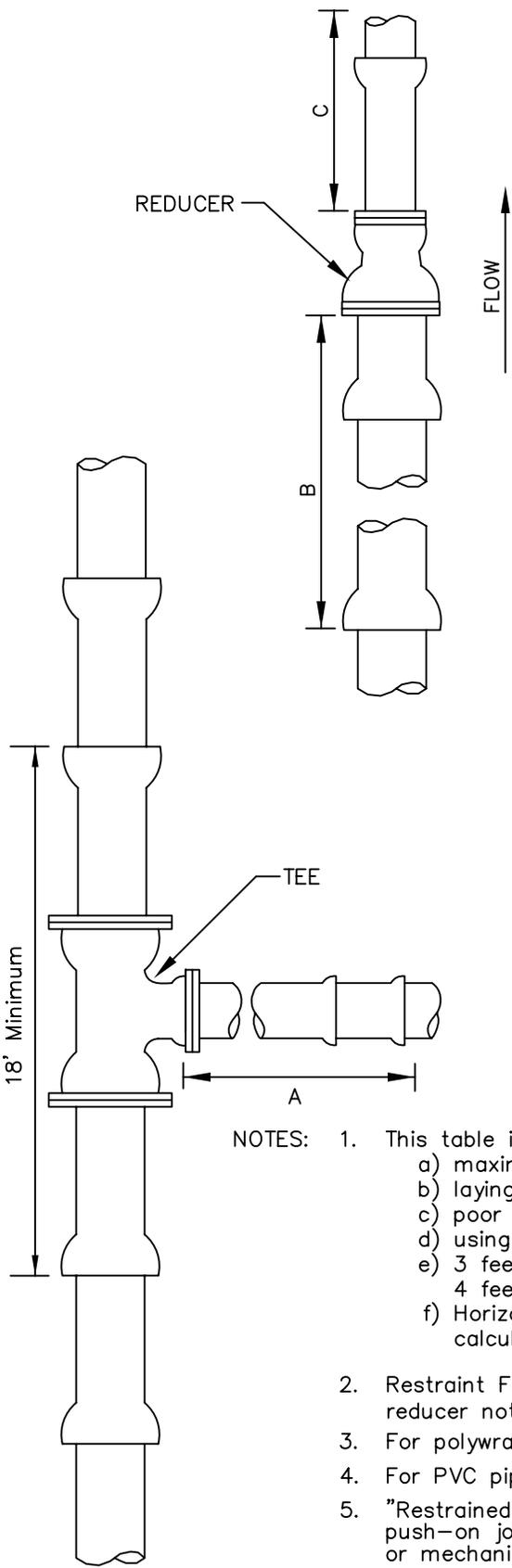
TAMPA
WATER
DEPARTMENT

APPROVED
Sept, 2011

REVISED

RESTRAINED JOINT STANDARD
FOR BENDS, PLUGS, AND CAPS

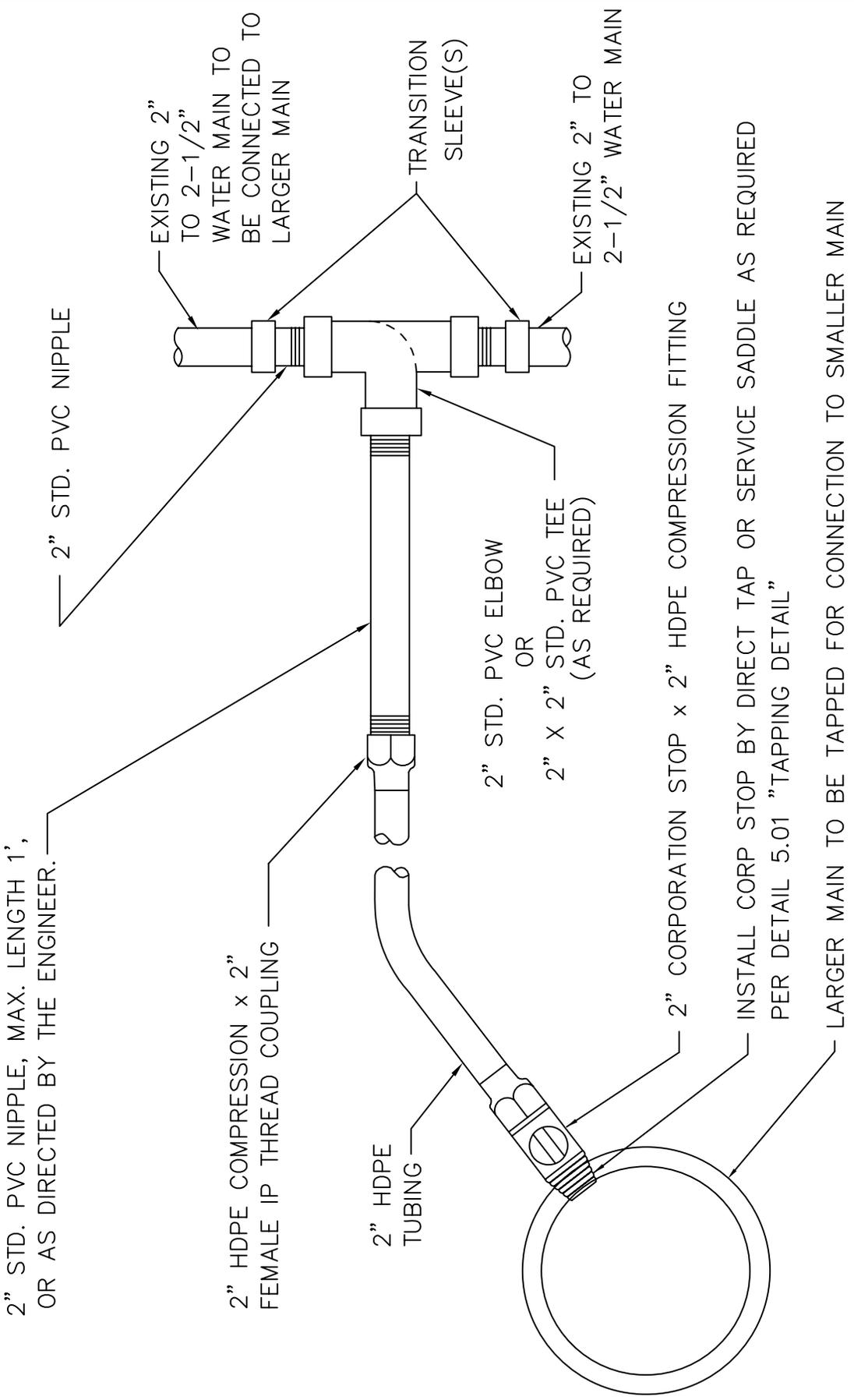
2.11



Fitting Size	Restrain (LF)		Unrestrained Straight Run (LF)
	Tee "A"	Reducer "B"	Reducer "C"
4x4	25	*	*
6x4	11	40	59
6x6	48	*	*
8x4	A.T.	73	142
8x6	38	43	56
8x8	72	*	*
12x4	A.T.	124	364
12x6	19	104	208
12x8	57	76	115
12x12	114	*	*
16x6	A.T.	121	321
16x8	27	104	212
16x12	77	61	82
16x16	118	*	*
20x6	A.T.	156	527
20x8	14	144	369
20x12	68	109	186
20x16	111	61	77
20x20	149	*	*
24x6	A.T.	189	777
24x8	A.T.	179	560
24x12	59	150	313
24x16	104	111	172
24x20	144	61	74
24x24	179	*	*
30x6	A.T.	234	1227
30x8	A.T.	226	904
30x12	45	204	542
30x16	94	173	341
30x20	135	134	208
30x24	172	86	110
30x30	220	*	*
36x6	A.T.	276	1784
36x8	A.T.	269	1328
36x12	30	251	824
36x16	83	226	551
36x20	127	195	373
36x24	165	156	245
36x30	215	86	106
36x36	261	*	*

A.T.—Restraint required at Tee only.
 *—not applicable

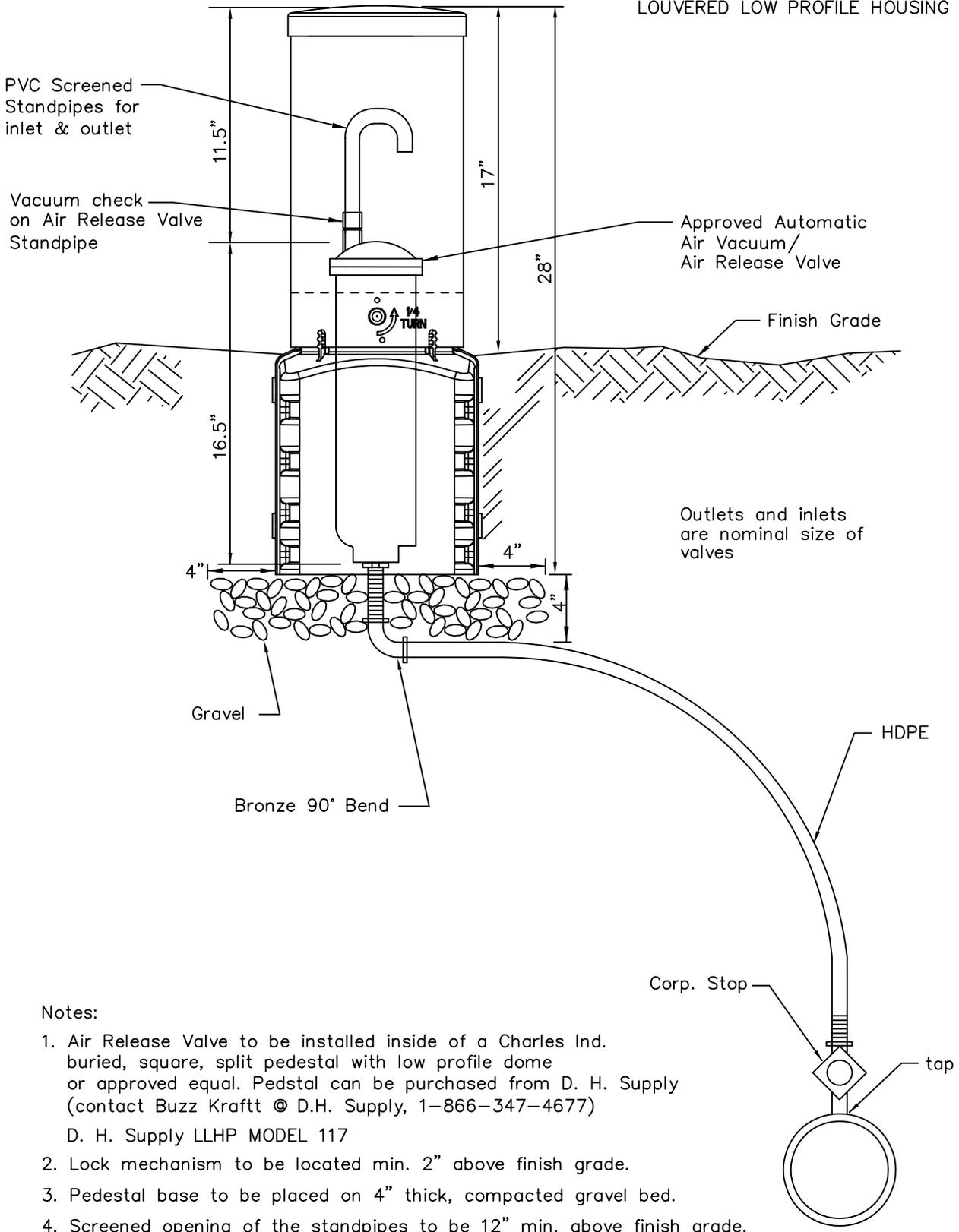
- NOTES: 1. This table is based on:
- a) maximum test pressure of 190 psi
 - b) laying condition type 2 (see Details 2.01 and 2.02)
 - c) poor soil conditions
 - d) using D.I.P.
 - e) 3 feet of cover for 12" and smaller mains;
4 feet of cover for 16" and larger mains
 - f) Horizontal bends only – Engineer to submit calculations for vertical restraints
2. Restraint For Reducers: If "C" straight run of pipe downstream of reducer not available, then restrain "B" upstream of reducer.
3. For polywrapped D.I.P., increase the footage to restrain by 25%.
4. For PVC pipe, increase the footage to restrain by 20%.
5. "Restrained" pipe shall be Manufactured Restrained Joint pipe, push-on joint pipe restrained w/gasket-type "Gripper Restraints", or mechanical joint pipe restrained by Megalug (or approved equivalent).
6. Any additional fittings within the restrained section shall be restrained accordingly.



NOTE: SEE DETAIL 5.01 TO DETERMINE WHEN SADDLES ARE REQUIRED FOR CORP INSTALLATION

<p>TAMPA WATER DEPARTMENT</p>	<p>APPROVED <u>Sept. 2011</u></p>	<p>REVISED</p> <p>_____ _____ _____</p>	<p>"TAPPED" CONNECTION FROM DI, CI, OR PVC PIPE TO <4" WATER MAINS</p>	<p>2.13</p>
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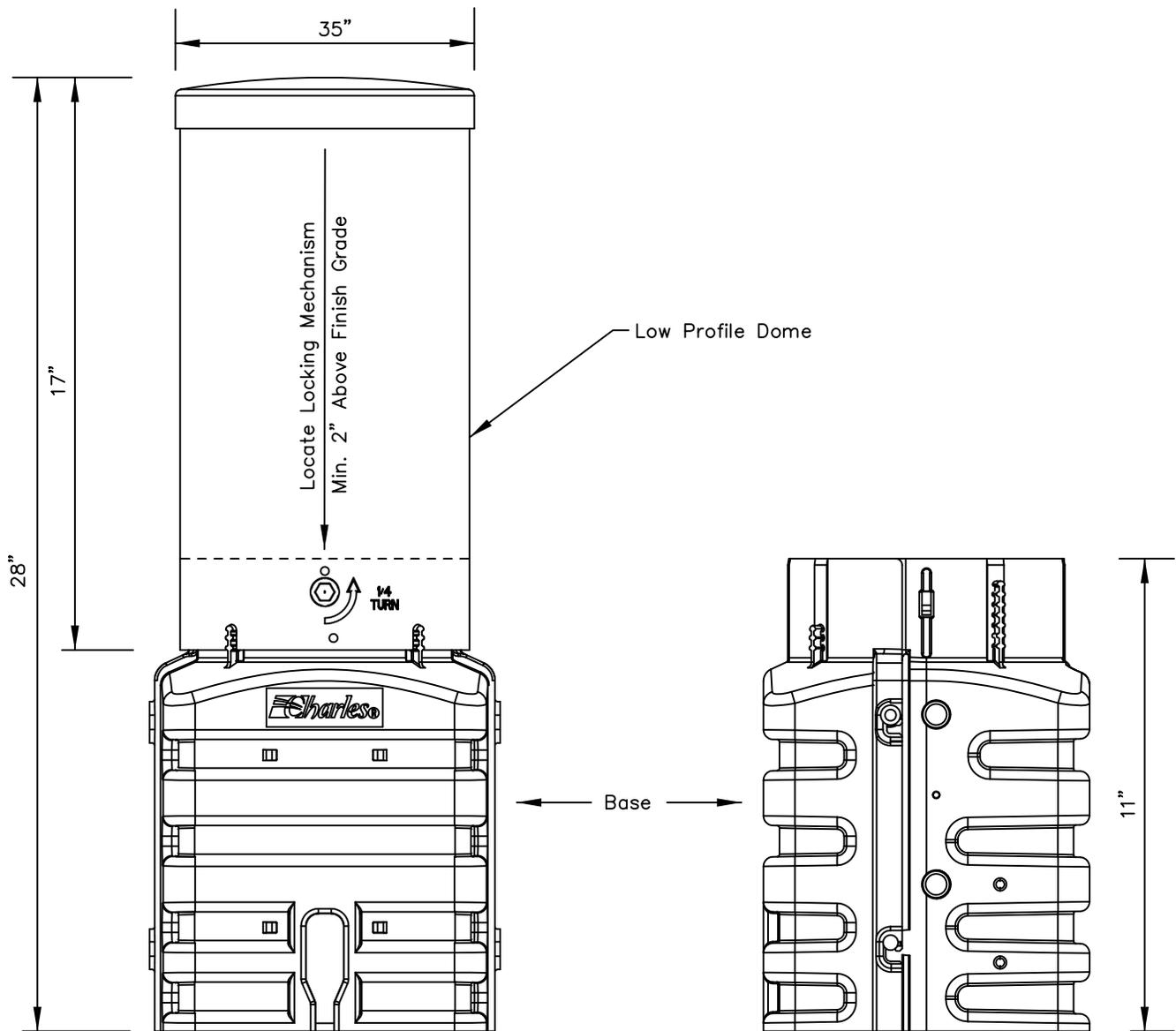
CHARLES INDUSTRIES
 MODEL 117 POLYETHYLENE LIGHT GREEN
 LOUVERED LOW PROFILE HOUSING



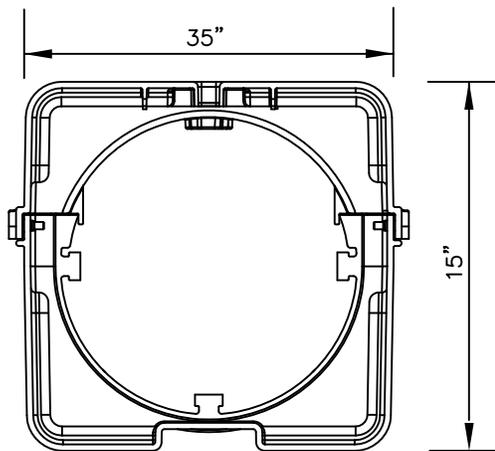
Notes:

1. Air Release Valve to be installed inside of a Charles Ind. buried, square, split pedestal with low profile dome or approved equal. Pedstal can be purchased from D. H. Supply (contact Buzz Kraftt @ D.H. Supply, 1-866-347-4677)
 D. H. Supply LLHP MODEL 117
2. Lock mechanism to be located min. 2" above finish grade.
3. Pedestal base to be placed on 4" thick, compacted gravel bed.
4. Screened opening of the standpipes to be 12" min. above finish grade.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	AUTOMATIC AIR VACUUM/ AIR RELEASE VALVE	2.14 RAW
	NOV. 2014	_____		
	_____	_____		



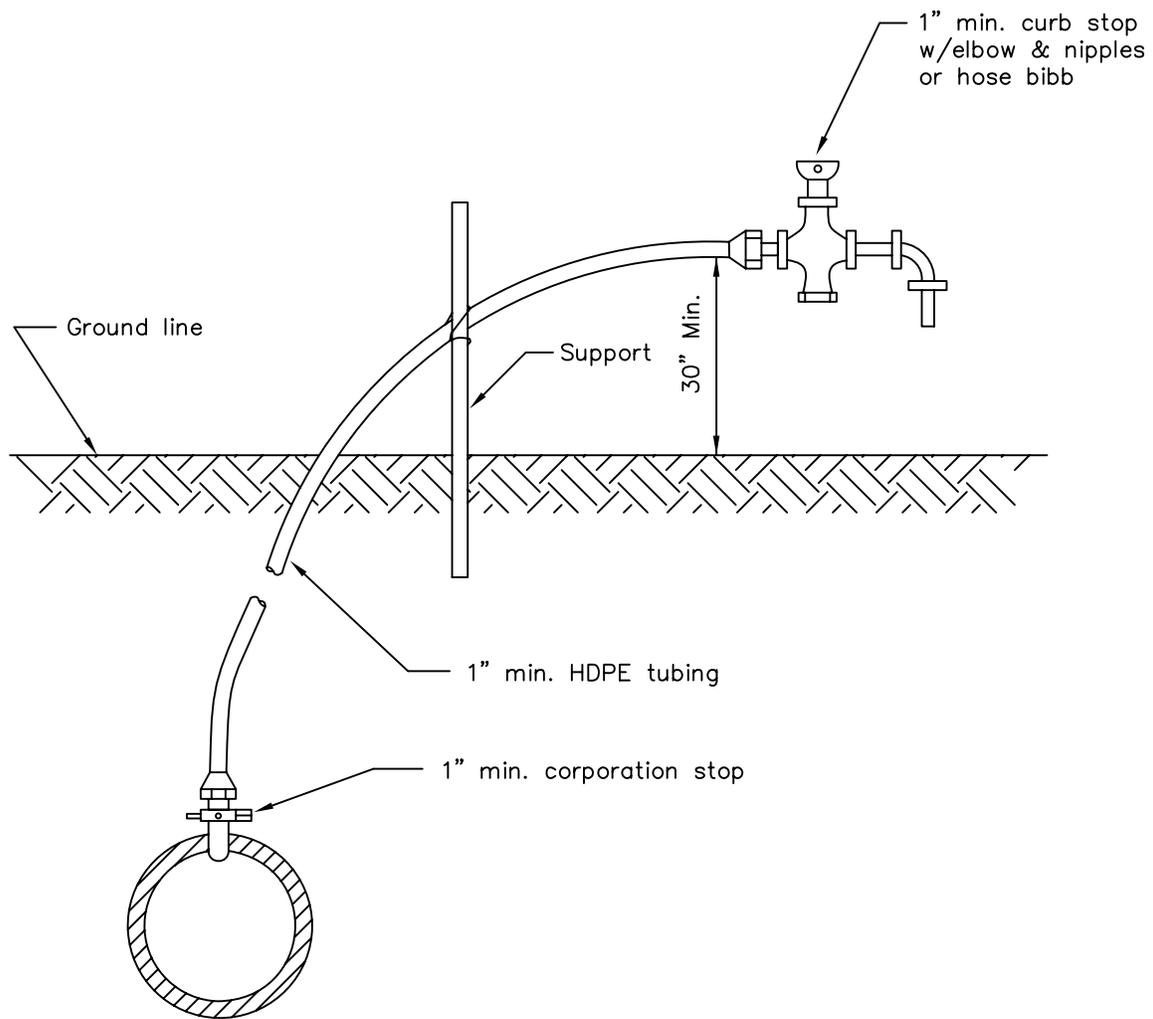
BASE, ROTATED 90°



PEDESTAL ASSEMBLY

Charles Industries
 Lowered Low Profile
 Housing (LLPH)
 LIGHT GREEN
 MODEL 117
 Without Bracketry
 & Crossbar
 With Locking Mechanism

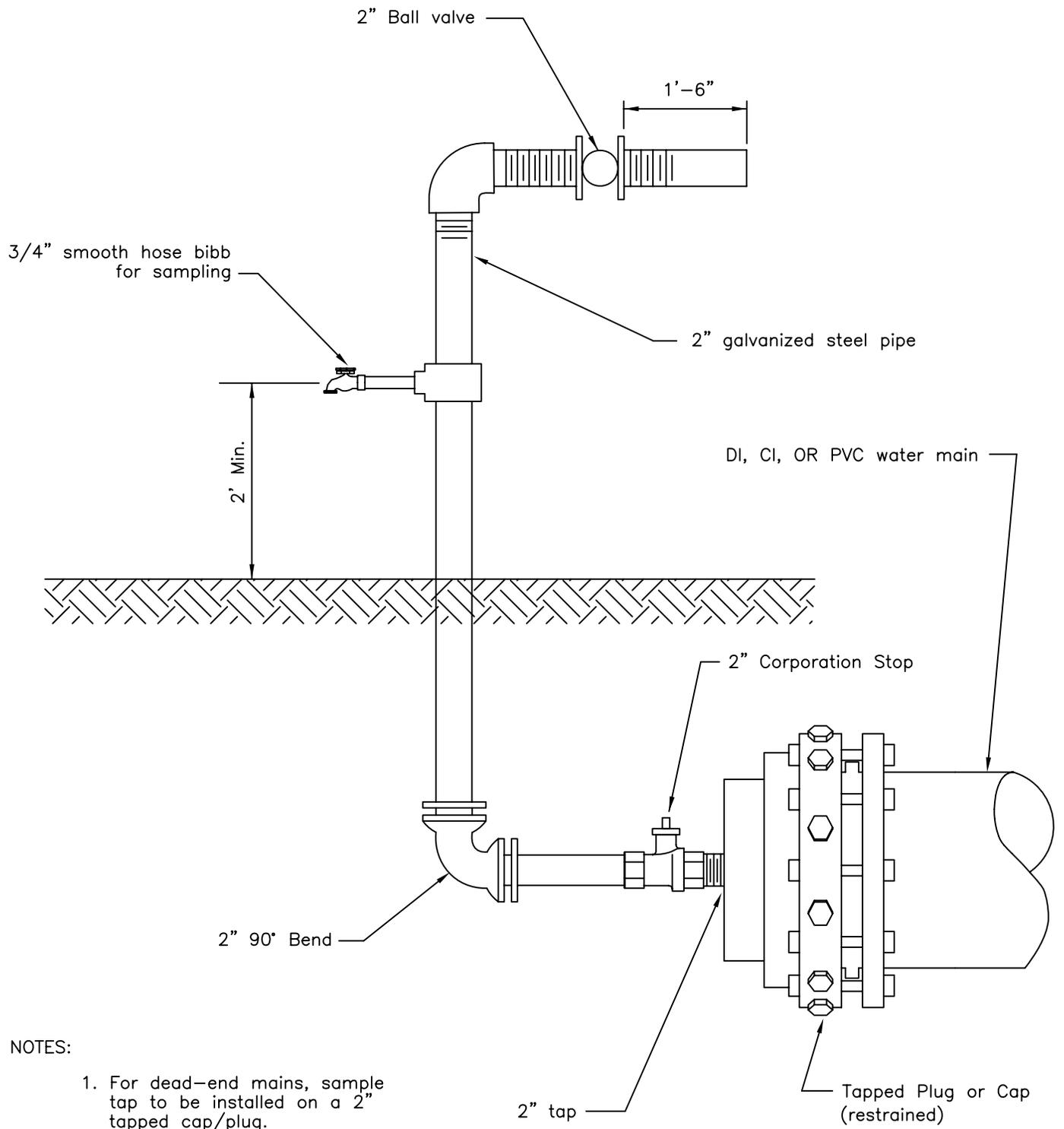
TAMPA WATER DEPARTMENT	APPROVED Nov. 2014	REVISED _____ _____ _____	PEDESTAL FOR AUTOMATIC AIR VACUUM/ AIR RELEASE VALVE	2.15 RAW
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Notes:

1. Water outlet shall be held up off the ground so as not to interfere with the sampling process.
2. Corporation stop to be removed and brass plug installed in tapped main after operation.

<p>TAMPA WATER DEPARTMENT</p>	<p>APPROVED Sept. 2011</p>	<p>REVISED _____ _____ _____</p>	<p>TEMPORARY SAMPLE TAP INSTALLATION w/DI, CI, OR PVC PIPE</p>	<p>2.18</p>
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NOTES:

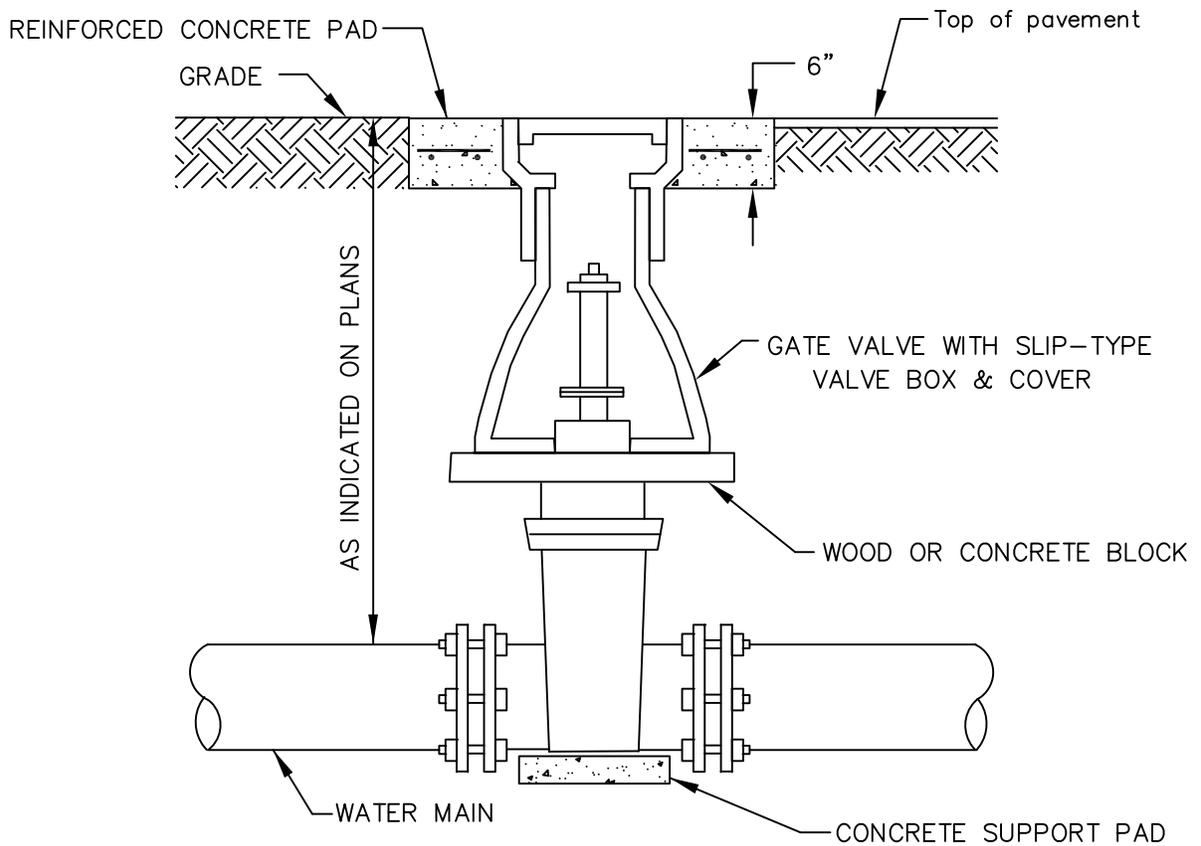
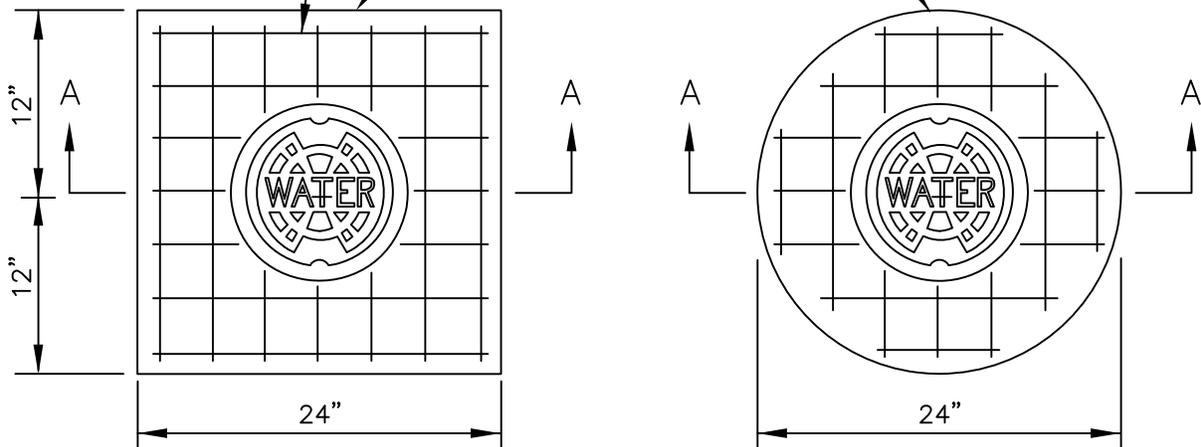
1. For dead-end mains, sample tap to be installed on a 2" tapped cap/plug.
2. Flushing/sampling arrangement to be removed after disinfection of main line.
3. After operation complete, install brass plug at corporation stop.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TEMPORARY SAMPLE TAP INSTALLATION FOR END OF LINE W/DI, CI, OR PVC PIPE	2.19
	Sept. 2011	_____		
	_____	_____		

WIRE MESH

(6 GAUGE 4" x 4" W.W.F.)

3000 PSI CONCRETE PAD
(See Notes)



SECTION A-A

N.T.S.

Notes :

1. Circular or square concrete pad required for all valve box installations.
2. Cast iron boxes shall be firmly supported, centered and plumb over the operating nut of the valve. Valve box cover shall painted green, flush with the surface of the finished pavement, or grade or at such other level as may be directed by the Department.
- 3."Green" Water Valve locate markers required for all valve installations.



TAMPA
WATER
DEPARTMENT

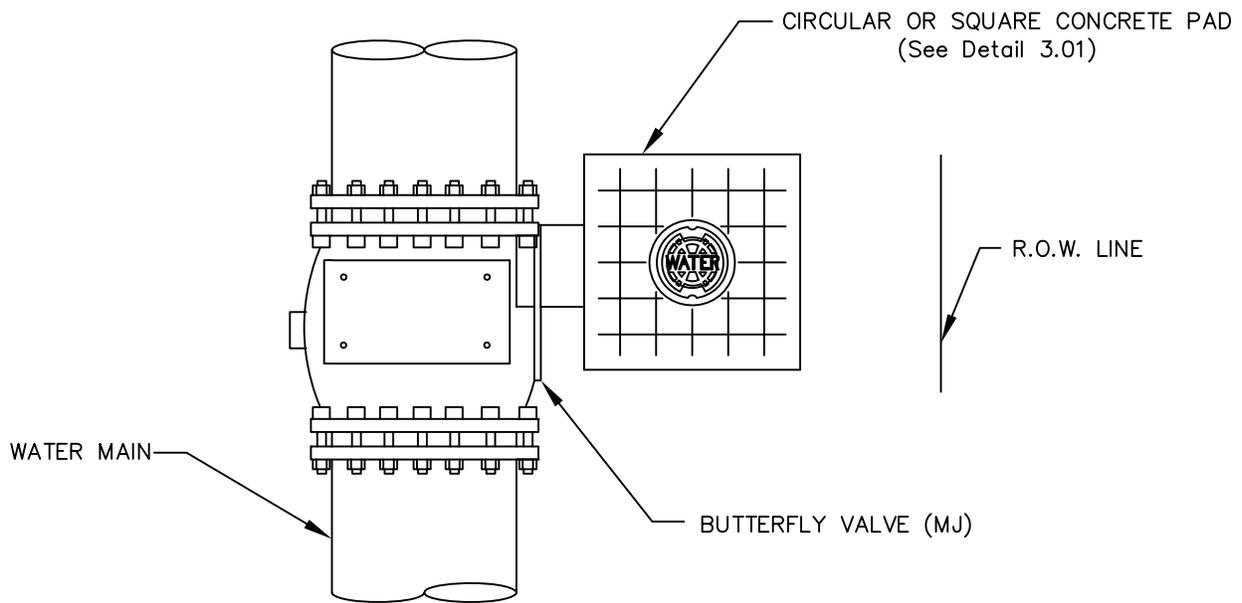
APPROVED

Jan, 2014

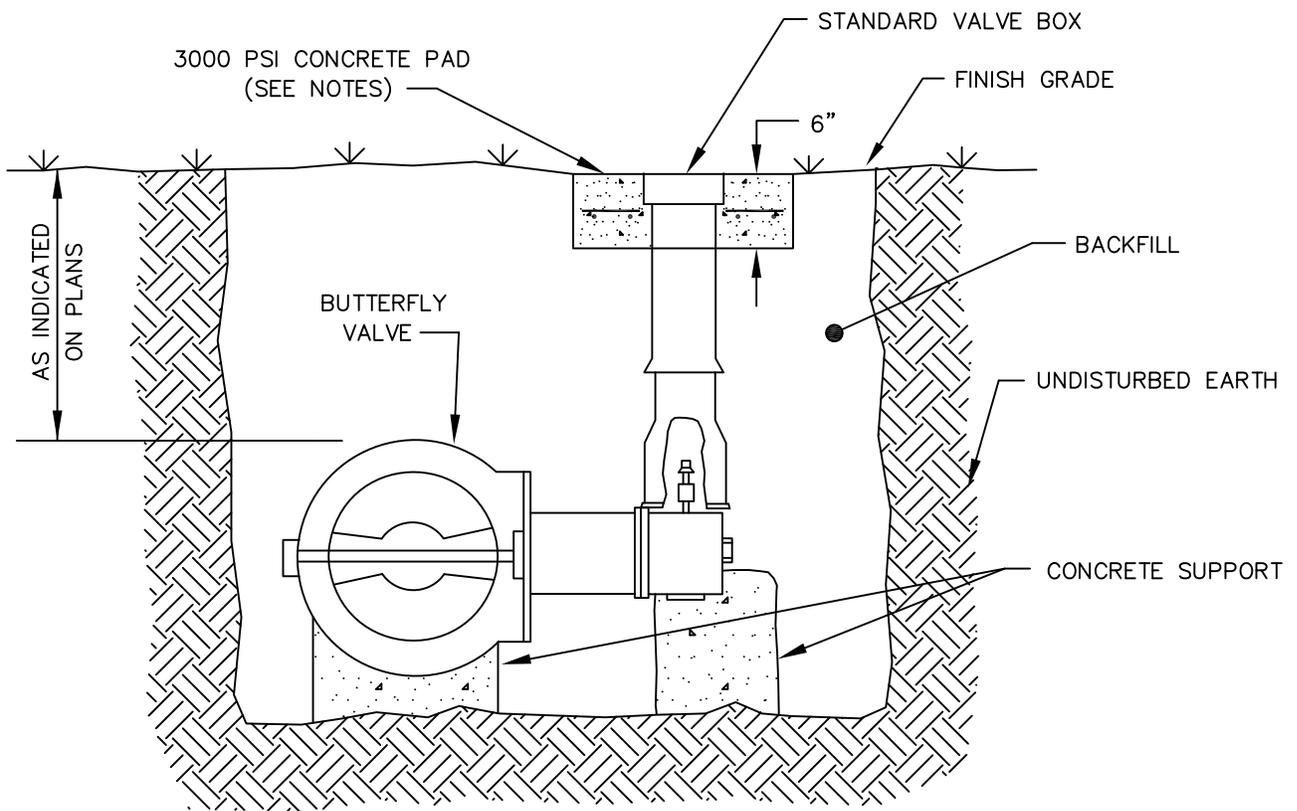
REVISED

RAW WATER VALVE
INSTALLATION W/VALVE
BOX & PAD FOR DI PIPE

3.01



PLAN

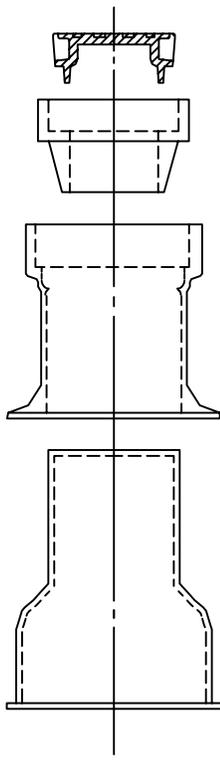


SECTION

Notes:

1. Circular or Square concrete pads for valve box and concrete supports as specified in detail above shall be furnished with all butterfly valve installations.
2. Orient valve so operator is located on the side of the pipe nearest the right-of-way line.

TAMPA WATER DEPARTMENT	APPROVED Feb. 2014	REVISED _____ _____ _____	BUTTERFLY VALVE INSTALLATION W/VALVE BOX & PAD	3.03
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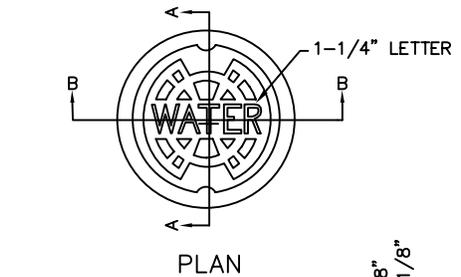
VALVE BOX ASSEMBLY

VALVE BOX COVER

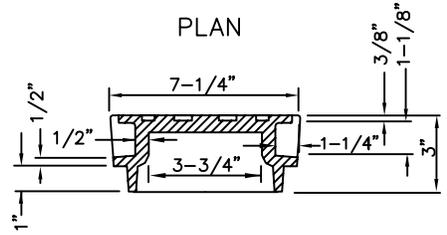
RISER

TOP SECTION

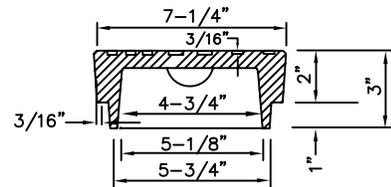
BOTTOM SECTION



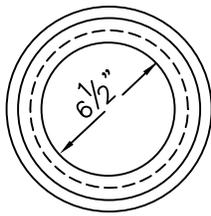
PLAN



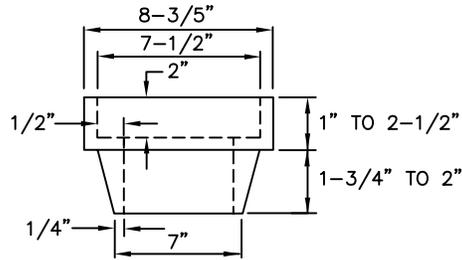
SECTION A-A



SECTION B-B



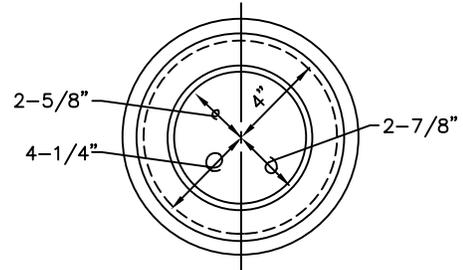
PLAN



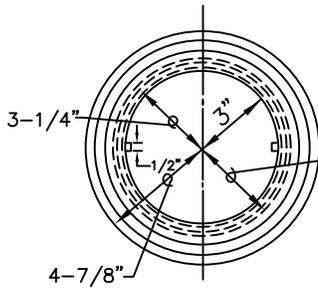
SIDE VIEW

RISER

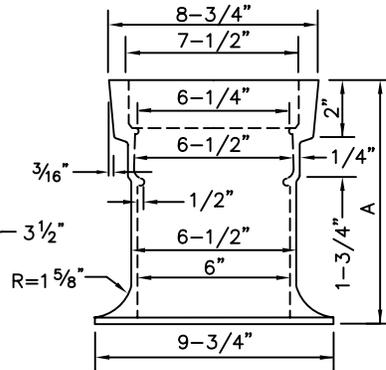
VALVE BOX COVER



PLAN

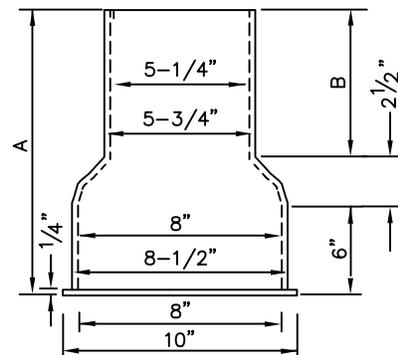


PLAN



SIDE VIEW

TOP SECTION



SIDE VIEW

BOTTOM SECTION

TOP SECTION	SIZE	A
	10"	10"
	16"	16"

BOTTOM SECTION	SIZE	A	B
	15"	15"	6-1/2"
	24"	24"	15-1/2"
	36"	36"	27-1/2"

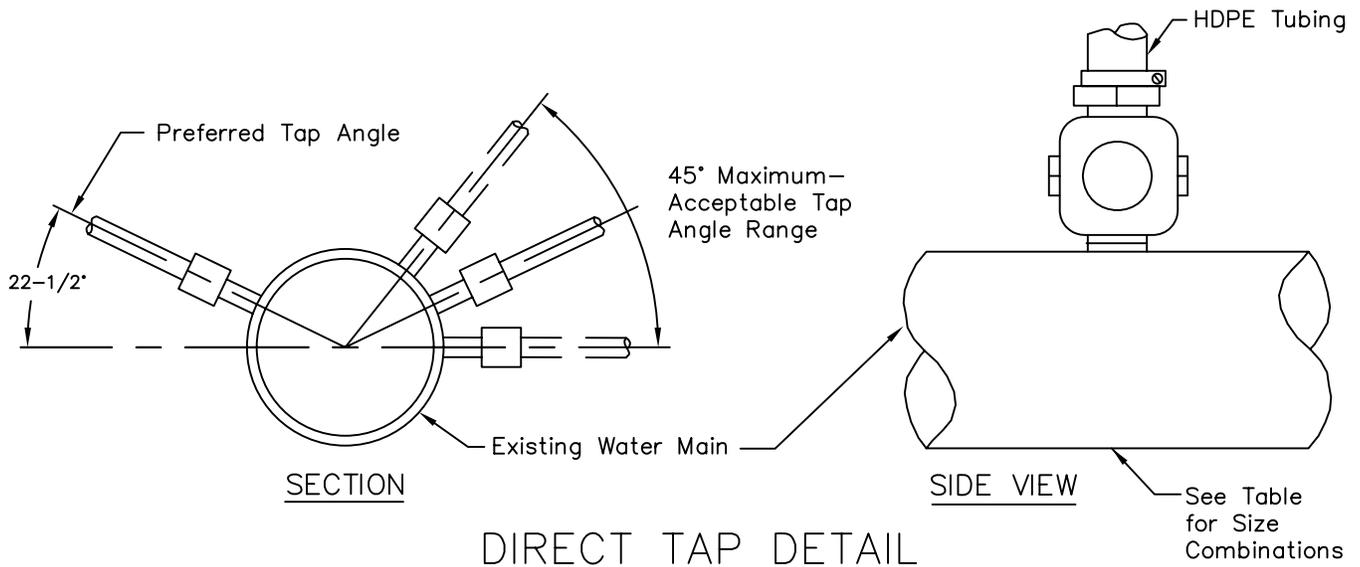
TAMPA
WATER
DEPARTMENT

APPROVED
Sept. 2011

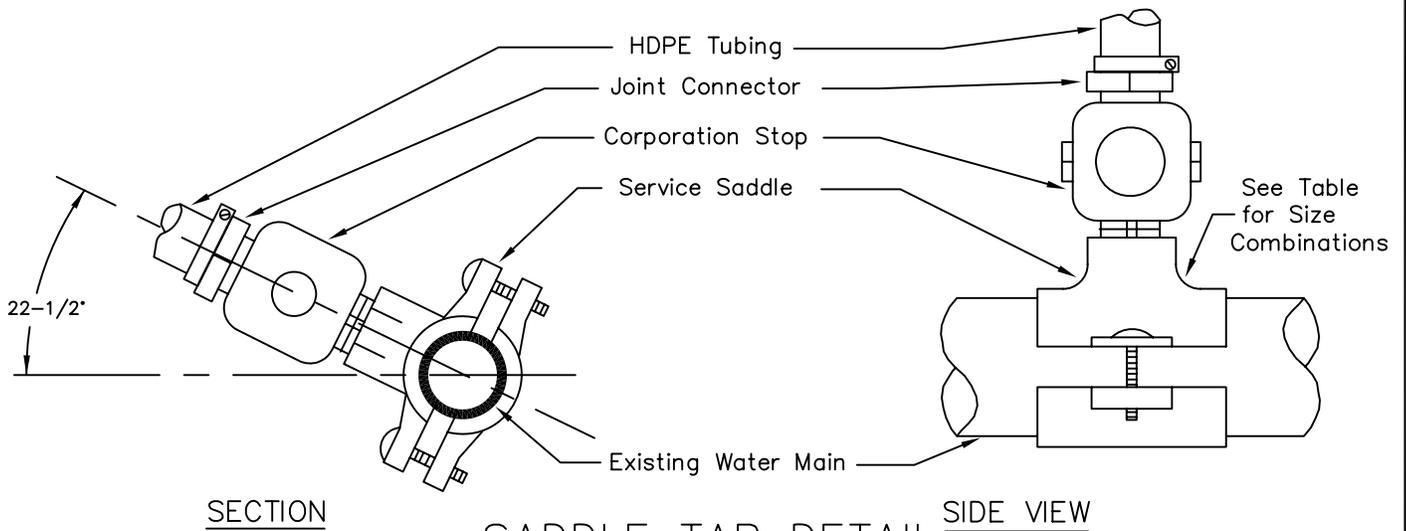
REVISED

VALVE BOX, SLIP-TYPE

3.04



DIRECT TAP DETAIL



SADDLE TAP DETAIL

PIPE	SIZE	CORPORATION TAP SIZE	
		1"	2"
DI/CI	12"	DT	DT
	8"	DT	SS
	6"	DT	SS
	4"	SS	SS
PVC	2", 2-1/2"	SS	NA
	8" C-900	SS	SS
	6" C-900	SS	SS
	2"-SDR21	SS	NA
OTHER*	12"	SS	SS
	10"	SS	SS
	8"	SS	SS
	6"	SS	SS
	4"	SS	NA
	3"	SS	NA
	2", 2-1/2"	SS	NA

LEGEND

DT- Direct Tap Can be Allowed
 SS- Service Saddle is Required
 NA- Not Allowed
 *Asbestos Cement, Steel, Galvanized Iron Pipe, Non Std PVC, etc.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TAPPING DETAIL FOR 3/4", 1", 1-1/2" & 2" W/DI, CI, OR PVC PIPE	5.01
	Sept. 2011	_____		