

**DESIGN BUILD AGREEMENT**

PINELLAS COUNTY GOVERNMENT IS COMMITTED TO PROGRESSIVE PUBLIC POLICY, SUPERIOR PUBLIC SERVICE, COURTEOUS PUBLIC CONTACT, JUDICIOUS EXERCISE OF AUTHORITY AND SOUND MANAGEMENT OF PUBLIC RESOURCES, TO MEET THE NEEDS AND CONCERNS OF OUR CITIZENS TODAY AND TOMORROW.



**DESIGN BUILD SERVICES AGREEMENT**

**RFP TITLE: Find and Fix Gravity Sewer Rehabilitation – Professional Design-Build Services**

**RFP CONTRACT NO. 24-0085-RFP-DB**

**COUNTY PID NO. 005225A**

**DB FIRM: GCU, LLC DBA Gulf Coast Underground, LLC**

<b>DESIGN BUILD AGREEMENT</b>
-------------------------------

## Contents

<b>PUBLIC NOTICE/LEGAL ADVERTISEMENT FOR THE REQUEST FOR QUALIFICATIONS.....</b>	<b>3</b>
<b>DESIGN BUILD AGREEMENT .....</b>	<b>4</b>
<b>SECTION 1. CONTRACT DOCUMENTS.....</b>	<b>4</b>
<b>SECTION 2. SCOPE OF WORK .....</b>	<b>5</b>
<b>SECTION 3. CONTRACT AMOUNT .....</b>	<b>6</b>
<b>SECTION 4. BONDS .....</b>	<b>7</b>
<b>SECTION 5. CONTRACT TIME AND LIQUIDATED DAMAGES .....</b>	<b>8</b>
<b>SECTION 6. EXHIBITS INCORPORATED .....</b>	<b>10</b>
<b>SECTION 7. NOTICES .....</b>	<b>11</b>
<b>SECTION 8. MODIFICATION.....</b>	<b>12</b>
<b>SECTION 9. E-VERIFY .....</b>	<b>12</b>
<b>SECTION 10. SUCCESSORS AND ASSIGNS .....</b>	<b>12</b>
<b>SECTION 11. GOVERNING LAW AND VENUE.....</b>	<b>12</b>
<b>SECTION 12. NO WAIVER .....</b>	<b>12</b>
<b>SECTION 13. ENTIRETY .....</b>	<b>12</b>
<b>SECTION 14. SEVERABILITY .....</b>	<b>12</b>
<b>SECTION 15. CHANGE ORDER AUTHORIZATION .....</b>	<b>13</b>
<b>SECTION 16. CONSTRUCTION .....</b>	<b>13</b>
<b>SECTION 17. ORDER OF PRECEDENCE .....</b>	<b>13</b>
<b>EXHIBIT A - BONDS .....</b>	<b>15</b>
<b>EXHIBIT B - INSURANCE REQUIREMENTS .....</b>	<b>21</b>
<b>EXHIBIT C - RELEASE AND AFFIDAVIT .....</b>	<b>28</b>
<b>EXHIBIT D - FORM OF CONTRACT APPLICATION FOR PAYMENT .....</b>	<b>29</b>
<b>EXHIBIT E - CHANGE ORDER.....</b>	<b>32</b>
<b>EXHIBIT F - DESIGN BUILDER CERTIFICATE OF SUBSTANTIAL COMPLETION .....</b>	<b>33</b>
<b>EXHIBIT G - FINAL PAYMENT CHECKLIST .....</b>	<b>34</b>
<b>EXHIBIT H - GENERAL TERMS AND CONDITIONS .....</b>	<b>35</b>
<b>EXHIBIT I - SUPPLEMENTAL TERMS AND CONDITIONS .....</b>	<b>55</b>
<b>EXHIBIT J - DESIGN CRITERIA PACKAGE .....</b>	<b>57</b>
<b>1.0 INTRODUCTION .....</b>	<b>62</b>
<b>1.2 DCP Organization .....</b>	<b>64</b>
<b>2.0 Project Description .....</b>	<b>64</b>
<b>3.0 PROPOSED IMPROVEMENTS.....</b>	<b>68</b>
<b>3.1 Planning and Preliminary Design .....</b>	<b>68</b>
3.1.1 Gravity Line and Manhole Cleaning .....	68
3.1.2 Investigation and Inspection.....	68
3.1.3 Technical Memorandum .....	69
3.1.4 Referenced Standards .....	69
<b>3.2 Final Design and Proposal.....</b>	<b>69</b>
3.2.1 Construction Documents .....	69
3.2.2 Proposal.....	69
<b>3.3 Flow Monitoring .....</b>	<b>70</b>
<b>4.0 CONSTRUCTABILITY AND OTHER CONSIDERATIONS .....</b>	<b>70</b>
<b>4.1 Permitting .....</b>	<b>70</b>
<b>4.2 Access .....</b>	<b>70</b>
4.2.1 Public Right-of-Way .....	70
4.2.2 Right of Entry.....	71
4.2.3 Existing Utility Easements .....	71
4.2.4 Temporary Construction Easements .....	71

## DESIGN BUILD AGREEMENT

4.3	Obtain Permits/Regulatory Agency Coordination – FDOT for MOT .....	71
4.4	Public Communications and Outreach .....	71
5.0	Additional Data Resources .....	72
5.1	Studies and Investigation Reports .....	72
5.2	GIS Data .....	72
6.0	Project Schedule:.....	73
	EXHIBIT K – PERMITS .....	395
	EXHIBIT L - PHASE 1 AND PHASE 2 PROJECT DESIGN MILESTONES AND DELIVERABLES .....	396
	EXHIBIT M - DESIGN PROFESSIONAL, ENGINEERS, & CONTRACTOR.....	401
	EXHIBIT N - LUMP SUM AMENDMENT AGREEMENT FORM .....	402
	Attachment 1 - List of Drawings, Specifications, and Addendums .....	406
	Attachment 2 - Schedule of Values .....	407
	Attachment 3 - Assumptions, Clarifications, & Exclusions .....	408
	Attachment 4 - Completion Schedule .....	409
	Attachment 5 - List of Subcontractors and Major Suppliers.....	410
	Attachment 6 -Allowances .....	411
	EXHIBIT O - SCOPE OF SERVICES .....	412
	EXHIBIT P - SCOPE OF PHASE 2 SERVICES .....	441
	EXHIBIT Q - PHASE 1 COMPENSATION SCHEDULE.....	463
	EXHIBIT R - TRUTH-IN-NEGOTIATION CERTIFICATE .....	464
	EXHIBIT S - DESIGN BUILDER’S KEY PERSONNEL.....	465
	EXHIBIT T - STORED MATERIALS RECORD .....	466
	EXHIBIT U - GENERAL CONDITIONS CATEGORIES .....	467
	EXHIBIT V – REQUEST FOR PROPOSAL SOLICITATION .....	468

## **PUBLIC NOTICE/LEGAL ADVERTISEMENT FOR THE REQUEST FOR QUALIFICATIONS**

PUBLIC ANNOUNCEMENT AS REQUIRED BY THE CONSULTANTS

COMPETITIVE NEGOTIATIONS ACT, CHAPTER 287.055 FLORIDA STATUTES

**DESIGN BUILD AGREEMENT****DESIGN BUILD AGREEMENT**

PINELLAS COUNTY, FLORIDA, ("Owner") by and through THE BOARD OF COUNTY COMMISSIONERS hereby contracts with GCU, LLC DBA Gulf Coast Underground, LLC ("Design Builder") of Tampa, Florida, a Florida corporation authorized and licensed to do business in the State of Florida, to perform all work and services in connection with the design and construction of the Pinellas County Find and Fix Gravity Sewer Rehabilitation Project", as said work and services is set forth in this Agreement, the Plans and Specifications to be prepared by or for Design Builder as hereafter provided and all other Contract Documents hereafter specified (the "Work").

Owner and Design Builder, for the consideration herein set forth, agree as follows:

**SECTION 1. CONTRACT DOCUMENTS**

- A. The Contract Documents consist of this Agreement, the Design Criteria Package, the Exhibits described in Section 6 hereof, the Public Notice/Legal Advertisement, and any duly executed and issued addenda, Change Orders, Work Directive Changes, Field Orders and amendments relating thereto. Further, the term Contract Documents shall include all plans and specifications for the construction of the Project ("Construction Documents") to be prepared by or for Design Builder, but only after said Construction Documents have been completed and approved in writing by Owner. All of the foregoing Contract Documents are incorporated by reference and made a part of this Agreement (all of said documents including the Agreement sometimes being referred to herein as the "Contract Documents" and sometimes as the "Agreement" and sometimes as the "Contract"). A copy of the Contract Documents shall be maintained by Design Builder at the Project site at all times during the performance of the Work.
- B. Design Builder shall furnish Owner one (1) sealed copy, one (1) reproducible set, and one (1) CD of the Contract Documents. All copies of the Construction Documents required by Design Builder for execution of the Work shall be made by Design Builder at Design Builder's sole cost and expense. Upon the completion or termination of this Agreement, as directed by Owner, Design Builder shall deliver to Owner copies or originals, as required by the Owner, of all records, documents, drawings, notes, tracings, plans, Auto CAD files, specifications, maps, evaluations, reports and other technical data, other than working papers, prepared or developed by or for Design Builder under this Agreement ("Project Documents"). Design Builder shall be solely responsible for all costs associated with delivering to Owner the Project Documents. Design Builder, at its own expense, may retain copies of the Project Documents for its files and internal use. Notwithstanding anything in this Agreement to the contrary and without requiring Owner to pay any additional fees, Design Builder hereby grants Owner a nonexclusive, irrevocable license in all of the Project Documents for Owner's use on this Project. Design Builder warrants to Owner that it has full right and authority to grant this license to Owner. Further, Design Builder consents to Owner's use of the Project Documents to complete the Project following Design Builder's termination for any reason or to perform reconstruction, additions to or remodeling or renovations of the Project.
- C. Nothing contained in the Contract Documents shall create a contractual relationship between Owner and any third party; however, it is agreed that Owner is an intended third-party beneficiary of all contracts for design and engineering services, all subcontracts, purchase orders and other agreements relating to the Project between Design Builder and third parties. Design Builder shall incorporate the obligations of this Contract into its respective consultant agreements, subcontracts, supply agreements and purchase orders.

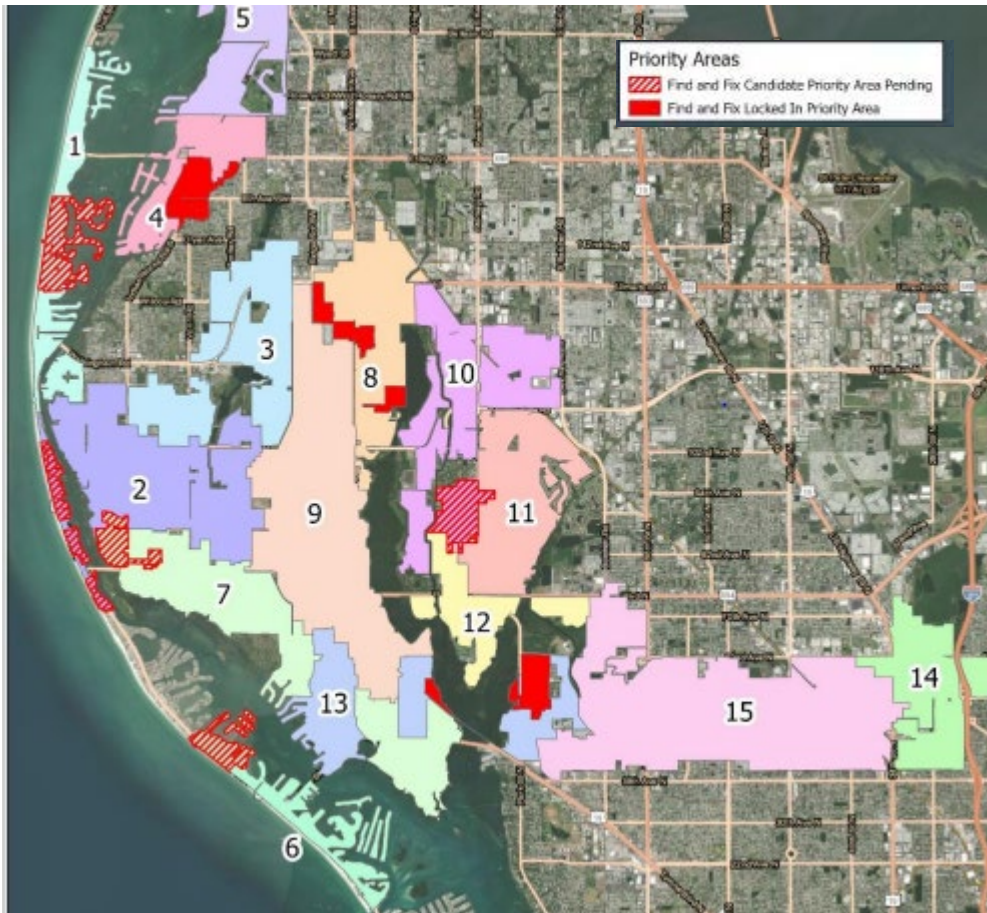


## DESIGN BUILD AGREEMENT

### **SECTION 2. SCOPE OF WORK**

The scope of the Work to be performed by Design Builder herein includes the design and construction as set out and described in the Contract Documents, including but not limited to all labor, services, materials and equipment as may be required to complete the Work in compliance with the Contract Documents.

This Project consists of the design and construction of Find and Fix Gravity Sewer Rehabilitation. The Gravity Sewer Rehabilitation will be located within County easement and on private property in the following areas, as denoted in RED:



The Project consists of two phases, referred to herein as Phase 1 and Phase 2. Phase 1, described more specifically in the attached Exhibit O, will include the following sub-phases: Program Verification, Schematic Design, Design Development, preparation of 50% complete Construction Documents, and development of the Lump Sum Price proposal. Phase 2, described more specifically in the attached Exhibit P, if authorized, will include the preparation of 100% Complete Construction Documents, completion of the Building Permit Phase, and the construction of the Project. Identified within Exhibit S are key personnel of the Design Builder's subconsultants. Design Builder shall require all subconsultants to agree that any such key personnel who are assigned to the Project shall not be removed without Owner's prior written approval, and if so removed must be immediately replaced with a person acceptable to Owner.

**DESIGN BUILD AGREEMENT****SECTION 3. CONTRACT AMOUNT**

In consideration of the faithful performance by Design Builder of the covenants in this Agreement to the full satisfaction and acceptance of Owner, Owner agrees to pay, or cause to be paid, to Design Builder the following Phase 1 Fee and Lump Sum Price amounts (collectively herein "Contract Amount"), in accordance with the terms of this Agreement:

- A. **Phase 1** - For all Phase 1 Services, including, but not limited to, causing the preparation of the 50% complete Construction Documents, providing value engineering services, reviewing Construction Documents for constructability, assisting and meeting with the Owner during the various design sub phases, and preparing cost estimates and schedules, Design Builder shall receive the fixed amount of **\$ 4,954,893.00** ("Phase 1 Fee") as the total lump sum compensation for all Phase 1 Services. Said lump sum amount shall be paid in accordance with the Phase 1 Compensation Schedule attached hereto as Exhibit Q.
- B. **Phase 2** - With respect to Phase 2 Services to be provided by Design Builder hereunder, Owner shall pay Design Builder the fixed lump sum amount ("Lump Sum Price") to be established in the Lump Sum Contract Price Amendment to the Agreement (the "Lump Sum Amendment"). Design Builder agrees to provide Owner with the Lump Sum Price proposal within forty-five (45) days after the Construction Drawings are at 50% Completion. The Lump Sum Price proposal shall be based upon the previous cost estimates provided by Design Builder as required hereunder. Further, the Lump Sum Price proposal shall be broken down into the categories and level of detail required by Owner. Design Builder agrees that all of its books, records and files, with respect to its development of the Lump Sum Amendment proposal, shall be open to Owner for review, examination and copying. The Lump Sum Price proposal shall include general condition expenses specified in the Lump Sum Amendment, and a profit markup not to exceed 5%. The Lump Sum Price shall be mutually agreed upon by Owner and Design Builder and shall be set forth in the Lump Sum Amendment. The form for the Lump Sum Amendment is attached hereto as Exhibit N. Design Builder guarantees that in no event shall the Design Builder's total compensation exceed the Lump Sum Price, as the Lump Sum Price may be adjusted pursuant to the terms herein for Change Orders and Construction Change Directives. In the event Design Builder and Owner fail to reach an agreement on the Lump Sum Amendment, Owner may elect to terminate this Contract. In the event of any such termination, Design Builder shall be entitled to receive that portion of the Contract Amount attributable to the Phase 1 Services earned through the date of termination plus that portion of any earned compensation associated with any Phase 2 Services provided, to the extent such services were expressly approved in advance and in writing by Owner; but Design Builder shall not be entitled to any further or additional compensation from Owner, including but not limited to damages or lost profits on portions of the Work not approved or performed.

**DESIGN BUILD AGREEMENT****SECTION 4. BONDS**

- A. Concurrent with its execution of the Lump Sum Amendment, Design Builder shall provide Performance and Payment Bonds, in the form prescribed in Exhibit A, in the amount of 100% of the Lump Sum Price, the costs of which are to be paid by Design Builder. The Performance and Payment Bonds shall be underwritten by a surety authorized to do business in the State of Florida and otherwise acceptable to Owner; provided, however, the surety shall meet the requirements of the Department of the Treasury Fiscal Service, "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsurance Companies" circular. This circular may be accessed via the web at [www.fms.treas.gov/c570/c570.html](http://www.fms.treas.gov/c570/c570.html). Should the Contract Amount be less than \$500,000, the requirements of Section 287.0935, F.S. shall govern the rating and classification of the surety.
- B. If the surety for any bond furnished by Design Builder is declared bankrupt, becomes insolvent, its right to do business is terminated in the State of Florida, or it ceases to meet the requirements imposed by the Contract Documents, the Design Builder shall, within five (5) calendar days thereafter, substitute at its cost and expense another bond and surety, both of which shall be subject to the Owner's approval.
- C. At the time Design Builder executes this Agreement, Design Builder shall deliver to Owner proof, reasonably acceptable to Owner, of Design Builder's ability to deliver the Performance and Payment bonds required hereunder.

**DESIGN BUILD AGREEMENT****SECTION 5. CONTRACT TIME AND LIQUIDATED DAMAGES**

- A. Time of Performance. Services performed pursuant to this contract shall remain in effect for eighteen hundred twenty-five consecutive calendar months from the commencement date on the Notice to Proceed. This Agreement shall become effective on the date of execution of the Agreement. Duration of the contract shall be two hundred seventy (270) consecutive calendar days for Phase 1 Design and TBD months for Phase 2 Construction. Time is of the essence in the performance of the Work under this Agreement. The "Phase 1 Commencement Date" shall be established in the written Notice to Proceed to be issued by the Project Manager, as hereinafter defined. Design Builder shall commence the Phase 1 Services portion of the Work within five (5) calendar days from the Phase 1 Commencement Date. Any Work performed by Design Builder prior to the Phase 1 Commencement Date shall be at the sole risk of Design Builder. The "Phase 2 Commencement Date" shall be established in the Lump Sum Amendment, except to the extent otherwise agreed to in writing by Owner. Design Builder shall commence the Phase 2 Services portion of the Work within five (5) calendar days after the Phase 2 Commencement Date. No portion of the Work, with respect to the Phase 2 Services to be provided hereunder shall be performed prior to the Phase 2 Commencement Date, unless expressly approved in advance by Owner in writing. The total period of time beginning with the Phase 2 Commencement Date and ending on the date of Substantial Completion of the Work is referred to hereafter as the "Contract Time". The Contract Time is further discussed in Paragraph B below.
- B. Because the Work is to be completed in two phases (i.e. Phase 1 and Phase 2), the timely completion of Phase 1 is critical to the timely completion of Phase 2 and, therefore, completion of the entire Project. Accordingly, Design Builder agrees to provide the Phase 1 Services in accordance with Exhibit L. With respect to the Phase 2 Services, the Lump Sum Amendment shall include the date that portion of the Work associated with the Phase 2 Services must be substantially completed by Design Builder. That Substantial Completion date shall be established in terms of calendar days after the Phase 2 Commencement Date. In the event Design Builder and Owner fail to reach an agreement on the Contract Time and the Substantial Completion date, Owner may elect to terminate this Contract. In the event of any such termination, Design Builder shall be entitled to receive that portion of the Contract Amount attributable to the Phase 1 Services earned to the date of termination plus that portion of any earned compensation associated with any Phase 2 Services provided, to the extent such services were expressly approved in advance and in writing by Owner; but Design Builder shall not be entitled to any further or additional compensation from Owner, including but not limited to damages or lost profits on portions of the Work not approved or performed. Substantial Completion of the Work shall be achieved when the Work has been completed to the point where Owner can occupy or utilize the Work for its intended purpose. The entire Work shall be fully completed and ready for final acceptance by Owner within sixty (60) calendar days after the Substantial Completion Date. Final Completion shall occur when the Agreement is completed in its entirety, is accepted by the Owner as complete and is so stated by the Owner as completed. As used herein and throughout the Contract Documents, the phrase "Project Manager" refers to the Owner's duly authorized representative and shall mean the Division Administrator or Department Director, as applicable, acting directly or through duly authorized representatives.
- C. Liquidated Damages in General. Owner and Design Builder recognize that, since time is of the essence for this Agreement, Owner will suffer financial loss if the Work associated with the Phase 2 is not substantially completed within the Contract Time specified in the Lump Sum Amendment, as said time may be adjusted as provided for herein. In such event, the total amount of Owner's damages, will be difficult, if not impossible, to definitely ascertain and quantify. Should Design Builder fail to achieve Substantial Completion within the number of calendar days established herein, Owner shall be entitled to assess, as liquidated damages, but not as a penalty, One Thousand dollars (\$1000.00) for each calendar day thereafter until Substantial Completion is achieved. Further, after Substantial Completion has been achieved, but Design Builder fails thereafter to achieve Final Completion within the required time period, Owner shall be entitled to assess, and Design Builder shall be liable for all actual damages incurred by Owner as a result of such failure. The Project shall be deemed to be substantially completed on the date the Design Professional issues a Certificate of Substantial Completion (after a Certificate of Occupancy has been issued by the local building official) pursuant to the terms hereof. Design Builder hereby expressly waives and relinquishes any right which it may have to seek to characterize the above noted liquidated damages as a penalty, which the parties agree represents a fair and reasonable estimate of the Owner's actual damages at the time of contracting if Design Builder fails to Substantially or Finally Complete the Work within the required time periods.
- D. Computation of Time Periods. When any period of time is referenced by days herein, it shall be computed to exclude the first day and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation, and the last day shall become the next succeeding day which is not a Saturday, Sunday or legal holiday.
- E. Determination of Number of Days of Default. For all contracts, regardless of whether the Contract Time is stipulated in calendar days or working days, the Owner will count default days in calendar days.

**DESIGN BUILD AGREEMENT**

- F. Right of Collection. The Owner has the right to apply any amounts due Design Builder under this Agreement or any other agreement between Owner and Design Builder, as payment on such liquidated damages due under this Agreement in Owner's sole discretion. Notwithstanding anything herein to the contrary, Owner retains its right to liquidated damages due under this Agreement even if Design Builder, at Owner's election and in its sole discretion, is allowed to continue and to finish the Work, or any part of it, after the expiration of the Contract Time including granted time extensions.
- G. Completion of Work by Owner. In the event Design Builder defaults on any of its obligations under the Agreement and Owner elects to complete the Work, in whole or in part, through another Design Builder or its own forces, the Design Builder and its surety shall continue to be liable for the liquidated damages under the Agreement until Owner achieves Substantial and Final Completion of the Work. Owner will not charge liquidated damages for any delay in achieving Substantial or Final Completion as a result of any unreasonable action or delay on the part of the Owner.
- H. Final Acceptance by Owner. The Owner shall consider the Agreement complete when the Design Builder has completed in its entirety all of the Work and the Owner has accepted all of the Work and notified the Design Builder in writing that the Work is complete. Once the Owner has approved and accepted the Work, Design Builder shall be entitled to final payment in accordance with the terms of the Contract Documents.
- I. Recovery of Damages Suffered by Third Parties. Design Builder shall be liable to Owner to the extent Owner incurs damages from a third party as a result of Design Builder's failure to fulfill all of its obligations under the Contract Documents. Owner's recovery of any delay related damages under this Agreement through the liquidated damages does not preclude Owner from recovering from Design Builder any other non-delay related damages that may be owed to it arising out of or relating to this Agreement.

**DESIGN BUILD AGREEMENT****SECTION 6. EXHIBITS INCORPORATED**

The following documents are expressly agreed to be incorporated by reference and made a part of this Agreement.

Exhibit A:	Performance and Payment Bond Forms
Exhibit B:	Insurance Requirements
Exhibit C:	Release and Affidavit Form
Exhibit D:	Design Builder Application for Payment Form
Exhibit E:	Change Order Form
Exhibit F:	Certificate of Substantial Completion Form
Exhibit G:	Final Payment Checklist
Exhibit H:	General Terms and Conditions
Exhibit I:	Supplemental Terms and Conditions
Exhibit J:	Design Criteria Package
Exhibit K:	Permits
Exhibit L:	Phase 1 and Phase 2 Project Design Milestones and Deliverables
Exhibit M:	Design Professional, Engineers, & Contractor
Exhibit N:	Lump Sum Amendment Agreement Form
Exhibit O:	Scope of Phase 1 Services
Exhibit P:	Scope of Phase 2 Services
Exhibit Q:	Phase 1 Compensation Schedule
Exhibit R:	Truth-in-Negotiation Certificate
Exhibit S:	Design Builder's Key Personnel
Exhibit T:	Stored Materials Record
Exhibit U:	General Conditions Categories
Exhibit V:	Request For Proposal Solicitation

**DESIGN BUILD AGREEMENT**

**SECTION 7. NOTICES**

- A. All notices required or made pursuant to this Agreement by the Design Builder to the Owner shall be deemed duly served if delivered by U.S. Mail or private delivery service, addressed to the following:

**If to the Owner:**

Nory Hancock  
Utilities Deputy Director  
14 S Ft Harrison Ave  
Clearwater, Florida 33756

**With a copy to:**

Merry Celeste  
Director of Purchasing  
400 S. Ft. Harrison Ave., Clearwater,  
FL 33756

**If to the Design Builder:**

Spencer Tuell, PE\*, DBIA President  
Gulf Coast Underground, LLC 5655  
Middle Rd Theodore, AL 36582

**With a copy to:**

- B. Either party may change its above noted address by giving 10 days written notice to the other party in accordance with the requirements of this Section.

**DESIGN BUILD AGREEMENT****SECTION 8. MODIFICATION**

No modification or change to the Agreement shall be valid or binding upon the parties unless in writing and executed by the party or parties intended to be bound by it.

**SECTION 9. E-VERIFY**

The Contractor and their Subcontractor(s) must register with and use the E-verify system in accordance with Florida Statute 448.095. A Contractor and Subcontractor may not enter into a contract with the County unless each party registers with and uses the E-verify system.

If a Contractor enters a contract with a Subcontractor, the Subcontractor must provide the Contractor with an affidavit stating that the Subcontractor does not employ, contract with, or subcontract with unauthorized aliens. The Contractor must maintain a copy of the affidavit for the duration of the contract.

If the County, Contractor, or Subcontract has a good faith belief that a person or entity with which it is contracting has knowingly violated Florida Statute 448.09(1) they shall immediately terminate the contract with the person or entity.

If the County has a good faith belief that a Subcontractor knowingly violated this provision, but the Contractor otherwise complied with this provision, the County will notify the Contractor and order that the Contractor immediately terminate the contract with the Subcontractor.

A contract terminated under the provisions of this section is not a breach of contract and may not be considered such. Any contract termination under the provisions of this section may be challenged to Section 448.095(2)(d), Florida Statute. Contractor acknowledges upon termination of this agreement by the County for violation of this section by Contractor, Contractor may not be awarded a public contract for at least one (1) year. Contractor acknowledges that Contractor is liable for any additional costs incurred by the County as a result of termination of any contract for a violation of this section.

Contractor or Subcontractor shall insert in any subcontracts the clauses set forth in this section, requiring the subcontracts to include these clauses in any lower tier subcontracts. Contractor shall be responsible for compliance by any Subcontractor or Lower Tier Subcontractor with the clause set for in this section.

**SECTION 10. SUCCESSORS AND ASSIGNS**

Subject to other provisions hereof, the Agreement shall be binding upon and shall inure to the benefit of the successors and assigns of the parties to the Agreement.

**SECTION 11. GOVERNING LAW AND VENUE**

The Agreement shall be interpreted under, and its performance governed by the laws of the State of Florida. In the event of any dispute by and between the parties, the exclusive jurisdiction and venue for any such proceeding shall be Pinellas County, Florida.

**SECTION 12. NO WAIVER**

The failure of the Owner to enforce at any time or for any period of time any one or more of the provisions of the Agreement shall not be construed to be and shall not be a waiver of any such provision or provisions or of its right thereafter to enforce each and every such provision.

**SECTION 13. ENTIRETY**

Each of the parties hereto agrees and represents that the Agreement comprises the full and entire agreement between the parties affecting the Work contemplated, and no other agreement or understanding of any nature concerning the same has been entered into or will be recognized, and that all negotiations, acts, work performed, or payments made prior to the execution hereof shall be deemed merged in, integrated and superseded by the Agreement.

**SECTION 14. SEVERABILITY**

Should any provision of the Agreement be determined by a court to be unenforceable, such a determination shall not affect the validity or enforceability of any other section or part thereof.



**DESIGN BUILD AGREEMENT****SECTION 15. CHANGE ORDER AUTHORIZATION**

The Project Manager shall have the authority on behalf of the Owner to execute all Change Orders and Work Directive Changes to the Agreement to the extent provided for under the Owner's Purchasing Policy and accompanying administrative procedures and paragraph 10.6 and 33.2 of Exhibit H, General Terms and Conditions.

**SECTION 16. CONSTRUCTION**

Any doubtful or ambiguous language contained in this Agreement shall not be construed against the party who physically prepared this Agreement. The rule sometimes referred to as "fortius contra proferentum" (pursuant to which ambiguities in a contractual term which appears on its face to have been inserted for the benefit of one of the parties shall be construed against the benefited party) shall not be applied to the construction of this Agreement.

**SECTION 17. ORDER OF PRECEDENCE**

In the event of any conflict between or among the terms of any of the Contract Documents, the following order of precedence shall be followed:

- Change Orders
- Exhibit N, Lump Sum Amendment
- General Terms and Conditions except the terms of any Supplemental Conditions shall take precedence over the Construction Agreement and the General Terms and Conditions.
- The Specifications
- Large Scale Details and Schedules
- The Drawings

To the extent any conflict in the terms of the Contract Documents cannot be resolved by application of the Order of Precedence, Supplemental Conditions, if any, shall take precedence or the conflict shall be resolved by imposing the more strict or costly obligation under the Contract Documents upon the Design Builder at Owner's discretion.

**DESIGN BUILD AGREEMENT**

IN WITNESS WHEREOF, the parties have executed this Agreement on the date(s) indicated below.

DESIGN BUILDER

By: Print Name: Spencer TuellTitle: PresidentDate: 9/9/24PINELLAS COUNTY, by and through its Board of  
County CommissionersBy: 

Chairman

Date: December 17, 2024.

ATTEST:

Ken Burke, Clerk of the Circuit Court

By: 

Deputy Clerk

Date: December 17, 2024.

APPROVAL AS TO FORM:

By: \_\_\_\_\_

Office of the County Attorney

**APPROVED AS TO FORM**By: Miles Belknap

Office of the County Attorney

## EXHIBIT A

**EXHIBIT A - BONDS**

The exact language in Section I must be used when submitting bonds

BOND NO. \_\_\_\_\_

**PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS:

That \_\_\_\_\_, as Principal,

And \_\_\_\_\_, as Surety,

Located at:

\_\_\_\_\_  
(Business Address)

\_\_\_\_\_  
(Phone Number)

Are held and firmly bound unto Pinellas County, Florida, as Obligee in the sum of

\_\_\_\_\_ DOLLARS    \\$\_\_\_\_\_ For the payment whereof we bind ourselves, our heirs, executors, personal representatives, successors and assigns, jointly and severally.

WHEREAS, Principal has entered into an Agreement with Obligee for Bid Title: **RFP Title: Find and Fix Gravity Sewer Rehabilitation – Professional Design-Build Services (PID # 005225A)**, Bid No: **24-0085-RFP-DB** in accordance with Plans and Specifications, which Agreement is incorporated by reference and made a part hereof, and is referred to as the Agreement.

THE CONDITIONS OF THIS BOND is that if Principal:

1. Performs the Agreement at the times and in the manner prescribed in the Agreement; and
2. Pays Obligee any and all losses, damages, costs and attorneys' fees, including appellate proceedings, that Obligee sustains because of any default by Principal under the Agreement, including, but not limited to, all delay damages, whether liquidated or actual, incurred by Obligee; and
3. Performs the guarantee of all Work and materials furnished under the Agreement for the time specified in the Agreement; then this bond is void; otherwise it remains in full force.

Any changes in or under the Agreement and compliance or noncompliance with any formalities connected with the Agreement or the changes do not affect Surety's obligations under this bond.

The Surety, for value received, hereby stipulates and agrees that no changes, extensions of time, alterations or additions to the terms of the Agreement or other Work to be performed hereunder, or the Specifications referred to therein shall in anyway affect its obligation under this bond, and it does hereby waive notice of any such changes, extensions of time, alterations or additions to the terms of the Agreement or to Work or to the Specifications.

This instrument shall be construed in all respects as a statutory bond. It is expressly understood the time provisions and statute of limitation under Section 255.05 Florida Statutes, shall apply to this bond.

**EXHIBIT A****BOND NO.** \_\_\_\_\_

By execution of this bond, the Surety acknowledges that is has read the Surety qualifications and obligations imposed by the construction Agreement and hereby satisfies those conditions.

IN WITNESS WHEREOF, the above bound parties have executed this instrument this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name of each party being affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

PRINCIPAL:

\_\_\_\_\_

\_\_\_\_\_

(Authorized Signature)

\_\_\_\_\_

(Print Name)

\_\_\_\_\_

(Title)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Business Address)

STATE OF FLORIDA

COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this day of \_\_\_\_\_

\_\_\_\_\_

By \_\_\_\_\_

of \_\_\_\_\_ a \_\_\_\_\_

Corporation, on behalf of the Corporation. He/She is personally known to me or has produced Florida Driver's License as identification and who did (did not) take an oath.

Notary: \_\_\_\_\_

Print Name: \_\_\_\_\_

Commission Number: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

**EXHIBIT A****BOND NO.** \_\_\_\_\_**SURETY:**

(Print)

(Business Address)

(Signature As Attorney In Fact)

(Attach Power of Attorney)

(Print Name)

(Title)

(Business Address)

(Telephone Number)

Witness as to Attorney in Fact

STATE OF FLORIDA

COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this day of \_\_\_\_\_

By \_\_\_\_\_

of \_\_\_\_\_ a \_\_\_\_\_

Corporation, on behalf of the Corporation. He/She is personally known to me or has produced Florida Driver's License as identification and who did (did not) take an oath.

Notary: \_\_\_\_\_

Print Name: \_\_\_\_\_

Commission Number: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

**EXHIBIT A****BOND NO.** \_\_\_\_\_**PAYMENT BOND**

BY THIS BOND, We \_\_\_\_\_  
(hereinafter called the ("Principal" and \_\_\_\_\_  
(hereinafter called the ("Surety"), located at \_\_\_\_\_

A surety insurer chartered and existing under the laws of the state of \_\_\_\_\_  
and authorized to do Business in the State of Florida, are held and firmly bound unto Pinellas County  
(hereinafter called the "County") in the sum of \_\_\_\_\_

\_\_\_\_\_ DOLLARS \ \$ \_\_\_\_\_

For payment of which we bond ourselves, our heirs, our personal representatives, our successors and our assignees,  
jointly and severally.

WHEREAS, Principal and County have reached a mutual agreement (hereinafter referred to as the "Agreement") for Bid  
Title: **RFP Title: Find and Fix Gravity Sewer Rehabilitation – Professional Design-Build Services (PID # 005225A)**,  
Bid No: **24-0085-RFP-DB** said Agreement being made a part of this Bond by this reference.

NOW, THEREFORE, THE CONDITION OF THIS BOND IS THAT IF THE PRINCIPAL:

1. Shall promptly make payments to all claimants as defined in section 255.05(l), Florida Statutes, Supplying the Principal with labor, materials or supplies, as used directly or indirectly by the Principal in the prosecution of the Work provided for in the Agreement and;
2. Shall pay the County for all losses, damages, expenses, costs and attorneys' fees, including appellate proceedings, that the County sustains because of a default by the Principal in contravention to the Agreement in regard to payment for such labor, materials, or supplies furnished to the Principal; then this bond is void; otherwise this Bond remains in full force and effect.

BE IT FURTHER KNOWN:

1. Any changes in or under the Agreement and compliance or noncompliance with any formalities Connected with the said Agreement or alterations, which may be made in the terms of said Agreement, or in the Work to be done under it, or the giving by the County of any extension of time for the performance of the said Agreement, or any other forbearance on the part of the County or Principal to the other, shall not in any way release the Principal and the Surety, or either of them, their heirs, personal representatives, successors or assigns from liability hereunder, notice to the Surety of any such changes, alterations, extensions or forbearance being hereby waived.
2. Certain claimants seeking the protection of this Bond must timely comply with the strict Requirements set forth in Section 255.05, Florida Statutes, and as otherwise provided by law.
3. The Provisions of this bond are subject to the limitation of Section 255.05(2). The Design Builder is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Design Builder shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Design Builder shall designate in writing a representative who shall have express authority to bind the Design Builder with respect to all matters under this Contract. The term "Design Builder" means the Design Builder or the Design Builder authorized representative.

**EXHIBIT A****BOND NO.** \_\_\_\_\_

By execution of this bond, the Surety acknowledges that it has read the Surety qualifications and obligations imposed by the construction Agreement and hereby satisfies those conditions.

THIS BOND DATE THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_\_

(the date of issue by the Surety or by the Surety's agent and the date of such agent's power-or-attorney)

PRINCIPAL:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Authorized Signature)

\_\_\_\_\_  
\_\_\_\_\_

(Print Name)

\_\_\_\_\_  
\_\_\_\_\_

(Title)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Business Address)

STATE OF FLORIDA

COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this day of \_\_\_\_\_

By \_\_\_\_\_

of \_\_\_\_\_ a \_\_\_\_\_

Corporation, on behalf of the Corporation. He/She is personally known to me or has produced Florida Driver's License as identification and who did (did not) take an oath.

Notary: \_\_\_\_\_

Print Name: \_\_\_\_\_

Commission Number: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

**EXHIBIT A****BOND NO.** \_\_\_\_\_

SURETY:

\_\_\_\_\_

\_\_\_\_\_

(Print)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Business Address)

\_\_\_\_\_

(Signature As Attorney In Fact)

(Attach Power of Attorney)

\_\_\_\_\_

(Print Name)

\_\_\_\_\_

(Title)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Business Address)

\_\_\_\_\_

(Telephone Number)

STATE OF FLORIDA

COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this day of \_\_\_\_\_

By \_\_\_\_\_

of \_\_\_\_\_ a \_\_\_\_\_

Corporation, on behalf of the Corporation. He/She is personally known to me or has produced Florida Driver's License as identification and who did (did not) take an oath.

Notary: \_\_\_\_\_

Print Name: \_\_\_\_\_

Commission Number: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_



**EXHIBIT B – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS****SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS****1. LIMITATIONS ON LIABILITY**

By submitting a Bid, the Vendor acknowledges and agrees that the services will be provided without any limitation on the Vendor's liability. The County objects to and shall not be bound by any term or provision that purports to limit the Vendor's liability to any specified amount in the performance of the services. The Vendor shall state any exceptions to this provision in its response, including specifying the proposed limits of liability in the stated exception to be included in the Services Agreement. The Vendor is deemed to have accepted and agreed to provide the services without any limitation on the Vendor's liability that the Vendor does not take exception to in its response. Notwithstanding any exceptions by the Vendor, the County reserves the right to declare its prohibition on any limitation on the Vendor's liability as non-negotiable, to disqualify any Bid I that includes exceptions to this prohibition on any limitation on the Vendor's liability, and to proceed with another responsive, responsible proposal, as determined by the County in its sole discretion.

**2. INSURANCE:**

The Vendor must provide a certificate of insurance and endorsement in accordance with the insurance requirements listed below, prior to recommendation for award.

The Vendor shall obtain and maintain and require any subcontractor to obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth. For projects with a Completed Operations exposure, Vendor shall maintain coverage and provide evidence of insurance for two (2) years beyond final acceptance. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and have an AM Best rating of A- VIII or better.

- A. Submittals should include, the Vendor's current Certificate(s) of Insurance. If Vendor does not currently meet insurance requirements, Vendor shall also include verification from their broker or agent that any required insurance not provided at that time of submittal will be in place prior to the award of contract.

Upon selection of Vendor for award, the selected Vendor shall email certificate that is compliant with the insurance requirements. If the certificate received is compliant, no further action may be necessary. The Certificate(s) of Insurance shall be signed by authorized representatives of the insurance companies shown on the Certificate(s).

**The Certificate holder section shall indicate Pinellas County, a Subdivision of the State of Florida, 400 S Fort Harrison Ave, Clearwater, FL 33756. Pinellas County shall be named as an Additional Insured for General Liability. A Waiver of Subrogation for Workers Compensation shall be provided if Workers Compensation coverage is a requirement.**

- B. Approval by the County of any Certificate(s) of Insurance does not constitute verification by the County that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate(s) of Insurance is in compliance with the requirements of the Agreement. County reserves the right to require a certified copy of the entire insurance policy, including endorsement(s), at any time during the Bid and/or contract period.

**EXHIBIT B – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS**

- C. If any insurance provided pursuant to the Agreement expires or cancels prior to the completion of the Work, you will be notified by CTrax, the authorized vendor of Pinellas County. Upon notification, renewal Certificate(s) of Insurance and endorsement(s) shall be furnished to Pinellas County Risk Management at [InsuranceCerts@pinellascounty.org](mailto:InsuranceCerts@pinellascounty.org) and to CTrax c/o JDi Data at [PinellasSupport@jdidata.com](mailto:PinellasSupport@jdidata.com) by the Vendor or their agent prior to the expiration date.
- 1) Vendor shall also notify County within twenty-four (24) hours after receipt, of any notices of expiration, cancellation, nonrenewal or adverse material change in coverage received by said Vendor from its insurer. Notice shall be given by email to Pinellas County Risk Management at [InsuranceCerts@pinellascounty.org](mailto:InsuranceCerts@pinellascounty.org). Nothing contained herein shall absolve Vendor of this requirement to provide notice.
  - 2) Should the Vendor, at any time, not maintain the insurance coverages required herein, the County may terminate the Agreement,
- D. If subcontracting is allowed under this Bid, the Primary Vendor shall obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth; and require any subcontractors to obtain and maintain, at all times during its performance of the Agreement, insurance limits as it may apply to the portion of the Work performed by the subcontractor; but in no event will the insurance limits be less than \$500,000 for Workers' Compensation/Employers' Liability, and \$1,000,000 for General Liability and Auto Liability if required below.
- All subcontracts between the Vendor and its Subcontractors shall be in writing and are subject to the County's prior written approval. Further, all subcontracts shall
1. Require each Subcontractor to be bound to the Vendor to the same extent the Vendor is bound to the County by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the Subcontractor.
  2. Provide for the assignment of the subcontracts from the Vendor to the County at the election of Owner upon termination of the Contract.
  3. Provide that County will be an additional indemnified party of the subcontract.
  4. Provide that the County will be an additional insured on all insurance policies required to be provided by the Subcontractor except workers compensation and professional liability.
  5. Provide a waiver of subrogation in favor of the County and other insurance terms and/or conditions
  6. Assign all warranties directly to the County; and
  7. Identify the County as an intended third-party beneficiary of the subcontract. The Vendor shall make available to each proposed Subcontractor, prior to the execution of the subcontract, copies of the Contract Documents to which the Subcontractor will be bound by this Section C and identify to the Subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Contract Documents.
- E. Each insurance policy and/or certificate shall include the following terms and/or conditions:
- 1) The Named Insured on the Certificate of Insurance and insurance policy must match the entity's name that responded to the solicitation and/or is signing the agreement with the County.
  - 2) Companies issuing the insurance policy, or policies, shall have no recourse against County for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of Vendor.
  - 3) The term "County" or "Pinellas County" shall include all Authorities, Boards, Bureaus, Commissions, Divisions, Departments and Constitutional offices of County and individual members, employees thereof in their official capacities, and/or while acting on behalf of Pinellas County.
  - 4) All policies shall be written on a primary, non-contributory basis.

The minimum insurance requirements and limits for this Agreement, which shall remain in effect throughout its duration and for two (2) years beyond final acceptance for projects with a Completed Operations exposure, are as follows:

**EXHIBIT B – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS**

- 1) **Workers' Compensation Insurance** Worker's Compensation Insurance is required if required pursuant to Florida law. If, pursuant to Florida law, Worker's Compensation Insurance is required, employer's liability, also known as Worker's Compensation Part B, is also required in the amounts set forth herein.

**Limits**

Employers' Liability Limits	Florida Statutory
Per Employee	\$ 500,000
Per Employee Disease	\$ 500,000
Policy Limit Disease	\$ 500,000

If Vendor/Contractor is not required by Florida law, to carry Workers Compensation Insurance in order to perform the requirements of this Agreement, County Waiver Form for workers compensation must be executed, submitted, and accepted by Risk Management. Failure to obtain required Worker's Compensation Insurance without submitting and receiving a waiver from Risk Management constitutes a material breach of this Agreement.

- 2) **Commercial General Liability Insurance** including, but not limited to, Independent Vendor, Contractual Liability Premises/Operations, Products/Completed Operations, and Personal Injury.

**Limits**

Combined Single Limit Per Occurrence	\$ 1,000,000
Products/Completed Operations Aggregate	\$ 2,000,000
Personal Injury and Advertising Injury	\$ 1,000,000
General Aggregate	\$ 2,000,000

- 3) **Professional Liability (Errors and Omissions) Insurance** with at least minimum limits as follows. If "claims made" coverage is provided, "tail coverage" extending three (3) years beyond completion and acceptance of the project with proof of "tail coverage" to be submitted with the invoice for final payment. In lieu of "tail coverage", Proposer may submit annually to the County, for a three (3) year period, a current certificate of insurance providing "claims made" insurance with prior acts coverage in force with a retroactive date no later than commencement date of this contract.

**Limits**

Each Occurrence or Claim	\$ 5,000,000
General Aggregate	\$ 5,000,000

For acceptance of Professional Liability coverage included within another policy required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence must be greater than or equal to the amount of Professional Liability and other coverage combined.

- 4) **Property Insurance** Vendor will be responsible for all damage to its own property, equipment and/or materials.

**15. PHASE 2 INSURANCE REQUIREMENTS - CONSTRUCTION SERVICES**

The Design Builder must provide a certificate of insurance and endorsement in accordance with the insurance requirements listed below, prior to recommendation for award. The Design Builder shall obtain and maintain, and require any subcontractor to obtain and maintain, at all times during its performance of the Agreement in Phase 2 insurance of the types and in the amounts set forth. For projects with a Completed Operations exposure, Design Builder shall maintain coverage and provide evidence of insurance for 2 years beyond final acceptance. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and have an AM Best rating of A- VIII or better.

**EXHIBIT B – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS****1. LIMITATIONS ON LIABILITY**

By submitting a Bid, the Vendor acknowledges and agrees that the services will be provided without any limitation on the Vendor's liability. The County objects to and shall not be bound by any term or provision that purports to limit the Vendor's liability to any specified amount in the performance of the services. The Vendor shall state any exceptions to this provision in its response, including specifying the proposed limits of liability in the stated exception to be included in the Services Agreement. The Vendor is deemed to have accepted and agreed to provide the services without any limitation on the Vendor's liability that the Vendor does not take exception to in its response. Notwithstanding any exceptions by the Vendor, the County reserves the right to declare its prohibition on any limitation on the Vendor's liability as non-negotiable, to disqualify any Bid I that includes exceptions to this prohibition on any limitation on the Vendor's liability, and to proceed with another responsive, responsible proposal, as determined by the County in its sole discretion.

**2. INSURANCE:**

The Vendor must provide a certificate of insurance and endorsement in accordance with the insurance requirements listed below, prior to recommendation for award.

The Vendor shall obtain and maintain and require any subcontractor to obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth. For projects with a Completed Operations exposure, Vendor shall maintain coverage and provide evidence of insurance for two (2) years beyond final acceptance. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and have an AM Best rating of A- VIII or better.

F. Submittals should include, the Vendor's current Certificate(s) of Insurance. If Vendor does not currently meet insurance requirements, Vendor shall also include verification from their broker or agent that any required insurance not provided at that time of submittal will be in place prior to the award of contract.

Upon selection of Vendor for award, the selected Vendor shall email certificate that is compliant with the insurance requirements. If the certificate received is compliant, no further action may be necessary. The Certificate(s) of Insurance shall be signed by authorized representatives of the insurance companies shown on the Certificate(s).

**The Certificate holder section shall indicate Pinellas County, a Subdivision of the State of Florida, 400 S Fort Harrison Ave, Clearwater, FL 33756. Pinellas County shall be named as an Additional Insured for General Liability. A Waiver of Subrogation for Workers Compensation shall be provided if Workers Compensation coverage is a requirement.**

G. Approval by the County of any Certificate(s) of Insurance does not constitute verification by the County that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate(s) of Insurance is in compliance with the requirements of the Agreement. County reserves the right to require a certified copy of the entire insurance policy, including endorsement(s), at any time during the Bid and/or contract period.

H. If any insurance provided pursuant to the Agreement expires or cancels prior to the completion of the Work, you will be notified by CTrax, the authorized vendor of Pinellas County. Upon notification, renewal Certificate(s) of Insurance and endorsement(s) shall be furnished to Pinellas County Risk Management at [InsuranceCerts@pinellascounty.org](mailto:InsuranceCerts@pinellascounty.org) and to CTrax c/o JDi Data at [PinellasSupport@ididata.com](mailto:PinellasSupport@ididata.com) by the Vendor or their agent prior to the expiration date.

## EXHIBIT B – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS

- 1) Vendor shall also notify County within twenty-four (24) hours after receipt, of any notices of expiration, cancellation, nonrenewal or adverse material change in coverage received by said Vendor from its insurer. Notice shall be given by email to Pinellas County Risk Management at [InsuranceCerts@pinellascounty.org](mailto:InsuranceCerts@pinellascounty.org). Nothing contained herein shall absolve Vendor of this requirement to provide notice.
  - 2) Should the Vendor, at any time, not maintain the insurance coverages required herein, the County may terminate the Agreement,
- I. If subcontracting is allowed under this Bid, the Primary Vendor shall obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth; and require any subcontractors to obtain and maintain, at all times during its performance of the Agreement, insurance limits as it may apply to the portion of the Work performed by the subcontractor; but in no event will the insurance limits be less than \$500,000 for Workers' Compensation/Employers' Liability, and \$1,000,000 for General Liability and Auto Liability if required below.
- All subcontracts between the Vendor and its Subcontractors shall be in writing and are subject to the County's prior written approval. Further, all subcontracts shall
8. Require each Subcontractor to be bound to the Vendor to the same extent the Vendor is bound to the County by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the Subcontractor.
  9. Provide for the assignment of the subcontracts from the Vendor to the County at the election of Owner upon termination of the Contract.
  10. Provide that County will be an additional indemnified party of the subcontract.
  11. Provide that the County will be an additional insured on all insurance policies required to be provided by the Subcontractor except workers compensation and professional liability.
  12. Provide a waiver of subrogation in favor of the County and other insurance terms and/or conditions
  13. Assign all warranties directly to the County; and
  14. Identify the County as an intended third-party beneficiary of the subcontract. The Vendor shall make available to each proposed Subcontractor, prior to the execution of the subcontract, copies of the Contract Documents to which the Subcontractor will be bound by this Section C and identify to the Subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Contract Documents.
- J. Each insurance policy and/or certificate shall include the following terms and/or conditions:
- 1) The Named Insured on the Certificate of Insurance and insurance policy must match the entity's name that responded to the solicitation and/or is signing the agreement with the County.
  - 2) Companies issuing the insurance policy, or policies, shall have no recourse against County for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of Vendor.
  - 3) The term "County" or "Pinellas County" shall include all Authorities, Boards, Bureaus, Commissions, Divisions, Departments and Constitutional offices of County and individual members, employees thereof in their official capacities, and/or while acting on behalf of Pinellas County.
  - 4) All policies shall be written on a primary, non-contributory basis.

The minimum insurance requirements and limits for this Agreement, which shall remain in effect throughout its duration and for two (2) years beyond final acceptance for projects with a Completed Operations exposure, are as follows:

- 5) **Workers' Compensation Insurance** Worker's Compensation Insurance is required if required pursuant to Florida law. If, pursuant to Florida law, Worker's Compensation Insurance is required, employer's liability, also known as Worker's Compensation Part B, is also required in the amounts set forth herein.

Limits

Employers' Liability Limits

Florida Statutory

**EXHIBIT B – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS**

Per Employee	\$ 500,000
Per Employee Disease	\$ 500,000
Policy Limit Disease	\$ 500,000

If Vendor/Contractor is not required by Florida law, to carry Workers Compensation Insurance in order to perform the requirements of this Agreement, County Waiver Form for workers compensation must be executed, submitted, and accepted by Risk Management. Failure to obtain required Worker's Compensation Insurance without submitting and receiving a waiver from Risk Management constitutes a material breach of this Agreement.

- 6) **Commercial General Liability Insurance** including, but not limited to, Independent Vendor, Contractual Liability Premises/Operations, Products/Completed Operations, and Personal Injury. No explosion, collapse, or underground damage, crane length or boom weight exclusions allowed.

7)

Limits

Combined Single Limit Per Occurrence	\$ 1,000,000
Products/Completed Operations Aggregate	\$ 2,000,000
Personal Injury and Advertising Injury	\$ 1,000,000
General Aggregate	\$ 2,000,000

- 8) **Business Automobile or Trucker's/Garage Liability Insurance** covering owned, hired, and non-owned vehicles. If the Consultant does not own any vehicles, then evidence of Hired and Non-owned coverage is sufficient. Coverage shall be on an "occurrence" basis, such insurance to include coverage for loading and unloading hazards, unless Consultant can show that this coverage exists under the Commercial General Liability policy.

Limit

Combined Single Limit Per Accident	\$1,000,000
------------------------------------	-------------

- 9) **Excess or Umbrella Liability Insurance** excess of the primary coverage required, in paragraphs (1), (2), and (3) above. No explosion, collapse, or underground damage, crane length or boom weight exclusions allowed.

Limits

Each Occurrence	\$ 5,000,000
General Aggregate	\$ 5,000,000

- 10) **Pollution Legal/Environmental Legal Liability Insurance** for pollution losses arising from all services performed to comply with this contract. Coverage shall apply to sudden and gradual pollution conditions including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants, or pollutants into or upon land, the atmosphere or any watercourse or body of water, which results in Bodily Injury or Property Damage. If policy is written on a Claims Made form, a retroactive date is required, and coverage must be maintained for 3 years after completion of contract or "tail coverage must be purchased. Coverage should include and be for the at least the minimum limits listed below:

- a. Bodily injury, sickness, disease, mental anguish or shock sustained by any person, including death; property damage including physical injury to or destruction of tangible property including the resulting loss of use thereof, cleanup costs, and the loss of use of tangible property that has not been physically injured or destroyed.
- b. Defense including costs, charges and expenses incurred in the investigation, adjustment, or defense of claims for such compensation damages.
- c. Cost of Cleanup/Remediation.

**EXHIBIT B – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS**

## Limits

Per Claim or Occurrence	\$ 1,000,000
General Aggregate	\$ 1,000,000

For acceptance of Pollution Legal/Environmental Legal Liability coverage included within another policy coverage required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence must be greater than or equal to the amount of Pollution Legal/Environmental Legal Liability and other coverage combined.

- 11) Professional Liability (Errors and Omissions) Insurance** with at least minimum limits as follows. If “claims made” coverage is provided, “tail coverage” extending three (3) years beyond completion and acceptance of the project with proof of “tail coverage” to be submitted with the invoice for final payment. In lieu of “tail coverage”, Proposer may submit annually to the County, for a three (3) year period, a current certificate of insurance providing “claims made” insurance with prior acts coverage in force with a retroactive date no later than commencement date of this contract.

## Limits

Each Occurrence or Claim	\$ 1,000,000
General Aggregate	\$ 1,000,000

For acceptance of Professional Liability coverage included within another policy required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence must be greater than or equal to the amount of Professional Liability and other coverage combined.

- 12) Property Insurance** Vendor will be responsible for all damage to its own property, equipment and/or materials.

**EXHIBIT C - RELEASE AND AFFIDAVIT****EXHIBIT C - RELEASE AND AFFIDAVIT**

STATE OF FLORIDA

COUNTY OF \_\_\_\_\_

Before me, the undersigned authority, personally appeared \_\_\_\_\_, who after being duly sworn, deposes and says:

- 1) In accordance with the Contract Documents and in consideration of \ \$ \_\_\_\_\_ paid, \_\_\_\_\_ ("Design Builder") releases and waives for itself and its subcontractors, materialmen, successors and assigns, all claims demands, damages, costs and expenses, whether in contract or in tort, against The County Commissioners of Pinellas County, Florida, a political subdivision of the State of Florida ("Owner") relating in any way to the performance of the Agreement between Design Builder and Owner, dated \_\_\_\_\_, 200\_\_, for the period from \_\_\_\_\_ to \_\_\_\_\_.
- 2) This Release and Affidavit is given in connection with Design Builder [monthly/final] Application for Payment No. \_\_\_\_\_.

**Design Builder:**

By: \_\_\_\_\_

Its: \_\_\_\_\_ President

Date: \_\_\_\_\_

\_\_\_\_\_  
Witnesses

[Corporate Seal]

STATE OF FLORIDA

COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 200\_\_, by \_\_\_\_\_, as \_\_\_\_\_ of \_\_\_\_\_, a \_\_\_\_\_ corporation, on behalf of the corporation. He/She is personally known to me or has produced a \_\_\_\_\_ (state) driver's license no. \_\_\_\_\_ as identification.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public (Signature)

(AFFIX NOTARY SEAL)

(Printed Name)

\_\_\_\_\_  
(Title or Rank)\_\_\_\_\_  
(Serial Number, if any)



## EXHIBIT D - CONSTRUCTION MANAGER AT RISK APPLICATION FOR PAYMENT

**EXHIBIT D - FORM OF CONTRACT APPLICATION FOR PAYMENT****FORM OF CONTRACT APPLICATION FOR PAYMENT (PHASE 1 ONLY)****FORM OF CONTRACT APPLICATION FOR PAYMENT IN PHASE 2 SHALL BE AIA STANDARD FORM G702****FORM OF CONTRACT APPLICATION FOR PAYMENT**

\_\_\_\_\_ (County Project Manager)      Contract No. \_\_\_\_\_  
 \_\_\_\_\_ (County Department)  
 Pinellas County Board of County Commissioners (the OWNER)      Project No. \_\_\_\_\_  
    Application Date \_\_\_\_\_  
    Payment Application No. \_\_\_\_\_

FROM: \_\_\_\_\_ (Design Builder's Representative) \_\_\_\_\_  
    (Design Builder's Name)

\_\_\_\_\_ (Design Builder's Address) \_\_\_\_\_

RE: \_\_\_\_\_ (Project Name)

Original Contract Time \_\_\_\_\_ Revised Contract Time \_\_\_\_\_

Original Contract Amount      \ \$ \_\_\_\_\_

Total Net Changes      \ \$ \_\_\_\_\_

Revised Contract Amount:      \ \$ \_\_\_\_\_

Total Completed and Stored to Date      \ \$ \_\_\_\_\_

Retainage @ 5% (Phase 2 only)      \ \$ \_\_\_\_\_

Total Retained to date: (Phase 2 only)      \ \$ \_\_\_\_\_

Total Earned Less Retainage (Phase 2 only)      \ \$ \_\_\_\_\_

Less Previously Paid      \ \$ \_\_\_\_\_

**AMOUNT DUE THIS APPLICATION:**      \ \$ \_\_\_\_\_

Percent Work completed to Date:      \_\_\_\_\_ %

Percent Contract Time completed to Date      \_\_\_\_\_ %

Liquidated Damages to be Accrued      \ \$ \_\_\_\_\_

**EXHIBIT D - CONSTRUCTION MANAGER AT RISK APPLICATION FOR PAYMENT**

**BOND NO.**\_\_\_\_\_

ATTACH SCHEDULE OF VALUES AND ACCOMPANYING DOCUMENTATION TO THIS APPLICATION

### ACCOMPANYING DOCUMENTATION TO THIS APPLICATION

From (Contractor Name)

Pinellas County Department

Payment Application Number \_\_\_\_\_

Purchase Order Number \_\_\_\_\_

[illegible]

## PAYMENT SUMMARY

Original Agreement Amount 1\$

Net Change by Change Order	\\$
----------------------------	-----

Agreement Sum to Date \ \$

Total Completed to Date \ \$

Stored Materials to Install	\\$
-----------------------------	-----

TOTAL	\\$
-------	-----

Retainage %

Total Earned Less Retainage	\\$
-----------------------------	-----

Less Previous Payments	<u>\\$</u>
------------------------	------------

Current Payment Due	\\$
---------------------	-----

I certify that the payment requested is in accordance with the terms of the agreement dated \_\_\_\_\_ and that previous payments have been used to pay obligations for materials supplied and work performed in conjunction with this project. In accordance

with the contract documents and in consideration of \_\_\_\_\_ paid.

\_\_\_\_\_ (“Contractor”) releases and waives for itself and its subcontractors, materialmen, successors, and assigns, all claims demands, damages, costs and expenses, whether in Contract or in tort, against the Board of County Commissioners of Pinellas County, Florida, Ex Officio the governing Board of the Pinellas County (“County”) relating in any way to the performance of the agreement between contractors and owner, dated \_\_\_\_\_ for the period from \_\_\_\_\_ to \_\_\_\_\_.

Contractor

Date \_\_\_\_\_

## APPLICATION FOR PAYMENT APPROVED BY:

---

Consultant or Design Professional/Engineer of Record

Pinellas County \_\_\_\_\_ (Dept) Engineering Project  
Manager

Pinellas County Public Works

Director of \_\_\_\_\_ (Dept)

**EXHIBIT D - CONSTRUCTION MANAGER AT RISK APPLICATION FOR PAYMENT**

DESIGN BUILDER'S CERTIFICATION: The undersigned DESIGN BUILDER certifies that: (1) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied to discharge in full all obligations of DESIGN BUILDER incurred in connection with Work covered by any and all prior Applications for Payment; (2) title to all materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all liens, claims, security interests and encumbrances (except such as covered by Bond acceptable to OWNER); (3) all amounts have been paid for work which previous payments were issued and received from the OWNER and that current payment is now due; and (4) DESIGN BUILDER has only included amounts in this Application for Payment properly due and owing and DESIGN BUILDER has not included within the above referenced amount any claims for unauthorized or changed Work that has not been properly approved by Owner in writing and in advance of such Work.

By DESIGN BUILDER: \_\_\_\_\_ (Design Builder's Name)

\_\_\_\_\_  
Date \_\_\_\_\_

(Signature)

\_\_\_\_\_  
(Type Name & Title)

(shall be signed by a duly authorized representative of DESIGN BUILDER)

SWORN TO (or affirmed) and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_ of FIRM NAME, a Florida corporation on behalf of the corporation. He is personally known to me or has produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name)

NOTARY PUBLIC, STATE OF FLORIDA

\_\_\_\_\_  
(Commission Expiration Date)

Payment to the DESIGN BUILDER for the above AMOUNT DUE THIS APPLICATION is approved:

By OWNER'S Project Manager: \_\_\_\_\_

(Signature)

Date: \_\_\_\_\_

(Type Name and Title)

## EXHIBIT E - CHANGE ORDER

**EXHIBIT E - CHANGE ORDER**

CHANGE ORDER NO. \_\_\_\_\_

CONTRACT NO. \_\_\_\_\_

TO: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DATE: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

PROJECT NO.: \_\_\_\_\_

Under our AGREEMENT dated \_\_\_\_\_, 200 \_\_\_\_.

\*\*\*\*\*

You hereby are authorized and directed to make the following change(s) in accordance with terms and conditions of the Agreement:

For the (Additive) (Deductive) Sum of: \_\_\_\_\_

(\\$\_\_\_\_\_\_).

Original Agreement Amount \\$\_\_\_\_\_\_

Sum of Previous Changes \\$\_\_\_\_\_\_

This Change Order (Add) (Deduct) \\$\_\_\_\_\_\_

Present Agreement Amount \\$\_\_\_\_\_\_

The time for completion shall be (increased/decreased) by \_\_\_\_\_ calendar days due to this Change Order. Accordingly, the Contract Time is now \_\_\_\_\_ (\_\_\_\_\_) calendar days and the Substantial Completion date is \_\_\_\_\_. Your acceptance of this Change Order shall constitute a modification to our Agreement and will be performed subject to all the same terms and conditions as contained in our Agreement indicated above, as fully as if the same were repeated in this acceptance. The adjustment, if any, to the Agreement shall constitute a full and final settlement of any and all claims arising out of or related to the change set forth herein, including claims for impact and delay costs.

Accepted: \_\_\_\_\_

**EXHIBIT F - CONSTRUCTION MANAGER AT RISK STAFFING SCHEDULE**

**EXHIBIT F - DESIGN BUILDER CERTIFICATE OF SUBSTANTIAL  
COMPLETION**

[AIA G704 Standard Certificate of Substantial Completion]

## EXHIBIT G - FINAL PAYMENT CHECKLIST

**EXHIBIT G - FINAL PAYMENT CHECKLIST**

Bid No.: **24-0085-RFP-DB** Project No.: \_\_\_\_\_ Date: \_\_\_\_\_, 20\_\_\_\_

Design Builder: \_\_\_\_\_

The following items have been secured by the \_\_\_\_\_

for the Project known as \_\_\_\_\_

and have been reviewed and found to comply with the requirements of the Contract Documents.

Original Contract Amount: \_\_\_\_\_ Final Contract Amount: \_\_\_\_\_

Commencement Date: \_\_\_\_\_

Substantial Completion Time as set forth in the Agreement: \_\_\_\_\_ Calendar Days.

Actual Date of Substantial Completion: \_\_\_\_\_.

Final Completion Time as set forth in the Agreement: \_\_\_\_\_ Calendar Days.

Actual Final Completion Date: \_\_\_\_\_.

YES	NO	
_____	_____	1. All Punch List items completed on _____
_____	_____	2. Warranties and Guarantees assigned to Owner (attach to this form).
_____	_____	3. Effective date of General one year warranty from Design Builder is: _____
_____	_____	4. 2 copies of Operation and Maintenance manuals for equipment and system submitted (list manuals in attachment to this form).
_____	_____	5. As-Built drawings obtained and dated: _____
_____	_____	6. Owner personnel trained on system and equipment operation.
_____	_____	7. Certificate of Substantial Completion issued on _____
_____	_____	8. Final Payment Application and Affidavits received from Design Builder on: _____
_____	_____	9. Consent of Surety received on _____
_____	_____	10. Operating Department personnel notified Project is in operating phase.
_____	_____	11. All Spare Parts or Special Tools provided to Owner: _____
_____	_____	12. Other: _____

If any of the above is not applicable, indicate by N/A. If NO is checked for any of the above, attach explanation.

Acknowledgments:

By Design Builder: \_\_\_\_\_ (Company Name)  
 \_\_\_\_\_ (Signature)  
 \_\_\_\_\_ (Typed Name & Title)

By Owner: \_\_\_\_\_ (Department Name)  
 \_\_\_\_\_ (Signature)  
 \_\_\_\_\_ (Name & Title)

**EXHIBIT H - GENERAL TERMS AND CONDITIONS****EXHIBIT H - GENERAL TERMS AND CONDITIONS****1. INTENT OF CONTRACT DOCUMENTS**

1. It is the intent of the Contract Documents to describe a functionally complete Project (or portion thereof) to be designed and constructed by Design Builder in accordance with the Contract Documents. Any work, services, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for in the Contract Documents. When words which have a well-known technical or trade meaning are used to describe work, materials or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association or to the laws or regulations of any governmental authority having jurisdiction over the Project, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, law or regulation in effect at the time the Work is performed, except as may be otherwise specifically stated herein.
2. If before or during the performance of the Work Design Builder discovers a conflict, error or discrepancy in the Contract Documents, Design Builder immediately shall report same to the Project Manager in writing and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from the Project Manager; said interpretation or clarification from the Project Manager may require Design Builder to consult directly with another professional, if any, involved with the Project as directed by Owner. Design Builder shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to Design Builder with the Contract Documents before commencing any portion of the Work.
3. Construction Documents approved by Owner are intended to show general arrangements, design and extent of Work and are not intended to serve as shop drawings. Specifications are separated into divisions for convenience of reference only and shall not be interpreted as establishing divisions for the Work, trades, subcontracts, or extent of any part of the Work. In the event of a discrepancy between or among the drawings, specifications or other Contract Document provisions, Design Builder shall be required to comply with the provisions identified in Section 16 of the Agreement, "Order of Precedence". Unless otherwise specifically mentioned, all anchors, bolts, screws, fittings, fillers, hardware, accessories, trim and other parts required in connection with any portion of the Work to make a complete, serviceable, finished and first quality installation shall be furnished and installed as part of the Work, whether or not called for by the Contract Documents.

**2. INVESTIGATION AND UTILITIES**

1. Subject to Section 2.3 below, Design Builder shall have the sole responsibility of satisfying itself concerning the nature and location of the Work and the general and local conditions, and particularly, but without limitation, with respect to the following: those affecting transportation, access, disposal, handling and storage of materials; availability and quality of labor; water and electric power; availability and condition of roads; work area; living facilities; climatic conditions and seasons; physical conditions at the work site and the project area as a whole; topography and ground surface conditions; nature and quantity of the surface materials to be encountered; subsurface conditions; equipment and facilities needed preliminary to and during performance of the Work; and all other costs associated with such performance. The failure of Design Builder to acquaint itself with any applicable conditions shall not relieve Design Builder from any of its responsibilities to perform under the Contract Documents, nor shall it be considered the basis for any claim for additional time or compensation.
2. Design Builder shall locate all existing roadways, railways, drainage facilities and utility services above, upon, or under the Project site, said roadways, railways, drainage facilities and utilities being referred to in this Sub Section 2.2 as the "Utilities". Design Builder shall contact the owners of all Utilities to determine the necessity for relocating or temporarily interrupting any Utilities during the construction of the Project. Design Builder shall schedule and coordinate its Work around any such relocation or temporary service interruption. Design Builder shall be responsible for properly shoring, supporting and protecting all Utilities at all times during the course of the Work. The Design Builder is responsible for coordinating all other utility work so as to not interfere with the prosecution of the Work (except those utilities to be coordinated by the Owner as may be expressly described elsewhere in the Contract Documents).
3. Notwithstanding anything in the Contract Documents to the contrary, Design Builder assumes all risks with respect to the conditions which are encountered at the Project site, including all (i) subsurface or otherwise concealed physical conditions whether or not they differ materially from those indicated in the Contract

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

Documents and (ii) unknown physical conditions of any nature, whether or not they differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents. Design Builder will not be entitled to any adjustment to the Lump Sum Price or the Contract Time as a result of any site conditions encountered, except for hazardous materials as set forth in Section 9.4 below. It is the specific intention of the Parties that Design Builder will propose and perform as part of its Phase 1 Services any necessary investigation and testing that Design Builder deems necessary to assume such risk.

**3. SCHEDULE**

1. The Design Builder, within ten (10) calendar days after receipt of the Notice of Award, shall prepare and submit to Project Manager, for his or her review and approval, a progress schedule for the Project. Said schedule shall include but not be limited to an overall progress schedule for all portions of the design and construction of the Project ("Master Project Schedule"). The Master Project Schedule shall (i) relate to all Work required by the Contract Documents, (ii) utilize the Critical Path method of scheduling, (iii) shall provide for expeditious and practicable execution of the Work within the Contract Time, and (iv) be in such form and level of detail as may be required by Owner. The Master Project Schedule shall indicate the dates for starting and completing the various stages of the Work, including the Phase 1 Services to be provided by Design Builder.
2. The Master Project Schedule shall be updated monthly by the Design Builder or as specified in the Supplemental Terms and Conditions (if any) attached to the Agreement as Exhibit I. All monthly updates to the Master Project Schedule shall be subject to the Project Manager's review and approval. Design Builder shall submit the updates to the Master Project Schedule with its monthly Applications for Payment noted below. The Project Manager's review and approval of the submitted monthly Master Project Schedule updates shall be a condition precedent to the Owner's obligation to pay Design Builder.
3. All Work under this Agreement shall be performed in accordance with the requirements of all Pinellas County Noise Ordinances then in effect. Unless otherwise specified, Work at the Project site will generally be limited to the hours of 7:00 a.m. to 5:00 p.m., Monday through Friday. No Work at the Project site shall be performed outside the specified hours without the prior approval of the Project Manager.

**4. PROGRESS PAYMENTS**

1. Design Builder's Applications for Payment shall be in the form attached to the Agreement as Exhibit D. Design Builder shall not submit more than one Application for Payment each month.
2. At the time it submits its Lump Sum Price proposal to Owner, Design Builder also shall submit to Owner, for its review, a Schedule of Values based upon the Lump Sum Price proposal; all in C.S.I. format, listing the major elements of the Work and the dollar value for each element. That Schedule of Values, as further revised to reflect the final negotiated Lump Sum Price and as approved by Owner, and shall be used as the basis for Design Builder's monthly Applications for Payment thereafter. The revised Schedule of Values shall be updated for the current month Change Orders and Construction Change Directives and submitted each month to Owner by Design Builder along with a completed and notarized copy of the Application for Payment form attached to the Agreement as Exhibit D.
3. When Design Builder submits its Lump Sum Price proposal to Owner, Design Builder shall provide to the Project Manager a list of its Subcontractors and materialmen showing the work and materials involved and the dollar amount of each subcontract and purchase order. Design Builder acknowledges and agrees that any modifications to the list of Subcontractors and any subsequently identified Subcontractors are subject to Owner's prior written approval. The first Application for Payment shall be submitted no earlier than thirty (30) days after the Commencement Date. Notwithstanding anything herein to the contrary, if approved by Owner in its sole discretion, Design Builder may submit its invoice for any required Payment and Performance Bonds prior to the first Application of Payment provided that Design Builder has furnished Owner certified copies of the receipts evidencing the premium paid by Design Builder for the bonds.
4. Unless expressly approved by Owner in advance and in writing, said approval at Owner's sole discretion, Owner is not required to make any payment for materials or equipment that have not been incorporated into the Project. If payment is requested on the basis of materials and equipment not incorporated into the Project, but delivered and suitably stored at the site or at another location, and such payment and storage have been agreed to by Owner in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that the Owner has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances, together with evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect Owner's interest therein, all of



**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

which shall be subject to the Owner's satisfaction. Thereafter, with each subsequent Application for Payment, Design Builder also shall complete and submit to Owner as part of its Application for Payment, the Stored Materials Record attached hereto and made a part hereof as Exhibit T.

5. Design Builder shall submit a draft copy of its monthly Application for Payment to the Project Manager or his or her designee, as directed by Owner. After the Project Manager has reviewed and approved or corrected the draft, the Design Builder shall forward an electronic copy of the final version to Pinellas County's Finance Department (e-mail address to be confirmed upon execution of this Agreement). Payments of proper invoices in the amounts approved shall be processed in accordance with Section 218.735, Florida Statutes "Local Government Prompt Payment Act" and the administrative procedures established by the County's Purchasing Department and the Clerk of Court's Finance Department respectively. In the event of a total denial by Owner and return of the Application for Payment by the Project Manager, the Design Builder may make the necessary corrections and re-submit the Application for Payment. The Owner shall, within ten (10) business days after the Application for Payment is stamped and received and after Project Manager approval of an Application for Payment, pay the Design Builder the amounts so approved.
  6. During Phase 2 only, Owner shall retain five percent (5%) of the gross amount of each monthly payment request or five percent (5%) of the portion thereof approved by the Project Manager for payment, whichever is less. Such sum shall be accumulated and not released to Design Builder until final payment is due unless otherwise agreed to by the Owner.
  7. Monthly payments to Design Builder shall in no way imply approval or acceptance of Design Builder's Work.
  8. Each Application for Payment shall be accompanied by a Release and Affidavit, in the form attached as Exhibit C, acknowledging Design Builder's receipt of payment in full for all materials, labor, services, equipment and other bills that are then due and payable by Owner with respect to the current Application for Payment. Further, to the extent directed by Owner and in Owner's sole discretion, Design Builder shall also submit a Release and Affidavit in the form attached as Exhibit C acknowledging that each Subconsultant, Subcontractor, sub-subcontractor or supplier has been paid in full through the previous month's Application for Payment (for which the Design Builder has actually been paid). The Owner shall not be required to make payment until and unless these affidavits are furnished by Design Builder. Further, if Design Builder is withholding any portion of a payment to any subcontractor, supplier or subconsultant for any labor, services, equipment or materials for which Owner has paid Design Builder, Design Builder agrees to refund such money to Owner upon demand by Owner.
  9. Notwithstanding anything in the Contract Documents to the contrary, Design Builder acknowledges and agrees that in the event of a dispute concerning payments for Work performed under this Agreement, Design Builder shall continue to perform the Work required of it under this Agreement pending resolution of the dispute provided that Owner continues to pay Design Builder all amounts that Owner does not dispute are due and payable.
5. PAYMENTS WITHHELD
1. The Project Manager may decline to approve any Application for Payment, or portions thereof, because of subsequently discovered evidence or subsequent inspections that reveal non-compliance with the Contract Documents. The Project Manager may nullify the whole or any part of any approval for payment previously issued and Owner may withhold any payments otherwise due Design Builder under this Agreement or any other agreement between Owner and Design Builder, to such extent as may be necessary in the Owner's opinion to protect it from loss because of: (a) defective Work not remedied; (b) third party claims filed or reasonable evidence indicating probable filing of such claims; (c) failure of Design Builder to make payment properly to subcontractors or for labor, materials or equipment; (d) reasonable doubt that the Work can be completed for the unpaid balance of the Contract Amount; (e) reasonable indication that the Work will not be completed within the Contract Time; (f) unsatisfactory prosecution of the Work by the Design Builder; or (g) any other material breach of the Contract Documents by Design Builder.
  2. If any conditions described in 5.1. are not remedied or removed, Owner may, after three (3) days written notice, rectify the same at Design Builder's expense. Provided, however, in the event of an emergency, Owner shall not be required to provide Design Builder any written notice prior to rectifying the situation at Design Builder's expense. Owner also may offset against any sums due Design Builder the amount of any liquidated or non-liquidated obligations of Design Builder to Owner, whether relating to or arising out of this Agreement or any other agreement between Design Builder and Owner.
6. FINAL PAYMENT

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

1. Owner shall make final payment to Design Builder in accordance with Florida Statutes Section 218.735 and the administrative procedures established by the County's Purchasing Department and the Clerk of Court's Finance Department after the Work is finally inspected and accepted by Project Manager as set forth in Section 20.1 herein, provided that Design Builder first, and as an explicit condition precedent to the accrual of Design Builder's right to final payment, shall have furnished Owner with a properly executed and notarized copy of the Release and Affidavit attached as Exhibit C, as well as, a duly executed copy of the Surety's consent to final payment and such other documentation that may be required by the Contract Documents and the Owner. Prior to release of final payment and final retainage, the Design Builder's Representative and the Project Manager shall jointly complete the Final Payment Checklist, a representative copy of which is attached to this Agreement as Exhibit G.
2. Design Builder's acceptance of final payment shall constitute a full waiver of any and all claims by Design Builder against Owner arising out of this Agreement or otherwise relating to the Project, except those previously made in writing in accordance with the requirements of the Contract Documents and identified by Design Builder as unsettled in its final Application for Payment. Neither the acceptance of the Work nor payment by Owner shall be deemed to be a waiver of Owner's right to enforce any obligations of Design Builder hereunder or to the recovery of damages for defective Work not discovered by the Project Manager at the time of final inspection.

**7. SUBMITTALS AND SUBSTITUTIONS**

1. Design Builder shall carefully examine the Contract Documents for all requirements for approval of materials to be submitted such as shop drawings, data, test results, schedules and samples. It is Design Builder's obligation to confirm, and Design Builder will be deemed to have certified to Owner that all submittals reviewed and approved by it fully comply with all requirements of the Contract Documents. During Phase 1, Design Builder shall prepare and submit to Owner, for Owner's approval, procedures for Design Builder's handling and processing of submittals. Owner shall identify, in its sole discretion, which submittals must be submitted to Owner for its approval. Further, Design Builder shall submit all such materials at its own expense and in such form as required by the Contract Documents in sufficient time to prevent any delay in the delivery of such materials and the installation thereof. To the extent that a submittal requires Owner's approval as set forth above, Design Builder shall also carefully review and certify to Owner the accuracy and completeness of such shop drawings and other submittals and then forward the same to Owner for its review and approval. In such case, Owner will transmit them back to Design Builder who will then issue the submittals to the affected subcontractor for fabrication or revision. Design Builder shall maintain a suspense control system to promote the expeditious handling of shop drawings and all other submittals. At Owner's request, copies of submittals and/or Design Builder's responses will be provided to Owner. At the completion of the project, the Design Builder will provide the Owner with a complete set of approved submittals in scanned format on CDs.
2. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other suppliers may be accepted by Owner if sufficient information is submitted by Design Builder to allow the Owner to determine that the material or equipment proposed is equivalent or equal to that named. Requests for review of substitute items of material and equipment will not be accepted by Owner from anyone other than Design Builder and all such requests, to the extent possible, must be submitted by Design Builder to Project Manager prior to the execution of Phase 2, unless otherwise mutually agreed in writing by Owner and Design Builder.
3. If Design Builder wishes to furnish or use a substitute item of material or equipment, Design Builder shall make application to the Project Manager for acceptance thereof, certifying that the proposed substitute shall adequately perform the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application shall state that the evaluation and acceptance of the proposed substitute will not prejudice Design Builder's achievement of substantial completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for the Project) to adapt the design to the proposed substitute and whether or not incorporation or use by the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service shall be indicated. The application also shall contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs for redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the Project Manager in evaluating the proposed substitute. The Project Manager may require Design Builder to furnish at Design Builder's expense additional data about the proposed substitute.

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

4. If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, Design Builder may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the Project Manager, if Design Builder submits sufficient information to allow the Project Manager to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedures for submission to and review by the Project Manager shall be the same as those provided herein for substitute materials and equipment.
  5. The Project Manager shall be allowed a reasonable time within which to evaluate each proposed substitute. Owner shall be the sole judge of the acceptability of any substitute. No substitute will be ordered, installed or utilized without the Project Manager's prior written acceptance which shall be evidenced by either a Change Order, a Work Directive Change, a Field Order or an approved Shop Drawing. The Owner may require Design Builder to furnish at Design Builder's expense a special performance guarantee or other surety with respect to any substitute. The Project Manager will record time required by the Project Manager and the Project Manager's consultants in evaluating substitutions proposed by Design Builder and making changes in the Contract Documents occasioned thereby. Whether or not the Owner accepts a proposed substitute, Design Builder shall reimburse Owner costs of evaluating each proposed substitute.
  6. Notwithstanding anything in the Contract Documents to the contrary, Design Builder expressly acknowledges and agrees that Owner's review or approval of any design documents submitted by Design Builder, including but not limited to any submittals as described herein, shall not relieve Design Builder of its responsibilities or liabilities for design hereunder. Notwithstanding anything in the Contract Documents to the contrary, Design Builder further expressly acknowledges and agrees that any such review or approval shall not be deemed as Owner's approval of any deviations to such design documents unless such deviation is expressly brought to Owner's attention by Design Builder in writing and Owner expressly approves such deviation in writing.
8. DAILY REPORTS, AS BUILTS AND MEETINGS
1. Design Builder shall prepare and maintain a daily log of the work on the job site. The daily log records shall be kept current and available for Owner's review. The daily log shall document activities at the Project site including, but not limited to, the following:
    - A. Weather conditions showing the high and low temperatures during work hours, the amount of precipitation received on the Project site, and any other weather conditions which adversely affect the Work;
    - B. Soil conditions which adversely affect the Work;
    - C. The hours of operation by Design Builder's and its subcontractors' and subconsultants' personnel;
    - D. The number of Design Builder's and Subconsultant's and Subcontractor's personnel present and working at the Project site, by subcontract and trade;
    - E. All equipment present at the Project site, description of equipment use and designation of time equipment was used (specifically indicating any down time);
    - F. Description of Work being performed at the Project site;
    - G. Any unusual or special occurrences at the Project site;
    - H. Materials received at the Project site;
    - I. A list of all visitors to the Project
    - J. Any problems that might impact either the cost or quality of the Work or the time of performance.

The daily log shall not constitute nor take the place of any notice required to be given by Design Builder to Owner pursuant to the Contract Documents.

2. Design Builder shall maintain in a safe place at the Project site one record copy of the Contract Documents, including, but not limited to, all drawings, specifications, addenda, amendments, Change Orders, Work Directive Changes and Field Orders, as well as all written interpretations and clarifications issued by the Owner, in good order and annotated to show all changes made during construction. The annotated drawings shall be continuously updated by the Design Builder throughout the prosecution of the Work to accurately reflect all field changes that are made to adapt the Work to field conditions, changes resulting from Change Orders, Work Directive Changes and Field Orders, and all concealed and buried installations of piping, conduit and utility services. All buried and concealed items, both inside and outside the Project site, shall be accurately located on

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

the annotated drawings as to depth and in relationship to not less than two (2) permanent features (e.g. interior or exterior wall faces). The annotated drawings shall be clean and all changes, corrections and dimensions shall be given in a neat and legible manner in a contrasting color. The "As Built" record documents, together with all approved samples and a counterpart of all approved shop drawings shall be available to the Project Manager for reference. Upon completion of the Work and as a condition precedent to Design Builder's entitlement to final payment, these "As Built" record documents, samples and shop drawings (along with electronic copies on CDs) shall be delivered to Project Manager by Design Builder for Owner.

3. Design Builder shall keep all records and supporting documentation which concern or relate to the Work hereunder for a minimum of five (5) years from the date of termination of this Agreement or the date the Project is completed, or such longer period as may be required by law, whichever is later. Owner, or any duly authorized agents or representatives of Owner, shall have the right to audit, inspect and copy all such records and documentation as often as they deem necessary during the period of this Agreement and during the document retention period noted above; provided, however, such activity shall be conducted only during normal business hours.
4. Design Builder shall advise Owner, Project Manager and their representatives of their requested or required participation in any meeting or inspection giving each at least one week written notice unless such notice is made impossible by conditions beyond Design Builder's fault and control, in which case at least 48 hours prior written notice must be given.

**9. CONTRACT TIME AND TIME EXTENSIONS**

1. Design Builder shall diligently pursue the completion of the Work and coordinate the Work being done on the Project by its subconsultants, subcontractors and material-men, as well as coordinating its Work with all work of others at the Project Site, so that its Work or the work of others shall not be delayed or impaired by any act or omission by Design Builder or anyone for whom Design Builder is liable. Design Builder shall be solely responsible for all construction means, methods, techniques, sequences, and procedures, as well as coordination of all portions of the Work under the Contract Documents, and the coordination of Owner's suppliers and contractors as set forth in Paragraph 12.2. herein.
2. Should Design Builder be obstructed or delayed in the prosecution of or completion of the Work as a result of unforeseeable causes beyond the control of Design Builder, and not due to its fault or neglect, including but not restricted to acts of Nature or of the public enemy, acts of government, fires, floods, epidemics, quarantine regulation, strikes or lockouts, Design Builder shall notify the Owner in writing within forty eight (48) hours after the commencement of such delay, stating the cause or causes thereof, or be deemed to have waived any right which Design Builder may have had to request a time extension.
3. No interruption, interference, inefficiency, suspension or delay in the commencement or progress of the Work from any cause whatever, including those for which Owner may be responsible, in whole or in part, shall relieve Design Builder of its duty to perform or give rise to any right to damages or additional compensation from Owner. Design Builder expressly acknowledges and agrees that it shall receive no damages for delay. Design Builder's sole remedy, if any, against Owner will be the right to seek an extension to the Contract Time; provided, however, the granting of any such time extension shall not be a condition precedent to the aforementioned "No Damage For Delay" provision. This paragraph shall expressly apply to claims for early completion, as well as to claims based on late completion.
4. Notwithstanding anything contained within Section 2.3 to the contrary, if Design Builder encounters on the Project site any materials reasonably believed by Design Builder to be petroleum or petroleum related products or other hazardous or toxic substances which have not been rendered harmless, Design Builder immediately shall (i) stop Work in the area affected and (ii) report the condition to Owner in writing. If the Work is so stopped and hazardous material is found, the Work in the affected area shall not thereafter be resumed except by Change Order. Any such Change Order shall include, but not be limited to, an adjustment to the Lump Sum Price and Contract Time as appropriate. If no hazardous material is found after the Work is stopped, no Change Order is required to resume the Work in the affected area. Notwithstanding the foregoing sentences in this Section 9.4, if the hazardous material encountered was generated or caused by Design Builder or any of its employees, agents, subconsultants, subcontractors, or material suppliers, no adjustment to the Contract Time or Lump Sum Price shall be made and Design Builder shall indemnify Owner and hold Owner harmless for any costs incurred by Owner with respect to such hazardous material. Design Builder will coordinate and cooperate with any person or entity who is hired to perform any hazardous material mitigation services.

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

5. In no event shall any approval by Owner authorizing Design Builder to continue performing Work under this Agreement or any payment issued by Owner to Design Builder be deemed a waiver of any right or claim Owner may have against Design Builder for delay damages hereunder.

**10. CHANGES IN THE WORK**

1. Owner shall have the right at any time during the progress of the Work to increase or decrease the Work. Promptly, but in no event more than 10 days after being notified of a change, Design Builder shall submit an itemized estimate of any cost or time increases or savings it foresees as a result of the change. Except in an emergency endangering life or property, or as expressly set forth herein, no addition or changes to the Work shall be made except upon written order of Owner, and Owner shall not be liable to the Design Builder for any increased compensation without such written order. No officer, employee or agent of Owner is authorized to direct any extra or changed work orally. Any alleged changes must be approved by Owner in writing prior to starting such items. Owner will not be responsible for the costs of any changes commenced without Owner's express prior written approval. Failure to obtain such prior written approval for any changes will be deemed: (i) a waiver of any claim by Design Builder for such items and (ii) an admission by Design Builder that such items are in fact not a change but rather are part of the Work required of Design Builder hereunder.
2. A Change Order, in the form attached as Exhibit E to this Agreement, shall be issued and executed promptly after an agreement is reached between Design Builder and Owner concerning the requested changes. Design Builder shall promptly perform changes authorized by duly executed Change Orders. The Contract Amount and Contract Time shall be adjusted in the Change Order in the manner as Owner and Design Builder shall mutually agree.
3. If Owner and Design Builder are unable to agree on a Change Order for the requested change, Design Builder shall, nevertheless, promptly perform the change as directed by Owner in a written Work Directive Change. In that event, the Contract Amount and Contract Time shall be adjusted as directed by Owner. If Design Builder disagrees with the Owner's adjustment determination, Design Builder must make a claim pursuant to Section 11 of these General Conditions or else be deemed to have waived any claim on this matter it might otherwise have had.
4. In the event a requested change is approved by Owner which results in an increase to the Lump Sum Price, a Change Order shall be issued which increases the Lump Sum Price by the amount of Design Builder's actual and reasonable direct increased Cost for such change work plus a maximum ten percent (10%) markup for Design Builder's overhead and profit. In the event such change work is performed by a subconsultant or subcontractor, a maximum ten percent (10%) total markup for all overhead and profit for all subconsultants', subcontractors', sub-subconsultants' and sub-subcontractors' direct labor and material costs and actual equipment costs shall be permitted. Design Builder shall not be entitled to any mark-up for Change Order work performed by subcontractors or subconsultants. All compensation due any Sub-consultant or Subcontractor for field and home office overhead is included in the markups noted above. Subcontractor's bond costs associated with any change order shall be included in the overhead and profit markups and shall not be paid as a separate line item.
5. Owner shall have the right to conduct an audit of Design Builder's books and records, as well as those of its subconsultants, subcontractors and suppliers to verify the accuracy of the Design Builder's claim with respect to Design Builder's costs associated with any Change Order or Work Directive Change.
6. The Project Manager shall have authority to order minor changes in the Work not involving an adjustment to the Contract Amount or an extension to the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes may be effected by Field Order or by other written order. Such changes shall be binding on the Design Builder.
7. No action, conduct, omission or course of conduct by Owner shall act to waive, alter, or change the requirement that Amendments, Change Orders, and Work Directive Changes must be in writing and signed by Owner. Such written and signed Amendments, Change Orders and Work Directive Changes are the sole and exclusive way to change either the amount of compensation to be paid to Design Builder or the time within which Design Builder is to perform its obligations hereunder. No changes will be allowed based upon actual, constructive, or oral notice or lack of prejudice to Owner.

**11. CLAIMS AND DISPUTES**

1. Claim is a demand or assertion by one of the parties seeking an adjustment or interpretation of the terms of the Contract Documents, payment of money, extension of time or other relief with respect to the terms of the Contract Documents. The term "Claim" also includes other disputes and matters in question between Owner and Design

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

Builder arising out of or relating to the Contract Documents. The responsibility to substantiate a Claim shall rest with the party making the Claim.

2. Claims by the Design Builder shall be made in writing to the Project Manager within forty eight (48) hours from when the Design Builder knew or should have known of the event giving rise to such Claim or else the Design Builder shall be deemed to have waived the Claim. Written supporting data shall be submitted to the Project Manager within fifteen (15) calendar days after the occurrence of the event, unless the Owner grants additional time in writing, or else the Design Builder shall be deemed to have waived the Claim. Claims not settled by the aforesaid procedure, shall be resolved according to the Dispute Resolution Procedure copies of which are available in the County Attorney's Office or Purchasing Department. All Claims shall be priced in accordance with the provisions of Subsection 10.4.
3. The Design Builder shall proceed diligently with its performance as directed by the Owner, regardless of any pending Claim, action, suit or administrative proceeding, unless otherwise agreed to by the Owner in writing. Owner shall continue to make payments in accordance with the Contract Documents during the pendency of any Claim.

**12. OTHER WORK**

1. Owner may perform other work related to the Project at the site by Owner's own forces, have other work performed by utility owners or let other direct contracts. If the fact that such other work is to be performed is not noted in the Contract Documents, written notice thereof will be given to Design Builder prior to starting any such other work. If Design Builder believes that such performance will involve additional expense to Design Builder or require additional time, Design Builder shall send written notice of that fact to Owner within forty eight (48) hours of being notified of the other work. If the Design Builder fails to send the above required forty eight (48) hour notice, the Design Builder will be deemed to have waived any rights it otherwise may have had to seek an extension to the Contract Time or adjustment to the Contract Amount.
2. Design Builder shall afford each utility owner and other Design Builder who is a party to such a direct contract (or Owner, if Owner is performing the additional work with Owner's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work and shall properly connect and coordinate its Work with theirs. Design Builder shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Design Builder shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of the Project Manager and the others whose work will be affected. The duties and responsibilities of Design Builder under this paragraph are for the benefit of such utility owners and other Contractors to the extent that there are comparable provisions for the benefit of Design Builder in said direct contracts between Owner and such utility owners and other contractors.
3. If any part of Design Builder's Work depends for proper execution or results upon the work of any other contractor of Owner or utility owner (or Owner), Design Builder shall inspect and promptly report to Project Manager in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Design Builder's failure to report will constitute an acceptance of the other work as fit and proper for integration with Design Builder's Work.

**13. INDEMNIFICATION AND INSURANCE**

1. The Contractor must maintain insurance in at least the amounts required in the Request for Proposal throughout the term of this contract. The contractor must provide a Certificate of Insurance in accordance with Insurance Requirements of Exhibit B to the agreement, evidencing such coverage prior to issuance of purchase order or commencement of any work under this contract.
2. To the maximum extent permitted by Florida law, Design Builder shall indemnify and hold harmless Owner and its officers and employees from any and all liabilities, claims, damages, penalties, demands, judgments, actions, proceedings, losses or costs, including, but not limited to, reasonable attorneys' fees and paralegals' fees, whether resulting from any claimed breach of this Agreement by Design Builder or from personal injury, property damage, direct or consequential damages, or economic loss, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of Design Builder or anyone employed or utilized by the Design Builder in the performance of this Agreement.

**14. COMPLIANCE WITH LAWS**

1. Design Builder agrees to comply, at its own expense, with all federal, state and local laws, codes, statutes, ordinances, rules, regulations and requirements applicable to the Project, including but not limited to those

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

dealing with taxation, worker's compensation, equal employment and safety (including, but not limited to, the Trench Safety Act, Chapter 553, Florida Statutes). If Design Builder observes that the Contract Documents are at variance therewith, it shall promptly notify Project Manager in writing. To the extent any law, rule, regulation, code, statute, or ordinance requires the inclusion of certain terms in this Agreement in order for this Agreement to be enforceable, such terms shall be deemed included in this Agreement. Notwithstanding anything in the Contract Documents to the contrary, it is understood and agreed that in the event of a change in any applicable laws, ordinances, rules or regulations subsequent to the date the Notice to proceed has been executed that increases the Design Builder's time or cost of performance of the Work, Design Builder is entitled to a Change Order for such increases, except to the extent Design Builder knew or should have known of the reasonable prospect of such changes prior to the date of the Notice to proceed.

**15. CLEANUP AND PROTECTIONS**

1. Design Builder agrees to keep the Project site clean at all times of debris, rubbish and waste materials arising out of the Work. At the completion of the Work, Design Builder shall remove all debris, rubbish and waste materials from and about the Project site, as well as all tools, appliances, construction equipment and machinery and surplus materials, and shall leave the Project site clean and ready for occupancy by Owner.
2. Any existing surface or subsurface improvements, including, but not limited to, pavements, curbs, sidewalks, pipes, utilities, footings, structures, trees and shrubbery, not indicated in the Contract Documents to be removed or altered, shall be protected by Design Builder from damage during the prosecution of the Work. Subject to the Section 2.3 above, any such improvements so damaged shall be restored by Design Builder to the condition equal to that existing at the time of Design Builder's commencement of the Work.

**16. ASSIGNMENT**

1. Design Builder shall not assign this Agreement or any part thereof, without the prior consent in writing of Owner. Any attempt to assign or otherwise transfer this Agreement, or any part herein, without the Owner's consent, shall be void. If Design Builder does, with approval, assign this Agreement or any part thereof, it shall require that its assignee be bound to it and to assume toward Design Builder all of the obligations and responsibilities that Design Builder has assumed toward Owner.

**17. PERMITS, LICENSES AND TAXES**

1. All permits, fees and licenses necessary for the prosecution of the Work shall be acquired and paid for by the Design Builder. If Design Builder performs any Work without obtaining, or contrary to, such permits or licenses, Design Builder shall bear all costs arising therefrom.
2. Design Builder shall pay all sales, consumer, use and other similar taxes associated with the Work or portions thereof, which are applicable during the performance of the Work.

**18. TERMINATION FOR DEFAULT**

1. Design Builder shall be considered in material default of the Agreement and such default shall be considered cause for Owner to terminate the Agreement, in whole or in part, as further set forth in this Section, if Design Builder: (1) fails to begin the Work under the Contract Documents within the time specified herein; or (2) fails to properly and timely perform the Work as directed by the Project Manager or as provided for in the approved Master Project Schedule; or (3) performs the Work unsuitably or neglects or refuses to remove materials or to correct or replace such Work as may be rejected as unacceptable or unsuitable; or (4) discontinues the prosecution of the Work; or (5) fails to resume Work which has been suspended within a reasonable time after being notified to do so; or (6) becomes insolvent or is declared bankrupt, or commits any act of bankruptcy; or (7) allows any final judgment to stand against it unsatisfied for more than ten (10) days; or (8) makes an assignment for the benefit of creditors; or (9) fails to obey any applicable codes, laws, ordinances, rules or regulations with respect to the Work; or (10) materially breaches any other provision of the Contract Documents.
2. Owner shall notify Design Builder in writing of Design Builder's default(s). If Owner determines that Design Builder has not remedied and cured the default(s) within seven (7) calendar days following receipt by Design Builder of said written notice or such longer period of time as may be consented to by Owner in writing and in its sole discretion, then Owner, at its option, without releasing or waiving its rights and remedies against the Design Builder's sureties and without prejudice to any other right or remedy it may be entitled to hereunder or by law, may terminate Design Builder's right to proceed under the Agreement, in whole or in part, and take possession of all or any portion of the Work and any materials, tools, equipment, and appliances of Design Builder, take assignments of any of Design Builder's subcontracts and purchase orders, and complete all or any portion of Design Builder's Work by whatever means, method or agency which Owner, in its sole discretion, may choose.

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

3. If Owner deems any of the foregoing remedies necessary, Design Builder agrees that it shall not be entitled to receive any further payments hereunder until after the Project is completed. All moneys expended and all of the costs, losses, damages and extra expenses, including all management, administrative and other overhead and other direct and indirect expenses (including attorneys' fees) or damages incurred by Owner incident to such completion, shall be deducted from the Contract Amount, and if such expenditures exceed the unpaid balance of the Contract Amount, Design Builder agrees to pay promptly to Owner on demand the full amount of such excess, including costs of collection, attorneys' fees (including appeals) and interest thereon at the maximum legal rate of interest until paid. If the unpaid balance of the Contract Amount exceeds all such costs, expenditures and damages incurred by the Owner to complete the Work, such excess shall be paid to the Design Builder. The amount to be paid to the Design Builder or Owner, as the case may be, shall be approved by the Project Manager, upon application, and this obligation for payment shall survive termination of the Agreement.
4. The liability of Design Builder hereunder shall extend to and include the full amount of any and all sums paid, expenses and losses incurred, damages sustained, and obligations assumed by Owner in good faith under the belief that such payments or assumptions were necessary or required, in completing the Work and providing labor, materials, equipment, supplies, and other items therefor or re letting the Work, and in settlement, discharge or compromise of any claims, demands, suits, and judgments pertaining to or arising out of the Work hereunder.
5. If, after notice of termination of Design Builder's right to proceed pursuant to this Section, it is determined for any reason that Design Builder was not in default, or that its default was excusable, or that Owner is not entitled to the remedies against Design Builder provided herein, then the termination will be deemed a termination for convenience and Design Builder's remedies against Owner shall be the same as and limited to those afforded Design Builder under Section 19 below.
6. In the event (i) Owner fails to make any undisputed payment to Design Builder in accordance with the Local Government Prompt Payment Act, Section 218.70, et.seq. of the Florida State Statutes or Owner otherwise persistently fails to fulfill some material obligation owed by Owner to Design Builder under this Agreement, and (ii) Owner has failed to cure such default within fourteen (14) days of receiving written notice of same from Design Builder, then Design Builder may stop its performance under this Agreement until such default is cured, after giving Owner a second fourteen (14) days written notice of Design Builder's intention to stop performance under the Agreement. If the Work is so stopped for a period of one hundred and twenty (120) consecutive days through no act or fault of the Design Builder or its Subcontractors or their agents or employees or any other persons performing portions of the Work under contract with the Design Builder or any Subcontractor, the Design Builder may terminate this Agreement by giving written notice to Owner of Design Builder's intent to terminate this Agreement. If Owner does not cure its default within fourteen (14) days after receipt of Design Builder's written notice, Design Builder may, upon fourteen (14) additional days' written notice to the Owner, terminate the Agreement and recover from the Owner payment for Work performed through the termination date, but in no event shall Design Builder be entitled to payment for Work not performed or any other damages from Owner.

**19. TERMINATION FOR CONVENIENCE AND RIGHT OF SUSPENSION**

1. Owner shall have the right to terminate this Agreement without cause upon seven (7) calendar days written notice to Design Builder. In the event of such termination for convenience, Design Builder's recovery against Owner shall be limited to that portion of the Contract Amount earned through the date of termination, together with any retainage withheld and reasonable termination expenses incurred, but Design Builder shall not be entitled to any other or further recovery against Owner, including, but not limited to, damages or any anticipated profit on portions of the Work not performed.
2. Owner shall have the right to suspend all or any portions of the Work upon giving Design Builder not less than five (5) calendar days' prior written notice of such suspension. If all or any portion of the Work is so suspended, Design Builder's sole and exclusive remedy shall be to seek an extension of time to its schedule in accordance with the procedures set forth in the Contract Documents. In no event shall the Design Builder be entitled to any additional compensation or damages. Provided, however, if the ordered suspension exceeds six (6) months, the Design Builder shall have the right to terminate the Agreement with respect to that portion of the Work which is subject to the ordered suspension.

**20. COMPLETION**

1. Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use provided, however, that as a condition precedent to Substantial Completion, the Owner has received all certificates of occupancy and any other permits, approvals, licenses, and other documents, that



**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

are Design Builder's responsibility to obtain under the Contract Documents from any governmental authority having jurisdiction thereof necessary for the beneficial occupancy of the Work; provided, however, such condition precedent shall be waived to the extent the failure to obtain any such item is not due to the fault or neglect of Design Builder or anyone for whom Design Builder is responsible. In general, the only remaining Work shall be minor in nature, so that the Owner could occupy the Work on that date and the completion of the Work by the Design Builder thereafter would not unreasonably interfere with the Owner's normal business operations or create an unsafe condition. The "punchlist" shall be completed within 60 consecutive calendar days or as agreed upon following the Substantial Completion Date ("Final Completion").

2. When the entire Work (or any portion thereof designated in writing by Owner) is ready for its intended use, Design Builder shall notify Project Manager in writing that the entire Work (or such designated portion) is substantially complete and ready for Certificate of Substantial Completion (or Certificate of Partial Substantial Completion) to be issued. Said written notice from Design Builder shall include a proposed punch-list of all items of Work to be completed or corrected by Design Builder. Within a reasonable time thereafter, Owner and Design Builder shall make an inspection of the Work (or designated portion thereof) to determine the status of completion. If Owner does not consider the Work (or designated portion) substantially complete, Project Manager shall notify Design Builder in writing giving the reasons therefor. In such case, Design Builder shall pay the costs of all additional Substantial Completion inspections. If Owner considers the Work (or designated portion) substantially complete, Design Professional shall prepare a Certificate of Substantial Completion (or Certificate of Partial Substantial Completion), which includes a Certificate of Occupancy issued by the local building official, for Owner's review, approval and execution which shall fix the date of Substantial Completion for the entire Work (or designated portion thereof) and include a tentative punch-list of items to be completed or corrected by Design Builder before final payment. Failure to include an item on the final punch-list does not waive Owner's right to demand completion of the item pursuant to the Contract Documents either prior to or after final payment. Owner shall have the right to exclude Design Builder from the Work and Project site (or designated portion thereof) after the date of Substantial Completion, but Owner shall allow Design Builder reasonable access to complete or correct items on the tentative punch-list.
3. Upon receipt of written certification by Design Builder that the Work is completed in accordance with the Contract Documents and is ready for final inspection and acceptance, Project Manager will make such inspection and, if he or she finds the Work acceptable and fully performed under the Contract Documents shall promptly issue a final Certificate for Payment, recommending that, on the basis of his or her observations and inspections, and the Design Builder's certification that the Work has been completed in accordance with the terms and conditions of the Contract Documents, that the entire balance found to be due Design Builder is due and payable. Neither the final payment nor the retainage shall become due and payable until Design Builder submits:
  - 1) Receipt of Design Builder's Final Application for Payment.
  - 2) The Release and Affidavit in the form attached as Exhibit C.
  - 3) Consent of surety to final payment.
  - 4) Receipt of the final payment check list.
  - 5) If required by Owner, other data establishing payment or satisfaction of all obligations, such as receipts, releases and waivers of liens, arising out of the Contract Documents, to the extent and in such form as may be designated by Owner.

Owner reserves the right to inspect the Work and make an independent determination as to the Work's acceptability, even though the Project Manager may have issued his or her recommendations. Unless and until the Owner is completely satisfied, neither the final payment nor the retainage shall become due and payable.

**21. WARRANTY**

1. Design Builder shall obtain and assign to Owner all express warranties given to Design Builder or any subcontractors by any subcontractor or materialmen supplying materials, equipment or fixtures to be incorporated into the Project. Design Builder warrants to Owner that any materials and equipment furnished under the Contract Documents shall be new unless otherwise specified, and that all Work shall be of good quality, free from all defects and in conformance with the Contract Documents. Design Builder further warrants to Owner that all materials and equipment furnished under the Contract Documents shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturers, fabricators, suppliers or processors except as otherwise provided for in the Contract Documents. If, within one (1) year after Substantial Completion, any Work is found to be defective or not in conformance with the Contract Documents,

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

Design Builder shall correct it promptly after receipt of written notice from Owner. Design Builder shall also be responsible for and pay for replacement or repair of adjacent materials or Work which may be damaged as a result of such replacement or repair. Further, in the event of an emergency, Owner may commence to correct any defective Work, without prior notice to Design Builder, at Design Builder's expense. These warranties are in addition to those implied warranties to which Owner is entitled as a matter of law.

2. No later than 30 days prior to expiration of the warranty, the Project Manager, or another representative of the Owner, shall conduct an inspection of the warranted work to verify compliance with the requirements of the Agreement. The Design Builder's Representative shall be present at the time of inspection and shall take remedial actions to correct any deficiencies noted in the inspection. Failure of the Design Builder to correct the cited deficiencies shall be grounds for the Owner to disqualify the Design Builder from future bid opportunities with the Owner, in addition to any other rights and remedies available to Owner.

**22. TESTS AND INSPECTIONS**

1. Owner and its respective representatives, agents and employees, and governmental agencies with jurisdiction over the Project shall have access at all times to the Work, whether the Work is being performed on or off of the Project site, for their observation, inspection and testing. Design Builder shall provide proper, safe conditions for such access. Design Builder shall provide Project Manager with timely notice of readiness of the Work for all required inspections, tests or approvals.
2. If the Contract Documents or any codes, laws, ordinances, rules or regulations of any public authority having jurisdiction over the Project requires any portion of the Work to be specifically inspected, tested or approved, Design Builder shall assume full responsibility therefore, pay all costs in connection therewith and furnish Project Manager the required certificates of inspection, testing or approval. All inspections, tests or approvals shall be performed in a manner and by organizations acceptable to the Project Manager.
3. Design Builder is responsible, without reimbursement from Owner, for re-inspection fees and costs; to the extent such re-inspections are due to the fault or neglect of Design Builder.
4. If any Work that is to be inspected, tested or approved is covered without written concurrence from the Project Manager, such work must, if requested by Project Manager, be uncovered for observation. Such uncovering shall be at Design Builder's expense unless Design Builder has given Project Manager timely notice of Design Builder's intention to cover the same and Project Manager has not acted with reasonable promptness to respond to such notice. If any Work is covered contrary to written directions from Project Manager, such Work must, if requested by Project Manager, be uncovered for Project Manager's observation and be replaced at Design Builder's sole expense.
5. The Owner shall charge to Design Builder and may deduct from any payments due Design Builder all engineering and inspection expenses incurred by Owner in connection with any overtime work. Such overtime work consisting of any work during the construction period beyond the regular eight (8) hour day and for any work performed on Saturday, Sunday or holidays.
6. Neither observations nor other actions by the Project Manager nor inspections, tests or approvals by others shall relieve Design Builder from Design Builder's obligations to perform the Work in accordance with the Contract Documents.
7. Owner shall have the right, but not the obligation, to hire any consultant it deems appropriate to perform a peer review on Design Builder's design documents. Design Builder agrees to cooperate with any such peer review.

**23. DEFECTIVE WORK**

1. Work not strictly conforming to the requirements of the Contract Documents shall be deemed defective Work. If required by Project Manager, Design Builder shall as directed, either correct all defective Work, whether or not fabricated, installed or completed, or if the defective Work has been rejected by Project Manager, remove it from the site and replace it with non-defective Work. Design Builder shall bear all direct, indirect and consequential costs of such correction or removal (including, but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby, and shall hold Owner harmless for same.
2. If the Project Manager considers it necessary or advisable that covered Work be observed or inspected or tested by others and such Work is not otherwise required to be inspected or tested, Design Builder, at Project Manager's request, shall uncover, expose or otherwise make available for observation, inspection or tests as Project Manager may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, Design Builder shall bear all direct, indirect and consequential costs of

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals), and Owner shall be entitled to an appropriate decrease in the Lump Sum Price. If, however, such Work is not found to be defective, Design Builder shall be allowed an increase in the Lump Sum Price and/or an extension to the Contract Time, to the extent solely attributable to such uncovering, exposure, observation, inspection, testing and reconstruction.

3. If any portion of the Work is defective, or if Design Builder fails to supply sufficient skilled workers, suitable materials or equipment or fails to finish or perform the Work in such a way that the completed Work will conform to the Contract Documents, or satisfactorily maintain the Project schedules, Project Manager may order Design Builder to stop the Work, or any portion thereof, until the cause for such order has been eliminated. The right of Project Manager to stop the Work shall be exercised, if at all, solely for Owner's benefit and nothing herein shall be construed as obligating the Project Manager to exercise this right for the benefit of Design Builder or any other person.
4. Should the Owner determine, in its sole opinion, it is in the Owner's best interest to accept defective Work, the Owner may do so. Design Builder shall bear all direct, indirect and consequential costs attributable to the Owner's evaluation of and determination to accept defective Work. If such determination is rendered prior to final payment, a Change Order shall be executed evidencing such acceptance of such defective Work, incorporating the necessary revisions in the Contract Documents and reflecting an appropriate decrease in the Contract Amount. If the Owner accepts such defective Work after final payment, Design Builder shall promptly pay Owner an appropriate amount to adequately compensate Owner for its acceptance of the defective Work.
5. If Design Builder fails, within a reasonable time, which in no event shall be more than 14 days after the written notice from Project Manager, to correct defective Work or to remove and replace rejected defective Work as required by Project Manager or Owner, or if Design Builder fails to perform the Work in accordance with the Contract Documents, or if Design Builder fails to comply with any of the provisions of the Contract Documents, Owner may, after seven (7) days written notice to Design Builder, correct and remedy any such deficiency. Provided, however, Owner shall not be required to give notice to Design Builder in the event of an emergency. To the extent necessary to complete corrective and remedial action, Owner may exclude Design Builder from any or all of the Project site, take possession of all or any part of the Work, and suspend Design Builder's services related thereto, take possession of Design Builder's tools, appliances, construction equipment and machinery at the Project site and incorporate in the Work all materials and equipment stored at the Project site or for which Owner has paid Design Builder but which are stored elsewhere. Design Builder shall allow Owner and its respective representatives, agents, and employees such access to the Project site as may be necessary to enable Owner to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of Owner in exercising such rights and remedies shall be charged against Design Builder, and a Change Order shall be issued, incorporating the necessary revisions to the Contract Documents, including an appropriate decrease to the Contract Amount. Such direct, indirect and consequential costs shall include, but not be limited to, fees and charges of engineers, architects, attorneys and other professionals, all court costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of Design Builder's defective Work. Design Builder shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by Owner of Owner's rights and remedies hereunder.

**24. SUPERVISION AND SUPERINTENDENTS**

1. Design Builder is responsible for supervising, coordinating and performing the Work with the highest level of care and skill as would be provided by a designer and contractor with extensive and special expertise in the type of design and construction services required under the Contract Documents. Design Builder shall plan, organize, supervise, schedule, monitor, direct and control the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in strict accordance with the Contract Documents. Design Builder shall be responsible to see that the finished Work complies accurately with the Contract Documents. Design Builder shall keep on the Work at all times during its progress a competent resident superintendent, who shall be subject to Owner's approval and who shall not be replaced without prior written notice to Project Manager except under extraordinary circumstances. The superintendent shall be employed by the Design Builder and be the Design Builder's representative at the Project site and shall have authority to act on behalf of Design Builder. All communications given to the superintendent shall be as binding as if given to the Design Builder. Owner shall have the right to direct Design Builder to remove and replace its Project superintendent, with cause. Attached to the Agreement as Exhibit S is Design Builder's list identifying Design Builder's Project Superintendent and all of Design Builder's key personnel who are assigned to the

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

Project; such identified personnel shall not be removed without Owner's prior written approval, and if so removed must be immediately replaced with a person acceptable to Owner.

2. Design Builder shall have a competent, experienced superintendent on the project at all times whenever Design Builder's work crews, or work crews of other parties authorized by the Project Manager are engaged in any activity whatsoever associated with the Project. Should the Design Builder fail to comply with the above condition, the Project Manager shall, at his discretion, deduct from the Design Builder's monthly pay estimate, sufficient moneys to account for the Owner's loss of adequate project supervision, not as a penalty, but as liquidated damages, separate from the liquidated damages described in Section 5, for services not rendered.

**25. PROTECTION OF WORK**

1. Design Builder shall fully protect the Work from loss or damage and shall bear the cost of any such loss or damage until final completion is achieved. If Design Builder or any one for whom Design Builder is legally liable for is responsible for any loss or damage to the Work, or other work or materials of Owner or Owner's separate contractors, Design Builder shall be charged with the same, and any moneys necessary to replace such loss or damage shall be deducted from any amounts due Design Builder.
2. Design Builder shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Design Builder subject any part of the Work or adjacent property to stresses or pressures that will endanger it.
3. Design Builder shall not disturb any benchmark established by the Owner with respect to the Project. If Design Builder, or its subcontractors, agents or anyone for whom Design Builder is legally liable, disturbs the Owner's benchmarks, Design Builder shall immediately notify Project Manager. The Owner shall re establish the benchmarks and Design Builder shall be liable for all costs incurred by Owner associated therewith.

**26. EMERGENCIES**

1. In the event of an emergency affecting the safety or protection of persons or the Work or property at the Project site or adjacent thereto, Design Builder, without special instruction or authorization from Owner, is obligated to act to prevent threatened damage, injury or loss. Design Builder shall give Project Manager written notice within forty eight (48) hours after Design Builder knew or should have known of the occurrence of the emergency, if Design Builder believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If the Project Manager determines that a change in the Contract Documents is required because of the action taken in response to an emergency, and such emergency was not due to the fault or neglect of the Design Builder, a Change Order shall be issued to document the consequences of the changes or variations. If Design Builder fails to provide the forty eight (48) hour written notice noted above, the Design Builder shall be deemed to have waived any right it otherwise may have had to seek an adjustment to the Contract Amount or an extension to the Contract Time.

**27. USE OF PREMISES**

1. Design Builder shall maintain all construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents and other lands and areas permitted by law, rights of way, permits and easements, and shall not unreasonably encumber the Project site with construction equipment or other material or equipment. Design Builder shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or any land or areas contiguous thereto, resulting from the performance of the Work.
2. Design Builder acknowledges that Work may be performed at a particular Project site where Owner simultaneously is conducting and continuing its operations upon the same site. In such event, Design Builder shall coordinate its Work and cooperate so as to cause no unreasonable interference with or disruption to Owner's operations.
3. Owner may take early occupancy of all or any portions of the Work, at Owner's election, by designating in writing to Design Builder the specific portions of the Work to be occupied and the date such occupancy shall commence. If any such specific early occupancy was not expressly identified at the time the Notice to Proceed was executed and such early occupancy negatively impacts Design Builder's cost or time of performance, Design Builder shall be entitled to an equitable adjustment to the Contract Amount and the Contract Time, all in accordance with the other terms and conditions of the Contract Documents.

**28. SAFETY**

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

- A. Design Builder shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Design Builder shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
- A. All employees on or about the project site and other persons and/or organizations who may be affected thereby;
  - B. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Project site; and
  - C. Other property on Project site or adjacent thereto, including trees, shrubs, walks, pavements, roadways, structures, utilities and any underground structures or improvements not designated for removal, relocation or replacement in the Contract Documents.
- B. Design Builder shall comply with all applicable codes, laws, ordinances, rules and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Design Builder shall erect and maintain all necessary safeguards for such safety and protection. Design Builder shall notify owners of adjacent property and of underground structures and improvements and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation or replacement of their property. Design Builder's duties and responsibilities for the safety and protection of the Work shall continue until such time as the Work is completed and final acceptance of same by Owner has occurred.
- C. Design Builder shall designate a responsible representative located on a full time basis at the Project site whose duty shall be the prevention of accidents. This person shall be Design Builder's superintendent unless otherwise designated in writing by Design Builder to Owner.
- D. Alcohol, drugs and all illegal substances are strictly prohibited on any Owner property. All employees of Design Builder, as well as those of all Design Builder's subconsultants and subcontractors and those of any other person or entity for whom Design Builder is legally liable (collectively referred to herein as "Employees"), shall not possess or be under the influence of any such substances while on any Owner property. Further, Employees shall not bring on to any Owner property any gun, rifle or other firearm, or explosives of any kind.
- E. Design Builder acknowledges that the Work may be progressing on a Project site which is located upon or adjacent to an existing Owner facility. In such event, Design Builder shall comply with the following:
- A. All Owner facilities are smoke free. Smoking is strictly prohibited;
  - B. All Employees working at the Project site must log in and out with the Design Builder each day;
  - C. Design Builder shall strictly limit its operations to the designated work areas and shall not permit any Employees to enter any other portions of Owner's property without Owner's express prior written consent;
  - D. All Employees are prohibited from distributing any papers or other materials upon Owner's property, and are strictly prohibited from using any of Owner's telephones or other office equipment;
  - E. All Employees shall at all times comply with the OSHA regulations with respect to dress and conduct at the Project site. Further, all Employees shall comply with the dress, conduct and facility regulations issued by Owner's officials onsite, as said regulations may be changed from time to time;
  - F. All Employees shall enter and leave Owner's facilities only through the ingress and egress points identified in the site utilization plan approved by Owner or as otherwise designated, from time to time, by Owner in writing;
  - G. When requested, Design Builder shall cooperate with any ongoing Owner investigation involving personal injury, economic loss or damage to Owner's facilities or personal property therein;
  - H. The Employees may not solicit, distribute or sell products while on Owner's property. Friends, family members or other visitors of the Employees are not permitted on Owner's property; and
  - I. At all times, Design Builder shall adhere to Owner's safety and security regulations, and shall comply with all security requirements at Owner's facilities, as said regulations and requirements may be modified or changed by Owner from time to time.
  - J. At all times while at the Project site, all Employees shall refrain from any abusive or offensive language and shall refrain from the harassment of any Owner employee, agent or invitee on the Project site.

**29. PROJECT MEETINGS**

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

Prior to the commencement of any Work, the Design Builder shall attend a conference with the Project Manager and others as appropriate to discuss the Master Project Schedule, procedures for handling design documents, shop drawings and other submittals, and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work. During the prosecution of the Work, the Design Builder shall attend any and all meetings convened by the Project Manager with respect to the Project, when directed to do so by the Project Manager. The Design Builder shall have its subconsultants, subcontractors and suppliers attend all such meetings (including the pre-construction conference) as may be directed by the Project Manager.

**30. MAINTENANCE OF TRAFFIC POLICY**

For all projects that are conducted within a Pinellas County Right-of-Way, the Design Builder shall provide and erect Traffic Control Devices as prescribed in the current edition of the Manual On Uniform Traffic Control Devices (MUTCD), where applicable on local roadways and as prescribed in the Florida Department of Transportation Design Standards (DS), where applicable on state roadways. These projects shall also comply with Pinellas County's Maintenance of Traffic Policy, incorporated herein by reference. Copies are available through Owner's Risk Management.

The Design Builder will be responsible for obtaining copies of all required manuals, MUTCD, FDOT Roadway & Traffic Design Standards Indexes, or other related documents, so to become familiar with their requirements. Strict adherence to the requirements of the Maintenance of Traffic ("MOT") policy will be enforced under this Contract.

All costs associated with the Maintenance of Traffic shall be included within the Lump Sum Agreement.

If MOT is required, MOT is to be provided beginning with the Phase 2 Commencement Date.

**31. SUBCONTRACTS**

1. As the design is being developed by or for Design Builder, Design Builder shall review the design and shall determine how it desires to divide the sequence of construction activities. Design Builder will determine the breakdown and composition of bid packages for award of subcontracts, based on the current Master Project Schedule, and shall supply a copy of that breakdown and composition to Owner for its review and approval prior to submitting its Lump Sum Price proposal. Design Builder shall take into consideration such factors as natural and practical lines of severability, sequencing effectiveness, access and availability constraints, total time for completion, construction market conditions, availability of labor and materials, community relations and any other factors pertinent to saving time and costs.
2. A Subcontractor is any person or entity who is performing, furnishing, supplying or providing any portion of the Work pursuant to a contract with Design Builder, including any of the required design services. Design Builder shall be solely responsible for and have control over the Subcontractors. Design Builder shall negotiate all Change Orders, Work Directive Changes, Field Orders and Requests for Proposal, with all affected Subcontractors and shall review the costs of those proposals and advise Owner of their validity and reasonableness, acting in Owner's best interest, prior to requesting approval of any Change Order from Owner. All Subcontractors performing any portion of the Work on this Project must possess all licenses required by state or local law and must be "qualified," meaning a person or entity that has the capability in all respects to perform fully the Agreement requirements with respect to its portion of the Work and has the integrity and reliability to assure good faith performance.
3. When Design Builder submits its Lump Sum Price proposal to Owner, Design Builder shall identify all Subcontractors, including their addresses, licensing information and phone numbers, it intends to utilize for the Project. All Subcontractors must be approved by Owner prior to Design Builder entering into any subcontract or purchase order with them and prior to any Subcontractor commencing any work on the Project. The list identifying Subcontractors shall be attached as an Attachment to the Lump Sum Price proposal and cannot be modified, changed, or amended without prior written approval from Owner. Any and all Subcontractor work to be self-performed by Design Builder must be approved in writing by Owner in its sole discretion prior to commencement of such work. As additional Subcontractors may be approved by Owner after the Notice to Proceed is executed, Design Builder shall continuously update that Subcontractor list, so that it remains current and accurate throughout the entire performance of the Work.
4. Design Builder shall not enter into a subcontract or purchase order with any Subcontractor, if Owner reasonably objects to that Subcontractor. Design Builder shall not be required to contract with anyone to whom it reasonably objects. Design Builder shall keep on file a copy of the license for every Subcontractor and sub-subcontractor performing any portion of the Work, as well as maintain a log of all such licenses. All subcontracts and purchase orders between Design Builder and its Subcontractors shall be in writing and are subject to Owner's approval.

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

Further, unless expressly waived in writing by Owner, all subcontracts and purchase orders shall (1) require each Subcontractor to be bound to Design Builder to the same extent Design Builder is bound to Owner by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the Subcontractor, (2) provide for the assignment of the subcontract or purchase order from Design Builder to Owner at the election of Owner upon termination of Design Builder, (3) provide that Owner will be an additional indemnified party of the subcontract or purchase order, (4) provide that Owner will be an additional insured on all liability insurance policies required to be provided by the Subcontractor except workman's compensation and professional liability policies, (5) assign all warranties directly to Owner, and (6) identify Owner as an intended third-party beneficiary of the subcontract or purchase order. Design Builder shall make available to each proposed Subcontractor, prior to the execution of the subcontract, copies of the Contract Documents to which the Subcontractor will be bound. Each Subcontractor shall similarly make copies of such documents available to its sub-subcontractors.

5. All Subcontractors providing any construction services must agree to provide field (on-site) supervision through a named superintendent for each trade (e.g., general concrete forming and placement, masonry, mechanical, plumbing, electrical and roofing) included in its subcontract or purchase order. In addition, the Subcontractor shall assign and name a qualified employee for scheduling direction for its portion of the Work. The supervisory employees of the Subcontractor (including field superintendent, foreman and schedulers at all levels) must have been employed in a supervisory (leadership) capacity of substantially equivalent level on a similar project for at least two years within the last five years. The Subcontractor shall include a resume of experience for each employee identified by it to supervise and schedule its work.
6. Unless otherwise expressly waived by Owner in writing, all subcontracts and purchase orders shall provide:
  - A. That the Subcontractor's exclusive remedy for delays in the performance of the subcontract or purchase order caused by events beyond its control, including delays claimed to be caused by Owner or attributable to Owner and including claims based on breach of contract or negligence, shall be an extension of its contract time.
  - B. In the event of a change in the work, the Subcontractor's claim for adjustments in the contract sum are limited exclusively to its actual costs for such changes plus no more than 10% for overhead and profit.
  - C. The subcontract or purchase order, as applicable, shall require the Subcontractor to expressly agree that the foregoing constitute its sole and exclusive remedies for delays and changes in the Work and thus eliminate any other remedies for claim for increase in the contract price, damages, losses or additional compensation. Further, Design Builder shall require all Subcontractors to similarly incorporate the terms of this Section 31.6 into their sub-subcontracts and purchase orders.
7. Each subcontract and purchase order shall require that any claims by Subcontractor for delay or additional cost must be submitted to Design Builder within the time and in the manner in which Design Builder must submit such claims to Owner, and that failure to comply with such conditions for giving notice and submitting claims shall result in the waiver of such claims.

**32. DESIGN BUILDER RESPONSIBILITIES**

Design Builder shall provide the following review and commentary services, in addition to any other work required by the terms of this Contract:

1. Allowances. The Lump Sum Price for Phase 2 may include Allowances with respect to the work.. Design Builder may expend Allowance money (up to the amount designated) only with the express prior written approval of Owner.
2. Responsibility for Work. Notwithstanding any requirements herein for Owner's review, inspection, consent or approval, the parties acknowledge and agree that Design Builder shall be solely responsible and liable for the proper performance of the Work as provided for herein.
3. Notices and Compliance with Law. Design Builder shall be responsible for giving all notices and for complying with all laws, ordinances, rules, regulations and lawful orders of any public authorities having jurisdiction over the particular portion of the Project with respect to the performance of the subject Work. The Master Project Schedule for the subject Work and the Lump Sum Price associated therewith shall be based upon the laws, ordinances and regulations which are then in effect on the date the Notice to Proceed is executed. Any changes in laws, ordinances or regulations thereafter that require additional work outside Design Builder's established scope shall be the subject of a Change Order as provided in section 14.1 of these General Terms and Conditions.

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

4. Indemnification for Infringement. Design Builder shall pay all royalty and license fees required for the design and construction of any portion of the Project assigned to it. To the maximum extent permitted by law, Design Builder shall defend any and all suits or claims for infringement of patent rights and shall indemnify and save Owner harmless from all loss or expense on account thereof (including attorneys' and paralegals' fees).
5. Review, Recommendations and Warranty: Design Builder shall familiarize itself thoroughly with the evolving architectural, civil, mechanical, plumbing, electrical and structural plans and specifications being prepared by its Design Professionals and shall follow the development of the Project design through all required design sub-phases in Phase 1. Design Builder shall make recommendations with respect to the selection of systems and materials, and cost-reducing alternatives including assistance to Owner in evaluating alternative comparisons versus long term cost effects. The evaluation shall address the benefits of the speed of erection and early completion of the Work. Design Builder shall furnish pertinent information as to the availability of materials and labor that will be required. Design Builder shall submit to Owner such comments as may be appropriate concerning construction feasibility and practicality. Design Builder shall call to Owner's attention any defects in the design, drawings and specifications or other documents of which it is aware. Design Builder shall prepare estimates of the construction cost utilizing the unit quantity survey method in the CSI format. These estimates shall be performed at the completion of the Program Verification Phase and shall be called the Program Estimate, followed by a Schematic Design Estimate, which shall be followed by the Design Development Estimate, which shall be followed by a 50% Construction Document Estimate, which shall be followed by the setting of the Lump Sum Price.
6. Review Reports: Within ten (10) days after receiving the documents produced by its Design Professionals, Design Builder shall perform a specific review thereof, focused upon factors of a nature encompassed in Paragraph 34.5 above and on factors set out in Paragraphs 34.7 and 34.8 below. Within the same ten (10) day period, Design Builder shall submit to Owner a written report covering suggestions or recommendations previously submitted, additional suggestions or recommendations as Design Builder may deem appropriate, and all actions taken by Design Builder with respect to same, any comments Design Builder may deem to be appropriate with respect to separating the Work into separate subcontracts, alternative materials, and any other appropriate or required comments.
7. THE DESIGN BUILDER SHALL BE DEEMED TO HAVE WARRANTED TO OWNER, THAT THE CONSTRUCTION DOCUMENTS ARE CONSISTENT WITH EACH OTHER, PRACTICAL, FEASIBLE AND CONSTRUCTABLE FOR THE CONTRACT AMOUNT. FURTHER, THE DESIGN BUILDER SHALL BE DEEMED TO HAVE WARRANTED TO OWNER THAT THE WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS IS CONSTRUCTABLE WITHIN THE CONTRACT TIME, AND THAT NO ADDITIONAL SITE INVESTIGATION IS NECESSARY OR DESIRED BY DESIGN BUILDER.
8. Long Lead Procurement: Design Builder shall review the Project design for the purpose of identifying long lead procurement items (machinery, equipment, materials and supplies) and consult with the Project Manager concerning same. When each item is identified, Design Builder shall notify the subcontractors and Owner of the required procurement and schedule. Such information shall be included in the bid documents and made a part of all affected subcontracts. Design Builder shall keep itself informed of the progress of the respective subcontractors or suppliers, manufacturing or fabricating such items, and advise Owner of any problems or possible delays in delivery.
9. Interfacing:
  - A. Design Builder shall take such measures as are appropriate to provide that all construction requirements will be covered in the separate procurement of long lead items, the separate construction subcontractors and the general conditions items without duplication or overlap, and sequenced to maintain completion of all Work on schedule. Particular attention shall be given to provide that each bid package clearly identifies the Work included in that particular separate subcontract, its schedule for start and completion and its relationship to the other separate subcontractors.
  - B. Design Builder shall include in the reports required under Paragraph 32.6 above, comments on overlap with any other separate subcontracts, omissions, lack of correlation between drawings, and any other deficiencies noted, in order that Design Builder may arrange for necessary corrections.

**33. OWNER'S RESPONSIBILITIES**

1. Design Criteria Package. Owner has provided Design Builder with the Design Criteria Package and will provide responses or clarification within a reasonable period of time to Design Builder's inquiries with respect to the Design Criteria Package.



**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

2. Owner's Representative. Owner designates **Kerstin Kenty** as Project Manager who shall be fully acquainted with the scope of the Work and authorized to act on Owner's behalf with respect to Design Builder's services for the Project. Provided, however, that Project Manager is not authorized to issue any orders or instructions to Design Builder that would have the effect, or be interpreted to have the effect, of modifying or changing in any way whatsoever the: (1) scope of services to be provided and performed by Design Builder hereunder; (2) the time Design Builder is obligated to commence and complete all such services; or (3) the amount of compensation Owner is obligated or committed to pay Design Builder. As set forth herein, Project Manager shall review and make appropriate recommendations on all requests submitted by Design Builder for payment for services and work provided and performed in accordance with this Agreement.

**34. MARKET ANALYSIS AND SOLICITATION OF BIDS**

1. The purpose of this Paragraph is to insure that Design Builder makes a genuine effort to stimulate subcontractor interest in the Project and maximize participation of potential qualified subcontractors in the bidding process. At all times Owner shall have access to and the right to require copies of all correspondence, records, files and other bid documents (including all bid responses) with respect to the bidding process. Further, Design Builder shall notify Owner of the date, time and place of all bid openings and Owner shall have the right to attend any and all such bid openings. All bid openings shall be conducted in Pinellas County, Florida.
  - A. Design Builder shall monitor conditions in the construction market to identify factors that will or may affect costs and time for completing the Work; Design Builder shall make an analysis as necessary to (i) determine and report on availability of labor, materials, equipment, potential bidders, and possible impact of any shortages or surpluses of labor or material, and (ii) in light of such determination, make recommendations and take action as may be appropriate with respect to long lead procurement, separation of construction into bid packages, sequencing of Work, use of alternative materials, equipment or methods, other economics in design or construction, and other matters that will promote cost savings and completion within the Contract Time.
  - B. Within thirty (30) days after execution of this Contract, Design Builder shall submit a written "Construction Market Analysis and Prospective Bidders Report" setting out recommendations and providing information as to prospective bidders. As various bid packages are prepared for bidding, Design Builder shall submit to Owner a list of potential bidders for its review and approval. Design Builder shall be responsible for promoting and encouraging bid competition.
  - C. Design Builder shall carry out an active program of stimulating interest of qualified subcontractors in bidding on the Work and of familiarizing those bidders with the requirements of this Project.
2. Design Builder shall prepare invitations for bids and all other appropriate bid documents for all procurement of long lead items, materials and services, for subcontractor contracts and for site utilities. All such invitations for bids and bid packages shall be submitted to Owner for its review and approval prior to distribution to bidders.
  - A. Except as hereafter provided in Paragraph 34.3, all subcontracts are to be awarded to the lowest responsive and responsible bidder.
  - B. Design Builder shall procure the lump sum price through a competitive bid process. Design Builder shall obtain at least three bids, wherever possible, and shall provide all associated documentation to Owner within a reasonable time after receipt of Owner's written request.
3. Notwithstanding the provision above requiring award of subcontracts to the lowest responsive and responsible bidder, Design Builder may award a subcontract to someone other than the lowest responsive and responsible bidder provided Design Builder has first received Owner's express written consent to such award. Owner's consent to any such award will be at Owner's sole discretion. Whenever Design Builder wishes to award a subcontract to someone who is not the lowest responsive and responsible bidder, Design Builder must notify Owner in writing, setting out in detail the reasons and justifications for the suggested award.
4. To the extent that Design Builder desires to self perform any portion of the Work, Design Builder shall obtain Owner's written approval and at least three (3) written sealed bids from subcontractors not affiliated with Design Builder.

**35. SECURING AGREEMENT**

1. Design Builder warrants that Design Builder has not employed or retained any company or person, other than a bona fide employee working solely for Design Builder, to solicit or secure this Contract and that Design Builder has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide

**EXHIBIT H - GENERAL TERMS AND CONDITIONS**

employee working solely for Design Builder, any fee, commission, percentage, gift or any other consideration contingent upon or resulting from the award or making of this Contract. At the time this Contract is executed, Design Builder shall sign and deliver to Owner the Truth-in-Negotiation Certificate attached hereto and made a part hereof as Exhibit R. The Design Builder's compensation shall be adjusted to exclude any sums by which Owner determines the compensation was increased due to inaccurate, incomplete, or non-current wage rates or other factual unit costs.

**36. PUBLIC ENTITY CRIMES**

1. DESIGN BUILDER is directed to the Florida Public Entity Crime Act, Fla. Stat. 287.133, and Fla. Stat. 287.135 regarding Scrutinized Companies, and DESIGN BUILDER agrees that its bid and, if awarded, its performance of the agreement will comply with all applicable laws including those referenced herein. DESIGN BUILDER represents and certifies that DESIGN BUILDER is and will at all times remain eligible to bid for and perform the services subject to the requirements of these, and other applicable, laws. DESIGN BUILDER agrees that any contract awarded to DESIGN BUILDER will be subject to termination by the County if DESIGN BUILDER fails to comply or to maintain such compliance.

**37. PUBLIC RECORDS**

1. Contractor acknowledges that information and data it manages as part of the services may be public records in accordance with Chapter 119, Florida Statutes and Pinellas County public records policies. Contractor agrees that prior to providing services it will implement policies and procedures to maintain, produce, secure, and retain public records in accordance with applicable laws, regulations, and County policies, including but not limited to the Section 119.0701, Florida Statutes. Notwithstanding any other provision of this Agreement relating to compensation, the Contractor agrees to charge the County, and/or any third parties requesting public records only such fees allowed by Section 119.07, Florida Statutes, and County policy for locating and producing public records during the term of this Agreement.

**If the contractor has questions regarding the application of Chapter 119, Florida Statutes, to the contractor's duty to provide public records relating to this agreement, the contractor shall contact:**

**Pinellas County Board of County Commissioners**

**Purchasing and Risk Management Division**

**400 S. Ft. Harrison Ave, 6th Floor,**

**Clearwater, FL 33756**

**Public Records Liaison**

**Phone: 727-464-3237**

**Email: [mcchartier@pinellas.gov](mailto:mcchartier@pinellas.gov)**

**EXHIBIT I - SUPPLEMENTAL TERMS AND CONDITIONS****EXHIBIT I - SUPPLEMENTAL TERMS AND CONDITIONS**

The following Supplemental Terms and Conditions hereby amend, modify and supersede in the event of a conflict the terms of the Agreement and the General Terms and Conditions attached thereto as Exhibit H.

**A. Reports****1. Monthly Summary Reports:**

- 1.1 The Design Builder shall prepare monthly written reports as described hereunder. All reports shall be in 8 1/2" x 11" format.
- 1.2 The Reports shall include the following:
  - a. A Monthly Executive Summary which provides an overview of current issues and pending decisions, future developments and expected achievements, and any problems or delays, including code violations found by any permitting authority.
  - b. A Monthly Scheduling Report summarizing the current status of the overall Master Project Schedule and an explanation of all variances from the plan. This report shall include an analysis of the various Project sub-schedules, a description of the critical path, and other analyses as necessary to compare planned performance with actual performance.
  - c. A Monthly Design and Construction Progress Report during the Phase 1 and Phase 2 summarizing the Work of the various subconsultants and subcontractors. Once construction at the site commences, this report shall include information from the weekly job site meetings as applicable such as general conditions, long lead supplies, current deliveries, safety and labor relations, programs, permits, construction problems and recommendations, and plans for the succeeding month.
- 1.3 The Reports outlined in subparagraphs 1.2.1 through 1.2.3 above shall be bound with applicable computer schedule reports and submitted monthly during Phase 1 and Phase 2 and shall be current through the end of the preceding month. Copies shall be delivered to the Owner. A bound copy of the complete diary shall be submitted to the Owner at the conclusion of the Project. An electronic pdf file of each Progress Report shall be delivered to the Owner's Representative each month.

**2. Schedule Control Subsystem.**

- 2.1 Master Project Schedule: Prior to the submittal of its first Application for Payment, the Design Builder shall submit to the Owner for its review and approval a Master Project Schedule covering the planning and design approvals, construction, and Owner occupancy of the Project. This schedule shall conform to the format outlined in Paragraph 2.3 below. This schedule shall serve as the framework for the subsequent development of all detailed schedules and shall be updated monthly by the Design Builder throughout the Project. Within fifteen (15) calendar days of the Design Builder's submittal, the Owner shall review the schedule and provide the Design Builder a written list of corrections needed to approve the schedule. The Design Builder must make all corrections and resolve all comments within thirty (30) calendar days after its receipt of Owner's comments. If the schedule is not approved within said thirty (30) calendar days, the Owner will withhold all Contract payments until the schedule is approved. The acceptance of the schedule by the Owner in no way attests to the validity of the assumptions, logic constraints, dependency relationships, resource allocations, manpower and equipment, and any other aspect of the proposed schedule. The Design Builder is and shall remain solely responsible for the planning and execution of all Work in order to meet Project milestones or Contract completion dates.
- 2.2 Construction Schedule: The Design Builder shall prepare and submit to the Owner, for its review and approval, a Construction Schedule. This schedule shall conform to the format outlined in Paragraph 2.3 below. The approved Construction Schedule shall be attached.. The Construction Schedule shall be integrated into the Master Project Schedule.
  - a. Following development and approval of the Construction Schedule as aforesaid, the Design Builder shall, at the end of each calendar month occurring thereafter during the period of time required to finally complete the Project, or at such earlier intervals as circumstances may require, update and/or revise the Construction Schedule which shall be submitted to the Owner in duplicate. No additional compensation will be due the Design Builder for making such updates. Failure of the Design Builder to update, revise, and submit the Construction Schedule as aforesaid shall be sufficient grounds for the Owner to find the Design Builder in substantial default hereunder and that sufficient cause exists

**EXHIBIT I - SUPPLEMENTAL TERMS AND CONDITIONS**

to terminate the Contract or to withhold payment to the Design Builder until a schedule or schedule update acceptable to the Owner is submitted.

3. **Schedule Format:** The Master Project Schedule and the Construction Schedule shall be planned and recorded with a Critical Path Method (CPM) schedule in the form of an activity-on-node diagram. All activity-on-node diagrams shall include the Activity Identification, Activity Description, and the type of relationship between activities, including any lead or lag time.
4. **Recovery Schedule:** If the initial schedule or any current updates fail to reflect the Work's actual plan or method of operation, or a contractual milestone date is more than fifteen (15) days behind, the Owner may require that a recovery schedule for completion of the remaining Work be submitted. The Recovery Schedule must be submitted within seven (7) calendar days of the Owner's request. The Recovery Schedule shall describe in detail the Design Builder's plan to complete the remaining Work by the required Contract milestone date. The Recovery Schedule submitted shall meet the same requirements as the original Construction Schedule. The narrative submitted with the Recovery Schedule should describe in detail all changes that have been made to meet the Contract milestone dates.
5. **Change Orders:** When a Change Order is proposed, the Design Builder must identify all logic changes as a result of the Change Order. The Design Builder shall include, as part of each Change Order proposal, a sketch showing all schedule logic revisions, duration changes, and the relationships to other activities in the approved Construction Schedule. This sketch shall be known as the fragnet for the change. Upon acceptance of the fragnet, the Design Builder will revise the Construction Schedule or current update. The logic changes required by the Change Order will be considered incidental to the Design Builder's work. No separate payment will be made.

**B. PROGRESS PAYMENTS**

1. **Retainage:**
  - 1.1 The five percent (5%) retainage referenced in Section 4.6 of the General Conditions shall not be applied to this Project during Phase 1

## **EXHIBIT J - DESIGN CRITERIA PACKAGE**



**Pinellas County**

# **GRAVITY SEWER REHABILITATION DESIGN CRITERIA PACKAGE**

**PID 005225A**

August 2023

August 2023

## Table of Contents

<b><u>1.0 INTRODUCTION</u></b>	<b>62</b>
<b><u>1.2 DCP Organization</u></b>	<b>64</b>
<b><u>2.0 Project Description</u></b>	<b>64</b>
<b><u>3.0 PROPOSED IMPROVEMENTS</u></b>	<b>68</b>
<b><u>3.1 Planning and Preliminary Design</u></b>	<b>68</b>
3.1.1 Gravity Line and Manhole Cleaning	68
3.1.2 Investigation and Inspection	68
3.1.3 Technical Memorandum	69
3.1.4 Referenced Standards	69
<b><u>3.2 Final Design and Proposal</u></b>	<b>69</b>
3.2.1 Construction Documents	69
3.2.2 Proposal	69
<b><u>3.3 Flow Monitoring</u></b>	<b>70</b>
<b><u>4.0 CONSTRUCTABILITY AND OTHER CONSIDERATIONS</u></b>	<b>70</b>
<b><u>4.1 Permitting</u></b>	<b>70</b>
<b><u>4.2 Access</u></b>	<b>70</b>
4.2.1 Public Right-of-Way	70
4.2.2 Right of Entry	71
4.2.3 Existing Utility Easements	71
4.2.4 Temporary Construction Easements	71
<b><u>4.3 Obtain Permits/Regulatory Agency Coordination – FDOT for MOT</u></b>	<b>71</b>
<b><u>4.4 Public Communications and Outreach</u></b>	<b>71</b>
<b><u>5.0 Additional Data Resources</u></b>	<b>72</b>
<b><u>5.1 Studies and Investigation Reports</u></b>	<b>72</b>
<b><u>5.2 GIS Data</u></b>	<b>72</b>
<b><u>6.0 Project Schedule:</u></b>	<b>73</b>

## Figures

Figure 1.1 South County Overall Zone Map and Priority Areas	63
Figure 2.1 Zone 4 Map (green) Priority Area (red)	65
Figure 2.2 Zone 8 Map (green) Priority Area (red)	66
Figure 2.3 Zone 13 Map (green) Priority Area (red)	67

## Tables

Table 2-1 Priority Area Zone 4 Quantities	65
Table 2-2 Priority Area Zone 8 Quantities	66
Table 2-3 Priority Area Zone 13 Quantities	67

## Appendices

Appendix A: Pinellas County Private Sewer Lateral and Systems Ordinance  
Appendix B: Private Sewer Lateral Policy  
Appendix C: Pinellas County Sanitary Sewer Flow Monitoring Methodology/Protocols Document  
Appendix D: Maps with Boundary Locations  
Appendix E: Pinellas County Standard Specifications for Sanitary Sewer Cured-In Place Pipelining  
Appendix F: National Association of Sewer Service Companies (NASSCO) Standards  
Appendix G: Pinellas County Standard Specification for Sanitary Sewer Cleaning and Televising  
Appendix H: Pinellas County Manhole Rehabilitation Standards  
Appendix I: Manhole Insert Inflow Dish Standards  
Appendix J: Pinellas County Standard Details  
Appendix K: Standard Operating Procedure for I&I Reduction Effectiveness Analysis  
Appendix L: Right of Entry Form Template  
Appendix M: Temporary Construction Easement (TCE) Form Template  
Appendix N: Studies and Investigation Reports



## **1.0 INTRODUCTION**

### **1.1 Overview**

Groundwater and surface water inflow and infiltration (I&I) that enters the wastewater collection system utilizes valuable sewer capacity, contribute to causes of sanitary sewer overflows (SSOs), and adds cost for excess wastewater treatment. Defective private sanitary sewer laterals and defective manholes also contribute to I&I into the wastewater collection system.

Recently, Pinellas County Utilities (County) developed and instituted the Private Sewer Lateral and Systems Ordinance (**Appendix A**) which defines the Private Sewer Lateral (PSL) Policy. The PSL Policy is comprised of four components to aid in the execution of a program to remediate I&I and SSOs. One of the four components is the Find and Fix Policy. **Appendix B** includes the resolution and a description of each of the four PSL Policy components (referred to as the Sewer Lateral and Private Systems Polices in the resolution). The policy components describe the framework for a program of projects that aim to remediate I&I and SSOs.

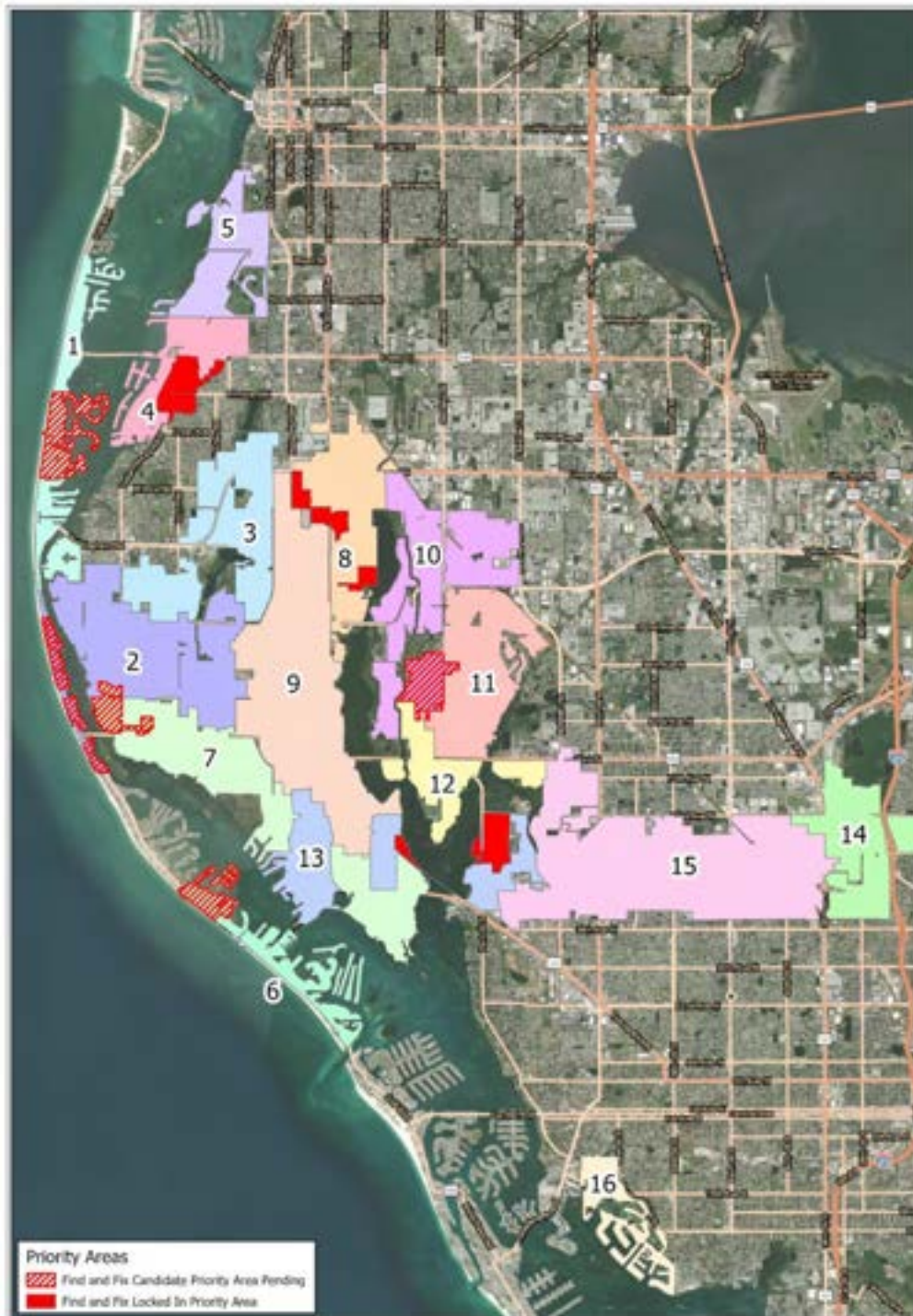
County is now implementing a Find and Fix program to remediate critical portions of excess I&I as part of the Capital Improvement Program (CIP). The South County I&I Remediation for Priority Areas in Zones 4, 8, and 13 (the Project), will be delivered as a Progressive Design Build (PDB) project. Figure 1.1 shows the South County Zones and the Priority Areas included as part of the project. It is anticipated that work for all three Priority Areas will be accomplished under a contract with a single PDB Contractor (Contractor). I&I studies and area evaluations have been completed and used to develop the design criteria for the Project's various components. Additional priority areas may be assigned to the Contractor at the discretion of the County.

The objective of the Project is to provide for the targeted reduction of I&I in the County's wastewater collection system in the selected Priority Areas where the approach described herein is considered the most cost-effective and technically superior. County will achieve I&I reduction efforts by implementing cost-effective and comprehensive rehabilitation and replacement of wastewater collection mains, manholes, and public and private laterals within the selected Priority Areas.

This DCP will be provided as an exhibit to the County's request for proposals (RFP) and is intended to communicate to potential progressive design-build teams the project limits, design criteria, and County's technical requirements for the new and modified wastewater collection system components that comprise the project.

Note that the provided documents related to the Project's feasibility and layout are conceptual and not intended for construction. The Contractor is responsible for reviewing the concepts illustrated and supporting technical documents to develop their independent proposal.

Figure 1.1 South County Overall Zone Map and Priority Areas



Three priority areas (Zones 4, 8 and 13) from the County's 16 zones, have been identified as major contributors to the I&I in south Pinellas County. In addition, four additional areas (Zones 1, 2, 6 and 12) have been identified as possible candidates for the Find and Fix program and may be added to the scope of work at the discretion of the County. Figure 1.1 identifies respective priority areas (red highlighted polygons) and candidate areas (red hatched polygons) within their respective zones.

August 2023

Views and tabulated data for each of these priority areas have been developed from the County's GIS records and are provided for reference only. The Contractor is responsible for reviewing and validating the information, and for determining what information is used in its proposal.

## **1.2 DCP Organization**

This DCP is organized by the following Sections:

1. Section 1 - Introduction: Describes the purpose of this DCP and overview of the project.
2. Section 2 - Project Description: Describes project areas and collection system components.
3. Section 3 - Proposed Improvements: Description and Criteria for Proposed Improvements.
4. Section 4 - Constructability and Other Considerations: Describes potential right-of-way (ROW) and easement concerns, Regulatory Requirements, Permits and Approvals, Site Restoration, and other standards for the work. Also identifies the County's and Contractor's respective responsibilities for permitting.
5. Section 5 - Studies and Investigations: Identifies previous studies, investigations, reports, and other historical information applicable to the project.
6. Section 6 - Project Schedule: Establishes the construction and commissioning schedule. (To be incorporated in the RFP).

## **2.0 Project Description**

Over the past several years, the County retained several consultants to complete I&I studies throughout several locations in the County. To maintain consistency, County developed and implemented the Pinellas County Sanitary Sewer Flow Monitoring Methodology/Protocols Document (**Appendix C**) as standard for nomenclature, describing areas, and completing the I&I investigations. Protocol and available I&I reports were reviewed and relied upon for the development of this DCP.

To clarify nomenclature for I&I studies in south Pinellas County, zones were created to describe boundaries for particular areas. Figure 1.1 identifies 16 zones where I&I investigations have been performed.

**Appendix D** provides a collection of maps with information for each of the priority areas from data provided by the County's GIS database. Views are progressively more detailed starting from the overall South County collection system as show in Figure 1.1, to the zone area, to the priority areas, to street views showing individual sewer lateral connections and other utilities. The following Figures 2.1 thru 2.3 and Tables 2-1 thru 2-3 provide a mid-level summary of that information for the identified priority areas.

August 2023

Figure 2.1 Zone 4 Map (green) Priority Area (red)



Table 2-1 Priority Area Zone 4 Quantities

Diameter (Inch)	Length (Ft)
Unknown	29,920
4	0
6	21
8	11,667
10	88
15	170
18	203
20	53
Total Pipe Length	42,121
Number of Laterals	691
Total Lateral Length	21,410
Total No. of Manholes	214



August 2023

Figure 2.2 Zone 8 Map (green) Priority Area (red)

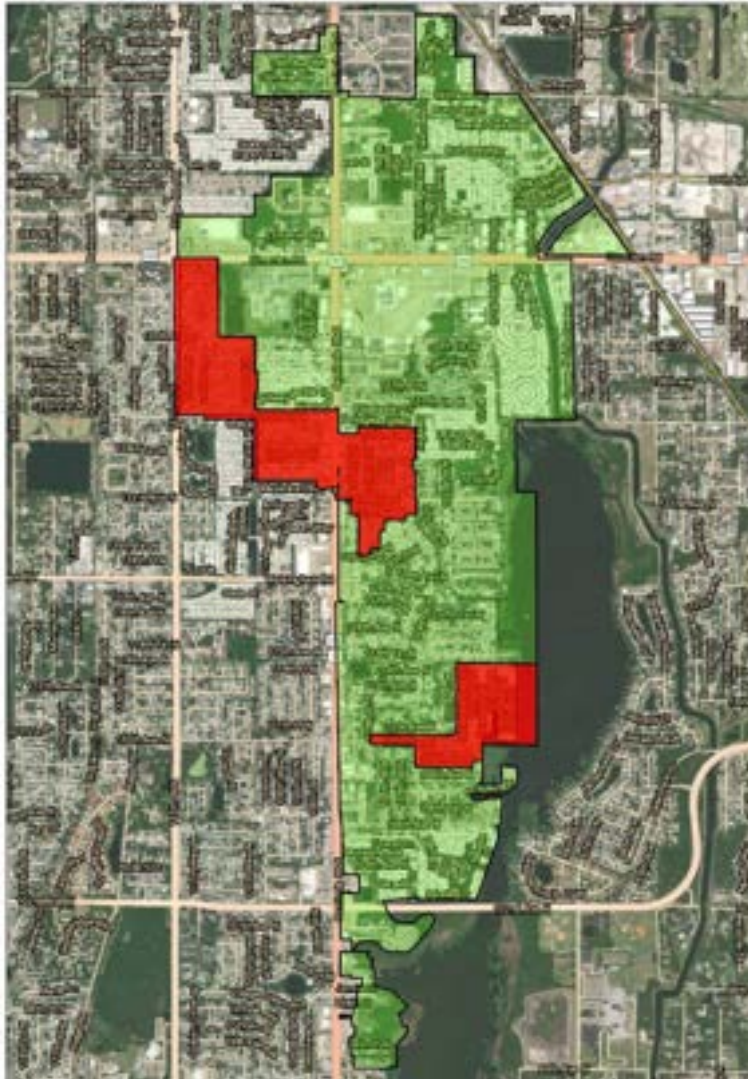


Table 2-2 Priority Area Zone 8 Quantities

Diameter (Inch)	Length (Ft)
Unknown	554
4	0
6	182
8	26,141
10	1,486
12	0
Total Pipe Length	28,363
Number of Laterals	550
Total Lateral Length	15,433
Total No. of Manholes	122

August 2023

Figure 2.3 Zone 13 Map (green) Priority Area (red)



Table 2-3 Priority Area Zone 13 Quantities

Diameter (Inch)	Length (Ft)
Unknown	700
4	0
6	5,216
8	18,069
10	765
12	299
Total Pipe Length	25,049
Number of Laterals	196
Total Lateral Length	4,078
Total No. of Manholes	119

### **3.0 PROPOSED IMPROVEMENTS**

Work will progress in two phases: First, the planning, investigation, and preliminary design of the three priority areas to be used in the development of a technical memorandum in support of a proposal to arrive at a guaranteed maximum price (GMP), and secondly, the development of final design and scope supporting a GMP proposal for the Project. Once the GMP is negotiated and approved and notice-to-proceed provided by the County, the Contractor will perform and certify the work in accordance with the Design-Build Agreement.

The following field investigation work is to be coordinated and completed for each of the priority areas.

### **3.1 Planning and Preliminary Design**

The work for the project is to clean and inspect the existing wastewater collection system components using the National Association of Sewer Service Companies (NASSCO) standards, identify and document defective components, and develop a proposal and Guaranteed Maximum Price (GMP) for repairs and remediation of defective components within each Priority Area. The Contractor shall prepare a work plan as part of its proposal to execute the work that meets the schedule requirements of the DCP and the County.

#### **3.1.1 Gravity Line and Manhole Cleaning**

The Contractor shall provide all materials, labor, and equipment necessary to flush and clean gravity lines and manholes in preparation for condition inspection, documentation, and planning. Work shall be completed in accordance with the Pinellas County Standard Specifications for Sanitary Sewer Cured-In Place Pipelining (**Appendix E**).

#### **3.1.2 Investigation and Inspection**

The Contractor shall provide all materials, labor, and equipment necessary to provide Closed Circuit Television (CCTV) recordings of the sewer systems for inspection purposes in accordance with Pinellas County Standard Specifications. Post rehabilitation CCTV shall be provided by the Contractor to validate the work performed. Contractor shall include all expenses necessary for providing digital CCTV for sanitary sewer main, lateral, and manhole inspection services.

**Manholes:** As part of the inspection, the Contractor shall access, inspect, and video each manhole within the boundaries of the Priority Areas and record the condition of the manhole in accordance with NASSCO Specifications – MACP Level 2 Standards. Depth to invert, manhole diameter measurements, ring and cover details, and presence of inflow dish will be recorded. Inflow dishes shall be furnished, installed, and documented by the Contractor at all locations that do not already have one installed.

**Pipelines and laterals:** The Contractor shall complete 100% CCTV condition inspection of the entire sewer lateral or pipeline, up to the nearest cleanout to the structure, or to the structure itself, in accordance with NASSCO standards and specifications for Sewer Main Lines, Public Sewer Laterals, Private Sewer Laterals, and Cleanouts and provide standard condition coding for the Sewer Main Lines in accordance with NASSCO's Pipeline Assessment Certification Program (PACP) standards (**Appendix F**). Inspections of the Private Sewer Laterals will also follow Pinellas County Standard Specification for Sanitary Sewer Cleaning and Televising (**Appendix G**). All inspection videos provided to the County must be compatible with the latest version of GraniteNet as described in the

specifications.

### **3.1.3 Technical Memorandum**

Prepare a Technical Memorandum (TM) summarizing the findings of the condition inspections. The TM shall include descriptions and locations of all defective components and provide recommendations with verified quantities for remedial action. The approach to the remedial work shall take appropriate steps to protect the public and maintain a high-quality, safe site. For use of CIPP method, provide a detailed order of operations for the various types of work. Work shall comply with appropriate industry standards including stopping all system flows and/or using appropriate bypassing to allow for the installation of CIPP in the dry.

Include recommendations for improvement to the system by adding cleanouts at strategic locations to facilitate proper maintenance and post-installation hydrostatic testing. As part of the Technical Memorandum, provide drawings, specifications, and a basis for design report (BODR) for preliminary design (approximately 30%) to be used for the development of the GMP. The preliminary design package will include a cost estimate and proposed schedule for completing the work using current Pinellas County or other standards as referenced herein for the development of the TM. The TM and BODR shall be signed and sealed by Professional Engineer licensed in the State of Florida.

### **3.1.4 Referenced Standards**

Referenced Standards to be used for design and construction include but are not limited to the following:

- Pinellas County Standard Specifications for Sanitary Sewer Cured In-Place Pipelining (**Appendix E**)
- National Association of Sewer Service Companies (NASSCO) Standards (**Appendix F**)
- Pinellas County Manhole Rehabilitation Standards (**Appendix H**)
- Pinellas County Technical Specifications
- Manhole Insert Inflow Dish Standards (**Appendix I**)
- Pinellas County Standard Details (**Appendix J**)
- ASTM F2561 (CIPP lateral/connection rehabilitation)
- F3240 (CIPP gasket sealing)
- Maintenance of Traffic (MOT)

## **3.2 Final Design and Proposal**

### **3.2.1 Construction Documents**

The Contractor shall prepare construction documents based on the approval of final preliminary design as described in the final Technical Memorandum approved by the County in Section 3.1 hereof. These documents shall further develop the preliminary design to a 90% level of definitiveness and detail to fix and describe the various Project components and each Project discipline and system as may be appropriate to support a proposal for the work as required by the RFP.

### **3.2.2 Proposal**

Based on the 90% Construction Documents approved by the Owner, and any other documents upon which



the parties may agree, the Contractor shall submit a proposal to the County (the "Proposal") within forty-five (45) days, which shall include the following unless mutually agreed otherwise:

1. a proposed Lump Sum Price for completion of the construction documents, all permitting, and construction of the Project
2. an updated Project Schedule and date of Substantial Completion of the Project upon which the Lump Sum Price for the Project is based
3. all other information necessary for the parties to enter into Phase 2, with the accompanying General Conditions of Contract

Upon completion and acceptance of the Contractor's proposal by the County, the Contractor shall be responsible for the performance of the work under the Agreement.

### **3.3 Flow Monitoring**

The Contractor will provide for flow monitoring to be conducted before, during and after the planning and execution of remedial work to measure, validate, and document the efficacy of the results of the work performed. The Contractor shall be required to certify the results to the County according to its Standard Operating Procedure. To this end, the County has adopted a Standard Operating Procedure for I&I Reduction Effectiveness Analysis included in Appendix C to be used by the Contractor for the performance of the flow monitoring work.

## **4.0 CONSTRUCTABILITY AND OTHER CONSIDERATIONS**

The Contractor will describe potential right-of-way (ROW) and easement concerns, regulatory requirements, permits and approvals, site restoration, and other standards required for the work. The Contractor shall identify the County and Contractor's respective responsibilities for permitting.

### **4.1 Permitting**

Contractor is responsible for applying for and obtaining all necessary and required building permits and approvals for the Project.

### **4.2 Access**

The Contractor shall be responsible to coordinate access at each site. Space for construction staging parking, set-up, and temporary facilities is extremely limited. Available space for Contractor use will be determined and outlined during the design development in coordination with the County. Any additional space required by the Contractor for employee parking, construction offices, or material storage at off-site locations will be the responsibility of the Contractor.

The Contractor shall be responsible for maintaining the construction site in a manner acceptable to the County. Site maintenance shall include at a minimum the disposal of construction debris, trash clean-up, and removal. All waste shall be removed from the site and disposed in a manner complying with local ordinance and laws. Contractor is responsible for any and all damage to site along with restoration to be completed no later than 30 days. Contractor is responsible for all restoration costs. The County reserves the right to limit the movement of construction crews when an area is not acceptably cleaned and maintained.

#### **4.2.1 Public Right-of-Way**

Collection system assets located solely within the public ROW of roads and streets may be accessed with

appropriate approvals and traffic control plans prior to beginning work in the designated areas. Portions of the sewer laterals will be in the public ROW thereby allowing work to commence for inspection and lining of sewer laterals.

#### **4.2.2 Right of Entry**

When deemed necessary for inspection of a private lateral, the Contractor shall coordinate with the County and the private property owner to obtain a right of entry approval to access individual private properties. A right of entry form template is shown in **Appendix L**. A right of entry approval may be requested for minimal property impacts to facilitate inspections of the private sewer lateral.

#### **4.2.3 Existing Utility Easements**

Public collection system lines designated in existing utility easements will be confirmed by easement information and furnished to the contractor by the County at the beginning of the project.

#### **4.2.4 Temporary Construction Easements**

If the private sewer lateral inspection shows a need for any work to be done on the private lateral, including lateral lining or a complete replacement involving necessary excavation within the private property, the contractor will be required to obtain a temporary construction easement from the property owner through Pinellas County. A temporary construction easement form template is shown in **Appendix M**. The County will be responsible for performing the required property research and providing the legal documentation related to the easement. The Contractor shall be responsible for coordination with the property owner and coordination to obtain the temporary construction easement.

### **4.3 Obtain Permits/Regulatory Agency Coordination – FDOT for MOT**

Contractor is responsible for obtaining any County or State Maintenance of Traffic (MOT) permits needed to carry out the scope of the program. Coordination with the Florida Department of Transportation may also be required. Contractor is responsible for coordinating with relevant regulatory agencies to conduct the work.

### **4.4 Public Communications and Outreach**

Contractor will provide a public outreach specialist to design the required communications and public outreach plan to inform the residents and directly affected businesses in the project areas about the project. Contractor will provide them with a platform that includes project details and directions to file inquiries or concerns related to construction that provides:

1. Consistent outreach and messaging of the goals, objectives, and schedule in conjunction with the County's Communications Department or other designee. Notice to the public residents and businesses (such as door hangers, mail inserts, emails, and website updates) that describes the upcoming work, the date the work is scheduled to commence, and specific instruction (i.e., request to the homeowner to not use or discharge any water into the system on the day the work is scheduled)
2. Direct communication to the public
3. Permits for private lateral work
4. Provide support and/or facilitate townhall meetings as needed.

The Contractor will be required to provide a Public Outreach Officer for the project. The Contractor will be required to develop and implement a plan for Public Outreach to address neighborhood concerns with construction activity. The Plan should outline a proactive strategy of educating the neighborhoods in the designated project areas on the planned construction activity, the methods to be deployed to mitigate traffic, noise, dust, odor, and light impacts during construction. Temporary barriers to minimize impacts to the community are anticipated to be required as a part of construction. The Public Outreach plan should establish the means to provide a primary point of contact from the Contractor to field and address calls from the public during the project with public complaints immediately directed to the County.

## **5.0 Additional Data Resources**

This section identifies additional resources to support the Find and Fix program.

### **5.1 Studies and Investigation Reports**

The following is a list of reports that provide information related to the County Wastewater Collection System Management and Find and Fix program found in Appendix N.

- The County Strategic Plan
- Pinellas County Resiliency Report (December 2020)

### **5.2 GIS Data**

The following is a list of Geographic Information System (GIS) data that provide information related to the County Wastewater Collection System Management and Find and Fix program. The data will be made available electronically from the County.

- Mainline sewers
- Lined sewers
- Manholes
- Force mains
- Collection system lift stations owned and operated by Pinellas County Utilities
- South Cross Bayou Advanced Water Reclamation Facility Flow Monitoring Zones
- Find and Fix Priority Areas
- Streets
- Sewer Laterals\*

- South Cross Bayou Advanced Water Reclamation Facility  
\*Note: not all sewer laterals are identified in the existing County GIS.

## **6.0 Project Schedule:**

Establishes the construction and commissioning schedule. Refer to the schedule section of the Request for Proposal (RFP) for more information.

## **Appendix A: Pinellas County Private Sewer Lateral and Systems Ordinance**

**ORDINANCE 21-\_\_\_\_\_**

AN ORDINANCE OF THE COUNTY OF PINELLAS, PROVIDING THAT THE PINELLAS COUNTY CODE BE AMENDED BY ADDING AN ARTICLE TO CHAPTER 126 TO BE NUMBERED VII; PROVIDING FOR REGULATIONS PERTAINING TO PRIVATE SEWER LATERALS; PROVIDING FOR PERMITTING AND REGULATION OF PRIVATE COLLECTION SYSTEMS; PROVIDING FOR SEVERABILITY; PROVIDING FOR AREAS EMBRACED; PROVIDING FOR INCLUSION IN THE CODE; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Pinellas County owns and operates wastewater facilities and related collection, transmission, and treatment infrastructure (“System”); and

WHEREAS, in addition to maintaining the System, the Board of County Commissioners also establishes policies governing the use of the System for the purpose of maintaining efficient, economic, and safe operation of the System and for the protection of the health, safety and general welfare of the public within Pinellas County; and

WHEREAS, the Pinellas County Code currently provides, among other provisions, that a purpose of the regulations and requirements currently codified is to prevent and abate pollution through the regulation and control of connections to the county sewer system and to limit the use of the sewer system to the collection, conveyance, treatment, and disposal of wastewater through appropriate regulation and enforcement; and

WHEREAS, in order to protect the environment from biological, nutrient, and other types of contaminants, as well as to ensure that financial investment in the System is accurately guided so that rate-payer funds are applied to create an appropriately engineered and functioning System, policies and programs are needed to address the various contributing factors that may cause inappropriate discharges to the System, or to increase the risk of sanitary sewer overflows (SSO) and the potential for regulatory action connected therewith; and

WHEREAS, the risk for adverse impacts to the System as well as of the occurrence of SSOs is increased when stormwater, groundwater or other inappropriate sources of discharge enter the sewer infrastructure, collectively referred to as inflow and infiltration (I&I); and

WHEREAS, a known source of I&I exists in portions of private plumbing infrastructure, in particular the portions of private plumbing that transmit wastewater from a building collection system to the System (Sewer Lateral), when Sewer Laterals through causes including material degradation, damage, and age begin to admit unintended discharges; and

WHEREAS, private Sewer Laterals belong to the property owner and are not County-owned infrastructure, but they are connected to and have a significant influence on County owned infrastructure by conveying material into the System; and

WHEREAS, there are private Collection and Transmission systems (private Sewer Systems) that discharge into the System and are not County owned infrastructure; and

WHEREAS, private Sewer Systems are not currently operated and maintained in accordance with best practices and discharge I&I into the System and also are at risk of causing SSOs from operation failures; and

WHEREAS, the Board therefore finds that a public purpose is served by eliminating the risk, to the extent possible, that a defective private Sewer Lateral or private Sewer System can contribute I&I to the System, which could result in SSOs or other burdens and expenses that would become a burden to the rate-payers of the System; and

WHEREAS, it is not only in the best interests of the environment and the residents of Pinellas County that private Sewer Laterals and private Sewer Systems are maintained in a state of good working order, but the Board has already established minimum housing standards that require the maintenance in good repair of private plumbing conveyances, including Sewer Laterals; and

WHEREAS, the County wishes to additionally and proactively reduce the amount of I&I originating from defective private Sewer Laterals and private Sewer Systems; and

WHEREAS, the Board has determined that policies and programs that address these obstacles to private Sewer Lateral repair and private Sewer Systems operation and maintenance support the public purposes described herein;

NOW THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF PINELLAS COUNTY, FLORIDA, that:

SECTION 1. That the Pinellas County Code is hereby amended by creating a new article to Chapter 126 to be numbered VII which article reads as follows:

## **ARTICLE VII.**

### **PRIVATELY-OWNED COLLECTION AND TRANSMISSION SYSTEMS**

#### **DIVISION 1.**

#### **IN GENERAL**

##### **Sec. 126-700. Definitions.**

*Cleanout* means a segment of pipe connected to an underground private sewer lateral and rising to the surface, providing access to the sewer lateral for purposes of inspection and cleaning.

*Competent Professional* means a Licensed Plumbing Contractor, licensed engineer, an inspector certified in National Association of Sewer Service Companies (NASSCO) pipeline inspection or

other person with all required professional licensure and the professional and technical competency to perform the scope of work included in a private Sewer Lateral inspection.

*Comprehensive Rehabilitation* means the rehabilitation or replacement of all gravity sewers, manholes, and public and private laterals, unless otherwise considered watertight, within a specific defined project area with the goal of maximizing the reduction of I&I entering from the project area.

*County Sewer System (System)* means all sanitary sewer collection, transmission, and treatment infrastructure owned and operated by the County.

*Defective* means, as applied to a Private Sewer Lateral, a Private Sewer Lateral for which any of the following conditions exist upon inspection by a licensed plumbing contractor or other competent professional:

- i. evidence of pipe or joint cracks or deterioration;
- ii. root intrusion into a pipe;
- iii. a misaligned pipe segment, sag, or lack of positive gradient;
- iv. a lack of a necessary cleanout cap;
- v. a downspout, drain, defective cleanout or other connection that allows storm water or other extraneous water to enter the sanitary sewer collection system; and/or
- vi. a defect (such as a crack, fracture, hole, open joint, etc.) or active leak that allows the discharge of sewage on the property or the introduction of extraneous water into the System.

*Infiltration* means groundwater that enters a sewer system, including service connections, through defective pipes, pipe joints, connections, service connections, manholes, or lift stations. Infiltration does not include, and is distinguished from, inflow.

*Inflow* means surface water and stormwater that enters a collection/transmission system, including service connections, from sources such as roof leaders, cellar drains, yard drains, area drains, drains from wet areas, foundation drains, cross connections between storm sewers and sanitary sewers, catch basins, stormwater, surface runoff, manhole covers, or drainage. Inflow does not include, and is distinguished from, infiltration.

*Licensed Plumbing Contractor* means a plumber licensed and insured in the State of Florida pursuant to Chapter 553 and Section 489.105, Florida Statutes.

*PCU-Prequalified Licensed Plumbing Contractor* is a licensed plumber or contractor that meets the requirements specified by Pinellas County Utilities for registration as prequalified, which includes defined qualification criteria, an active license, familiarity with standard drawings and



specifications and submittal requirements associated with this policy and providing a warranty for a minimum of one (1) year.

*Private Collection and Transmission Systems (private Sewer System)* are privately owned sanitary sewers, manholes, lift stations, force mains and any other facility that discharges into the County sewer system excluding single-family residences.

*Private Collection and Transmission Systems (private Sewer System) Operating Permit* is a permit from the County provided to owners of a private Sewer System allowing the private owner to discharge wastewater into the County System that includes terms and conditions and performance requirements for the owner to maintain and operate their system in accordance with County requirements.

*Private Sewer Lateral* means a pipe that carries wastewater, excluding storm, surface and ground water starting just outside the building and ending at the right-of-way or recorded easement, and connects directly to the county System.

*Private Sewer Lateral maintenance* means the routine inspection, flushing, rodding, and removal of grease, roots, and debris of a private sewer lateral located within private property up to the right-of-way to maintain a free-flowing condition.

*Property* means any real property, or portion thereof, located in the County, including buildings or structures and private sewer infrastructure situated on the surface or beneath the surface of the property, including the private sewer lateral up to the right-of-way.

*Rehabilitation* as applied to private sewer laterals, means the lining of the complete length of the private sewer lateral with a cured-in-place liner to bring the private sewer lateral into compliance with the minimum functional requirements established by this code. This also includes any other work necessary to prepare the pipe for lining.

*Replacement* as applied to private sewer laterals, means the installation of a complete new private sewer lateral and cleanout.

*Sanitary Sewer Overflow (SSO)* means a wastewater overflow from a manhole, a confined repair site, or directly onto the ground from a sewer line break in the sanitary collection and transmission system (regardless of volume) within the Pinellas County sewer service area.

## **Sec. 126-701. Intent.**

This Article sets forth the criteria and requirements for the proper maintenance of new and existing private Sewer Laterals, as well as related infrastructure comprising a private transmission system servicing private buildings and discharging to the County's System. Included within this Article are requirements for private Sewer Lateral performance, inspection, reporting, maintenance, repair, and rehabilitative procedures required by all property owners discharging to the County's Sanitary Sewer System. This Article supports the county's compliance with all applicable State and Federal laws required by the "Clean Water Act of 1977" (hereinafter referred to as the CWA), and Chapter 62-604, Florida Administrative Code. The requirements of this

Article are supplemental to all other applicable regulations, including those stated elsewhere in this Code.

The objectives of this Article are as follows:

- (1) To minimize the introduction of groundwater or other unauthorized flows into the Pinellas County System resulting from inflow and infiltration (hereinafter referred to as I&I).
- (2) To educate and inform owners of privately owned sewer infrastructure, including private Sewer Laterals and related plumbing components, of their responsibilities regarding sanitary sewer system I&I and offer guidance to minimize I&I.
- (3) To ensure strict adherence to construction and maintenance standards applicable to private Sewer Laterals.
- (4) To reduce the potential for the occurrence of SSOs.

#### **Sec. 126-702. Applicability.**

The conditions of this article are applicable to all users of the county's sanitary sewer system. Except as otherwise provided herein, the County Administrator or designee shall administer, implement, and enforce the provisions of this Article.

#### **Sec. 126-703. Prohibitions and performance criteria.**

- (1) General Prohibitions. In addition to all other requirements and prohibitions, including but not limited to those in Sec. 126-301, Sec.126-327, 126-328, and 126-329 of this Code, the following acts and the causing thereof are strictly prohibited:
  - (a) The ownership and/or maintenance of any component comprising or associated with a private Sewer Lateral in a condition which will not assure an impervious connection to the sanitary sewer system to which it is connected.
  - (b) The submission by any person or owner of a private Sewer Lateral, or employee, contractor, or agent thereof, of misleading, false, or inaccurate information to Pinellas County, either knowingly or through neglect.
  - (c) The intentional or accidental release or discharge of excreta, sewage, or other wastewater or residuals from a private Sewer System without providing proper treatment to the surface of the ground or to a surface water body.
  - (d) The introduction of, or causing to be introduced, directly or indirectly, stormwater, in any amount, into any private sewer lateral or private Sewer System designed solely for the conveyance of domestic/industrial wastewater.

- (e) Acceptance of wastewater discharges which contain solid or viscous materials that may obstruct flow or otherwise interfere with County System operations or treatment.
  - (f) The operation and/or maintenance of all equipment associated with a privately-owned system in a condition without a valid private Sewer System operating permit and which will not reasonably ensure proper operation.
  - (g) Modification of a pump station, service area, sewer subsystem, and/or manholes without a construction permit.
  - (h) The discharge of I&I into the County System from a private Sewer System that may cause or contribute to surcharging or SSOs in the private and/or County System.
- (2) Private Sewer Laterals located upon privately-owned real property will be the responsibility of the private real property owner. Responsible parties will ensure the maintenance in good repair of a private Sewer Lateral, including through any necessary inspection thereof, and will Repair, Rehabilitate, or Replace any portions of the private Sewer Lateral that are Defective. Pinellas County may commence enforcement actions, if deemed necessary, to achieve cessation of infiltration and/or inflow.

## **DIVISION 2.**

### **PRIVATE SEWER LATERALS**

#### **Sec. 126-704. Private Sewer Lateral Inspections**

- (1) *Occurrences Requiring Inspection* Private Sewer Laterals must be inspected by a Competent Professional, upon the occurrence of any of the following:
- (a) At any time on or after October 1, 2022, a building permit application is filed for an improvement on the property that meets any of the following conditions:
    - i. the work would alter or expand any component of the building collection system that flows into the Private Sewer Lateral, including any drain or fixture such that the flow into the County System would be increased;
    - ii. would involve work, alterations, improvements, or replacement of any portion of the private Sewer Lateral;
    - iii. the work would include the addition, replacement, or relocation of a plumbing fixture, bathtub with shower or whirlpool tub or shower pan, or urinals, toilets, sinks, or trench drains that would increase wastewater flows into the County System;

- iv. The construction estimate of a home improvement is 50 percent or greater of the assessed value; this repair or reconstruction is considered a substantial improvement. A substantial improvement is defined as the first alteration of any wall, ceiling, floor, or another structural part of the building, whether the alteration changes the external dimensions of the structure. This definition is consistent with the 50 Percent Rule implemented by the National Flood Insurance Program (NFIP);
- v. Additional square footage of 70 square feet or more is added to an existing residential building because additional occupants would increase wastewater flows to the private Sewer Lateral;
- vi. A building is to be demolished and the lateral is to be kept in place. If a building has already been demolished and a new building is being constructed, any existing lateral being utilized will require inspection including those under slabs per the building code.

When required by this subsection, an inspection must be completed by a Competent Professional within 30 days of the filing of the qualifying building permit application.

- (b) The County is conducting improvements of the sanitary sewer system along the property boundary, in which case the County will offer to inspect the system subject to the owner's written agreement;
  - (c) The County observes an open and obvious condition indicating a Defective Private Sewer Lateral.
- (2) *Inspection Requirements* Inspections of private Sewer Laterals must be performed by a Competent Professional. The inspection and recording must be performed so that it is possible to clearly observe and assess the condition of the full length of the private Sewer Lateral. A closed-circuit television (CCTV) camera or other video recording technology is required, and proper lighting must be used such that the condition of the full length of the pipe can be inspected and recorded. Any debris, roots, or grease that impede the camera or interfere with the ability to fully view the pipe condition must be removed prior to inspection and all such conditions must be recorded and reported. All private Sewer Lateral inspections must include a report summarizing the conditions found in the lateral and the date of delivery of the report to the property owner. The property owner or Competent Professional must submit a copy of the report, and video recording if applicable, to the County within 30 calendar days of completion and delivery to the owner.
- (3) *Replacement or Rehabilitation of Defective Private Sewer Laterals* If a private Sewer Lateral is found to be Defective, it must be rehabilitated or replaced at the expense of the property owner within 365 calendar days from the date of an inspection, or the date on which the owner became aware of that a private Sewer Lateral was Defective. However, from time to time the County may conduct programs to repair or replace defective private

Sewer Laterals using County resources, or to contribute funding, provided the property owner meets applicable qualifications.

### **DIVISION 3.**

#### **PRIVATE SEWER SYSTEMS**

##### **Sec. 126-705. Private Sewer System Operating Permit**

- (1) Any person or entity owning a private Sewer System will obtain a three (3)-year renewable operating permit from the County. The operating permit will include details of enforcement, which will be based on the provisions and procedures set out in Pinellas County Code 126-400, which are made applicable to the provisions of this Article VII as though restated and revised fully herein. When submitting a renewal application, the owner of the private Sewer System is required to submit copies of the following:
  - (a) **System O&M Plan** – This plan will detail private Sewer System operation and maintenance (O&M) to ensure adherence to applicable regulations and permit requirements. The O&M Plan will include a strategy to ensure adequate funds are available and allocated for system inspection, cleaning, repairs, and replacement. A copy of the O&M Plan must be submitted with a new operating permit or permit renewal application.
  - (b) **Operation and Maintenance Records** – The operating records for the three-year period prior to the operating permit renewal application submittal date must be provided.
    - (i) Operation and maintenance records must be maintained for two reporting cycles. Records include daily run times, recorded either electronically or manually, and any inspections (other than the any inspection conducted by the County and/or cleaning and resulting repairs.
    - (ii) The County, at its discretion, may request certain operating records at any time. Requested records must be submitted to the County within 30 calendar days of the request.
  - (c) **Private Lift Station Service and Maintenance Agreement**– All private Sewer Systems that include a lift station must have a maintenance agreement with a person or company holding a State of Florida master plumbing certificate of competency, a Pinellas County master plumber certificate of competency, a state wastewater operator license, or be a person approved by the County for such work.
    - (i) The maintenance agreement will provide for monthly inspections of the sewer lift station to ensure proper operation and maintenance, and to provide 24-hour emergency restoration services if a failure occurs.

- (d) **Sanitary Sewer Overflow Response Plan (SSORP)** –The SSORP must adhere to United States Environmental Protection Agency (USEPA) guidance and include response to and remediation of SSOs caused by, but not limited to, line failure, line collapse, line obstruction, power failure and/or mechanical failure. When an SSO occurs within the owner's private Sewer System, the owner is responsible for notifying the County and the Florida Department of Environmental Protection (FDEP) within the required timeframes as specified in current regulations.
    - (i) The owner will clean up SSOs or spills as soon as possible after discovery in accordance with all applicable local and state regulations and take appropriate measures to correct all issues that caused or contributed to the SSO or spill.
  - (e) **Emergency and/or Backup Power Plan** – The private Sewer System owner will have a back-up power plan with protocols for managing flows during a power outage to prevent SSOs from occurring. This plan shall meet current State and County requirements.
- (2) The County may establish fees to recover the costs permitting, inspection, and all other elements of administering the provisions of this Division.

#### **Sec. 126-706. Private Sewer System Inspections**

- (1) The County will inspect all privately-owned collection systems periodically to ensure the integrity of the system. An inspection fee and re-inspection fee will be established by resolution of the Pinellas County Board of County Commissioners (the Board). These fees will be assessed for each collection system inspection and re-inspection. The collection system inspection may include:
  - (a) Examination of service records, plans, and agreements required by permit.
  - (b) Review the results of any inspections or assessments.
  - (c) Evaluation of compliance with operation and maintenance requirements.
  - (d) Review of data provided for evidence of excessive I&I, such as pump run times.
- (2) Infiltration and Inflow (I&I); If there is reasonable evidence that there may be excessive I&I within the private Sewer System, the County, at its discretion and cost, may hire an outside contractor to install a flow meter or any other measurement device at the point of connection to determine whether a private Sewer System is allowing excessive amounts of I&I to enter the County's System.
- (3) The County will provide reasonable notice when there is reason to need access to the flow meter or other measurement device to perform meter readings or for maintenance.

- (4) Should the County determine that excessive amounts of I&I are entering the County's System from a private Sewer System, the owner of the private Sewer System is responsible for determining the cause(s). The private Sewer System owner also is responsible for planning, designing, and constructing all necessary repairs or replacements to the system, and securing all applicable permits and authorizations. All work will be completed by a qualified licensed contractor and inspected by the County. Post-construction flow monitoring (at the original monitoring location) will be conducted by the County at its expense to demonstrate the effectiveness of the mitigation measures.

#### **Sec. 126-707. Private Sewer System Transfer of Ownership**

- (1) The County will allow for the owner of a private Sewer System to request the County to take ownership of a private Sewer System. After reviewing the owner's application and finding that the owner has met the requirements contained herein, the County may accept a transfer of ownership and responsibility for the private Sewer System.
- (2) Before the County takes ownership of any private Sewer System, the owner must establish that the collection system, including lift stations and other equipment, meet all requirements of the Pinellas County's Standard Technical Specifications, Material Specification Manual, and Standard Details. The County may, if it is deemed in the best interest of the County and its residents, decide to allow for a transfer of ownership if the collection system does not meet current County standards.
- (3) Before the County takes ownership of any private Sewer System, the owner shall have the private Sewer System tested to establish that it meets or surpasses the standards set forth in the Pinellas County's Standard Technical Specifications. The testing shall be done in accordance with the procedures set forth in the Pinellas County's Standard Technical Specifications unless otherwise allowed by the County.
- (4) The transfer of all property associated with the private Sewer System shall be evidenced by a good and sufficient bill of sale in a form acceptable to the County and shall be free and clear of any claims or encumbrances.
- (5) The County shall determine the extent to which a transfer of real property associated with the private Sewer System may be accomplished by easement or by conveyance of a fee interest. All easements shall be conveyed by good and sufficient easement deeds in a form acceptable to the County. All fee interests shall be conveyed by warranty deed. Regardless of whether an easement or fee is conveyed, the conveyance shall be free of any claims or encumbrances. Further, the owner of the private Sewer System shall provide the County with a survey in recordable form describing any interest in real property which the owner proposes to convey to the County.
- (6) At the time of the transfer, the owner shall execute a written warranty in a form acceptable to the County, guaranteeing that the private Sewer System meets every requirement

contained herein, and that for a period of twelve (12) months from the date of the transfer, the private Sewer System and all equipment associated with it will operate without the need for any repairs other than normal maintenance. Further, the owner will provide the County with a bond or letter of credit in a form and amount acceptable to the County which will be payable in the event that the private Sewer System is repaired during the warranty period and the owner does not make timely payment for those repairs.

- (7) The owner will pay all cost or expenses, including but not limited to attorney's and engineering fees, which the County incurs to accomplish the transfer of ownership of a private Sewer System.

Secs. 126-708--126-750. Reserved.

**SECTION 2. Severability.** If any Section, Subsection, sentence, clause, phrase, or provision of this Ordinance is for any reason held invalid or unconstitutional by any Court of competent jurisdiction, such holding shall not be construed to render the remaining provisions of this Ordinance invalid or unconstitutional.

**SECTION 3. Areas Embraced.** This Ordinance shall be effective in the incorporated as well as unincorporated areas of the County.

**SECTION 4. Inclusion in Code.** It is the intention of the Board of County Commissioners that the provisions of this Ordinance shall become and be made a part of the Pinellas County Code and that the sections of this Ordinance may be renumbered or relettered and the word "ordinance" may be changed to section, article or such other appropriate word or phrase in order to accomplish such intentions.

**SECTION 5. Filing of Ordinance; Effective Date.** Pursuant to Section 125.66, Florida Statutes, a certified copy of this Ordinance shall be filed with the Department of State by the Clerk of the Board of County Commissioners within ten (10) days after enactment by the Board of County Commissioners. This Ordinance shall become effective upon filing of the ordinance with the Department of State.



## Appendix B: Private Sewer Lateral Policy

**RESOLUTION \_\_\_\_**

**A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF PINELLAS COUNTY, FLORIDA, AUTHORIZING THE COUNTY ADMINISTRATOR TO ESTABLISH AND IMPLEMENT PROGRAMS TO ADDRESS THE CONDITION OF PRIVATE SEWER LATERALS AND COLLECTION SYSTEMS AND REDUCE RELATED IMPACTS TO THE COUNTY SEWER SYSTEM ; PROVIDING AN EFFECTIVE DATE.**

**WHEREAS**, Pinellas County owns and operates wastewater facilities and related collection, transmission, and treatment infrastructure (“System”); and

**WHEREAS**, in addition to maintaining the System, the Board of County Commissioners also establishes policies governing the use of the System for the purpose of maintaining efficient, economic and safe operation of the System and for the protection of the health, safety and general welfare of the public within Pinellas County; and

**WHEREAS**, the Pinellas County Code currently provides, among other provisions, that a purpose of the regulations and requirements currently codified is to prevent and abate pollution through the regulation and control of connections to the county sewer system and to limit the use of the sewer system to the collection, conveyance, treatment and disposal of wastewater through appropriate regulation and enforcement; and

**WHEREAS**, in order to protect the environment from biological, nutrient, and other types of contaminants, as well as to ensure that financial investment in the System is accurately guided so that rate-payer funds are applied to create an appropriately engineered and functioning System, policies and programs are needed to address the various contributing factors that may cause inappropriate discharges to the System, or to increase the risk of sanitary sewer overflows (SSO) and the potential for regulatory action connected therewith; and

**WHEREAS**, the risk for adverse impacts to the System as well as of the occurrence of SSOs is increased when stormwater, groundwater or other inappropriate sources of discharge enter the sewer infrastructure, collectively referred to as Inflow and Infiltration (I&I); and

**WHEREAS**, a known source of I&I exists in portions of private plumbing infrastructure, in particular the portions of private plumbing that transmit wastewater from a building collection system to the System (Sewer Lateral), when Sewer Laterals through causes including material degradation, damage, and age begin to admit unintended discharges; and

**WHEREAS**, private Sewer Laterals belong to the property owner and are not County-owned infrastructure, but they are connected to and have a significant influence on County owned infrastructure by conveying material into the System; and

**WHEREAS**, similar issues are presented by privately owned collection systems (Private Systems) that connect to the County System; and

**WHEREAS**, the Board therefore finds that a public purpose is served by eliminating the risk, to the extent possible, that a defective private Sewer Lateral or Private System can contribute I&I to the System, which could result in SSOs or other burdens and expenses that would become a burden to the rate-payers of the System; and

**WHEREAS**, it is not only in the best interests of the environment and the residents of Pinellas County that private Sewer Laterals and Private Systems are maintained in a state of good working order, but the Board has already established minimum housing standards that require the maintenance in good repair of private plumbing conveyances, including Sewer Laterals; and

**WHEREAS**, the County wishes to additionally and proactively reduce the amount of I&I originating from defective private Sewer Laterals and Private Systems; and

**WHEREAS**, certain obstacles exist that make it difficult for home owners or other private property owners who may own a defective Sewer Lateral to make necessary repairs; and

**WHEREAS**, among those obstacles notice or knowledge of the defect is one, and the expense of making the repair is another; and

**WHEREAS**, the Board has determined that policies and programs that address these obstacles to private Sewer Lateral repair support the public purposes described herein; and

**WHEREAS**, in order to ensure that the expense of needed repairs, which could be prohibitively high for some property owners, does not preclude the improvement of a defective Sewer Lateral that will otherwise continue to burden the System with I&I, the Board finds that funds may appropriately be budgeted and used to make rebates available to eligible property owners and implement the policies described incorporated and adopted by this resolution;

**NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF PINELLAS COUNTY, FLORIDA, AT A DULY ASSEMBLED MEETING HELD ON THIS \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_, AS FOLLOWS:**

Section 1. The Board makes the legislative findings stated above, which are incorporated herein, and accordingly determines that in furtherance of the public purposes identified, the County Administrator is authorized and directed to implement the Sewer Lateral and Private Systems Policies attached to and incorporated into this Resolution, as further described in Attachments 1, 2, 3, and 4.

Section 2. This Resolution shall take effect immediately upon its adoption.

Commissioner \_\_\_\_\_ offered the foregoing Resolution and moved its adoption, which was seconded by Commissioner \_\_\_\_\_, and upon roll call the vote was:

AYES:

NAYS:

ABSENT AND NOT VOTING:

ATTACHMENT 1

PINELLAS COUNTY  
FLORIDA

PRIVATE SEWER LATERAL  
FIND AND FIX POLICY

November 2021

Table of Contents

I. Intent .....3

II. Definitions.....3

III. Policy Applicability .....5

IV. Find and Fix Policy Overview .....5

V. Design Phase .....6

VI. Construction Phase .....6

VII. Post-Construction Phase.....7

VIII. Policy Impact.....7

## I. Intent

Pinellas County Utilities (PCU) is committed to protecting public health and the environment through effective management of our wastewater treatment facilities and wastewater collection system. Groundwater and surface water inflow and infiltration (I&I) entering the wastewater collection system take up valuable sewer capacity, contribute to causes of sanitary sewer overflows (SSOs), and add costs for excess wastewater treatment. Defective private sanitary sewer laterals allow a significant amount of I&I into the wastewater collection system, and therefore, Pinellas County institutes this Private Sewer Lateral Find and Fix Policy (Find and Fix Policy).

The purpose of the Find and Fix Policy is to provide for the targeted reduction of I&I in PCU's wastewater collection system in selected neighborhoods where this approach is considered cost-effective. PCU will achieve this I&I reduction effort by implementing cost-effective, comprehensive rehabilitation and replacement of wastewater collection mains, manholes, and public and private laterals within selected Capital Improvement Program (CIP) project areas.

Reducing the I&I will increase available capacity within the PCU wastewater service area, aid in reducing the risk of SSOs, reduce flows to the treatment facilities, and reduce the need for new or expanded infrastructure system-wide.

## II. Definitions

**Cleanout** means a segment of pipe connected to an underground private Sewer Lateral and rising to the surface, providing access to the sewer lateral for purposes of inspection and cleaning.

**Comprehensive Rehabilitation** means the rehabilitation or replacement of all gravity sewers, manholes, and public and private laterals, unless otherwise considered watertight, within a specific defined project area with the goal of maximizing the reduction of I&I entering from the project area.

**County Sewer System (System)** consists of the County owned collection and transmission system that conveys the wastewater to the treatment facility. This consists of sanitary sewers, trunk sewers, interceptors, lift stations, force mains, and all appurtenances between the private Sewer Laterals (or building sewers) and the wastewater treatment facility.

**Defective** means, as applied to a Private Sewer Lateral, a Private Sewer Lateral for which any of the following conditions exist upon inspection by a licensed plumbing contractor or other competent professional:

1. evidence of pipe or joint cracks or deterioration,
2. root intrusion into a pipe,
3. a misaligned pipe segment, sag, or lack of positive gradient,
4. a lack of a necessary cleanout cap,
5. a downspout, drain, defective cleanout, or other connection that allows storm water or other extraneous water to enter the sanitary sewer system, and/or
6. a defect (e.g., crack, fracture, hole, open joint) or active leak that allows the discharge of sewage on the property or the introduction of extraneous water into the County sewer system.

Pinellas County, FL  
Private Sewer Lateral Find and Fix Policy

**Infiltration** means groundwater that enters a sewer system, including service connections, through defective pipes, pipe joints, connections, service connections, manholes, or lift stations. Infiltration does not include, and is distinguished from inflow.

**Inflow** means surface water and stormwater that enters a collection/transmission system, including service connections, from sources such as roof leaders, cellar drains, yard drains, area drains, drains from wet areas, foundation drains, cross connections between storm sewers and sanitary sewers, catch basins, stormwater, surface runoff, manhole covers, or drainage. Inflow does not include, and is distinguished from, infiltration.

**Licensed Plumbing Contractor** means a plumber licensed and insured in the State of Florida pursuant to Chapter 553 and Section 489.105, Florida Statutes.

**PCU-Prequalified Plumber/Contractor** is licensed plumber or contractor that meets the requirements specified by Pinellas County Utilities for registration as prequalified, which includes defined qualification criteria, an active license, familiarity with standard drawings and specifications and submittal requirements associated with this policy and providing a warranty for a minimum of one (1) year.

**Private Collection and Transmission Systems (Private sewer system)** are privately owned sanitary sewers, manholes, lift stations, force mains and any other facility that discharges into the County sewer system excluding single-family residences.

**Private Collection and Transmission Systems (Private sewer system) Operating Permit** is a permit from the County provided to owners of a private sewer system allowing the private owner to discharge wastewater into the County sewer system that includes terms and conditions and performance requirements for the owner to maintain and operate their system in accordance with County requirements.

**Private Sewer Lateral** means a pipe that carries wastewater, excluding storm, surface and ground water starting just outside the building and ending at the right-of-way or recorded easement, and connects directly to the County System.

**Private sewer lateral maintenance** means the routine inspection, flushing, rodding, and removal of grease, roots, and debris of a private Sewer Lateral of located within private property up to the right-of-way to maintain a free-flowing condition.

**Property** means any real property, or portion thereof, located in the County, including buildings or structures and private sewer infrastructure situated on the surface or beneath the surface of the property, including the private Sewer Lateral up to the right-of-way.

**Reference Meter** means a flow meter installed in a manhole for the purpose of measuring flows from a specified area where no rehabilitation work is being performed. The reference meter is installed and operating at the same time as the associated rehab meter. The purpose for the reference meter is to allow for an objective comparison of flows from a Find and Fix project area before and after construction.

**Rehabilitation**, as applied to private Sewer Laterals, means the lining of the complete length of the private Sewer Lateral with a cured-in-place pipe (CIPP) liner to bring the private Sewer Lateral into compliance with minimum functional requirements. This also includes any other work necessary to prepare the pipe for lining.



**Rehab Meter** means a flow meter installed in a manhole for the purpose of measuring flows under dry and wet conditions. The meter data may compare flows from an associated reference meter to allow for an objective comparison of flows from the Find and Fix project area before and after construction.

**Replacement**, as applied to private Sewer Laterals, means the installation of a complete new private Sewer Lateral and cleanout.

**Sanitary Sewer Overflow (SSO)** means a wastewater overflow from a manhole, a confined repair site, or directly onto the ground from a cleanout, or from the sanitary collection and transmission system (regardless of volume) within the County.

**Smoke Testing** involves pushing a simulated, non-toxic, non-staining simulated smoke through a community's sanitary sewer collecting system, then observing and documenting where the smoke exits. This method for identifying I&I typically involves residential, commercial, and industrial areas. Field technicians set up a blower over a neighborhood manhole, and non-toxic simulated smoke is pumped through the sewer line. The exiting smoke can indicate the location of a broken sewer pipe, manholes, catch basins, or where roof or foundation drains are connected to the sewer system.

### III. Policy Applicability

The Find and Fix Policy applies only to residential properties located within a designated Find and Fix project area as determined by PCU.

### IV. Find and Fix Policy Overview

Work is completed in conjunction with the rehabilitation and replacement of PCU's wastewater collection system. Private sewer lateral work within the same project area is performed as part of the public bidding process. Other private property sources of I&I in the project area must be removed at the property owner's expense as part of current PCU policy. Examples include downspouts, yard drains, or any other source of direct or indirect surface or groundwater that allows entry of I&I into PCU's wastewater collection system from private property.

The three phases of the Find and Fix Policy are:

- I. Design, including pre-construction flow monitoring, closed-circuit television (CCTV) inspection, smoke testing, and bid document preparation
- II. Construction
- III. Project area post-construction flow monitoring

The process begins when PCU identifies potential project areas based on an evaluation of various factors, including:

- Extent of I&I
- Known sewer system capacity issues, including historic SSO events
- I&I removal potential and downstream impacts
- Tidal influences
- Age of neighborhood

Pinellas County, FL  
Private Sewer Lateral Find and Fix Policy

- Project costs

PCU further evaluates and confirms the feasibility of selecting a particular area for the Find and Fix Policy based on:

- Complexity
- Potential constructability issues
- Available funding

## V. Design Phase

After a project area is confirmed as a candidate for the Find and Fix Policy and included in the CIP, PCU begins the design process by conducting preliminary engineering activities and preparing drawings and specifications for construction and bidding.

**Preliminary Engineering Inspection.** A qualified contractor performs various activities, including smoke testing and CCTV inspection of the public sanitary sewers, associated manholes, and both public and private portions of sewer laterals. Smoke testing identifies major defects or illegal connections that may be contributing I&I to the wastewater collection system. Any defects found on private property that are unrelated to the private lateral must be addressed by the property owner and will be managed with the current code enforcement process. The CCTV inspection locates the lateral for surveying later and provides visual inspection of its condition to determine if the lateral can be lined or if it must be replaced. PCU may also utilize leak detection technology in specific locations where the pipe appears to be in good condition to verify watertightness. If these pipes and laterals pass a leak detection test, they are removed from the rehabilitation list.

**Survey.** A survey is conducted on private property by a qualified licensed surveyor hired by the professional design consultant to survey the sewer lateral and any cleanouts. The surveyor also will survey the corners of structures and the outline of pavement in proximity to the private Sewer Lateral.

**Property Access Documents.** Pinellas County will secure access to the private property for lateral lining or replacement thru instruments, such as temporary construction easements.

**Signing of Waiver.** Property owners will be asked to sign a waiver to hold PCU harmless for work done on private property.

## VI. Construction Phase

Once the project is bid, construction will begin. The selected construction contractor will perform the lateral repair, lining, or replacement.

Depending on the condition, a single lateral may be lined with cured-in-place pipe (CIPP) or replaced. A cleanout will be installed at the right-of-way and at the upstream termination of the lining or replacement. The contractor will perform post-construction testing, such as CCTV inspection and cured-in-place pipe (CIPP) strength testing. PCU may also require the contractor to use a PCU approved leakage test to verify water tightness. The contractor will be required to fix any defects identified at no cost to PCU.

## VII. Post-Construction Phase

Once construction is completed, where applicable, the rehab and reference flow meters are placed in the same locations as pre-construction flow monitoring. The duration of monitoring will be a minimum of four (4) months. The I&I volume measured for each rainfall event will be recorded for both the rehab and reference monitor locations.

**Rehabilitation Effectiveness Assessment:** Pre- and post-construction flow monitoring data are used to analyze the I&I removal effectiveness in accordance with the PCU Pre- and Post-Construction Flow Monitoring and Analysis Standard Operating Procedure (SOP).

## VIII. Policy Impact

The cost-effectiveness of the Find and Fix Policy is analyzed internally or through the support from an outside consultant as projects are implemented and as the engineering analysis progresses for the Wastewater Collection System Master Plan. Find and Fix project locations may be added or adjusted based on ongoing data analysis.

ATTACHMENT 2

PINELLAS COUNTY  
FLORIDA

PRIVATE SEWER LATERAL  
PERMITTING POLICY

November 2021

## Table of Contents

I.	Intent .....	3
II.	Definitions.....	3
III.	Policy Applicability .....	5
IV.	Permitting Policy Requirements .....	5
V.	Private Sewer Lateral Inspection Requirements .....	6
VI.	Responsibility for Payment .....	6
VII.	Policy Enforcement.....	6
VIII.	Policy Impact.....	7

## I. Intent

Pinellas County Utilities (PCU) is committed to protecting public health and the environment through effective management of our wastewater treatment facilities and wastewater collection system. Groundwater and surface water inflow and infiltration (I&I) entering the wastewater collection system takes up valuable sewer capacity, contributes to causes of sanitary sewer overflows (SSOs), and adds costs for excess wastewater treatment. Defective private sanitary sewer laterals allow a significant amount of I&I into the wastewater collection system, and therefore, Pinellas County institutes this Private Sewer Lateral Permitting Policy (Permitting Policy).

The Private Sewer Lateral Permitting Policy has a dual purpose: 1) support removal of I&I from the PCU wastewater collection system, and 2) verify that the private sanitary sewer lateral is in good working order per [Section 22-296](#) of the Pinellas County Code. Permitting Policy implementation uses the building permit application process to initiate an inspection of private sanitary sewer laterals and require lateral repairs, if necessary. Applicable permits include any improvements that may result in an increase in wastewater discharge into PCU's wastewater collection system from the private sanitary sewer lateral. The private sanitary sewer lateral inspection is part of the building permit application process.

The goal of the Permitting Policy is to reduce the amount of groundwater infiltration and surface water inflow entering PCU's wastewater collection system from defective privately owned sanitary sewer laterals. Reducing the amount of groundwater infiltrating into the wastewater collection system through defective laterals will aid in reducing the risk of SSOs, reducing extraneous flow to treatment facilities, and increasing available system capacity.

## II. Definitions

**Cleanout** means a segment of pipe connected to an underground private Sewer Lateral and rising to the surface, providing access to the sewer lateral for purposes of inspection and cleaning.

**County Sewer System (System)** consists of the County owned collection and transmission system that conveys the wastewater to the treatment facility. This consists of sanitary sewers, trunk sewers, interceptors, lift stations, force mains, and all appurtenances between the private Sewer Laterals (or building sewers) and the wastewater treatment facility.

**Defective** means, as applied to a Private Sewer Lateral, a Private Sewer Lateral for which any of the following conditions exist upon inspection by a licensed plumbing contractor or other competent professional:

1. evidence of pipe or joint cracks or deterioration,
2. root intrusion into a pipe,
3. a misaligned pipe segment, sag, or lack of positive gradient,
4. a lack of a necessary cleanout cap,
5. a downspout, drain, defective cleanout, or other connection that allows storm water or other extraneous water to enter the sanitary sewer system, and/or

Pinellas County, FL  
Private Sewer Lateral Permitting Policy

6. a defect (e.g., crack, fracture, hole, open joint) or active leak that allows the discharge of sewage on the property or the introduction of extraneous water into the County sewer system.

**Infiltration** means groundwater that enters a sewer system, including service connections, through defective pipes, pipe joints, connections, service connections, manholes, or pump stations. Infiltration does not include, and is distinguished from inflow.

**Inflow** means surface water and stormwater that enters a collection/transmission system, including service connections, from sources such as roof leaders, cellar drains, yard drains, area drains, drains from wet areas, foundation drains, cross connections between storm sewers and sanitary sewers, catch basins, stormwater, surface runoff, manhole covers, or drainage. Inflow does not include, and is distinguished from, infiltration.

**Licensed Plumbing Contractor** means a plumber licensed and insured in the State of Florida pursuant to Chapter 553 and Section 489.105, Florida Statutes.

**PCU-Prequalified Plumber/Contractor** is licensed plumber or contractor that meets the requirements specified by Pinellas County Utilities for registration as prequalified, which includes defined qualification criteria, an active license, familiarity with standard drawings and specifications and submittal requirements associated with this policy and providing a warranty for a minimum of one (1) year.

**Private Collection and Transmission Systems (Private sewer system)** are privately owned sanitary sewers, manholes, lift stations, force mains and any other facility that discharges into the County sewer system excluding single-family residences.

**Private Collection and Transmission Systems (Private sewer system) Operating Permit** is a permit from the County provided to owners of a private sewer system allowing the private owner to discharge wastewater into the County sewer system that includes terms and conditions and performance requirements for the owner to maintain and operate their system in accordance with County requirements.

**Private Sewer Lateral** means a pipe that carries wastewater, excluding storm, surface and ground water starting just outside the building and ending at the right-of-way or recorded easement, and connects directly to the County System.

**Private Sewer Lateral maintenance** means the routine inspection, flushing, rodding, and removal of grease, roots, and debris of a private Sewer Lateral located within private property up to the right-of-way to maintain a free-flowing condition.

**Property** means any real property, or portion thereof, located in the County, including buildings or structures and private sewer infrastructure situated on the surface or beneath the surface of the property, including the private Sewer Lateral up to the right-of-way.

**Rehabilitation**, as applied to private Sewer Laterals, means the lining of the complete length of the private Sewer Lateral with a cured-in-place pipe (CIPP) liner to bring the private Sewer Lateral into compliance with minimum functional requirements. This also includes any other work necessary to prepare the pipe for lining.

Pinellas County, FL  
Private Sewer Lateral Permitting Policy

**Replacement**, as applied to private Sewer Laterals, means the installation of a complete new private Sewer Lateral and cleanout.

**Sanitary Sewer Overflow (SSO)** means a wastewater overflow from a manhole, a confined repair site, or directly onto the ground from a cleanout, or from the sanitary collection and transmission system (regardless of volume) within the County.

**Smoke Testing** involves pushing a simulated, non-toxic, non-staining simulated smoke through a community's sanitary sewer collecting system, then observing and documenting where the smoke exits. This method for identifying I&I typically involves residential, commercial, and industrial areas. Field technicians set up a blower over a neighborhood manhole, and non-toxic simulated smoke is pumped through the sewer line. The exiting smoke can indicate the location of a broken sewer pipe, manholes, catch basins, or where roof or foundation drains are connected to the sewer system.

### III. Policy Applicability

The Permitting Policy applies to single-family residential property owners connected directly to the County sewer system and are within the permitting authority of Pinellas County Building Services.

The Permitting Policy will become effective October 1, 2022.

### IV. Permitting Policy Requirements

The Permitting Policy requires property owners to engage a licensed plumbing contractor to inspect, and, if necessary, repair, replace, or line their private sanitary sewer laterals when applying for a building permit that includes:

- A. Additional Plumbing Fixtures:** The addition, replacement, or relocation of a plumbing fixture, bathtub with shower or whirlpool tub or shower pan, or urinals, toilets, sinks, or trench drains that would increase wastewater flows into the PCU sanitary sewer system.
- B. 50 Percent Rule:** This is based on improvements that are substantial as calculated by the FEMA 50% rule based on the property evaluation currently maintained by the Pinellas County Property Appraiser's Office.
- C. Additional Square Footage: 70 square feet or more** additional square footage is added to an existing residential building because additional occupants would increase wastewater flows to the sanitary sewer lateral.
- D. Demolition/Rebuild:** An inspection will be required if a building is to be demolished and the lateral is to be kept in place. If a building has already been demolished and a new building is being constructed, any existing lateral being utilized will require inspection including those under slabs per the building code.

Property owners who have had their private laterals either installed, replaced, or have an inspection demonstrating that the lateral is not defective within the last 10 years are exempt from this policy.



## V. Private Sewer Lateral Inspection Requirements

A private Sewer Lateral inspection involves the use of a closed-circuit television (CCTV) camera and is conducted according to PCU specifications by a licensed plumbing contractor. Smoke testing is not considered an acceptable inspection method.

A defective sewer lateral is one that is not in good working order. The lateral is deemed defective, for the purposes of this policy, if any of the following conditions exist upon inspection:

- evidence of pipe or joint cracks or deterioration,
- root intrusion into a pipe,
- a severely misaligned pipe segment, sag, or lack of positive gradient,
- a lack of necessary cleanout cap,
- a downspout, drain, defective cleanout, other connection that allows storm water or other extraneous water to enter the County sewer system, and/or
- a defect (e.g., crack or hole) or active leak that allows the discharge of sewage onto the property or the introduction of extraneous water into the County sewer system.

If the private Sewer Lateral is found to be defective, the private Sewer Lateral must be fully replaced as quickly as possible, but no longer than 365 calendar days after the initial finding that the private Sewer Lateral is defective. Lining of the entire lateral may be allowed under certain conditions and must be approved by PCU. All corrective action work must be performed in accordance with County specifications by a licensed plumbing contractor and all applicable permits and fees are the responsibility of the property owner.

The requirements of this policy will not interfere with the processing of the original building permit application that triggered the private lateral inspection.

## VI. Responsibility for Payment

The private Sewer Lateral inspection and related or subsequent replacement, or lining costs (corrective measures) and post construction inspection are the responsibility of the property owner/applicant. The corrective repairs or improvements shall meet PCU specifications. Additionally, the property owner must apply for applicable building permits for repairs or replacement of the lateral.

Affected property owners may choose to apply for a rebate for the inspection and/or subsequent replacement or lining as applicable and in accordance with the PCU Private Sewer Lateral Rebate Policy.

If a property owner opts to apply for a rebate, they must meet additional requirements stipulated in the Rebate Policy. The ability to utilize the Rebate Policy is at the discretion of PCU and as funding is available.

## VII. Policy Enforcement

Policy enforcement shall be as set forth in [Pinellas County Code Chapter 126 Sections 126-400-406](#) and [Pinellas County Code Chapter 1 Sections 1-8](#).

## VIII. Policy Impact

The effectiveness of the Permitting Policy is evaluated based on property owners' permitting process through the Pinellas County Building Services. The overall effectiveness of reducing I&I throughout the PCU wastewater collection system depends on whether participation rates are low or high, and whether sanitary sewer lateral lining or replacement work is clustered or dispersed. This policy, in conjunction with other private Sewer Lateral policies, provides PCU the best opportunity to reduce I&I in the PCU wastewater collection system and help protect the environment and public health from SSOs.

ATTACHMENT 3

PINELLAS COUNTY  
FLORIDA

PRIVATE SEWER LATERAL  
REBATE POLICY

November 2021

## Table of Contents

I.	Intent .....	3
II.	Definitions.....	3
III.	Rebate Eligibility .....	5
IV.	Rebate information.....	5
V.	Private Sewer Lateral Inspection Requirements .....	5
VI.	Private Sewer Lateral Inspection Rebate Request .....	6
VII.	Private Sewer Lateral Replacement and Rehabilitation Requirements .....	6
VIII.	Private Sewer Lateral Replacement/Rehabilitation Rebate Request.....	7
IX.	Licensed Plumbing Contractor Prequalification .....	7
X.	Policy Impact.....	7

## I. Intent

Pinellas County Utilities (PCU) is committed to protecting public health and the environment through effective management of our wastewater treatment facilities and wastewater collection system. Groundwater and surface water inflow and infiltration (I&I) entering the wastewater collection system takes up valuable sewer capacity, contributes to causes of sanitary sewer overflows (SSOs), and adds costs for excess wastewater treatment. Defective private Sewer Laterals allow a significant amount of I&I into the wastewater collection system, and therefore, Pinellas County institutes this Private Sewer Lateral Rebate Policy (Rebate Policy).

The Rebate Policy assists private single-family residential property owners with the cost of conducting sanitary sewer lateral inspections and lining or replacing sanitary sewer laterals within the Pinellas County Utilities (PCU) wastewater collection system service area.

The goal of the Rebate Policy is to reduce the amount of I&I entering PCU's wastewater collection system from defective privately owned sanitary sewer laterals. Reducing the amount of groundwater infiltrating into the wastewater collection system through defective laterals will aid in reducing the risk of SSOs, reducing extraneous flow to treatment facilities, and increasing available system capacity.

## II. Definitions

**Cleanout** means a segment of pipe connected to an underground private Sewer Lateral and rising to the surface, providing access to the sewer lateral for purposes of inspection and cleaning.

**County Sewer System (System)** the portion of the wastewater facility (WWF) that consists of the collection system which conveys the wastewater to the treatment facility. This consists of sanitary sewers, trunk sewers, interceptors, lift stations, force mains, and all appurtenances between the private Sewer Laterals (or building sewers) and the wastewater treatment facility.

**Defective** means, as applied to a Private Sewer Lateral, a Private Sewer Lateral for which any of the following conditions exist upon inspection by a licensed plumbing contractor or other competent professional:

1. evidence of pipe or joint cracks or deterioration,
2. root intrusion into a pipe,
3. a misaligned pipe segment, sag, or lack of positive gradient,
4. a lack of a necessary cleanout cap,
5. a downspout, drain, defective cleanout, or other connection that allows storm water or other extraneous water to enter the sanitary sewer system, and/or
6. a defect (e.g., crack, fracture, hole, open joint) or active leak that allows the discharge of sewage on the property or the introduction of extraneous water into the County sewer system.

**Infiltration** means groundwater that enters a sewer system, including service connections, through defective pipes, pipe joints, connections, service connections, manholes, or pump stations. Infiltration does not include, and is distinguished from inflow.

Pinellas County, FL  
Private Sewer Lateral Rebate Policy

**Inflow** means surface water and stormwater that enters a collection/transmission system, including service connections, from sources such as roof leaders, cellar drains, yard drains, area drains, drains from wet areas, foundation drains, cross connections between storm sewers and sanitary sewers, catch basins, stormwater, surface runoff, manhole covers, or drainage. Inflow does not include, and is distinguished from, infiltration.

**Licensed Plumbing Contractor** means a plumber licensed and insured in the State of Florida pursuant to Chapter 553 and Section 489.105, Florida Statutes.

**PCU-Prequalified Licensed Plumbing Contractor** is a licensed plumber or contractor that meets the requirements specified by Pinellas County Utilities for registration as prequalified, which includes defined qualification criteria, an active license, familiarity with standard drawings and specifications and submittal requirements associated with this policy and providing a warranty for a minimum of one (1) year.

**Private Collection and Transmission Systems (Private sewer system)** are privately owned sanitary sewers, manholes, lift stations, force mains and any other facility that discharges into the County sewer system excluding single-family residences.

**Private Collection and Transmission Systems (Private sewer system) Operating Permit** is a permit from the County provided to owners of a private sewer system allowing the private owner to discharge wastewater into the County sewer system that includes terms and conditions and performance requirements for the owner to maintain and operate their system in accordance with County requirements.

**Private Sewer Lateral** means a pipe that carries wastewater, excluding storm, surface and ground water starting just outside the building and ending at the right-of-way or recorded easement, and connects directly to the County System.

**Private Sewer Lateral Maintenance** means the routine inspection, flushing, rodding, and removal of grease, roots, and debris of a private Sewer Lateral of located within private property up to the right-of-way to maintain a free-flowing condition.

**Property** means any real property, or portion thereof, located in the County, including buildings or structures and private sewer infrastructure situated on the surface or beneath the surface of the property, including the private Sewer Lateral up to the right-of-way.

**Rehabilitation**, as applied to private Sewer Laterals, means the lining of the complete length of the private Sewer Lateral with a cured-in-place pipe (CIPP) liner to bring the private Sewer Lateral into compliance with minimum functional requirements. This also includes any other work necessary to prepare the pipe for lining.

**Replacement**, as applied to private Sewer Laterals, means the installation of a complete new private Sewer Lateral and cleanout.

**Sanitary Sewer Overflow (SSO)** means a wastewater overflow from a manhole, a confined repair site, or directly onto the ground from a cleanout, or from the sanitary collection and transmission system (regardless of volume) within the County.

Pinellas County, FL  
Private Sewer Lateral Rebate Policy

**Smoke Testing** involves pushing a simulated, non-toxic, non-staining simulated smoke through a community's sanitary sewer collecting system, then observing and documenting where the smoke exits. This method for identifying I&I typically involves residential, commercial, and industrial areas. Field technicians set up a blower over a neighborhood manhole, and non-toxic simulated smoke is pumped through the sewer line. The exiting smoke can indicate the location of a broken sewer pipe, manholes, catch basins, or where roof or foundation drains are connected to the sewer system.

### III. Rebate Eligibility

The Rebate Policy is anticipated to begin in 2022. Pinellas County Utilities will provide the specific date when rebates will be available. Once the program is available, the following eligibility requirements will apply.

A property owner is eligible under this Rebate Policy if the property:

1. is located within the PCU service area,
2. serves a single-family residence,
3. has a private Sewer Lateral that is connected to the County wastewater collection system,
4. is not connected to the County wastewater collection system through a private collection and transmission system (private sewer system), and
5. has not previously received a rebate for sewer lateral replacement or rehabilitation under this Rebate Policy

### IV. Rebate information

PCU offers rebates to eligible property owners for:

1. private Sewer Lateral inspections, and
2. private Sewer Lateral replacements or rehabilitation (via cured-in-place pipe (CIPP) liner only).

At PCU's discretion, rebates will be awarded in the amount as determined in the rebate schedule. PCU's goal for cost sharing is 100% up to a maximum amount for private Sewer Lateral inspections, and 50% up to a maximum amount for private sewer replacement or rehabilitation. Rebate amounts are subject to change. Rebates will be based on actual costs that are customary for the services rendered, excluding any additional restoration costs that are above customary. Reimbursement is pending the availability of funds and is on a first come first serve basis.

### V. Private Sewer Lateral Inspection Requirements

A private Sewer Lateral inspection involves the use of a closed-circuit television (CCTV) inspection camera and is conducted by a PCU-prequalified licensed plumbing contractor according to PCU specifications. Smoke testing is not considered an acceptable inspection method.

A defective sewer lateral is one that is not in good working order. The lateral is deemed defective, for the purposes of this policy, if any of the following conditions exist upon inspection:

Pinellas County, FL  
Private Sewer Lateral Rebate Policy

- evidence of pipe or joint cracks or deterioration,
- root intrusion into a pipe,
- a severely misaligned pipe segment, sag, or lack of positive gradient,
- a lack of necessary cleanout cap,
- a downspout, drain, defective cleanout, other connection that allows storm water or other extraneous water to enter the County sewer system, and/or
- a defect (e.g., crack or hole) or active leak that allows the discharge of sewage onto the property or the introduction of extraneous water into the County sewer system.

The PCU-prequalified licensed plumbing contractor providing the private Sewer Lateral inspection provides certification to the property owner and to PCU as to whether the lateral is in good working order or is defective, with supporting CCTV video inspection records.

If the private Sewer Lateral is found to be in good working order as certified by the PCU-prequalified licensed plumbing contractor, the lateral is considered as passing and will not qualify for a rebate for repair/replacement.

If the private Sewer Lateral is found to be defective as certified by the PCU-prequalified licensed plumbing contractor, the private Sewer Lateral must be brought into good working order as quickly as possible, but no longer than 365 calendar days after the initial finding that the private Sewer Lateral is defective.

## VI. Private Sewer Lateral Inspection Rebate Request

The property owner is responsible for payment to the PCU-prequalified licensed plumbing contractor providing the initial private Sewer Lateral inspection.

Once the PCU-prequalified licensed plumbing contractor provides the private Sewer Lateral inspection certification and supporting CCTV records to the property owner and to PCU, the property owner may submit a request for a Private Sewer Lateral Inspection Rebate. The process for submitting a rebate request is defined by PCU and detailed on the PCU website. The rebate request and receipt must be submitted and received by PCU within 90 days of the inspection to be eligible for a rebate under this policy.

Private sewer lateral rebate requests are reviewed by PCU, and payments made to the property owner within 90 days of receipt of the request, unless issues with the request, certification, or supporting documentation are found. Any issues noted will be communicated directly to the property owner and the PCU-prequalified licensed plumbing contractor, as appropriate, for rectification.

## VII. Private Sewer Lateral Replacement and Rehabilitation Requirements

If a property owner brings their defective sewer lateral back into good working order by replacing the entire private Sewer Lateral, the property owner is eligible for a private Sewer Lateral



Pinellas County, FL  
Private Sewer Lateral Rebate Policy

replacement/rehabilitation rebate with required documentation. Lining of the entire lateral may be eligible for the rebate under certain conditions at the discretion of the Utilities Director, or their designee.

The property owner hires and is responsible for payment to the licensed plumbing contractor for replacement or rehabilitation of their private Sewer Lateral.

The licensed plumbing contractor must obtain all necessary permits from the appropriate Building Department before work may begin. For laterals fully lined or replaced, pressure testing will also be required. Whether the lateral is replaced or lined, the County performs the post construction inspection.

### VIII. Private Sewer Lateral Replacement/Rehabilitation Rebate Request

The property owner is responsible for payment to the licensed plumbing contractor providing the private Sewer Lateral replacement/rehabilitation.

Once the licensed plumbing contractor completes the lateral replacement or rehabilitation and the County inspects and closes the applicable permits, the property owner may submit a request for a Private Sewer Lateral Replacement/Rehabilitation Rebate. The process for submitting a rebate request is defined by PCU and detailed on the PCU website. The rebate request and receipt must be submitted and received by PCU within 90 days of project completion and testing to be eligible for a rebate under this policy.

Private sewer lateral rebate requests are reviewed by PCU, and payments made to the property owner within 90 days of receipt of the request, unless issues with the request or supporting documentation are found. Any issues noted will be communicated directly to the property owner.

### IX. Licensed Plumbing Contractor Prequalification

PCU maintains a list of prequalified licensed plumbing contractors that meet specified requirements and are registered with PCU to complete private Sewer Lateral inspections in accordance with this policy. PCU-prequalified licensed plumbing contractors must meet defined qualification criteria, have active licenses, be familiar with standard drawings and specifications and submittal requirements associated with this policy, and warrant their work for a minimum of one (1) year.

The specific requirements and registration process for licensed plumbing contractors is defined by PCU and detailed on the PCU website. Property owners may select and use any licensed plumbing contractor on this prequalified list to be eligible for rebates as defined in this policy.

### X. Policy Impact

The effectiveness of the Rebate Policy is evaluated based on property owners' participation throughout the PCU wastewater collection system service area. The overall effectiveness of reducing I&I throughout the PCU wastewater collection system depends on whether participation rates are low or high, and whether sanitary sewer lateral lining or replacement work is clustered or dispersed.

This policy, in conjunction with other private Sewer Lateral policies, provides PCU the best opportunity to reduce I&I in the PCU wastewater collection system and help protect the environment and public health from SSOs.

ATTACHMENT 4

PINELLAS COUNTY  
FLORIDA

PRIVATE SEWER SYSTEM  
POLICY

November 2021

Table of Contents

I. Intent .....3

II. Definitions.....3

III. Policy Applicability .....5

IV. Permit Applications and Performance Standards .....5

V. Review of Design Standards .....5

VI. Utility Permit.....6

VII. Operating Permit .....6

VIII. Private Sewer System Inspections .....7

IX. Private Sewer System Infiltration and Inflow (I&I) and Corrective Actions .....7

X. Transfer of Ownership of an Existing Private Sewer System.....7

XI. Policy Enforcement.....8

XII. Policy Impact.....8

## I. Intent

The purpose of the Private Sewer System Policy (System Policy) is to require all privately owned collection and transmission systems (private Sewer Systems) to obtain operation permits and, any applicable utility permits to ensure proper design, construction, operation, and maintenance of new and existing privately-owned collection and transmission systems that discharge to the County's wastewater collection system. [Pinellas County Code 126-301](#) requires all new or altered collection systems (private or public) connected to the Pinellas County Utilities' (PCU) wastewater collection system to conform to Pinellas County standard technical specifications. Additionally, [Pinellas County Code 126-327 \(5\)](#) prohibits the discharge of stormwater, surface water, roof runoff, subsurface drainage, and other water sources into the County's wastewater collection system. Through the System Policy, PCU improves its tracking and enforcement capabilities to ensure the wastewater collection system's health and longevity, to reduce the risk of sanitary sewer overflows (SSOs), and to preserve public health.

The goals of the System Policy are to reduce inflow and infiltration (I&I) entering PCU's wastewater collection system from private Sewer Systems, and to reduce the risk of blockage or equipment failure related spills from privately-owned infrastructure. Reducing the amount of groundwater infiltrating into the wastewater collection system will aid in reducing the risk of SSOs, reducing extraneous flow to treatment facilities, and increasing available system capacity. Additionally, this Policy allows for existing Private Sewer Systems to transfer ownership to PCU under certain conditions.

## II. Definitions

**Cleanout** means a segment of pipe connected to an underground private Sewer Lateral and rising to the surface, providing access to the sewer lateral for purposes of inspection and cleaning.

**County Sewer System (System)** consists of the County owned collection and transmission system that conveys wastewater to the treatment facility. The system consists of sanitary sewers, trunk sewers, interceptors, sewer pump stations, force mains, and all appurtenances between the private Sewer Laterals (or building sewers) and the wastewater treatment facility.

**Defective** means, as applied to a Private Sewer Lateral, a Private Sewer Lateral for which any of the following conditions exist upon inspection by a licensed plumbing contractor or other competent professional:

1. evidence of pipe or joint cracks or deterioration,
2. root intrusion into a pipe,
3. a misaligned pipe segment, sag, or lack of positive gradient,
4. a lack of a necessary cleanout cap,
5. a downspout, drain, defective cleanout, or other connection that allows storm water or other extraneous water to enter the sanitary sewer system, and/or
6. a defect (e.g., crack, fracture, hole, open joint) or active leak that allows the discharge of sewage on the property or the introduction of extraneous water into the County sewer system.

Pinellas County, FL  
Private Sewer System Policy

**Infiltration** means groundwater that enters a sewer system, including service connections, through defective pipes, pipe joints, connections, service connections, manholes, or pump stations. Infiltration does not include, and is distinguished from inflow.

**Inflow** means surface water and stormwater that enters a collection/transmission system, including service connections, from sources such as roof leaders, cellar drains, yard drains, area drains, drains from wet areas, foundation drains, cross connections between storm sewers and sanitary sewers, catch basins, stormwater, surface runoff, manhole covers, or drainage. Inflow does not include, and is distinguished from, infiltration.

**Licensed Plumbing Contractor** means a plumber licensed and insured in the State of Florida pursuant to Chapter 553 and Section 489.105, Florida Statutes.

**PCU-Prequalified Plumber/Contractor** is licensed plumber or contractor that meets the requirements specified by Pinellas County Utilities for registration as prequalified, which includes defined qualification criteria, an active license, familiarity with standard drawings and specifications and submittal requirements associated with this policy and providing a warranty for a minimum of one (1) year.

**Private Collection and Transmission Systems (Private sewer system)** are privately owned sanitary sewers, manholes, lift stations, force mains and any other facility that discharges into the County sewer system, excluding single-family residences.

**Private Collection and Transmission Systems (Private sewer system) Operating Permit** is a permit from the County provided to owners of a private Sewer System allowing the private owner to discharge wastewater into the County sewer system that includes terms and conditions and performance requirements for the owner to maintain and operate their system in accordance with County requirements.

**Private Sewer Lateral** means a pipe that carries wastewater, excluding storm, surface and ground water starting just outside the building and ending at the right-of-way or recorded easement, and connects directly to the County System.

**Private Sewer Lateral Maintenance** means the routine inspection, flushing, rodding, and removal of grease, roots, and debris of a private Sewer Lateral of located within private property up to the right-of-way to maintain a free-flowing condition.

**Property** means any real property, or portion thereof, located in the County, including buildings or structures and private sewer infrastructure situated on the surface or beneath the surface of the property, including the private Sewer Lateral up to the right-of-way.

**Rehabilitation**, as applied to private Sewer Laterals, means the lining of the complete length of the private Sewer Lateral with a cured-in-place pipe (CIPP) liner to bring the private Sewer Lateral into compliance with minimum functional requirements. This also includes any other work necessary to prepare the pipe for lining.

**Repair** means the replacement of existing work with the same kind of material used in the existing work, not including additional work that would change the structural safety of the building or that would affect or change required exit facilities, a vital element of elevator, plumbing, gas piping, wiring, or heating

Pinellas County, FL  
Private Sewer System Policy

installations, or that would be in violation of a provision of law, or provision of County ordinance. The term "repair" shall not apply to any change of construction. The term "repair" as applied to private Sewer Laterals means construction activities performed on a portion of the private Sewer Lateral to bring the private Sewer Lateral into compliance with minimum functional requirements.

**Replacement**, as applied to private Sewer Laterals, means the installation of a complete new private Sewer Lateral and cleanout.

**Sanitary Sewer Overflow (SSO)** means a wastewater overflow from a manhole, a confined repair site, or directly onto the ground from a cleanout, or from the sanitary collection and transmission system (regardless of volume) within the County.

**Smoke Testing** involves pushing a simulated, non-toxic, non-staining simulated smoke through a community's sanitary sewer collecting system, then observing and documenting where the smoke exits. This method for identifying I&I typically involves residential, commercial, and industrial areas. Field technicians set up a blower over a neighborhood manhole, and non-toxic simulated smoke is pumped through the sewer line. The exiting smoke can indicate the location of a broken sewer pipe, manholes, catch basins, or where roof or foundation drains are connected to the sewer system.

### III. Policy Applicability

The System Policy will apply to all existing and future private Sewer Systems discharging to the Pinellas County wastewater collection system as well as any proposed privately constructed wastewater collection facilities. The intent of this policy is to add more specific requirements to the County Sewer System Code for private Sewer Systems to include inspection, operation, and management requirements as well as providing for construction and operation permitting requirements by PCU.

The owner or developer of any site development is required to build public wastewater collection systems for any wastewater collection system facilities to be constructed in public easement or right-of-way.

### IV. Permit Applications and Performance Standards

PCU will develop permit application forms, fees, and performance standards to be incorporated into all private Sewer System construction and operating permits.

### V. Review of Design Standards

PCU will review and revise as necessary the following design and construction standards for gravity sewers, sewer pump stations, and force mains relevant to private Sewer Systems:

- Pinellas County Standard Technical Specifications for Utilities and Related Construction
- Pinellas County Material Specification Manual
- Pinellas County Standard Engineering Details
- Pinellas County Pump Station Standards

## VI. Utility Permit

In accordance with current PCU Policy, a utility permit is required for a new or a modification to an existing private Sewer System. All new private Sewer Systems, where allowed, are to be gravity only unless otherwise approved in accordance with current PCU Policy.

## VII. Operating Permit

Any person or entity owning a private Sewer System will obtain a three (3)-year renewable operating permit from PCU. The operating permit will include details of provision enforcement, set forth in [Pinellas County Code Section 126-400](#). When submitting a renewal application, the owner of the private Sewer System is required to submit copies of the following:

- **Operation and Maintenance Records** – The operation and maintenance records for the three-year period prior to the operating permit renewal application submittal date must be provided.

Operation and maintenance records must be maintained for two reporting cycles. Records include daily run times, recorded either electronically or manually, and any inspections (other than the any inspection conducted by PCU) and/or cleaning and resulting repairs.

PCU, at its discretion, may request certain operating records at any time. Requested records must be submitted to PCU within a month of the request unless an extension is granted by PCU.

- **Private Sewer Pump Station Service and Maintenance Agreement** – All private Sewer Systems that include a sewer pump station must have a maintenance agreement with a person or company holding a State of Florida master plumbing certificate of competency, a Pinellas County master plumber certificate of competency, a certified wastewater operator, licensed in the State of Florida, or be a person approved by PCU for such work.

The maintenance agreement will provide for monthly inspections of the sewer pump station to ensure proper operation and maintenance and provide 24-hour emergency restoration services if a failure occurs.

- **Sanitary Sewer Overflow Response Plan (SSORP)** – The SSORP must adhere to United States Environmental Protection Agency (USEPA) guidance and include response to and remediation of SSOs caused by, but not limited to, line failure, line collapse, line obstruction, power failure and/or mechanical failure. When an SSO occurs within the owner's private Sewer System, the owner is responsible for notifying PCU and the Florida Department of Environmental Protection (FDEP) within 24 hours of becoming aware of the SSO.
- The owner will clean up SSOs or spills as soon as possible after discovery in accordance with all applicable local and state regulations and take appropriate measures to correct issues that caused the SSO or spill at no cost to the County.
- **Emergency and/or Backup Power Plan** – The private Sewer System owner will have a back-up power plan with protocols for managing flows during a power outage to prevent SSOs from occurring. This plan shall meet current State and PCU requirements.

## VIII. Private Sewer System Inspections

PCU will inspect all private Sewer Systems periodically to ensure the integrity of the system. An inspection fee and re-inspection fee will be established by resolution of the Pinellas County Board of County Commissioners (the Board). These fees will be assessed for each collection system inspection and re-inspection. The wastewater collection system inspections may include:

- Examination of service records, plans, and agreements required by permit
- Evaluation of compliance with operation and maintenance requirements
- Review of the results of any internal inspections or assessments
- Review of data provided for evidence of excessive I&I, such as pump run times.

PCU will issue an inspection report including any required corrective actions.

## IX. Private Sewer System Infiltration and Inflow (I&I) and Corrective Actions

If there is reasonable evidence that there may be excessive I&I within the private Sewer System, PCU, at its discretion and cost, may install a flow meter or any other measurement device at the point of connection to determine whether a private Sewer System is allowing excessive amounts of I&I to enter the County's wastewater collection system.

PCU will have the right to access the flow meter or other measurement device at any time to perform meter readings or for maintenance.

Should PCU determine that excessive amounts of I&I are entering the County wastewater collection system from a private Sewer System, the owner of the private Sewer System is responsible for determining the cause(s). The private Sewer System owner also is responsible for planning, designing, and constructing all necessary repairs or replacements to the system, and securing applicable state and PCU construction permits. All work will be completed by a qualified licensed contractor and inspected by PCU. Post-construction flow monitoring (at the original monitoring location) will be conducted by PCU at the property owner's expense to demonstrate the effectiveness of the mitigation measures. All repairs and improvements made to remediate for I&I will be done at no cost to the County.

## X. Transfer of Ownership of an Existing Private Sewer System

PCU will allow for the owner of a private Sewer System to request the County to take ownership of a private Sewer System. After reviewing the owner's application and finding that the owner has met the requirements contained herein, the County may accept a transfer of ownership and responsibility for the private Sewer System.

Before the County takes ownership of any private Sewer System, the owner must establish that the wastewater collection system, including pump stations and other equipment, meet all requirements of the Pinellas County's Standard Technical Specifications, Material Specification Manual, and Standard



Pinellas County, FL  
Private Sewer System Policy

Details. The County may, if it is deemed in the best interest of the County and its residents, decide to allow for a transfer of ownership if the wastewater collection system does not meet current County standards.

Before the County takes ownership of any private Sewer System, the owner shall also have the private Sewer System evaluated to establish that it meets or surpasses the standards set forth in the Pinellas County's Standard Technical Specifications. The evaluation shall be done in accordance with the procedures set forth in the Pinellas County's Standard Technical Specifications unless otherwise allowed by the County. If the owner is not able to pay for the system evaluation, the County may elect to pay for the testing or forego the testing.

The transfer of all private property associated with the private Sewer System shall be evidenced by a good and sufficient bill of sale in a form acceptable to the County and shall be free and clear of any claims or encumbrances.

The County shall determine the extent to which a transfer of real property associated with the private Sewer System may be accomplished by easement or by conveyance of a fee interest. All easements shall be conveyed by good and sufficient easement deeds in a form acceptable to the County. All fee interests shall be conveyed by warranty deed. Regardless of whether an easement or fee is conveyed, the conveyance shall be free of any claims or encumbrances. Further, the owner of the private Sewer System shall provide the County with a survey in recordable form describing any interest in real property which the owner proposes to convey to the County. If the owner is not able to pay for the survey, the County may elect to pay for the survey.

The owner will pay all cost or expenses, including but not limited to attorney's and engineering fees, which the County incurs to accomplish the transfer of ownership of a private Sewer System.

## XI. Policy Enforcement

Provisions under this policy shall be enforced as set forth set forth in [Pinellas County Code Section 126-400](#).

## XII. Policy Impact

This anticipated impact of this policy is to reduce I&I and O&M-related SSOs from private Sewer Systems and to reduce I&I entering the County sewer system, which, in turn, will reduce the risk of SSOs in the County sewer system and reduce peak flows at the WWFs.

## Appendix C: Pinellas County Sanitary Sewer Flow Monitoring Methodology/Protocols

1.1

# **PINELLAS COUNTY**

## **SANITARY SEWER FLOW MONITORING METHODOLOGY/PROTOCOLS DOCUMENT**



February 13, 2017

**Submitted To:**

Jeremy Waugh, P.E., ENV SP.

Section Manager

Pinellas County Utilities

14 S. Fort Harrison Avenue, Clearwater, FL 33756

Phone (727) 453-3005

[jwaugh@pinellascounty.org](mailto:jwaugh@pinellascounty.org)

**Submitted By:**

Mitch Chiavaroli, PE

Director of Engineering

McKim & Creed, Inc.

1365 Hamlet Avenue, Clearwater FL 33756

[mchiavaroli@mckimcreed.com](mailto:mchiavaroli@mckimcreed.com)

# PINELLAS COUNTY

## SANITARY SEWER FLOW MONITORING METHODOLOGY/PROTOCOLS DOCUMENT

TABLE OF CONTENTS.....	1.2
------------------------	-----

### SECTION 1 - FLOW METER SERVICE PROVIDER QUALIFICATIONS

1.1 - GENERAL QUALIFICATIONS .....	1.3
1.2 - FLOW METER/RAINFALL GAUGE EQUIPMENT SELECTION .....	1.3
1.3 - FLOW METER/RAINFALL GAUGE MANAGEMENT PLATFORM.....	1.4

### SECTION 2 - FLOW MONITORING & RAINFALL/GROUNDWATER GAUGING

2.1 - GENERAL DISCUSSION .....	2.5
2.2 - METER SITE SELECTION AND SEWER STUDY ZONE DELINEATION .....	2.5
2.3 - ACCEPTABLE FLOW MEASURES AND RECORD KEEPING .....	2.6
2.4 - DURATION OF FLOW MONITORING .....	2.6
2.5 - DATA ACCURACY SPECIFICATIONS .....	2.7
2.6 - RAINFALL MONITORING .....	2.7
2.7 - GROUNDWATER MONITORING .....	2.7
2.8 - FLOW AND RAINFALL MONITORING PLAN.....	2.8

### SECTION 3 - FLOW & RAINFALL MONITORING IMPLEMENTATION

3.1 - DATA COLLECTION .....	3.10
3.2 - EQUIPMENT MAINTENANCE.....	3.10
3.3 - DATA STORAGE FORMAT AND WAREHOUSING .....	3.10

### SECTION 4 - MONTHLY REPORTING

4.1 - DATA SUMMARIES .....	4.11
4.1.1 - GRAPHICAL REPRESENTATION OF DATA .....	4.11
4.1.2 - TABULAR DATA.....	4.13
4.2 - DATA ANALYSIS .....	4.13
4.2.1 - FLOW COMPONENTS .....	4.14
4.2.1.1 - BASE SEWAGE FLOW.....	4.14
4.2.1.2 - DRY WEATHER FLOW (DWF).....	4.14
4.2.1.3 - DRY WEATHER INFILTRATION (DWI) .....	4.15
4.2.1.4 - RAINFALL DERIVED INFILTRATION/INFLOW EVALULATION ....	4.15
4.3 – MONTHLY REPORT SUBMITTAL.....	4.15
4.4 – MONTHLY REPORT FORMAT.....	4.16

### APPENDIX A – SAMPLE FLOW METERING SITE ANALYSIS FORM

1.3

## **SECTION 1       FLOW METER SERVICE PROVIDER QUALIFICATIONS**

### **1.1 GENERAL QUALIFICATIONS:**

The consultant shall utilize a Flow Meter Service Provider (FSP) that has a minimum of ten (10) years of successful documented experience in the assembly, installation and maintenance of the proposed networked, telemetered flow monitoring and rainfall gauging equipment in gravity sewer applications. Documentation will include the submittal of a listing of successfully completed projects during the ten (10) year period including project client references.

The FSP shall provide satisfactory evidence of having adequate staff, equipment and technical experience to furnish the equipment and provide the services required herein to the consultant for submittal to the County. The consultant shall also submit resumes' of the FSP's project manager, project engineer, instrument technicians and other key personnel who will perform the proposed work. Each resume shall reflect the competency of the FSP personnel noting past experience on projects of similar scope and complexity.

The consultants shall indemnify and hold harmless the County from all liabilities, judgements, costs, damages, and expenses which may result in infringement of any patents, trademarks, or copyrights by use of any materials, devices, equipment, or processes incorporated in or used in the performance of the work under the consultant's contract.

The consultant shall ensure that the FSP complies with 29 CFR 1910.146 (OSHA confined space safety regulations) and all safety requirements involved with the project. The consultant shall submit Certificate of Completion for Confined Space Entry Training for all FSP personnel involved with the project as well as a copy of the FSP safety manual. If a meter location is at a manhole that requires Maintenance of Traffic (MOT) to access, the consultant shall be responsible for providing the necessary MOT. Consultant shall have MOT certified person on site.

### **1.2 FLOW METER/RAINFALL GAUGE EQUIPMENT SELECTION:**

The FSP shall utilize approved open channel flow monitoring equipment. Open channel flow monitoring equipment shall be submerged sensor (area velocity) type meters with redundant level sensor. Primary level monitoring device shall be a pressure transducer and secondary level monitoring device shall be ultrasonic sensor mounted in the top of the pipe.

Approved open channel flow meters to be utilized are: ADS Triton +, ADS Flow Shark, ISCO 2150, Hach FL 900 Series, FloWav Shortboard 1000, or approved equal. All flow monitoring devices shall incorporate cellular enabled recording telemetry units (RTUs) to upload the recorded level, velocity and flow rate data automatically to the proposed flow monitoring data storage platform on a daily basis. Level, velocity and flow rates shall be averaged and recorded every five (5) minutes. The consultant shall submit for approval catalog information and equipment specifications for the flow metering devices the FSP proposes to use on the project.

Rainfall gauges must be electronic tipping buckets built to National Weather Service standards with bucket mechanism accurately measuring rainfall accumulation in 0.01 inch increments. The

## 1.4

rainfall logger must also have a cellular enabled RTU and be connected to the same monitoring platform utilized by the flow meter network. The logger shall totalize the recorded rainfall measured over every five (5) minute period and upload the data remotely on a daily basis to the project's data storage platform.

## 1.3 FLOW METER/RAINFALL GAUGE DATA MANAGEMENT PLATFORM:

The consultant's FSP shall maintain a third party hosted, web-based data management platform for access by the County, and County's representative, to the flow monitoring and rainfall gauging fifteen (15) minute data. The approved data management platforms include ADS – Intelliserve, Hach – FS Data, ISCO – Flowlink, Telog – Enterprise, or approved equal.

In general the data management platform shall provide the following functionality:

- Collect Data – Data from RTU's
- Transfer Data – Automatically at Pre-determined Time Intervals
- Manage Data – Organize, View, Create Reports and Archive Data
- Share Data – Over Intranet, or Internet Using Web Browser Applications

The data management platform will collect and store data once per day for all flow meter and rainfall gauging equipment and provide notification when any of the monitoring equipment fails to send the 24-hour recorded data. Access to the data by the County, and County's representative, shall be gained through a dedicated web-based portal using a pre-established user name and password. The web-portal browsers shall utilize 'ActiveX', 'Chrome' or 'Fire Fox' for access.

Once accessed the data management platform shall have a graphical interface that allows for identification of equipment location, as well as identifying equipment communication status and remaining battery life. The data management platform shall also allow for the following actions:

- Review of Transient Data
- Creation of Flow, Level and Velocity Hydrographs for Selected Time Periods
- Creation of Rainfall Bar Graphs for Selected Time Periods
- Means to Save and Download Created Graphs
- Ability to Export Created Hydrographs, Bar Graphs and Tabular Data to .pdf, .txt, .csv

The consultant shall submit for approval from the County, or the County's representative, catalog information and specifications for the data management platform that the FSP proposes to use on the project.

## **SECTION 2      FLOW MONITORING & RAINFALL/GROUNDWATER GAUGING**

### **2.1 GENERAL DISCUSSION:**

The wastewater flow monitoring program is being conducted in an effort to characterize the flow regime in the sanitary sewer system during dry weather and wet weather periods under current conditions and to use the collected data as a benchmark to determine the effectiveness of storm water and groundwater infiltration abatement after sewer repair, rehabilitation and replacement projects are performed. The primary objectives of the flow monitoring program are as follows:

- Collect representative dry and wet weather flow data for the Sewer Study Zone(s)
- Measure flow rate amounts of wastewater conveyed to the South Cross Bayou WRF
- Identify conditions that cause sewer surcharging
- Observe and quantify dry weather infiltration
- Quantify rainfall derived inflow and infiltration (RDII) volumes
- Correlate RDII with rainfall volumes and intensities
- Determine seasonal variations of flow within the sanitary sewer system
- Assist in prioritizing SSES Basins
- Observe and quantify potential dry-weather inflow (e.g., manholes located in low-lying areas which may be inundated in dry-weather by tidal effects or stream flow)
- Benchmark current RDII volumes and demonstrate that peak flow reductions have been achieved after RDII abatement construction has been completed

The scope of the County's flow monitoring program has been developed to ensure flow data acquisition is adequate to meet the program objectives identified above. The following section(s) describes the various protocols that will be employed by the consultants/FSPs to ensure that collected data is of the appropriate quality.

### **2.2 METER SITE SELECTION AND SEWER STUDY ZONE DELINEATION:**

Selection of meter location sites is critical to defining sewer sub-basins within a Sewer Study Zone. Flow meter sites shall be selected so that the entire flow for the Sewer Study Zone can be characterized. This may require multiple meters for areas with parallel sewers or complex connectivity. Meter sites shall be compatible with the minimum requirements of the flow monitoring equipment manufacturer relative to physical site constraints and hydraulic conditions. The County will provide available historical SSO information for consideration. A minimum of one sub-basin needs to be delineated that corresponds to a terminal pump station connecting to the County's force main piping. Pump station runtimes and, if available, flow meter data will be provided by the County. The County will clean the sewer line in the vicinity of each proposed meter installation location prior to the flow meter being installed, provided the Consultant provides the location and schedule for meter installation far enough in advance for the County to schedule this work.

## 2.6

Sewer sub-basin delineation can be accomplished through use of sewer mapping noting that it is important that the meter locations are strategically selected to provide an appropriate delineation of sanitary Sewer Study Zones.

If at any time a previously selected site is removed or replaced after approval of the Flow and Rainfall Monitoring Plan, the County shall be notified and it shall be noted within the monthly reporting.

### 2.3 ACCEPTABLE FLOW MEASURES AND RECORD KEEPING:

Flow monitoring equipment shall include a data logger, communication device and sensing units. All gravity sewer metering equipment shall be capable of recording in both low flow and surcharged conditions for wet weather monitoring. The consultants must utilize best engineering judgment in the selection of flow monitoring methods and the application of the resulting data. The flow monitoring equipment, methods and application of the resulting data shall be reviewed and approved by the County, or the County's representative, as part of the required Flow and Rainfall Monitoring Plan submittal.

### 2.4 DURATION OF FLOW MONITORING:

For the purposes of identifying areas for future SSES activities, flow monitoring shall be conducted. The flow data shall capture a representative sample of dry weather flows as well as storm events of varying magnitudes. Flow monitoring shall be conducted for a duration of six (6) months to satisfy the following criteria:

#### Flow Monitoring for SSES Basin Identification

- Flow monitoring shall provide data that characterizes seasonal variations and captures the peak seasonal sanitary sewer system flows.
- Flow monitoring shall record as many individual wet-weather flow events possible. These events shall capture system response under a variety of antecedent rainfall and groundwater conditions.
- Flow monitoring shall continue for sufficient time between rain events for the flow to normalize to dry weather conditions.
- Flow monitoring period shall capture typical diurnal variations in dry-weather flow, including weekends and weekdays.

If these events do not occur during the 6-month period, the County may extend the monitoring period. Selection of locations for flow monitoring shall include pump stations that are representative of a group of pump stations that exhibit similar responses to the variables which impact peak flow. Examples of the variables that shall be considered include, but are not limited to: the average age of the gravity sewers in the Sewer Study Zone; pipe material and joint type; soil-type and porosity; maximum, minimum and groundwater elevations; proximity to surface water bodies; tidal influence; ratio of pervious to non-pervious surface area; service areas size; land use; historic I/I data; seasonal population patterns; and sanitary sewer system construction materials.



## 2.7

## 2.5 DATA ACCURACY SPECIFICATIONS:

Flow monitoring accuracies will be based on typical accuracies for the type of equipment used. Flow meters shall provide an average, maximum and minimum values at 5-minute intervals.

Prior to installation of any meter and/or gauge, the device shall be calibrated according to manufacturer's recommendations. The calibration of open channel flow meters shall be checked periodically after installation using supplemental velocity and level measurement devices, where the use of such devices is practical. After equipment installation, a form shall be prepared for each site by the FSP, see sample form in Appendix A. Installation forms shall be submitted to the County for review. Installation forms shall be included with each monthly report for all flow meter sites. Calibration records shall be included in the monthly report for each flow meter site to demonstrate that the equipment was properly calibrated. Any recalibration required during the monitoring period shall be noted and also included in the monthly report. The flow meters shall be maintained in a manner that shall provide for a minimum of ninety five percent (95%) uptime and ninety percent (90% ) data reliability. Data reliability is identified as the percentage of flow data that has been collected that is obviously not incorrect (i.e., flat lines or drifted from known calibration levels).

Rainfall, and flow monitoring shall be carried out in accordance with current standard practices, and shall generally be in conformance with widely used industry guidance such as Water Research Centre's (WRC) "A Guide to Short Term Flow Surveys of Sewer Systems", Water Environment Federation's (WEF) MOP FD-6 "Existing Sewer Evaluation and Rehabilitation", and NASSCO's "Manual of Practices".

## 2.6 RAINFALL MONITORING:

Rainfall monitoring shall be completed to obtain the data needed to compare wet weather sewer flow to rainfall volume, duration and intensity. The relationship between peak sewer flow and rainfall shall be used during the evaluation of the sewer system's performance and the prediction of RDII. Rainfall gauges shall be of the continuous recording type, and store data in 5-minute increments. Rain gauges shall be distributed throughout the area covered by the sanitary sewer system on a minimum of every five (5) square miles. That density should provide reasonable coverage and representation of variations in rainfall intensity, duration and accumulation throughout the sewer system and shall be utilized to also calibrate any utilized Doppler radar rainfall data. Rainfall gauges shall be capable of recording rainfall at 0.1-inch intervals or less.

Rain data can be supplemented from gauges maintained by the United States Geologic Survey (USGS), the National Oceanic and Atmospheric Administration (NOAA) or County rainfall records. Radar rainfall records derived from radar information that is calibrated with rain gauges maintained by the USGS, NOAA, are also acceptable. Rain gauges shall be installed in the general vicinity of the flow monitoring sites as applicable.

## 2.7 GROUNDWATER MONITORING:

Groundwater level data shall be used to establish the potential for groundwater infiltration into the sewer system. Groundwater data can be used in conjunction with flow data to analyze infiltration based on the relationship between the groundwater table level and the elevation of the

## 2.8

sewers. The consultant shall provide the proposed locations and methods to establish groundwater elevations to the County, or County's representative for review and acceptance.

## 2.8 FLOW AND RAINFALL MONITORING PLAN:

A Flow and Rainfall Monitoring Plan shall be developed by each consultant and shall be submitted to the County for review and approval. The Flow and Rainfall Monitoring Plan shall include the following minimum information:

### TITLE PAGE

- Project/Report Title
- Report Date
- Consultant Contact Information

### Section 1 - EXECUTIVE SUMMARY

### Section 2 - FLOW AND RAINFALL MONITORING METHODOLOGY

- Methodology Utilized to Determine Flow Meter Sub-Basin Limits
- Proposed Calibration Procedures
- Proposed Maintenance Procedures

### Section 3 - EVALUATION OF EXISTING DATA

### Section 4 - OPEN CHANNEL FLOW MONITORING SITE SELECTION

- Site Selection Criteria
- Proposed Maintenance of Traffic for Sites in Roadways
- Map Identifying Proposed Flow Monitoring Sites

### Section 5 - RAINFALL GAUGE SITE SELECTION

- Site Selection Criteria
- Map Identifying Rainfall Gauge Sites

### Section 6 - GROUNDWATER LEVEL SENSOR LOCATIONS

- Site Selection Criteria
- Proposed Method of Monitoring and Reporting
- Map Identifying Groundwater Gauge Sites

### Section 7 - MONITORING EQUIPMENT

- Manufacturer's Data for Proposed Equipment to be Utilized
- Data Acquisition Plan

### Section 8 – PROPOSED IMPLEMENTATION SCHEDULE

2.9

#### Section 9 - DATA COLLECTION ACTIVITIES

- Data Acquisition Plan
- Data Collection Period

#### Section 10 - DATA MANAGEMENT

- Data Transfer – Storage – Review (Procedures)
- Data Verification – Reporting (Procedures)

#### Section 11 - QA/QC PROCEDURES

- Documentation of Maintenance
- Documentation of Calibration
- Documentation of Data Review & Data Reliability Evaluation

3.10

## **SECTION 3        FLOW & RAINFALL MONITORING IMPLEMENTATION**

### **3.1 DATA COLLECTION:**

Electronic transmission, via cellular RTU, of data for flow and rainfall gauging sites is required. Sewer flow and rainfall information shall be collected (downloaded) every 24 hours for the duration of the monitoring period for each flow meter/rainfall gauge. If the instrument experiences a communication link failure, the FSP will remedy the situation immediately. Also, a site visit after every significant storm event is required to confirm accurate meter calibration, noting that a significant event is categorized as any event greater than one (1) inch during a 24-hour period. Significant rainfall event site visit shall occur within 48-hours after the rainfall event has ended. In addition, a site visit is required 48-hours prior to any forecasted significant weather events, (i.e. tropical depressions, tropical storms, hurricanes), to confirm meter operation and calibration. As previously described the FSP shall provide a minimum of ninety five percent (95%) uptime for each flow monitoring device and a minimum of ninety percent (90%) data reliability.

### **3.2 EQUIPMENT MAINTENANCE:**

Open channel flow meters shall be calibrated weekly as a minimum during dry weather periods and more frequently as required during wet weather periods. Rainfall gauges shall be calibrated once every month. Calibration records shall be submitted as part of the monthly monitoring reports. Problems with the instrument operation should be corrected as soon as possible to sustain data collection and data reliability at the highest level. The collected data will be reviewed daily to determine if any form of maintenance is required. The FSP will investigate any and all perceived equipment malfunctions within 48-hours of discovery and will replace any malfunctioning equipment within three (3) business days of the initial field investigations.

### **3.3 DATA STORAGE FORMAT AND WAREHOUSING:**

The metered data shall be stored in an open data format that can easily be accessed in an ODBC (Open data base connectivity) compliant format. Data for each meter/gauge shall be uniquely identified and shall be distinguishable from the data from other meters. Each meter shall be identified by Sewer Study Zone number and meter number as agreed upon by the County. Meter shall be numbered in ascending order from furthest upstream site; one (1), to the furthest downstream site. Flow data shall be labeled using the assigned meter/gauge number with identification and determination of the dates of collection.

4.11

## SECTION 4 MONTHLY REPORTING

### 4.1 DATA SUMMARIES:

Flow data summaries to be included in the monthly report shall present the flow data and observed flow conditions supported by graphical and tabular presentations of flow, level, temperature and velocity, where applicable. Each summary shall include the following information. Any modified data should be noted as such. Modified data should be analyzed for trends.

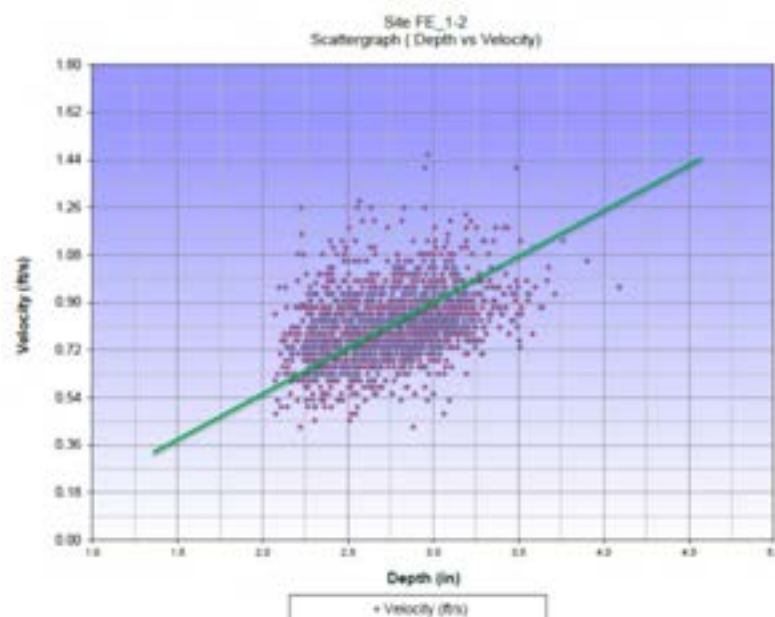
#### 4.1.1 Graphical Representation of Data

A graphical time-series weekly plot (hydrograph) of flow rate vs. time data, as well as associated recorded rainfall data, shall be presented for each specific flow meter site. An average seven (7) day dry weather hydrograph will also be prepared/presented and flow data from any significant rainfall event (greater than 0.5-inches over 24-hours) during any specific seven (7) day period will be added to the hydrograph and RDII volumes for each significant event shall be calculated and displayed on the hydrograph. Additional graphs will also be required:

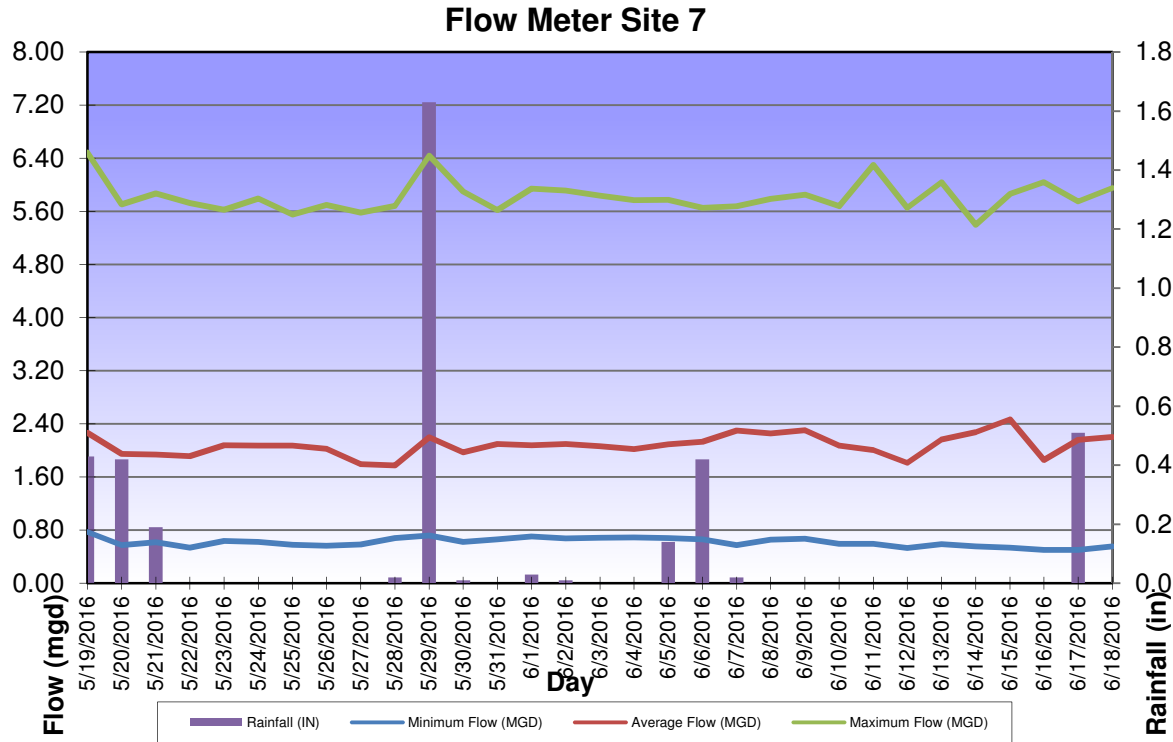
- Monthly graph (scatter graph) of flow depth versus velocity readings
- Monthly flow graph depicting daily maximum, average and minimum flow rates with daily rainfall accumulations
- Daily wet weather 24-hour flow volume versus recorded rainfall magnitude for events greater than 0.5-inches (regression analysis)
- Flow balance schematic depicting flow meter connectivity and measured flow volumes over each 24-hour rainfall event greater than 0.5-inches (with downstream flow volumes isolated from upstream flow meters)

Graphs shall be provided in both .pdf and .xls formats. The following provides examples of graphs required.

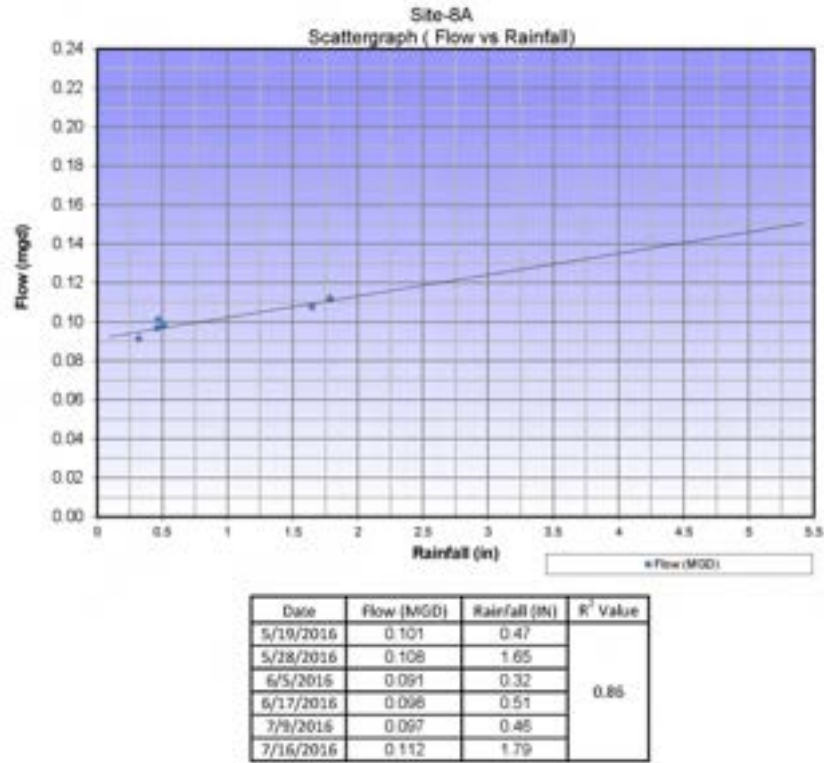
**Scatter Graph**



4.12



**Monthly 24-Hour Flow Maximums, Minimums, Averages and Rainfall Accumulation**



**24-Hour Flow Volume (MGD) Versus Rainfall Accumulation (IN)**

## 4.13

## 4.1.2 Tabular Data

The following data shall be submitted in electronic form with calculated statistics in .xls format for each specific flow meter/rainfall gauging site. Both raw data and any modified data shall be submitted. Modified data shall be highlighted and explained.

- Flow Meter Site Statistics:
  - Average dry weather flow rate (Million Gallons Per Day)
  - Peak hourly dry weather flow rate (Million Gallons Per Day)
  - Peak hourly wet weather flow rate (Million Gallons Per Day)
- Rainfall Monitoring Site Statistics:
  - Recorded rainfall event date (events greater than 0.5-inches)
  - Rainfall amount per event (Inches)
  - Recurrence storm interval (2, 5, 10 Year, etc.)
  - Identification of rainfall gauge used for each flow meter site analysis
- Flow Monitoring Data:
  - Time (5 Minute Increments)
  - Level (Inches)
  - Velocity (Feet Per Second)
  - Flow rate (Million Gallons Per Day)
  - Temperature (°F)
- Rainfall Monitoring Data:
  - Time (5 Minute Increments)
  - Rainfall measured (Inches)
- Calibration records
- Data reliability summary of all meters
- Data excluded
- Maintenance activities completed
- Installation report

## 4.2 DATA ANALYSIS

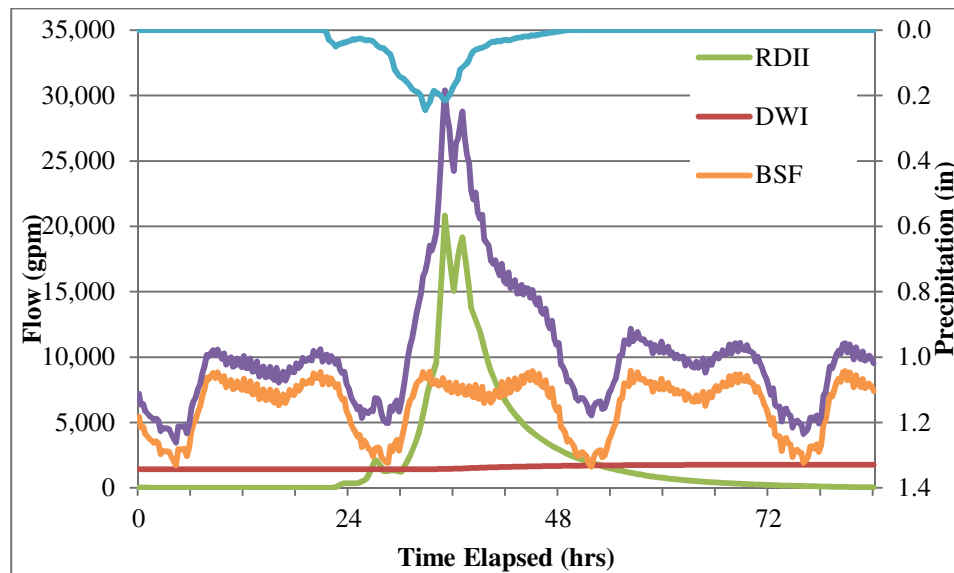
The primary objectives of the flow evaluation are to characterize sewer flow under a range of hydrologic conditions, and quantify peak flow for the purposes of identifying SSES Basins. The sewer flow evaluation shall include quantification of base sewage flow, dry weather infiltration (DWI) and rainfall-derived inflow/infiltration (RDII) using the following procedure:

- Separate periods of dry and wet-weather flow with respect to rainfall data
- Establish a typical 24-hour and 7-day, dry-weather sewer hydrograph
- Estimate DWI by determining flow rate during off peak water usage hours
- Extract RDII by subtracting the applicable dry-weather flow hydrograph from the applicable wet weather hydrograph for the event or events of interest.

4.14

#### 4.2.1 Flow Components

Sewer flow consists of base flow and RDII, as shown on the Figure on the following page. The first step in determining the peak flow reduction potential is to quantify the components. The following describe processes for determining each component of the total wastewater flow.



**Example Components of Sewer Flow**

##### 4.2.1.1 Base Sewage Flow

Base sewage flow (BSF) is defined as the domestic and industrial/process sewage flow in the sanitary sewer system. It does not include DWI or RDII. The quantity of BSF shall be determined by each consultant and shall be based on information and conditions specific to the monitored Sewer Study Zone/sub-basin. In general a dry weather period with low groundwater should be used for determining BSF values. In tidally influenced areas, periods of low tide should also be used for determining BSF values. Water consumption data shall be used to verify flow meter data. If water consumption data is found to be more representative of BSF, supporting documentation and/or engineering analysis must be submitted to the County for review and approval. In either case, the BSF value and method of determination shall be submitted to the County for review and approval.

##### 4.2.1.2 Dry Weather Flow (DWF)

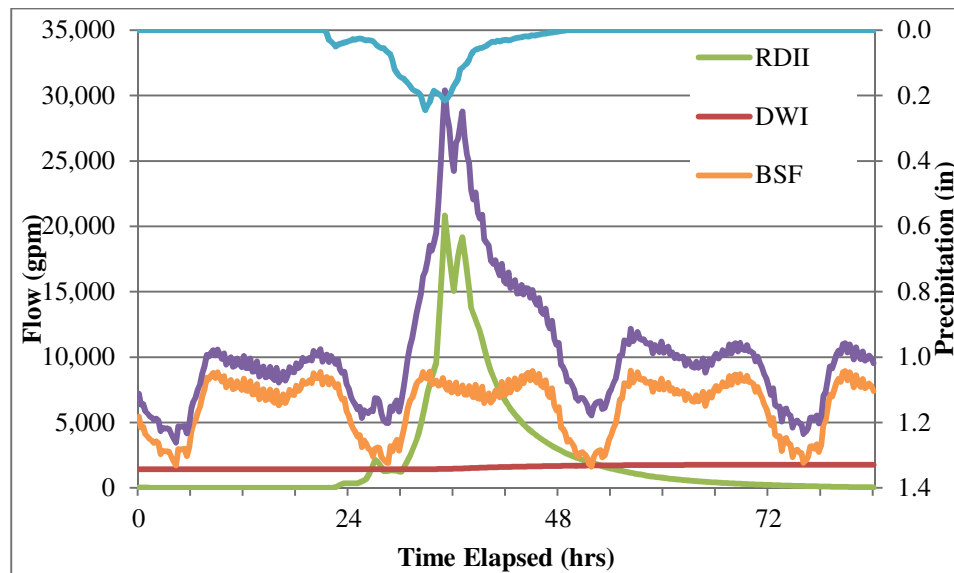
The Dry Weather Flow (DWF) is composed of BSF and DWI. The flow at each flow-monitoring site shall be used as the basis for determining the DWF for the metered areas and for estimating the dry weather infiltration entering the sewers. In determining the DWF, days with rainfall (and the following three days) shall be excluded from the analysis, and a minimum of one (1) month of flow data shall be used. Dry day flows identified for each monitoring site shall be averaged to determine the shape of the diurnal curve for each metered area. A comparison of peak hourly flows is suggested to identify anomalies in flow patterns.



4.14

#### 4.2.1 Flow Components

Sewer flow consists of base flow and RDII, as shown on the Figure on the following page. The first step in determining the peak flow reduction potential is to quantify the components. The following describe processes for determining each component of the total wastewater flow.



**Example Components of Sewer Flow**

##### 4.2.1.1 Base Sewage Flow

Base sewage flow (BSF) is defined as the domestic and industrial/process sewage flow in the sanitary sewer system. It does not include DWI or RDII. The quantity of BSF shall be determined by each consultant and shall be based on information and conditions specific to the monitored Sewer Study Zone/sub-basin. In general a dry weather period with low groundwater should be used for determining BSF values. In tidally influenced areas, periods of low tide should also be used for determining BSF values. Water consumption data shall be used to verify flow meter data. If water consumption data is found to be more representative of BSF, supporting documentation and/or engineering analysis must be submitted to the County for review and approval. In either case, the BSF value and method of determination shall be submitted to the County for review and approval.

##### 4.2.1.2 Dry Weather Flow (DWF)

The Dry Weather Flow (DWF) is composed of BSF and DWI. The flow at each flow-monitoring site shall be used as the basis for determining the DWF for the metered areas and for estimating the dry weather infiltration entering the sewers. In determining the DWF, days with rainfall (and the following three days) shall be excluded from the analysis, and a minimum of one (1) month of flow data shall be used. Dry day flows identified for each monitoring site shall be averaged to determine the shape of the diurnal curve for each metered area. A comparison of peak hourly flows is suggested to identify anomalies in flow patterns.

## 4.15

## 4.2.1.3 Dry Weather Infiltration (DWI)

Dry weather infiltration (DWI) for each metered area shall be estimated by subtracting the BSF from the DWF. DWI is heavily influenced by groundwater, thus the time of year used for determining DWF and DWI are critical and engineering judgment shall be applied in the estimation of DWI. As median dry weather groundwater conditions are desired for this analysis, thus flow monitoring for determining DWF and DWI shall be performed between May and June.

## 4.2.1.4 Rainfall Derived Infiltration/Inflow Evaluation

Rainfall Derived Infiltration/Inflow (RDII) is the component of total wastewater flow resulting from rainwater entering the sewer system. RDII is generally a substantial portion of the total sewer flow that occurs during wet-weather. In many cases, particularly in older sewers, RDII should be the largest component of wet-weather flow. RDII varies with rainfall volume, rainfall intensity, antecedent moisture conditions, the condition of the collection system, and other factors, including storm driven tidal effects. The constituents of RDII are infiltration and inflow.

Flows occurring during and after rainfall events that are higher than the dry weather diurnal curve represent potential RDII. The extraneous flow quantity is estimated by subtracting the measured flow diurnal pattern from the wet weather hydrograph. After taking into account temporal and usage variations, the accumulated extraneous wet weather flow volume can then be estimated. The extraneous wet weather flow quantity (in gallons) for each monitoring site can be divided by the average dry weather flow over the metered area to calculate an RDII factor, expressed as a percentage of the total accumulated rainfall that entered the sanitary sewer system.

In addition to estimating the volumetric contribution of rainfall to the sanitary sewer system flow, peak one (1) hour flow shall be observed in conjunction with each rainfall event. The peak one (1) hour flow is critical for identifying Sewer Study Zones that will require future SSES activities.

The rainfall-derived infiltration can be graphically observed in the receding portion of the wet weather hydrograph. After the rainfall event has passed and the peak flow response has passed, the slower decline of flow back to normal dry weather conditions may be an indicator of the wet weather infiltration. Volumetric quantification of this flow in the system can help determine the volume of rainfall dependent infiltration entering the system.

## 4.3 MONTHLY REPORT SUBMITTAL

The previously described graphical and tabular data will be submitted along with the following flow data representations.

Monthly reports shall contain charts, tables, hydrographs and figures demonstrating at a minimum, the following quantities and calculations:

- DWF, Dry Weather Flow (Daily)
- BSF, Average Daily Dry Weather Flow, determined by calculation
  - $BSF = DWF - DWI$

4.16

- DWI, Non-Rainfall Groundwater Infiltration, estimated by analysis of early morning flows when the sanitary sewer contribution is very low. DWI will be calculated by taking the lowest flow value during non-peak water usage hours and by multiplying that flow rate by 0.90. All upstream established DWI rates shall be subtracted from the minimum recorded flow rate prior to performing the computation.
- Ratio of DWI/BSF.
- Rainfall Amount and Intensity and Duration
- Rainfall Dependent Infiltration/Inflow, (RDII), directly resulting from rainfall.
  - $RDII = \text{Total Wet Weather Flow Volume} - \text{BSF}$
- Peak RDII, maximum difference between the BSF and Total Flow hydrographs.
- PHF, Peak Hourly Wet Weather Flow Rate
- Peaking Factor =  $PHF/DWF$
- Peak 15-minute Flow Depth
- Peak 15-minute Flow Velocity
- Peak 15-minute Flow Volume
- Current Full Pipe Capacity (Based on Flow Velocity at Various Flow Depths)
- Total Monthly Flow
- Ratio of DWI/Inch-Diameter Miles of Upstream Contributing Sewer Mains for Each Meter Sub-Basin.

#### 4.4 MONTHLY REPORT FORMAT

The consultant will submit monthly flow monitoring/rainfall gauging reports to the County for review. Included in the monthly report will be raw flow data, edited flow data, (changes highlighted in yellow) and raw rainfall data. The following identifies the format that the monthly report will be prepared.

##### SECTION 1 – SUMMARY OF FLOW AND RAINFALL RECORDED

- Summary of recorded flow and rainfall recorded during the month
- Identification of equipment/communication malfunctions during the month
- Identification of flow meter uptime and data quality percentages
- Identification of equipment calibrations completed during the month
- Identification of equipment maintenance activities completed during the month

##### SECTION 2 – TABULAR DATA (Per Meter Site)

##### SECTION 3 – GRAPHICAL REPRESENTATIONS (Per Meter Site)




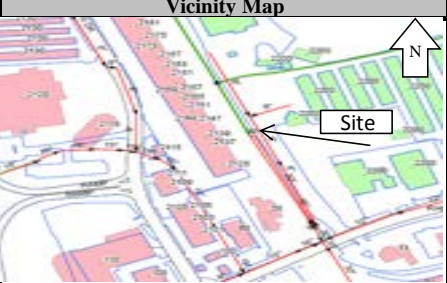
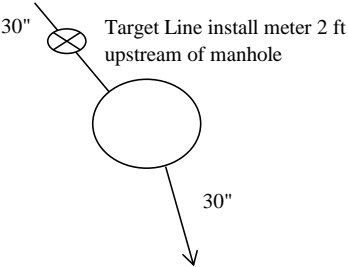
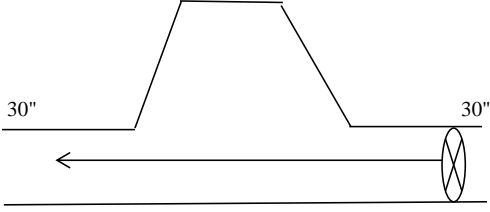

##### SECTION 4 – DATA ANALYSIS RESULTS

##### SECTION 5 – FLOW METER MAINTENANCE RECORDS

##### SECTION 6 – FLOW METER & RAINFALL GAUGE CALIBRATION DATA

##### SECTION 7 – PROPOSED MODIFICATIONS TO THE FLOW METER APPROACH

## APPENDIX A – SAMPLE FLOW METERING SITE ANALYSIS FORM

Baltimore County		Flow Meter Site Analysis Form				Site Name TXPS	
Sewershed  <i>Texas</i>		Project No.  <i>2008-06</i>		Inspection Date/Time <i>6/17/2010 11:30</i>		MH I.D. <i>33471</i>	
				Inspected By <i>JS / JGM</i>		Manhole Depth (ft)    Width (ft) <i>8.70</i> <i>4.00</i>	
Site Address: <i>West side of State Fair Grounds, North of Timonium Rd.</i>						Pipe Width (in)    Height (in) <i>30.00</i> <i>30.00</i>	
MH Type: <input checked="" type="radio"/> Brick <input type="radio"/> Pre-cast		Pipe Type: <input type="radio"/> Brick <input checked="" type="radio"/> Concrete <input type="radio"/> Clay <input type="radio"/> Other		Pipe Shape: <input checked="" type="radio"/> Circular <input type="radio"/> Box <input type="radio"/> Odd			
Area View		Top View Picture		Area Location Map		Safety Concerns	
						<input type="checkbox"/> Gas <input type="checkbox"/> Traffic <input type="checkbox"/> Access <input type="checkbox"/> Other	
Access Instructions		Vicinity Map		Meter Location		Flow Characteristics	
Site is located in State Fair parking lot north of Timonium Rd. Approximately 100 yds north along east side of fence east of RR Tracks. Site is flagged with orange marking tape.				<input type="radio"/> U/S <input type="radio"/> D/S <i>2</i>		<input checked="" type="checkbox"/> Residential	
						<input checked="" type="checkbox"/> Commercial	
						<input checked="" type="checkbox"/> Industrial	
				Northing/Easting			
				Latitude <i>N39 26'27.9"</i>			
				Longitude <i>W076 37'50.5"</i>			
Hydraulic Assessment							
Surcharge (ft): <i>N/A</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Bend <input type="checkbox"/> Drop Inlet <input type="checkbox"/> Backwater <input checked="" type="checkbox"/> Pump Sta. <input type="checkbox"/> WWTP <input type="checkbox"/> Needs Cleaning Flow Depth (in): <i>1.5"</i> Instant Vel (fps): <i>2.25fps</i> Silt Level (in): <i>0</i> Signs of I/I: <i>N/A</i>							
HYDRAULIC RATING: <input type="radio"/> A (good) <input checked="" type="radio"/> B (questionable) <input type="radio"/> C (poor)						Recommended for Installation <input checked="" type="radio"/> Yes <input type="radio"/> No	
Installation Plan Sketch				Installation Profile Sketch			
							
Installation Information						Target Pipe Photo	
	Incoming					Outgoing	
Line #	1	2	3	4	5	1	
Size (in)	<i>30</i>					<i>30</i>	
Material	<i>RCP</i>					<i>RCP</i>	
Shape	<i>Cir</i>					<i>Cir</i>	
Flow Depth (in):	<i>1.5</i>					<i>1.25</i>	
Instant Vel. (fps)	<i>2.25</i>					<i>2.5</i>	
Comments: Bend in channel. Flow in pipe looks stable. Install meter 2ft upstream of manhole in incoming line. This location was previously monitored by ADS site BC27. Unsure of hydraulic conditions at this location during higher flows. Believe there to be no issue due to the change of grade thru the manhole.							
							

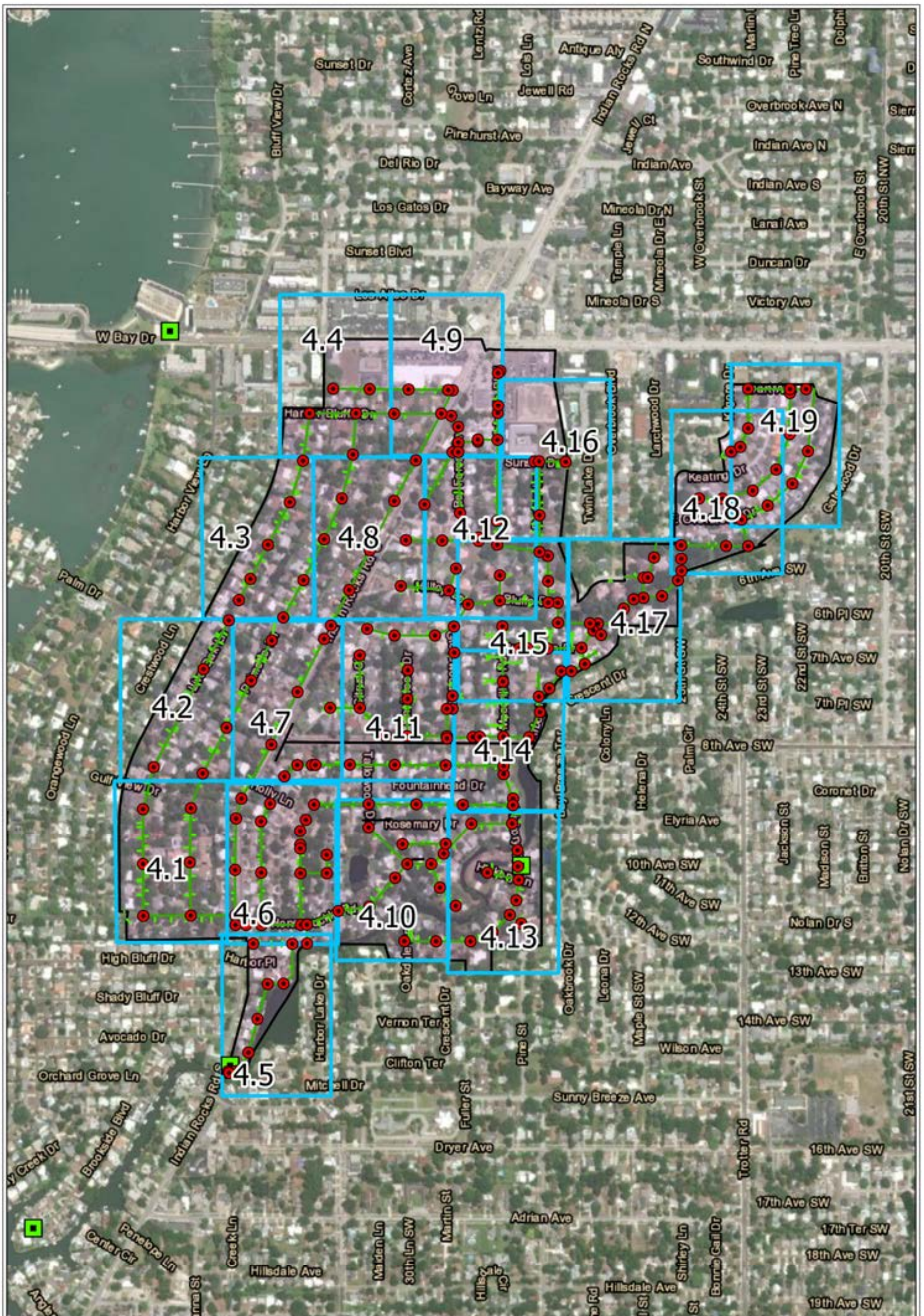
PART A - SITE INVESTIGATION








PART A - SITE INVESTIGATION

PART B - SITE INSTALLATION

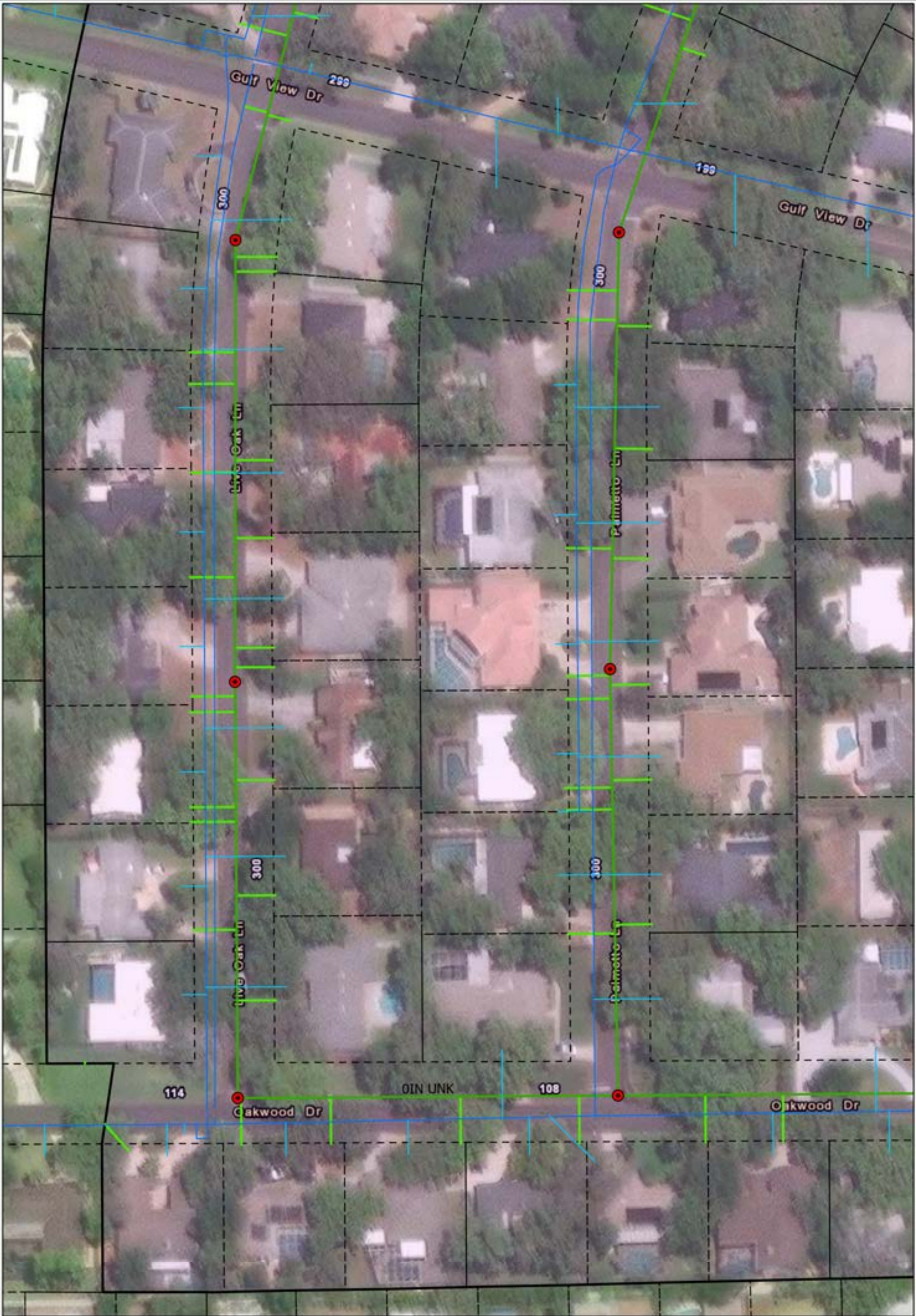
PART B - SITE INSTALLATION






 <p><b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373</p>	<p>PREPARED FOR:</p> 	<p><b>FIND AND FIX: PRIORITY ZONES</b> ZONE 4 KEY MAP</p> <p>0 400 800 Feet</p> <p><b>Legend</b></p> <ul style="list-style-type: none"><li> Lift Station</li><li> Manhole</li><li> Priority 1 Sewer Laterals</li><li> Priority 1 Gravity Mains</li><li> Priority Area</li></ul>	<p>EXHIBIT</p> <p><b>4.0</b></p>
---	--	--	----------------------------------








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:














**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
**ZONE 4**

0 50 100 Feet

EXHIBIT  
**4.1**

**Legend**

 Parcels	 Lift Station	 Forcemain	 Reclaim Main
 Priority Area	 Manhole	 Priority 1 Sewer Laterals	 Reclaim Laterals
		 Priority 1 Gravity Mains	 Water Main
			 Water Laterals





201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



### FIND AND FIX: PRIORITY ZONES ZONE 4

0 50 100  
Feet

EXHIBIT  
4.2



#### Legend



Parcels



Priority Area



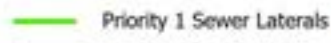
Lift Station



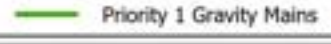
Manhole



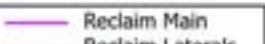
Forcemain



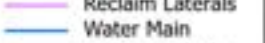
Priority 1 Sewer Laterals



Priority 1 Gravity Mains



Reclaim Main



Reclaim Laterals





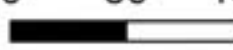












Water Main



Water Laterals






 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 4</b>		<b>0 50 100 Feet</b> 	<b>EXHIBIT</b> <b>4.3</b>
		<b>Legend</b>   Parcels  Priority Area  Lift Station  Manhole	 Forcemain  Priority 1 Sewer Laterals  Priority 1 Gravity Mains  Reclaim Main  Reclaim Laterals  Water Main  Water Laterals		








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 4

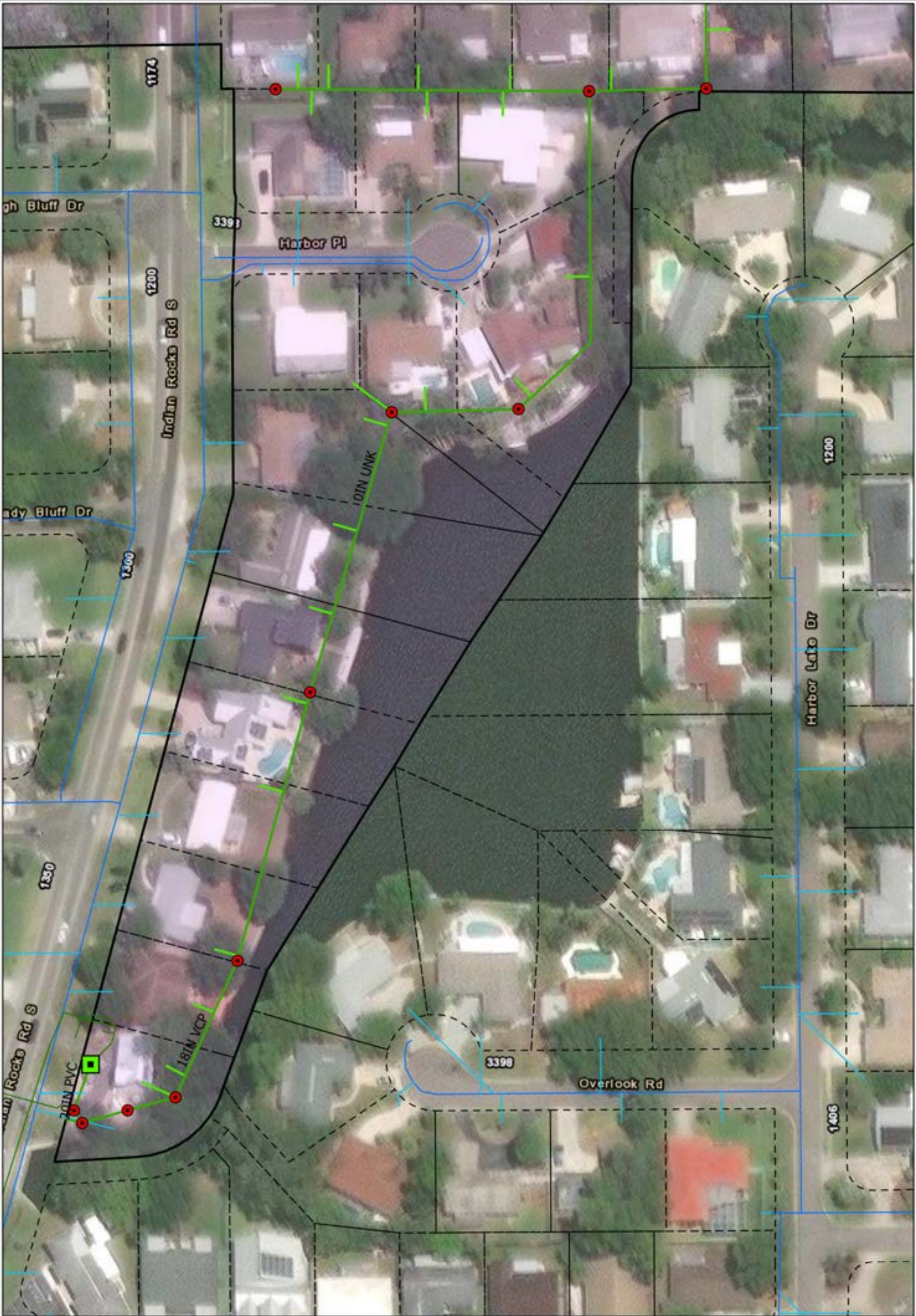
0 50 100 Feet


EXHIBIT  
4.4

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 4

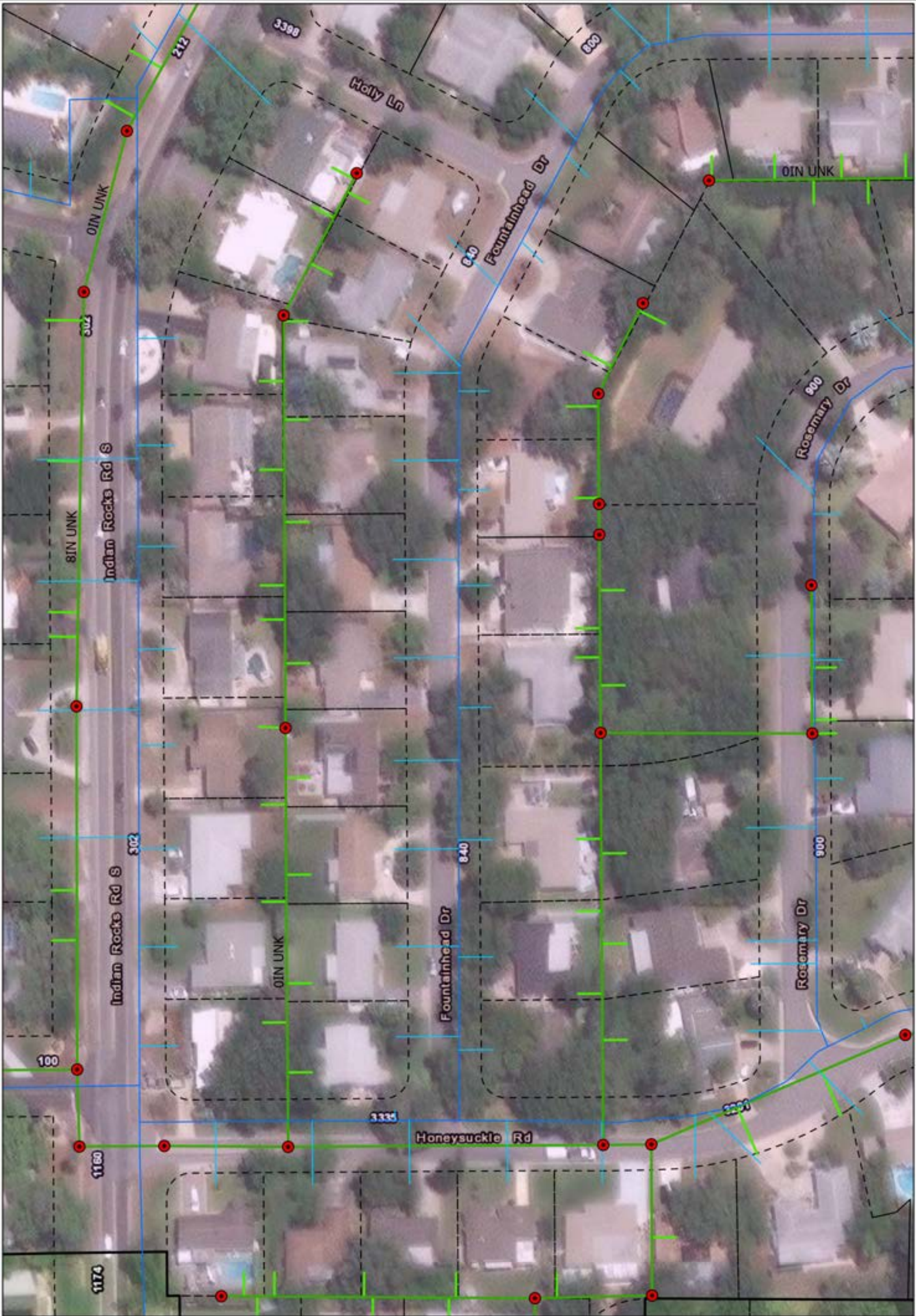
0 50 100 Feet
















EXHIBIT  
4.5

**Legend**

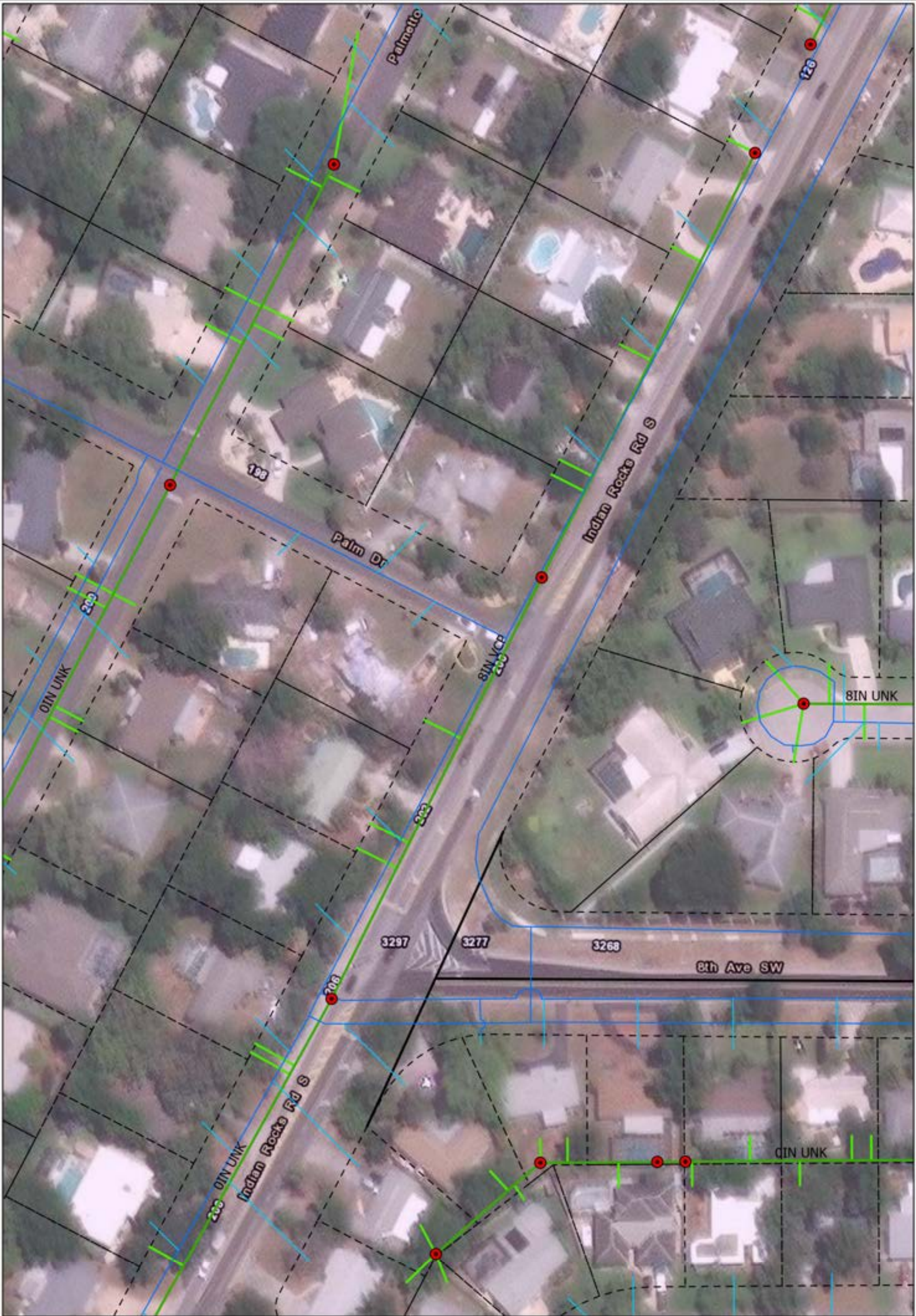
Parcels	Lift Station	Forcemain	Reclaim Main
Manhole	Priority 1 Sewer Laterals	Reclaim Laterals	Water Main
Priority Area	Priority 1 Gravity Mains	Water Laterals	






 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 4</b>		<b>0 50 100 Feet</b> 	<b>EXHIBIT</b> <b>4.6</b>
		<b>Legend</b>   Parcels  Lift Station  Manhole  Priority Area  Forcemain  Priority 1 Sewer Laterals  Priority 1 Gravity Mains  Reclaim Main  Reclaim Laterals  Water Main  Water Laterals			








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
**ZONE 4**

0 50 100 Feet



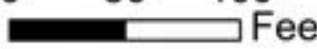












EXHIBIT  
**4.7**

**Legend**

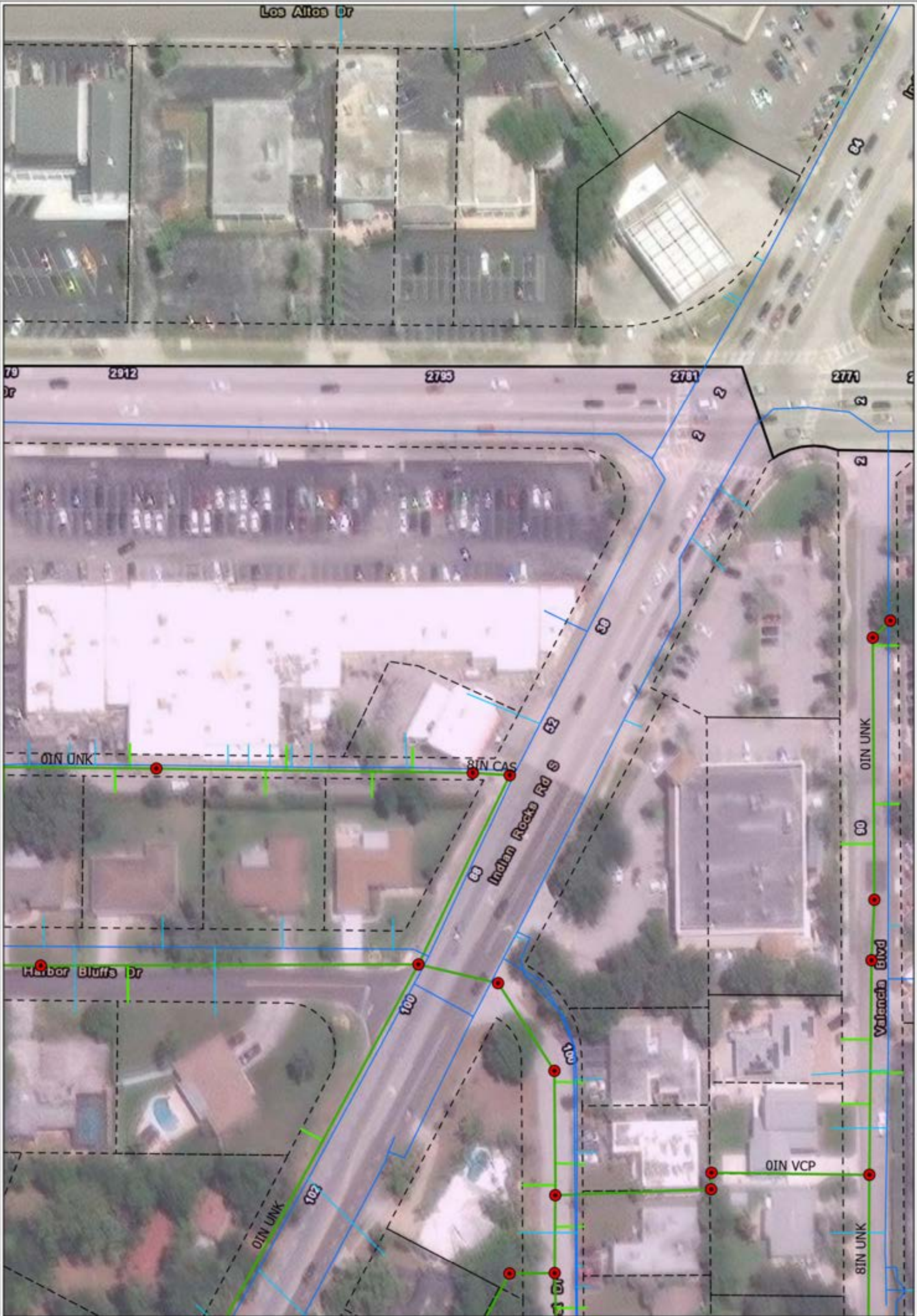
Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals






 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 4</b>		<b>0 50 100 Feet</b> 	<b>EXHIBIT</b> <b>4.8</b>
		<b>Legend</b>   Parcels  Lift Station  Manhole  Priority Area  Forcemain  Priority 1 Sewer Laterals  Priority 1 Gravity Mains  Reclaim Main  Reclaim Laterals  Water Main  Water Laterals			








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
**ZONE 4**

0 50 100 Feet


EXHIBIT  
**4.9**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 4

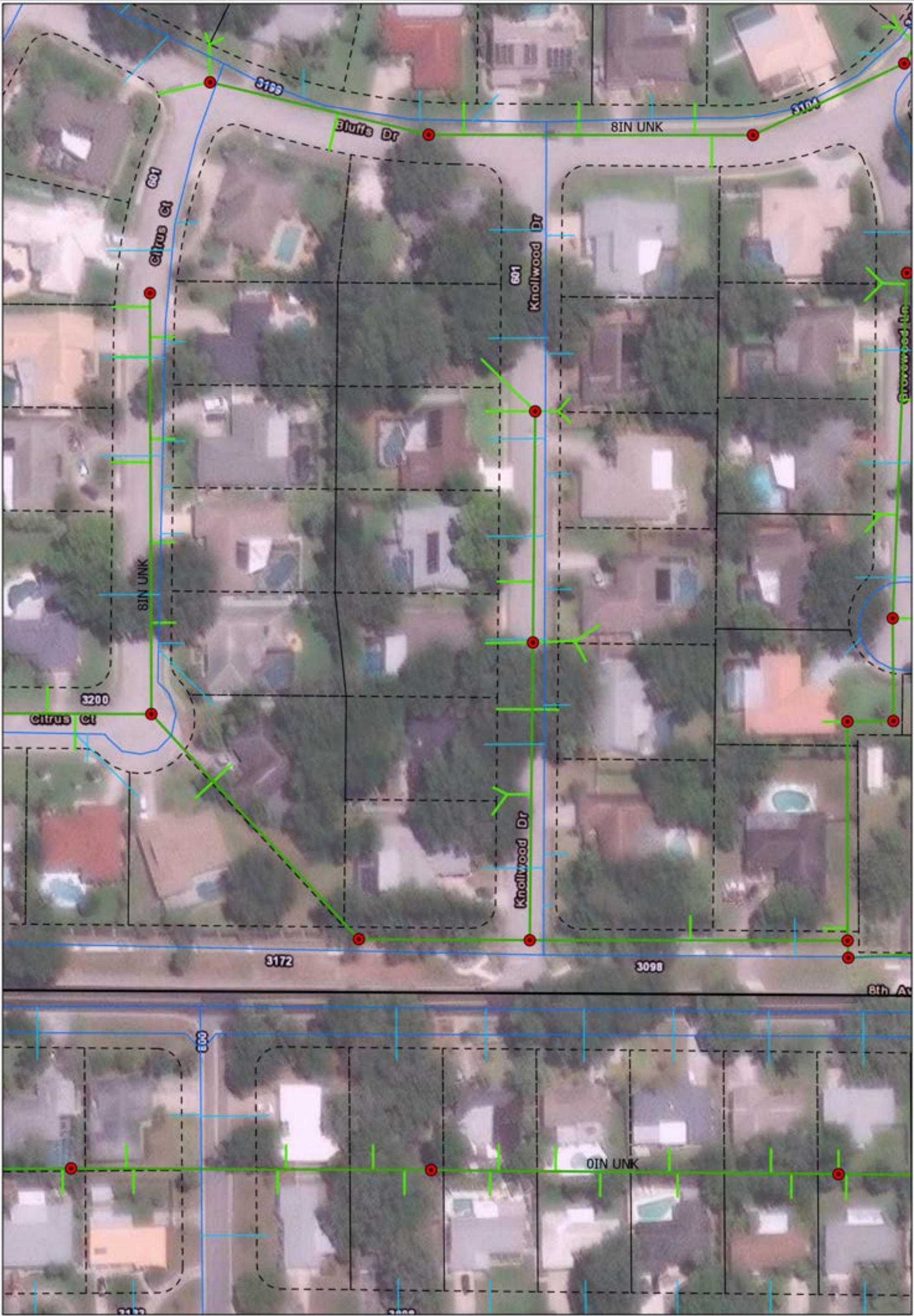
0 50 100 Feet


EXHIBIT  
4.10

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 4

0 50 100 Feet


EXHIBIT  
**4.11**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 4

0 50 100 Feet


EXHIBIT  
4.12

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 4

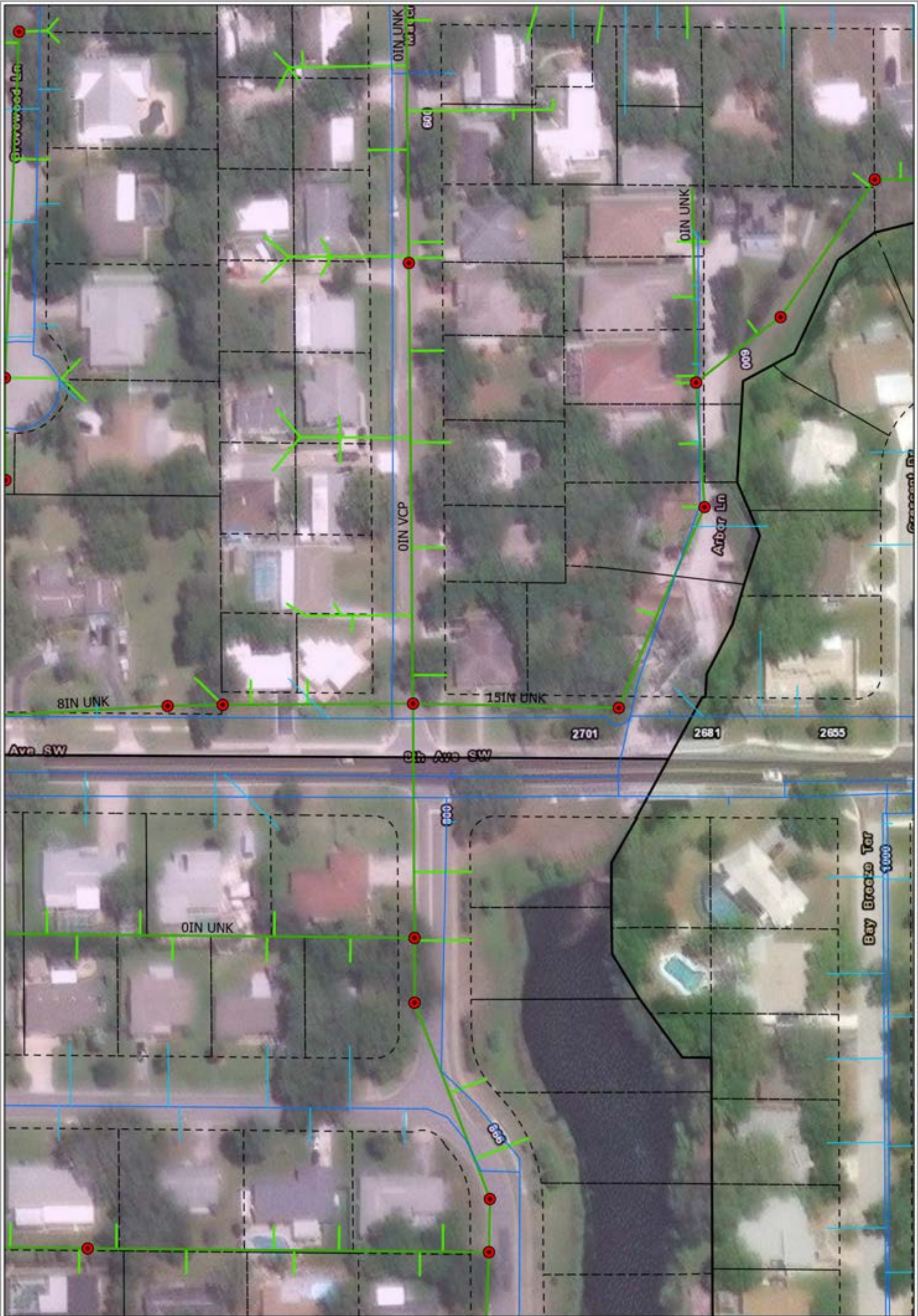
0 50 100 Feet



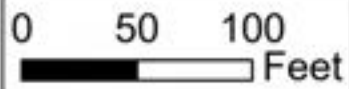








EXHIBIT  
4.13

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Manhole	Priority 1 Sewer Laterals	Reclaim Laterals	Water Main
Priority Area	Priority 1 Gravity Mains	Water Laterals	






 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 4</b>			<b>EXHIBIT</b> <b>4.14</b>
		<b>Legend</b>   Parcels  Priority Area  Lift Station  Manhole	 Forcemain  Priority 1 Sewer Laterals  Priority 1 Gravity Mains		








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 4

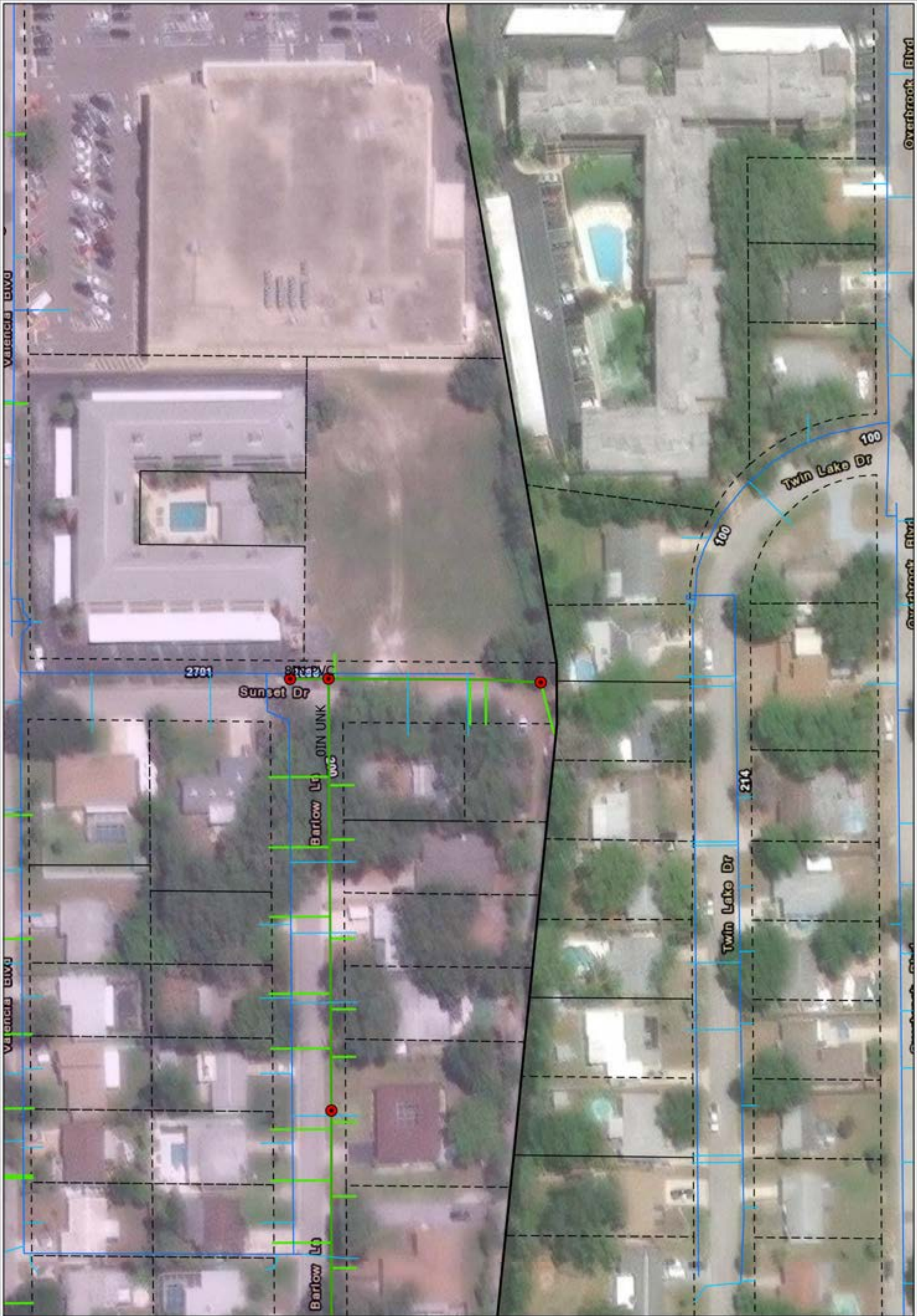
0 50 100 Feet


EXHIBIT  
4.15

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 4

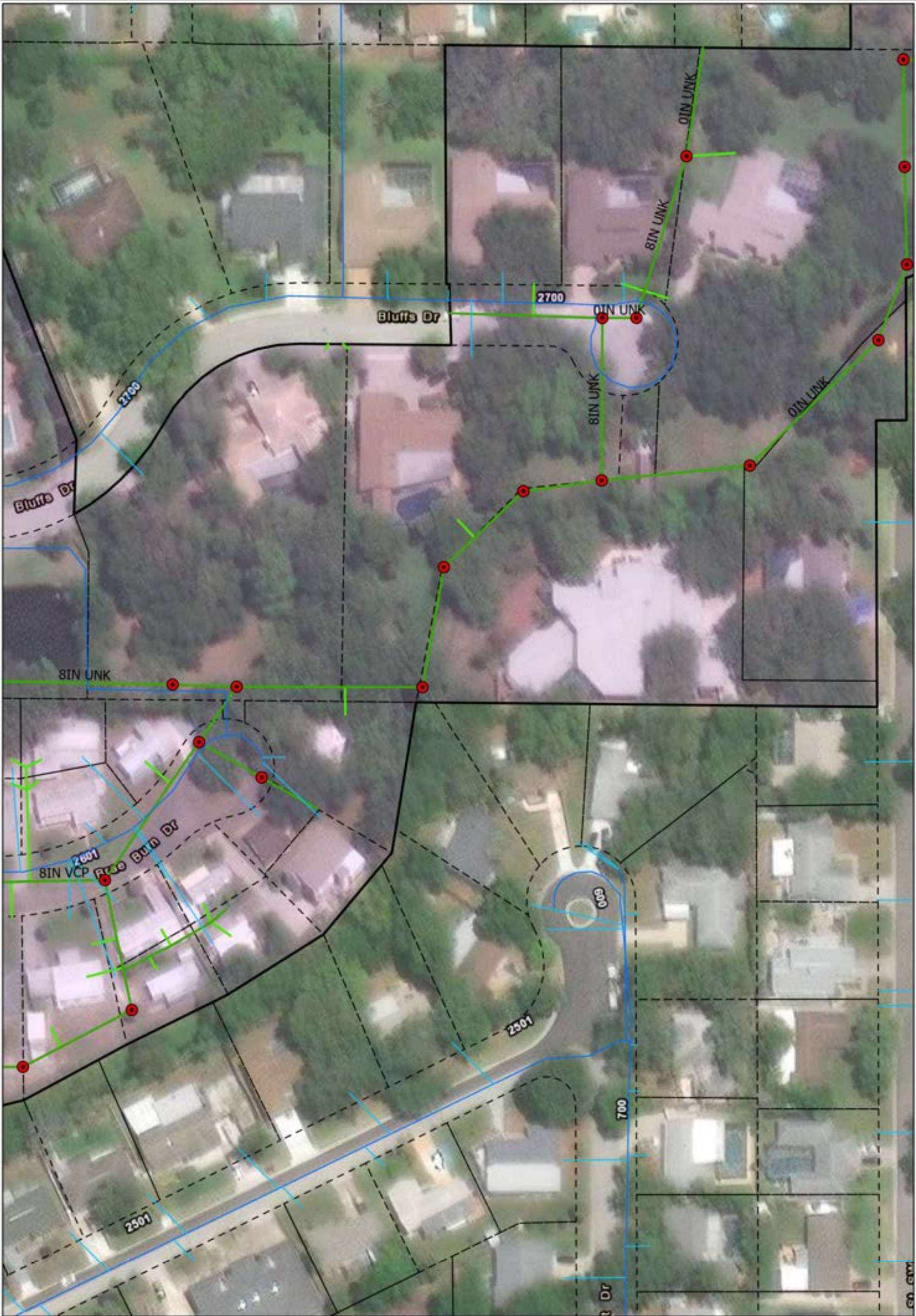
0 50 100 Feet


EXHIBIT  
4.16

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 4

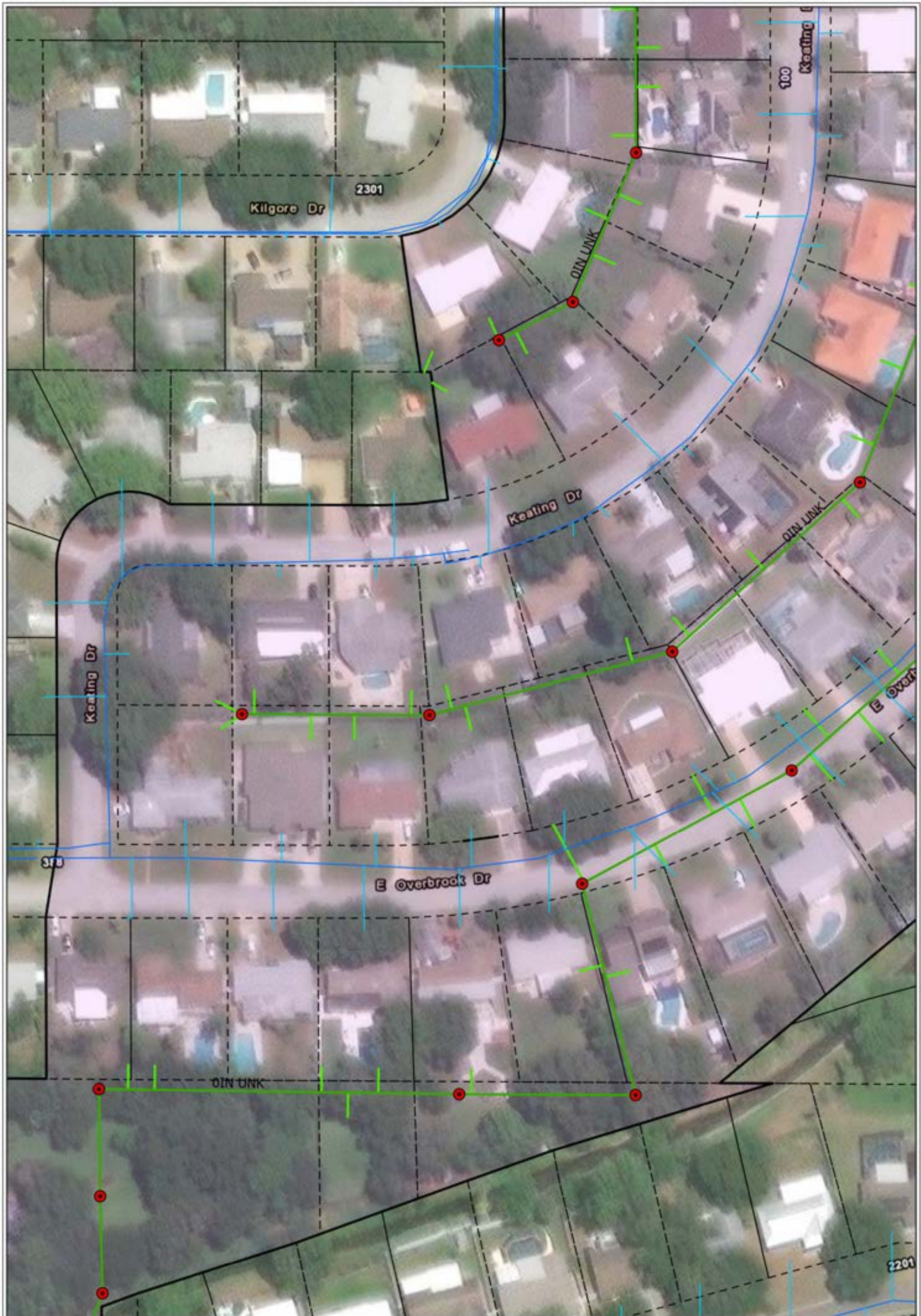
0 50 100 Feet















EXHIBIT  
4.17

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals




















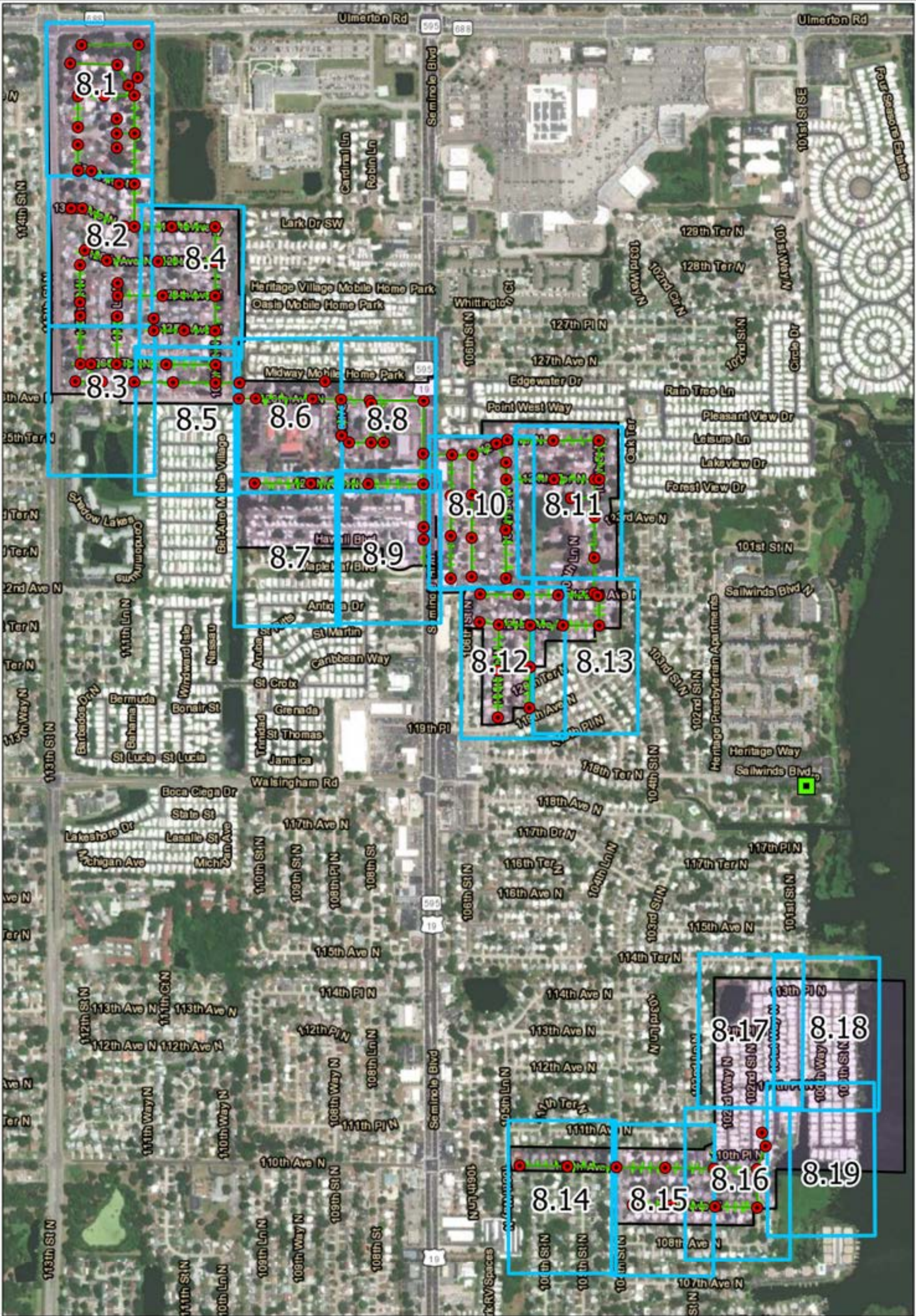
 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 4</b>		<b>0 50 100 Feet</b>	<b>EXHIBIT</b> <b>4.18</b>
		<b>Legend</b>   Parcels  Lift Station  Manhole  Priority Area  Force main  Priority 1 Sewer Laterals  Priority 1 Gravity Mains  Reclaim Main  Reclaim Laterals  Water Main  Water Laterals			






 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 4</b>		<b>0 50 100 Feet</b> 	<b>EXHIBIT</b> <b>4.19</b>
		<b>Legend</b>   Parcels  Priority Area  Lift Station  Manhole  Forcemain  Priority 1 Sewer Laterals  Priority 1 Gravity Mains  Reclaim Main  Reclaim Laterals  Water Main  Water Laterals			








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373


PREPARED FOR:








**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
**ZONE 8 KEY MAP**

EXHIBIT **8.0**




**Legend**

-  Lift Station
-  Manhole
-  Priority Area
-  Priority 1 Sewer Laterals
-  Priority 1 Gravity Mains








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 8

0 50 100 Feet

EXHIBIT  
**8.1**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals






Claim Main  
Claim Laterals  
Per Main  
Per Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:













**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 8

0 50 100 Feet


EXHIBIT  
**8.3**

**Legend**

 Priority Area	 Lift Station	 Forcemain	 Reclaim Main
	 Manhole	 Priority 1 Sewer Laterals	 Reclaim Laterals
		 Priority 1 Gravity Mains	 Water Main
			 Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 8

0 50 100 Feet


EXHIBIT  
**8.4**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Manhole	Priority 1 Sewer Laterals	Reclaim Laterals	Water Main
Priority Area	Priority 1 Gravity Mains	Water Laterals	








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 8

0 50 100 Feet


EXHIBIT  
**8.5**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
**ZONE 8**

0 50 100 Feet

EXHIBIT  
**8.6**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals









**WADE  
TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373


PREPARED FOR:





**FIND AND FIX: PRIORITY ZONES**  
ZONE 8


**Legend**


Parcels


Priority Area


Lift Station


Manhole


Force Main


Priority 1 Sewer Laterals

Priority 1 Gravity Mains

Reclaim Main

Reclaim Laterals

Water Main

Water Laterals

050100  
Feet


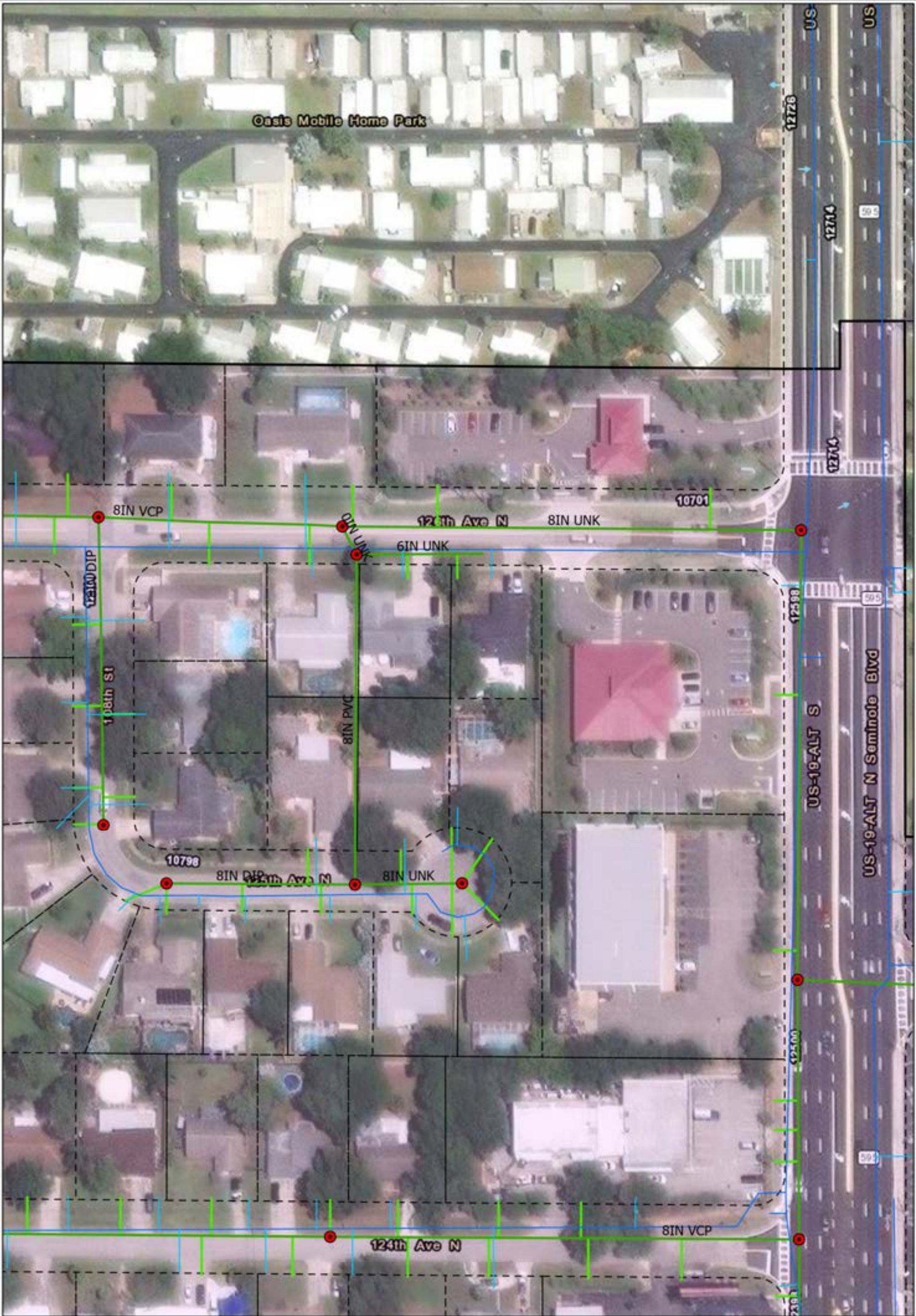



EXHIBIT  
8.7








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:














**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
**ZONE 8**

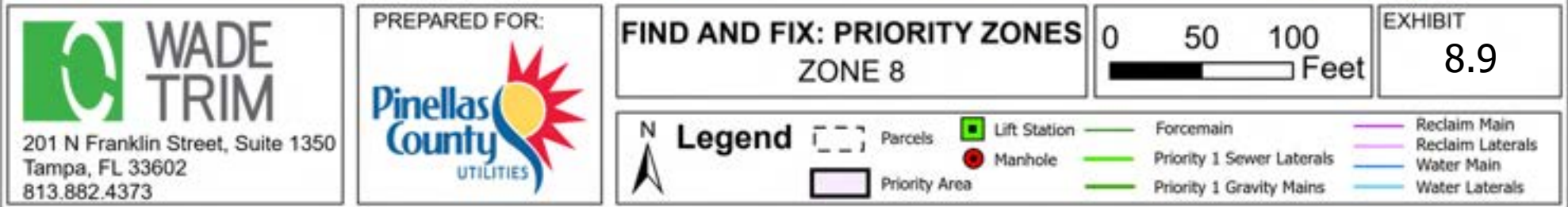
0 50 100 Feet

EXHIBIT  
**8.8**

**Legend**








 Parcels	 Lift Station	 Forcemain	 Reclaim Main
 Priority Area	 Manhole	 Priority 1 Sewer Laterals	 Reclaim Laterals
		 Priority 1 Gravity Mains	 Water Main
			 Water Laterals







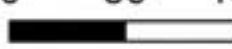
















 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 8</b>		<b>0 50 100</b> Feet	<b>EXHIBIT</b> <b>8.10</b>
		<b>Legend</b> N [ ] Parcels [ ] Priority Area	 Lift Station  Manhole  Forcemain  Priority 1 Sewer Laterals  Priority 1 Gravity Mains		







 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 8</b>	<b>0 50 100 Feet</b> 	<b>EXHIBIT</b> <b>8.11</b>
				<b>Legend</b>   Parcels  Priority Area  Lift Station  Manhole  Forcemain  Priority 1 Sewer Laterals  Priority 1 Gravity Mains  Reclaim Main  Reclaim Laterals  Water Main  Water Laterals






 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 8</b>	<b>0 50 100 Feet</b>	<b>EXHIBIT</b> <b>8.12</b>












**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 8

0 50 100 Feet


EXHIBIT  
**8.14**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 8

0 50 100 Feet


EXHIBIT  
**8.15**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 8

0 50 100 Feet


EXHIBIT  
**8.16**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Manhole	Priority 1 Sewer Laterals	Reclaim Laterals	Water Main
Priority Area	Priority 1 Gravity Mains	Water Laterals	








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 8

0 50 100 Feet



EXHIBIT  
**8.17**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals






 <p><b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373</p>	<p>PREPARED FOR:</p>  <p><b>Pinellas County</b> UTILITIES</p>	<p><b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 8</b></p> <p><b>Legend</b></p> <ul style="list-style-type: none"><li>Parcels</li><li>Priority Area</li><li>Lift Station</li><li>Manhole</li><li>Forcemain</li><li>Priority 1 Sewer Laterals</li><li>Priority 1 Gravity Mains</li><li>Reclaim Main</li><li>Reclaim Laterals</li><li>Water Main</li><li>Water Laterals</li></ul>	<p>0 50 100 Feet</p>	<p>EXHIBIT <b>8.18</b></p>
---	--	---	----------------------	--------------------------------








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 8

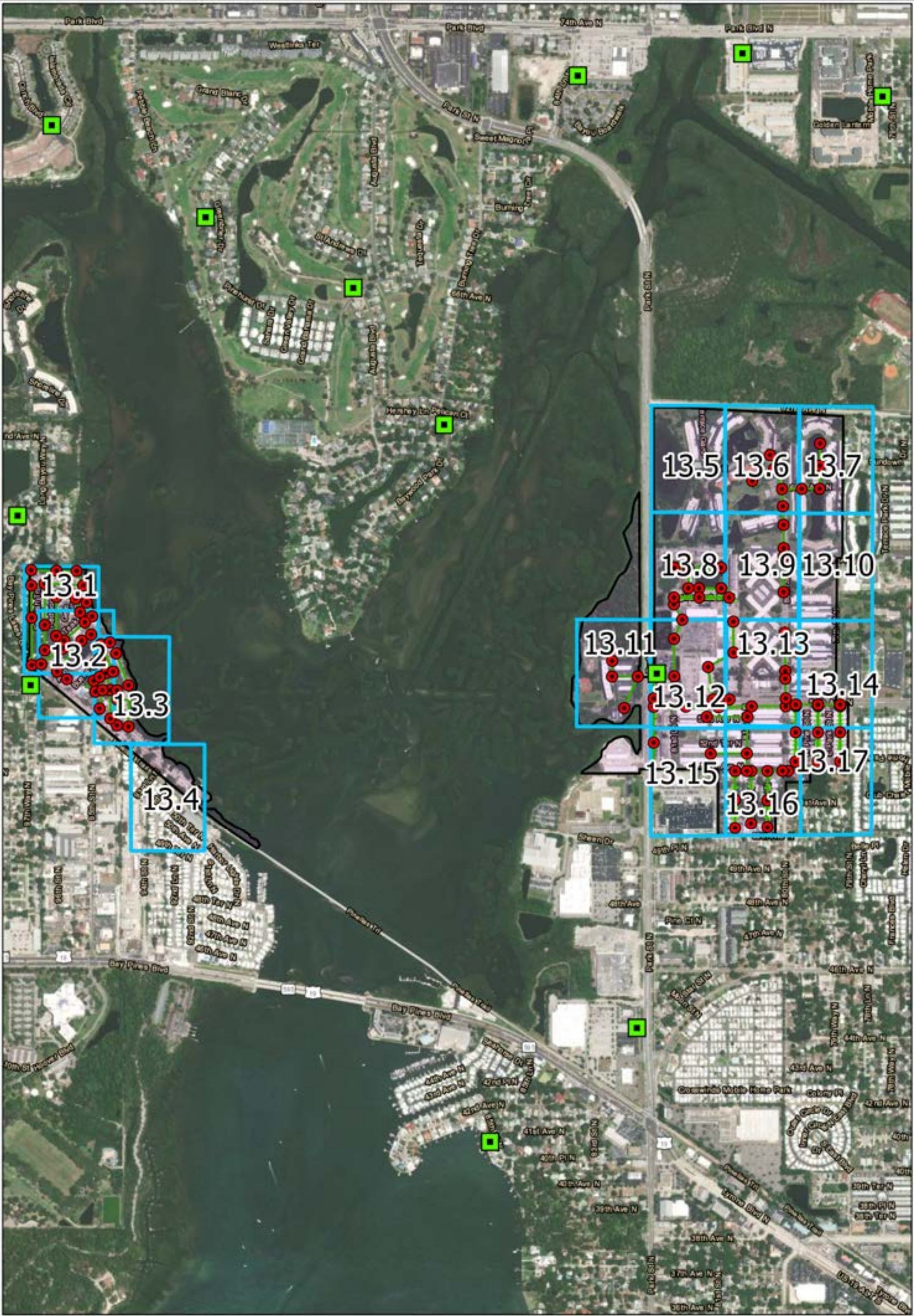
0 50 100 Feet



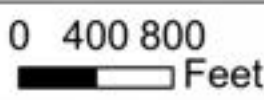
















EXHIBIT  
**8.19**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals
















 <p><b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373</p>	<p>PREPARED FOR:</p>  <p><b>Pinellas County</b> UTILITIES</p>	<p><b>FIND AND FIX: PRIORITY ZONES</b> ZONE 13 KEY MAP</p> <div></div> <p><b>Legend</b></p> <table><tr><td></td><td>Lift Station</td><td></td><td>Manhole</td></tr><tr><td></td><td>Priority Area</td><td></td><td>Priority 1 Sewer Laterals</td></tr><tr><td></td><td></td><td></td><td>Priority 1 Gravity Mains</td></tr></table>		Lift Station		Manhole		Priority Area		Priority 1 Sewer Laterals				Priority 1 Gravity Mains	<p>EXHIBIT</p> <p><b>13.0</b></p>
	Lift Station		Manhole												
	Priority Area		Priority 1 Sewer Laterals												
			Priority 1 Gravity Mains												





 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 13</b>		0    50    100 Feet	<b>EXHIBIT</b> <b>13.1</b>
		<b>Legend</b> N [ ] Parcels [ ] Priority Area	 Lift Station  Manhole	 Forcemain  Priority 1 Sewer Laterals  Priority 1 Gravity Mains	 Reclaim Main  Reclaim Laterals  Water Main  Water Laterals



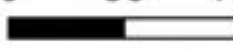
















 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	PREPARED FOR: 	<b>FIND AND FIX: PRIORITY ZONES</b> ZONE 13		0 50 100 Feet	EXHIBIT 13.2
		<b>Legend</b>  Parcels Priority Area Lift Station Manhole Forcemain Priority 1 Sewer Laterals Priority 1 Gravity Mains Reclaim Main Reclaim Laterals Water Main Water Laterals			





 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 13</b>		<b>0 50 100 Feet</b> 	<b>EXHIBIT</b> <b>13.3</b>
		<b>Legend</b>   Parcels  Priority Area  Lift Station  Manhole  Forcemain  Priority 1 Sewer Laterals  Priority 1 Gravity Mains  Reclaim Main  Reclaim Laterals  Water Main  Water Laterals			







WADE TRIM

201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



FIND AND FIX: PRIORITY ZONES

ZONE 13

N

Legend

Parcels

Priority Area

Lift Station

Manhole

0 50 100 Feet

Forcemain

Priority 1 Sewer Laterals

Priority 1 Gravity Mains

Reclaim Main

Reclaim Laterals

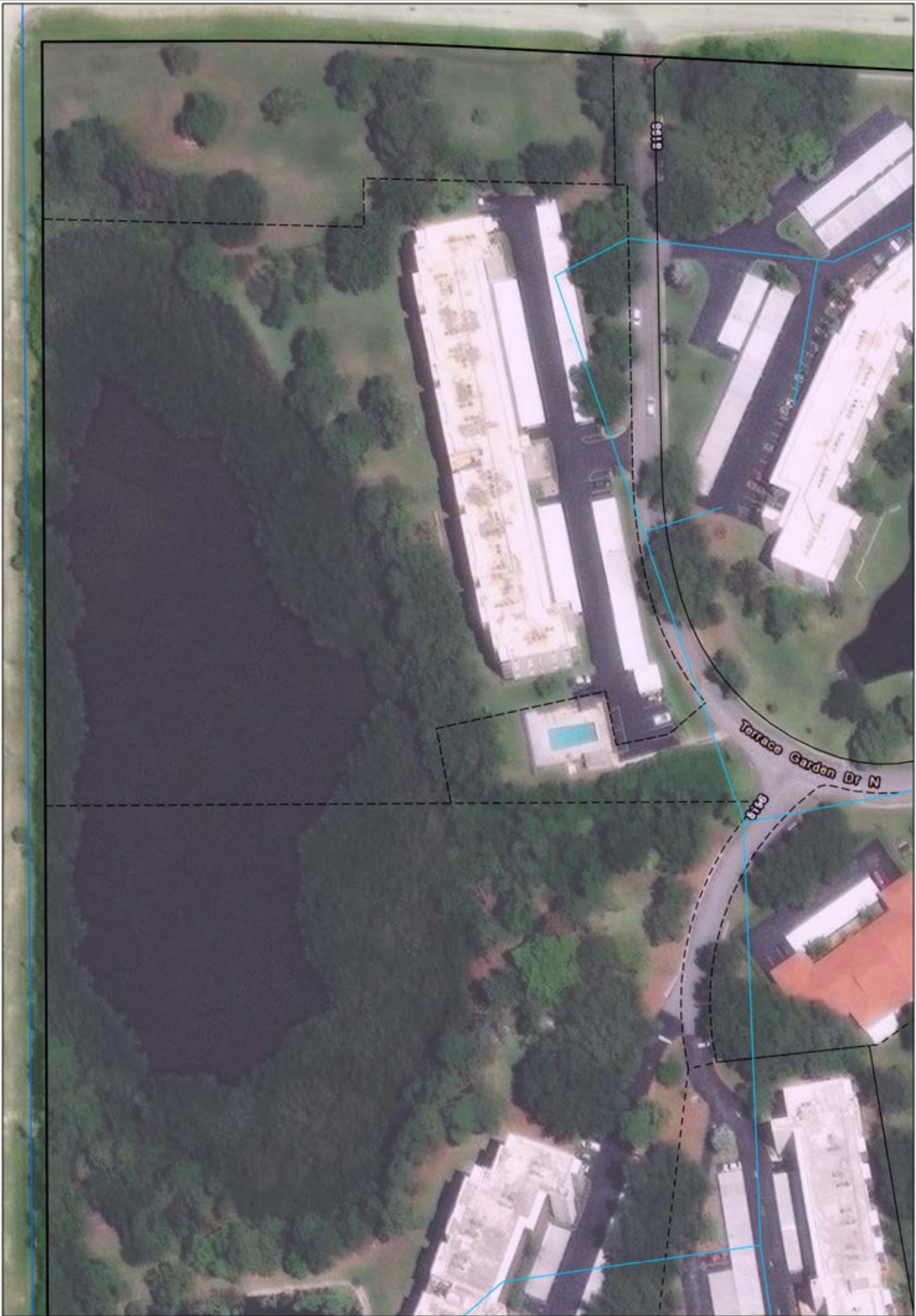
Water Main

Water Laterals

EXHIBIT

13.4







WADE TRIM

201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



FIND AND FIX: PRIORITY ZONES  
ZONE 13

N

Legend

Parcels

Priority Area

Lift Station

Manhole

Forcemain

Priority 1 Sewer Laterals

Priority 1 Gravity Mains

Reclaim Main

Reclaim Laterals

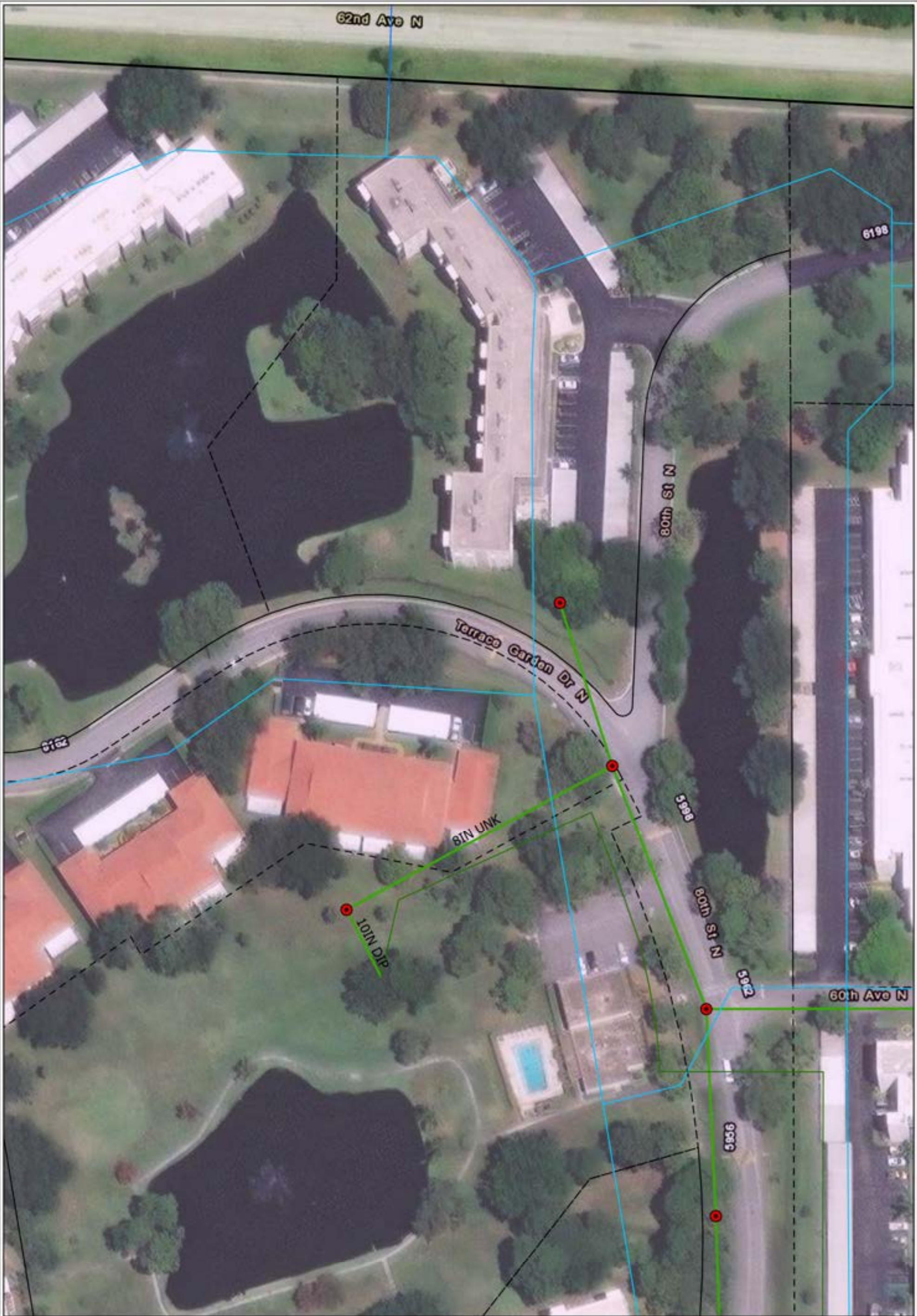
Water Main

Water Laterals

0 50 100 Feet

EXHIBIT  
13.5








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:





**Pinellas County**  
UTILITIES


**FIND AND FIX: PRIORITY ZONES**  
**ZONE 13**




**Legend**

 Parcels


 Priority Area


 Lift Station


 Manhole

050100

Feet


 Forcemain


 Priority 1 Sewer Laterals


 Priority 1 Gravity Mains


EXHIBIT

13.6

 Reclaim Main



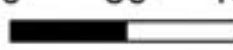












 Reclaim Laterals

 Water Main

 Water Laterals






 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 13</b>	<b>0 50 100 Feet</b> 	<b>EXHIBIT</b> <b>13.7</b>
				<b>Legend</b>   Parcels  Priority Area  Lift Station  Manhole  Forcemain  Priority 1 Sewer Laterals  Priority 1 Gravity Mains  Reclaim Main  Reclaim Laterals  Water Main  Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
**ZONE 13**

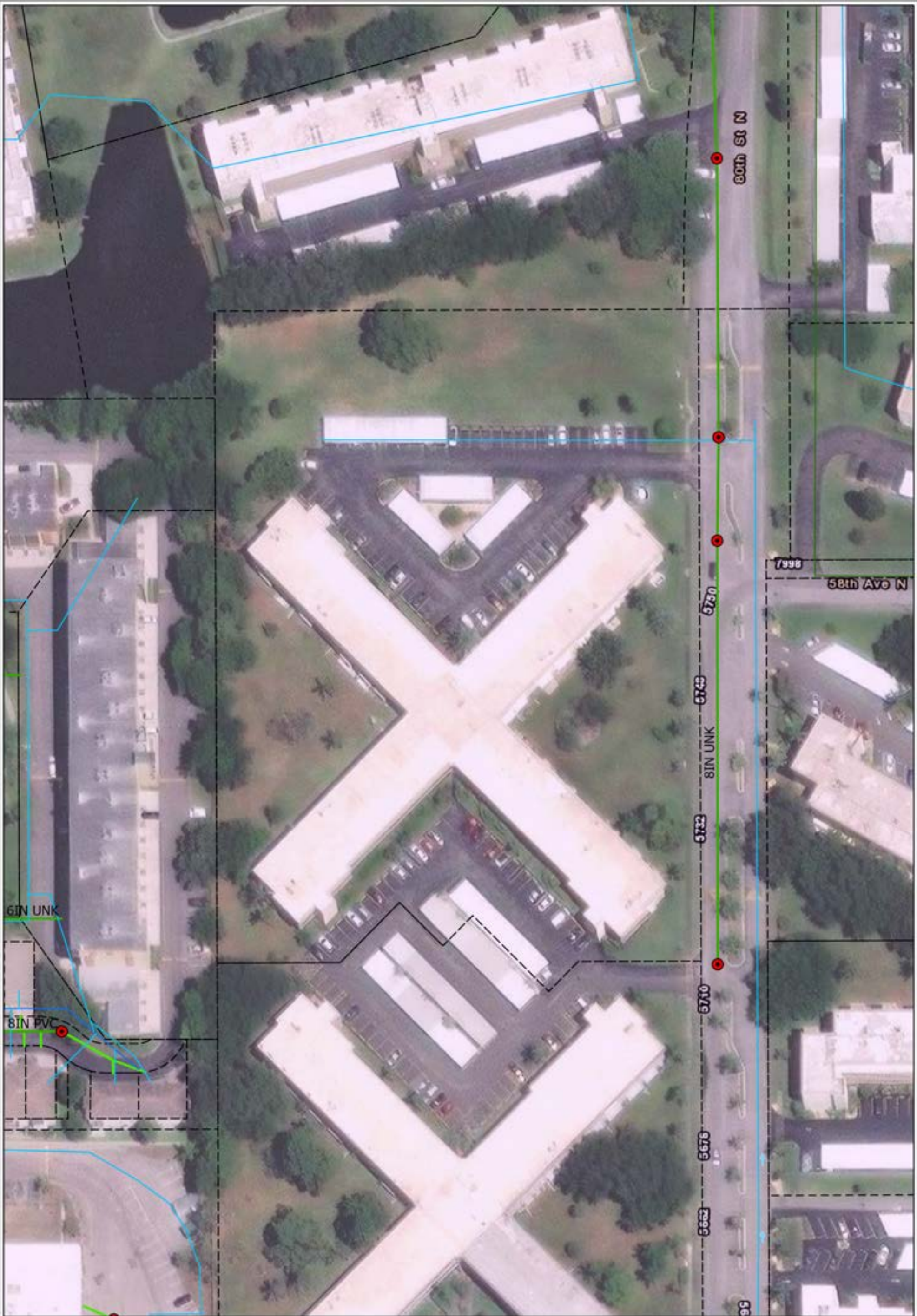
0 50 100 Feet

EXHIBIT  
**13.8**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals





**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:  
**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
**ZONE 13**

**Legend**

- Parcels
- Priority Area
- Lift Station
- Manhole

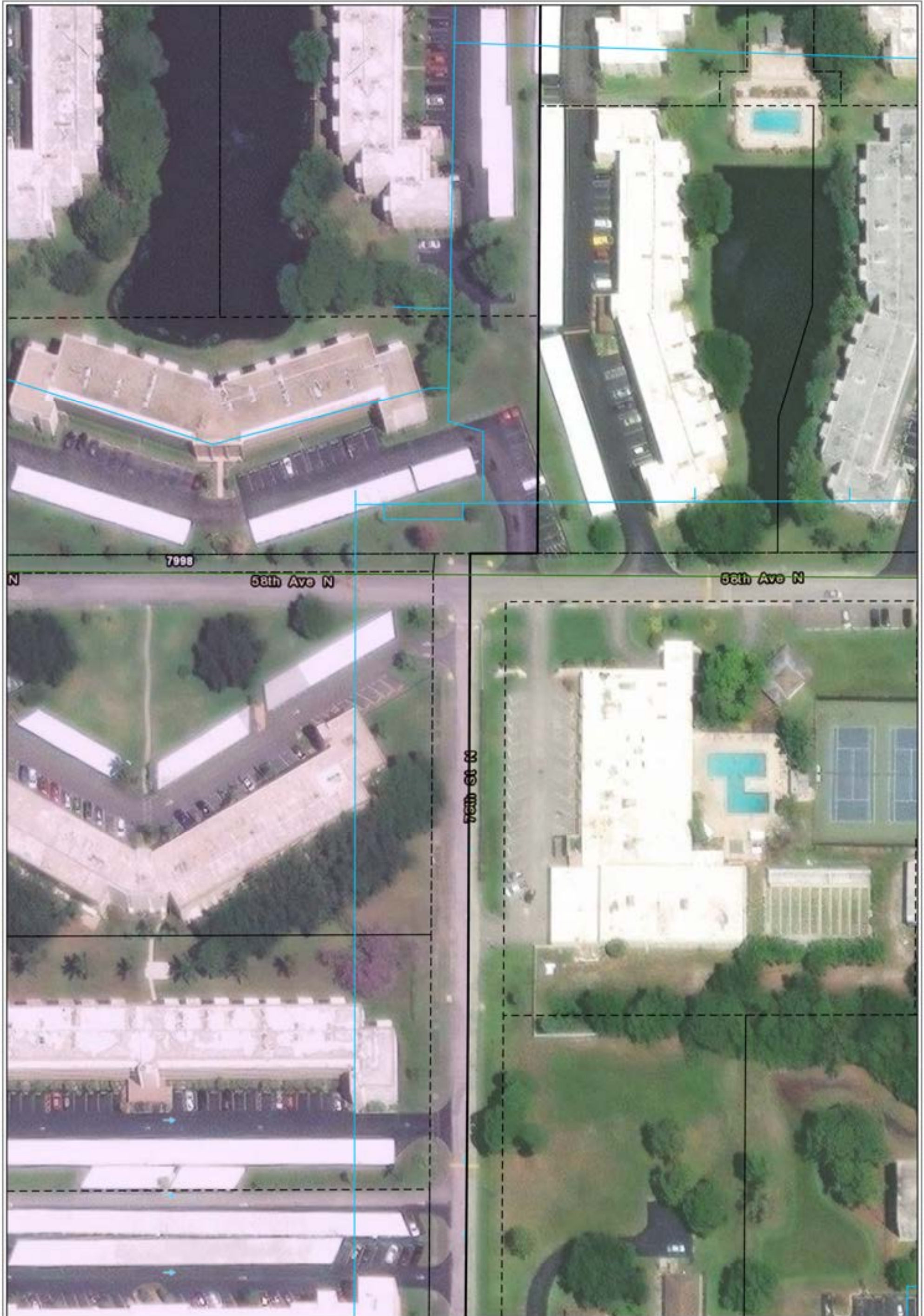
0 50 100 Feet



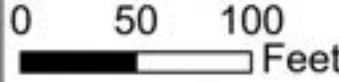












- Forcemain
- Priority 1 Sewer Laterals
- Priority 1 Gravity Mains

EXHIBIT  
**13.9**

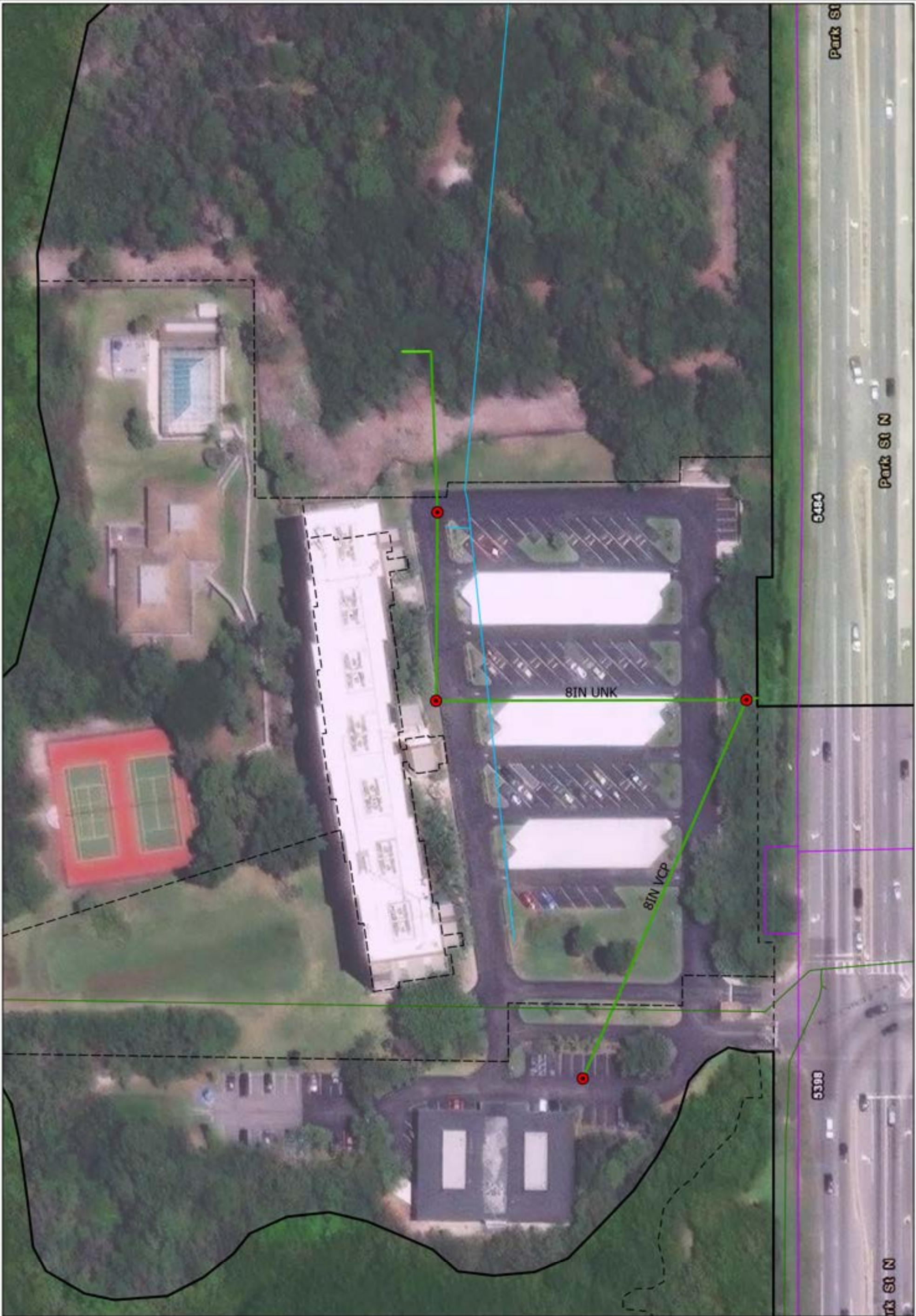
- Reclaim Main
- Reclaim Laterals
- Water Main
- Water Laterals



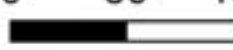
















 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	PREPARED FOR:  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> ZONE 13		 0 50 100 Feet	EXHIBIT <b>13.10</b>
		<b>Legend</b>   Parcels  Priority Area  Lift Station  Manhole  Forcemain  Priority 1 Sewer Laterals  Priority 1 Gravity Mains  Reclaim Main  Reclaim Laterals  Water Main  Water Laterals			





 <b>WADE TRIM</b> 201 N Franklin Street, Suite 1350 Tampa, FL 33602 813.882.4373	<b>PREPARED FOR:</b>  <b>Pinellas County UTILITIES</b>	<b>FIND AND FIX: PRIORITY ZONES</b> <b>ZONE 13</b>		<b>0 50 100</b>  <b>Feet</b>	<b>EXHIBIT</b> <b>13.11</b>
		<b>Legend</b>   <b>Parcels</b>  <b>Priority Area</b>  <b>Lift Station</b>  <b>Manhole</b>  <b>Force main</b>  <b>Priority 1 Sewer Laterals</b>  <b>Priority 1 Gravity Mains</b>  <b>Reclaim Main</b>  <b>Reclaim Laterals</b>  <b>Water Main</b>  <b>Water Laterals</b>			





— Reclaim Main  
— Reclaim Laterals  
— Water Main  
— Water Laterals









**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373


PREPARED FOR:





FIND AND FIX: PRIORITY ZONES  
ZONE 13

 **Legend**


 Parcels


 Priority Area

 Lift Station

 Manhole

0 50 100 Feet

 Forcemain

 Priority 1 Sewer Laterals






 Priority 1 Gravity Mains

EXHIBIT  
13.13

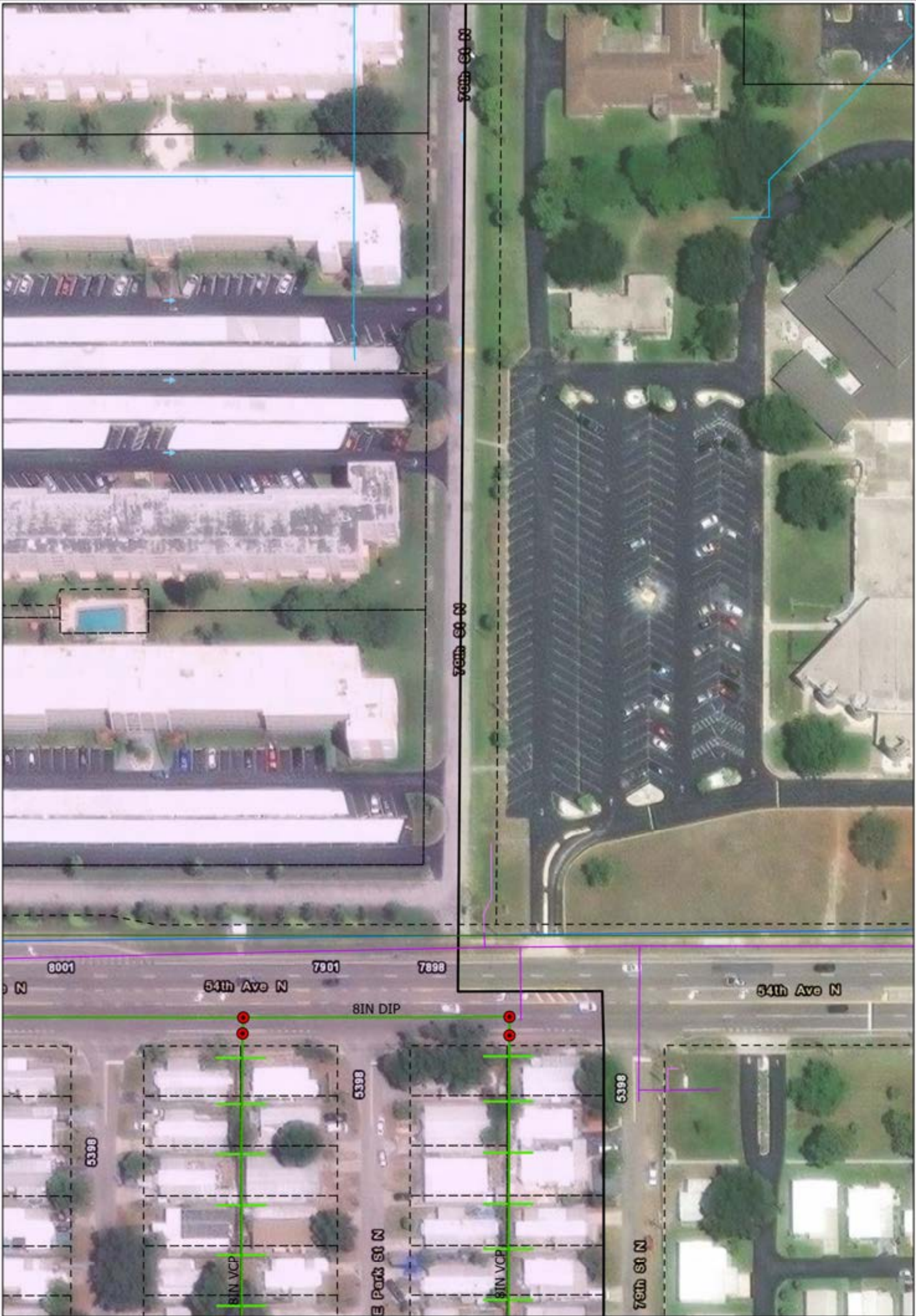
 Reclaim Main


 Reclaim Laterals

 Water Main

 Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
**ZONE 13**

0 50 100 Feet













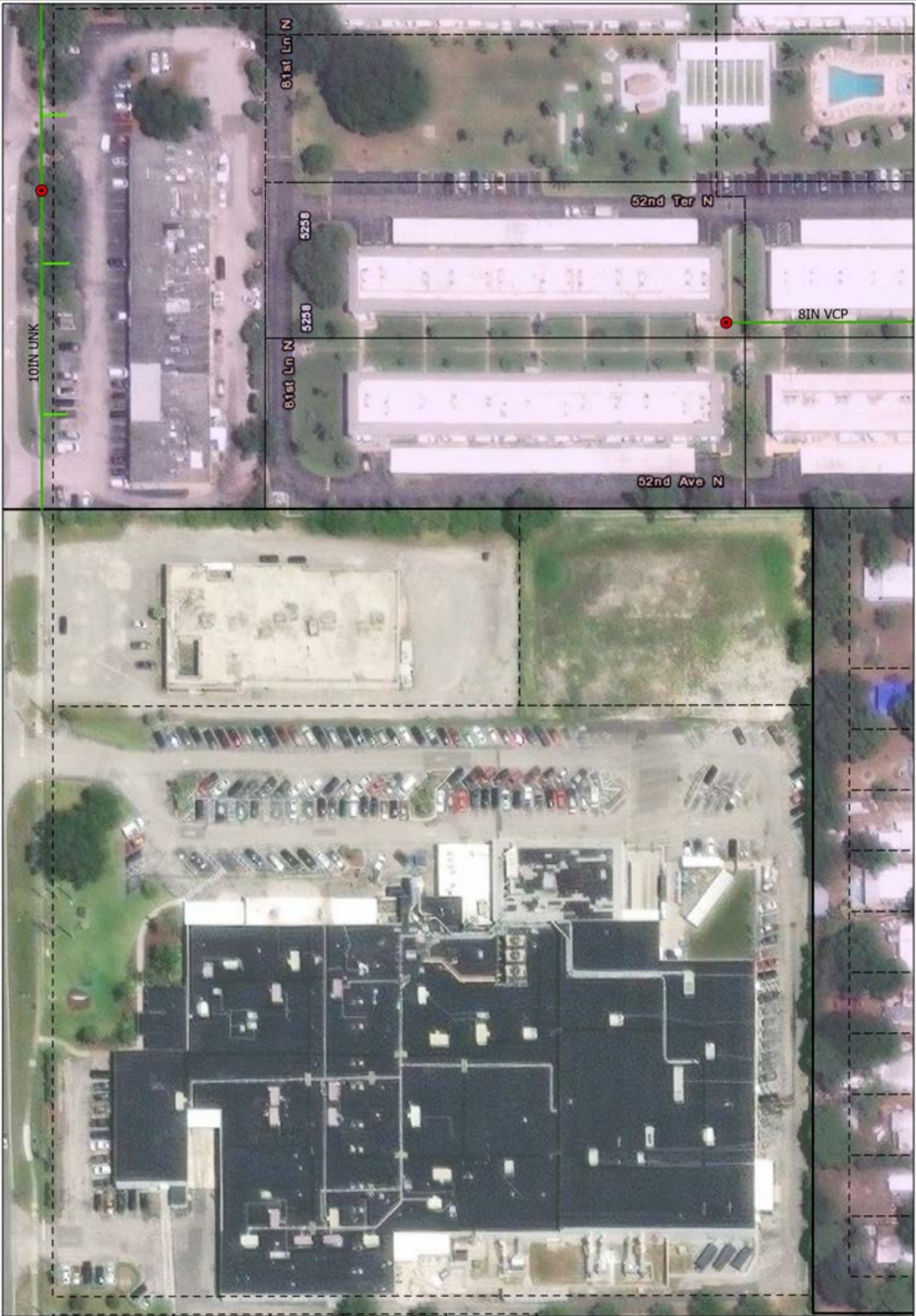



EXHIBIT  
**13.14**

**Legend**

 Parcels	 Lift Station	 Forcemain	 Reclaim Main
 Priority Area	 Manhole	 Priority 1 Sewer Laterals	 Reclaim Laterals
		 Priority 1 Gravity Mains	 Water Main
			 Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:














**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
ZONE 13

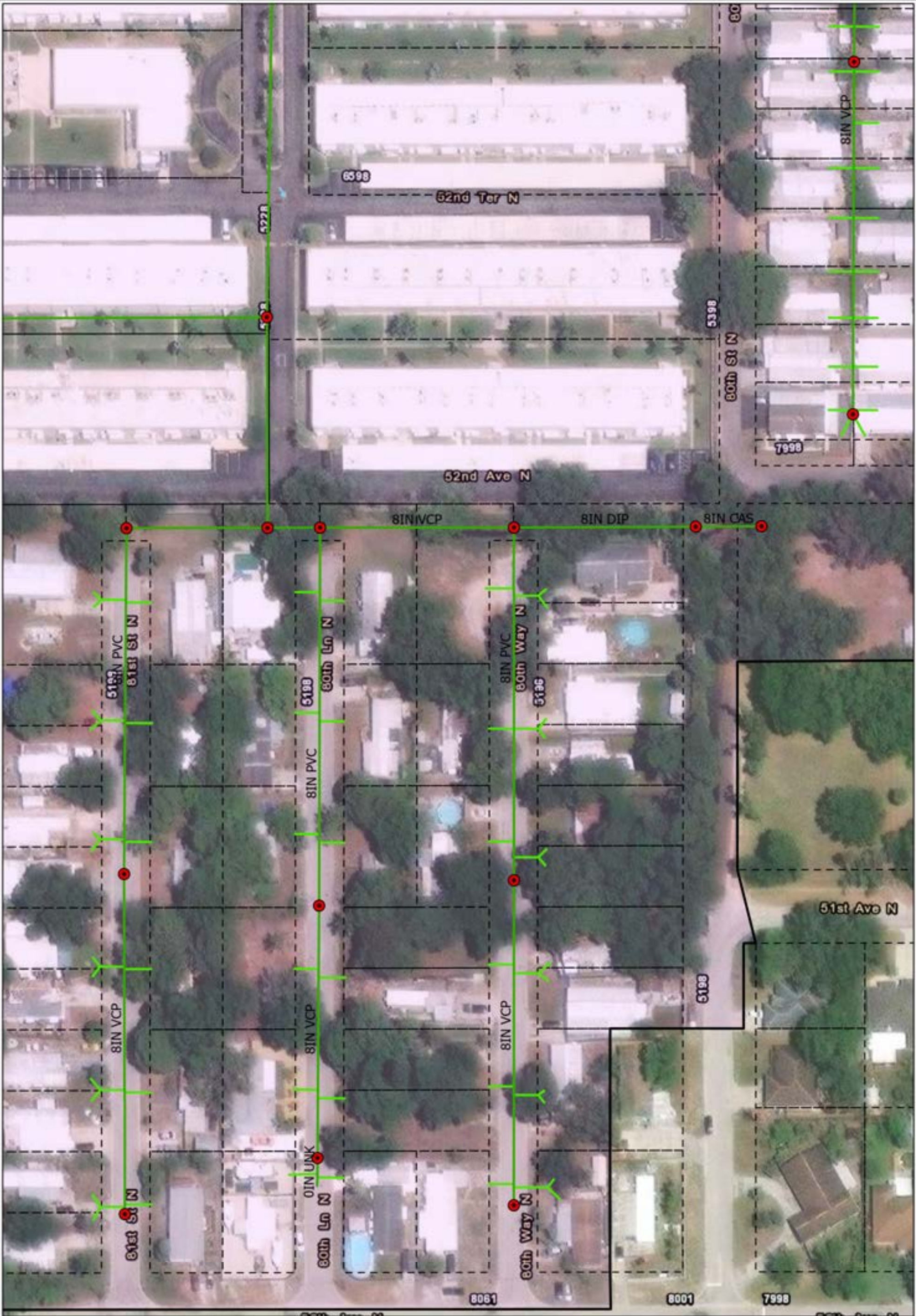
0 50 100 Feet


EXHIBIT  
**13.15**

**Legend**

 Parcels	 Lift Station	 Forcemain	 Reclaim Main
 Priority Area	 Manhole	 Priority 1 Sewer Laterals	 Reclaim Laterals
		 Priority 1 Gravity Mains	 Water Main
			 Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:















**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
**ZONE 13**

0 50 100 Feet


EXHIBIT  
**13.16**

**Legend**

	 Parcels	 Lift Station	 Forcemain	 Reclaim Main
 Priority Area	 Manhole	 Priority 1 Sewer Laterals	 Reclaim Laterals	 Water Main
		 Priority 1 Gravity Mains		 Water Laterals








**WADE TRIM**  
201 N Franklin Street, Suite 1350  
Tampa, FL 33602  
813.882.4373

PREPARED FOR:



**Pinellas County**  
UTILITIES

**FIND AND FIX: PRIORITY ZONES**  
**ZONE 13**

0 50 100 Feet

EXHIBIT  
**13.17**

**Legend**

Parcels	Lift Station	Forcemain	Reclaim Main
Priority Area	Manhole	Priority 1 Sewer Laterals	Reclaim Laterals
		Priority 1 Gravity Mains	Water Main
			Water Laterals



## **Appendix E: Pinellas County Standard Specifications for Sanitary Sewer Cured-In Place Pipelining**

## SECTION 33 01 31

## SANITARY SEWER CURED IN PLACE PIPELINING

## PART I – GENERAL

## 1.01 SCOPE OF WORK

- A. The Work includes furnishing all plant, labor, tools, equipment, materials, and performing all operations in connection with rehabilitation of 8-inch through 42-inch gravity sanitary sewer lines with cured-in-place pipe (CIPP).
- B. The CIPP shall be continuous and jointless from manhole to manhole and shall be free of all defects that will affect the long term life and operation of the pipe.
- C. All lining material shall be suitable for use in domestic sewage.
- D. Pipelines to be rehabilitated may be in backyard easements, light traffic subdivision roadways or highways requiring Maintenance of Traffic plans conforming to Florida Department of Transportation and Pinellas County requirements. No additional compensation will be made for these locations unless specified within the Contract.
- D. It shall be assumed that pipelines to be rehabilitated will only need light cleaning, removal of protruding services and sewage bypass pumping to successfully install the liner system. If the Contractor feels point repairs are necessary to complete lining of a particular main line segment, the County will make the individual necessary repair or cancel that section of Work at no cost to the County. The Contractor shall be responsible for all material removed from the sewer and shall properly dispose of materials in accordance with the appropriate regulatory agency requirements.
- E. Any main line or service line damage occurring during the rehabilitation process shall be the responsibility of the Contractor including, but not limited to, point repairs, main line replacement, service line replacement, any and all required permits, traffic control, by pass pumping, including a back-up system pipe/structure ventilation systems, Personal Protection Systems, such personal fresh air respirators, and restoration of all disturbed areas.
- F. The Contractor shall be responsible for any wastewater spills during any bypass operation and pay any and all fines, fees, property damage,



environmental damage and cleanup costs that are associated with wastewater spill.

#### 1.02 QUALITY CONTROL

- A. Products and Installers seeking approval must meet all of the following criteria to be deemed acceptable:
- B. Acceptable products shall have similar documented acceptable wastewater installations in the United States.
- C. The Contractor must have similar documented acceptable wastewater installations in the State of Florida.
- D. A client/reference list shall be supplied with the Bid, which shall include the product utilized for the referenced installations along with the dates of installation and details of similar individual installations.
- E. Liner materials shall be as specified in the Material Specification Manual.

#### 1.03 SUBMITTALS

- A. The Contractor shall submit the following information:
  - 1. Manufacturer's certification that the materials to be used meet the referenced standards and these specifications.
  - 2. License or certificate verifying Manufacturer's/ Licensor's approval of the installer.
  - 3. Proposed equipment and procedures for accomplishing the work.
  - 4. Lining Manufacturer's product data and instructions for resin and catalyst system.
  - 5. Design Calculations, in accordance with the Appendix of ASTM F-1216, for each length of liner to be installed including the thickness of each proposed CIPP. It will be acceptable for the Contractor to submit a design for the most severe line condition and apply that design to all of the line sections. To be completed and certified by a Professional Engineer proficient in the design of pipeline systems. All calculations shall include data that conforms to the requirements of these specifications.
  - 6. A detailed installation plan describing all preparation work, cleaning operation, pre-closed circuit television (CCTV) inspections, bypass pumping, traffic control, installation procedure, method of curing, service reconnection, quality control, testing to be performed, final CCTV inspection, and all else necessary and appropriate for a complete CIPP liner installation.

7. Tube wet-out and cure method including: a complete description of the proposed wet-out procedure, manufacturer's recommended cure method- for each diameter and thickness of CIPP liner to be installed, and detailed curing procedure detailing the curing medium and the method of application.
8. A detailed installation schedule.
9. All MSDS sheets for all materials to be furnished for the project.
10. Weekly work schedules shall be submitted no later than close of business on proceeding Thursdays for the work on the following week. Scope of the schedule shall include the following: cleaning operations, CCTV pre & post operations, lining, and crew leader's information including phone number.

#### 1.04 SUBSTITUTIONS

- A. Only after execution of the contract will Engineer consider requests from Contractor for substitutions. Substitutions will be considered only when a product becomes unavailable due to no fault of Contractor.
- B. Items identified as "equal" shall be accompanied by product literature and a written itemized comparison of the published specifications (feature by feature from the manufacturer's literature) for the item specified and for the item proposed. The burden of proof of "equality" shall be on the supplier.
- C. Request constitutes a representation that Contractor:
  1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
  2. Will provide the same warranty for substitution as for specified product.
  3. Will coordinate installation and make other changes which may be required for Work to be complete in all respects.
  4. Waives claims for additional costs which may subsequently become apparent.
- D. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate written request, or when acceptance will require substantial revision of Contract Documents.
- E. Engineer will determine acceptability of proposed substitution, and will notify Contractor of acceptance or rejection in writing within a reasonable time.

#### PART 2 – PRODUCTS



## 2.01 CURED-IN-PLACE PIPE (CIPP) LINING

- A. The liner material shall be an epoxy vinyl ester or polyester fiber felt resin impregnated tubing or Engineer approved equal, sized to tightly fit the internal circumference and length of the designated gravity sewer. The cured liner shall meet the minimum initial structural properties as listed in ASTM F-1216. The liner shall be designed in accordance with the Appendices in ASTM F-1216. It shall be assumed that a fully deteriorated gravity sewer pipeline having no structural strength will be rehabilitated with H-20 traffic loading, the water table's at the ground surface and the product installed will have a minimum expected lifetime of fifty (50) years. In no case shall the liner thickness be less than 0.236 inches (6 mm) for pipe sizes eight inches through twelve (12) inches in diameter. Minimum liner thickness for pipes greater than twelve (12) inches shall be as specified in the bid form. Minimum liner thickness shall be measured as post-cured thickness. Liner shall be sized by Contractor to provide a tight fit to the inside circumference of the host pipe and shall be a continuous joint-less lining from manhole to manhole.
- B. Unless otherwise specified, the Contractor shall use an epoxy vinyl ester or polyester resin and catalyst system and a fiber felt tube compatible with the inversion or other approved alternate installation process and having the following minimum physical properties for the cured pipe:

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>MINIMUM VALUE</u>
Tensile Strength	ASTM D 638	3,000 psi
Flexural Strength	Modified ASTM D 790	4,500 psi
Flexural Modulus of Elasticity	Modified ASTM D 790	250,000 psi
Minimum Long-Term (50 year)	Modulus of Elasticity (ASTM D 7790)	125,000 psi

- C. The epoxy vinyl ester or polyester resin and fiber felt tubing system shall be in accordance with the requirements of ASTM F-1216 and be fabricated to a size that, when installed, will neatly fit the interior of the host pipe. Allowance shall be made for circumferential stretching during a direct (non-inversion) pull in. The CIPP product shall fit tightly to the host sewer pipe (with minimal shrinkage) in such a way as to minimize water migration (tracking) between the liner and the host pipe. A vacuum impregnation process shall be used in conjunction with a roller system to achieve a uniform distribution of the resin throughout the tube under controlled conditions. The volume shall be adjusted by adding five to ten (10) percent excess resin for the change in resin volume due to

polymerization and to allow for any migration of resin into cracks or joints in the host pipe.

- D. The outside of the fabric tube shall be marked every 5 feet with the name of the manufacturer or CIPP system, manufacturing lot and production footage.

## 2.02 CHEMICAL JOINT, CRACK AND ANNULAR SPACE SEALING MATERIALS FOR ACTIVE LEAKS AND SERVICE LATERAL CONNECTIONS

- A. Chemical joint and crack sealing materials used on this Project shall have the following properties:

1. React quickly to form a permanent watertight seal;
2. Resultant seal shall be flexible and immune to the effects of wet/dry cycles;
3. Non-biodegradable and immune to the effects of acids, alkalis, and organics in sewage;
4. Component packaging and mixing compatible with field conditions and worker safety;
5. Extraneous sealant left inside pipe shall be readily removable; and shall be compatible with the repair resin utilized.

- B. Chemical joint sealing material shall be acrylic resin type and shall be furnished with activators, initiators, inhibitors and any other materials recommended by the manufacturer for a complete grout system.

- C. Sealing grout shall be furnished in liquid form in standard manufacturer's containers. Sealing grout shall be as specified in the Pinellas County Material Specification Manual.

## PART 3 - EXECUTION

### 3.01 PUBLIC NOTIFICATION

- A. All residences and businesses that may be affected by work performed in the installation of CIPP liners shall be notified by delivery of a notification. Notifications are to be delivered at least 72 hours before any work commences at a site.

- B. Notifications shall include the following: and explanation of the work to be performed; when the work is anticipated to commence; where the work is to be performed in reference to local streets; the name and office telephone numbers of Contractor representatives; the nature of the inconvenience(s) anticipated to be experienced by the resident/ business owner; the anticipated duration of the work; that the work is being



performed on behalf of Pinellas County and a Pinellas County Pinellas County contact and telephone number as provided by the County.

- C. Information included in the notifications regarding Contractor representatives shall include both the name and twenty-four (24) hour telephone number of the Contractor's supervisor at the work site(s) and the name and business telephone number of a Contractor representative who is responsible for the administration of the project from the location of the offices of the Contractor.
- D. The proposed format of all correspondence from the Contractor, to the public, shall be reviewed, and approved, by the Engineer or a Designee.
- E. Complete public notification is to be the exclusive responsibility of the Contractor.
- F. Cost associated with public notifications shall be included in the contract price of CIPP installation.

### 3.02 WASTEWATER FLOW CONTROL

- A. The Contractor shall bypass sewage around the section of pipe being lined by plugging the upstream manhole and discharging to a downstream manhole. Bypass shall be set up to cause minimum disruption to residents, commercial establishments and traffic. Pumps shall be of sufficient capacity to accommodate daily peak flows and wet weather flows.
- B. Where lines to be rehabilitated are determined by the Engineer to be of a critical nature and cannot be bypassed during normal work hours, lining may have to be scheduled at low flow during nighttime hours.
- C. If wastewater flow is minimal and lining can be installed in a timely manner, bypass may not be required.
- D. The Contractor shall make every effort possible to notify each customer whose service is affected by the lining operation.
- E. The Contractor shall be responsible for any back-up or any damage caused by the lining process.

### 3.03 PRE-CLEANING AND TELEVISION INSPECTION

- A. The Contractor shall clean and televise the assigned gravity sewer to be rehabilitated prior to construction in accordance with specification 33 01 32 - Sanitary Sewer Cleaning and Televising. Only National

Association of Sewer Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) certified personnel trained in locating breaks, obstacles and service connections by closed circuit television using PACP certified software shall perform the inspection. The interior surface of the pipeline shall be cleaned with high pressure water jet equipment prior to receiving the new liner. All service locations and obstructions, such as dropped joints and protruding services, shall be noted on the inspection.

- B. Pre-Cleaning and television inspection to occur a minimum of five working days prior to installation of the liner, or as otherwise directed by engineer.
- C. The Contractor shall notify the Engineer if any severe problems are discovered during televising that would prohibit the installation of the liner. If conditions such as broken pipe or major blockages are found that will prevent proper cleaning, or where additional damage would occur if cleaning is attempted or continued, the Contractor shall advise the Engineer.
- D. The Contractor shall notify the Engineer if pipe joint offsets greater than 20% of the interior diameter of the pipe are present. No liners shall be installed through joint offset greater than 20% of the interior diameter of the pipe unless otherwise directed by Engineer.
- E. Any damage done by the Contractor to any existing sewer pipe or structure by the Contractor will be immediately repaired to a condition equal to or better than its original condition at the Contractor's expense.
- F. Cost associated with pre-televising and cleaning shall be included in the contract price of CIPP installation.

#### 3.04 PROTRUDING SERVICE CONNECTIONS

- A. Existing service connections that protrude into the main line shall be removed to within one-quarter inch of the inside wall of the main line pipe by means of robotic equipment. The protrusion shall be ground using grinding tools specifically designed for that purpose. The finished product shall be uniform and smooth to accept main line lining product and provide a proper seal.

#### 3.05 LINER INSERTION

- A. Installation of CIPP shall proceed only after all necessary preparation has been completed, including the following: all affected residences and businesses have been notified in accordance with these specifications; pre-installation cleaning and television inspection; implementation of



adequate flow control; and the placement of traffic control measures in accordance with these specifications.

- B. The Contractor shall obtain all field measurements required to properly size the liner for installation. The proposed liner shall be sized to provide for a tight fit to the inside circumference of the host pipe and extend sufficiently from manhole to manhole. Liner shall be installed in strict accordance with methods and requirements of ASTM F-1216 and of the liner manufacturer. Liner shall be free of irregularities, pinholes, tears, cracks, excessive wrinkling and sealed so as to eliminate any possibility of infiltration at the manhole wall.
- C. The Contractor shall notify the Engineer in a timely fashion if the lining process is delayed and would continue to cause continued service interruption to customers affected by the lining operation. In this situation, the Contractor shall be responsible for taking steps necessary to reconnect services or provide a bypass operation, satisfactory to the Engineer, for the affected services at no additional cost to the County.
- D. Pressure requirements: Before the curing begins, the pressure required to hold the flexible tube tight against the existing conduit, and the maximum allowable pressure so as not to damage the tube, shall be specified by the tube manufacture and provided to the County for each line segment.
- E. Once the cure has started and dimpling for laterals is completed, the required pressure shall be maintained until the cure has been completed. Should the pressure deviate more than 2.3 ft. of water (1psi.) from the required pressure, the installed tube shall be removed from the existing conduit. A continuous log of pressure during cure shall be maintained and submitted to the County for each lined segment.
- F. Prior to installation and as recommended by the manufacturer remote temperature gauges or sensors shall be placed inside the host pipe to monitor the temperature during the cure cycle. Liner and/or host pipe interface temperature shall be monitored and logged during curing of the liner.
- G. Curing shall be accomplished by utilizing the appropriate medium (water or steam) in accordance with the manufacturer's recommended cure schedule. The curing source or in and output temperatures shall be monitored and logged during the cure cycles. The manufacturer's recommended cure schedule shall be used for each line segment installed.
- H. The Contractor shall cool the CIPP in accordance with the approved manufacturer's recommendations.

- 1 I. Temperatures and curing data shall be monitored and recorded, by the  
2 Contractor, throughout the installation process to ensure that each phase  
3 in achieved as approved in accordance with the CIPP System  
4 manufacturer's recommendations.  
5  
6 J. The installed CIPP shall be continuous over the entire length of sewer line  
7 section and be free from visual defects such as foreign inclusions, dry  
8 spots, pinholes, major wrinkles and de-lamination.  
9  
10 K. Contractor shall submit an inversion and cure record report for each liner.  
11 This record shall include location, from & to manhole numbers, direction of  
12 inversion, date, time, pressure and temperature throughout the entire  
13 inversion and curing process for each liner.  
14

### 15 3.06 MANHOLE CONNECTIONS

16

- 17 A. A compression hydrophilic end seal gasket compatible with the installed  
18 CIPP liner shall be installed at each manhole connection. When  
19 hydrophilic gaskets come in contact with water they swell to create a  
20 compression seal gasket fit between the host pipe and the newly installed  
21 CIPP liner at the manhole connection. Because of inconsistencies during  
22 application of chemical grout, hydrophilic caulks or hydrophilic paste,  
23 these sealing attempts are not an acceptable alternative. Acceptable end  
24 seals are Insignia™ seals or approved equal.  
25  
26 B. Cost associated with manhole seals shall be included in the contract price  
27 of CIPP installation.  
28  
29

### 30 3.07 SERVICE RECONNECTIONS

31

- 32 A. Service reconnections shall be completed as soon as possible upon  
33 completion of the main line rehabilitation and with the approval of the  
34 Engineer.  
35  
36 B. Re-connection shall be accomplished without excavation using a robotic  
37 cutter. Cuts shall be neat and smooth with the service line opened to  
38 ninety-five (95) percent of the inside diameter in order to prevent  
39 blockages, and the bottom of both openings must match. The edges of the  
40 opening shall not have pipe fragments or liner fragments, which may  
41 obstruct flow or snag debris. All over-cut service connections will be  
42 properly repaired to meet the requirements of these specifications.  
43  
44 C. In the event that service reinstatements result in openings that are greater  
45 than 100 percent of the service connection opening, the Contractor shall  
46 install a CIPP type repair, sufficiently in size to completely cover the over-



cut service connection. No additional compensation will be paid for the repair of over-cut service connections.

- D. All cuttings and coupons of pipe material resulting from service tap cutting shall be recovered at the downstream manhole of the pipe rehabilitation operation prior to leaving the site and putting the main line back in service. Coupons may not be allowed to pass through the system.
- E. The Contractor shall stop all visible service line leaks and seal each service lateral connection to the new liner with a chemical sealant compatible with liner material. The chemical sealant shall be injected by the use of standard packer device and equipment to create a water tight seal at each connection.
- F. In the event reconnection within the pipe cannot be accomplished or failure occurs during the reconnection process, the Contractor may be permitted to excavate, at the Contractor's expense, and reconnect to the existing main using an approved sewer saddle.
- G. Due to the critical nature of service reconnection, the Contractor shall keep backup robotic equipment on site to eliminate any delay to the reactivation of service to customers. This specification shall also apply to the Pay Item to grinding and sealing existing service openings on previously lined pipe.

### 3.08 TRAFFIC CONTROL AND MAINTENANCE OF TRAFFIC

- A. The Contractor shall implement a Maintenance of Traffic Plan in accordance with County specifications.

### 3.09 CIPP REPAIR/ REPLACEMENT

- A. Occasionally installation will result in the need to repair or replace a defective CIPP. The Contractor shall outline specific repair or replacement procedures for potential defects that may occur in the installed CIPP. Repair/replacement procedures shall be as recommended by the CIPP system manufacturer and shall be submitted to the County.
- B. Defects in the installed CIPP that will not affect the operation and long term life of the product shall be identified and defined.
- C. Repairable defects that may occur in the installed CIPP shall be specifically defined by the Contractor based on manufacturer's recommendations, including a detailed step-by-step repair procedure, resulting in a finished product meeting the requirements of these contract specifications.

- 1  
2 D. Un-repairable defects that may occur to the CIPP shall be clearly defined  
3 by the Contractor based on manufacturer's recommendations, including a  
4 recommended procedure for the removal and replacement of the CIPP.  
5

6 3.10 SAFETY  
7

- 8 A. The Contractor is responsible for meeting all safety precautions required  
9 or recommended by the product manufacturer to protect workers, the  
10 public and the environment. This includes but is not limited to  
11 implementing control measures to prevent or capture styrene resin spills,  
12 obtaining any necessary discharge permits, properly disposing of material  
13 (i.e. spill material, cure water, rinse water, etc.) per regulatory  
14 requirements, providing personal protection equipment (i.e. respirators or  
15 other inhale protection, body suits, etc.), and preventing odors or steam  
16 produced by the CIPP process from migrating off-site and becoming a  
17 nuisance to neighboring properties or individuals. The Contractor is  
18 responsible for reporting and taking immediate corrective action for any  
19 accidental releases of CIPP waste or effluent into the environment.  
20

21 3.11 POST CLEANING AND TELEVISION INSPECTION/ FINAL ACCEPTANCE  
22

- 23 A. Post cleaning and television inspection shall proceed only after all  
24 necessary work and preparation has been completed, including the  
25 following: installation on CIPP liner in accordance with specifications, all  
26 services re-instated including grout sealing in accordance with these  
27 specifications; pre-installation cleaning and television inspection;  
28 implementation of adequate flow control; and the placement of traffic  
29 control measures in accordance with these specifications.  
30  
31 B. The Contractor shall clean and televise the assigned gravity sewer after  
32 rehabilitation in accordance with specification 33 01 32- Sanitary Sewer  
33 Cleaning and Televising. Only NASSCO PACP certified personnel trained  
34 in locating breaks, obstacles and service connections by closed circuit  
35 television using PACP certified software shall perform the inspection. The  
36 interior surface of the pipeline shall be cleaned with high pressure water  
37 jet equipment immediately prior to conducting the post television  
38 inspection. All service locations, gouges, cracks, bumps, bulges and  
39 obstructions, such as dropped joints, shall be noted on the inspection.  
40  
41 C. In the case of bellies in the line, the pipe shall be cleared of any standing  
42 water to provide continuous visibility during the post inspection.  
43  
44 D. The Contractor shall provide all inspections in digital PACP format  
45 including printed inspection logs.  
46



- 1 E. Cost associated with post-televising and cleaning shall be included in the  
2 contract price of CIPP installation.  
3
- 4 F. The finished liner shall be free of significant visual defects, damage,  
5 deflection, holes, leaks and other defects.  
6
- 7 G. Each individual location contained in a Work Order is to be considered an  
8 "individual project" such that all work, including all deliverables shall be  
9 reviewed and accepted prior to the County's accepting and processing  
10 payment for that individual project. No partial payments will be made on  
11 individual projects.  
12

### 13 3.11 CLEANUP

- 14
- 15 A. Cleanup is an essential part of the Work. As the work progresses and is  
16 completed, the Contractor shall clean the various sites of all operations  
17 and completely restore all work areas to the satisfaction of the Engineer  
18 and the County. This cleanup shall be done as promptly as practicable  
19 and shall not be left until the end of the construction period. No part of the  
20 Work shall be considered complete and no payment will be made until  
21 cleanup is completed.  
22

23 END OF SECTION  
24

## SECTION 33 01 40

## CIPP STRUCTURAL LATERAL CONNECTION LINING

PART 1 -- GENERAL

## 1.01 SCOPE

- A. The work specified in this section consists of providing for the reconstruction of a particular mainline section and the adjacent lateral sewer pipe without excavation while providing a structural one piece leak free connection at the interface of the mainline and lateral pipelines.
- B. Pipelines to be rehabilitated may be in backyard easements, light traffic subdivision roadways or highways requiring Maintenance of Traffic plans conforming to Florida Department of Transportation and Pinellas County requirements. No additional compensation will be made for these locations unless specified within the Contract
- C. It shall be assumed that pipelines to be rehabilitated will only need light cleaning and sewage bypass pumping to successfully install the liner system. If the Contractor feels point repairs are necessary to complete lining of a particular lateral line segment, the County will make the individual necessary repair or cancel that section of Work at no cost to the County. The Contractor shall be responsible for all material removed from the sewer and shall properly dispose of materials in accordance with the appropriate regulatory agency requirements.

## 1.02 GENERAL

- A. The reconstruction will be accomplished using a non-woven fabric tube of particular length and a thermoset resin with physical and chemical properties appropriate for the application. The lateral tube within a translucent inversion bladder is vacuum impregnated with the resin then placed inside a protective carrying device. The mainline liner that is physically attached to the lateral tube is affixed around a rigid launching device. The launching device and protective carrying device are winched into the existing sewer. When the launching device is properly positioned at the lateral connection, the mainline liner is inflated and the resin saturated tube is inverted up through the lateral pipe, using air or water pressure, by the action of the inversion bladder. Once the tube/resin composite is cured, the inversion bladder and launching/carrying devices are removed.
- B. The cured-in-place mainline/lateral connection repair system shall be as specified in Materials Specification Manual, or as otherwise specified by County Engineer.

CIP STRUCTURAL LATERAL CONNECTION LINING  
33 01 40-1



## 1 1.03 SUBMITTALS

- 2
- 3 A. The CONTRACTOR shall submit shop drawings, samples of materials, and other
- 4 information to the OWNER for review. Included shall be design calculations for the
- 5 work.
- 6

## 7 1.04 QUALIFICATIONS

- 8
- 9 A. The Qualifications of the CONTRACTOR shall be submitted with the bid. The
- 10 Contractor is defined as the entity that holds the contracting license ("the state or
- 11 county licensed company") to perform contracting work under these bid documents,
- 12 the Contractor Qualifications must be submitted in this name. Individual
- 13 qualifications will not be considered in the product experience. These Qualifications
- 14 shall include detailed descriptions of the following:

- 15 1. Name, business address and telephone number of the CONTRACTOR.
- 16 2. Name(s) of all supervisory personnel to be directly involved with this project.
- 17 3. Specialty technicians shall be certified by the proposed product manufacturer
- 18 and/or its authorized representative. Certifications shall be submitted to the
- 19 OWNER.
- 20 4. The CONTRACTOR shall provide the references of previous project lists
- 21 going back five years including his customer's names, city contact name,
- 22 phone number, city project number, city project name. The list must include
- 23 the number of laterals rehabilitated as well as the number and type of
- 24 connection seals installed. If there have been any changes in the materials it
- 25 shall be brought to the attention of the OWNER and is to be noted on the
- 26 submitted projects used for references showing the date and type of the
- 27 changes.
- 28 5. To be acceptable, the installer (the company bidding) must provide
- 29 documented acceptable installations similar in nature to those proposed in
- 30 this contract in Florida.
- 31 6. To be acceptable, the installer (the company bidding) must have applicable
- 32 experience in the commercial installation of the product bid.
- 33

34 PART 2 -- PRODUCTS

## 35

## 36 2.01 GENERAL

- A. The finished liner shall be fabricated from material as specified in this section which when cured will be resistant to the corrosive effects of the raw sewage and hydrogen sulfide.

## 2.02 LINER SIZING

- A. The liner shall be fabricated to a size that when installed will neatly fit the internal circumference of the conduit to be repaired.

## 2.03 LINER MATERIAL

- A. The liner shall be one piece and will consist of a lateral portion and the mainline portion with one or more layers of flexible needled felt or an equivalent non-woven material. The liner will be continuous in length and the wall thickness shall be uniform. No overlapping sections shall be allowed in the circumference or the length of the lateral liner. The tube will be capable of conforming to offset joints, bells, and disfigured pipe sections. The mainline liner will be flat with one end overlapping the second end and sized accordingly to create a circular lining equal to the full diameter of the mainline pipe. The resin will be polyester or vinyl ester or epoxy, with proper catalysts as designed for the specific application. The cured-in-place pipe shall provide a smooth bore interior. Both the lateral pipe and the main connection shall have a design report documenting the design criteria, fully deteriorated pipe section for the lateral and partially deteriorated for the main (if the main has already been lined), relative to the hydrostatic pressures, depth of soil cover, and type of soil. The mainline sectional liner shall be a full-circle 16-inch long CIPP liner integrally manufactured to the lateral liner providing a seamless connection between the mainline pipe liner and the lateral liner. Installation will be accomplished remotely using air or water for inversion and curing. The cured pipe repair system shall be watertight and shall conform to the existing pipe and eliminate any leakage or connection to the outside of the host pipe/service.

- B. The liner shall meet or exceed ASTM F2561-06.

- C. The composite of the materials above will, upon installation inside the host pipe, exceed the minimum test standards specified by the American Society for Testing Methods.

Physical Characteristics	Test Procedure	Minimum Value
Flexural Strength	ASTM D790	4,500 psi
Flexural Modulus	ASTM D790	250,000 psi
Long Term Modulus	Reduction for Creep	50%

Design Considerations	Criteria	
Tube Design	ASTM F 1216	Appendix X1

### CIP STRUCTURAL LATERAL CONNECTION LINING 33 01 40-3



Hydrostatic Buckling	ASTM F 1216	Appendix X1
----------------------	-------------	-------------

The CIPP design for the lateral tube and mainline structural connection shall assume no bonding to the original host pipe.

#### 2.04 LINER DESIGN

- A. The minimum required structural CIPP wall thickness shall be based on the physical properties described above and in accordance with the design equations in the appendix of ASTM F 1216, and the following design parameters:

Design Safety Factor	2.0
Retention Factor for Long-Term Flexural Modulus to be used in Design	50 %
Ovality*	2 %
Groundwater Depth = Pipe Depth (above invert)*	ft.
Soil Depth (above crown)*	ft.
Soil Modulus	700 psi
Soil Density	120 pcf
Live Load	One H20 passing truck
Design Condition (lateral pipe)	Fully deteriorated
Design Condition (main pipe) Lined Main Pipe	Partially deteriorated
Design Condition (main pipe) Unlined Main Pipe	Fully deteriorated
<i>*Denotes information which can be provided here or in inspection video tapes or project construction plans. Multiple line segments may require a table of values.</i>	

Note: There are two conditions that require design calculation in accordance with ASTM F1216. 1) Lateral piping. 2) The connection in the main, lined or unlined main.

- B. The lining manufacturer shall submit to the OWNER for review complete design calculations for the liner, both main connection and lateral pipe designs, signed and sealed by a Professional Engineer registered in the State of Florida and certified by the manufacturer as to the compliance of his materials to the values used in the calculations. A safety factor of 2 shall be applied in the design calculation. The lateral host pipe shall be considered fully deteriorated, the previously lined main pipe shall be considered partially deteriorated. The liner shall be designed to withstand a live load equivalent to one H-20 passing truck plus all pertinent dead loads, hydrostatic pressure and grout pressure (if any). For design purposes, the water table shall be considered at grade elevation. The liner shall be designed in accordance with ASTM F 1216. The buckling analysis shall account for the

combination of dead load, live load, hydrostatic pressure and grout pressure (if any). The liner side support shall be considered as if provided by soil pressure against the liner. The existing lateral pipe shall not be considered as providing any structural support. If the main pipe has been lined a partially deteriorated condition is to be used for the design of the main. Hydrostatic loads must be considered in three existing pipe conditions 1) mainline design, for previously lined mains and 2) unlined mains as well as 3) the lateral pipe design for unlined pipe. Modulus of soil reaction shall be 700, corresponding to a moderate degree of compaction of bedding and a fine-grained soil as shown in AWWA Manual M45, Fiberglass Pipe Design.

- C. The design of the finished main / lateral connection liner shall include compression gaskets at the termination points of the liner. When the hydrophilic gaskets come in contact with water they swell to create a compression gasket fit between the host pipe and the newly installed lateral connection.

Because of inconsistencies during application of, chemical grout, hydrophilic caulks or hydrophilic paste, these sealing attempts are not an acceptable alternative. Acceptable seals are Insignia™ seals or approved equal.

- D. Liner shall be neither accepted nor installed until design calculations are acceptable to the OWNER for the three existing pipe conditions.

### PART 3 -- EXECUTION

#### 3.01 PUBLIC NOTIFICATION

- A. All residences and businesses that may be affected by work performed in the installation of CIPP liners shall be notified by delivery of a notification. Notifications are to be delivered at least 72 hours before any work commences at a site.
- B. Notifications shall include the following: and explanation of the work to be performed; when the work is anticipated to commence; where the work is to be performed in reference to local streets; the name and office telephone numbers of Contractor representatives; the nature of the inconvenience(s) anticipated to be experienced by the resident/ business owner; the anticipated duration of the work; that the work is being performed on behalf of Pinellas County; and a Pinellas County contact and telephone number as provided by the County.
- C. Information included in the notifications regarding Contractor representatives shall include both the name and twenty-four (24) hour telephone number of the Contractor's supervisor at the work site(s) and the name and business telephone number of a Contractor representative who is responsible for the administration of the project from the location of the offices of the Contractor.



- 1  
2 D. The proposed format of all correspondence from the Contractor, to the public, shall  
3 be reviewed, and approved, by the Engineer or a Designee.  
4  
5 E. Complete public notification is to be the exclusive responsibility of the Contractor.  
6  
7 F. Cost associated with public notifications shall be included in the contract price of  
8 CIPP installation.  
9

10 3.02 WASTEWATER FLOW CONTROL  
11

- 12 A. The Contractor shall bypass sewage around the section of pipe being lined. Bypass  
13 shall be set up to cause minimum disruption to residents, commercial  
14 establishments and traffic.  
15  
16 B. Where lines to be rehabilitated are determined by the Engineer to be of a critical  
17 nature and cannot be bypassed during normal work hours, lining may have to be  
18 scheduled at low flow during nighttime hours.  
19  
20 C. If wastewater flow is minimal and lining can be installed in a timely manner, bypass  
21 may not be required.  
22  
23 D. The Contractor shall make every effort possible to notify each customer whose  
24 service is affected by the lining operation.  
25  
26 E. The Contractor shall be responsible for any back-up or any damage caused by the  
27 lining process.  
28

29 3.03 PRE-CLEANING AND TELEVISION INSPECTION  
30

- 31 A. The Contractor shall clean and televise the assigned gravity sewer to be  
32 rehabilitated prior to construction in accordance with specification 33 01 32 -  
33 Sanitary Sewer Cleaning and Televising. Only National Association of Sewer  
34 Companies (NASSCO) Pipeline Assessment and Certification Program (PACP)  
35 certified personnel trained in locating breaks, obstacles and service connections by  
36 closed circuit television using NASSCO certified software shall perform the  
37 inspection. The interior surface of the pipeline shall be cleaned with high pressure  
38 water jet equipment prior to receiving the new liner. All service locations and  
39 obstructions, such as dropped joints and protruding services, shall be noted on the  
40 inspection.  
41

- B. Pre-Cleaning and television inspection to occur a minimum of five working days prior to installation of the liner, or as otherwise directed by Engineer.
- C. The Contractor shall notify the Engineer if any severe problems are discovered during televising that would prohibit the installation of the liner. If conditions such as broken pipe or major blockages are found that will prevent proper cleaning, or where additional damage would occur if cleaning is attempted or continued, the Contractor shall advise the Engineer.
- D. The Contractor shall notify the Engineer if pipe joint offsets greater than 20% the interior diameter of the pipe are present. No liners shall be installed through joints offset greater than 20% the interior diameter of the pipe unless otherwise directed by Engineer.
- E. Any damage done by the Contractor to any existing sewer pipe or structure by the Contractor will be immediately repaired to a condition equal to or better than its original condition at the Contractor's expense.
- F. Cost associated with pre-televising and cleaning shall be included in the contract price of CIPP installation.

#### 3.04 LINER INSTALLATION

- A. The tube is inspected for tears and frayed sections. The tube, in good condition, will be vacuum impregnated with the thermostat resin. The resin will be introduced into the tube creating a slug of resin at the beginning of the tube. A calibration roller will assist the resin slug to move throughout the tube. All air in the tube shall be removed by vacuum allowing the resin to thoroughly impregnate the tube. All resin shall be contained to ensure no public property or persons are exposed to the liquid resin. The mainline liner will be saturated upon a wet-out platform. The resin impregnated sample (wick), shall be retained by the installer to provide verification of the curing process taking place in the host pipe.
- B. The saturated tube along with the inversion bladder will be inserted into the carrying device. The mainline liner is affixed on the launching device. Both the launching and carrying device is pulled into the pipe using a cable winch. The pull is complete when the open port of the launching device is aligned with the interface of the service connection and mainline pipe. The resin saturated lateral tube is completely protected during the pull. No resin shall be lost by contact with manhole walls or the pipe during the pull. The resin saturated mainline liner is supported upon the rigid launcher that is elevated above the pipe invert by means of rotating skid system. The mainline liner should not be contaminated or diluted by exposure to dirt, debris, or water during the pull.

#### CIP STRUCTURAL LATERAL CONNECTION LINING 33 01 40-7



- 1 C. The installer shall document the placement of the liner by internal video inspection  
2 with the camera being inserted from the lateral pipe down to the mainline pipe.
- 3 D. The mainline liner is expanded against the mainline pipe and lateral tube is inverted  
4 out of the launcher/carrying device by controlled air or water pressure. The installer  
5 shall be capable of viewing the lateral liner contacting the lateral pipe from the  
6 beginning to the end of the repair. The mainline liner and the lateral tube are held  
7 tightly in place against the wall of the host pipe by controlled pressure until the cure  
8 is complete.
- 9 E. When the curing process is complete, the pressure will be released. The inversion  
10 bladder and launching device shall be removed from the host pipe with the winch.  
11 No barriers, coatings, or any material other than the cured tube/resin composite,  
12 specifically designed for desirable physical and chemical resistance properties,  
13 should ever be left in the host pipe. Any materials used in the installation other than  
14 the cured tube/resin composite are to be removed from the pipe by the installer.

### 15 3.05 POST CLEANING AND TELEVISION INSPECTION

- 16
- 17 A. Post cleaning and television inspection shall occur only after all necessary work and  
18 preparation has been completed, including the following: installation on CIPP liner  
19 in accordance with specifications, pre-installation cleaning and television inspection;  
20 implementation of adequate flow control; and the placement of traffic control  
21 measures in accordance with these specifications.  
22
- 23 B. The Contractor shall clean and televise the assigned gravity sewer after  
24 rehabilitation in accordance with specification 33 01 32- Sanitary Sewer Cleaning  
25 and Televising. Only NASSCO PACP certified personnel trained in locating breaks,  
26 obstacles and service connections by closed circuit television using PACP/ LACP  
27 certified software shall perform the inspection. The interior surface of the pipeline  
28 shall be cleaned with high pressure water jet equipment immediately prior to  
29 conducting the post television inspection. All gouges, cracks, bumps, bulges and  
30 obstructions, such as dropped joints, shall be noted on the inspection.  
31
- 32 C. In the case of bellies in the line, the pipe shall be cleared of any standing water to  
33 provide continuous visibility during the post inspection.  
34
- 35 D. The Contractor shall provide all inspections in digital PACP/ LACP format including  
36 printed inspection logs. All lateral inspections shall, at a minimum, be compatible  
37 with Granite XP currently used by the County.  
38
- 39 E. Cost associated with post-televising and cleaning shall be included in the contract  
40 price of CIPP installation.

## CIP STRUCTURAL LATERAL CONNECTION LINING

### 33 01 40-8

1 3.06 ACCEPTANCE AND TESTING

- 2
- 3 A. The finished liner shall be continuous over the entire length of the installation. The
- 4 liner shall be free from visual defects, damage, deflection, holes, delamination,
- 5 uncured resin, and the like. There shall be no visible infiltration through the liner or
- 6 from behind the liner.
- 7 B. Verification of a non-leaking lateral liner and service connection shall require an air
- 8 test in accordance with the following specifications. Testing shall be performed at
- 9 the OWNER'S discretion. The cost for the test shall be included in the liner
- 10 installation cost, and no separate payment shall be made.
- 11 1. A camera shall be inserted into the lateral pipe via a clean-out upstream of
- 12 the upper most portion of the cured in-place lateral liner. The camera is then
- 13 moved through the lateral pipe until it becomes positioned at the lateral/main
- 14 connection. The camera is utilized to assist in positioning and placing a pair
- 15 of plugs in the mainline on either side of the lateral opening. A test device
- 16 with a minimum of a ten-inch clear separation shall be centered on the lateral
- 17 opening and spanning the brim of the lined connection.
- 18 2. Next, an air test plug shall be introduced into the lateral pipe. The test plug
- 19 will be placed inside of the cured in-place lateral liner at its upper most
- 20 portion. The test plug shall be inflated and sealed against the cured in-place
- 21 lateral liner at the upstream end of the liner.
- 22 3. The testing device within the mainline are then inflated and sealed across the
- 23 service connection.
- 24 4. Air-pressure not less than 4 PSI shall be introduced through the test plug.
- 25 The void area between the three plugs shall be pressurized at 4 PSI, held for
- 26 2 minutes and during this time the pressure shall not drop below 3.0 PSI.
- 27 5. If an installed cured in-place lateral liner fails the specified air test, the
- 28 following corrective measures shall be taken.
- 29 a. The cured in-place lateral liner shall be re-inspected by use of a
- 30 closed circuit television camera in attempt to identify the defect.
- 31 b. Any repairs made shall consist of materials that are structural and
- 32 meet or exceed the same criteria as the cured in-place lateral liner is
- 33 required to meet in a domestic sewer collection system. Such
- 34 materials shall have a minimum life expectancy of 50 years in
- 35 accordance with ASTM F-1216 (most recent standard) Appendix X1
- 36 Design Considerations and Appendix X2 Chemical-Resistance Test.

CIP STRUCTURAL LATERAL CONNECTION LINING  
33 01 40-9



1 c. Once the defect has been corrected, the renewed lateral pipe shall be  
2 re-tested in accordance with the air test procedure as described  
3 above.

4 d. Any corrective measures shall be performed at the CONTRACTOR's  
5 expense.

6 6. If any of the air tests fail, the OWNER at its option may require the  
7 CONTRACTOR to test an additional lateral at no additional charge to the  
8 OWNER. If a second air test shall fail, the OWNER at its option may require  
9 the CONTRACTOR to test additional or all of the installed cured in-place  
10 lateral linings at no additional charge to the OWNER.

11 C. Each individual location contained in a Work Order is to be considered an  
12 "individual project" such that all work, including all deliverables shall be reviewed  
13 and accepted prior to the OWNER accepting and processing payment for that  
14 individual project. No partial payments will be made on individual projects.  
15

16 3.07 CLEANUP

17  
18 A. After the liner installation has been completed and accepted, the CONTRACTOR  
19 shall clean up the entire project area and return the ground cover to grade. All  
20 excess material and debris not incorporated into the permanent installation shall be  
21 disposed of by the CONTRACTOR.  
22

23 END OF SECTION  
24  
25

## **Appendix F: National Association of Sewer Service Companies (NASSCO) Standards**



# PIPE CONDITION ASSESSMENT USING CCTV

## PERFORMANCE SPECIFICATION GUIDELINE

October 2014



**Thanks to the following participants for the development of this document:**

Diego Calderón - NASSCO  
Ted DeBoda - NASSCO  
Guy Leslie - RapidView  
Frank Ligorì - StoneAge Tools  
Gerry Muenchmeyer - Muenchmeyer Associates  
Heather Myers - NASSCO  
George Selembo – Info Sense  
Marilyn Shepard - NASSCO Master Trainer, (Committee Chair)  
Jimmy Stewart - Brenford Environmental Systems  
Matt Sutton - RapidView  
Mike Vislay - Envirosight  
Jerry Weimer - City of Cincinnati

© 2020 NASSCO, Inc.  
nassco.org

## Disclaimer

These Specifications were prepared by a Committee comprised of representatives of NASSCO members and peer-reviewed by industry professionals. These Specifications are not specific to any one product, project, or job site, and should be considered a guideline only. Conditions for use may require additions, deletions or amendments to these guidelines so as to conform to project-specific site conditions and to comply with applicable laws, regulations, and ordinances. NASSCO does not guarantee, certify or assure any result and assumes no liability as to content, use and application of these guidelines.



## Index

<b>INTRODUCTION.....</b>	<b>1</b>
<b>SUGGESTED PROJECT STEPS .....</b>	<b>1</b>
<b>MANDATORY PRE-BID/PRE-CONSTRUCTION AND PROJECT MEETINGS.....</b>	<b>4</b>
<b>PART 1 - GENERAL.....</b>	<b>6</b>
1.1 SCOPE OF SERVICES AND WORK PHASING .....	6
1.2 OWNER.....	8
1.3 TIME OF PERFORMANCE, SCHEDULING AND LIQUIDATED DAMAGES.....	8
1.4 COMPLIANCE AND ACCEPTANCE .....	8
1.5 REFERENCED DOCUMENTS .....	9
1.6 SUBMITTALS.....	10
<b>PART 2 - SPECIAL PROVISIONS .....</b>	<b>12</b>
2.1 OWNER RIGHTS .....	12
2.2 EMERGENCY RESPONSE .....	12
2.3 WORKING HOURS.....	12
2.4 DECREASE/INCREASE IN SERVICE/STOP WORK DUE TO INCLEMENT WEATHER .....	13
2.5 PRE-CONSTRUCTION MEETING .....	13
2.6 CLOSE-OUT PROCEDURES.....	14
2.7 PRE-QUALIFICATIONS.....	14
<b>PART 3 - GENERAL PROVISIONS .....</b>	<b>15</b>
3.1 MAINTENANCE OF TRAFFIC.....	15
3.2 EXISTING UTILITIES.....	15
3.3 REQUEST FOR SUPPLEMENTARY INFORMATION.....	16
3.4 USE OF PREMISES .....	16
3.5 PROTECTION OF TREES .....	17
3.6 FENCING .....	17
3.7 RESTORATION .....	17
3.8 CLEANUP .....	18
3.9 PROPERTY DAMAGE.....	18
3.10 ACCESS TO MUNICIPAL WATER SUPPLIES.....	18
<b>PART 4 - EXECUTION .....</b>	<b>18</b>
4.1 GENERAL .....	18
4.2 TELEVISION INSPECTION AND COMPUTERIZED EQUIPMENT .....	19
<b>PART 5 - PAYMENT FOR WORK .....</b>	<b>21</b>
5.1 MEASUREMENT AND PAYMENT .....	21
<b>HEADER FIELD CHECKLIST .....</b>	<b>22</b>
<b>CCTV CONDITION SURVEY BID SHEET (SAMPLE).....</b>	<b>23</b>

## INTRODUCTION

These specifications were written to provide a comprehensive, uniform and consistent template for the procurement of sewer line inspection services based on the current industry services and technologies. They have been created and reviewed by industry experts including Contractors, Equipment Manufacturers and their Representatives, Municipalities, Engineers, Operators, and Field Technicians. It is hoped that facility Owners will find this useful in their procurement processes and that other parties involved in this industry find it helpful in clarifying what might otherwise be ambiguous.

This document was developed to provide clarity on the issues that have proven problematic for the procurement of pipeline inspection services. Encompassing all industry perspectives, this document strives to offer an understanding and knowledge base from which all parties can communicate in a clear and concise manner.

This document was created to allow flexibility for the end-user, whether the Owner, engineer and or municipality. As a guideline, this document is not meant to be simply cut and pasted into a specification. Flexibility rests in the ability to customize the specification to your specific budget and service requirements. The specification requires the facility Owner to make decisions while creating the document. This level of customization is necessary because specific services or technologies may not be applicable to all geographic locations or each specific project. Decisions must be made to alter and affect the outcome of the project to best suit the budget and service requirements.

Should you find this document lacking in any way, we would welcome your comments and suggestions for improvement in future revisions.

## SUGGESTED PROJECT STEPS

The following is basic, step by step guidance for the successful planning, implementation and completion of a sewer inspection project. These steps have been compiled, reviewed and presented by the NASSCO Industry Standards Committee, which is comprised of experts in the field including Contractors and Sub-Contractors, Owners (public and private), Equipment Manufacturers, Operators and Engineers. The following is based upon their experiences on these projects.

1. Establish need based upon existing sewer O&M Program(s)
2. Determine Scope of Work
  - a. Consider budget available for project
  - b. Determine if cleaning is required. Refer to Cleaning Specification.
  - c. Determine technologies required (Pan and Tilt or Side Wall Scanning)
  - d. May need to consult with other Owners or experts to compile reasonable cost estimates



3. Create a detailed project map from existing conveyance system maps to include as much information as possible
  - a. Pipe size
  - b. Scheduled pipe length
  - c. Material
  - d. Age of sewer
  - e. Depths
  - f. Shapes
  - g. Determination if debris in sewer is hazardous
  - h. Potential hazards in sewer (ex. H<sub>2</sub>S, explosive, corrosive)
4. Gather data on area(s) of CCTV project
  - a. Accessibility
  - b. Restrictions
  - c. Environmental issues
  - d. Water access and costs
  - e. Dumping availability and costs
5. Write Bid Specifications:
  - a. Define types of inspection
  - b. Define level of cleaning expected (95%) for CCTV
  - c. Establish verification method (CCTV-PACP)
  - d. Establish payment method and schedule
  - e. Include the time frame for completion and possible liquidated damages if not completed on time
  - f. Establish mandatory pre-bid meeting to:
    - i. Ensure that everyone understands your expectations
    - ii. Interview the bidding Contractors
    - iii. Eliminate bidders claiming they were not informed of something and did not bid accordingly and who may request unsubstantiated extras during the project
    - iv. Ensure that there are interested bidders knowledgeable about your project and not an uninformed bidder, etc.
    - v. Establish method to work out differences to prevent issues later in project
  - g. Define required deliverables
  - h. Establish payments/ responsibility/ location for water usage and
    - i. Helps prevent change orders and issues with inspections
    - ii. Establishes when and how work may be billed
    - iii. Outlines which party is responsible for each activity
    - iv. Define liability for damages to help prevent defaults and lawsuits
  - i. Define liability for stuck equipment and damaged utility
    - i. Make it clear, who will retrieve stuck equipment and who will pay for retrieval of equipment and repair of sewer
    - ii. Established when each party is responsible

6. Publish Project Notice in local, regional papers, plan houses, etc.
7. Pre-qualify Potential Bidders
  - a. Review Bids
  - b. Check References
  - c. Verify quality of work / timeliness and quality of deliverables
  - d. Verify Certifications and experience
8. Hold Mandatory Pre-Bid Meeting
9. Receive and Open Bids
10. Review Bid Packets and Make Award Recommendation
11. Award Bid
12. Issue Notice of Award
13. Receive and Review Contract Required Documents (insurance, bond, etc.)
14. Issue Notice to Proceed
15. Hold Mandatory Pre-Construction Meeting to include Field Personnel
  - a. See Mandatory Pre-bid and Pre-construction Project Meetings
  - b. Reinforces all issues in contract and clarifies any questions from field personnel
16. Begin Project
17. Weekly Update Meetings
  - Deals with Problems and issues early
18. Receive Lien Release(s)
19. Issue Notice of Completion
20. Issue Final Payment
21. End Project Meeting
22. Close Project



## **MANDATORY PRE-BID/PRE-CONSTRUCTION AND PROJECT MEETINGS**

Making these meetings are mandatory and will ensure the full understanding and project requirements by both the Contractor and Owner.

### **PRE-BID MEETINGS**

**CONTRACTORS MUST ATTEND A MANDATORY PRE-BID CONFERENCE** at the (Location) located at (Address) at (Time/Date) to discuss the Bidding Documents. **CONTRACTORS WHO DO NOT ATTEND THE PRE-BID CONFERENCE WILL BE DISQUALIFIED FROM THE BIDDING PROCESS.**

The purpose of this **MANDATORY PRE-BID** meeting is to ensure that all companies bidding on the project fully understand the scope of work, definitions and interpretation of all items in the bid documents. Questions may be answered at the MANDATORY PRE-BID; However all questions will be required to be submitted in writing by (Date) to the (Owner and email address) and will be addressed in addendum, Questions and answer will be distributed to all attendees at the **MANDATORY PRE-BID** meeting.

### **PROJECT MEETINGS**

- A. Pre-Construction Meeting - **MANDATORY See attendance requirements below**
- B. Progress Meetings - **Attendance requirement to be determined by the Owner prior to the scheduled meeting.**
- C. Project Completion Meeting - **Attendance requirement to be determined by the Owner prior to the scheduled meeting.**

### **MANDATORY PRE-CONSTRUCTION MEETINGS**

The Owner will schedule a Pre-Construction Meeting to:

- A. Finalize communication and coordination protocols
- B. Review the Final Planning Document with special attention to:
  - 1. Schedule
  - 2. Public notification
  - 3. Traffic control
  - 4. Flow control
- C. Discuss the ensuing field work prior to starting the project. This meeting may be held at a location designated by the Owner. The purpose of this meeting is to ensure that the successful bidder fully understands and will comply with all contract documents and Owner requirements.

### **Guidelines for the Pre-Construction Meeting**

- A. Schedule: No later than 15 days after date of Notice to Proceed
- B. Location: A central site, convenient for all parties, designated by the Owner

C. Attendance:

1. Owner or Owner's Representative
2. Owners Inspector
3. Supervising Engineer
4. Contractor's Representative
5. Contractor's Project Manager or Representative
6. Contractor's Superintendent
7. Major Subcontractors
8. Major Suppliers
9. Others, as appropriate

D. Suggested Agenda

1. Distribution and discussion of
  - a. List of Major Subcontractors and Suppliers
  - b. Projected construction schedules
2. Critical work sequencing
3. Major equipment deliveries and priorities
4. Project coordination
  - a. Designation of responsible personnel
  - b. Communication protocol
5. Procedures and processing of
  - a. Field decisions
  - b. Requests for Information
  - c. Submittals
  - d. Deliverables
  - e. Change Orders
  - f. Applications for Payment
6. Procedures for Maintaining Record Documents
7. Use of premises
  - a. Office, work and storage areas
  - b. Owner's requirements
8. Construction Facilities, Controls and Construction Aids
9. Temporary Utilities



## PART 1 - GENERAL

### 1.1 SCOPE OF SERVICES AND WORK PHASING

- A. The purpose of this bid is to obtain competitive unit prices for all labor, material, and equipment necessary to inspect via closed-circuit television (CCTV) existing sewers. The work includes remote televising and recording of the sewer. All project locations will be within the Owner's service area.
- B. The work to be completed on each section of sewer will be performed in phases as defined in the following:
  - 1. Phase 1: Inspection.
    - a. Sewer sections shall be inspected by means of remote CCTV. If a blockage hampers the inspection of the sewer in one direction, then the Contractor shall attempt to complete the section by televising from the other manhole to complete the section. The Contractor must immediately report the obstruction to the Owner or his representative (hereinafter referred to as "Owner"). All CCTV work shall conform to Current NASSCO-PACP standards.
    - b. CCTV inspections will be delivered entirely in electronic format.
      - 1. All PACP Header information shall be completed in accordance with PACP Guidelines. In addition to mandatory Header fields, additional fields are required as noted on the attached Header Field Matrix.
      - 2. The documentation of the work shall consist of PACP CCTV Reports, PACP database, logs, electronic reports, etc. noting important features encountered during the inspection. The speed of travel shall be slow enough to inspect each pipe joint, tee connection, structural deterioration, infiltration and inflow sources, and deposits, but should not, at any time, be faster than 30 feet per minute, except as noted otherwise in this document.
      - 3. The camera must be centered in the pipe to provide accurate distance measurements to provide locations of features in the sewer and these footage measurements shall be displayed and documented on the video. All PACP Observations shall be identified by audio and on PACP log. All video must be continuously metered from manhole. The pipe should be clean enough to ensure all defects, features and observations are seen and logged. If cleaning is required, see NASSCO Performance Specification Guideline for Sewer Pipe Cleaning.
  - 2. Phase 2: Sewer Pipe Cleaning. Based on the Owner's review, he or she will determine if additional work will be required. The Owner, at his sole discretion, will

either declare the work on the particular sewer section complete or notify the Contractor of additional work (i.e. Phase 3: Light Sewer Cleaning, Heavy Cleaning, Deposit Cut, Root Cut Medium, Root Cut Ball, or Lateral Cut). See NASSCO Performance Specification Guideline for Sewer Pipe Cleaning.

3. Phase 3: Additional Sewer Pipe Cleaning (Optional). The Contractor shall perform the assigned additional work, which may be any one of the following items: Light Sewer Cleaning, Heavy Cleaning, Deposit Cut, Root Cut Medium, Root Cut Ball, or Lateral Cut.
4. Phase 4: Post Cleaning Inspection. Final televising of the sewer section to evaluate the condition of the sewer section after all cleaning has been performed in phase 3. Phase 4 will be required to be performed and will be reimbursed at the bid unit price.
  - a. The recorded video must show the entire circumference of the sewer. Any flow control to remove standing water and debris shall be incidental to the contract. It is not the intent of this specification to require bypass pumping to control heavy flow; however, the Contractor must, at a minimum, make reasonable effort to control the flow. The Contractor must also consider weather conditions to obtain the best video image of the sewer. This may require the Contractor to delay any video work after major rain events until the system can return to lower dry weather flow. The Contractor shall submit PACP data to include the electronic video reports, logs, etc. for the Owner's review as required in Part 1 Section 6.
  - b. The sections of sewer to be cleaned and televised through this contract will be located primarily within the paved areas of the public right-of-way; however, there may be some sewer sections that are located within public easements on private property. The successful bidder will be responsible to coordinate and gain access to any and all sewer sections and will be responsible for any restoration in accordance with Part 3 Section 3.7. This will include written authorization between Contractor and landowner. Costs associated with access will be included with other items bid in this contract.
- C. The Contractor shall furnish all labor, components, materials, tools, and appurtenances necessary for the performance and completion of the contract.
- D. Award of the contract will be determined through an evaluation of bids and in the best interest of the Owner.
- E. The Contractor will be held fully liable for any damages incurred that are caused by his or her negligence.
- F. Patents, Trade Secrets, and Copyrights: The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the work or



the incorporation in the work of any invention, design, process, product or device which is the subject of patent rights, trade secrets protection rights, or copyrights held by others. The Contractor shall indemnify and hold harmless the Owner and Engineer and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorney's fees and court and arbitration costs) arising out of any infringement of patent rights, trade secret protection rights, or copyright incident to the use in the performance of the work or resulting from the incorporation in the work of any invention, design, process, product or device not specified in the contract documents, and shall defend all such claims in connection with any alleged infringement of such rights.

## 1.2 OWNER

This contract will be administered and performed under the direction and inspection of the Owner or his designated representative. Questions pertaining to this contract, before and after award, should be directed to the Owner at (Phone Number) and (e-mail address)

## 1.3 TIME OF PERFORMANCE, SCHEDULING AND LIQUIDATED DAMAGES

- A. Upon award of the contract, the Contractor shall CCTV at least three (3) segments or 1,000 feet of pipe and submit the data to the Owner to verify that the CCTV database is compatible with the Owner's PACP Database, and the deliverables are acceptable to the Owner. The Owner shall verify acceptability of the deliverables within five (5) business days of receipt. After the Owner verifies compatibility of the inspection deliverables including the database, the Owner shall then issue to the Contractor a written "Notice to Proceed" including a date for commencement of work. The Contractor shall begin work on the date stated in the written "Notice To Proceed" (but no later than 10 calendar days after receipt) with an adequate force and sufficient resources to demonstrate due diligence in the performance of the contract.
- B. It is understood that the bidder may have other contracts with the Owner during the period of this contract. By bidding this work, the bidder is agreeing to provide an adequate number of crews in order to perform the work concurrently with due diligence and as specified in his approved schedule.

## 1.4 COMPLIANCE AND ACCEPTANCE

- A. Compliance with this contract shall be complete when all conditions set forth in these specifications have been met. The following defines each work item, the level of effort, and quality of work that will be necessary to meet the intent of this specification.

B. Television Inspection

1. As in the initial survey television inspection pay item, CCTV inspections will be delivered entirely in electronic format.
2. All CCTV work shall conform to the most current NASSCO PACP standards. The documentation of the work shall consist of NASSCO PACP CCTV Reports, NASSCO PACP database, logs, electronic reports, etc. noting defects and observations encountered during the inspection.

## 1.5 REFERENCED DOCUMENTS

A. All work must also conform to the latest edition of the following specifications (as required in advance by the Owner)

1. NASSCO PACP Standards
2. State Department of Transportation, Construction and Materials Specification
3. Rules and Regulations and Standard Drawings
4. Rules and Regulations of the Office of the City/County Engineer
5. Others, as required

B. Liability and Assumptions

In order to minimize and appropriately allocate costs and risks, it is in the best interest of all contracted parties (Owner and Contractor) and prospective parties (i.e. Bidders) to understand thoroughly the risks associated with any particular project. For that reason we will define herein, what is standard practice in the procurement and completion of sewer cleaning and inspection so that everyone involved can effectively assess their obligations, risks and duties. Liability for removal of equipment that becomes stuck in the sewer should be discussed in the contract.

1. Negligence Caused – Contractor
2. Owner Decision to proceed after concerns raised – Owner
3. Unforeseen Hazard (I.E. hole in pipe under flow line and not visible) – To be discussed in advance to mutually agree upon liability based on the CCTV leading up to the hazard.

C. Assumptions

1. It is reasonable and customary to assume the following, unless otherwise detailed in writing:
  - a. The Owner has provided the Parties (Contractor and/or Bidders), in writing, with all of the information that the Owners possess that would allow the Parties to accurately and fully assess the entire scope of the project.
  - b. The Owner possesses or has contracted the services of a person or entity who possesses the knowledge, expertise and experience to fully understand the scope of the service for which they are attempting to contract with the Parties.
  - c. The Parties are knowledgeable, capable and legally authorized to contract for the services in question.



- d. The infrastructure for which the services are requested are in suitable condition to allow for the activities which are usual and customary for the services requested without undue risk to the Parties equipment or personnel, unless otherwise described by the Owner in writing.

#### D. Liabilities

Should it be found during initial investigation and/or during the course of performance that conditions are different than those which are typical and customary and outside of the assumptions listed above, the Contractor may negotiate a reasonable change in terms. If the Owner and the Contractor cannot agree on a change in terms, the Owner reserves the right to re-bid or cancel such work.

#### E. Notification

1. If observed defects are believed to be such that further operations may compromise the structural integrity and/or cause the pipe to become unusable, the Contractor must provide written communication to the Owner's designee of the observed condition(s) and reason to believe that continued operations may cause substantial damage. The Owner will then direct the Contractor as to what services, precautions, etc., the Owner will require of the Contractor. If the contract documents do not address this potential, then the Owner and Contractor will negotiate in good faith, the conditions under which the work is to continue or cease to continue.
2. This exception may only be used to prevent asset damage and shall not be used to eliminate difficult or adverse areas that were previously documented in these documents or by prior written communication with the Owner.

### 1.6 SUBMITTALS

- A. All submittals are due as scheduled. Work will not proceed until all submittals are received and approved. The Owner reserves the right to adjust the due dates of the submittals based on Contractor performance. The Contractor shall label each submittal indicating what is represented, name of Contractor, and project number. All submittals identified as being in error shall be re-performed and corrected at the Contractor's expense.
- B. Submittals Required with Bid Documents include:
  1. List of references per Part II Section 7
  2. Documentation of Certification of PACP Software
- C. Liability Insurance
  1. The Contractor's commercial general liability limits must be not less than \$\_\_\_\_, total occurrence limit
  2. Liability Insurance. Seven (7) days prior to the pre-construction meeting, the Contractor shall submit written evidence that it has obtained commercial general liability limits must be not less than \$\_\_\_\_, total occurrence limit. Owner shall be

named as an additional insured with respect to General Liability, and shall identify additional insured parties, such as the General Contractor, as applicable, with respect to General Liabilities

- D. Submittals required of the Successful Bidder seven (7) days prior to the Pre-construction Meeting
  - 1. Name of the project supervisor and resumes
  - 2. Documentation of NASSCO PACP certification for all CCTV operators, database and software
  - 3. Site Safety Plan. A complete site safety plan, specific for the project, must be submitted one week prior to the pre-construction meeting. Work will not begin until an approved site safety plan is in place
  - 4. Sample inspection CCTV data and video or data from other approved inspection method
- E. Submittals Required for the Pre-construction Meeting
  - 1. An initial comprehensive schedule of work, see Part IV, Paragraph D (To be approved by the Owner)
  - 2. Management Organization: Provide an organization chart depicting the essential organizational elements and senior personnel of the proposed Contractor and the functions and interrelationships of the personnel proposed to provide technical support, project management and supervision for this project. Provide succinct resumes of the personnel proposed to provide technical support and project management for this project. The personnel designated in the management summary for essential positions shall not be changed except with the permission of Owner. The Owner will only approve such a change when, in its opinion, the substitute personnel have equal or greater qualifications and experience to those intended to be replaced
  - 3. Proof that Contractor is an approved/bonded Contractor with the Owner
- F. Submittals Required One Week Prior to Any Cleaning & Televising Work
  - 1. Site specific site safety plan addenda
  - 2. Entry releases, if applicable
- G. Weekly Submittals
  - 1. Detailed updates to the work schedule will be provided to the Owner no later than 1:00 p.m. on the Friday preceding the next week's cleaning and televising work
  - 2. Electronic data and video/scan submittals, logs, and / or electronic worksheets submitted seven (7) days prior to work. All field paperwork must be submitted before the Contractor's invoice will be processed for payment
  - 3. Corrections to punch list items as required by the Owner to fulfill the requirements of this specification
- H. Final Submittals Prior to Payment
  - 1. Corrections to punch list items as required by the Owner to fulfill the requirements of this specification



## PART 2 - SPECIAL PROVISIONS

### 2.1 OWNER RIGHTS

- A. The Owner reserves the right to stop the work when in the Owner's judgment the Contractor's work or activities are threatening the health and safety of the public or endangering the environment or endangering the waters of the state. Work shall not proceed until a satisfactory resolution has been achieved, according to the Owner.
- B. No Contractor or Subcontractor will perform any work not specifically identified in the work schedule unless approved by the Owner. Notification of such work must be received no later than 8:00 a.m. on the day the work is to be performed. A list of persons available to be notified will be given at the pre-construction meeting.

### 2.2 EMERGENCY RESPONSE

The Contractor shall provide direct contact information to the Owner. These numbers are intended for the Owner's use in contacting the evening/weekend/holiday emergency work crew for emergencies resulting from the Contractor's actions or lack thereof during this project. This crew shall be responsible for contacting the Owner within one-half hour after the first verbal and electronic notification. If the Contractor's crew has not responded to the site of the emergency within one hour of the first contact, verbal and electronic, the Owner will make all necessary repairs and bill the Contractor for all work performed. Costs related to the emergency response will be incidental to the contract and not measured for payment.

### 2.3 WORKING HOURS

- A. The Contractor must complete all work such that no homeowner is without sewer service, unless otherwise directed by the Owner. Local noise ordinances or agencies having control over roadway closures may control starting or stopping operations. Prior to starting operations, the Contractor shall advise the Owner of the restrictions imposed by the local agencies.
- B. The Contractor may be required to work days, nights or weekends to achieve the lowest depth flows in the sewer pipes and not conflict with public events.
- C. **No work will be allowed on weekends or holidays** except at the discretion of the Owner.

## 2.4 DECREASE/INCREASE IN SERVICE AND STOP WORK DUE TO INCLEMENT WEATHER

The Owner, at its option, may increase or decrease any or all service requirements provided for under this contract. The Owner further reserves the right to suspend or stop the performance of any or all of the work of this contract due to inclement weather conditions.

## 2.5 PRE-CONSTRUCTION MEETING

A. Following award of the contract and before starting any work the Contractor, Job Superintendent/Project Manager, and Crew Leader shall meet with the Owner. The Contractor will be notified of the date, time, and place of the meeting.

B. Attendance:

1. Owner
2. Owner's Inspector
3. Engineer
4. Contractor's Representative(s)
5. Major Subcontractors
6. Major Suppliers
7. Others, as appropriate

C. Agenda:

1. Distribution and Discussion
  - a. List of major Subcontractors and Suppliers
  - b. Projected Construction Schedules
2. Critical Work Sequencing
3. Major Equipment Deliveries and Priorities
4. Project Coordination
  - a. Designation of responsible personnel
5. Procedures and Processing
  - a. Field decisions
  - b. Requests for Information
  - c. Submittals
  - d. Deliverables
  - e. Change Orders
  - f. Applications for Payment
6. Procedures for Maintaining Record Documents
7. Use of Premises
  - a. Office, work and storage areas
  - b. Owner's requirements
8. Construction Facilities, Controls and Construction Aids



9. Procedures for reporting Sanitary Sewer Overflows (SSOs)
10. Temporary Utilities

## 2.6 CLOSE-OUT PROCEDURES

Progress Meetings: Project closeout will be completed in phases by project. The Owner will hold progress meetings at predetermined intervals, or as determined necessary by the Owner. Items covered in the meetings include the following.

1. Punch List: This list will detail all items requiring correction, repair, or improvements in order to be accepted. The Contractor will address these items within 7 calendar days or as specified by the Owner. Failure to complete punch list items will result in a stop work notice and delay of payment until completed to the satisfaction of the Owner.
2. Reports and Submittals: Final reports, post-tapes and other submittals previously described will be finalized and submitted.
3. Review of the status of pay estimates.
4. Issue project worksheets, as necessary.
5. Work scheduling issues.

## 2.7 PRE-QUALIFICATIONS

- A. The successful bidder must have an onsite field supervisor with a minimum three (3) years of experience specializing in the televising of sewers. A foreman for each crew performing television inspection with a minimum of five years of experience specializing in that type of work may be substituted for the onsite field supervisor requirement. The Contractor shall provide the names, titles, phone numbers and addresses of a minimum of two references that can be used to verify this experience. The references must be contract managers or persons of authority over cleaning and televising work performed by the Contractor.
  1. The Contractor shall also provide five (5) similar projects with inspection equipment as proposed for this project.
  2. The Contractor must have foreman or supervisors meeting all pre-qualifications for the duration of the contract.
- B. PACP Requirements
  1. Current NASSCO PACP certification of all CCTV operators, working on this project, will be required for all CCTV work.
  2. Database shall be an NASSCO-PACP (Current Version) Certified Access Database.
  3. CCTV Software shall be NASSCO-PACP (Current Version) certified.
  4. CCTV inspections (Video and Data Collected) will be delivered entirely in digital format.

## **PART 3 - GENERAL PROVISIONS**

### **3.1 MAINTENANCE OF TRAFFIC**

- A. The Contractor shall be responsible for maintaining "local" traffic at all times and for notifying the proper authorities regarding the closing of the roads. The Contractor will be responsible for obtaining all permits required for maintenance of traffic.
- B. The Contractor shall not begin work until standard barricades and warning signs are in an acceptable position and the markers and signs conform to the Federal Highway Administration (FHWA) "Manual of Uniform Traffic Control Devices for Streets and Highways" and all applicable state and local requirements. The Contractor assumes all responsibilities and liabilities regarding strict adherence to applicable sections for the maintenance of traffic and public safety as set forth in the FHWA "Manual of Uniform Traffic Control Devices for Streets and Highways", and other applicable regulations. All traffic control devices must be in place prior to starting work.
- C. The cost of all traffic control devices shall not be paid separately, but shall be included in the other price items in the contract.
- D. The Contractor shall maintain local traffic at all times during all phases of this project in a manner causing the least amount of inconvenience to the abutting property Owners. Temporary driveways, temporary roadways, or run around as may be necessary to provide vehicular access to and from the abutting properties shall be constructed, maintained, and subsequently removed by the Contractor as directed by the Owner.
- E. The portion of the pavement not affected by the work shall be kept clear of all material and equipment.
- F. The Contractor shall hold harmless the Owner and all its representation from all suits, actions, of claims of any character brought on account of any injuries or damages sustained by any person or persons or property in the performance of this contract.
- G. If at any time traffic has to be blocked (emergencies only), the Contractor shall notify the nearest fire, police departments and service departments.
- H. The cost of maintenance of traffic shall be incidental to the contract and not measured for payment.

### **3.2 EXISTING UTILITIES**

- A. The Contractor must take the necessary precautions for the protection of any utility encountered on the project or the restoration of any utility damaged during the work.



- B. If an excavation is required, the Contractor shall notify, at least 48 hours before breaking ground, all public or private service corporations having wire, poles, pipes, conduit, manholes, or other structures that may be affected by this operation, including all structures which are affected and not shown on these plans. Owners of underground utilities, which are members of the state's one call service, can be notified by calling. Non-member underground utility Owners must be called directly.
- C. All maintenance, repair, and replacement of existing utilities shall be in accordance with the rules and regulations of the various utility companies having jurisdiction.
- D. All existing storm sewers, driveway drains, surface drain pipes and other property, removed or damaged during construction shall be repaired and reconnected by the Contractor as directed by the Owner at no additional cost to the Owner.

### 3.3 REQUEST FOR SUPPLEMENTARY INFORMATION

- A. It shall be the responsibility of the Contractor to make timely requests of the Owner for supplemental information, which should be furnished by the Owner under the terms of this contract, and as required in the planning and execution of the work. Such requests may be submitted from time to time as the need approaches, but each shall be filed in ample time to permit appropriate action to be taken by all parties involved to avoid delay.
- B. Each request shall be in writing, and list the various items and the latest day by which each will be required by the Contractor. The first list shall be submitted within two (2) weeks after contract award and shall be as complete as possible at that time. The Contractor shall, if required, furnish promptly any assistance and information the Owner may require in responding to these requests of the Contractor. The Contractor shall be fully responsible for all delays arising from failure to comply with this section.

### 3.4 USE OF PREMISES

- A. The Contractor shall not trespass upon or in any way disturb private property without first obtaining written permission from the property Owner and/or Owner or Prime Contractor as appropriate to do so. A copy of such written permission shall be furnished to the Owner prior to accessing the site.
- B. It shall be the Contractor's responsibility to work equipment around poles, trees, or other obstructions and to do so at his own expense.
- C. If the Contractor finds it necessary to obtain additional working area, it shall be the Contractor's responsibility for its acquisition.

- D. The Contractor shall, at no additional expense, restore such property to the original condition in the sole and unfettered opinion of the system Owner. The Contractor must take photographs and/or videos of existing properties prior to disturbance of each property, and make a copy available to the system Owner.
- E. All items within the street right-of-way or sewer easement shall be removed, or removed and replaced, or restored as directed by the Owner.
- F. The Contractor shall ensure all employees have a badge or visible identification during any time that they on the project site or within private property. This identification must be worn so that it is readily recognized and readable to the public.

### 3.5 PROTECTION OF TREES

The Contractor shall avoid any unnecessary damage to trees. Branches which overhang the project limits and which interfere with the operation of equipment shall be tied back to avoid damage, if possible. Where injury to branches is unavoidable, the branches shall be sawed off neatly at the trunk or main branch, and the cut area shall be protected with approved pruning spray immediately. The Contractor at no additional expense shall remove any trees damaged beyond saving, and make restitution to the Owner (public or private).

### 3.6 FENCING

Any fences, including hedge and shrubs, that need to be removed to facilitate the work shall be replaced, in kind or with repairs satisfactory to the Owner, at the Contractor's expense. Replacement of fences, hedges, and shrubs shall be considered incidental to the contract and not measured for payment.

### 3.7 RESTORATION

- A. All roadway berms and drainage ditches disturbed by the work shall be restored, reshaped, and graded to drain.
- B. Pavement restoration, if necessary, shall conform to the Owner's regulations, or the Owner's Specifications depending upon who has jurisdiction for the street. Trench backfill and compaction shall be in conformance with the local street restoration jurisdiction.
- C. The remediation of sunken trenches caused by activities conducted in this contract shall be the Contractor's responsibility. Sunken areas shall be backfilled and compacted to meet adjoining grades; the surface shall be re-seeded or resurfaced with asphalt or concrete matching the existing surfacing.



- D. The Contractor shall restore unpaved areas by seeding and mulching. No direct payment will be made for seeding and mulching.
- E. Driveways shall be restored in accordance with Owner's regulations, or the Owner's Specifications depending upon who has jurisdiction for the driveway.
- F. All disturbed areas shall be restored as nearly as possible to their original condition.
- G. All restoration shall be completed in strict accordance with the appropriate items of the specifications as directed by the Owner.
- H. The cost of all restoration of streets, drives, walks; sod, etc. shall be incidental to the contract and not measured for payment.
- I. Restoration shall be kept current with the project work. Failure to keep restoration of these items completed reasonably close shall result in a stop work notice and delay of payment until such restoration is completed to the satisfaction of the Owner.

### 3.8 CLEANUP

The Contractor shall keep the work area in an uncluttered condition by the frequent removal of debris. The Contractor shall remove all debris and unused material and leave the area in a condition similar to the condition of the area before any work was performed.

### 3.9 PROPERTY DAMAGE

- A. The Contractor shall immediately investigate any and all reports of sewage backing up into fixtures served by the sewer section that is being cleaned or televised.
- B. The Contractor will be required to notify the Owner immediately if he causes any damage to private or public property caused by activities related to this contract. The Contractor shall make repairs and/or clean the property immediately in a timeframe that is acceptable to the Owner.

### 3.10 ACCESS TO MUNICIPAL WATER SUPPLIES

Should be addressed by individual Owner.

## **PART 4 - EXECUTION**

### 4.1 GENERAL

- A. The Contractor shall furnish and maintain, in good condition, all cleaning and televising equipment necessary for proper execution of the work.

- B. Maintaining Flow: It will be the responsibility of the Contractor, throughout the tenure of this contract, to provide and maintain sufficient flow at all times to pass any flash of storm flow of drainage ditches and prevent any backwater flooding due to obstruction caused by cleaning or CCTV equipment.
- C. Retrieval of Materials and Equipment: It shall be the Contractor's responsibility to remove materials and equipment that has been lodged in the sewer from cleaning, television inspection, or point repair excavations.
- D. Work Schedule. This schedule shall outline the sequence in which the Contractor proposes to conduct his operations and shall be approved by the Owner before work is started. The Contractor shall use a time-scaled logic diagram format. The level of detail of activities shall provide clear, concise communication of the plan of work. At a minimum, activities showing initial mobilization, start-up, cleaning and televising, and any resultant point repairs shall be included.
- E. Original and updated schedules must be provided to the Owner in writing. The software used for producing the schedules must have the capability to tailor the form and format of schedules, and accompanying reports, to the Owner's requirements.
- F. The Owner may require additional updates to the schedule as changes occur. These additional updates will be submitted to the Owner within 24 hours of the request. Changes to the schedule are subject to approval of the Owner.

#### 4.2 TELEVISION INSPECTION AND COMPUTERIZED EQUIPMENT

- A. The Contractor shall use a color pan and tilt camera or a side wall scanning (panoramic) camera specifically designed and constructed for sewer inspection. Each sewer to be televised shall be suitably isolated to control flow during the inspection. The Contractor shall provide a recording of the televised sewer inspection, locating each sewer service connection entering the sewer.
- B. Lighting for the pan and tilt camera or side wall scanning camera shall provide a clear picture of the entire periphery of the existing sewer.
- C. The pan and tilt camera shall pause, pan, and visually inspect all service connections, pipe ends, and maintenance or structural defects. If utilizing a camera with side wall scanning capabilities, pausing and panning of each lateral is not necessary during the inspection if the image clearly depicts the inside of the lateral for post processing. If a blockage cannot be removed and hampers the televising of the sewer in one direction then the Contractor shall attempt to complete the section by televising from the other manhole to complete the section, this reversal should immediately follow the initial direction. The Contractor must immediately report the obstruction to the Owner.



- D. Side wall scanning inspection systems are imaging cameras that are capable of a continuous 360 degree image capture of the wall of the pipeline being inspected. These systems may have one or multiple cameras to capture the complete interior view of the pipeline. Due to the high resolution of the image quality, the inspections may be conducted at a higher speed than color pan and tilt CCTV method. Once the pipeline inspections are completed, the captured images can be linked with a companion software package that allows for identifying and coding defects and features in the pipeline. Typically these systems provide a fold flat view and a perspective view (typical of CCTV) of the pipeline.
- E. If the image quality is not adequate for post-inspection coding, the Contractor shall be required to repeat the survey at the Contractor's expense.
- F. The Contractor shall perform all CCTV inspections in accordance with NASSCO's Pipeline Assessment Certification Program (PACP). CCTV inspections will be delivered entirely in electronic format. The entire survey shall be recorded in an approved electronic format submitted with electronic links between the data and the video. All television inspection reports shall be with-in +/- two (2) feet of the measured linear footage between manholes along the existing sewer centerline from the start of pipe to end of pipe. All Owner and PACP required header information must be fully and accurately entered on all CCTV reports. Work not following these specifications may be rejected for payment and the Contractor may be required to re do the work.
- G. The Contractor shall provide a PACP certified operator on site at all times during the entire survey. If video is to be coded separately from the actual recording, both the onsite Operator and the individual performing the PACP coding shall be PACP certified. The Contractor shall provide proof of certification prior to commencement of work, prior to a change in personnel involved in data collection, and as requested by the Owner
- H. CCTV Reports, logs, electronic reports, and worksheets must include the following information and conform to the applicable guidelines:
  - 1 CCTV Reports, NASSCO PACP Certified Database, and electronic worksheets must accompany all inspection work.
  - 2 All Owner and NASSCO PACP required header information must be fully and accurately entered on all CCTV reports.

## PART 5 - PAYMENT FOR WORK

### 5.1 MEASUREMENT AND PAYMENT

- A. In cases where the sewer is entirely inspected manhole-to-manhole, payments will be based on the measured linear footage between manholes along the existing sewer centerline from manhole wall to manhole wall at the unit price submitted on the unit price page.
- B. All invoicing will be by sewer segment, and payment and will be made when all punch list items and rework are completed for each Sewer Segment. Additional work shall be invoiced and paid upon completion.
- C. The following items of work will not be measured for payment but the cost thereof will be considered as incidental to the contract:
  - 1 Data entry, computerized equipment, software, and hardware to submit the required electronic submittals, including the DVDs, records, and logs.
  - 2 Completion of all electronic forms.
  - 3 Photographic equipment and supplies used to show sewer pipe and manhole defects.
  - 4 Bypass pumping and flow control where required by the Contractor to perform his or her work.
  - 5 Providing temporary and final paving at any proposed excavations.
  - 6 Providing temporary and final restoration of grass areas.
  - 7 Emergency after-hours response.
  - 8 Re-televising and re-cleaning following a point repair completed by the Contractor.
  - 9 Demobilization and mobilization because of suspension of work.
  - 10 Updates to the schedule as required by the Owner.
  - 11 Right of entry access to private property.
  - 12 Dye testing of service connections in order to meet the CCTV specification.
- D. In order for the Owner to properly and accurately track costs of the contract, the Contractor shall submit the final invoice on each project within 30 days after the completion of the project.
- E. Performance and Payment Bond: The bond securing the performance of the contract shall be effective for the full maximum period of the contract including the optional renewal period(s) specified. The bond amount indicated shall be deemed adequate surety for the initial and optional renewal periods. The cost of performance surety shall be treated as an overhead expense and shall be included in the bid amounts. The Owner shall not pay the cost of surety as a direct bill item.

**\*\*END OF SECTION\*\***



The following is an example of a Header Field Checklist requiring non-mandatory PACP fields within the specification. The specification writer is responsible for determining which additional fields are required.

### HEADER FIELD CHECKLIST

Field #	Header Field	Mandatory	Required for this Project
1	Surveyed By	X	
1a	Certificate No.	X	
2	Owner		
3	Customer		
4	Drainage Area		
5	Sheet Number	X	
6	P/O Number		
7	Pipe Segment Ref.		X
8	Date	X	
9	Time		
10	Street	X	
10a	City	X	
11	Location Details		
12	Upstream MH No.	X	
13	Upstream MH Rim to Invert		X
14	Upstream MH Grade to Invert		X
15	Upstream MH Rim to Grade		X
16	Downstream MH No.	X	
17	Downstream MH Rim to Invert		X
18	Downstream MH Grade to Invert		X
19	Downstream MH Rim to Grade		X
20	Sewer Use		X
21	Direction	X	
22	Flow Control		
23	Height	X	
24	Width	X	
25	Shape	X	
26	Material	X	
27	Lining Method		
28	Pipe Joint Length		X
29	Total Length		X
30	Length Surveyed		X
31	Year Laid		
32	Year Renewed		
33	Media Label		
34	Purpose		
35	Sewer Category		
36	Pre-Cleaning	X	
36a	Date Cleaned		
37	Weather		
38	Location		
39	Additional Info.		
40	W/O #		
41	Project		
42	Pressure V		

**CCTV CONDITION SURVEY BID SHEET (SAMPLE)**

<u>WORK TYPE</u>	<u>PIPE SIZE</u>	<u>ESTIMATED FOOTAGE</u>	<u>PRICE PER FOOT</u>	<u>TOTAL PRICE</u>	<u>TOTALS</u>
INSPECTION	6" TO 12"			0	
INSPECTION	13" TO 24"			0	
INSPECTION	25" TO 30"			0	
INSPECTION	Over 30"			0	
<b>TOTAL BID</b>					0



# **CURED-IN-PLACE PIPE (CIPP) LATERAL PIPE LINING (Not at the Main to Lateral Connection)**

## **PERFORMANCE SPECIFICATION GUIDELINE (PSG)**

November 2017



**Thanks to the following participants for the development of this document:**

Brendan Doyle – BLD (Chair)  
Jason Walborn – Pro-Pipe (Co-Chair)  
Ted DeBoda – NASSCO  
Marc Anctil – Logiball  
Carl Marc-Aurele – Formadrain  
Tim Back – Back Municipal Consultants  
Frank Kendrix – Insituform  
Jonathan Kunay – CDM/Smith  
Daniel MaGill – Avanti  
Dean Monk – Pro-Pipe  
Bill Moore – AOC  
Kevan Taylor – Relining Technologies  
Jacob Trapani – BLD Services

### **Disclaimer**

These Specifications were prepared by a Committee comprised of representatives of NASSCO members and peer-reviewed by industry professionals. These Specifications are not specific to any one product, project, or job site, and should be considered a guideline only. Conditions for use may require additions, deletions or amendments to these guidelines so as to conform to project-specific site conditions and to comply with applicable laws, regulations, and ordinances. NASSCO does not guarantee, certify or assure any result and assumes no liability as to content, use and application of these guidelines.



## Contents

<b>PART 1</b>	<b>- GENERAL</b>	Page	3
1.1	Description of work and product delivery	Page	3
1.2	Performance work statement (PWS) Submittal	Page	4
1.3	Submittals	Page	5
1.4	Quality Control Plan (QCP)	Page	6
1.5	Lateral lining system repair/replacement	Page	6
1.6	Safety	Page	6
1.7	Warranty	Page	7
1.8	Warranty Inspections	Page	7
1.9	Measurement and payment	Page	7
 <b>PART 2</b>	 <b>- LATERAL LINING PRODUCTS</b>	Page	8
2.1	Lateral cured in place pipe (CIPP)		
2.1 A.	General	Page	8
2.1 B.	References	Page	9
2.1 C.	Materials	Page	9
 <b>PART 3</b>	 <b>- EXECUTION</b>	Page	12
3.1	Lateral cured in place pipe (CIPP)		
3.1 A.	General	Page	12
3.1 B.	Preparation	Page	12
3.1 C.	Install	Page	14
3.1 D.	Finish	Page	15

## **PART 1 - GENERAL**

### **1.1 Description of work and product delivery**

- 1.1 A. These Specifications include the minimum requirements for the rehabilitation of laterals as shown on the plans and included as part of these contract documents. These Specifications do NOT include details pertaining to the connection between the lateral pipe and the main line pipe (connection liner).
- 1.1 B. The rehabilitation of laterals shall be accomplished by the installation of Cured-In-Place-Pipe (CIPP). The CIPP liner will extend over the predetermined length of lateral pipeline and may be installed by use of several techniques, including but not limited to:
1. Inversion from the main and/or cleanout, or access pit or manhole
  2. Pull in from the main and/or cleanout, access pit or manhole
  3. Or other Owner approved methods not described within this document
- 1.1 C. The prices submitted by the Contractor shall include all costs for the various bid items necessary for furnishing and installing, complete and in place, the lateral liner in accordance with these specifications, except for those specified otherwise by the Owner.
- 1.1 D. At the discretion of the Owner, the lining system manufacturer will submit to the Owner, a minimum of 14 calendar days in advance of a bid date, all required product information to obtain pre-approval lining system status. Those lining systems that have been pre-approved will not need to be re-submitted as required in the submittal section of these specifications unless any of the lateral lining system components have changed from those pre-approved by the Owner. All other component products will be required to meet the submittal requirements as contained herein.
- 1.1 E. At the discretion of the Owner, the lining system installer will submit to the Owner, a minimum of 14 calendar days in advance of a bid date, all required qualifications information to obtain pre-approval lining system installer status. Those lateral lining system installers that have been pre-approved will be allowed to bid on the specified project scope.
- 1.1 F. The installed lateral lining system shall be free of all defects that will affect the design life, service life and performance of the lateral.
- 1.1 G. The installed lateral lining system shall eliminate water leakage into the lateral and prevent fluids from leaking out of the lateral. If leakage occurs through the lateral lining system or at the ends of the lateral lining system, and exceeds that allowed by ASTM F1216, the liner shall be repaired or removed and replaced as recommended by the manufacturer.
- 1.1 H. The lateral lining system shall be resistant against corrosion and typical chemicals found in domestic sewage, unless otherwise specified in the detailed section of the contract documents. The manufacturer of the lateral lining system shall provide testing data that supports the chemical resistance in accordance with ASTM F1216.



1.1 I. The lateral lining system may be designed to rehabilitate the existing lateral for partially or fully deteriorated design conditions (Owner/Engineer to determine which of the conditions is required for their project), as specified by the Owner, and in accordance with ASTM F1216. Partially deteriorated designs conditions assume the CIPP liner is designed to support groundwater loads only, while Fully Deteriorated design conditions assume the CIPP liner is designed to structurally replace the host pipe. Wall thickness design calculations stamped by a registered professional engineer will be submitted. All physical properties used in the design must be supported by third party testing and documentation for the exact product that is being submitted.

1.1 J. Flow entering the lateral shall be maintained or bypassed if the plugging of flow will adversely affect proper lateral lining system installation and/or the sewerage discharging entity. If there is no cleanout available for such bypass, then the discharging entity will be notified not to use their water for the period of time needed to clean, install, and cure the CIPP lateral lining system.

1.1 K. All lateral lining materials furnished as part of this contract shall be marked with detailed product information, stored in a manner specified by the manufacturer and tested to the requirements of this contract.

**1.2 Performance Work Statement (PWS) Submittal – Product/Contractor Prequalification (if opted by the Owner)**

1.2 A. The Contractor shall submit to the Owner a Performance Work Statement (PWS) and Contractor pre-qualifications package at a predetermined time set by the Owner, which clearly defines the proposed CIPP lateral lining system delivery in conformance with the requirements of the contract documents.

1.2 B. Clearly indicate that the lateral lining system will conform to the project requirements as outlined in the Description of Work, Scope of Work included and as further delineated in these contract documents.

1.2 C. Certify at the time of the bid that the designated items included in the contract documents were visited, inspected and evaluated by the Contractor or Contractor's Representative, prior to submitting a bid.

1.2 D. Where the scope of work is specifically delineated in the contract documents, a detailed installation plan describing all preparation work, cleaning operations, pre-inspections, sewage flow maintenance, traffic control, installation procedure, method of curing, quality control, testing to be performed, final inspection, warranties furnished and all else necessary and appropriate for a complete lateral lining system installation, shall be submitted.

1.2 E. A detailed installation schedule shall be prepared, submitted and conform to the requirements of these contract documents.

1.2 F. The Contractor's experience with the lateral lining system proposed for use in this contract. The name and experience of each lead individual performing work on this contract shall be submitted. If personnel are substituted after bid submittal the name

and experience of the individual shall be submitted to the Owner for approval before starting any work.

### **1.3 Submittals (after contract award)**

**1.3 A.** Product data submittals required for all lateral lining systems proposed for installation under this contract shall include:

1. LATERAL LINING SYSTEM material type and manufacturer to be used including: catalog data sheets, standard references, material composition, manufacturers recommended specifications, component physical properties and chemical resistance.
2. Manufacturer's detailed description of the recommended procedures for handling and storing materials
3. Manufacturers detailed description of the recommended lateral lining system installation process
4. Copies of independent testing performed on the CIPP liner composite verifying the product meets the requirements as specified in these contract documents and the manufacturers design.
5. By-Pass Pumping Plan if applicable to the lateral lining system being installed.
6. Traffic Control plan, if applicable for the lateral lining system being installed.
7. Certified statement, from the manufacturer, that the contractor/installer is an approved installer of the lateral lining system with certificates of completed training for each crew member involved in each rehabilitation component. This requirement shall comply with the specific lateral lining system requirements specified in the contract documents
8. Submittal of all quality assurance documentation and test reports for lateral lining system installed. (After Rehabilitation Completion)
9. CIPP wall thickness design calculations based upon ASTM F1216 assuming either Fully or Partially Deteriorated conditions,. The designs will be stamped by a Professional Engineer.
10. Wetout and cure logs per liner providing details pertaining to the resin type and quantity, catalyst type and quantity, tube type, installation pressures, temperatures and times (as applicable to the curing lateral lining system utilized), and pertinent Owner/User project specific data.
11. Third party testing to support the physical properties used in the design calculations for the liner wall thickness, chemical resistance and sealing data (when applicable).
12. Health and Safety plan detailing the site specific safety requirements.



13. Qualifications of the Contractor to install the lateral lining system.

14. Qualifications of the proposed lateral lining system to meet the requirements of the Contract.

#### **1.4 Quality Control Plan (QCP)**

1.4A. A detailed quality control plan (QCP) shall be submitted to the Owner in accordance with section 1.3

- i. Proposed procedures for quality control, frequency of sampling, product sampling and testing shall be defined.
- ii. Proposed methods and procedures for lateral lining system repair or replacement, (as defined in Section 1.5) in the event of product defects or failure.

#### **1.5 Lateral lining system repair/replacement**

1.5 A. Due to defects in preparation and/or installation, lateral lining systems will occasionally need to be repaired or partially replaced. The Manufacturer shall outline specific repair or replacement procedures for potential issues that may occur during the application of the lateral lining system. Repair/replacement procedures shall be as recommended by the lateral lining system manufacturer and shall be submitted as part of the PWS.

1.5 B. Issues, that may not affect the operation and long term life of the product, shall be identified and defined by the Manufacturer.

1.5 C. Repairable issues that may occur in the lateral lining system shall be specifically based on Manufacturer's recommendations, including a detailed step-by-step repair procedure, resulting in a finished product meeting the estimated performance and design life of the component and requirements of these contract specifications.

1.5 D. Un-repairable issues that may occur in the lateral lining system shall be clearly defined based on the Manufacturer's recommendations. The Contractor, together with the manufacturer, shall define the best recommended procedure for the total removal and replacement of the lateral lining system.

1.5 E. The Contractor shall receive no additional compensation for the repair or replacement of lateral lining system deemed non-conforming to the requirements of these contract documents and unacceptable by the Owner.

#### **1.6 Safety**

1.6 A. The Contractor shall conform to all work safety requirements of pertinent regulatory agencies, and shall secure the site for working conditions in compliance with the same. The Contractor shall erect such signs and other devices as are necessary for the safety of the work site.

1.6 B. The Contractor shall perform all of the Work in accordance with applicable OSHA safety standards. Emphasis shall be placed upon the requirements for entering confined spaces.

1.6 C. The Contractor shall have on the job site at all times at a minimum the following safety equipment:

1. Gas monitor capable of testing and detecting for combustible gas, oxygen deficiency and hydrogen sulfide.
2. Confined space access and retrieval winch system.
3. Ventilating fans with large diameter ventilating hose.
4. Safety harness and life lines.
5. Other equipment as may be required for a specific project
6. All equipment to be available for use, in sufficient quantity, by the Contractor, Engineer and Owner for the duration of the project.

1.6 D. All entries into or work within confined spaces shall be conducted in accordance with the U.S. Department of Health and Human Services/National Institute for Occupational Safety and Health [DHHS (NIOSH)] Publication No. 87-113, A Guide to Safety in Confined Spaces.

## **1.7 Warranty**

1.7 A. The materials used for the project shall be certified by the manufacturer for the specified purpose. The manufacturer shall warrant the lateral lining system to be free from defects in raw materials for one (1) year after installation or from the date of acceptance by the Owner, whichever is later. The Contractor shall warrant the installation of the lateral lining system for a period of one (1) year.

## **1.8 Warranty Inspections**

1.8 A. The Owner shall perform, at its own cost, any warranty CCTV inspections of the lateral lining system.

## **1.9 Measurement and payment**

1.9 A. Typical bid items consist of:

1. Clean and CCTV of specified lateral pipeline, per Each
2. CIPP Lining of specified lateral pipeline (referred to as setup or a lineal foot length equal to the shortest segment length specified for lining), per EA
3. CIPP Lining of specified lateral pipeline (after first 5'), per LF

1.9 B. Measurements for each item furnished and installed to the satisfaction of the Owner shall be at the units of measure contained in the Bid Proposal.

1.9 C. Payment for each item shall be in accordance with the contract documents at the unit or lump sum prices bid therefore in the Bid Proposal.

# **PART 2 - LATERAL LINING PRODUCTS**



## 2.1 Lateral - Cured In Place Pipe (CIPP)

### 2.1 A. General

1. The rehabilitation of pipelines shall be done by the installation of a resin-impregnated flexible liner which, when cured, shall be continuous and tight-fitting throughout the entire length of the original lateral pipe, or the portion of said pipe that has been specified for lining. The CIPP shall extend over the specified length of the lateral host pipe and provide a structurally sound, joint-less and water-tight new pipe within a pipe. The Contractor is responsible for proper, accurate and complete installation of the CIPP using the lateral lining system selected by the Contractor.
2. The CIPP shall be a felt, fiberglass or felt/fiberglass composite that after wet-out and installation provides a water-tight liner within the existing host pipe over the specified length of lateral pipeline.
3. Neither the CIPP lateral lining system, nor its installation, shall cause adverse effects to any of the Owner's processes or facilities.
4. The CIPP shall be continuous and joint-less from end to end and shall be free of all defects that will affect the long-term design life and performance of the pipe.
5. The CIPP shall be designed for 50 years or greater.
6. The CIPP may be designed for partially deteriorated (i.e., resistant to external groundwater pressures only) or fully deteriorated (i.e., fully structural stand alone pipe-within-a-pipe) in conformance with ASTM F1216.
7. The installed CIPP shall have corrosion resistance to the typical chemicals found in domestic sewage.
8. If there are any existing and confirmed active service connections connected to the lateral pipeline specified for lining, they shall be reinstated as directed by the Owner. The connections shall be re-opened, by any means, to not less than 90% of their original capacity. All over-cut service connections will be properly repaired to meet the requirements of these specifications. Any connections to a lateral pipeline must have clean outs within 50' of the lateral pipeline to allow external reinstatement.
9. The rehabilitation of lateral service lines may require the product to be capable of blind terminations within the service line and capable of navigating bends or other transitions in alignment as identified by the owner in the contract bid documents.
10. The liner will provide a water-tight seal at each end and throughout the liner. Data must be provided to support the product's ability to provide the watertight seal at each end. The product used in the sealing method shall be installed in accordance with manufacturer's recommendations.

11. Cleanouts will be installed at the discretion of the Owner, or the Contractor, if required for installation of the proposed lining system.

## 2.1 B. References

1. ASTM F1216 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube.
2. ASTM F1743 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-In-Place Installation of Cured in Place Thermosetting Resin Pipe.
3. ASTM D543 – Practices for Evaluating the Resistance of Plastics to Chemical Reagents.
4. ASTM D790 – Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
5. ASTM D5813 – Specification for Cured in Place Thermosetting Resin Sewer Piping Lateral Lining Systems.
6. ASTM F2019 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured in Place Thermosetting Resin Pipe.
7. NASSCO Performance Specification Guideline for the installation of Cured in Place Pipe (CIPP) (June 2011).

## 2.1 C. Materials

1. Non-woven fabric tube
  - (a) The fabric tube shall consist of one or more layers of absorbent non-woven felt fabric, felt/fiberglass or fiberglass and meet the applicable requirements of ASTM F 1216, ASTM F 1743, ASTM D 5813 or ASTM F2019. The fabric tube shall be capable of absorbing and carrying resins, constructed to withstand installation pressures and curing temperatures and have sufficient strength to bridge missing pipe segments and stretch to fit irregular pipe sections.
  - (b) The wet-out fabric tube shall have a uniform thickness and excess resin distribution that when compressed at installation pressures will meet or exceed the design thickness after cure.
  - (c) The fabric tube shall be manufactured to a size that when installed will tightly fit the internal circumference, meeting applicable ASTM standards of the original pipe. Allowance shall be made for circumferential stretching during installation. The tube shall be properly sized to the diameter of the existing pipe and the length to be rehabilitated and be able to stretch to fit irregular pipe sections and negotiate bends. The Contractor shall determine the minimum tube length necessary to effectively span the designated run. The Contractor



shall verify the lengths in the field prior to ordering or assembly and prior to impregnation of the tube with resin, to ensure that the tube will have sufficient length to extend the entire length required. The Contractor shall also measure the inside diameter of the existing pipelines in the field prior to ordering or assembling liner to ensure an installed tight-fitted condition.

- (d) The outside and/or inside layer of the fabric tube (before inversion/pull-in, as applicable) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate, vacuum impregnation and monitoring of the resin saturation during the resin impregnation (wetout) procedure.
- (e) No material shall be included in the fabric tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be acceptable upon visual inspection as evident by color contrast between the tube fabric and the activated resin containing a colorant.
- (f) The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made. The hue of the color shall be dark enough to distinguish a contrast between the fully resin saturated felt fabric and dry or resin lean areas.
- (g) The final installed product shall be marked every 5 feet, or other approved interval, with the name of the manufacturer or CIPP lateral lining system, manufacturing lot and/or production footage on the inside of the cured liner.
- (h) The minimum length of the fabric tube shall be that deemed necessary by the installer to effectively span the distance from the starting point of access in the pipe to the terminating location, whether a blind termination in the pipe at the main, or at a manhole or access point, plus that amount required for installation purposes.
- (i) The liner coating shall be compatible with the proposed resin system.
- (j) The liner shall be constructed with transitions where applicable.

## 2. Resin

- (a) The resin shall be a corrosion resistant polyester, vinyl ester, silicate or epoxy resin and catalyst system and hardener system that, when properly cured within the tube composite, meets the requirements of ASTM F1216, ASTM F1743 or F2019, the physical properties herein, and those, which are to be utilized in the design of the CIPP for this project. The resin shall produce CIPP, which will comply with or exceed the structural and chemical resistance requirements of this specification.
- (b) The method of cure may either be from a manufacturer recommended heat source, light cure or by ambient temperature. Method of cure instructions, along with a cure log, shall be on-site at all times.

- (c) The resin to tube ratio, by volume, shall be as recommended by the manufacturer.

### 3. Structural requirements

- (a) The physical properties and characteristics of the finished liner will vary considerably, depending on the types of resin and tube used. It shall be the responsibility of the Contractor to provide a CIPP lateral lining system which meets or exceeds the minimum properties specified herein.
- (b) The CIPP wall thickness shall be designed per ASTM F1216. The CIPP design shall assume no bonding to the original pipe wall.
- (c) The CIPP shall be designed assuming the following minimum design data, unless otherwise modified by the Owner:
  - (i) Factor of Safety = 2
  - (ii) Soil Modulus = 1,000 psi
  - (iii) Soil Density = 120 pcf
  - (iv) Live Load = H20
  - (v) Depth of Cover = as specified
  - (vi) Groundwater =  $\frac{1}{2}$  depth of cover
  - (vii) Ovality = 2%
- (d) The design engineer shall set the long term (50 year extrapolated) Creep Retention Factor at 50% of the initial design flexural modulus as determined by ASTM D790 test method. This value shall be used unless the Contractor submits long term test data (ASTM D2990) to substantiate a different retention factor.
- (e) The cured pipe material (CIPP) shall, at a minimum, meet or exceed the structural properties, as listed below.
  - (i) Flexural modulus of elasticity: 250,000 psi
  - (ii) Flexural strength: 4,500 psi
- (f) The Owner must select and specify either Fully or Partially Deteriorated design requirements for the contract.

## PART 3 - EXECUTION

### 3.1 Lateral - Cured In Place Pipe (CIPP)



### 3.1 A. General

1. Rehabilitation of lateral service lines is typically performed from either an excavated access pit or clean out between the structure and the mainline or from within the mainline.
2. Lateral CIPP installed from an access pit or cleanout is installed using a blind termination at the mainline connection therefore eliminating need to excavate the connection. In such case, the blind termination shall allow the CIPP to effectively terminate at or near the mainline without protruding by measuring the lateral length prior to install. The required distance and/or locations to be lined will be specified by the Owner.
3. Lateral CIPP installed from the mainline shall be pre-measured to line a specified distance identified within the bid documents. Commonly, this distance is the portion of the lateral owned by the utility owner – ending at the edge of the public right of way.
4. Excavated access pits shall be subject to the owner's specifications for trenching/excavation, backfill and surface remediation - including grading, paving, concrete and landscape restoration. The owner shall also specify the type of cleanout, if required.
5. When an agency has ownership or for other purposes is electing to rehabilitate laterals within the public right of way, the access pit shall be excavated within that right of way unless the owner has obtained legal access to private property via a temporary construction easement.

### 3.1 B. Preparation

1. Preparation, cleaning, inspection, sewage by-passing and public notification. The Contractor shall clean the interior of the existing host pipe prior to installation of the CIPP liner. All debris and obstructions, that will affect the installation and the final CIPP product, shall be removed and disposed of. All preparation shall be in accordance with the manufacturer's written installation procedures.
2. The CIPP liner shall be constructed of materials and methods, that when installed, shall provide a jointless and continuous CIPP designed in accordance with ASTM F1216 Appendix X1.1
3. The Contractor may, under the direction of the Owner, utilize any of the existing manholes in the project area as installation access points or excavate access points at predetermined locations.
4. Pre-Cleaning CCTV – The Contractor shall request utility locating (as required by the Owner or local Government) to identify potential crossbore utilities within the proximity of the service lateral to be cleaned for rehabilitation, if applicable. Prior to cleaning, the Contractor shall, to all extents possible, televise the service lateral to confirm that cleaning the lateral will not damage or breach a conflicting utility bored through the sewer lateral (such as natural gas or power) when the utility locate indicates a potential conflict.

5. Cleaning of Pipelines - The Contractor shall remove all internal debris from the pipeline that will interfere with the installation and the final product performance of the CIPP as required in these specifications. The Contractor shall make use of commercially available industry standard cleaning equipment to prepare the pipe for lining. Solid debris and deposits shall be removed from the lateral system, if possible, and disposed of properly by the Contractor. Precaution shall be taken, by the Contractor in the use of cleaning equipment to avoid damage to the existing pipe. If the pipe cannot be cleaned sufficiently using industry standard cleaning equipment, then additional cleaning will be considered changed conditions, as determined by the Owner.
6. Post-Cleaning CCTV – Upon completion of the cleaning, the Contractor shall then perform a Post-Cleaning CCTV Inspection, which typically acts as the Pre-Lining CCTV Inspection.
7. Existing Sewage Flows – The Contractor shall provide flow diversion, bypass pumping or stoppage requirements to the owner, including notifying upstream users to temporarily stop using their water/wastewater lateral, during the installation of the lining system.
8. Bypass Existing Sewage Flows - When circumstances require continuous service, for the flow of the service connection (such as medical facilities or laboratories), the Contractor will install a temporary sewage by-pass lateral lining system, if required by the Owner. Once the lining process has begun, existing sewage flows shall be maintained, until the resin/felt tube composite is fully cured, cooled down, fully televised and the installation is complete. The Contractor shall coordinate sewer bypass and flow interruptions with the Owner at least 7 days in advance and with the property owners and businesses at least 1 business day in advance. The pump and bypass lines shall be of adequate capacity and size to handle typical flows. .
9. Contractor shall perform post-cleaning video inspections of the pipelines. Only PACP certified personnel trained in locating breaks, obstacles and service connections by closed circuit television shall perform the inspection. The Contractor shall provide the Owner a copy of the pre-cleaning and post-cleaning video and suitable log, and/or in digital format, for review prior to installation of the CIPP and for later reference by the Owner, if specifically required by the Owner.
10. Line Obstructions - It shall be the responsibility of the Contractor to clear the line of obstructions that will interfere with the installation and long-term performance of the CIPP. If pre-installation inspection reveals an obstruction, misalignment, broken or collapsed section or sag that was not identified as part of the original scope of work and will prohibit proper installation of the CIPP, the Contractor may be directed by the Owner to correct the problem(s) prior to lining by utilizing open cut or other repair methods. This work will be considered changed conditions, or if there is an existing bid item for this work, the Contractor shall be compensated under the particular pay item designated for open cut point repairs.

11. The Contractor shall be responsible for confirming the locations of all branch service connections prior to installing and curing the CIPP. If required in the contract documents, each connection will be dye tested to determine whether or not the connection is live or abandoned. The cost for dye testing of existing service connections shall be compensated at the unit price bid. In the event the status of a service connection cannot be adequately defined, the Owner will make the final decision prior to installation and curing of the liner. Typically only service connections deemed "active" shall be reopened by the Contractor. Reinstatement in small diameter pipes typically requires external reinstatement through a cleanout.
12. The Contractor shall be allowed to use water from an owner-approved fire hydrant in the project vicinity. Use of an approved double check backflow assembly shall be required, unless an open gap exists in the Contractor's equipment. Contractor shall provide his own approved assembly. Contractor shall pay current market price for all water usage, unless otherwise specified by the Owner.

### 3.1 C. Install

1. The entire liner shall be wet-out using vacuum impregnation.
2. The CIPP Liner shall be installed and cured in the host pipe per the manufacturer's specifications as described and submitted
3. CIPP installation shall be in accordance with the applicable ASTM standards
4. The CIPP may be installed from a single access pit, manhole or via carrier transported through the mainline to enable the lateral CIPP to be inverted up the lateral.
5. The wet-out tube shall be positioned in the pipeline using the method specified by the manufacturer. Care should be exercised not to damage the tube as a result of installation. The tube should be pulled-in or inverted through an existing access pit, cleanout or placed within a manufacturer designated carrier for transport to the lateral via the mainline from a manhole or approved access point and fully extend up the lateral from the main to a termination point. Installing from a single point of access, typically being an excavated pit or a cleanout, is suitable if the Contractor follows manufacturer procedures for terminating the CIPP blind.
6. If required by the manufacturer, temperature gauges or sensors may be placed inside the host pipe to monitor the temperatures during the cure cycle. Liner and/or host pipe interface temperature shall be monitored and logged during curing of the liner.
7. Curing shall be accomplished by utilizing the appropriate medium in accordance with the manufacturer's recommended cure schedule. The curing source or in and output temperatures shall be monitored and logged during the cure cycles if applicable. The manufacturer's recommended cure method and schedule shall be used for each line segment installed, and the liner wall thickness and the existing ground conditions with regard to temperature, moisture level, and thermal conductivity of soil, per ASTM as applicable, shall be taken into account by the Contractor.



8. Thermoset resins shall have a cool down period in accordance with manufacturer's recommendations and noted as part of the cure log.
9. The manufacturer shall provide the method of sealing the CIPP ends and submit supporting documentation confirming the method will provide a long term seal.

#### 3.1 D. Finish

1. The installed CIPP shall be continuous over the specified length of the lateral section and be free from visual defects such as foreign inclusions, dry spots, pinholes, major wrinkles and de-lamination.
2. Any defect, which will or could affect the structural integrity or water-tightness, of the CIPP shall be repaired at the Contractor's expense,
3. The beginning and end of the CIPP shall be sealed to the existing host pipe. The sealing material shall be compatible with the pipe end and shall provide a watertight seal.
4. Branch lateral connections or any other pre-existing connection to the service lateral shall be reinstated by a remote controlled cutting device, either from within the pipeline or externally through a cleanout. The reinstated connection shall be brushed to allow for a smooth edge.
5. Cured samples of the CIPP may be required for testing to verify the flexural strength and modulus of the CIPP meet or exceed the specified values and those used in the design of the CIPP liner. Samples shall be acquired via manufacturer's recommendations or in accordance with ASTM F1216. The testing shall be performed by an independent 3<sup>rd</sup> party laboratory.

## **Appendix G: Pinellas County Standard Specification for Sanitary Sewer Cleaning and Televising**

## SECTION 33 01 32

## SANITARY SEWER CLEANING AND TELEVISIONING

## PART 1 – GENERAL

## 1.01 SCOPE

- A. The Contractor shall provide for routine maintenance cleaning and closed circuit television inspection (CCTV) of assigned pipes and inspection of manholes within the Pinellas County sanitary sewer collection system including removal and disposal of debris removed during the cleaning process, which is preventing the design flow of the pipe, prevent blockages and restore the sewer to near full capacity and self-scouring velocity. The contractor shall be aware that this specification requires work in active sewers.
- B. The Work includes furnishing all plant, labor, tools, equipment and materials including various forms of specialized pipe cleaning, and televising of sanitary sewage mains and related manholes, and all operations to support the primary maintenance cleaning and inspection activities are also to be provided.
- C. This specification section also applies to new installation, replacement and repair inspection for compliance documentation of construction specifications.

## 1.02 SAFETY CODE REQUIREMENTS

- A. The Contractor shall conduct his operations in strict accordance with all applicable Federal, State, and Local safety codes and statutes and shall be fully responsible and obligated to maintain procedures for safety of the public as well as work, personnel and equipment involved in the project.
- B. The Contractor shall at all times during the course of the cleaning and televising conform to Occupational Safety and Health Administration (OSHA) and all other applicable safety codes or standards. No additional compensation will be allowed for OSHA or other safety code standards or requirements.
- C. The Contractors shall conform to traffic control requirements of the State of Florida Department of Transportation at all sites within roadway right-of-ways.



1 1.03 SUBMITTALS

2  
3 A. The Contractor shall submit the following information:

- 4  
5 1. Information on all types of processes that will be used for cleaning.  
6 2. Copies of PACP/ MACP certifications for personnel performing  
7 television and manhole inspections.  
8 3. Manufacturer's certification that the equipment to be used meets  
9 the referenced standards and these specifications.  
10 4. Proposed equipment and procedures for accomplishing the work.  
11 5. Proposed personnel and qualifications assigned to the cleaning  
12 work.

13  
14 PART 2 – EQUIPMENT

15  
16 2.01 CLEANING EQUIPMENT

- 17  
18 A. All sanitary sewer pipes shall be cleaned with truck-mounted high velocity  
19 hydraulic cleaning (hydra-cleaning) equipment and equipped vacuum  
20 debris removal system. Sufficient high pressure hose length should be  
21 available on the vehicle described to perform cleaning on manhole runs up  
22 to 900 linear feet in length. High pressure hose should be at least 1 inch  
23 in diameter with the ability to deliver at least 80 gallons per minute at  
24 3,000 PSI. Water tanks on the vehicle should be at least 1,200 gallons in  
25 capacity. All controls for cleaning equipment shall be located so that the  
26 equipment can be operated above ground.  
27  
28 B. The nozzle and skids used for cleaning should be designed for use in a  
29 manner consistent with the diameter of the pipe being cleaned. Specialty  
30 heads and nozzles may be required for hardened debris, grease, and  
31 scale removal.  
32  
33 C. Cutting heads to remove intruding roots or projecting obstructions will also  
34 be required and shall be designed specifically for the diameter of the pipe  
35 in which they are used.  
36  
37 D. Vacuum debris removal system shall be used to remove sand, silt, grease,  
38 rocks, bricks, and all other debris from manholes during the cleaning  
39 process. It is essential that the debris be removed from the wastewater  
40 system and not allowed to move into adjacent pipes or manholes.  
41 Wastewater removed from the collection system during the vacuuming  
42 process can be decanted back into the system only after the solids are  
43 allowed to settle sufficiently to prevent the materials from re-entering the  
44 system.  
45

- 1 E. Contractor shall provide equipment capable of removing all sand, dirt,  
2 rocks and other debris from the sewer reach to allow unobstructed remote  
3 television internal inspection of all internal surfaces.  
4
- 5 F. Cleaning system shall utilize a device capable of dislodging sediments  
6 found in sewer lines without damaging the structural integrity of the pipe.  
7 Cleaning devices shall have sufficient power to force and move the debris  
8 commonly found in large diameter sewers to a manhole for extraction.  
9 Cleaning method may maintain normal sewer flows during the cleaning  
10 process.  
11
- 12 G. Contractor shall certify that backup cleaning equipment, including  
13 machines, devices, tools, etc, is available and can be delivered to the site  
14 within 24 hours.  
15
- 16 H. Contractor shall provide all equipment required for specialty cleaning  
17 including removing roots and de-scaling sewer pipes.  
18
- 19 I. The Contractor shall be responsible for proper disposal of all materials  
20 removed from pipes and/or manholes.  
21

## 22 2.02 CLOSED CIRCUIT TELEVISION EQUIPMENT

- 23
- 24 A. Video inspection shall be performed using National Association of Sewer  
25 Companies (NASSCO) Pipeline Assessment and Certification Program  
26 (PACP) certified software.  
27
- 28 B. Closed Circuit Television Inspection Equipment shall produce a color  
29 video.  
30
- 31 C. Pipe inspection camera shall be a pan-and-tilt and radial viewing pipe  
32 inspection camera that pans a minimum of  $\pm 275$  degrees and rotates 360  
33 degrees.  
34
- 35 D. A slope indicator shall be included on the camera and accurately  
36 calibrated per manufacture's instructions for measurement of pipe slope.  
37
- 38 E. A camera with an accurate footage counter shall be used, which displays  
39 on the monitor the exact distance of the camera from the centerline of the  
40 starting manhole.  
41
- 42 F. The camera will be capable of height adjustment so that the camera lens  
43 is always centered at one-half the inside diameter, or higher, in the pipe  
44 being televised.  
45

- 1 G. Lighting for the camera shall be suitable to allow a clean picture of the  
2 entire periphery of the pipe. A reflector in front of the camera may be  
3 required to enhance lighting in dark or large diameter pipe.  
4
- 5 H. The camera, television monitor and other components of the video system  
6 shall be capable of producing a minimum 500-line resolution colored video  
7 picture.  
8
- 9 I. Video data shall be provided to the County in a digital format such as an  
10 external removable drive, or other device or media, as required by the  
11 County to be uploaded to the CCTV inspection database.  
12
- 13 J. Video data shall be PACP database compliant and compatible with the  
14 County's existing Granite XP software database system.  
15  
16

### 17 PART 3 – EXECUTION

#### 18 3.01 NEIGHBORHOOD NOTIFICATION

- 19  
20
- 21 A. Not less than 48 hours prior to the commencement of work in a right-of-  
22 way, the Contractor shall notify all residents and businesses affected by  
23 the work with an Engineer or County approved printed door hanger notice  
24 indicating the schedule date of work, the type of work, and Contractor's  
25 and superintendent's name, address and telephone number. The notice  
26 shall contain wording indicating any disruption of sanitary service or  
27 access to property that may be required to perform the work. Disruption in  
28 sanitary sewer service shall be minimized. Access to private property shall  
29 be maintained at all times.  
30

#### 31 3.02 DEWATERING

- 32
- 33 A. All gravity sanitary sewer pipes (lines) less than 48" in diameter shall be  
34 dewatered for cleaning and inspection purposes. Lines 48" and larger may  
35 be cleaned and inspected without dewatering only when the County  
36 agrees that dewatering is not feasible. Each exception to the dewatering  
37 requirement shall be considered on a case by case basis. Contractor will  
38 assume that dewatering is required for bidding purposes.  
39
- 40 B. Dewatering may be accomplished by pumping water around the work area  
41 or by plugging off pipes to isolate the portion of the system being worked  
42 on while cleaning and performing inspection. If plugging the line is used  
43 for dewatering purposes, the system must be properly monitored so that  
44 no overflows occur. If a pipe that has been rehabilitated by the installation  
45 of a liner is plugged, the liner must be braced at the manhole to prevent  
46 movement of the liner pipe.



1  
2 3.03 CLEANING  
3  
4

- 5 A. The sewers shall be cleaned by removing dirt, rock, sand, roots and other  
6 deleterious materials from the pipe and manholes. The cleaning  
7 equipment shall remove grease or roots and restore ninety-five (95)  
8 percent of original pipe inside diameter.  
9
- 10 B. All necessary precautions are to be taken to protect the sewer lines from  
11 damage resulting from the cleaning and inspection process.  
12 Reimbursement for damage to the sewer infrastructure or damage or  
13 flooding of private or public property, as a direct or indirect result of the  
14 cleaning and inspection operation shall be the responsibility of the  
15 Contractor.  
16
- 17 C. Contractor shall be responsible for all permits required to perform  
18 assigned Work.  
19  
20
- 21 D. Contractor shall obtain permission from the property owner whenever  
22 access to manholes in easements and right-of-way is required for  
23 equipment.  
24  
25
- 26 E. Cleaning and inspection work required includes, but not limited to the  
27 following:  
28
- 29 a. Field locating all manholes along the sewer pipes to be cleaned.
  - 30 b. Maintaining and protecting both vehicular and pedestrian traffic, and
  - 31 meeting all requirements of the County and all other government
  - 32 agencies having jurisdiction.
  - 33 c. Cleaning and inspecting existing sanitary sewer pipes and manholes,
  - 34 as herein specified, and to record the inspection information in the
  - 35 format identified by the County.
  - 36 d. Disposal of waste, sediment and debris as specified herein.
  - 37 e. Removal of roots, scale, and protrusions as specified herein.
  - 38 f. Cleaning and restoring the work area as the work progresses and after
  - 39 the completion of all work activities.
  - 40 g. All other work required for the complete and satisfactory cleaning and
  - 41 inspection of the pipeline and adjacent manholes.  
42

43 3.04 CLEANING PROCEDURE  
44

- 45 A. After determining and performing all preliminary requirements, Contractor  
46 shall thoroughly clean assigned pipelines sufficiently to permit an

unrestricted inspection by closed circuit television. The Contractor shall remove accumulated grease, roots, sand, rock, bricks, sludge and all other debris that obstructs video inspection such that all portions of the pipe being inspected will be clearly visible.

- B. Contractor shall remove all brick, rocks, debris, sludge, dirt, sand, grease, roots and other materials from the sewers shown in the work order, and collect and remove the resulting debris from the manholes of the sewer section being cleaned. Equipment shall decant or separate the water from the solids before it is transported to the designated disposal site. Liquid decanted from the solids shall be returned to the sewer. Debris remaining in the sewer after cleaning shall not exceed 5% of the pipe diameter. Passing waste material between manholes, causing line stoppages, accumulations of sand, or damage to the pumping equipment, shall not be permitted.
- C. Contractor shall complete a NASSCO Manhole Assessment and Certification Program (MACP) manhole inspection form for both upstream and downstream terminal manholes during cleaning and inspection operation.
- D. Normal cleaning consists of removing all debris and requires a minimum of two passes. The first pass shall be restricted to 800 psi at the nozzle head. The second and subsequent passes shall be at 1200 psi.
- E. Specialty cleaning consists of removing all heavy grease, roots and tuberculation by use of special equipment such as a high pressure de-scaling head, root cutter, or other mechanical means approved by the County.
- F. Contractor is responsible for damage to the sewer as a direct result of the cleaning method.
- G. Contractor shall use all cleaning equipment in accordance with manufacturer's recommendations to prevent damage to sewer lines.
- H. Contractor shall immediately notify the County if fresh soil, pieces of pipe, or other visible signs of potential problems occur during cleaning operations.

- 1  
2 I. Contractor shall ensure that water pressure created does not cause  
3 damage due to flooding of property being served by sewer section(s)  
4 involved.  
5  
6  
7 J. Contractor shall conform to the following requirements:  
8  
9  
10 a. Cleaning of sewers shall commence from furthest upstream point from  
11 access point.  
12  
13 b. Hydraulic cleaning equipment shall be inserted in the downstream  
14 manhole of the reach and the work shall proceed upstream unless  
15 otherwise approved by the County.  
16  
17 K. Any blockages of lateral building connections resulting from the cleaning  
18 or other items of work shall be removed by cleaning of the building  
19 connection by Contractor, at its own expense. Any damage caused by  
20 flooding of lateral building connections shall be corrected by Contractor, at  
21 its own expense.  
22

### 23 3.05 WASTE DISPOSAL

- 24  
25 A. Waste materials and debris resulting from sanitary sewer cleaning  
26 operations shall be removed and conveyed by the Contractor to an  
27 approved waste site. The disposal site shall be accessible during the  
28 Contractor's working hours. All permits required shall be the responsibility  
29 of the Contractor. Waste material and debris resulting from the cleaning  
30 operation shall be drained in the collection system and disposed of at  
31 Pinellas County Solid Waste Operations, located at 3095 114th Avenue  
32 North. The material deposited at Solid Waste Operations, shall not exhibit  
33 any liquid when deposited at the location as specified by Pinellas County  
34 Solid Waste Operations. Disposal manifest records shall be supplied to  
35 Pinellas County Utilities. Under no circumstances shall sewage or solids  
36 removed from sewer lines be dumped onto the streets or into ditches,  
37 catch basins or storm drains. It shall not be necessary to stop the cleaning  
38 operation while the debris is transported to the disposal site.  
39

### 40 3.06 CLOSE CURICUIT TELEVISION INSPECTION PROCEDURE

- 41  
42 A. The Contractor shall provide Pinellas County with digital media that  
43 includes video and data base file that is compatible with Granite XP in  
44 NASSCO PACP format. Compatibility issues with software other than  
45 Granite XP latest version are the Contractor's responsibility.  
46



- 1 B. CCTV inspection shall be performed by NASSCO PACP certified  
2 operators who use NASSCO certified software that is compatible with  
3 Granite XP latest version using PACP defect coding methodology.  
4
- 5 C. Perform CCTV inspection immediately after line cleaning. Before insertion  
6 of the camera into the sewer, the camera shall record on video the  
7 upstream and downstream manhole asset numbers, pipe size, specific  
8 location of the sewer, and the direction in which the camera will travel. The  
9 camera shall be moved through the line in either direction at a moderate  
10 rate, stopping when necessary to permit proper documentation of the  
11 sewer's condition in audio and documented on the television inspection  
12 log.  
13
- 14 D. The camera height shall be adjustment so that the camera lens is always  
15 centered at one-half the inside diameter, or higher, in the pipe being  
16 televised.  
17
- 18 E. The camera shall not travel at a speed greater than thirty (30) feet per  
19 minute. To better understand the flow from each individual lateral (if  
20 flowing) the camera shall be positioned at each lateral for a sufficient  
21 duration to determine the nature of flow and condition of the lateral  
22 (minimum of 30-seconds).  
23
- 24 F. Videos shall pan beginning and ending manholes to demonstrate that all  
25 debris has been removed. A manhole inspection shall be performed for all  
26 manholes.  
27
- 28 G. Manual winches, power winches, TV cable powered rewinds, or self-  
29 propelled cameras may be used to move the camera through the sewer  
30 line.  
31
- 32 H. When manually operated winches are used to pull the television camera  
33 through the line, telephones or other suitable means of communication  
34 should be set up between the two manholes of the section being  
35 inspected to ensure good communication between members of the crew.  
36
- 37 I. If during CCTV inspection of a pipeline, the television camera is unable to  
38 pass through the entire pipeline section, the Contractor shall set up his  
39 equipment so that the inspection can be performed from the opposite  
40 direction (reverse setup) in order to obtain a complete video of the line. If,  
41 again, the camera fails to pass through the pipeline section, the inspection  
42 of the entire pipeline section will be considered complete for purposes of  
43 payment. The Contractor shall provide a summary of findings describing  
44 probable issue(s) that prevented a complete pass through of the pipeline  
45 section.  
46

- 1 J. In the event that the TV camera encounters broken pipe and there is a  
2 possibility that continuation of the inspection could cause the TV Camera  
3 to become stuck or result in additional pipe damage or collapse, the  
4 Engineer may elect to discontinue the inspection.  
5
- 6 K. Distance Measurements: The accuracy of the measurements for location  
7 of defects, service connections, changes in pipe materials, and all other  
8 PACP recognized conditions is paramount, particularly when it may  
9 require later corrective action or a dig-up. The accuracy of the footage  
10 meter shall be checked by taking a reading at the entrance to the away  
11 manhole and comparing with a surface measurement made with a steel  
12 tape or walking meter (Roll-A-Tape). These measurements shall be  
13 performed by the Contractor in the presence of the Pinellas County  
14 inspector. Measurement meters shall be accurate to one-tenth of a foot  
15 over the entire length of the sewer line section being inspected.  
16 Otherwise, the Contractor shall take corrective action.  
17
- 18 L. The video inspection shall be clear and visible with adequate lighting to  
19 enable the viewer to discern even small defects in the pipe being  
20 inspected. Camera distortions, inadequate lighting, dirty lens, or  
21 blurred/hazy picture will be cause for rejection of a video and rejection of  
22 the associated line segment. Any pipeline television inspection video that  
23 does not meet this requirement or fails to meet PACP specifications shall  
24 be cause for Contractor to re-inspect the pipe at no additional cost to the  
25 County. Payment for television inspection and sewer rehabilitation will not  
26 be made until the County approves the quality of the video and logs.  
27
- 28 M. CCTV inspection video shall be continuous for pipe segments between  
29 manholes. Do not leave gaps in the video of a segment between  
30 manholes and do not show a single segment on more than one video,  
31 unless specifically allowed by the County.  
32
- 33 N. Documentation of television inspection by the Contractor shall be  
34 performed in accordance with the Specifications. TV reports can be  
35 assembled elsewhere, but documentation must be done in the field. A  
36 video inspection report shall be prepared by the Contractor for every  
37 segment and manhole that is CCTV-inspected. The Contractor shall  
38 provide written records that show the location in relation to an identified  
39 manhole of each infiltration point observed during inspection. In addition,  
40 other points of significance such as locations of building sewers, unusual  
41 conditions, roots, sewer connections, broken pipe, presence of scale and  
42 corrosion, and other discernible features shall be recorded on the PACP  
43 television inspection report. The video, PACP television inspection report  
44 and the NASSCO Manhole Inspection Form (latest version), with all  
45 applicable fields accurately completed per PACP format, shall be supplied  
46 to the County with each Pay Request.

1  
2 3.07 REMOVAL OF DEBRIS  
3

- 4 A. Materials generated by the cleaning operation shall be removed by  
5 vacuuming at the upstream or downstream manhole of the section being  
6 cleaned. Suitable traps or weirs shall be used to prevent the movement of  
7 solids to adjacent sections of pipe.  
8

9 3.08 WATER  
10

- 11 A. The use of potable water from the municipal, private, or reclaimed water  
12 systems for filling the water tanks on cleaning vehicles shall be permitted  
13 however, Contractor shall be required to acquire and use a meter  
14 approved by the County to monitor the use of this water and will be  
15 charged for water use in accordance with the current rate as described in  
16 PCU Policy Manual and the schedule of rates and fees. Contractor shall  
17 be responsible for obtaining and hooking up the potable water meter at  
18 their own expense. A reduced pressure type backflow preventer approved  
19 by the County shall be used to prevent contamination of the potable water  
20 system. Contractor is responsible for any damage resulting from improper  
21 operation of hydrants. Contractor shall not use or obstruct a fire hydrant  
22 when there is a fire in the area.  
23

- 24 B. Contractor shall not waste water from the public water supply because of  
25 improper connections or from hydrants left open.  
26  
27

28 3.09 FINAL ACCEPTANCE OF SEWER LINE CLEANING  
29

- 30 A. Acceptance of sewer line cleaning work is contingent upon the completion  
31 of the CCTV inspection and successful review of the television inspection  
32 video by the County. If the inspection shows the cleaning to be  
33 unsatisfactory, Contractor shall be required to re-clean and re-inspect the  
34 sewer line until the cleaning is shown to be satisfactory. Such re-cleaning  
35 and re-inspection shall be made at Contractor's expense.  
36

37 3.10 TRAFFIC CONTROL AND MAINTENANCE OF TRAFFIC  
38

- 39 A. Refer to Section 01 55 26, Traffic Regulation  
40  
41 B. If required, the Contractor shall employ a uniformed off-duty police officer  
42 to maintain and regulate traffic through the work area.  
43  
44  
45  
46

END OF SECTION



## **Appendix H: Pinellas County Manhole Rehabilitation Standards**

## SECTION 33 01 33

## MANHOLE REHABILITATION

## PART 1 - GENERAL

## 1.01 SCOPE OF WORK

- A. The intent of manhole repair is to provide a structurally sound and watertight manhole in place of an existing deteriorated manhole.
- B. Several types of manhole repair may be ordered: rebuilding, lining and replacement. The Engineer may change the type of repair for a particular manhole after visually inspecting the manhole.
- C. Costs for traffic control shall be included in the work item in right-of-ways with a County Functional Classification of Collector or less and locations not requiring more than Standard Index 612.
- D. Minor infiltration shall be considered as a part of manhole work effort. Very active infiltration as determined by the Engineer shall be paid in a separate Pay Item, if it is specifically included as a pay item in the Contract.

## 1.02 SUBMITTALS

- A: All materials and procedures required to establish compliance with the Specifications shall be submitted to the County/Engineer for review/approval.
- B. Submittals shall include at least the following:
  - 1. Descriptive literature, bulletins and/or catalogs of materials.
  - 2. Work procedures including flow diversion plan, method of repair, etc.
  - 3. Materials and method for repair of leaks or cracks in concrete structure.
  - 4. Final installation report on completed structures.

## 1.03 WARRANTY

- A. Manufacturer shall warrant all products against failure for a period of ten (10) years, performing repairs to the damage and restore the coating at no cost to the County within sixty (60) days after written notification of the failure. For

## MANHOLE REHABILITATION

warranty requirements for other lining material refer to specific liner system specification sections.

#### 1.04 SUBSTITUTIONS

- A. Only after execution of the contract will Engineer consider requests from Contractor for substitutions. Substitutions will be considered only when a product becomes unavailable due to no fault of Contractor.
- B. Items identified as "equal" shall be accompanied by product literature and a written itemized comparison of the published specifications (feature by feature from the manufacturer's literature) for the item specified and for the item proposed. The burden of proof of "equality" shall be on the supplier.
- C. Request constitutes a representation that Contractor:
  - 1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
  - 2. Will provide the same warranty for substitution as for specified product.
  - 3. Will coordinate installation and make other changes which may be required for Work to be complete in all respects.
  - 4. Waives claims for additional costs which may subsequently become apparent.
- D. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate written request, or when acceptance will require substantial revision of Contract Documents.
- E. Engineer will determine acceptability of proposed substitution, and will notify Contractor of acceptance or rejection in writing within a reasonable time.

#### PART 2 – PRODUCTS

##### 2.01 PATCHING MATERIAL FOR MANHOLES

- A. Manhole patching material shall be as specified in the Materials Specification Manual.
- B. Active leaks shall be stopped using a rapid setting cementitious grout. Some leaks may require weep holes to localize the infiltration during the application after which the weep holes shall be plugged with rapid setting mix prior to the final liner application. When severe infiltration is present, drilling may be required in order to pressure grout.



## 2.02 PRESSURE GROUTING

- A. Severe infiltration shall be repaired by pressure grouting using material specified in the Material Specification Manual

## 2.03 CALCIUM ALUMINATE MANHOLE LINER

- The coating to be applied shall be pure fused calcium aluminate mortar with pure fused calcium aluminate as specified in Materials Specification Manual.

## 2.04 FIBERGLASS MANHOLE LINER

- A. Fiberglass Liners shall be specifically manufactured for sewer use as specified in Material Specification Manual. These products shall meet all requirements of latest ASTM designation C-582 (plastic laminates) and ASTM designation C-581 (chemical resistance). The properly installed liners shall not fail under H-20 dynamic wheel load applied vertically. Liner shall be installed in accordance with manufacturer's requirements.

## 2.05 MULTI-COMPONENT STRESS PANEL MANHOLE LINER SYSTEM

- A. Multi-component stress panel liner system shall be as specified in Material Specification Manual.

## 2.06 URETHANE/ EPOXY, POLYUREA MANHOLE LINER SYSTEM

- A. Urethane/epoxy, polyurea liner system shall be as specified in Material Specifications Manual.

## 2.07 POLYURETHANE MANHOLE LINER SYSTEM

- A. Polyurethane liner system shall be as specified in Material Specification Manual.

## 2.08 POLYMORPHIC RESIN MANHOLE LINER SYSTEM

- A. Polymorphic Resin liner system shall be as specified in Materials Specifications Manual.

## PART 3 – EXECUTION

### 3.01 FIELD LAYOUT

- A. The County supplied Project Documents, containing all applicable information available in GIS system including street address and other pertinent information will identify the general location of the repair. If there is

evidence of the defect visible from the surface, such as a depression, the Contractor shall center his excavation on the evidence. If there is any question as to the general location described by the County, the Contractor shall approach the Engineer and address the questions before beginning with the excavation.

### 3.02 MANHOLE ADJUSTMENT

A. Manhole ring and covers found to be above or below grade shall be adjusted by adding or removing rows of brick and mortar to meet the following specifications:

1. The top of the cone shall be set between two and one-half inches and fourteen and one-half (14 - 1/2) inches below the bottom of the manhole cover frame. It is the intent of the specifications to provide a minimum of two and one-half inches to accommodate future grade changes without disturbing the manhole.
2. Where the distance between the bottom of the manhole cover frame and the top of the cone is greater than fourteen and one-half (14 - 1/2) inches, 12-inch riser units shall be used to bring the top of the cone to within the limits specified.

### 3.03 MANHOLE REBUILDING

A. Manholes that have cracked rings, leaky risers or covers below grade may be designated to be rebuilt. The rebuilding shall include all labor, equipment, materials, including excavation and dewatering to accomplish the following:

1. Removing existing manhole down to required elevation and rebuild using brick or precast sections as directed by the Engineer.
2. The Contractor shall then install a new manhole ring and cover as directed by the Engineer.
3. The contractor shall install new stainless steel manhole insert as specified in the Material Specification Manual to prevent surface water inflow into the collection system through the manhole lid, as directed by the Engineer.

### 3.04 MANHOLE LINING

A. Manholes may be designated to receive a new fiberglass liner and reducer cone. This lining will only be specified for forty-eight (48) inches in diameter or larger manholes. Installation of fiberglass liners and reducer cones shall include:

1. Excavation of an area sufficiently wide and deep for removal of the old castings, mortar and brick riser and the existing manhole top section.
2. The bottom of the manhole liner shall be cut to fit the existing manhole base as closely as possible. Cutouts in manhole liner shall be made to accommodate existing inlets, drops, and clean-outs. Cuts should be precisely made with a power saw fitted with masonry-type blade or with a special jigsaw. Fresh cut fiberglass shall receive two coats of polyester resin to resist wicking.
3. The manhole liner shall be lowered into the existing brick or concrete manhole and set into a quick-setting grout mixture. Good bottom seal shall be obtained in order to prevent loss of grout from the annular space between the outside of the manhole liner and the interior of the old manhole. A six inch height of a quick-setting grout shall be placed above the initial bottom seal in the annular space between the manhole liner and the existing brick or concrete manhole to insure adequacy of the bottom seal. The gap from drops, clean-outs materials, and existing piping between the existing manhole wall and the new manhole liner wall shall be bridged with short lengths of PVC or other corrosion-resistant pipe approved by the County. Quick-setting mortar shall be used to seal around all pipes.
4. The annular space between the manhole liner and existing brick or concrete manhole shall be filled with a Portland cement and sand grout. The grout shall be made with six bags of cement per cubic yard of grout.
5. As directed by the Engineer, the new ring and cover shall be replaced and finished to grade by constructing a chimney on the flat shoulder of the manhole liner using brick and mortar or precast concrete rings. In no case, shall the cast iron ring be placed directly on the manhole liner. All new rings and covers will be furnished by the Contractor.

### 3.05 MANHOLE PATCHING AND LINING

- A. This Section shall govern all work, materials and equipment required for manhole rehabilitation for the purpose of eliminating infiltration, providing corrosion protection, repair of voids and restoration of structural integrity of the manhole, as a result of spray applying a monolithic fiber-reinforced cementitious liner to the wall and bench surfaces of brick, concrete or any other construction material.



- 1 B. The Applicator must be approved, trained and certified as having  
2 successfully completed factory training. The Applicator/Contractor shall  
3 furnish all labor, equipment and materials for applying the coating directly  
4 to the contour of the manhole to form a structural cementitious liner of a  
5 minimum of one-half inch thickness using a machine specially designed  
6 for the application. All aspects of the installation shall be in accordance  
7 with manufacturer's recommendations and shall include the elimination of  
8 active infiltration prior to applying lining, the repair and sealing of inverts  
9 and benches, the removal of any loose or unsound material and patching.
- 10  
11 C. The manhole shall be prepared for coating by COVERING inverts to  
12 prevent extraneous material from entering the sewer lines and to prevent  
13 up stream line from flooding the manhole. All foreign material shall be  
14 removed from the manhole wall and bench using a high pressure water  
15 spray (minimum 1,200 psi). Loose and protruding brick, mortar and  
16 concrete shall be removed using a mason's hammer and chisel or  
17 scraper.
- 18  
19 D. Active leaks shall be stopped using a rapid setting cementitious grout  
20 according to the manufacturer's recommendations. Some leaks may  
21 require weep holes to localize the infiltration during the application after  
22 which the weep holes shall be plugged with rapid setting mix prior to the  
23 final liner application. When severe infiltration is present, drilling may be  
24 required in order to pressure grout. Manufacturer's recommendations shall  
25 be followed when pressure grouting is required.
- 26  
27 E. Any bench, invert or service line repairs shall be made at this time using a  
28 quick-setting mix and following the manufacturer's recommendations.
- 29  
30 F. The surface, prior to spraying on the lining system, shall be damp without  
31 noticeable free water droplets, or running water. Materials shall be  
32 sprayed, applied to a minimum uniform thickness to insure that all cracks,  
33 crevices and voids are filled and a somewhat smooth surface remains  
34 after light troweling. The light troweling is performed to compact the  
35 material into voids and to set the bond.
- 36  
37 G. Not before the first application has begun to take an initial set  
38 (disappearance of surface sheen which could be fifteen (15) minutes to  
39 one hour depending upon ambient conditions) the second application  
40 should be made to assure a minimum total finished thickness of one-half  
41 inch. The surface shall then be troweled to a smooth finish being careful  
42 not to over trowel, so as to bring additional water to the surface to weaken  
43 it. A brush finish may be applied to the finished coat to remove trowel  
44 marks. Manufacturer's recommendation shall be followed whenever more  
45 than twenty-four (24) hours have elapsed between applications.
- 46

H. The wooden bench covers shall be removed and when the bench is sprayed such that a gradual slope is produced from the walls to the invert with the thickness at the edge of the invert being no less than one-half inch. The wall-bench intersection shall be rounded to a uniform radius, the circumference of the intersection.

I. For calcium aluminate mortar systems, curing should be implemented as soon as the surface begins to harden and dry (as early as one hour after application). Several layers of ASTM C-309 liquid membrane curing compound or a 100%-humid moisture cure may be used.

### 3.06 TESTS

#### A. Procedure

1. Compressive strength tests shall be made by breaking 2-inch cube test specimens prepared, cured and broken in accordance with the American Society for Testing Materials Standard Method C-109, latest version. Four specimen test cubes shall be taken from every fifty (50) bags of product used or eight (8) manholes. One cube shall be broken at seven days, the remainder at twenty-eight (28) days. Additional test cubes may be ordered for changes in equipment or method, and under adverse weather, or curing conditions.

#### B. Responsibility for Tests and Reports

1. The Contractor shall supply all cube molds, tools and labor for preparing specimens.
2. The test cubes shall be tested in a recognized commercial testing laboratory.

### 3.07 FINAL ACCEPTANCE

- A. All completed manhole work will be inspected by the County. Any leaks or cracks or defective workmanship shall be repaired to the satisfaction of the Engineer at no cost to the County. Final acceptance will be granted after surface restoration, if required, is complete.

END OF SECTION

## Appendix I: Manhole Insert Inflow Dish Standards



## Material Specifications

### K 4 – MANHOLE INSERT/ STAINLESS STEEL:

**Specification:**

- Manhole inserts shall meet or exceed the performance specifications of:
- Shall reduce or eliminate inflow thru manhole cover.
- Shall have a deep dish design to allow for easy removal and replacement of the manhole cover (i.e., cover rotation).
- Body shall be manufactured of 304 stainless steel with a thickness of not less than 18 gauge.
- Shall have a sealing gasket made of Nitrile Buna-N (Acrylonitrile butadiene (NBR) ), EPDM (Ethylene Propylene Diene Monomer) or closed cell neoprene.
- Shall have a handle made of 1/8" minimum, 304 stainless steel cable. Plastic coating of handle is optional or 1" heavy weight polypropylene.
- The handle shall be attached using two 304 stainless steel round head bolts with flat washers and self-locking bolts or stainless steel pop rivets.

**Additional Requirements:**

- **When hydrogen sulfide (H<sub>2</sub>S) gas levels warrant relief; a relief valve shall be provided and meet the following:**
- The gas relief valve shall be designed to release at a pressure of 0.5 to 1.5 psi and have a water leak down rate no greater than 5 gallons per 24 hours.


**Manufacturer:**

- SEALING SYSTEMS INC.– STAINLESS STEEL INSERTS
- INFLOW SYSTEMS, INC.– INFLOW SHIELD
- OPEN

Created Date: 06/22/05 (JJS)  
Last Revised Date: 11/29/10 (JJS)



Material Specifications  
Pinellas County  
14 South Ft. Harrison Ave.  
Clearwater, FL 33756

## Appendix J: Pinellas County Standard Details

## PINELLAS COUNTY STANDARD DETAILS

### ROADWAY AND RELATED CONSTRUCTION:

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

1360: P.C.E.D. Type "A" and "B" Handicap Ramp Detail

## PINELLAS COUNTY

STANDARD DETAILS  
INDEX SHEET 1 OF 3

DETAIL INDEX I.D.:

INDEX 1 OF 3

DATE:

JUL / 2018

REVISION:



**GENERAL DETAILS:**

- PCU GD 1: Trench Backfill Detail (See 1291)
- PCU GD 2: Main Clearances Detail
- PCU GD 3: Tracer Wire Layout Detail
- PCU GD 3a: Tracer Wire Installation Detail
- PCU GD 4: Valve Box/Tracer Wire Installation Detail
- PCU GD 5: Concrete Valve Box and Collar Detail
- PCU GD 6: Reverse Deadman Restraint Detail
- PCU GD 7: Bollard Detail
- PCU GD 8: Jack and Bore Under Roadway Detail
- PCU GD 9: Jack and Bore Under Railway Detail
- PCU GD 10: Fusible PVC/HDPE Pipe Connections Detail
- PCU GD 10a: Fusible PVC/HDPE Pipe Connections Detail
- PCU GD 11: Pressure Main Restrained Joint Detail
- PCU GD 12: CUL-DE-SAC-Potable Water Detail
- PCU GD 13: Typical Pressure Offset Relocation Detail
- PCU GD 14: Automatic Flushing Assembly Detail

**RECLAIM WATER DETAILS:**

- PCU RD 1: 1" Reclaimed Service Connection (Non-metered) Detail
- PCU RD 2: 1½" or 2" Reclaimed Service Connection (Non-metered) Detail
- PCU RD 3: 1½" or 2" Metered Reclaimed Water Service Detail
- PCU RD 4: Reclaimed Water Flushing Assembly Detail
- PCU RD 5: CUL-DE-SAC Layout - Reclaimed Water Detail
- PCU RD 6: 2" Offset Air Release Assembly for Reclaimed Water (Below Ground) Detail

**SANITARY SEWER DETAILS:**

- PCU SD 1: Manhole Construction Notes
- PCU SD 1a: Standard Manhole (Pre-cast) Detail
- PCU SD 1b: Inside Drop Manhole Connection Detail
- PCU SD 1c: Outside Drop Manhole Connection Detail
- PCU SD 1d: Doghouse Air Release Valve Manhole Detail
- PCU SD 2: Sewer Air Release/Air Vacuum Valve in Manhole (12" Pipe or Less) Detail
- PCU SD 3: Offset Air Release Assembly for 4"-12" and Larger Sanitary Sewer (Above Ground) Detail
- PCU SD 4: Sewer Service Connection and Clean-Out Detail
- PCU SD 5: Depth Limitations of Sanitary Sewer Pipe Detail

**WATER DETAILS:**

- PCU WD 1: Temporary Sampling Point Detail
- PCU WD 2: 2" Permanent Water Blow-Off Detail
- PCU WD 3: ¾" or 1" Potable Water Service Connection Detail
- PCU WD 4: 1½" or 2" Potable Water Service Connection Detail
- PCU WD 5: Typical Fire Hydrant Locations Detail
- PCU WD 6: Fire Hydrant Assembly Detail
- PCU WD 7: Parallel Fire Hydrant Detail
- PCU WD 8: Water Quality Sampling Detail

**PINELLAS COUNTY**

 STANDARD DETAILS  
 INDEX SHEET 2 OF 3

DETAIL INDEX I.D.:

**INDEX 2 OF 3**

DATE:

**JUL / 2018**

REVISION:

**AIR RELEASE VALVES:**

- PCU ARV 1A,1B:      Air Release Vacuum Valve Matrix and Main Connection Detail
- PCU ARV 2A,2B:      Air Release/Air Vacuum Valve Location Detail
- PCU ARV 3A,3B,3C:    Above Grade Air release Assembly Detail
- PCU ARV 4A,4B,4C:    Air Release/Air Vacuum Valve Vented/Odor Controlled Detail

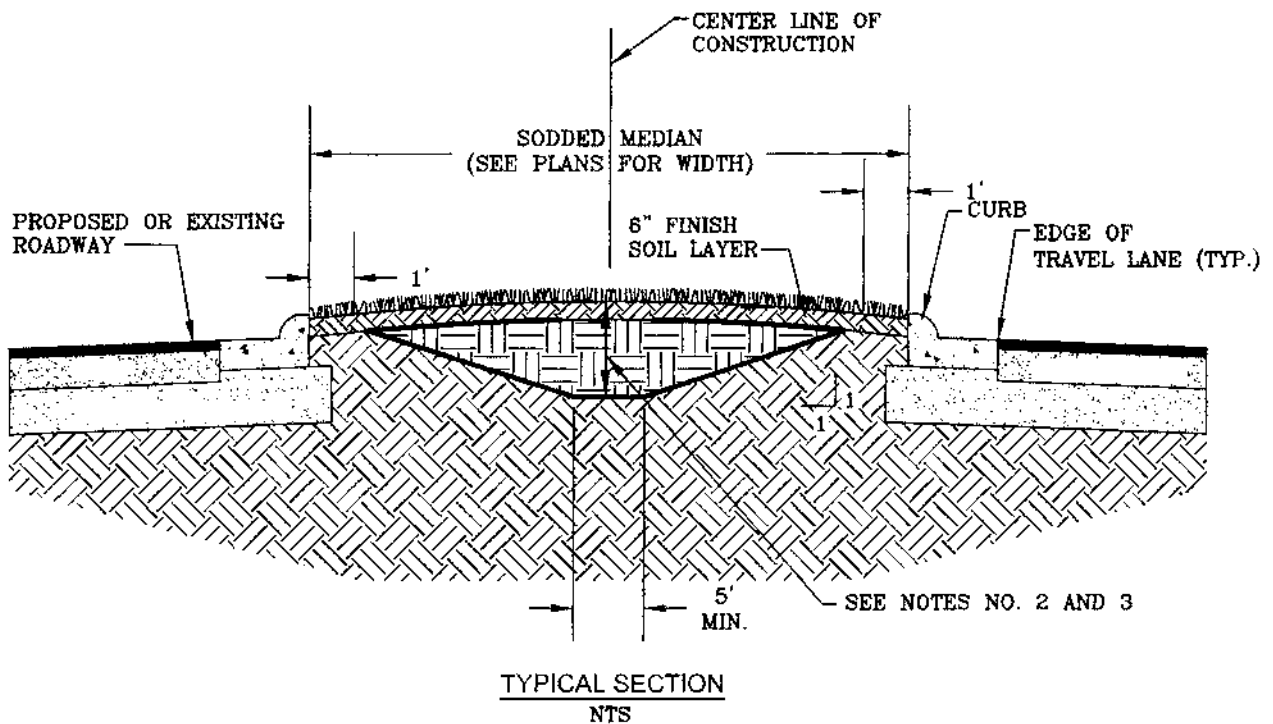
**PINELLAS COUNTY**

**STANDARD DETAILS  
INDEX SHEET 3 OF 3**

DETAIL INDEX I.D.:	
INDEX 3 OF 3	
DATE:	JUL / 2018
REVISION:	

**NOTES:**

1. 6" FINISH SOIL LAYER SHALL COMPLY WITH SECTION 162 OF F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.
2. REMOVE UNSUITABLE MATERIAL (EXISTING PAVEMENTS, ROADWAY BASE, LIMEROCK, MILLINGS AND OTHER DEBRIS), TO A MAXIMUM DEPTH OF 18" BELOW FINISHED GRADE IN MEDIAN AREAS. MEDIAN FILL SOIL, FOR AREAS THAT ARE EXCAVATED, SHALL BE NATIVE SITE SOILS APPROVED BY THE ENGINEER. IN THE ABSENCE OF SUFFICIENT NATIVE SITE SOILS, REPLACEMENT FILL SHALL BE SUITABLE FOR PLANT GROWTH AND APPROVED BY THE ENGINEER. EXCAVATION AND REPLACEMENT SOIL SHALL BE INCLUDED IN PAY ITEM FOR "EXCAVATION OF UNSUITABLE MATERIAL."
3. DO NOT DISTURB EXISTING MEDIAN SOILS EXCEPT TO REMOVE EXISTING UNSUITABLE MATERIALS LISTED IN NOTE NO. 2, OR TO CONSTRUCT PROPOSED IMPROVEMENTS.
4. GROUND SURFACE ELEVATION OF MEDIAN SHALL BE AS SHOWN ON APPROVED PLANS.

**PINELLAS COUNTY**

MEDIAN SOIL; COMPOSITION AND DEPTH

DETAIL INDEX I.D.:

1105

DATE:

FEB/2016

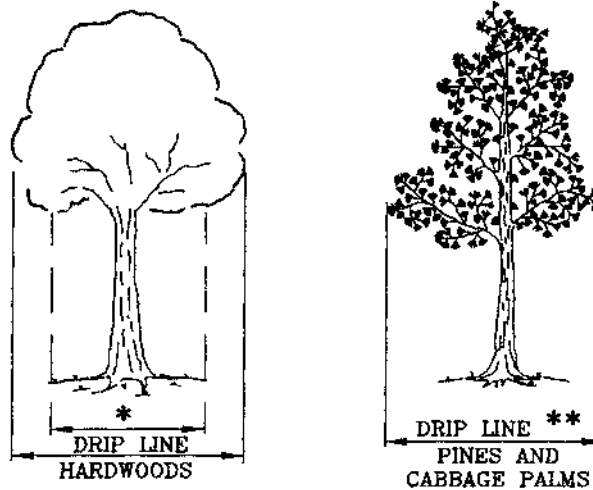
IVAN J. FERNANDEZ, P.E.

REVISION:

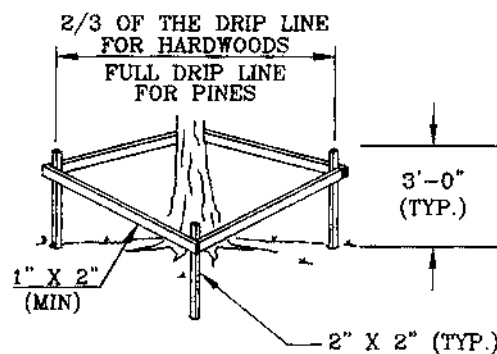


**NOTES:**

1. NO TREE SHALL BE REMOVED UNLESS SPECIFICALLY TAGGED FOR REMOVAL BY THE ENGINEER.
2. THE CONTRACTOR SHALL TAKE SPECIAL CARE NOT TO DAMAGE TREES THAT ARE TO REMAIN.
3. ROOTS GREATER THAN 1" DIAMETER SHALL NOT BE CUT UNLESS OTHERWISE APPROVED BY THE ENGINEER.
4. ALL ROOT PRUNING SHALL BE PERFORMED BY AN ISA CERTIFIED ARBORIST IN ACCORDANCE WITH ANSI-A300 STANDARDS.
5. STOCKPILED MATERIALS OR UNNECESSARY VEHICULAR TRAFFIC SHALL NOT BE ALLOWED OVER ANY TREE ROOTS SYSTEM.
6. BARRIER SHALL BE CONSTRUCTED WHEN CALLED FOR ON PLANS OR AS DIRECTED BY THE ENGINEER. BARRIERS SHALL BE MAINTAINED IN PLACE UNTIL REMOVAL IS DIRECTED BY THE ENGINEER.
7. COST OF ALL TREE BARRICADES SHALL BE INCLUDED IN PAY ITEM 800-9004 (CLEARING & GRUBBING).
8. SUBSTITUTION FOR WOODEN (1"x 2" MIN.) BEAMS WITH OTHER MATERIALS REQUIRE PRE-APPROVAL BY THE COUNTY ENGINEER.

**REQUIRED DISTANCES FROM TREE TRUNK**

- \*  $\frac{2}{3}$  THE DRIP LINE OR 6 FEET, WHICHEVER IS GREATER.
- \*\* DRIP LINE FOR PINES/CONIFERS AND CABBAGE PALMS OR 6 FEET, WHICHEVER IS GREATER.

**BARRIER****PINELLAS COUNTY****TREE PROTECTION**

DETAIL INDEX I.D.:

1111

DATE:

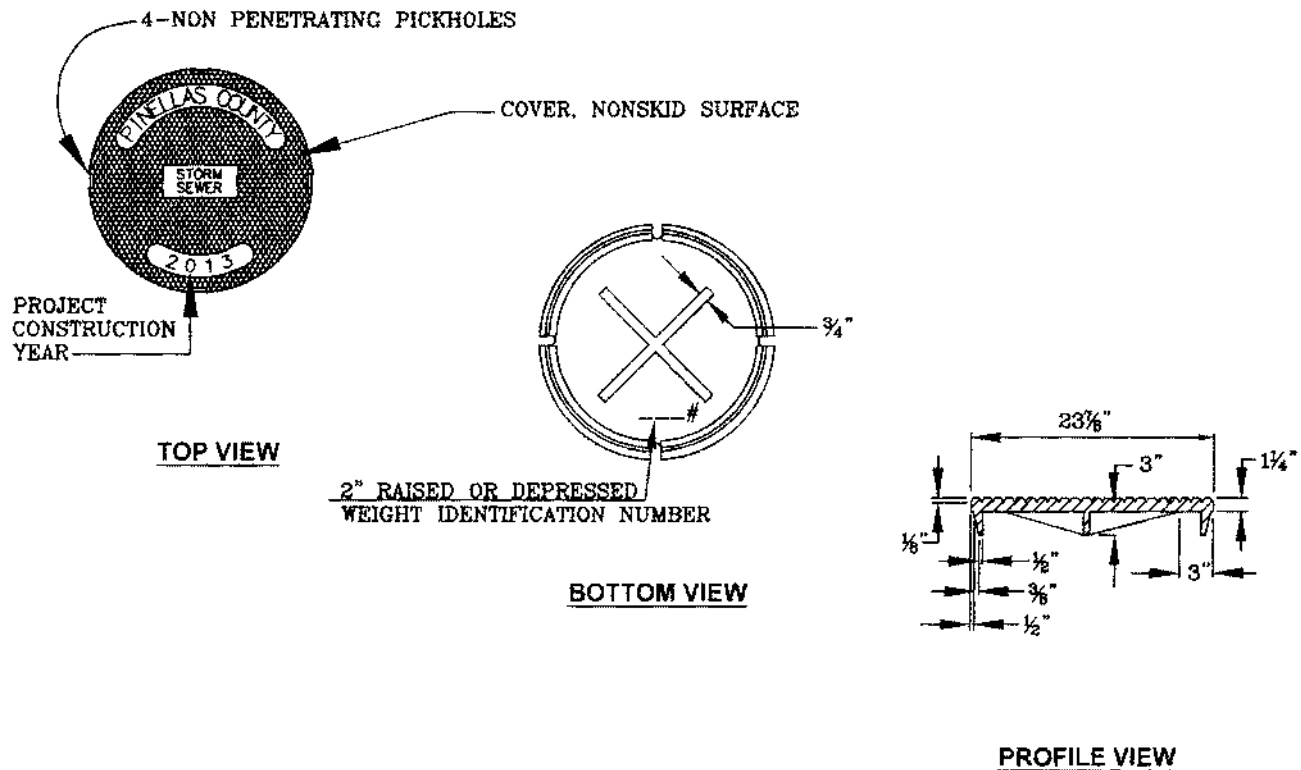
FEB/2016

IVAN J. FERNANDEZ, P.E.

REVISION:

NOTES:

1. THIS COVER IS NOT TO BE USED FOR SANITARY SEWER MANHOLES.
2. THIS COVER MAY BE USED WITH FRAME TYPE I, II OR III AS DETAILED IN F.D.O.T. INDEX No. 201. TYPE I SHALL BE USED UNLESS OTHERWISE SPECIFIED IN THE PLANS.
3. MATERIALS AND FABRICATION SHALL CONFORM TO SECTION 425 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. COVERS FOR UNDERDRAIN CLEANOUTS SHALL BE LABELED UNDERDRAIN AND NOT STORM SEWER.



PINELLAS COUNTY

STORM SEWER COVER

DETAIL INDEX I.D.:

1250

DATE:

FEB/2016

IVAN J. FERNANDEZ, P.E.

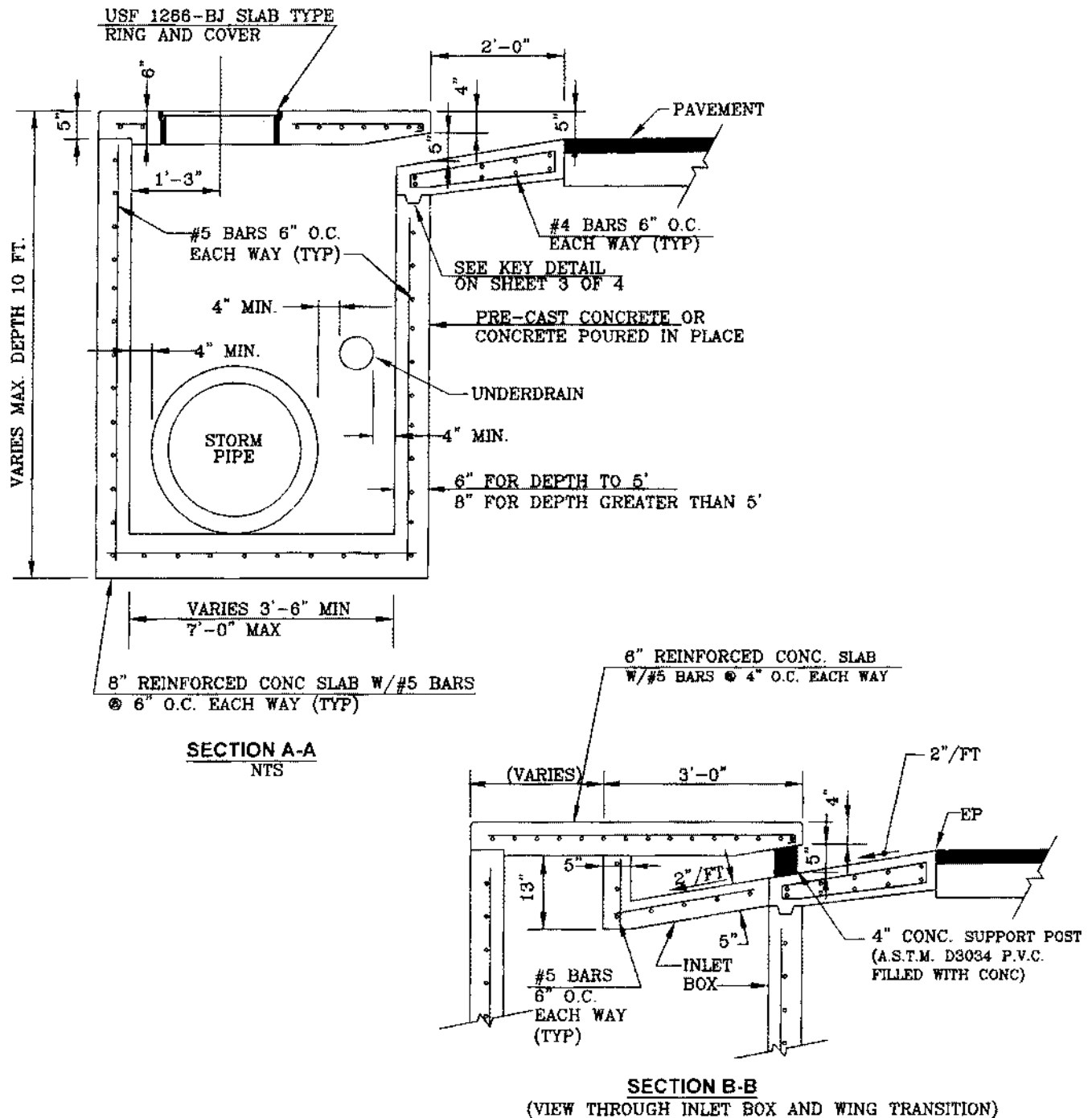
REVISION:





**NOTES:**

1. RC-4 IS SYMMETRICAL ABOUT THE CENTERLINE.
2. RC-5 IS CONSTRUCTED WITHOUT WINGS.

**PINELLAS COUNTY**

P.C.E.D. CURB INLET (TYPES RC-3, 4, AND 5)  
SHEET 2 OF 4

DETAIL INDEX I.D.:

1255-SHT. 2

DATE:

FEB/2016

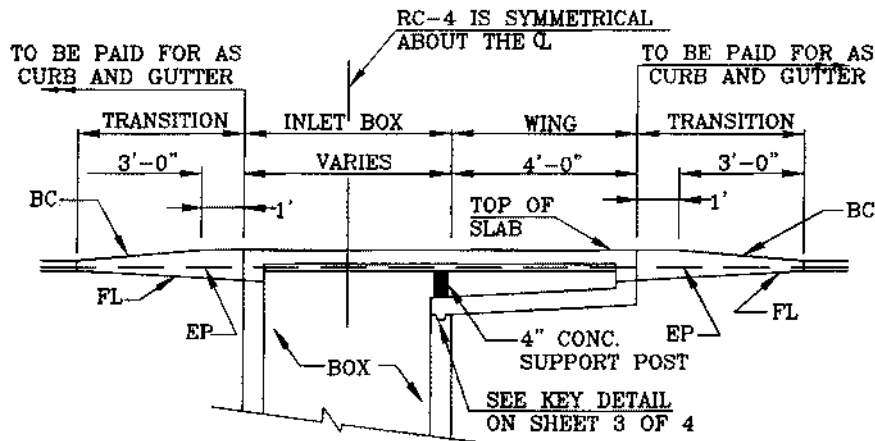
IVAN J. FERNANDEZ, P.E.

REVISION:

6

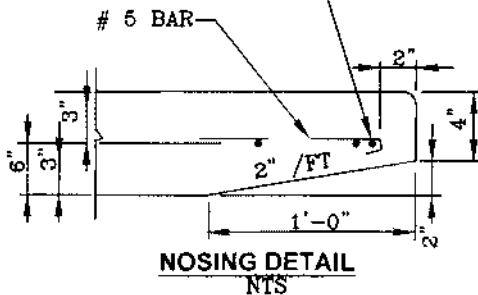
NOTES:

1. RC-4 IS SYMMETRICAL ABOUT THE CENTERLINE.
2. RC-5 IS CONSTRUCTED WITHOUT WINGS.

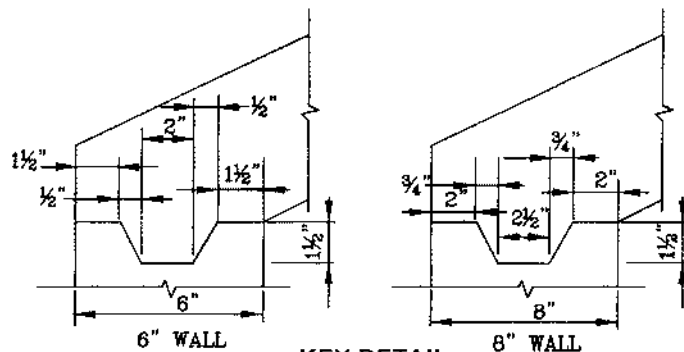


**SECTION F-F**  
NTS

ADDITIONAL # 5 BAR ALONG  
ENTIRE LENGTH OF NOSING



**NOSING DETAIL**  
NTS



**KEY DETAIL**  
NTS

## PINELLAS COUNTY

P.C.E.D. CURB INLET (TYPES RC-3, 4, AND 5)  
SHEET 3 OF 4

DETAIL INDEX I.D.:

1255-SHT 3

DATE:

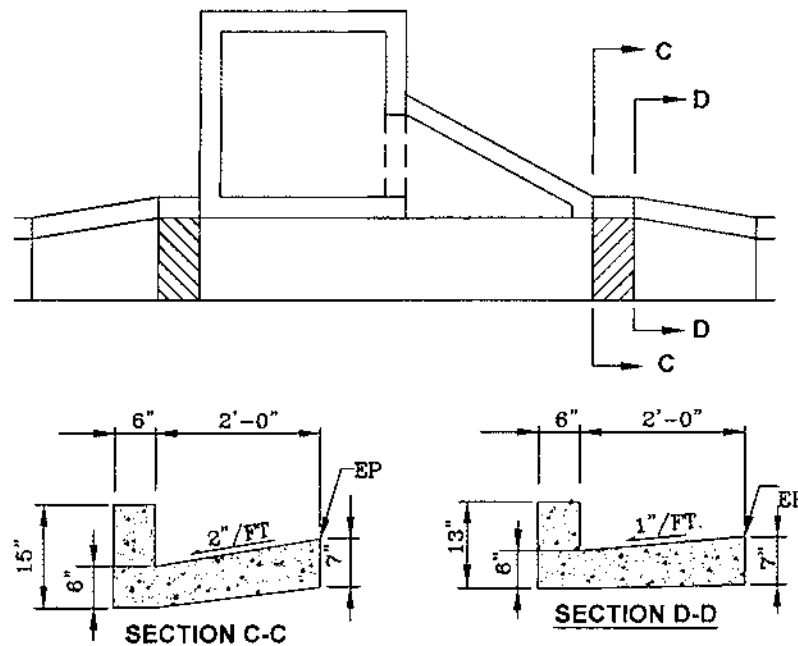
FEB/2016

IVAN J. FERNANDEZ, P.E.

REVISION:

**NOTES:**

1. THESE INLETS FOR USE WITH PINELLAS COUNTY AND WITH F.D.O.T. TYPE 'A' CURB AND GUTTER, AND WITH TYPE 'F' CURB (FOR USE WITH TYPE 'F', SEE DETAILS FOR TYPE 'F' CURB TRANSITION).
2. CENTERLINES OF INLETS SHOULD BE LOCATED AT PROPERTY LINES UNLESS OTHERWISE APPROVED.
3. COVER FOR ALL REINFORCING STEEL SHALL BE 2" MINIMUM.
4. SUGGESTED MAXIMUM INLET DESIGN FLOWS FOR 0.4% PROFILE GRADE AND 1/4"/FT. CROSS SLOPE.  
 RC-3: 4.5 CFS (3'-6" WIDTH) / 5.5 CFS (5'-0" WIDTH)  
 RC-4: 6.5 CFS (3'-6" WIDTH) / 7.5 CFS (5'-0" WIDTH)  
 RC-5: 3 CFS (3'-6" WIDTH) / 4 CFS (5'-0" WIDTH)
5. INLETS SHALL BE CONSTRUCTED OF REINFORCED CONCRETE, AND MAY BE EITHER PRECAST OR POURED IN PLACE.
6. CONCRETE SHALL BE CLASS II, WITH  $F_c' = 3400$  PSI (MIN.). ( $F_c' = 4000$  PSI (MIN.) FOR TOP SLAB).
7. REINFORCING STEEL SHALL BE GRADE 60, DEFORMED, AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 615 (GRADE 60 TOP SLAB).
8. WHEN INLET TOPS EXTEND INTO SIDEWALK OR OTHER PAVED AREAS, THE FINISHED SURFACE OF THE INLET TOPS SHALL CONFORM TO THE FINISHED GRADE AND CROSS SLOPE OF THE ADJACENT SIDEWALK OR PAVEMENT. TO ACHIEVE THIS CONFORMITY THE DEPTH OF THE INLET SLAB MAY BE INCREASED WHERE NECESSARY, AND/OR THE HEIGHT OF THE INLET SIDE AND REAR WALLS MAY BE INCREASED OR DECREASED AS REQUIRED. HOWEVER, THE THICKNESS OF THE INLET SLAB AT ANY POINT SHALL NOT BE LESS THAN THAT SHOWN IN THE PLANS, AND NO ADJUSTMENT SHALL BE MADE TO THE DEPTH OF INLET OPENINGS OR THE HEIGHT OF THE TOP FRONT EDGE OF THE INLET SLAB.
9. UNLESS OTHERWISE NOTED, ALL EXPOSED EDGES AND CORNERS OF CONCRETE SHALL HAVE A 3/4" CHAMFER.
10. F.D.O.T. TYPE 'J' BOTTOM MAY BE USED WITH 'RC-3', 'RC-4' AND 'RC-5' INLETS. IN SUCH CASES THE STRUCTURE BOTTOM MAY BE ROTATED AS DIRECTED BY ENGINEER IN ORDER TO FACILITATE CONNECTIONS BETWEEN THE STRUCTURE WALLS AND STORM SEWER PIPES.
11. INLET SHOWN IS TYPE 'RC-3' (SINGLE WING). TYPE 'RC-4' (DOUBLE WING) IS THE SAME AS 'RC-3', EXCEPT THAT IT IS SYMMETRICAL ABOUT CENTERLINE OF BOX, AND RC-5 IS THE SAME, EXCEPT THAT IT IS CONSTRUCTED WITHOUT WINGS.
12. SECTIONS 'C'-C' AND 'D'-D' ON THIS SHEET SHOW TRANSITION FOR TYPE 'F' CURB.

**PINELLAS COUNTY**

P.C.E.D. CURB INLET (TYPES RC-3, 4, AND 5)  
 SHEET 4 OF 4

DETAIL INDEX I.D.:

1255-SHT. 4

DATE:

FEB/2016

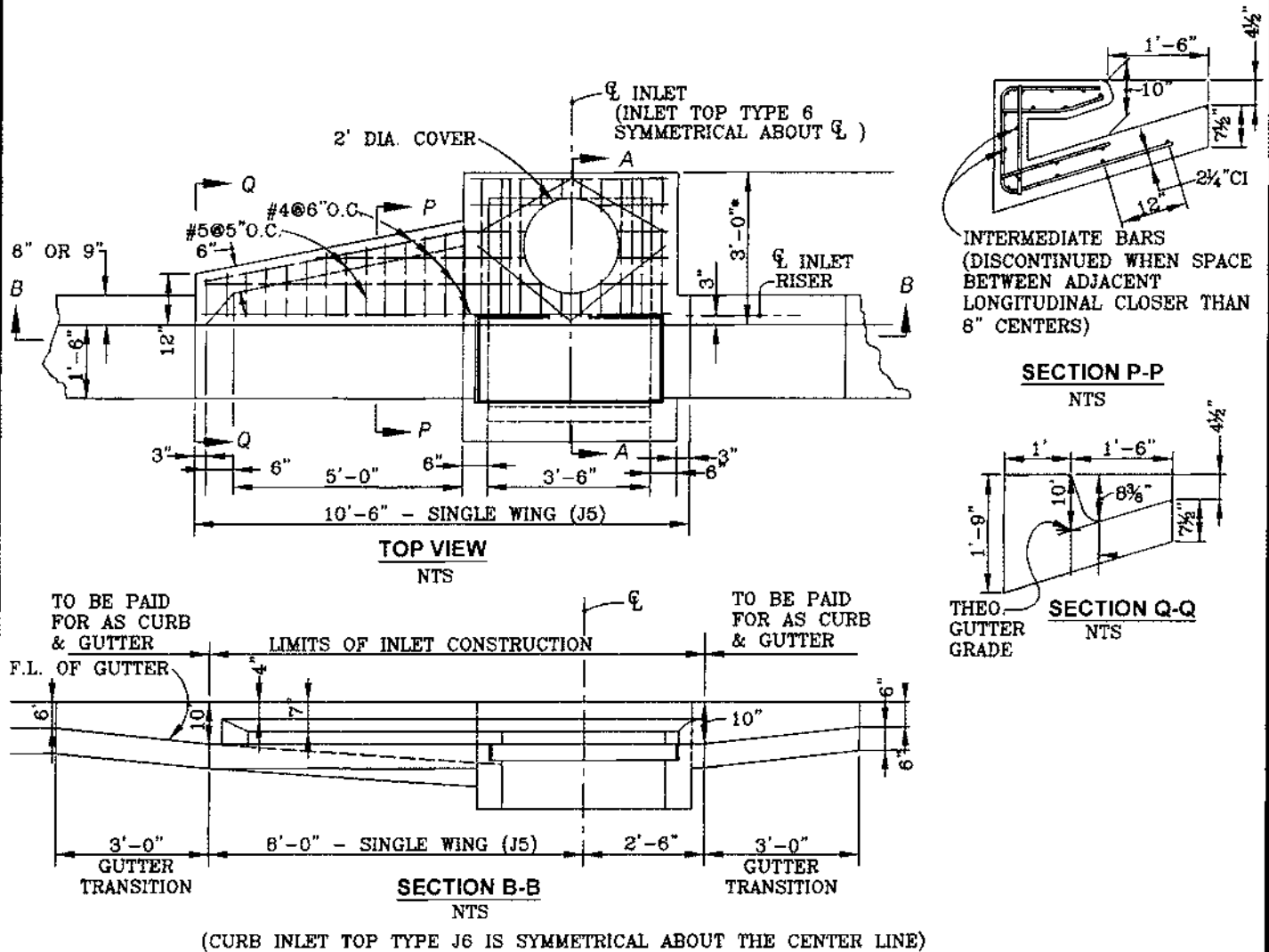
IVAN J. FERNANDEZ, P.E.

REVISION:



**NOTES:**

1. COVER FOR ALL REINFORCING STEEL SHALL BE 2" MINIMUM.
2. INLETS SHALL BE CONSTRUCTED OF REINFORCED CONCRETE, AND MAY BE EITHER PRECAST OR POURED IN PLACE.
3. CONCRETE SHALL BE CLASS II, WITH  $F_c' = 3400$  PSI (MIN). CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 346 OF F.D.O.T.'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. REINFORCING STEEL SHALL BE GRADE 60, DEFORMED, AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 615.
5. UNLESS OTHERWISE NOTED, ALL EXPOSED EDGES AND CORNERS OF CONCRETE SHALL HAVE A  $\frac{3}{4}$ " CHAMFER.
6. SEE F.D.O.T. INDEX 211 FOR GRATE INFORMATION.

**PINELLAS COUNTY**

P.C.E.D. J5 & J6 CURB INLETS - SHEET 1 OF 2  
(MODIFIED F.D.O.T. J5 & J6 CURB INLETS)

DETAIL INDEX I.D.:

1260 SHT. 1

DATE:

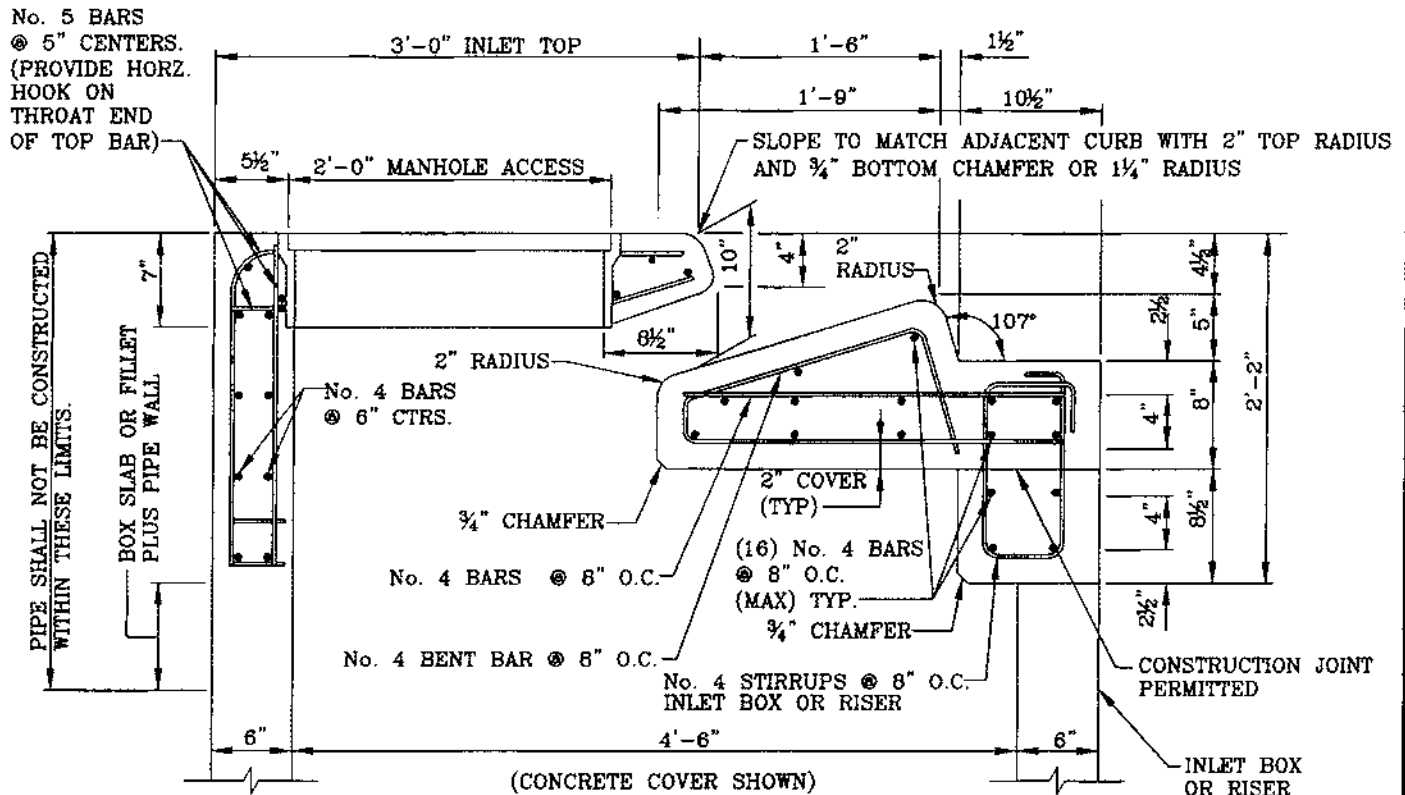
FEB/2016

IVAN J. FERNANDEZ, P.E.

REVISION:

**NOTES:**

1. MANHOLE COVER & FRAME TO BE F.D.O.T. INDEX No. 201, TYPE III.
2. CONTRACTOR TO SUBMIT SHOP DRAWING TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
3. J5 DESIGNATES A SINGLE WING INLET.
4. J6 DESIGNATES A DOUBLE WING INLET.



INLET TOP:  
No. 4 TOP BARS @ 6" O.C.  
No. 4 BOTTOM BARS @ 6" O.C.

**SECTION A-A**  
N.T.S.

## PINELLAS COUNTY

P.C.E.D. J5 & J6 CURB INLETS- SHEET 2 OF 2  
(MODIFIED F.D.O.T. J5 & J6 CURB INLETS)

DETAIL INDEX I.D.:

1260-SHT. 2

DATE:

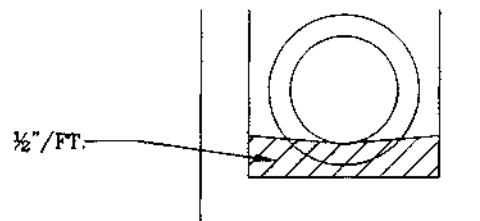
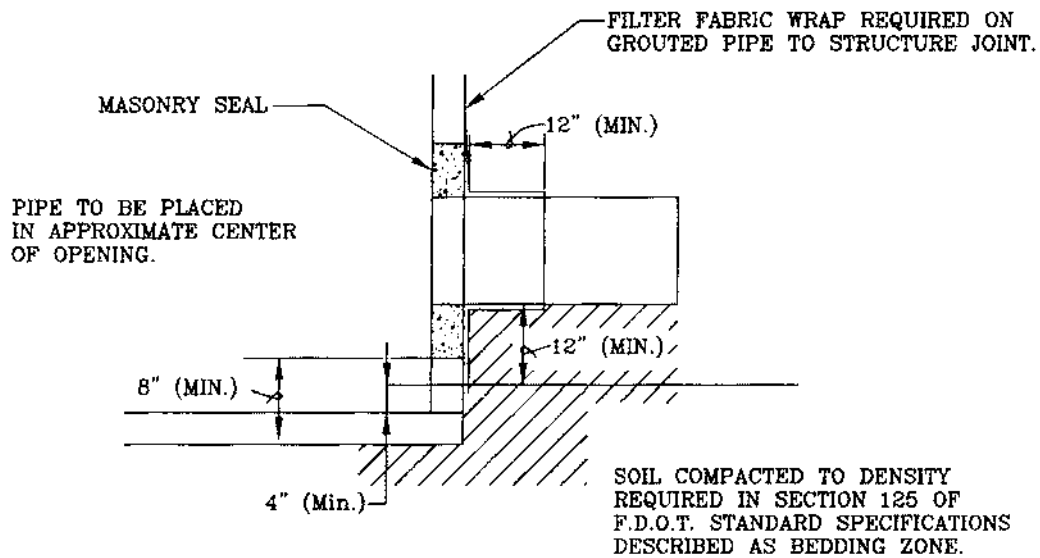
FEB/2016

IVAN J. FERNANDEZ, P.E.

REVISION:

**NOTES:**

1. GROUT TO CONSIST OF 3:1 SAND-CEMENT MIXTURE OR ANY CLASS CONCRETE.
2. FOR ALL STRUCTURES, UNLESS EXCLUDED BY SPECIAL DETAIL, BRICKS SHALL NOT BE USED IN THIS AREA, UNLESS THEY ARE COVERED WITH 4" THICK (MIN.) CONCRETE ABOVE THE BRICKS.



**PINELLAS COUNTY**

**FILTER FABRIC WRAP AND  
GROUT AT STRUCTURES**

DETAIL INDEX I.D.:

1265

DATE:

FEB/2016

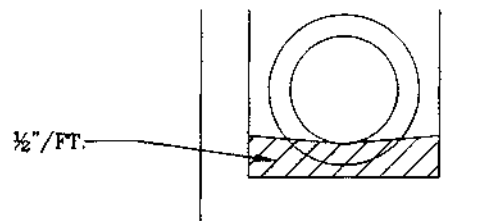
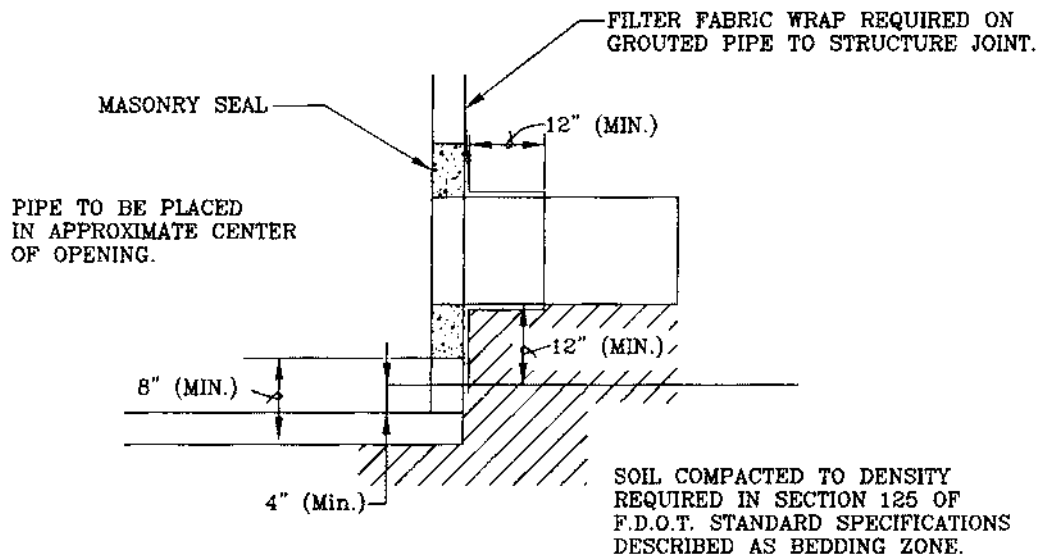
IVAN J. FERNANDEZ, P.E.

REVISION:



**NOTES:**

1. GROUT TO CONSIST OF 3:1 SAND-CEMENT MIXTURE OR ANY CLASS CONCRETE.
2. FOR ALL STRUCTURES, UNLESS EXCLUDED BY SPECIAL DETAIL, BRICKS SHALL NOT BE USED IN THIS AREA, UNLESS THEY ARE COVERED WITH 4" THICK (MIN.) CONCRETE ABOVE THE BRICKS.



**PINELLAS COUNTY**

**FILTER FABRIC WRAP AND  
GROUT AT STRUCTURES**

DETAIL INDEX I.D.:

1265

DATE:

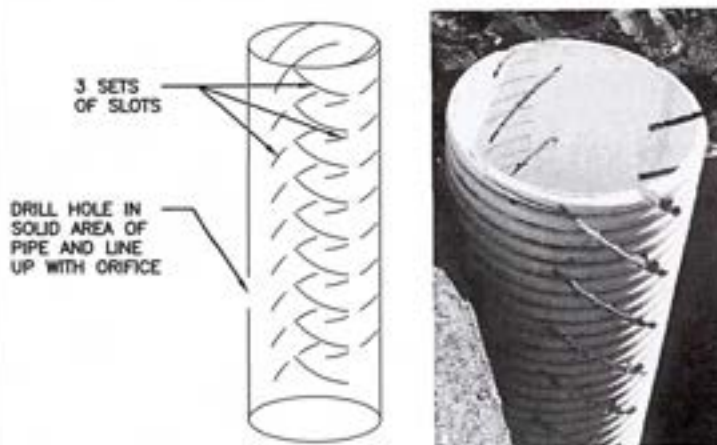
FEB/2016

IVAN J. FERNANDEZ, P.E.

REVISION:

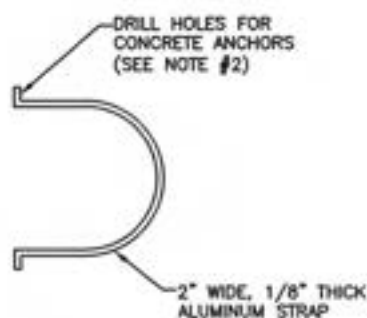
## NOTES:

1. THIS ANTI-CLOGGING DEVICE SHALL ONLY BE USED ON ORIFICES THAT ARE LESS THAN ONE INCH IN DIAMETER AND WHEN AN EXTERNAL SKIMMER IS PRESENT.
2. ALUMINUM STRAPS SHALL BE ANCHORED TO OUTFALL STRUCTURE WITH  $1/4"$  x  $2-3/4"$  HEX HEAD STAINLESS STEEL TAPCON® CONCRETE SCREWS (OR APPROVED EQUIVALENT). A MINIMUM OF 2 SCREWS PER STRAP IS REQUIRED.
3. TO PROVIDE SUFFICIENT FLOW CAPACITY, A MINIMUM CLEARANCE OF 1-INCH BETWEEN THE BOTTOM OF THE 6" SLOTTED PIPE AND THE SCOUR PAD IS REQUIRED.
4. CONTRACTOR SHALL CUT 3 SETS OF SLOTS SPACED EQUIDISTANT AROUND THE CIRCUMFERENCE OF THE 6" SLOTTED PVC PIPE. THE SLOTS SHALL BE  $1/8"$  WIDE, 5" LONG, 2" APART, AND EXTEND THE ENTIRE LENGTH OF THE PIPE. SLOTS SHALL BE CUT ON A 45 DEGREE ANGLE. REFER TO DETAIL.
5. CONTRACTOR SHALL DRILL A HOLE  $1/4"$  LARGER THAN THE ORIFICE INTO THE 6" SLOTTED PVC PIPE AND LINE UP THE PIPE HOLE WITH THE ORIFICE WHEN INSTALLING THE PIPE. THE PIPE HOLE SHALL BE LOCATED IN A SOLID SECTION OF PIPE BETWEEN TWO OF THE SETS OF THE  $1/8"$  SLOTS.
6. CONCRETE PAD SHALL BE PRE-CAST AND EXTEND AT LEAST ONE FOOT BEYOND ALL SIDES OF SKIMMER. CONCRETE MINIMUM SPECS. ARE: 4" THICKNESS; 2500 PSI WITH #5 REBAR ON 1' CENTERS; TWO #5 REBARS SHALL BE LOCATED 4" FROM EDGE AND DOWELED INTO OUTFALL STRUCTURE. ENGINEER SHALL ASSESS SITE CONDITIONS AND OUTFALL STRUCTURE DESIGN TO STRENGTHEN PAD ACCORDINGLY.
7. TERM "ENGINEER" REFERS TO PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.



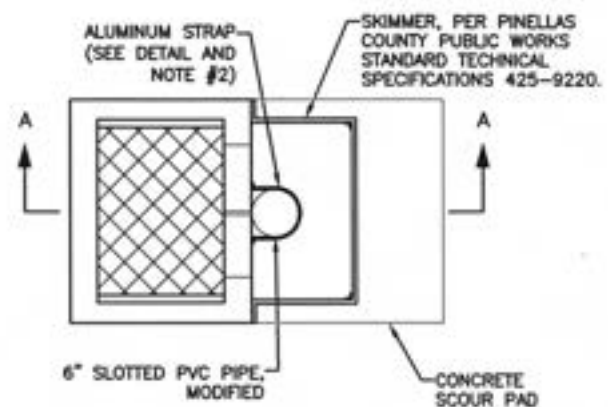
MODIFIED 6" SLOTTED PVC PIPE DETAIL

N.T.S.



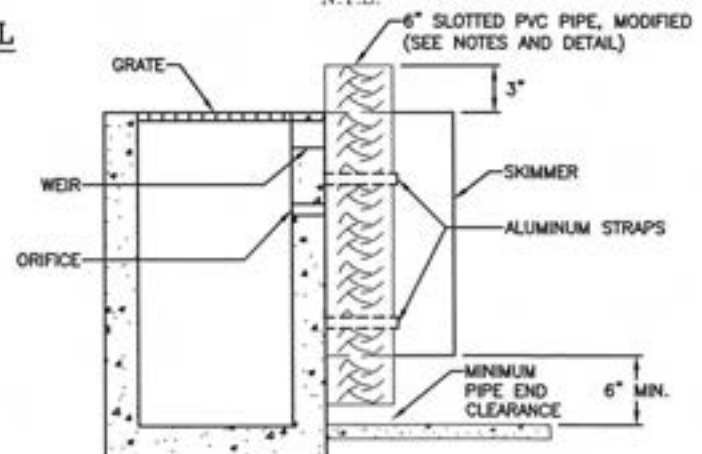
ALUMINUM STRAP DETAIL

N.T.S.



PLAN VIEW

N.T.S.



SECTION A-A

N.T.S.

## PINELLAS COUNTY

ANTI-CLOGGING DEVICE FOR POND  
OUTFALL CONTROL STRUCTURES

DETAIL INDEX I.D.:

1270

DATE:

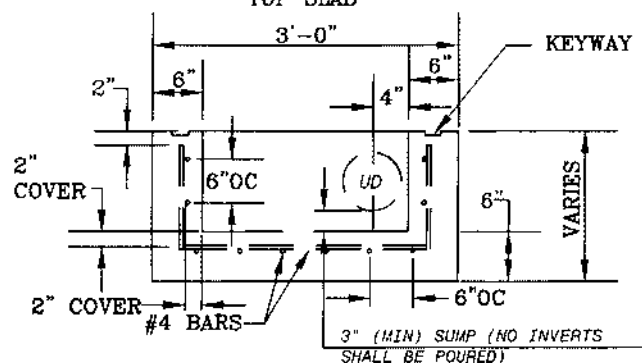
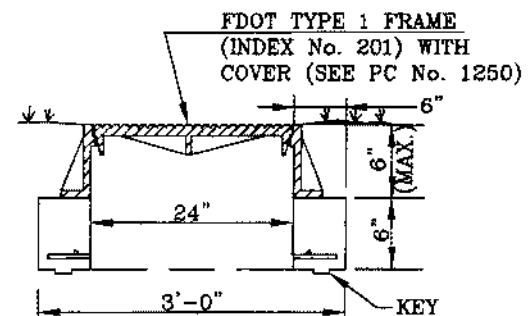
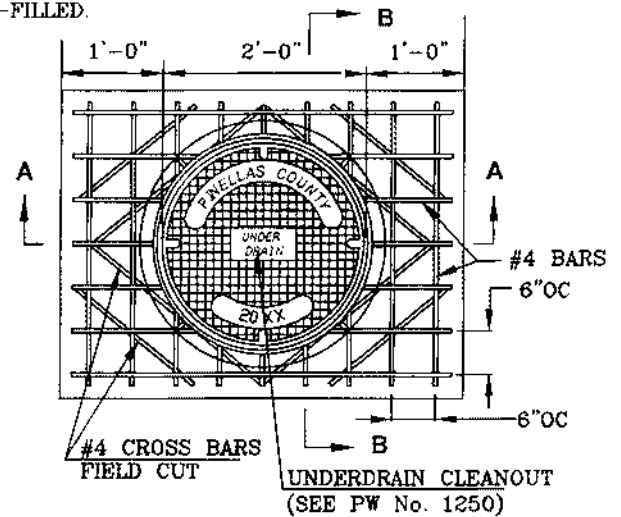
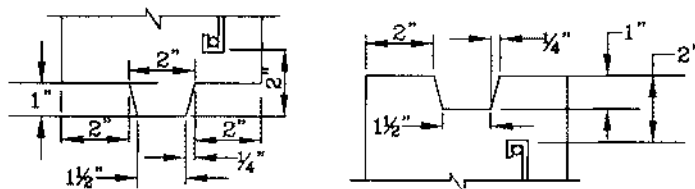
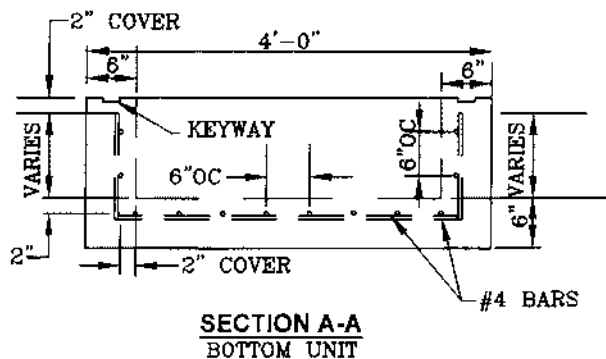
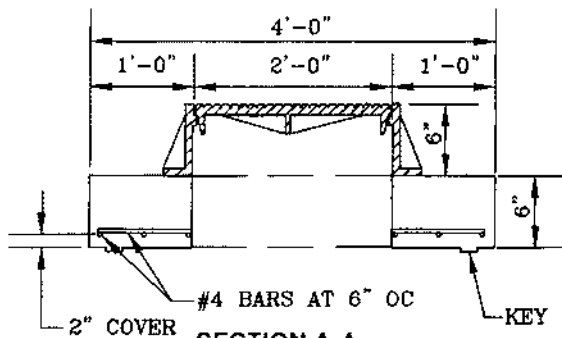
NOV/2017

BY: IVAN J. FERNANDEZ

REVISION:

**NOTES:**

1. THIS MANHOLE SHALL BE CONSTRUCTED OF PRECAST CONCRETE.
2. CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO SECTION 425 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
3. LIFTING HOLES SHALL BE LOCATED AS NEEDED.
4. NO INVERTS SHALL BE POURED.
5. 2" CLEARANCE COVER FOR REINFORCING STEEL.
6. OPENING AROUND UNDERDRAIN PIPE SHALL BE GROUT-FILLED.



# PINELLAS COUNTY

## UNDERDRAIN INSPECTION MANHOLE TYPE 1

DETAIL INDEX I.D.:

1281

DATE:

FEB/2016

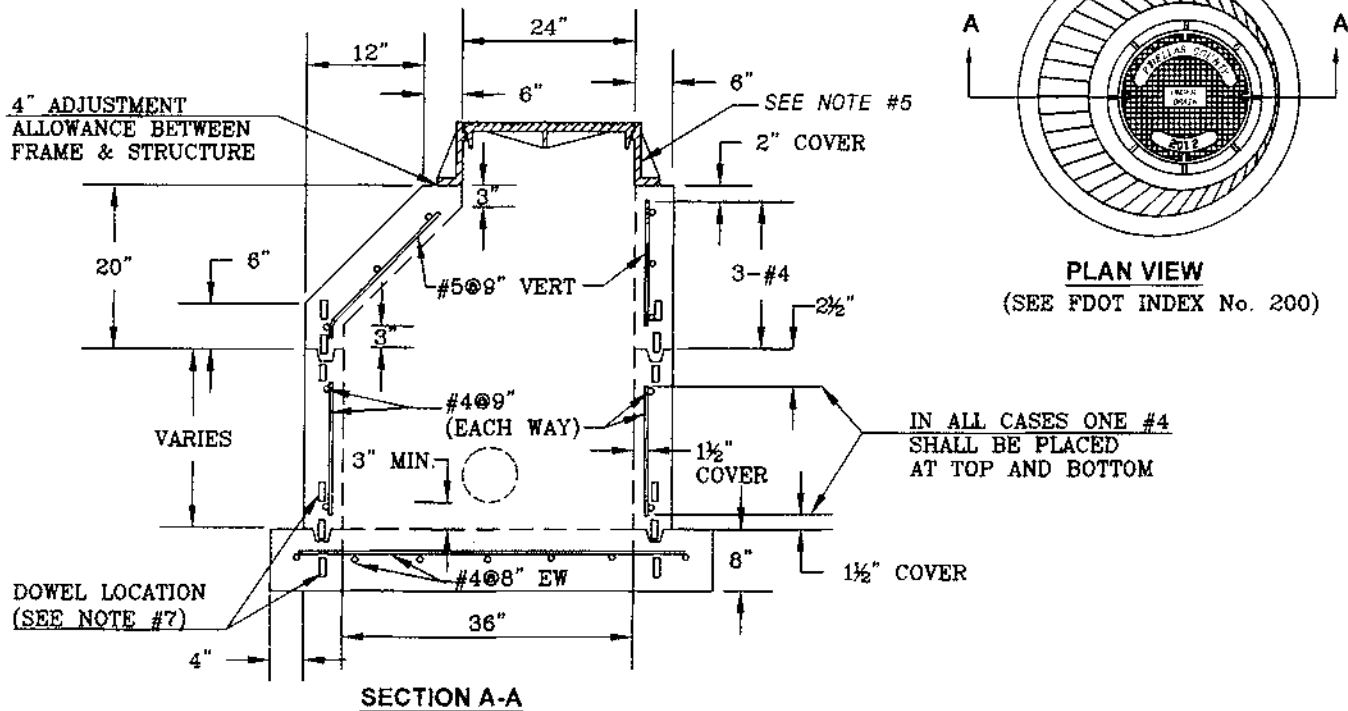
IVAN J. FERNANDEZ, P.E.

REVISION:

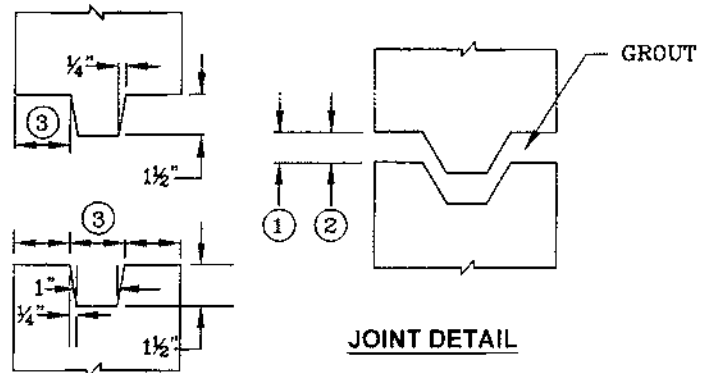


**NOTES:**

1. CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO SECTION 425 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.
2. OPENING AROUND UNDERDRAIN PIPE SHALL BE GROUT-FILLED.
3. MANHOLE COVERS SHALL COMPLY WITH PC No. 1250.
4. WHEN AUTHORIZED BY THE ENGINEER AND AT NO ADDITIONAL EXPENSE TO THE COUNTY, F.D.O.T. INDEX No. 200 MANHOLE TYPE P (ALTERNATE A), MAY BE USED IN PLACE OF A COUNTY UNDERDRAIN INSPECTION MANHOLE.
5. EXCEPT AS OTHERWISE NOTED ON THE PLANS, FRAME FOR MANHOLE COVERS SHALL BE F.D.O.T. INDEX No. 201, TYPE I.
6. MINIMUM WALL THICKNESS:  $4\frac{1}{2}$ " FOR PREFAB AND 6" FOR POURED IN PLACE.
7. FOR POURED IN PLACE CONSTRUCTION, DOWELS MAY BE USED IN LIEU OF JOINT KEY AND GROUTING. DOWELS SHALL EXTEND A MINIMUM OF 6" INTO ADJACENT SECTIONS.

**JOINT DIMENSIONS**

- ① 1" PRIOR TO PLACEMENT OF UPPER SECTION
- ② 1/2" MAXIMUM AFTER FINAL SETTLEMENT OF UPPER SECTION
- ③ 1 1/2" WIDE (4 1/2" WALL)  
2" WIDE (6" WALL)

**PINELLAS COUNTY**

UNDERDRAIN INSPECTION MANHOLE TYPE 2

DETAIL INDEX I.D.:

1282

DATE:

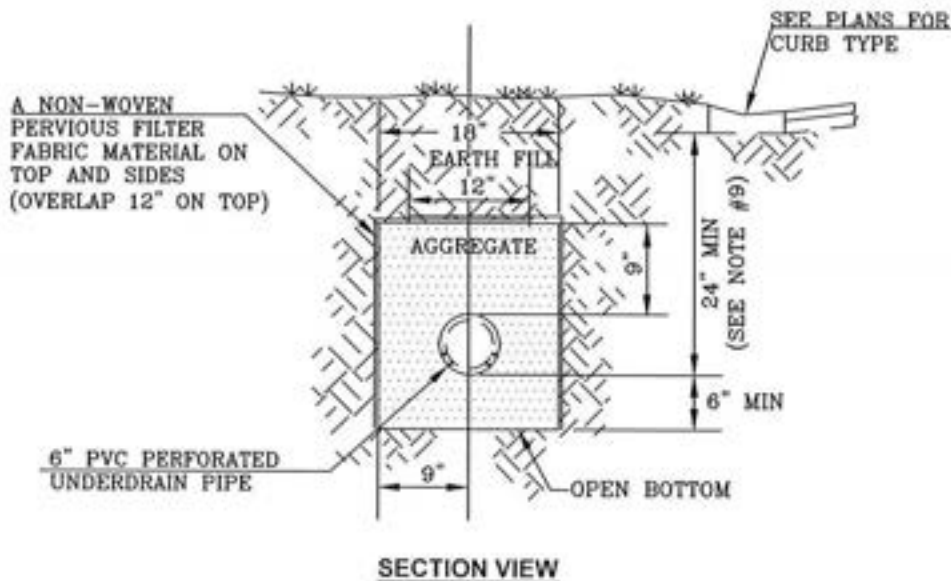
FEB/2016

IVAN J. FERNANDEZ, P.E.

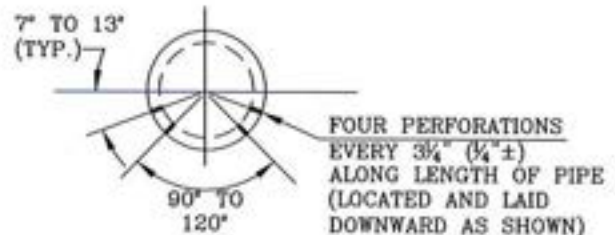
REVISION:

**NOTES:**

1. ALL VALUES EXCEPT A.O.S. AND ELONGATION ARE MINIMUM AVERAGE ROLL VALUES IN THE WEAKEST PRINCIPAL DIRECTION. VALUES FOR A.O.S. AND ELONGATION ARE MAXIMUM AVERAGE ROLL VALUES.
2. FOR ADDITIONAL NOTES SEE F.D.O.T. STANDARD INDEX NO. 286.
3. PAYMENT FOR UNDERDRAIN (L.F.) SHALL BE FOR THE COMPLETED ASSEMBLY, NOT FOR INDIVIDUAL COMPONENTS REGARDLESS IF THEY EXIST IN THE BID SUBMITTAL SHEETS.
4. PVC PIPE SHALL CONFORM TO EITHER ASTM F750 OR ASTM D3034. EXCEPT THAT THE PIPE AND ARRANGEMENT OF PERFORATIONS SHALL CONFORM TO THE PERFORATION DETAIL ON THIS SHEET.
5. AGGREGATE SHALL BE AS SPECIFIED IN THE F.D.O.T. STANDARD SPECIFICATIONS, SECTION 901, AND SHALL BE SIZE 57.
6. DIAMETER OF PERFORATIONS SHALL BE  $\frac{3}{16}$ " TO  $\frac{1}{8}$ ".
7. MAXIMUM ALLOWABLE BEND SHALL BE  $22\frac{1}{2}$ ", WITH A STRAIGHT 2' MINIMUM PIPE SEPARATION BETWEEN BENDS.
8. DO NOT USE PERFORATED PVC PIPE OR AGGREGATE UNDERNEATH ROADWAYS.
9. SEE PLANS FOR EXACT DIMENSIONS. DIMENSIONS LESS THAN 24" REQUIRES COUNTY APPROVAL.



STANDARD CRITERIA	UNIT	TEST METHOD	VALUE
Permittivity	sec <sup>-1</sup>	ASTM-D-4491	0.2
A.O.S.	U.S. Sieve #	ASTM-D-4751	100+
Elongation	%	ASTM-D-4632	50
Grab Tensile Strength	N	ASTM-D-4632	1100
Sewn Strength	N	ASTM-D-4884	990
Puncture	N	ASTM-D-4833	400
Trapezoidal Tear	N	ASTM-D-4533	400
U.V. Resistance	AT 500 Hrs.	ASTM-D-4355	50%



# PINELLAS COUNTY

## ROADSIDE UNDERDRAIN INSTALLATION

DETAIL INDEX I.D.:

1290

DATE:

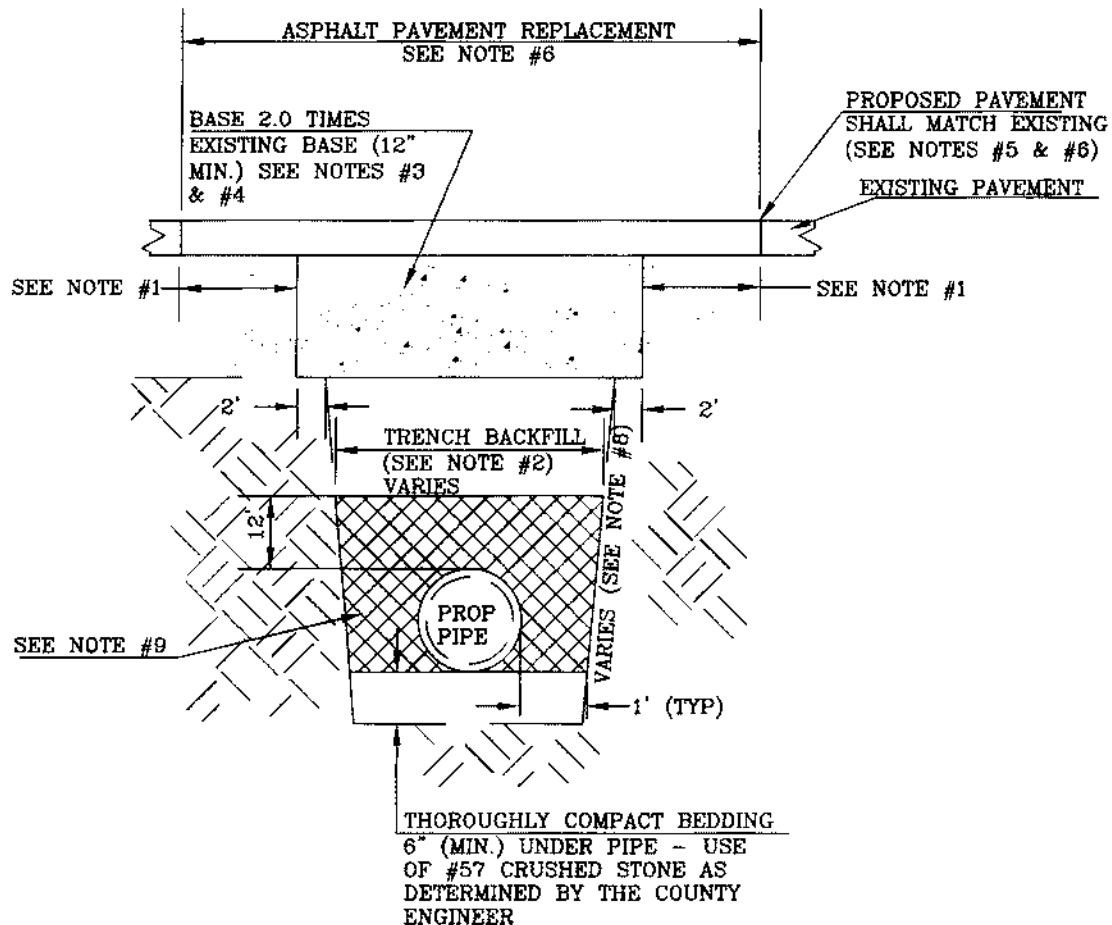
MAY/2017

Ivan J. Fernandez, P.E.

REVISION:

**NOTES:**

1. MILLING AND RESURFACING LIMITS: 3'-0" FOR RESIDENTIAL ROADWAYS; 25'-0" FOR ALL OTHER TYPES OF ROADWAYS. SHALL INCLUDE ENTIRE LANE WIDTH.
2. BACKFILL FOR TRENCH SHALL BE PLACED IN 6" COMPACTED LAYERS TO 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99. (EXCAVATABLE FLOWABLE FILL OPTION IS SUBJECT TO COUNTY ENGINEER'S APPROVAL). TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY.
3. BASE MATERIAL SHALL BE LIME ROCK OR CRUSHED CONCRETE (MIN. LBR 100) AND SHALL BE PLACED IN 6" COMPACTED LAYERS TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 (MODIFIED) (TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY).
4. AS AN ALTERNATIVE TO COMPACTED BASE AND IN WET AREAS, FULL-LIFT ASPHALTIC CONCRETE, FINE TRAFFIC LEVEL C TYPES SP9.5 OR 12.5, SHALL BE PLACED IN 2" COMPACTED LAYERS WITH A MINIMUM THICKNESS EQUAL TO THE EXISTING BASE (6" MIN.).
5. ASPHALTIC CONCRETE PAVEMENT JOINTS SHALL BE SAW-CUT AND ALL SURFACES TACK COATED.
6. ASPHALT SURFACE SHALL BE CONSISTENT WITH EXISTING GRADE. IN ACCORDANCE WITH PINELLAS COUNTY SPECIFICATIONS, THE FOLLOWING ROADWAY CLASSIFICATION TYPE/THICKNESS ARE REQUIRED: ARTERIAL-3" MIN. TYPE SP-12.5 FINE TRAFFIC LEVEL "C"; COLLECTOR-2" MIN. TYPE SP-12.5 FINE TRAFFIC LEVEL "C"; RESIDENTIAL-1½" MIN. TYPE SP-9.5 TRAFFIC LEVEL "C" (TEST REPORTS ARE REQUIRED AND SHALL BE SUBMITTED TO PINELLAS COUNTY).
7. OVERLAY OF CONSTRUCTION SCARS TO PAVEMENT AND TRENCH SHALL BE REQUIRED AS DIRECTED BY THE COUNTY ENGINEER.
8. EXCAVATION SHALL COMPLY WITH THE TRENCH SAFETY ACT REQUIREMENTS.
9. INSTALL DRY COMPACTABLE MATERIAL AROUND THE PIPE.
10. ALL MATERIAL, WORK AND TESTING SHALL MEET PINELLAS COUNTY STANDARD SPECIFICATIONS.
11. CONTRACTOR SHALL RESTORE PAVEMENT TO MATCH THE GRADES THAT EXISTED PRIOR TO CONSTRUCTION. ANY ADDITIONAL SURVEY NECESSARY TO ENSURE THAT THIS REQUIREMENT IS MET SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.

**PINELLAS COUNTY**

PAVEMENT CUTS, EXCAVATION AND  
RESTORATION

DETAIL INDEX I.D.:

1291

DATE:

FEB/2016

IVAN J. FERNANDEZ, P.E.

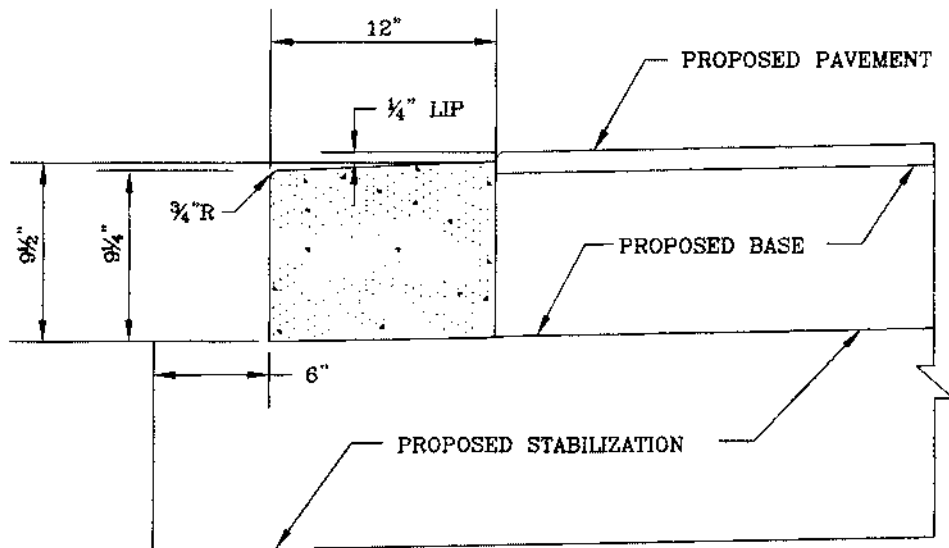
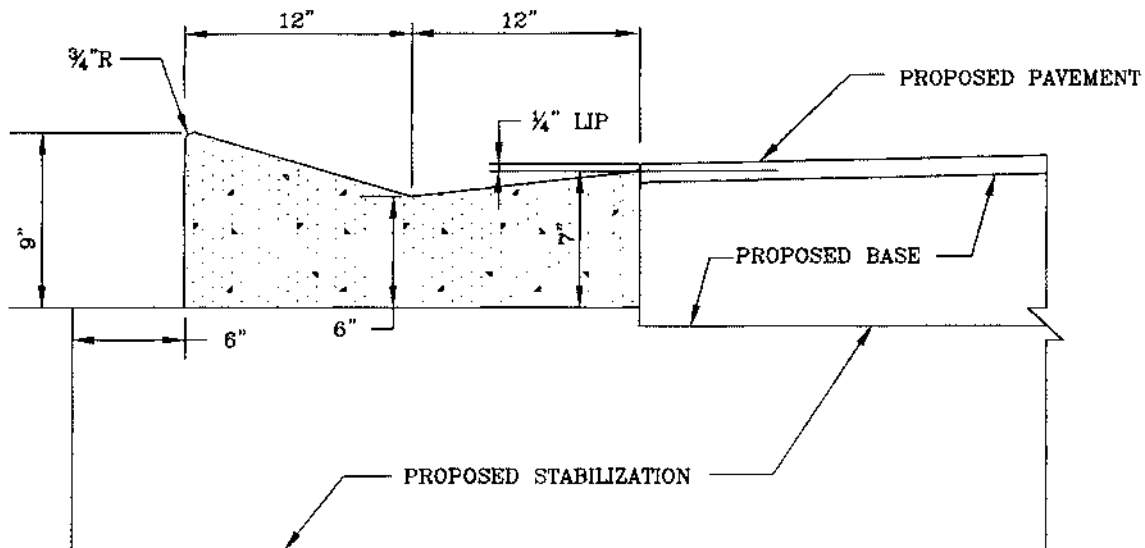
REVISION:

6



**NOTE:**

1.  $\frac{1}{2}$ " EXPANSION JOINT EVERY 500', BETWEEN CURB SECTIONS, AT RADII, END OF POUR AND STRUCTURES. (FALSE JOINTS EVERY 10', LONGITUDINALLY. SEE SECTION 520 OF THE F.D.O.T. STANDARD SPECIFICATIONS.)

**PROFILE VIEW OF HEADER CURB****PROFILE VIEW OF CURB & GUTTER****PINELLAS COUNTY**CURB AND GUTTER TYPE A  
AND HEADER CURB

DETAIL INDEX I.D.:

1305

DATE:

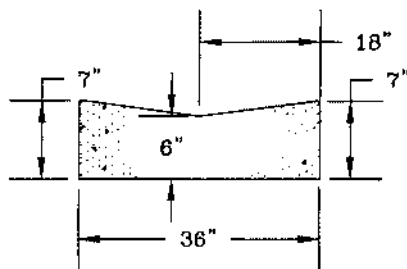
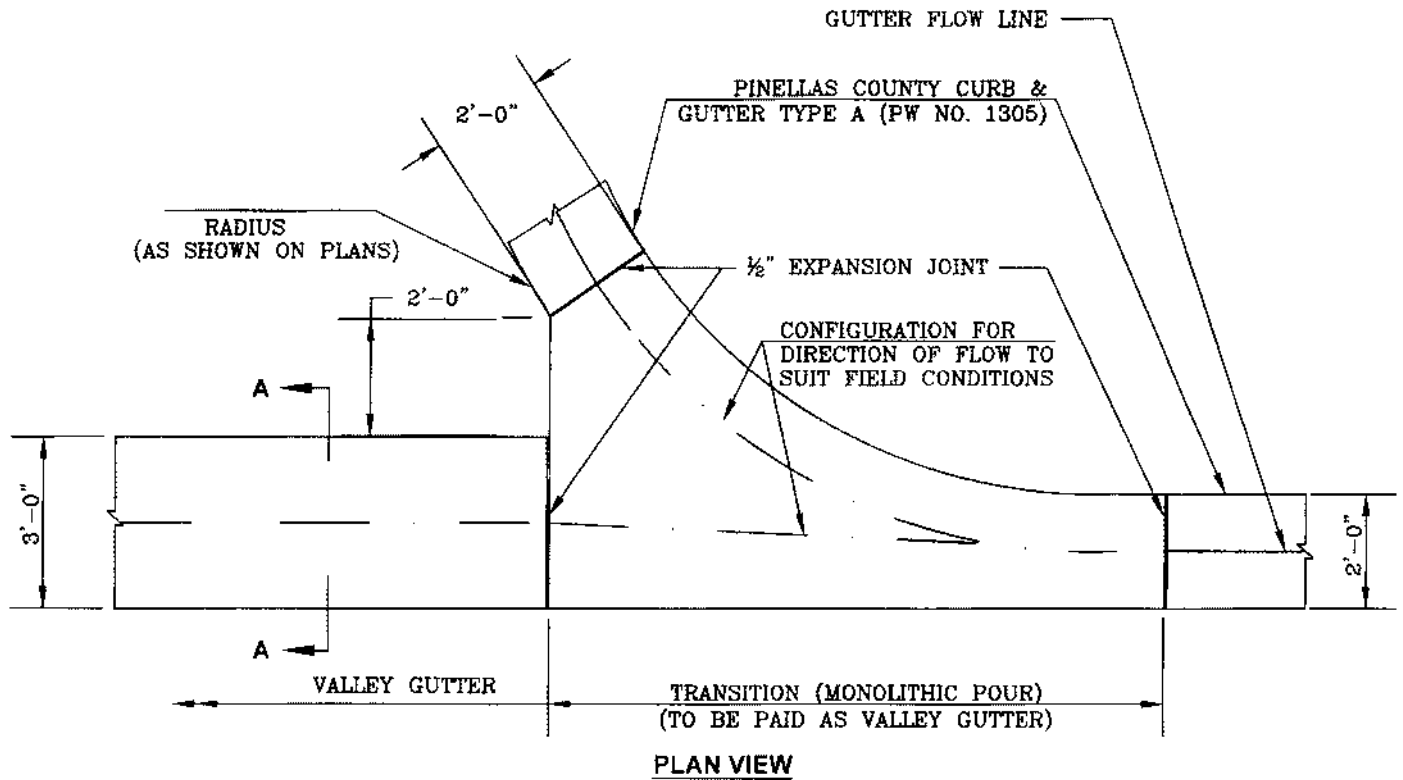
FEB/2016

IVAN J. FERNANDEZ, P.E.

REVISION:

**NOTES:**

1. SURFACE OF PAVEMENT SHALL BE  $\frac{1}{4}$ " ABOVE LIP OF GUTTER.
2.  $\frac{1}{2}$ " EXPANSION JOINT (AS SHOWN) AND CENTERLINE OF SIDE STREET, WITH (SAWCUT) FALSE JOINTS EVERY 10', LONGITUDINALLY. (SEE SECTION 520 OF THE F.D.O.T. STANDARD SPECIFICATIONS).



**VALLEY GUTTER**  
SECTION A-A

**PINELLAS COUNTY**

**VALLEY GUTTER AND TRANSITION**

DETAIL INDEX I.D.:

1315

DATE:

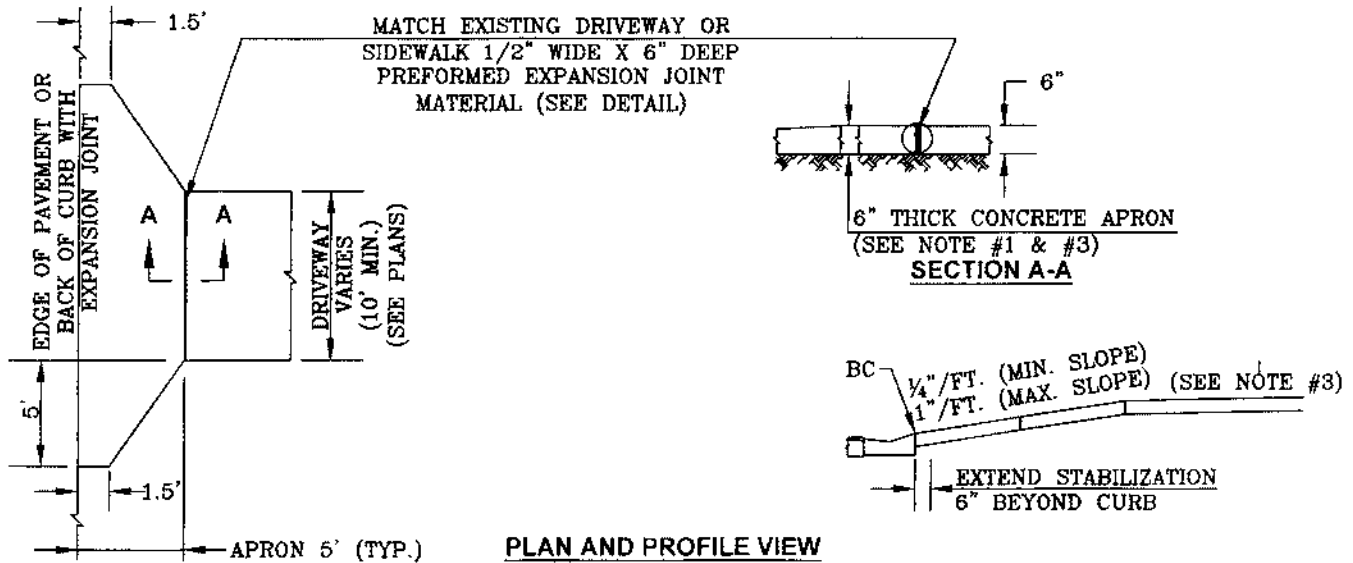
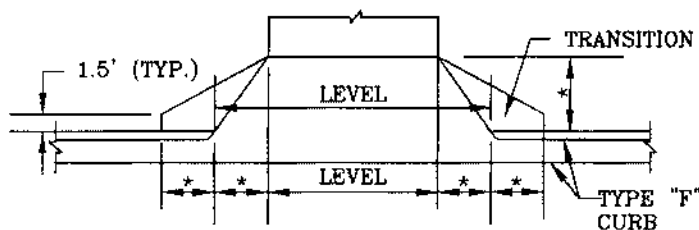
FEB/2016

IVAN J. FERNANDEZ, P.E.

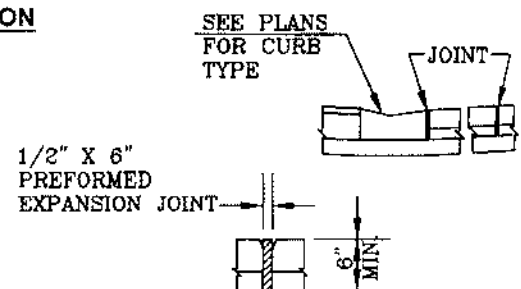
REVISION:

**NOTES:**

1. CONCRETE DRIVEWAY APRONS AND SIDEWALK CROSSINGS SHALL BE CONSTRUCTED OF CONCRETE PAVEMENT (3000 PSI), 6" THICK REINFORCED WITH 6" X 6" #10/#10 WELDED WIRE FABRIC, (2" MINIMUM COVER FROM THE BOTTOM.)
2. FIBER REINFORCED CONCRETE 3000 PSI (MIN.) MAY BE USED IN PLACE OF THE REQUIREMENTS OF NO. 1 ABOVE.
3. CONSTRUCTION OF APRON/DRIVEWAY CROSS SLOPES AND SIDEWALK CROSS SLOPE THROUGH THE DRIVEWAY SHALL COMPLY WITH F.D.O.T. INDEX NO. 515 FOR ADA REQUIREMENTS.
4. REMOVE TREE ROOTS WITHIN 10" OF PROPOSED GRADE.
5. WHEN THERE IS EXISTING SIDEWALK CROSSING THE PROPOSED DRIVEWAY, IT MUST BE REMOVED TO THE NEAREST JOINT BEYOND THE DRIVEWAY.
6. SIDEWALKS ADJACENT TO LOT PROPERTY LINES SHALL NOT HAVE A CROSS SLOPE GREATER THAN 2% PER F.D.O.T. INDEX 310.
7. CORNER LOTS INVOLVING HANDICAP RAMPS SHALL BE IN ACCORDANCE WITH F.D.O.T. INDEX 304 FOR SIDEWALK AND RAMP CONSTRUCTION.

**TYPE "A" CURB DRIVEWAY APRON**

(\*) SEE FDOT INDEX No. 515 FOR DIMENSIONS

**TYPE "F" CURB DRIVEWAY APRON****JOINT DETAIL****PINELLAS COUNTY****CONCRETE DRIVEWAY APRON**

DETAIL INDEX I.D.:

**1340**

DATE:

**FEB/2016**

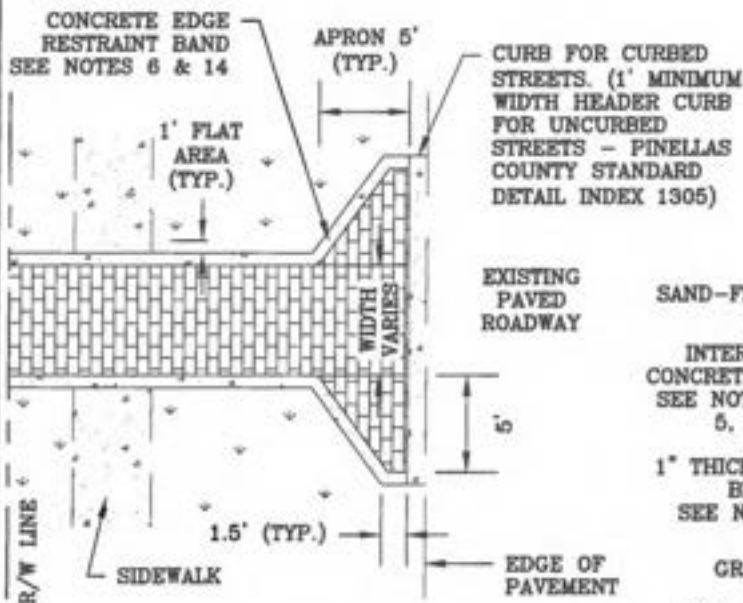
IVAN J. FERNANDEZ, P.E.

REVISION:

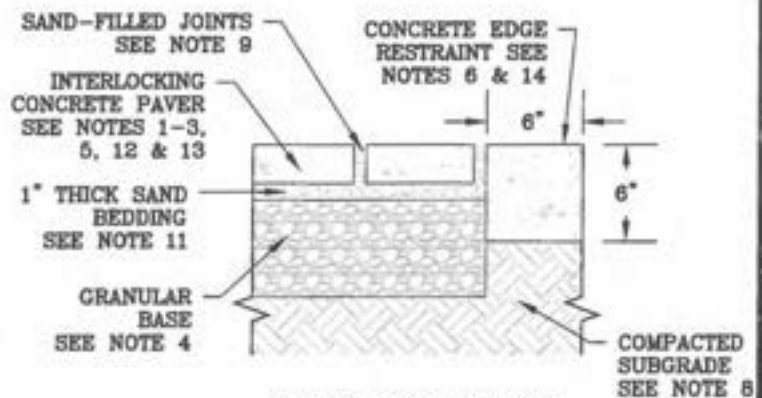
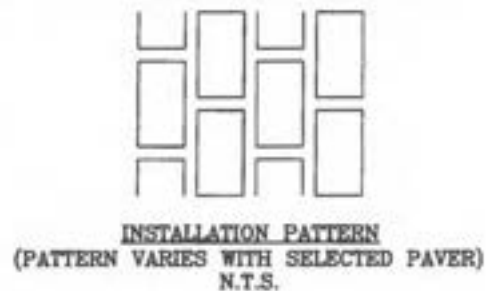


**NOTES:**

1. Interlocking paving units shall generally be installed in accordance with manufacturer's requirements.
2. Minimum Paver Thickness: 2-3/8" (Concrete), 2-1/4" (Clay Brick).
3. Concrete Pavers to conform to ASTM C936. Clay Brick Pavers to conform to ASTM C902.
4. Granular Base shall be in accordance with manufacturer's requirements (6" min.). Granular base shall be Limerock (LBR 100) or Crushed Concrete (Graded Aggregate) compacted to at least 98% modified Proctor Density (ASTM D1557).
5. Coloring or dye shall be uniform throughout each concrete paver unit. Dipped or externally colored paver units are unacceptable.
6. Curb will need to be constructed along the roadway edge of pavement at the driveway. As an alternate, on streets without curbing, a minimum 12-inch width is acceptable (per Pinellas County Standard Details Index 1305). A minimum of 6-inch wide and 6-inch deep concrete edge restraint band is required along each side of the driveway to contain the architectural pavers, on top of soil compacted to 98% modified Proctor density (ASTM D1557). All concrete shall meet FDOT specifications for Class I Concrete.
7. Final finished surface shall be of uniform elevation or slope.
8. Subgrade shall be free of clay, organics, or other materials which will allow future settlement and compacted to 98% AASHTO T-180-57 or ASTM D1557.
9. Polymeric sand or other joint filling material, as approved by the County Engineer, shall be installed between pavers. Joint sand shall meet the grading requirements of ASTM C144 or CSA-A179. Bedding sand may be used for joint sand. Joint width shall not exceed 1/8".
10. The cross slope on any required pedestrian path crossing a driveway and/or drive apron cannot exceed 2%.
11. Sand Bedding material shall be a clean, non-plastic bedding and joint sand, free from deleterious or foreign matter, natural or manufactured from crushed rock, and shall meet the grading requirements of ASTM C33 or CSAA23.1-FA1. Do not use joint sand for bedding. Sand bedding should be placed to an even thickness of 1-inch. Do not use the sand to fill depressions in the granular base.
12. In accordance with the 2010 ADA (Americans with Disabilities Act) Standards for Accessible Design (403, 405, 406) the surface texture of pavers shall be vibration free with a limit of 1/4" or less rise not more than every 30 inches. Pavers shall be installed in a tight uniform configuration that provides a smooth surface for wheelchair users.
13. Pavers shall not impede drainage or result in any ponding of water. Existing drainage flows shall not be altered.
14. Alternate edge treatments may be submitted for approval to the county by the property owner.



TYPICAL LAYOUT  
N.T.S.



TYPICAL CROSS SECTION  
N.T.S.

## PINELLAS COUNTY

RESIDENTIAL DRIVEWAY/SIDEWALK PAVER DETAIL

DETAIL INDEX I.O.:

1345

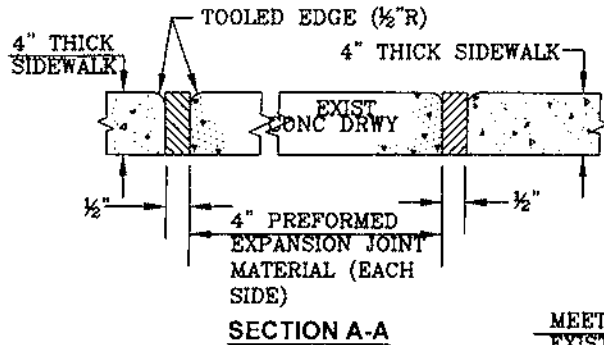
DATE: 11/1/16 NOV/2016

IVAN S. FERNANDES, P.E.

REVISION:

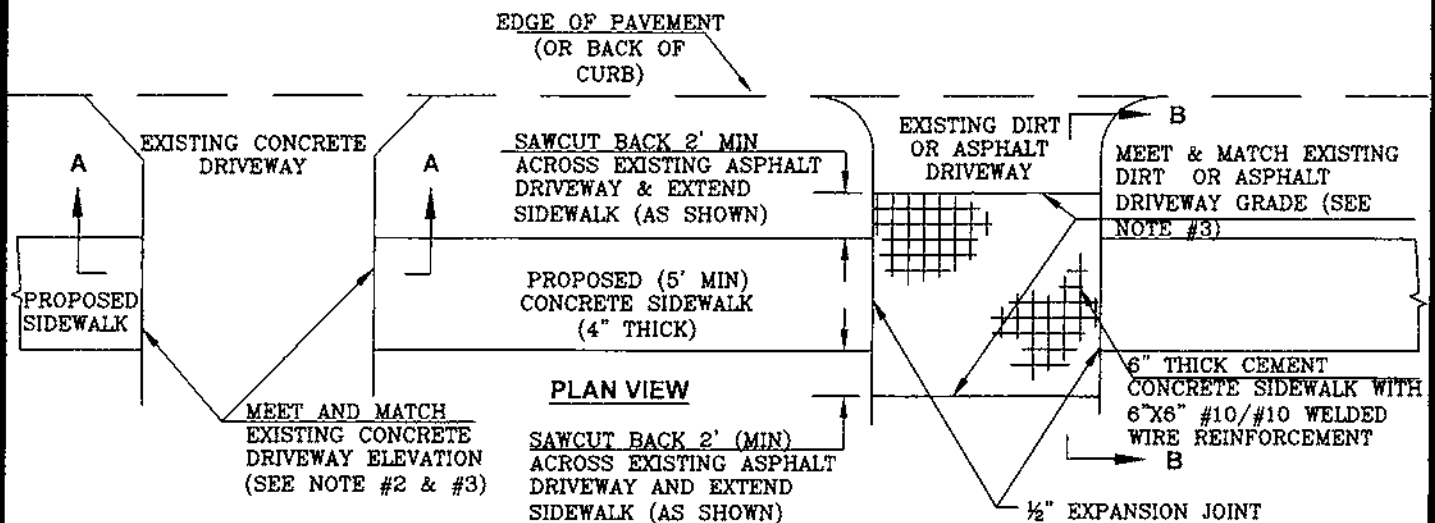
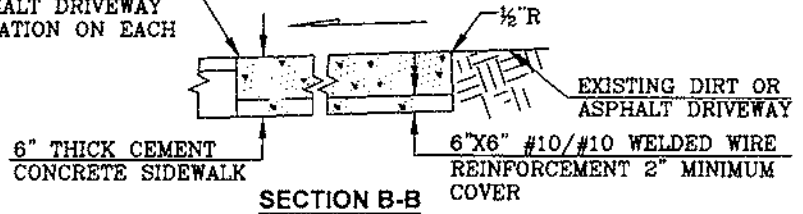
**NOTES:**

1. SEE PLANS FOR LIMITS OF SIDEWALKS AT ALL DRIVEWAYS.
2. PLACE  $\frac{1}{2}$ " EXPANSION JOINT WHERE CONCRETE ABUTS CONCRETE CURBS, SIDEWALKS DRIVEWAYS.
3. SIDEWALK SHALL COMPLY WITH F.D.O.T. INDEX No. 515 AND PINELLAS COUNTY ORDINANCES.  
(SEE INDEX No. 1340)
4. REMOVE TREE ROOTS WITHIN 10" OF PROPOSED GRADE.
5. SIDEWALKS ALONG RURAL CROSS SECTION ROADWAYS WHERE VEHICLES CAN CROSS THE SIDEWALK SHALL BE 6" THICK.



MEET AND MATCH  
EXISTING DIRT OR  
ASPHALT DRIVEWAY  
ELEVATION ON EACH  
SIDE

SLOPE TO MATCH EXISTING DRIVEWAY  
REFER TO F.D.O.T. INDEX No. 515  
FOR ADA REQUIREMENTS IF SLOPE  
EXCEEDS 0.02'/FT



**PINELLAS COUNTY**

SIDEWALK THROUGH EXISTING  
DRIVEWAYS

DETAIL INDEX I.D.:

1353

DATE:

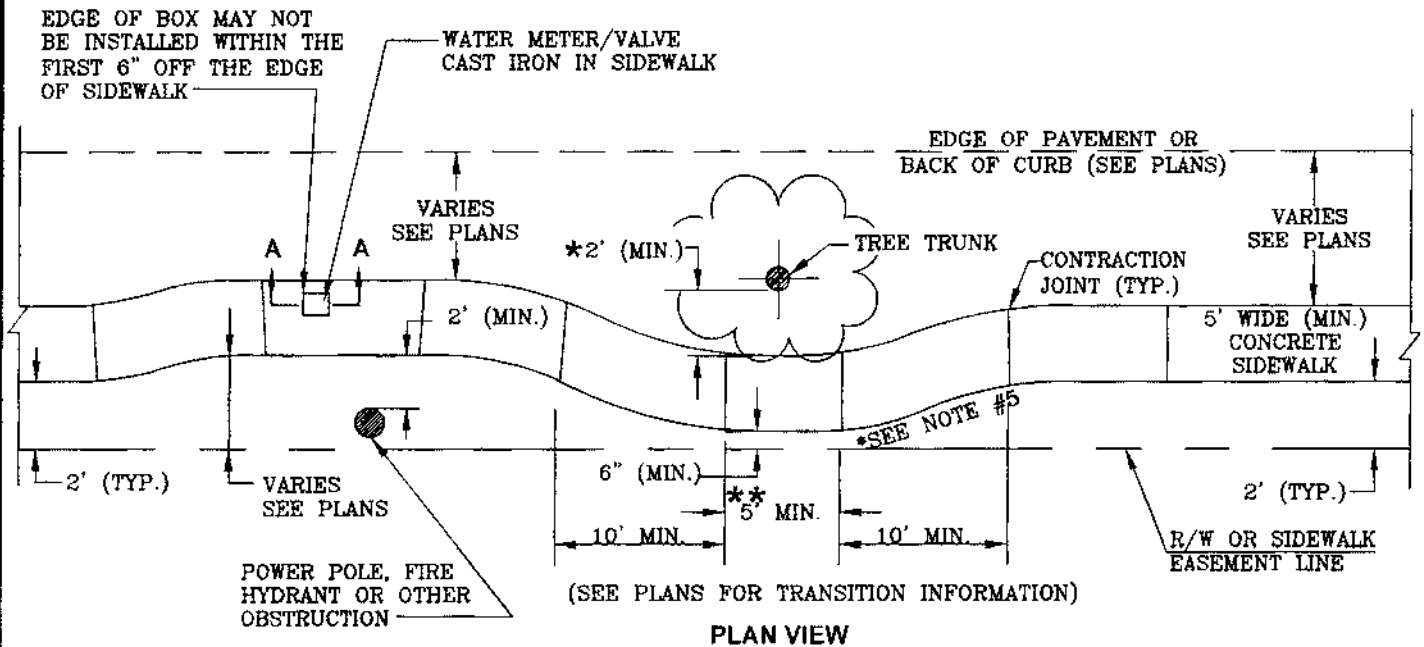
FEB/2016

IVAN J. FERNANDEZ, P.E.

REVISION:

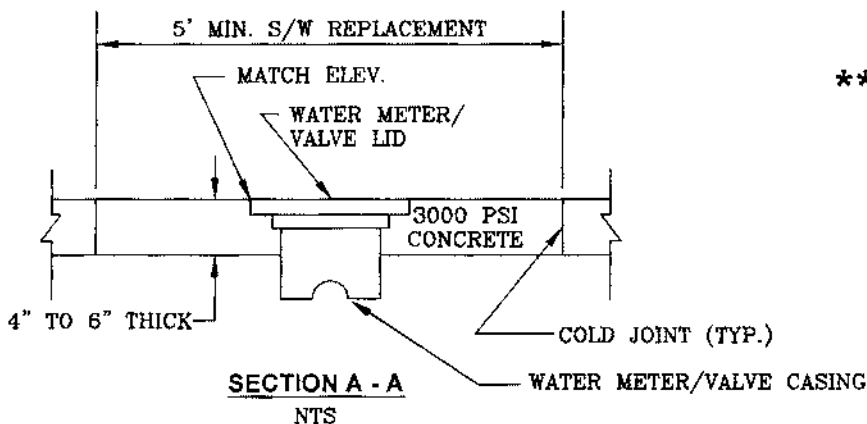
**NOTES:**

1. ADJUST SIDEWALK TO AVOID OBSTRUCTIONS, AS SHOWN, OR AS DIRECTED BY THE ENGINEER, IN ACCORDANCE WITH F.D.O.T. MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION, AND MAINTENANCE FOR STREETS AND HIGHWAYS - LATEST EDITION ("FLORIDA GREEN BOOK").
2. CONSTRUCTION OF SIDEWALKS SHALL MEET ADA REQUIREMENTS AS SPECIFIED IN F.D.O.T. INDEX NOS. 515 AND 304.
3. POWER POLES SHALL BE MOVED WHEN POSSIBLE.
4. TREES SHALL BE PRUNED BY AN ISA CERTIFIED ARBORIST IN ACCORDANCE WITH ANSI-A300 GUIDELINES TO MAINTAIN VERTICAL CLEARANCE: 9 FT. FOR SIDEWALKS AND 18 FT. FOR ROADS.
5. MAXIMUM LATERAL DEFLECTION SHALL BE 5:1.
6. REMOVE TREE ROOTS WITHIN 10" OF PROPOSED GRADE.
7. CONTRACTION JOINTS SHALL MEET F.D.O.T. INDEX No. 310.
8. ANY NECESSARY PRUNING SHALL BE PERFORMED BY AN ISA CERTIFIED ARBORIST IN ACCORDANCE WITH ANIS-A300 STANDARDS.



\*THIS MINIMUM DIMENSION MAY NEED ADJUSTMENT BASED ON THE DIAMETER, HEALTH AND SPECIES OF THE TREE. ADJUSTMENTS REQUIRE PRE-APPROVAL OF THE COUNTY ENGINEER

\*\*CENTERED ON VERTICAL OBSTRUCTION-SIDEWALK SHALL BE 6" THICK ALONG THIS LENGTH (5'-0" MIN.)



# PINELLAS COUNTY

## GUIDELINES FOR SIDEWALK ALIGNMENT

DETAIL INDEX I.D.:

1357

DATE:

FEB/2016

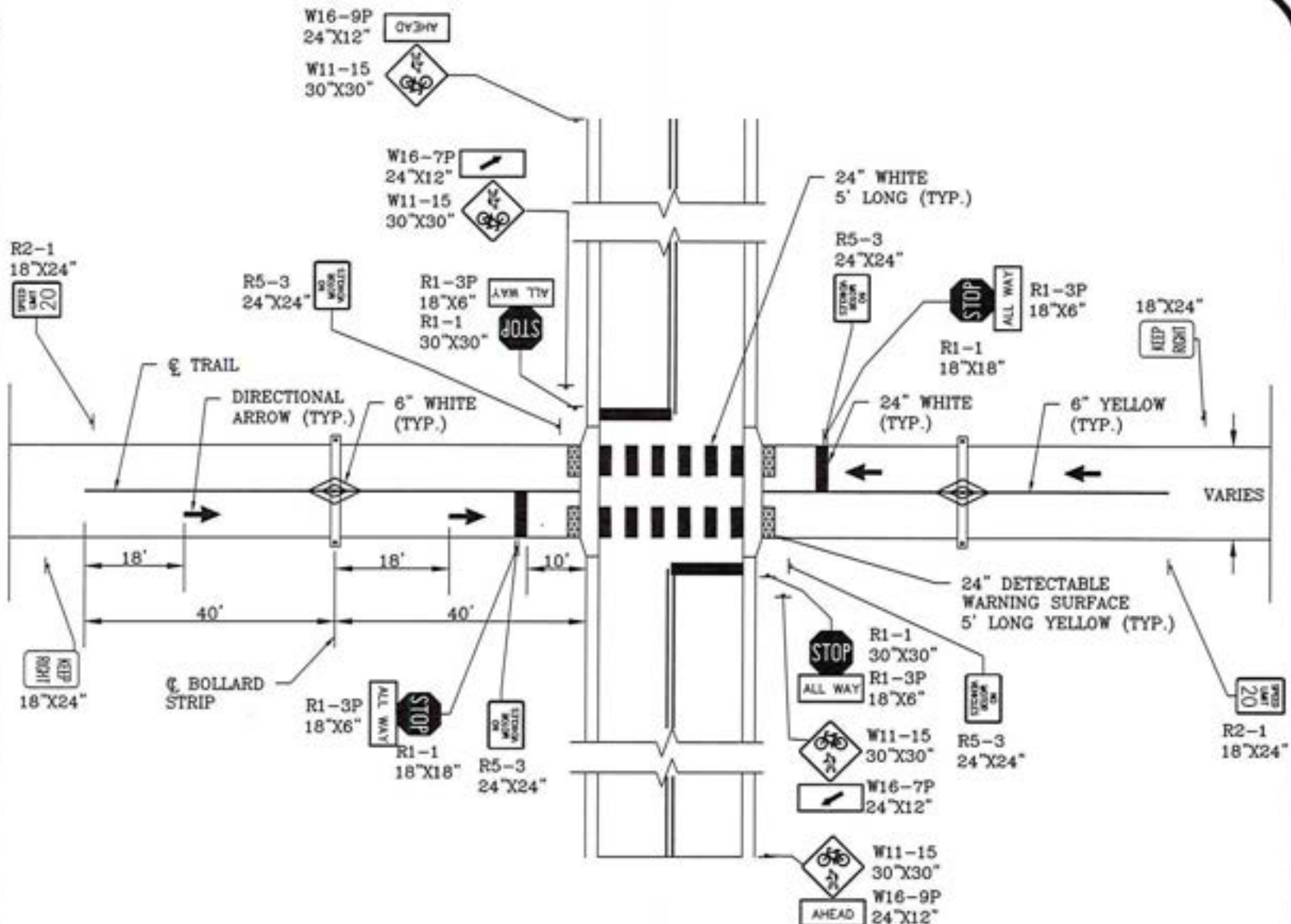
IVAN J. FERNANDEZ, P.E.

REVISION:





# PINELLAS COUNTY P.C.E.D. TRAIL INTERSECTION CROSSING DETAIL - SHEET 1 OF 4



## NOTES:

1. WARNING SIGNS W11-5, W16-9P, W16-7P SHALL BE IN ACCORDANCE WITH THE MUTCD, SECT. 1A-12, COLOR CODE "T"-FLUORESCENT YELLOW-GREEN.
2. OFFSET DISTANCES FOR SIGNS SHALL BE IN ACCORDANCE WITH FDOT STANDARD PLANS AND/OR DIMENSIONS PROVIDED IN THE CONSTRUCTION PLANS.
3. DETECTABLE WARNINGS SHALL BE IN ACCORDANCE WITH PINELLAS COUNTY SPECIFICATION 522
4. TRAIL WIDTHS VARY. SOLID YELLOW PAVEMENT MARKING SHALL BE PLACED ALONG THE CENTERLINE OF THE TRAIL

**TRAIL INTERSECTION  
DETAIL  
NOT TO SCALE**

PINELLAS COUNTY

1365-SHT. 1

DATE:

JULY 1 2018

DESIGNED BY:

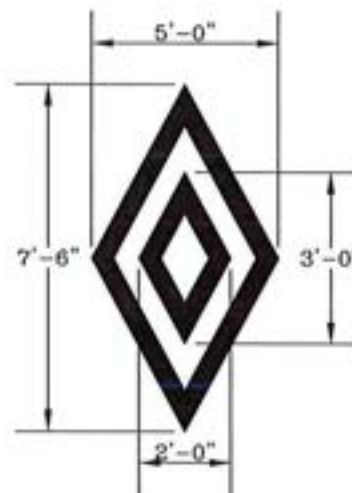
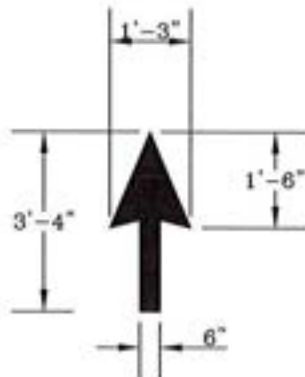
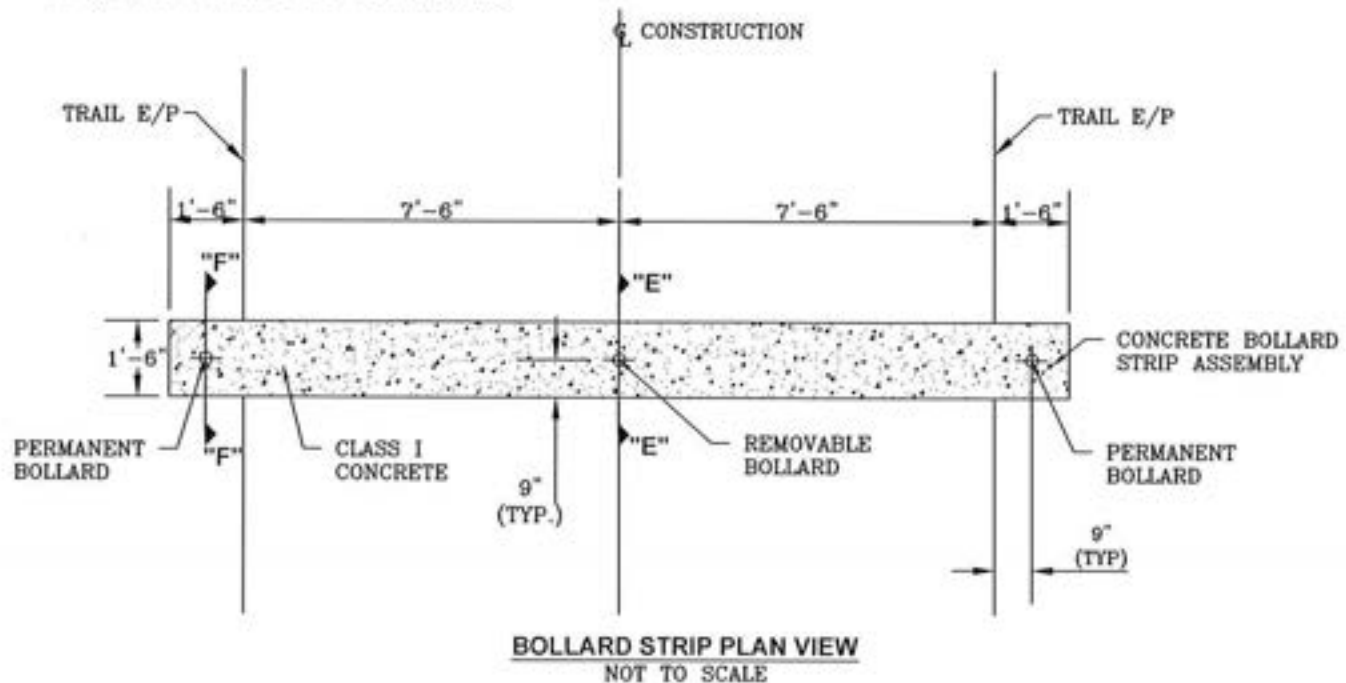
REVISION:

BY:

*Cham Park*

**NOTES:**

1. ALL BOLLARDS CONSTRUCTED WITHIN THE CONCRETE BOLLARD ASSEMBLY ARE PAID FOR UNDER CONCRETE BOLLARD STRIP ASSEMBLY.
2. ALL BOLLARDS CONSTRUCTED OUTSIDE OF THE CONCRETE BOLLARD STRIP ASSEMBLY ARE PAID FOR UNDER A SEPARATE PAY ITEM UNLESS OTHERWISE NOTED.
3. TYPICAL TRAIL WIDTH IS 15 FEET; HOWEVER, TRAIL WIDTHS MAY VARY. WIDTH OF BOLLARD STRIP SHALL BE ADJUSTED TO FIT ACTUAL TRAIL WIDTH
4. E/P REPRESENTS EDGE OF PAVEMENT



**PAVEMENT MESSAGE DIMENSIONS**  
**ALL MARKINGS ARE WHITE**  
 NOT TO SCALE

**PINELLAS COUNTY**

P.C.E.D. TRAIL INTERSECTION  
 CROSSING DETAIL - SHEET 2 OF 4

DETAIL INDEX I.D.:

1365-SHT. 2

DATE:

JULY 2018

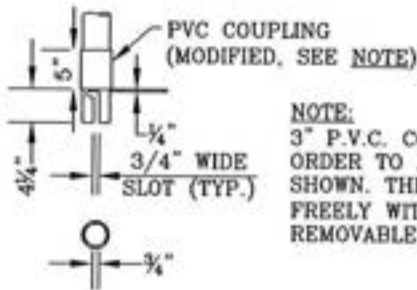
BY: *[Signature]*

REVISION:



**NOTES:**

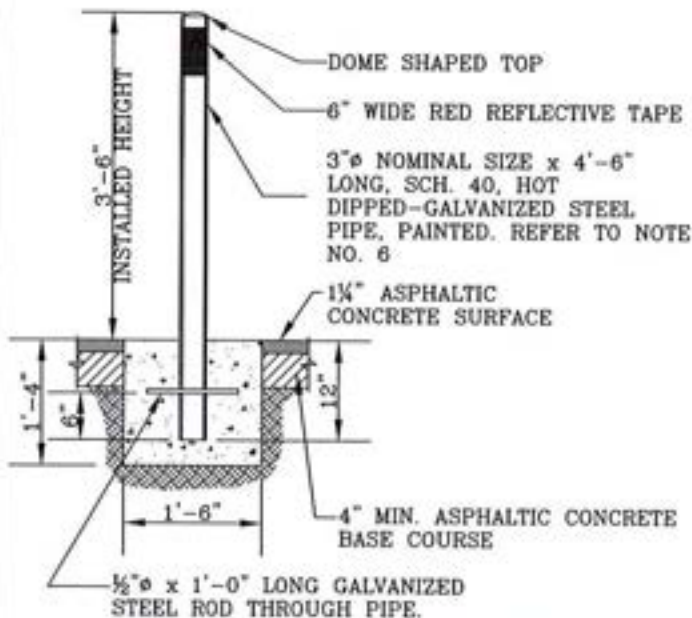
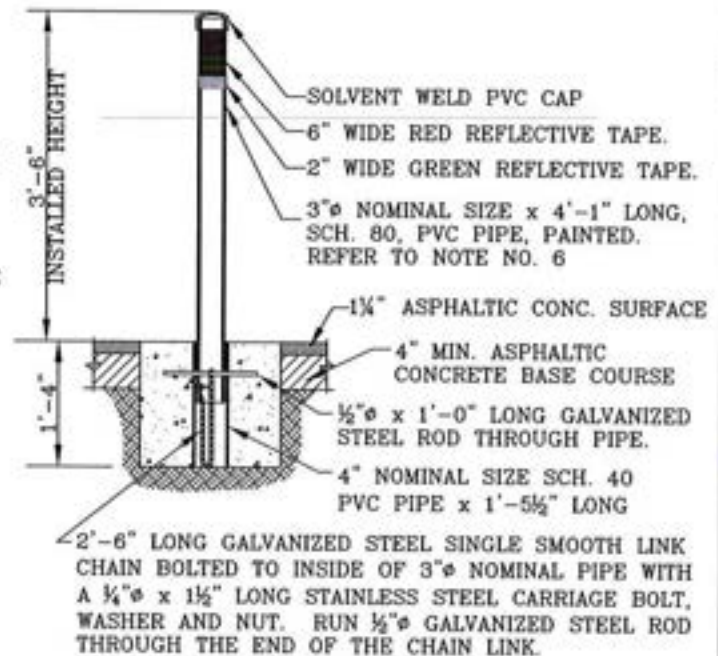
1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. ALL SIGNAGE TO BE ERECTED ALONG TRAIL IS TO BE OFFSET 4' FROM EDGE OF PAVEMENT TO NEAREST EDGE OF SIGN AND 7' FROM THE PROPOSED GRADE TO THE BOTTOM OF THE SIGN.
3. 6" WIDE 3MTM PRESSURE SENSITIVE, HIGH-INTENSITY GRADE RED REFLECTIVE SHEETING, TO BE PLACED ON ALL BOLLARDS. OVERLAP ENDS OF SHEETING BY  $\frac{1}{4}$ " MINIMUM.
4. ALL BOLLARDS CONSTRUCTED WITHIN THE CONCRETE BOLLARD ASSEMBLY ARE PAID FOR UNDER CONCRETE BOLLARD STRIP ASSEMBLY.
5. ALL BOLLARDS CONSTRUCTED OUTSIDE OF THE CONCRETE BOLLARD STRIP ASSEMBLY ARE PAID FOR UNDER A SEPARATE PAY ITEM UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL USE DURABLE REFLECTIVE PAINT DESIGNED FOR APPLICATION ON PVC AND/OR STEEL COMPONENTS. SPECIFICATIONS OF PROPOSED PAINT SHALL BE SUBMITTED TO THE COUNTY FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF PAINTING OPERATIONS. CONTRACTOR SHOULD PREPARE SURFACE ACCORDING TO MANUFACTURER'S DIRECTION.

**NOTE:**

3" P.V.C. COUPLING SHALL BE MACHINED FOR A SLIP-FIT. UNIFORM INSIDE  $\phi$  IN ORDER TO ALLOW THE COUPLING TO BE SOLVENT WELDED AT THE POSITION SHOWN. THE OUTSIDE  $\phi$  SHALL BE MACHINED TO ALLOW THE COUPLING TO SLIDE FREELY WITHIN THE 4" P.V.C. PIPE EMBEDDED IN CONCRETE AS SHOWN IN THE REMOVABLE BOLLARD DETAIL.

**SLOT AND COUPLING DETAIL**

NOT TO SCALE

**PERMANENT BOLLARD DETAIL "F"**  
NOT TO SCALE**REMOVABLE BOLLARD DETAIL "E"**  
NOT TO SCALE**PINELLAS COUNTY**

P.C.E.D. TRAIL INTERSECTION  
CROSSING DETAIL - SHEET 3 OF 4

DETAIL INDEX I.D.:

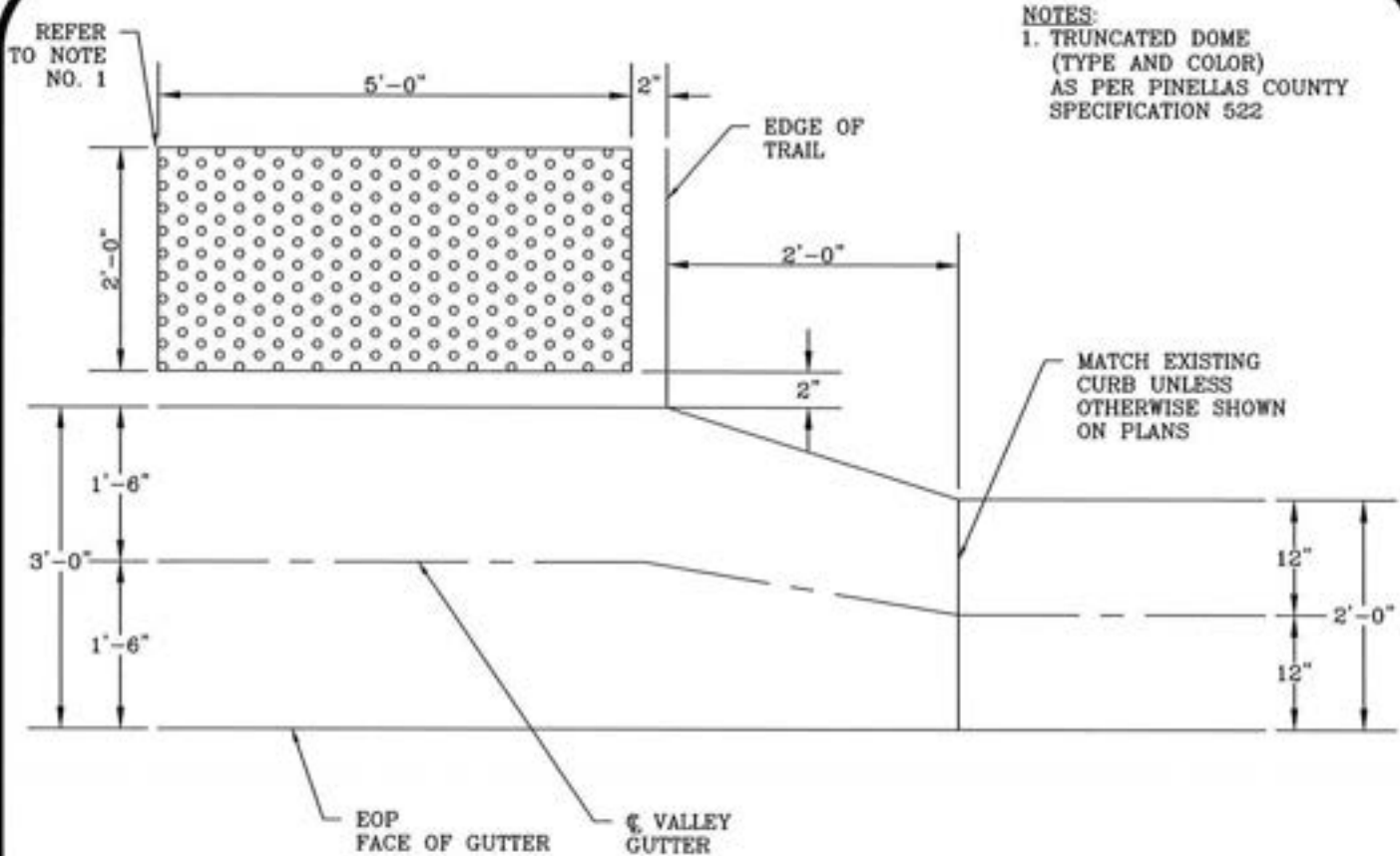
1365-SHT.3

DATE:

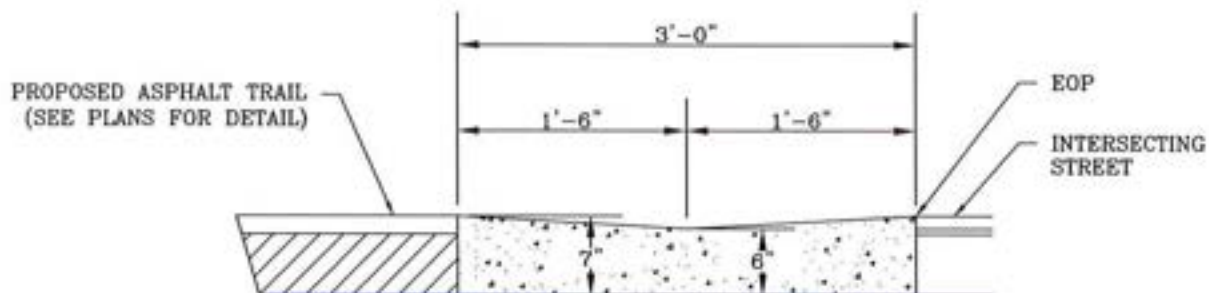
JULY/2018

IVAN J. FERNANDEZ, P.E.

REVISION:



**VALLEY GUTTER TRANSITION**  
NOT TO SCALE



**VALLEY GUTTER DETAIL**  
NOT TO SCALE

## PINELLAS COUNTY

P.C.E.D. TRAIL INTERSECTION  
CROSSING DETAIL - SHEET 4 OF 4

DETAIL INDEX I.D.:

1365-SHT. 4

DATE:

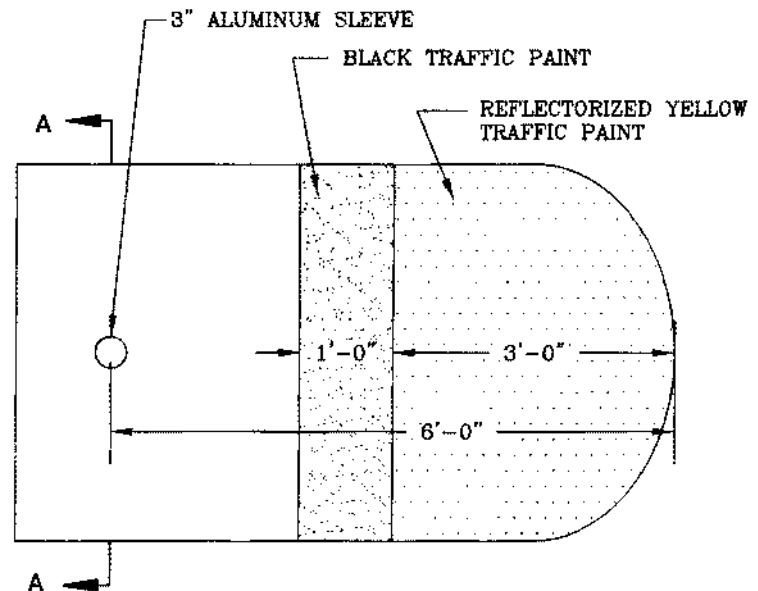
JULY/2018

IVAN J. FERNANDEZ, P.E.

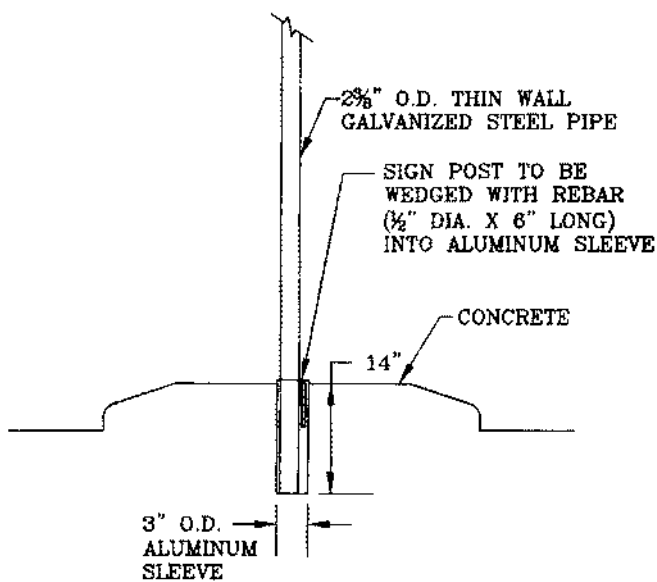
REVISION:

**NOTE:**

1. THE USE OF ALUMINUM SLEEVES SHALL BE APPLICABLE FOR ALL CASES WHERE A SIGN POST IS PLACED IN CONCRETE (I.E., SIDEWALKS, ETC.). WHEN PLACED IN A CONCRETE MEDIAN OR TRAFFIC SEPARATOR, IT SHALL BE CENTERED 6' FROM NOSE END, UNLESS OTHERWISE SPECIFIED IN THE PLANS.



**TOP VIEW**  
**MEDIAN NOSE**  
N.T.S.



**SECTION A-A**  
N.T.S.

## PINELLAS COUNTY

### TRAFFIC SIGN INSTALLATION INTO CONCRETE

DETAIL INDEX I.D.:

1380

DATE:

FEB/2016

IVAN J. FERNANDEZ, P.E.

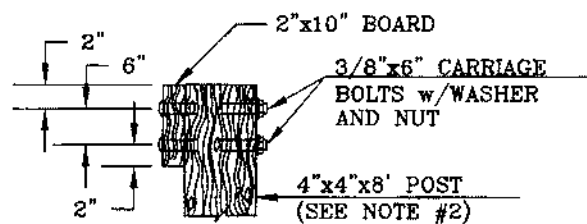
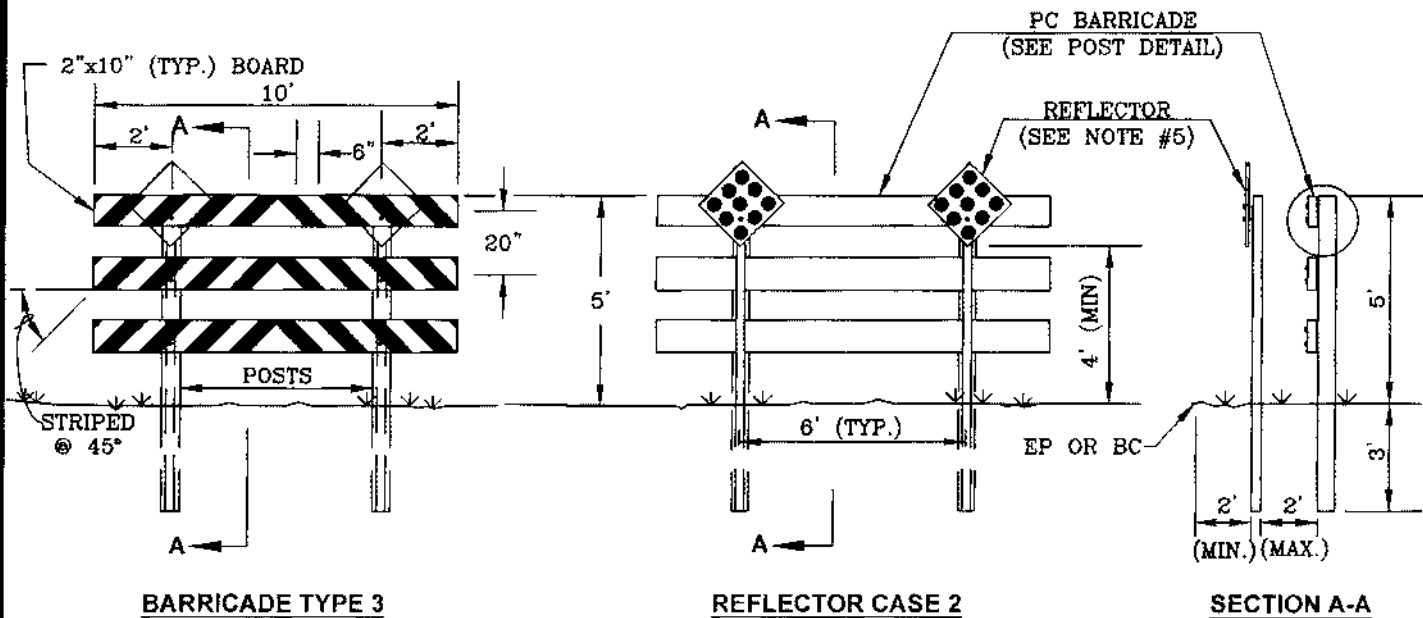
REVISION:

6



**NOTES:**

1. STRIPES SHALL BE WHITE AND ORANGE FOR TEMPORARY BARRICADE DURING CONSTRUCTION PHASE AND WHITE AND RED FOR PERMANENT BARRICADE WITH A MATERIAL THAT HAS A HIGH INTENSITY AND SMOOTH SEALED OUTER SURFACE. USE ONLY PRESSURE TREATED POSTS (ASTM D-1760 PRESSURE TREATMENT OF TIMBER PRODUCTS).
2. USE ONLY GALVANIZED COATED HARDWARE.
3. THE SPACING OF REFLECTORS SHALL ALIGN WITH BARRICADE POSTS.
4. REFLECTOR PANEL AND POST ASSEMBLY SHALL COMPLY WITH F.D.O.T. INDEX No.17349 FOR CASE 2 AND SECTION 994 OF F.D.O.T. SPECIFICATIONS.



# PINELLAS COUNTY

## BARRICADE WITH REFLECTORS

DETAIL INDEX I.D.:

1406

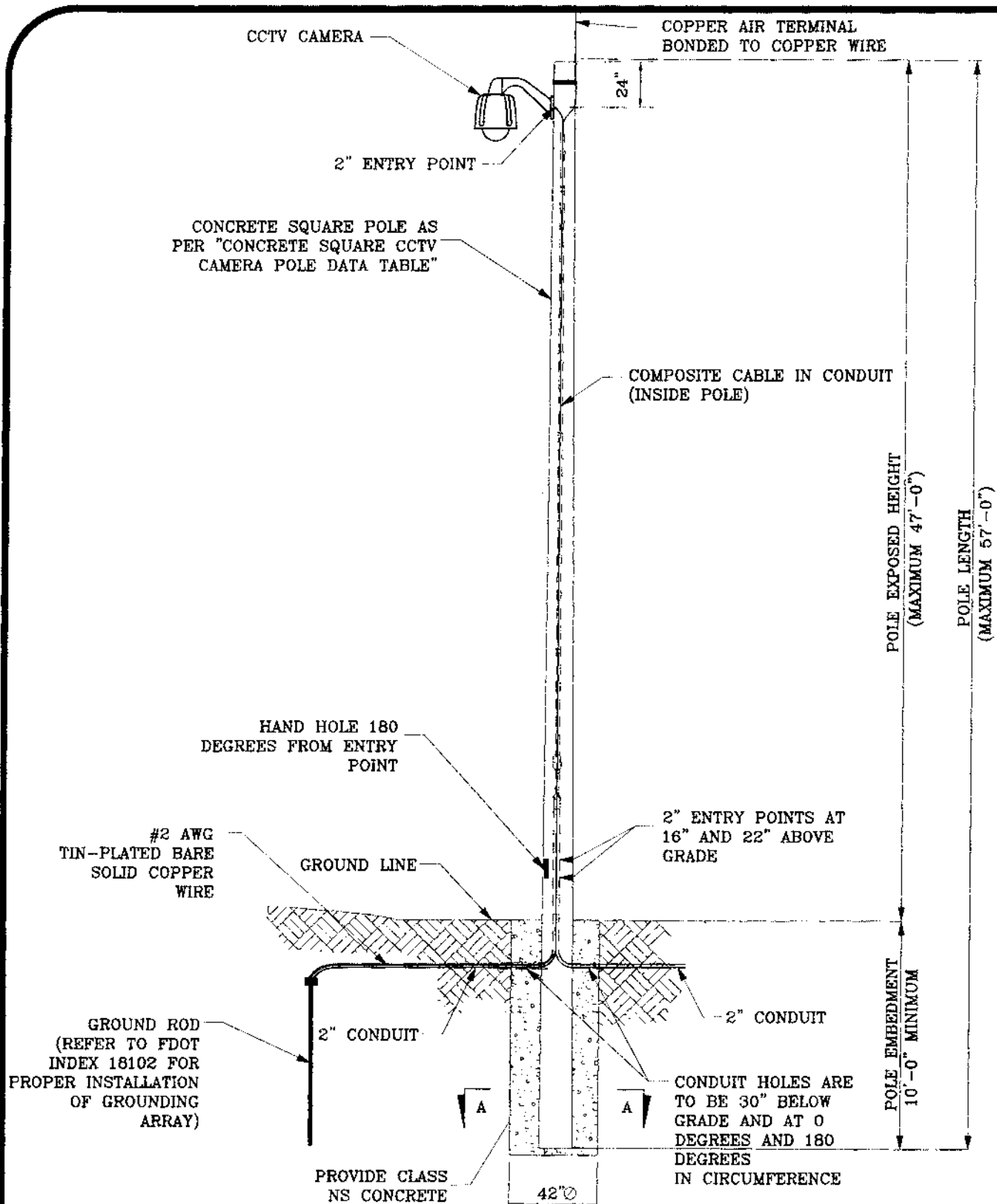
DATE:

FEB/2016

IVAN J. FERNANDEZ, P.E.

REVISION:

6



PINELLAS COUNTY

CONCRETE SQUARE CCTV CAMERA POLE  
SHEET 1 OF 2

DETAIL INDEX I.D.:

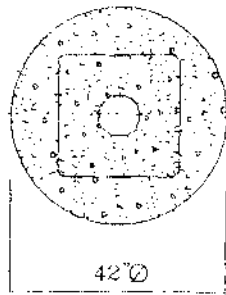
1700 - SH.1

DATE:

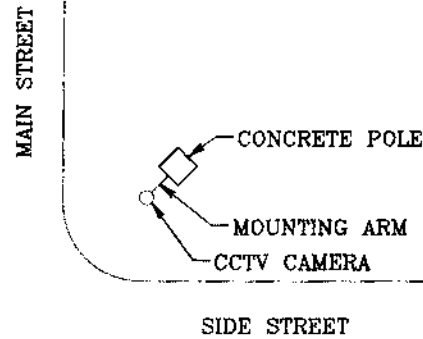
FEB/2016

IVAN J. FERNANDEZ P.E.

REVISION:



SECTION A-A



CCTV ORIENTATION DETAIL

CONCRETE SQUARE CCTV CAMERA POLE DATA TABLE

EXPOSED POLE LENGTH (ft)	GRADE SLOPE	POLE TIP WIDTH (in)	POLE TAPER (in/ft)	EMBEDMENT DEPTH (ft)	TOTAL POLE LENGTH (ft)
47	Flat	8.5	0.162	10	57

## NOTES:

1. ALL POLES SHALL BE FULLY EMBEDDED IN CLASS NS CONCRETE.
2. WORK THIS SHEET WITH FDOT INDEX 17725 STANDARD TYPE P-IV POLE DESIGN ONLY.
3. ONLY ATTACHMENT ALLOWED ON POLES IS THE CCTV CAMERA.

PINELLAS COUNTY

CONCRETE SQUARE CCTV CAMERA POLE  
SHEET 2 OF 2

DETAIL INDEX I.D.:

1700 - SH.2

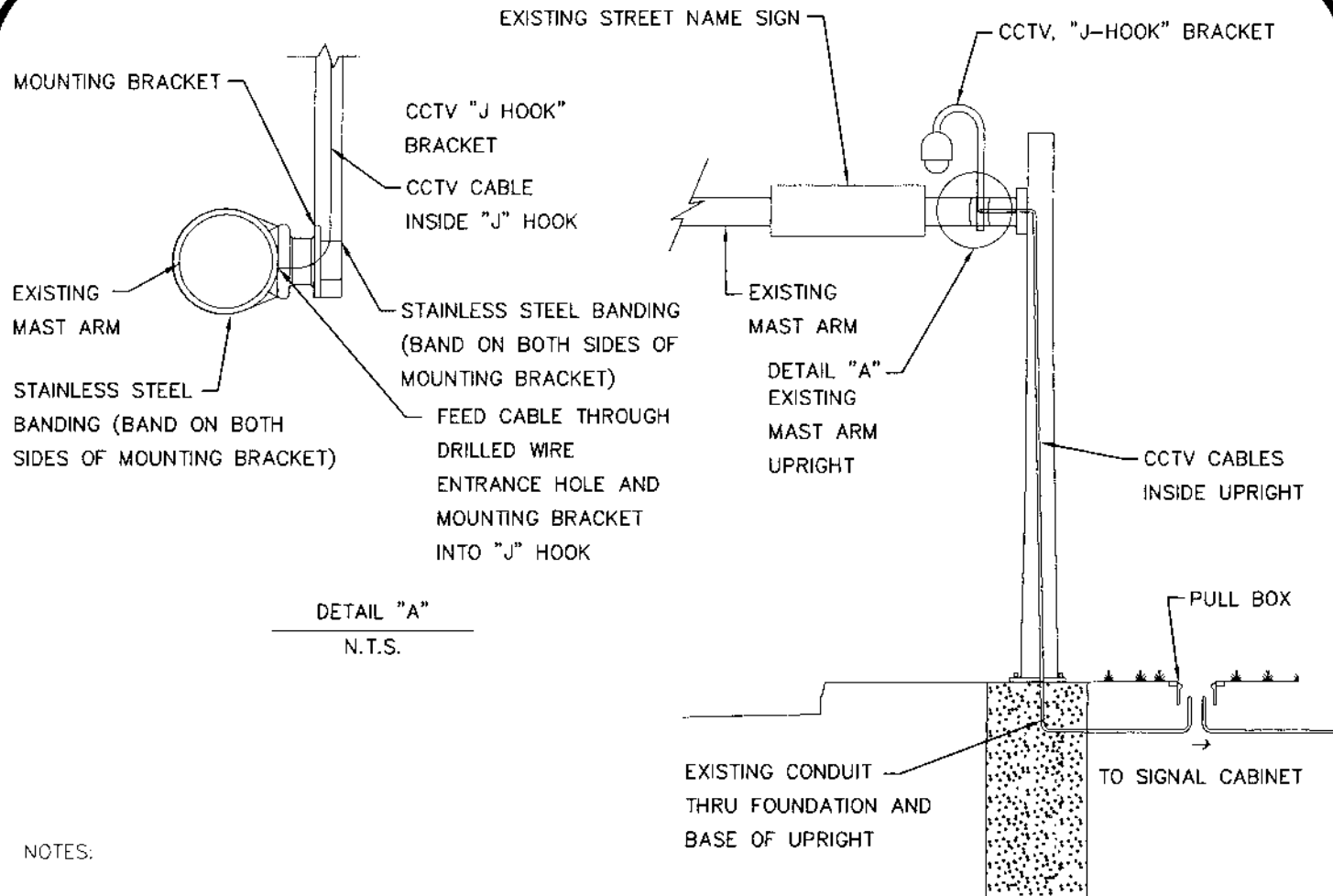
DATE:

FEB/2016

IVAN J. FERNANDEZ, P.E.

REVISION:





## NOTES:

1. ALL MOUNTING HARDWARE AND BRACKET SHALL BE PROVIDED BY PINELLAS COUNTY.
2. THE CONTRACTOR SHALL MOUNT THE "J HOOK" BRACKET AS HIGH AS POSSIBLE BUT SO THAT IT STILL SITS FIRMLY IN THE MOUNTING HARDWARE BRACKET. THE ATTACHMENT SHALL BE INSPECTED BY THE ENGINEER BEFORE THE CCTV CAMERA IS INSTALLED.
3. THE CONTRACTOR SHALL FIELD DRILL A HOLE IN THE MAST ARM OF A MINIMUM DIAMETER TO ACCOMMODATE THE CCTV COMPOSITE CABLE.
4. THE CONTRACTOR SHALL COLD GALVANIZE THE DRILLED HOLE AND PLACE A WEATHER-TIGHT GROMMIT IN THE HOLE PRIOR TO RUNNING THE CCTV COMPOSITE CABLE INTO THE ARM.
5. THE CONTRACTOR SHALL TOUCH UP THE MAST ARM PAINT DUE TO SCRATCHES OR CHIPS DURING THE INSTALLATION OF THE CCTV CAMERA AND COMPOSITE CABLE.
6. THE COST FOR LABOR AND MATERIALS FOR TOUCH UP AND GROMMITS SHALL BE INCLUDED UNDER THE CCTV PAY ITEM 682-1-30 OR 682-1-31.

PINELLAS COUNTY

CCTV MOUNTING DETAIL

DETAIL INDEX I.D.:

1705

DATE:

FEB/2016

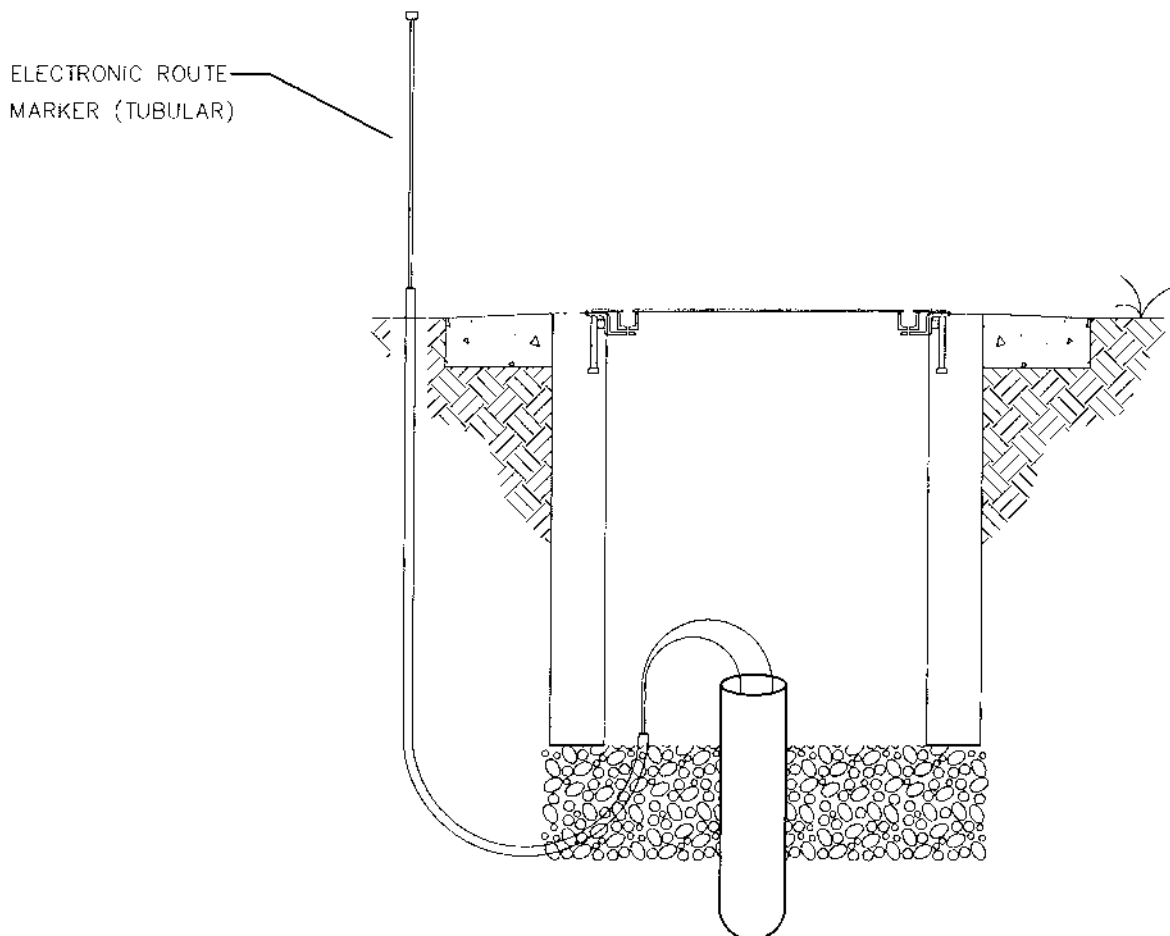
IVAN J. FERNANDEZ, P.E.

REVISION:

APRIL/2016

## NOTES:

1. FOR MORE INFORMATION ON THE ELECTRONIC ROUTE MARKER (ERM), SEE SECTION 630 IN THE TECHNICAL SPECIFICATIONS AND THE GENERAL NOTES.
2. THE CONTRACTOR SHALL INSTALL THE ERM BEFORE PLACING THE CONCRETE APRON AROUND THE FIBER OPTIC PULL BOX OR SPLICE VAULT. HOWEVER, THE ERM SHALL NOT BE PLACED WITHIN THE CONCRETE APRON.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE ERM AS SHOWN ON THIS SHEET, TECHNICAL SPECIFICATIONS SECTION 630, AND THE GENERAL NOTES.
4. THE CONTRACTOR SHALL ALSO INSTALL STANDARD ROUTE MARKERS (SRM) AT THE MIDPOINT OF THE CONDUIT RUN BETWEEN THE FIBER OPTIC PULL BOXES AND/OR SPLICE VAULTS. ROUTE MARKERS SHALL NOT BE INSTALLED IN DRIVEWAYS OR SIDEWALKS.
5. THE COST FOR THE ERMS SHALL BE PAID FOR UNDER PAY ITEMS 630-2 FOR CONDUIT.
6. THE TRACER WIRE FOR ALL CONDUIT LOCATING SHALL BE SPICED TOGETHER IN ONE CONTINUOUS LENGTH.



ELECTRONIC ROUTE MARKER (ERM) DETAILS FOR  
FIBER OPTIC PULL BOXES AND SPLICE VAULTS  
WITH CONCRETE APRONS

**PINELLAS COUNTY**

**ELECTRONIC ROUTE MARKER DETAIL  
SHEET 1 OF 2**

DETAIL INDEX I.D.:

**1710 - SH. 1**

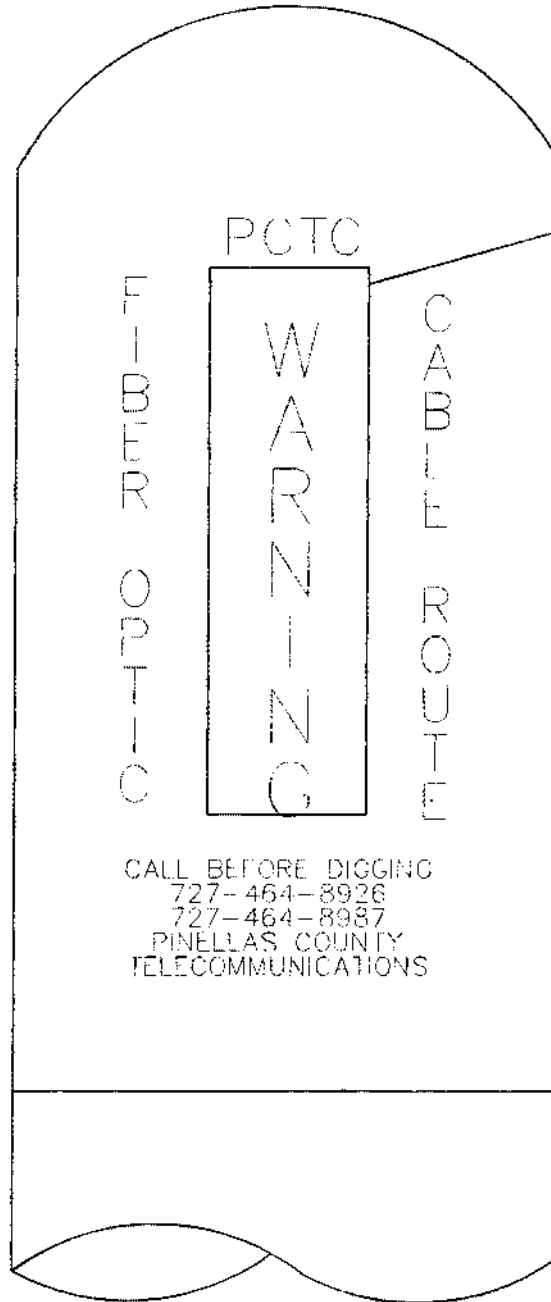
DATE:

**FEB/2016**

IVAN FERNANDEZ, P.E.

REVISION:

**APRIL/2016**



BLACK BACKGROUND  
WITH ORANGE TEXT

LOGO ON BACK



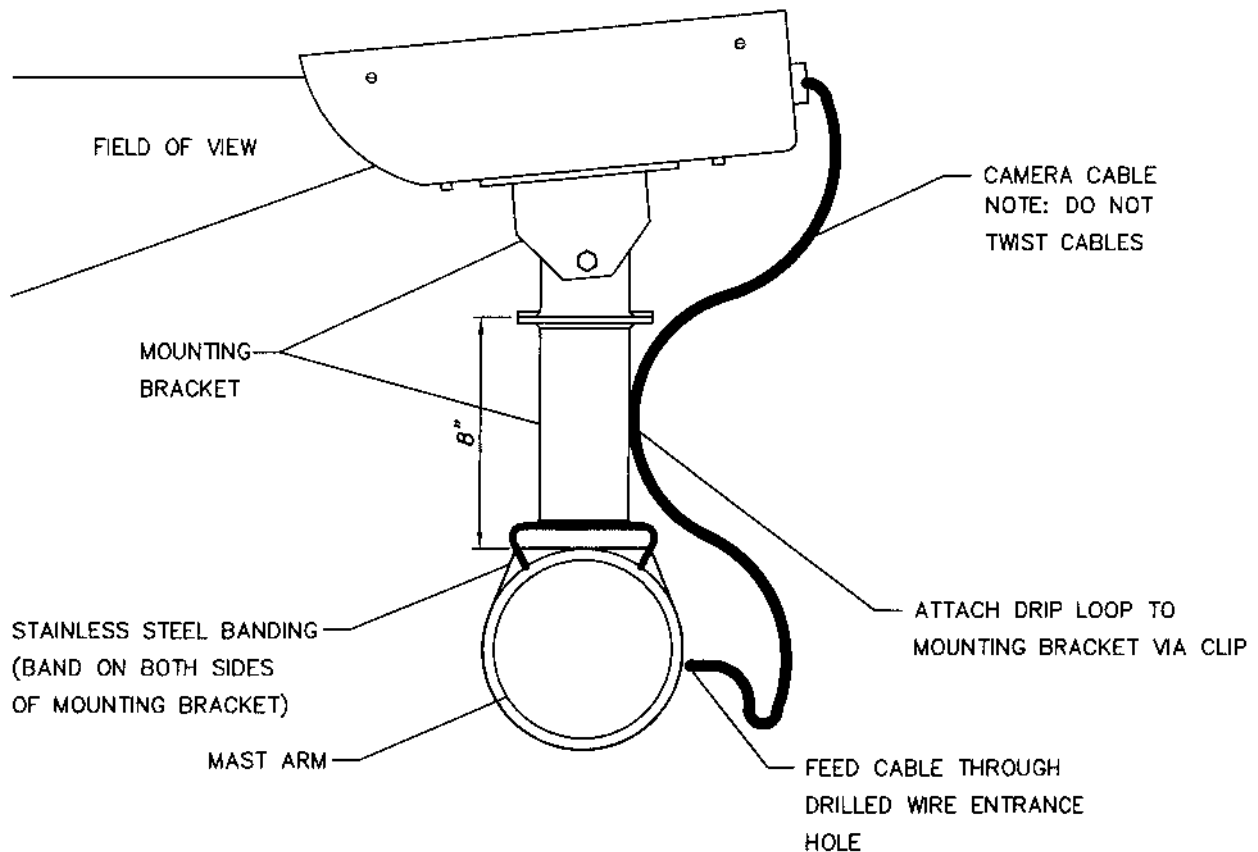
ORANGE BACKGROUND  
WITH BLACK TEXT

**PINELLAS COUNTY**

**ELECTRONIC ROUTE MARKER DETAIL  
SHEET 2 OF 2**

DETAIL INDEX I.D.:	
1710 - SH.2	
DATE:	FEB/2016
IVAN J. FERNANDEZ, P.E.	
<i>Ivan J. Fernandez</i>	
REVISION:	6





### VVDS ATTACHMENT FOR MAST ARMS

N.T.S.

#### NOTES:

1. THE CONTRACTOR SHALL FIELD DRILL A HOLE IN THE MAST ARM OF MINIMUM SIZE TO ACCOMMODATE THE VIDS CABLE.
2. THE CONTRACTOR SHALL COLD GALVANIZE THE DRILLED HOLE AND PLACE A WEATHER-TIGHT GROMMIT IN THE HOLE PRIOR TO RUNNING THE VIDS CABLE INTO THE ARM.
3. THE CONTRACTOR SHALL TOUCH UP THE MAST ARM PAINT DUE TO SCRATCHES OR CHIPS DURING THE INSTALLATION OF THE VIDS CAMERA AND CABLE.
4. THE COST FOR LABOR AND MATERIALS FOR TOUCH UP AND GROMMITS SHALL BE INCLUDED UNDER THE VIDS PAY ITEM 660-4-32.

**PINELLAS COUNTY**

**VVDS INSTALLATION DETAILS**

DETAIL INDEX I.D.:

1720

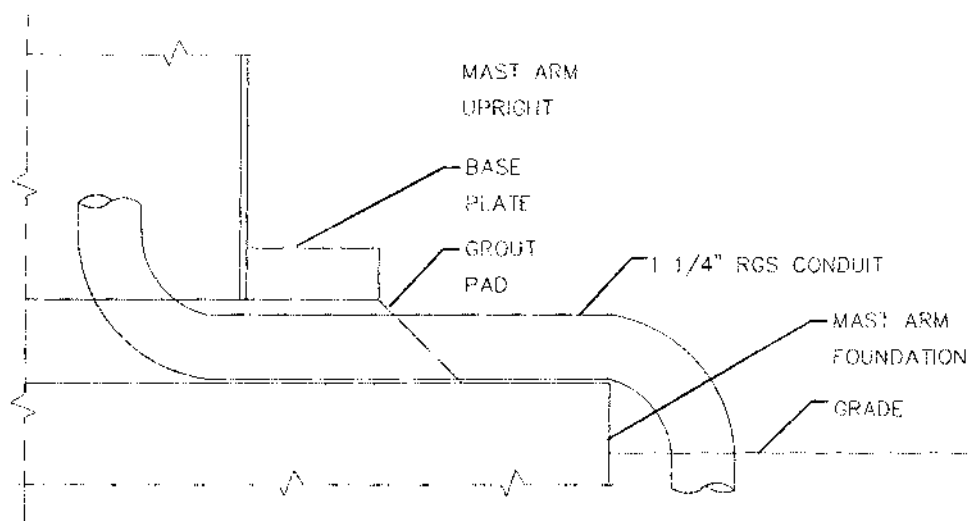
DATE:

FEB/2016

IVAN FERNANDEZ P.E.

REVISION:

APRIL/2016



MAST ARM CONDUIT ENTRANCE DETAIL

N.T.S.

**NOTES:**

1. THE CONTRACTOR SHALL USE EXISTING UNDERGROUND CONDUIT TO FEED CABLE & CONDUCTORS INTO THE MAST ARM UPRIGHT. THIS DETAIL MAY BE USED IN THE EVENT THERE ARE NO EXISTING CONDUITS.
2. THE CONTRACTOR SHALL DRILL INTO THE MAST ARM STRUCTURE GROUT PAD AND FEED THE GALVANIZED STEEL CONDUIT INTO THE MAST ARM. THE DRILLED GROUT PAD SHALL BE SEALED AROUND THE CONDUIT.
3. ANY HIGH VOLTAGE CONDUCTORS SHALL BE IN A SEPARATE CONDUIT AND PULL BOXES WHERE NECESSARY.

**PINELLAS COUNTY****MAST ARM CONDUIT ENTRANCE DETAIL**

DETAIL INDEX I.D.:

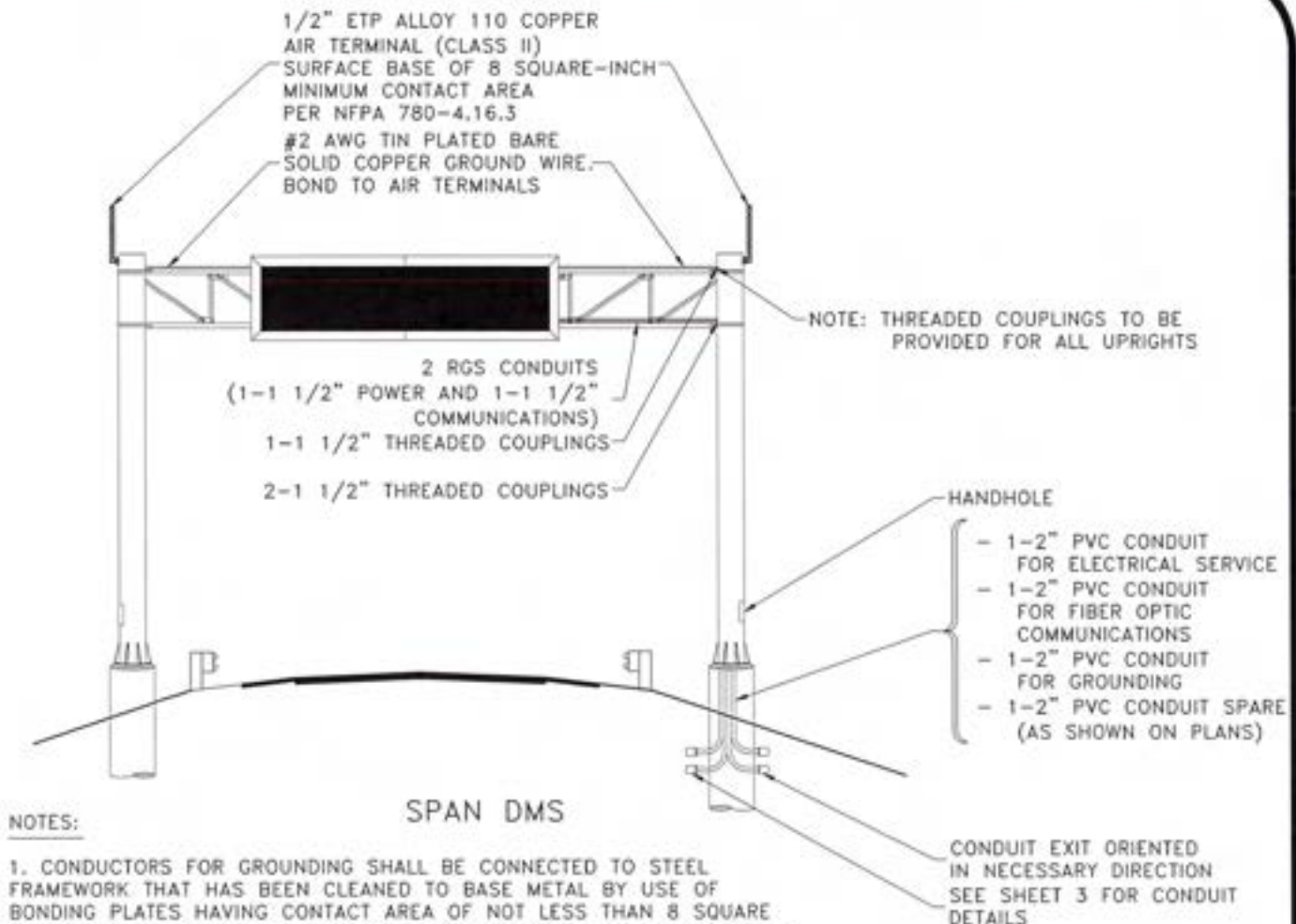
**1725**

DATE:

**FEB/2016**

IVAN J. FERNANDEZ, P.E.

REVISION:



## NOTES:

1. CONDUCTORS FOR GROUNDING SHALL BE CONNECTED TO STEEL FRAMEWORK THAT HAS BEEN CLEANED TO BASE METAL BY USE OF BONDING PLATES HAVING CONTACT AREA OF NOT LESS THAN 8 SQUARE INCHES OR BY WELDING OR BRAZING. DRILLING AND TAPPING THE STEEL STRUCTURE TO ACCEPT A THREADED CONNECTOR IS ALSO AN ACCEPTABLE METHOD.

2. IF STEEL FRAMEWORK IS TO BE DRILLED AND TAPPED TO ACCEPT THREADED CONNECTOR, THE THREADED CONNECTOR SHALL BE GALVANIZED AND HAVE AT LEAST 5 THREADS FULLY ENGAGED AND SECURED WITH A JAM NUT TO THE STEEL FRAMEWORK.

3. BENDS IN THE CONDUIT SHALL NOT BE LESS THAN THE MINIMUM BENDING RADIUS FOR THE CABLE CONTAINED IN THE CONDUIT.

4. ALL DATA, FIBER OPTIC AND POWER CABLES FOR THE DMS SHALL BE COMPLETELY ENCASED WITHIN THE SIGN STRUCTURE OR IN CONDUIT.

5. PERMANENTLY STAMP/MARK FOUNDATION TO CONDUIT LOCATIONS.

6. TRANSITION CONDUIT IN FOUNDATION TO UNDERGROUND CONDUIT WITH APPROPRIATE REDUCER OUTSIDE THE LIMITS OF THE FOUNDATION.

7. DMS CONTROLLER CABINET TO BE GROUND MOUNTED. SEE SHEET 3 OF 5 FOR DETAILS.

PINELLAS COUNTY

DYNAMIC MESSAGE SIGN  
SHEET 1 OF 5

DETAIL INDEX I.D.:

1730 - SH.1

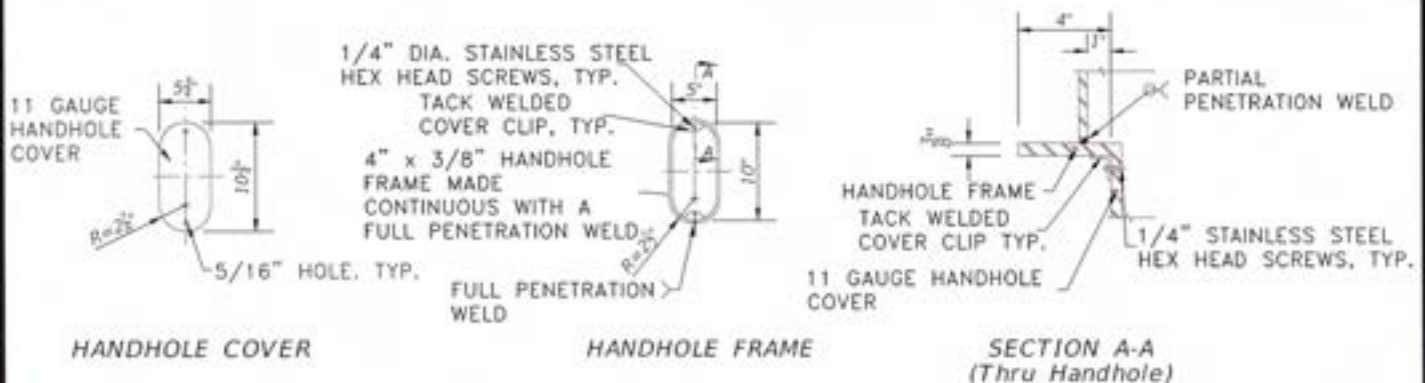
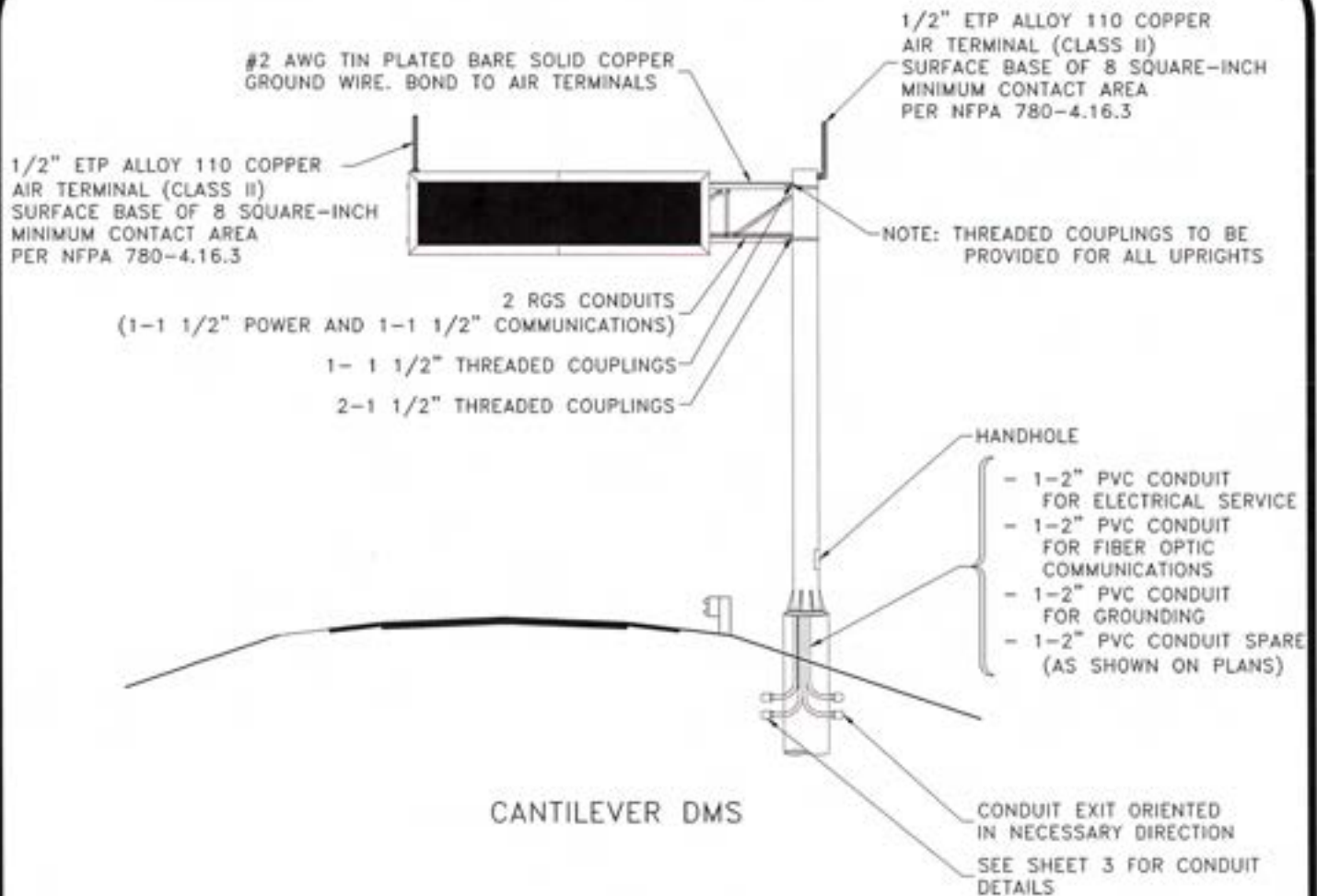
DATE:

OCT/2017

DRAWN BY: FERNANDEZ

REVISION:





PINELLAS COUNTY

DYNAMIC MESSAGE SIGN  
SHEET 2 OF 5

DETAIL INDEX I.D.:

1730 - SH.2

DATE: \_\_\_\_\_

OCT/2017

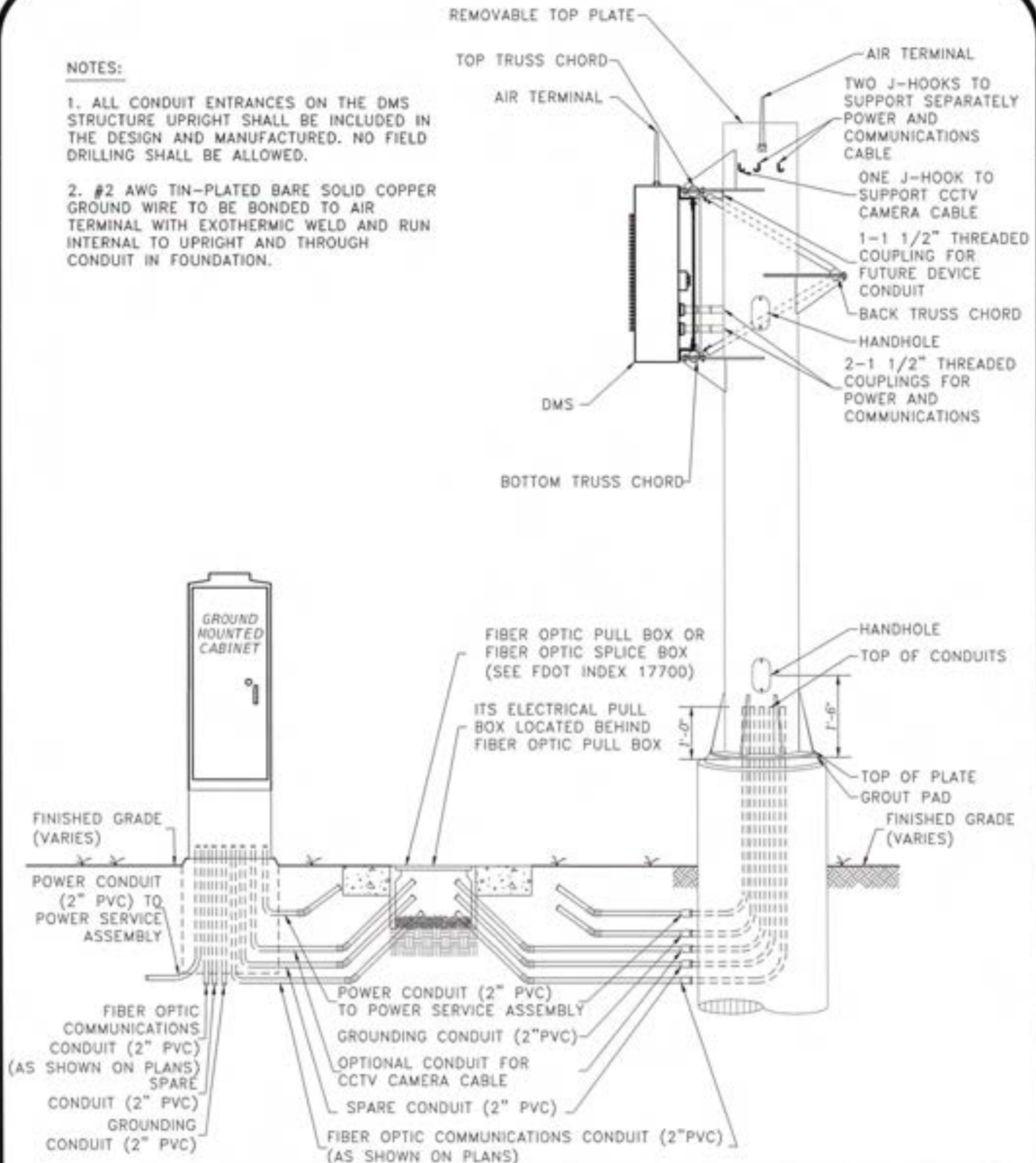
IVAN J. FERNANDEZ, P/E

REVISION:

## NOTES:

1. ALL CONDUIT ENTRANCES ON THE DMS STRUCTURE UPRIGHT SHALL BE INCLUDED IN THE DESIGN AND MANUFACTURED. NO FIELD DRILLING SHALL BE ALLOWED.

2. #2 AWG TIN-PLATED BARE SOLID COPPER GROUND WIRE TO BE BONDED TO AIR TERMINAL WITH EXOTHERMIC WELD AND RUN INTERNAL TO UPRIGHT AND THROUGH CONDUIT IN FOUNDATION.



PINELLAS COUNTY

DYNAMIC MESSAGE SIGN  
SHEET 3 OF 5

DETAIL INDEX I.D.:

1730 - SH.3

DATE:

OCT/2017

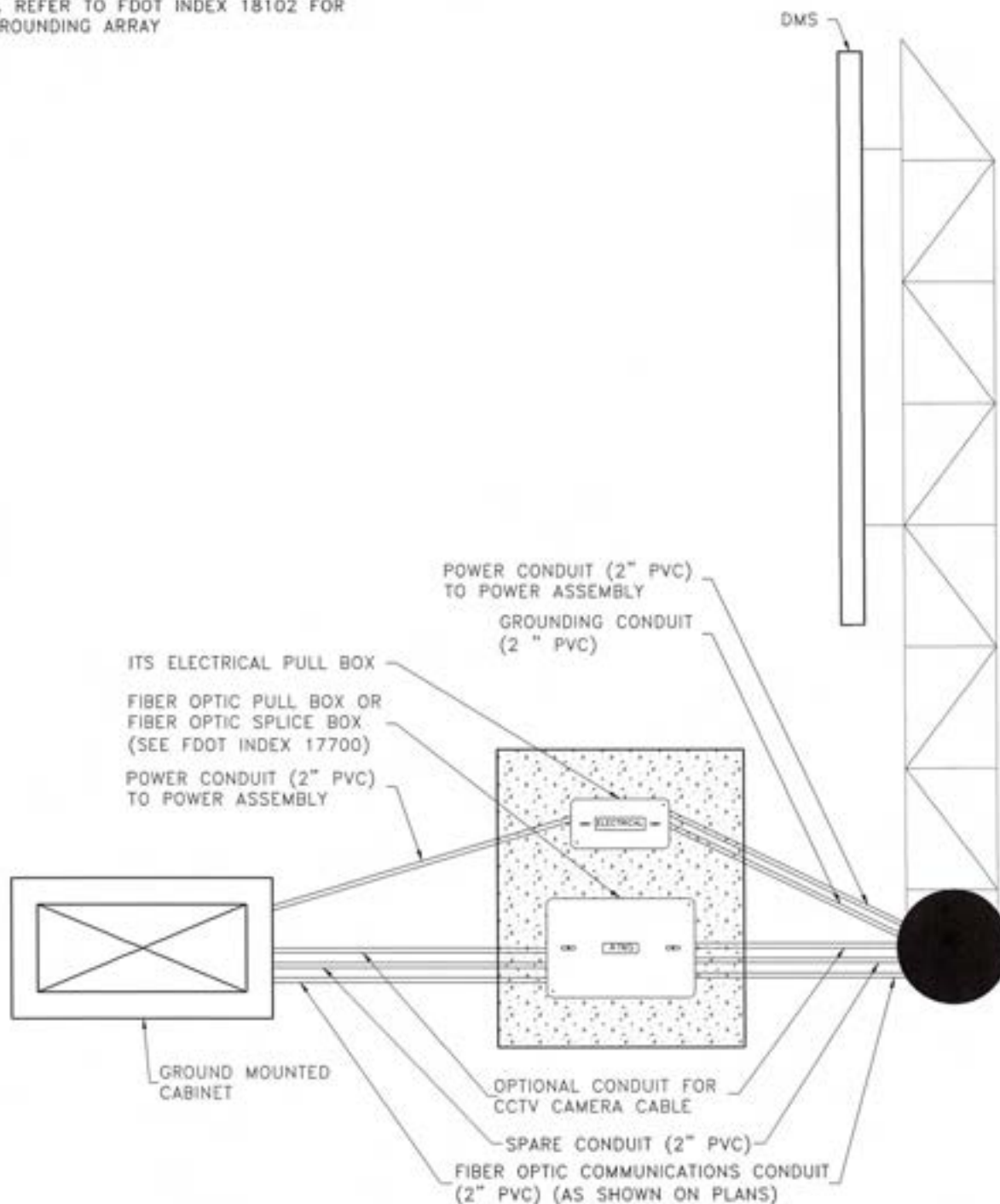
JUAN FERNANDEZ, P.E.

REVISION:

# TYPICAL DMS CONDUIT DETAIL

## NOTES:

1. REFER TO FDOT INDEX 18102 FOR GROUNDING ARRAY



PINELLAS COUNTY

DYNAMIC MESSAGE SIGN  
SHEET 4 OF 5

DETAIL INDEX I.D.:

1730 - SH.4

DATE:

OCT/2017

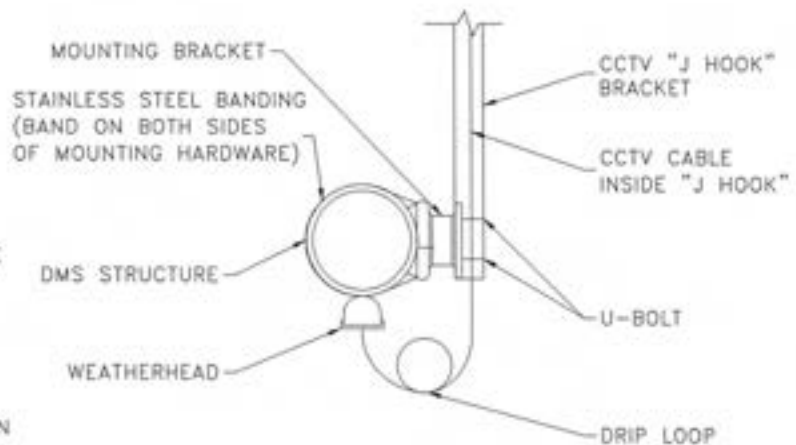
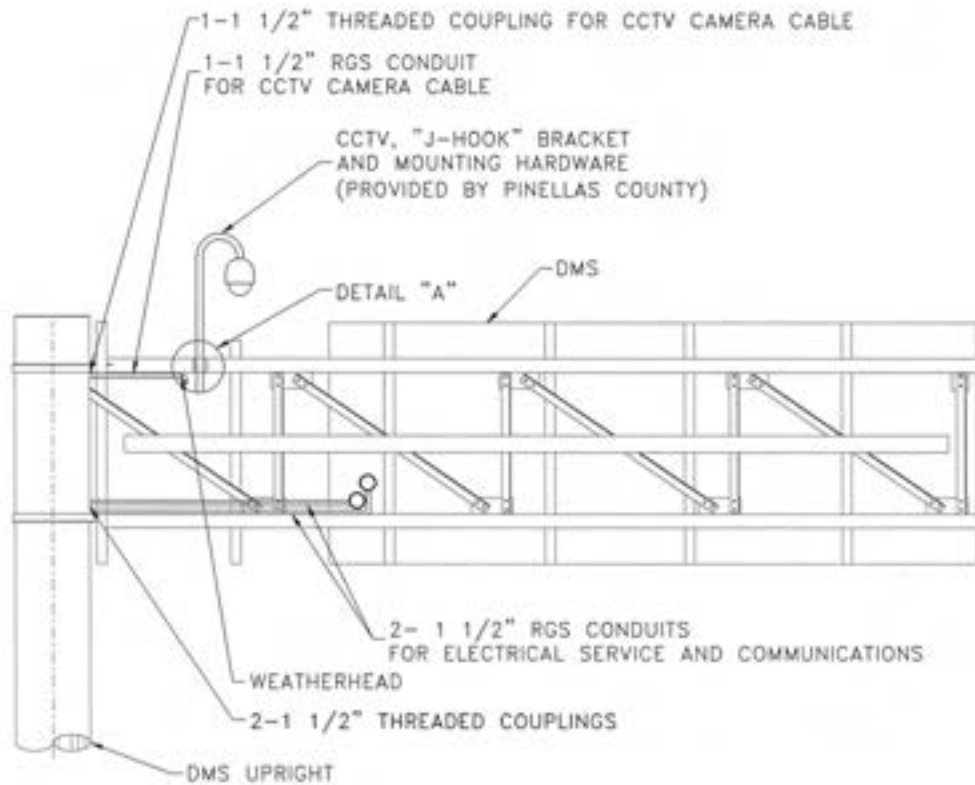
BY:

FERNANDEZ

REVISION:



### CCTV MOUNTING ON DMS DETAIL (OPTIONAL)



**DETAIL "A"**  
**N.T.S**

**NOTES:**

1. LOCATION OF CAMERA ON THE DMS CAN BE ADJUSTED BY DIRECTION OF THE ENGINEER.
2. RGS CONDUIT RUNNING ON THE TRICORD SHALL BE STRAPPED EVERY 5 FEET.
3. 3-1 1/2" THREADED COUPLINGS TO BE PROVIDED ON ALL DMS STRUCTURES AS SHOWN IN DETAIL ABOVE.
4. MOUNT CCTV CAMERA A MINIMUM OF 2.5 FEET ABOVE THE SIGN

**PINELLAS COUNTY**

**DYNAMIC MESSAGE SIGN  
SHEET 5 OF 5**

DETAIL INDEX I.D.:

**1730 - SH.5**

DATE:

**OCT/2017**

IRAN J. FERNANDEZ, P.E.

REVISION:

**SEE INDEX NO. 1291**

**PINELLAS COUNTY**

**TRENCH BACKFILL  
DETAIL**

DETAIL INDEX I.D.:

**PCU GD 1**

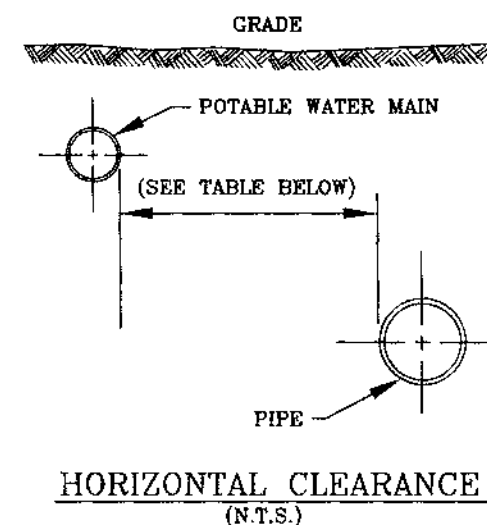
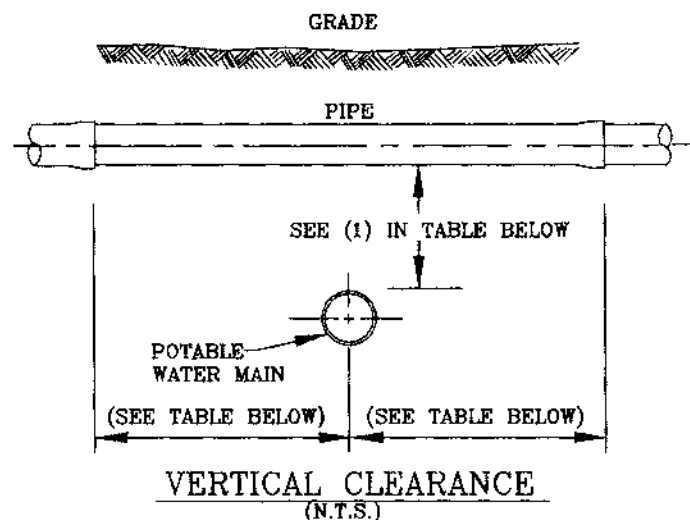
DATE:

**FEB/2016**

KEVIN BECOTTE, P.E.

REVISION:

## PINELLAS COUNTY

MAIN CLEARANCES  
DETAIL

PIPE	HORIZONTAL SEPARATION	CROSSINGS (1)	JOINT SPACING @ CROSSINGS
VACUUM-TYPE SANITARY SEWER, STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER (2)	3 FT. MINIMUM	12 INCHES IS THE MINIMUM, EXCEPT FOR STORM SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED	(FULL JOINT CENTERED, ALTERNATE 3 FT. MINIMUM FROM ALL JOINTS)
GRAVITY OR PRESSURE SANITARY SEWER, SANITARY SEWER FORCE MAIN, RECLAIMED WATER (4)	10 FT. PREFERRED 6 FT. MINIMUM (3)	12 INCHES IS THE MINIMUM, EXCEPT FOR GRAVITY SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED	(FULL JOINT CENTERED, ALTERNATE 6 FT. MINIMUM FROM ALL JOINTS)
ON-SITE SEWAGE TREATMENT & DISPOSAL SYSTEM	10 FT. MINIMUM	-	-

## NOTES: (IN ACCORDANCE WITH F.A.C. RULE 62-555.314)

- POTABLE WATER MAIN SHOULD CROSS ABOVE OTHER PIPE. WHEN POTABLE WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 12 INCHES.
- RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
- 3 FT. FOR GRAVITY SANITARY SEWER WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER.
- RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
- ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED MATERIALS SPECIFICATIONS MANUAL.EE

DETAIL INDEX I.D.

PCU GD 2

DATE:

FEB/2016

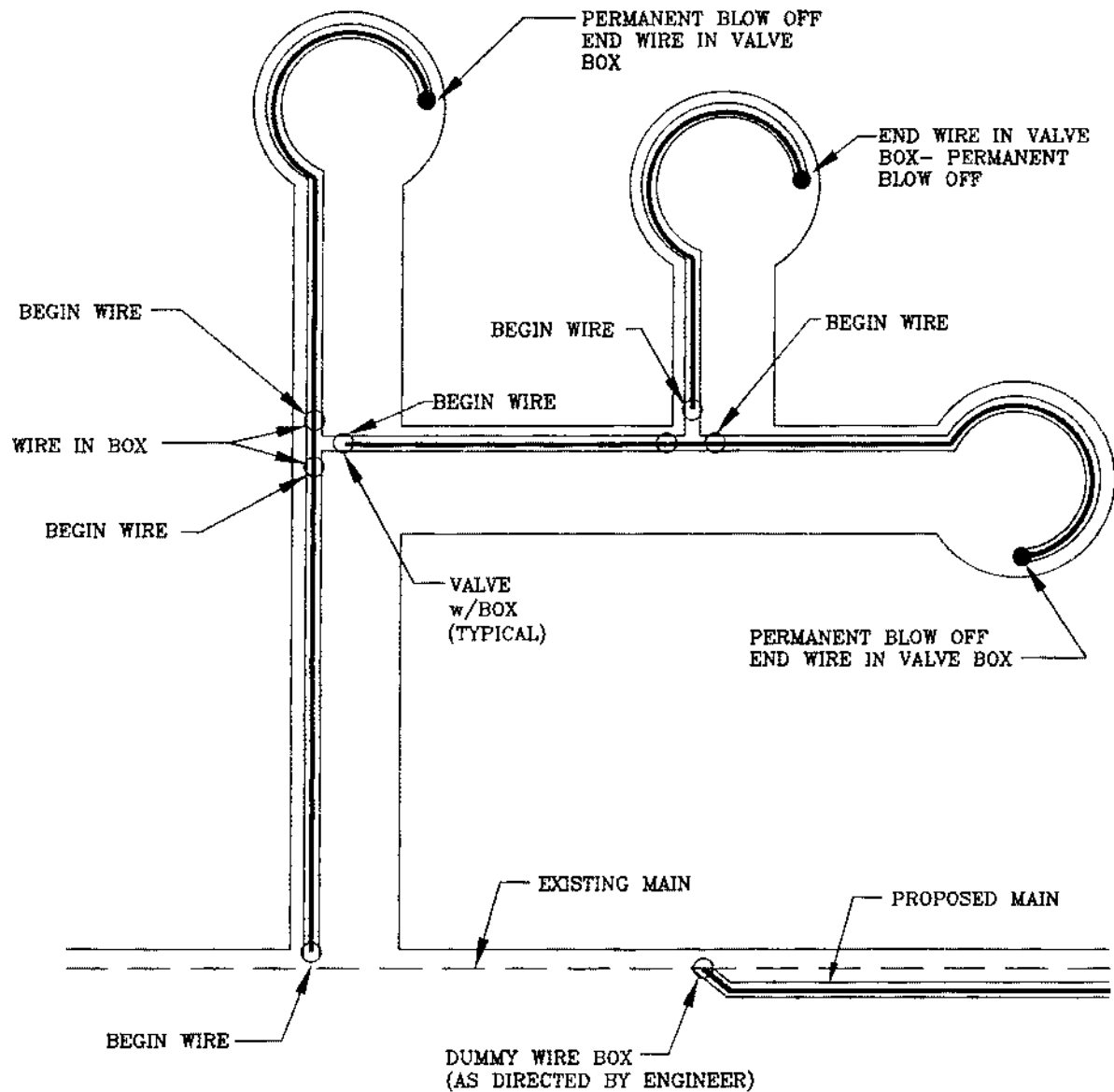
KEVIN BECOTTE, P.E.

REVISION:



**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. IF STREET IS A SHORT CUL-DE-SAC, LOCATOR WIRE IS TO RUN FROM MAIN VALVE TO BLOW-OFF VALVE BOX.



**PINELLAS COUNTY**

TRACER WIRE LAYOUT  
DETAIL

DETAIL INDEX I.D.:

PCU GD 3

DATE:

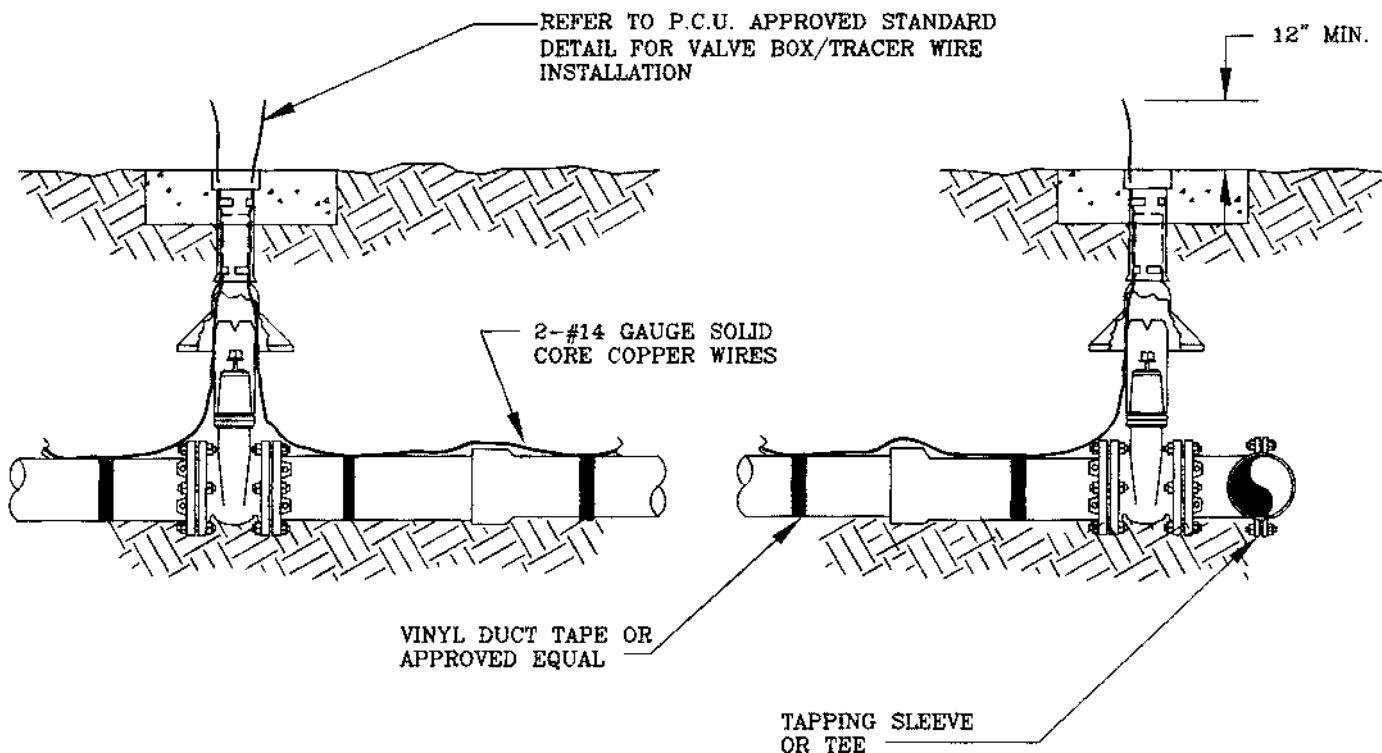
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. USE 2-#14 GAUGE (MINIMUM), SOLID CORE COPPER WIRE WITH COLOR CODED INSULATION PER SERVICE.
3. THERE SHALL BE SUFFICIENT SLACK IN TRACER WIRE TO EXTEND A MIN. OF 12" ABOVE VALVE BOX.
4. WIRE IS TO CONTINUE THROUGH TEES ON MAIN LINE WHERE NO VALVES EXIST.
5. ATTACH WIRE TO TOP CENTER LINE OF MAIN USING DUCT TAPE OR APPROVED EQUAL @ 5'- 0" INTERVALS.
6. DUMMY BOXES ARE TO CONSIST OF A TOP SECTION OF A VALVE BOX ASSEMBLY ENCASED IN A CONCRETE VALVE BOX COLLAR PER P.C.U. APPROVED STANDARD DETAIL.



**PINELLAS COUNTY**

TRACER WIRE INSTALLATION  
DETAIL

DETAIL INDEX I.D.:

PCU GD 3a

DATE:

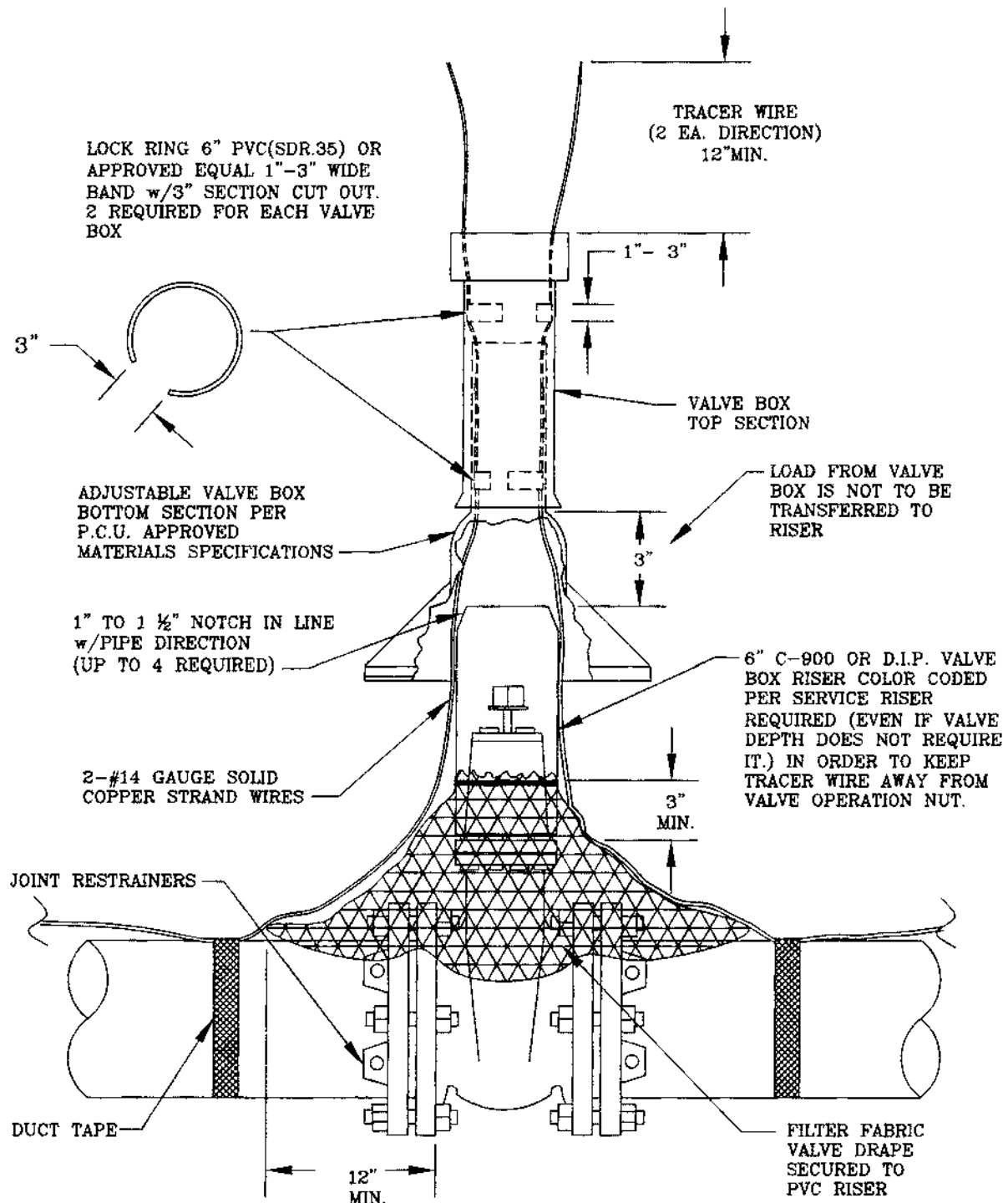
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. FILTER FABRIC REQUIRED ON VALVES WHEN PIPE LINE HAS 5' OR MORE OF COVER  
VALVE KEY EXTENSION REQUIRED ON VALVES WITH OPERATOR NUT OVER 3' DEEP.  
COLOR CODED POLY WRAP REQUIRED ON ALL BURIED VALVES AND FITTINGS.



## PINELLAS COUNTY

### VALVE BOX/TRACER WIRE INSTALLATION DETAIL

DETAIL INDEX I.D.:

PCU GD 4

DATE:

FEB/2016

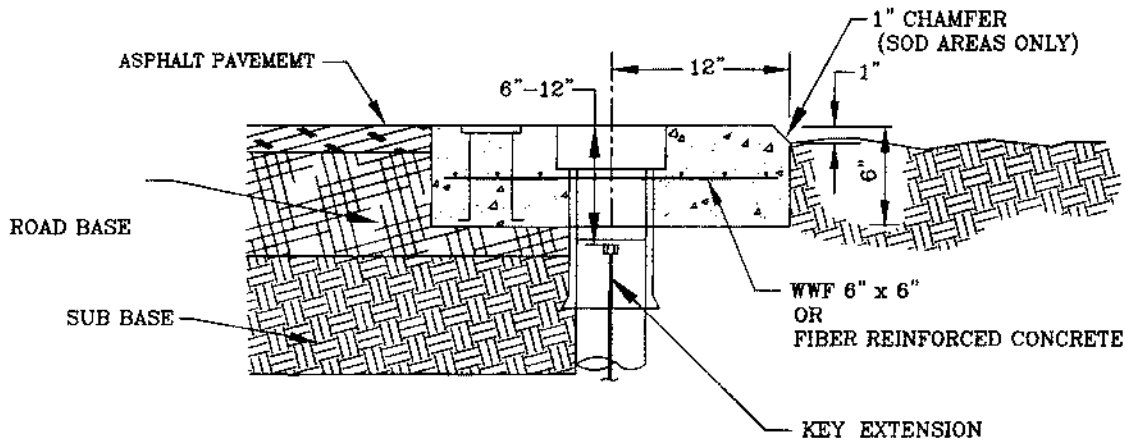
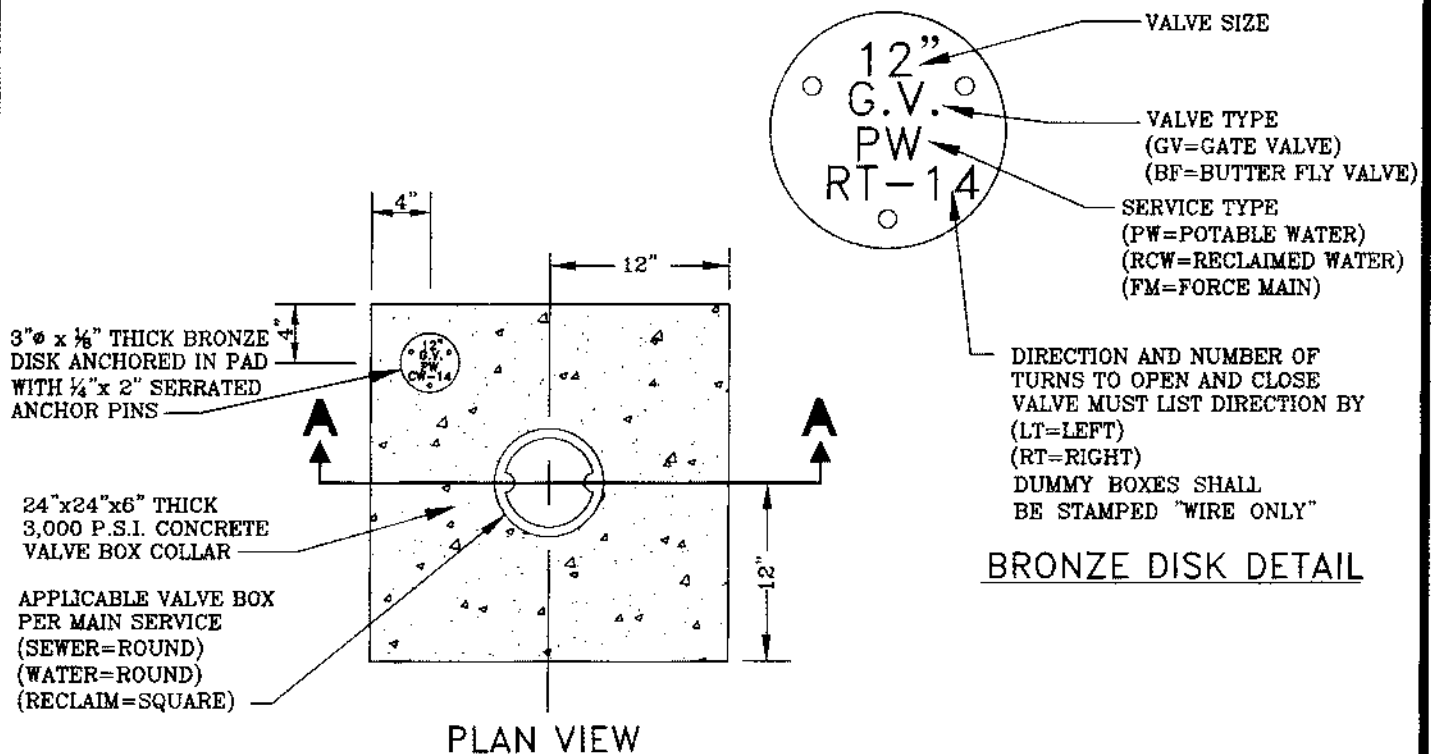
KEVIN BECOTTE, P.E.

  
 REVISION:



**NOTES**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. IF VALVE IS LOCATED WITHIN A SIDEWALK CONCRETE COLLAR MAY BE ELIMINATED AND DISK SET FLUSH DIRECTLY IN SIDEWALK.
3. **BRONZE DISK REQUIRED:** FOR ALL VALVES, AND DUMMY BOXES.
4. THE 24"x24"x6" THICK CONCRETE VALVE BOX COLLAR CAN BE INSTALLED BELOW THE FRICTION COARSE AND THE BRONZE DISK ANCHORED IN A NEAR-BY CURB OR SIDEWALK.
5. ALL VALVES/BOXES SHALL BE LOCATED BY MEANS OF A PERPENDICULAR 6"x2' BLUE STRIPE ACROSS THE CURB. THE DISTANCE FROM THE BACK OF THE CURB TO THE VALVE SHALL BE STENCILED ON THE CURB WITH NUMBERS FOUR INCHES HIGH, PAINTED BLUE, BY THE CONTRACTOR.

**SECTION A-A****PINELLAS COUNTY**

CONCRETE VALVE BOX AND COLLAR  
DETAIL

DETAIL INDEX I.D.:

PCU GD 5

DATE:

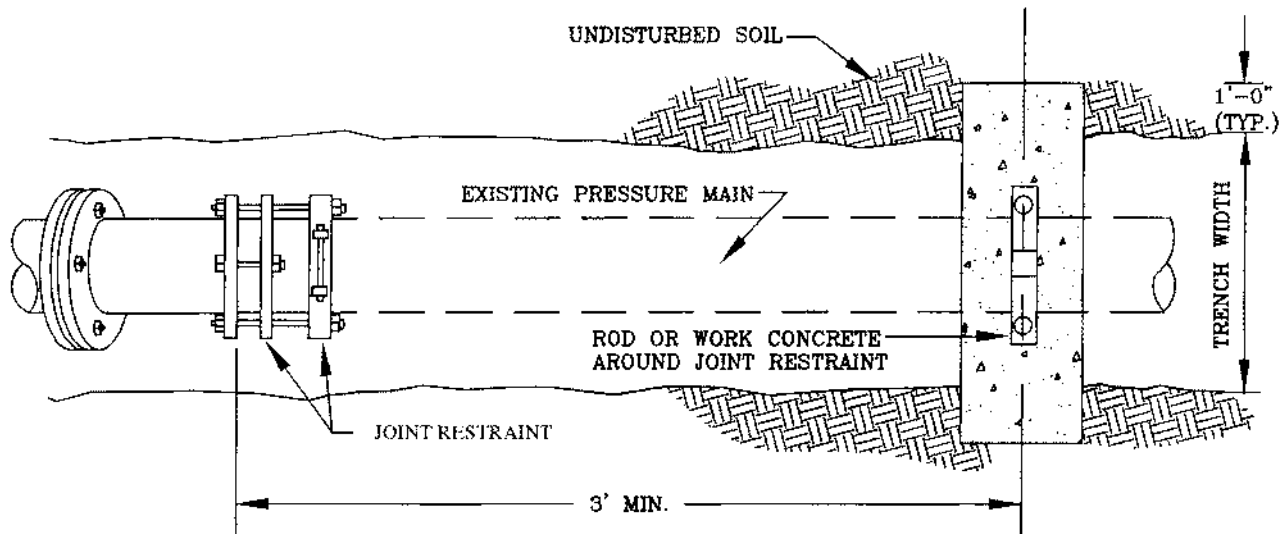
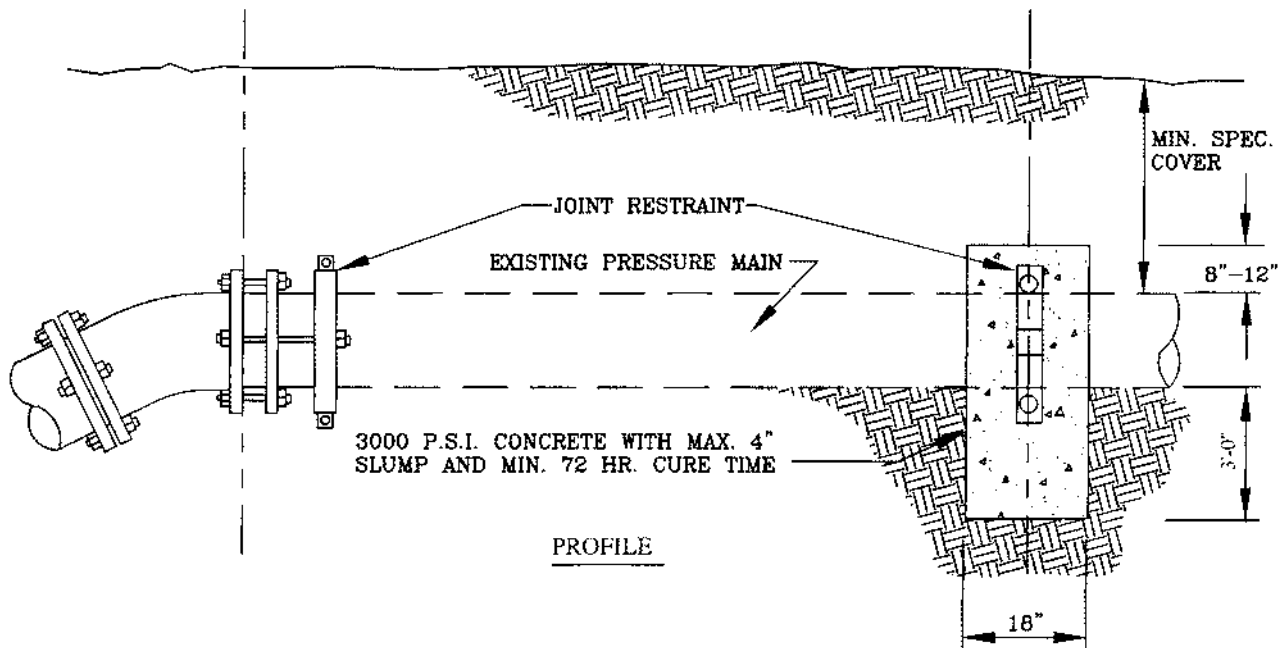
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED MATERIAL SPECIFICATION MANUAL.
2. FITTING CONNECTION TO EXISTING PIPE AND REVERSE DEADMAN MUST BE PART OF ONE INTEGRAL JOINT OF PIPE.
3. REVERSE DEADMAN FOR 16" AND LARGER PIPES SHALL BE DESIGNED BY ENGINEER.

PLANPROFILE**PINELLAS COUNTY****REVERSE DEADMAN RESTRAINT  
DETAIL**

DETAIL INDEX I.D.:

**PCU GD 6**

DATE:

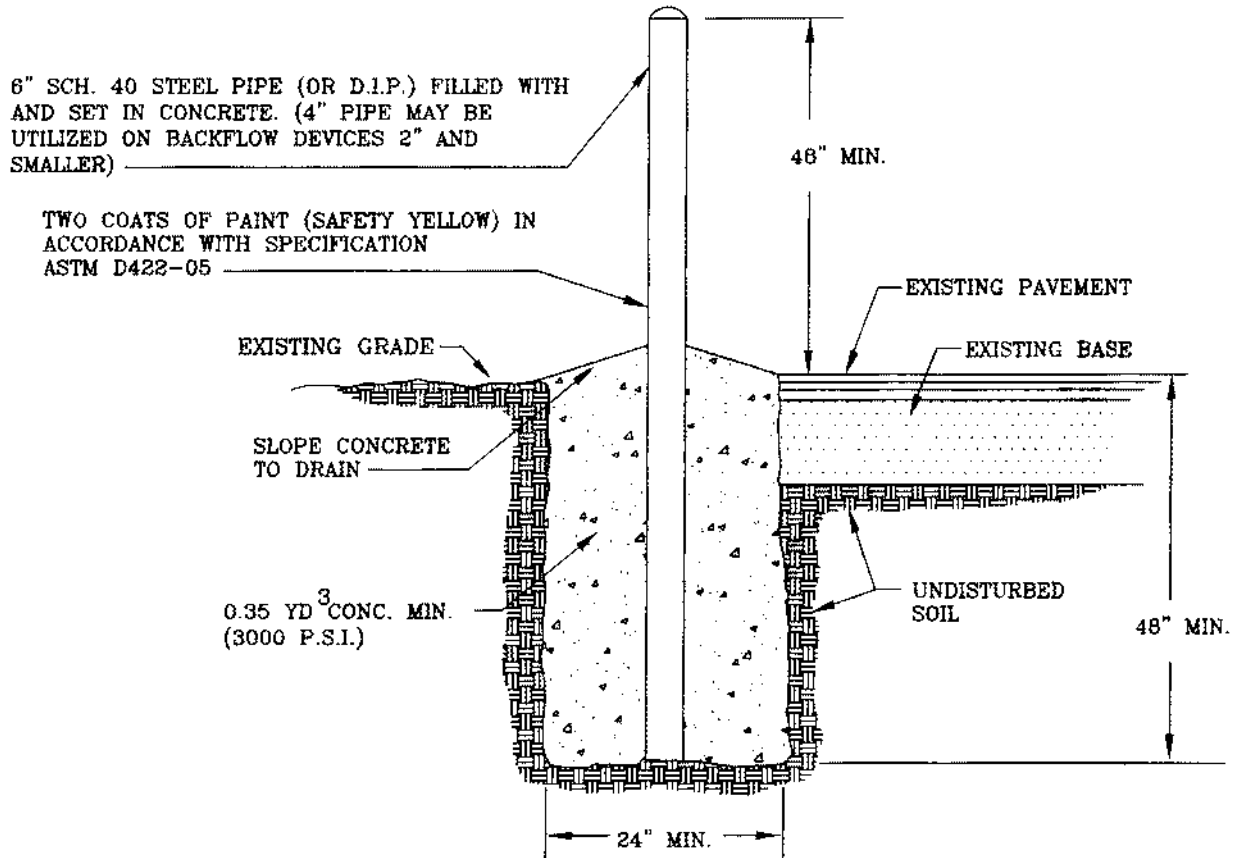
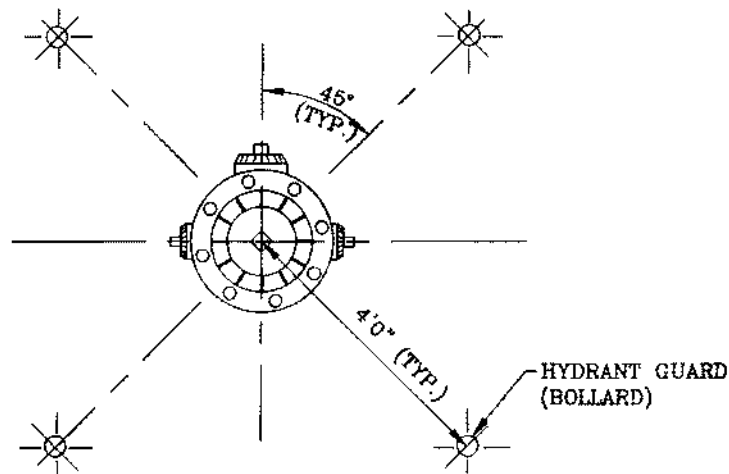
**FEB/2016**

KEVIN BECOTTE, P.E.

REVISION:

**NOTE:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED MATERIAL SPECIFICATION MANUAL.

**INSTALLATION****LAYOUT**

**PINELLAS COUNTY**

**BOLLARD  
DETAIL**

DETAIL INDEX I.D.:

PCU GD 7

DATE:

FEB/2016

KEVIN BECOTTE, P.E.,

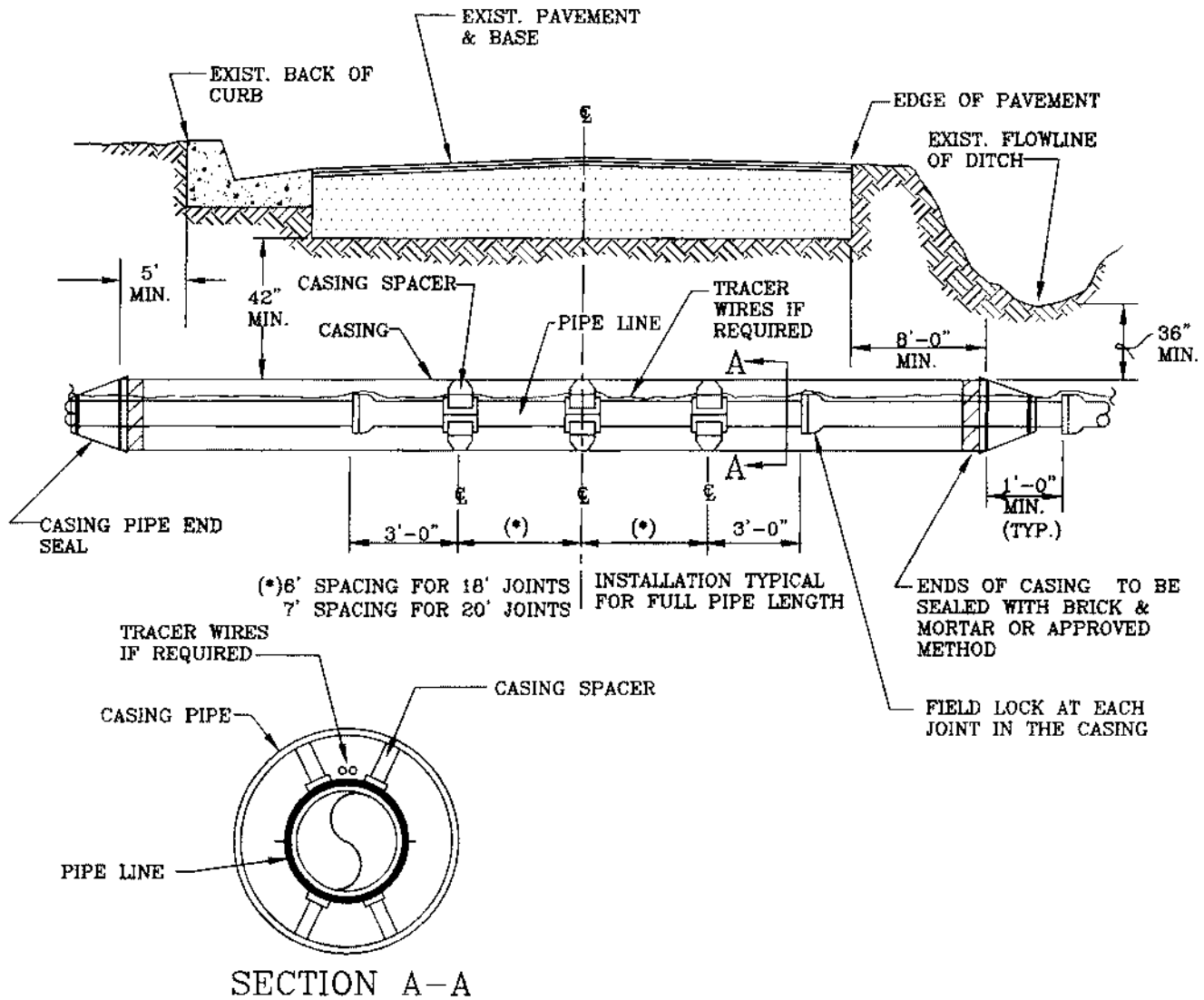
*Kevin Becotte*

REVISION:



**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED MATERIAL SPECIFICATION MANUAL.
2. IF DISTANCE FROM PIPE JOINT TO END OF CASING IS 6' OR LESS, NO SPACER IS REQUIRED.
3. SPACER TO BE INSTALLED OVER POLY WRAP.
4. ALL PIPE IN JACK AND BORE CASING SHALL BE D.I. PIPE WITH ALL JOINTS RESTRAINED.



CARRIER & CASING SIZES									
WATER MAIN	4"	6"	8"	10"	12"	14"	16"	18"	20"
CASING	8"	12"	16"	20"	24"	28"	32"	36"	40"
CASING / WALL THICKNESS	.188	.188	.219	.250	.281	.344	.406	.406	.500

**PINELLAS COUNTY**
**JACK AND BORE UNDER ROADWAY  
DETAIL**

DETAIL INDEX T.D.:

PCU GD 8

DATE:

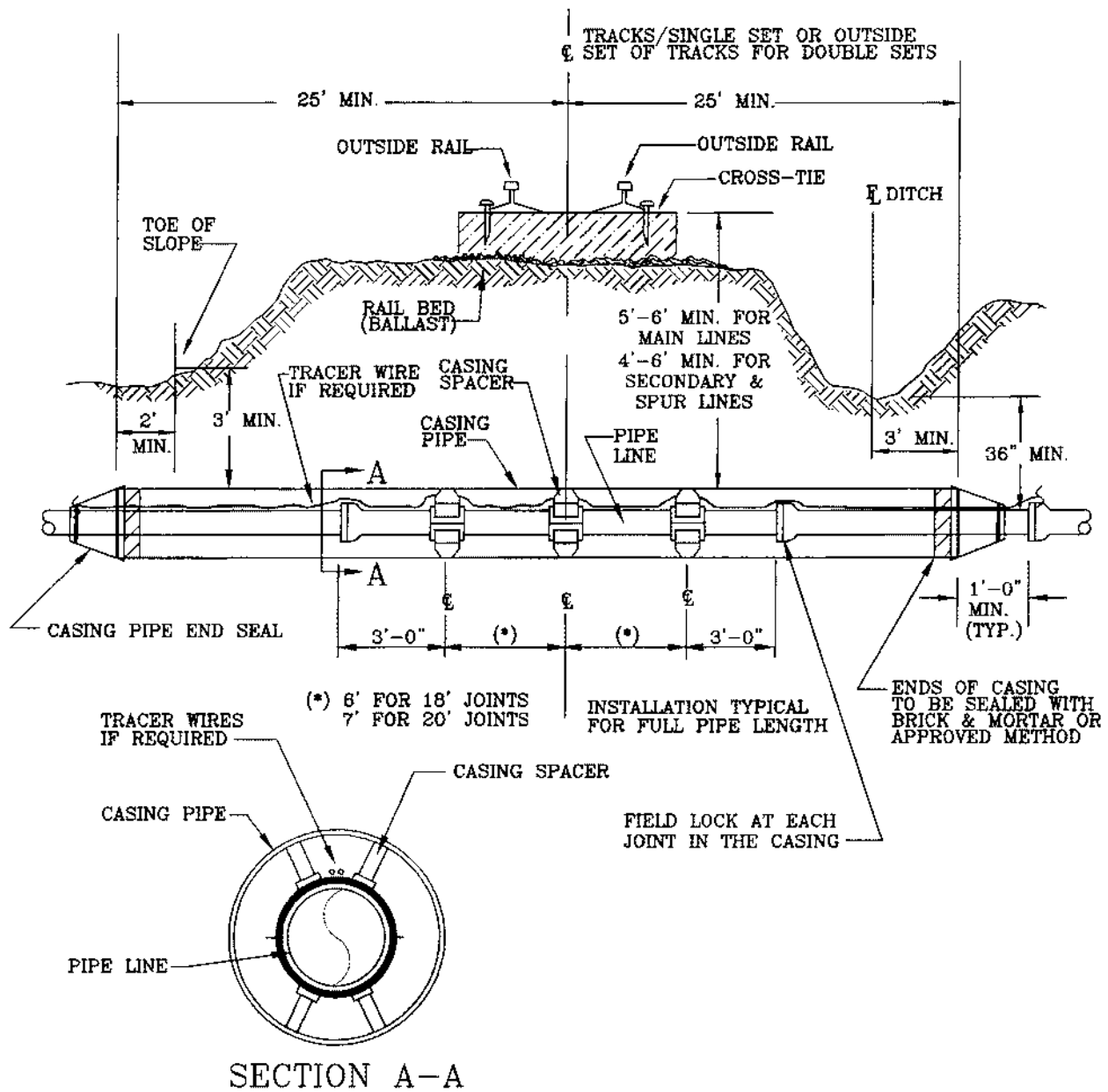
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED MATERIAL SPECIFICATION MANUAL.
2. IF DISTANCE FROM PIPE JOINT TO END OF CASING IS 6' OR LESS, NO SPACER IS REQUIRED.
3. CENTERLINE OF TRACKS IS DETERMINED AS CENTERLINE OF A SINGLE TRACK SET OR OUTSIDE SET OF TRACKS FOR DOUBLE SET.
4. SPACER TO BE INSTALLED OVER POLY WRAP.
5. ALL PIPE IN JACK AND BORE CASING SHALL BE D.I. PIPE WITH ALL JOINTS RESTRAINED.



CARRIER & CASING SIZES									
CARRIER / WATER MAIN	4"	6"	8"	10"	12"	14"	16"	18"	20"
CASING	8"	12"	16"	20"	24"	28"	32"	36"	40"
CASING / WALL THICKNESS	.188	.188	.219	.250	.281	.344	.406	.406	.500

**PINELLAS COUNTY**

JACK AND BORE UNDER RAILWAY  
DETAIL

DETAIL INDEX I.D.:

PCU GD 9

DATE:

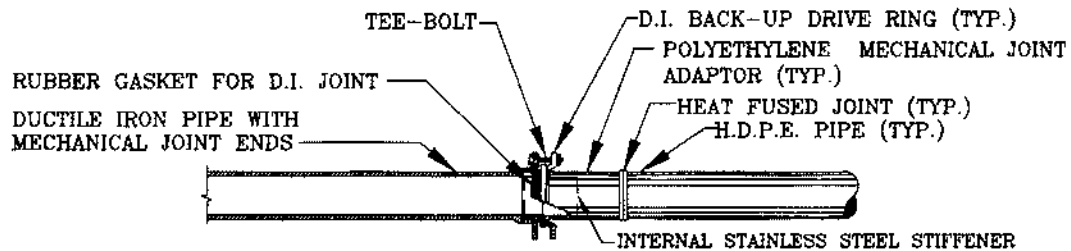
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

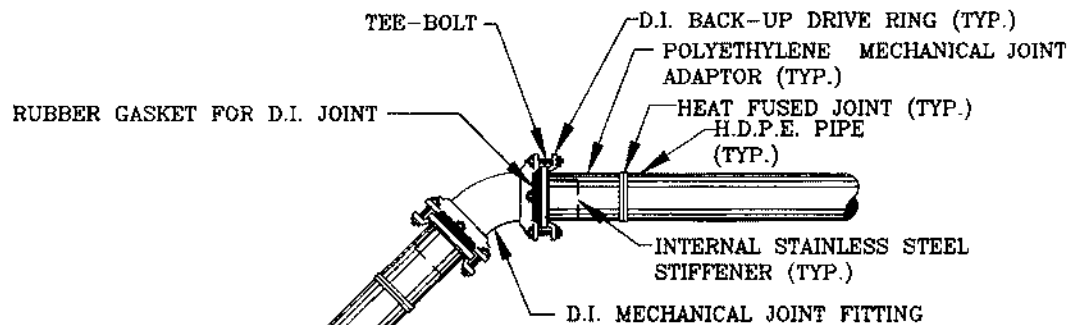
NOTES:

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. ALL DUCTILE IRON PIPE SHALL BE RESTRAINED.
3. RIGID PIPE CONNECTING TO H.D.P.E. PIPE WILL REQUIRE ADDITIONAL RESTRAINT METHODS OF THE RIGID PIPE AS DIRECTED BY ENGINEER.



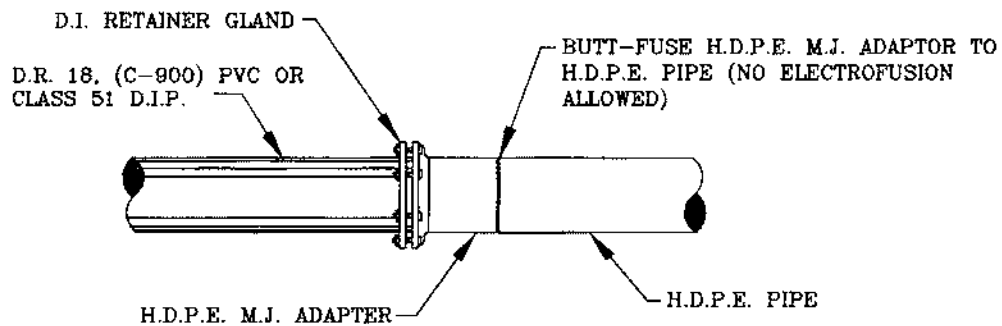
TYPICAL D.I./HDPE PIPE  
MECHANICAL JOINT ADAPTOR

NOT TO SCALE



TYPICAL D.I. FITTING/HDPE  
PIPE CONNECTION DETAIL

NOT TO SCALE



TYPICAL PVC/HDPE PIPE  
MECHANICAL JOINT ADAPTER

NOT TO SCALE

**PINELLAS COUNTY**

FUSIBLE PVC/HDPE PIPE CONNECTIONS  
DETAIL

DETAIL INDEX I.D.:

PCU GD 10

DATE:

FEB/2016

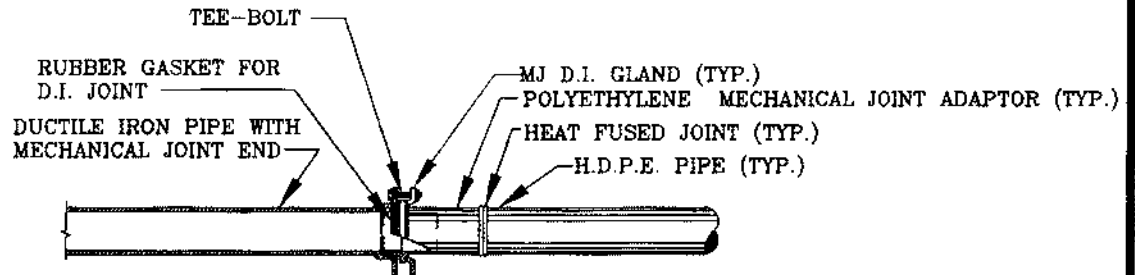
KEVIN BECOTTE, P.E.

REVISION:



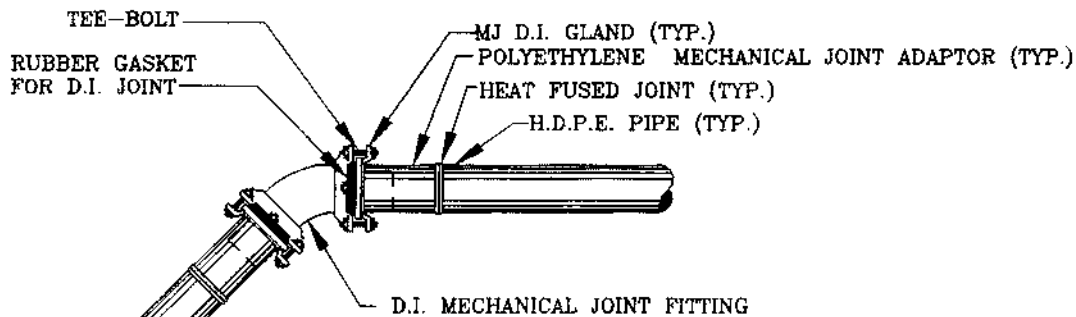
**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. ALL DUCTILE IRON PIPE SHALL BE RESTRAINED.
3. RIGID PIPE CONNECTING TO H.D.P.E. PIPE WILL REQUIRE ADDITIONAL RESTRAINT METHODS OF THE RIGID PIPE AS DIRECTED BY ENGINEER.



**PROFILE VIEW**  
**TYPICAL D.I./HDPE PIPE**  
**MECHANICAL JOINT ADAPTOR**

NOT TO SCALE



**PROFILE VIEW**  
**TYPICAL D.I. FITTING/HDPE**  
**PIPE CONNECTION DETAIL**

NOT TO SCALE

## PINELLAS COUNTY

### FUSIBLE PVC/HDPE PIPE CONNECTIONS DETAIL

DETAIL INDEX I.D.:

PCU GD 10a

DATE:

FEB/2016

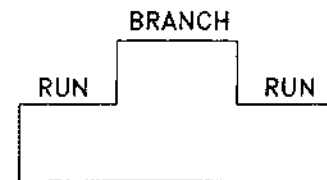
KEVIN BECOTTE, P.E.

REVISION:

*Kevin Becotte*

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION.
2. MANUAL. THIS TABLE SHALL BE UTILIZED FOR ALL PRESSURE MAIN INSTALLATIONS. ALL FITTINGS SHALL BE RESTRAINED TO THE LENGTHS INDICATED, AT A MINIMUM.
3. THIS TABLE WAS DEVELOPED USING THE FOLLOWING ASSUMPTIONS:
  - o D.I. PIPE WITH POLY WRAP
  - o SAFETY FACTOR OF 1.5 TO 1
  - o TEST PRESSURE OF 150 P.S.I.
  - o SOIL TYPE = S.M.
  - o TYPE 3 TRENCH
  - o DEPTH OF COVER = 2.5' UP TO 18" AND 3' FOR 20" AND ABOVE.
4. WHEN A TEE HAS A VALVE ON THE RUN, THE BRANCH AND THE RUNS SHALL BE RESTRAINED AS A 90° BEND FOR THE SIZE OF THE PIPE.
5. ALL BENDS, TEES, AND VALVES SHALL BE RESTRAINED ON EACH SIDE OF THE FITTING.
6. ALL RESTRAINED PIPE LENGTHS ARE IN FEET.
7. "F" REPRESENTS THE RESTRAINED JOINTS AT THE FITTINGS.
8. HDPE TRANSITION VALVE IS FOR STRAIGHT TIE-INS. IF A BEND IS USED, THE VALVE FOR THE BEND MUST BE ADDED.
9. LINE VALVES SHALL BE RESTRAINED UPSTREAM AND DOWNSTREAM AS A DEAD END.



PIPE SIZE	FITTINGS					
	TEE BRANCH ONLY	90°	45°	22½°	11¼°	DEAD END
2"	F	40	17	F	F	40
4"	19	49	20	10	5	49
6"	33	69	28	14	7	69
8"	58	88	37	18	9	88
10"	76	107	44	21	11	107
12"	93	125	52	25	12	125
14"	110	142	59	28	14	142
16"	127	159	66	32	16	159
18"	143	175	73	35	17	175
20"	132	164	68	33	16	164
24"	159	192	79	38	19	192
30"	195	229	95	46	23	229
36"	230	264	109	53	26	264

FITTINGS			
REDUCERS			LARGER PIPE
LG. SIZE	SM. SIZE	LENGTH	
4"	2"	17'	24
6"	4"	50'	35
8"	4"	91'	64
	6"	53'	37
10"	4"	123'	87
	6"	93'	66
	8"	51'	36
12"	4"	154'	108
	6"	129'	91
	8"	94'	66
	10"	52'	37
14"	6"	160'	113
	8"	131'	92
	10"	95'	67
	12"	52'	36
16"	6"	190'	134
	8"	165'	116
	10"	134'	94
	12"	96'	67
18"	14"	52'	36
	8"	196'	137
	10"	169'	118
	12"	135'	95
	14"	96'	67
20"	16"	51'	36
	10"	172'	121
	12"	147'	103
	14"	117'	82
	16"	82'	58
24"	18"	44'	30
	12"	201'	141
	14"	177'	124
	16"	149'	104
	18"	117'	82
30"	20"	82'	57
	18"	206'	144
	20"	178'	125
	24"	115'	80
36"	20"	258'	180
	24"	207'	144
	30"	114'	80

PRESSURE MAIN RESTRAINED JOINT

**PINELLAS COUNTY**PRESSURE MAIN RESTRAINED JOINT  
DETAIL

DETAIL INDEX I.D.:

PCU GD 11

DATE:

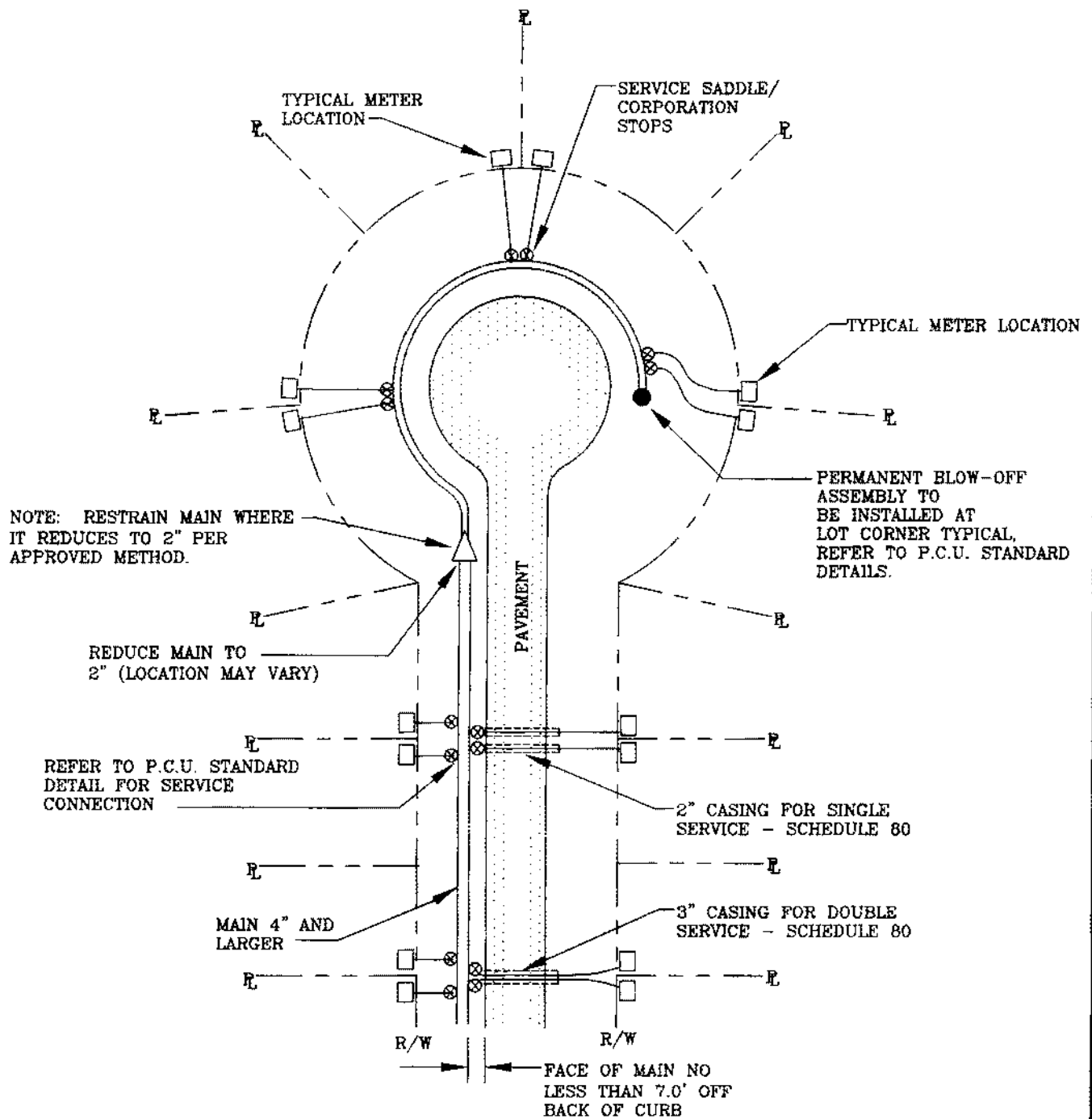
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. NO MORE THAN SIX (6) METER CONNECTIONS SHALL BE INSTALLED BETWEEN BLOW-OFF AND REDUCTION TO 2" MAIN.
3. CASINGS TO BE EXTENDED A MINIMUM OF 5' BEYOND E.P. OR B.O.C. IN ACCORDANCE WITH P.C.U. STANDARD DETAILS.

**PINELLAS COUNTY**
**CUL-DE-SAC LAYOUT - POTABLE WATER  
DETAIL**

DETAIL INDEX I.D.:

PCU GD 12

DATE:

FEB/2016

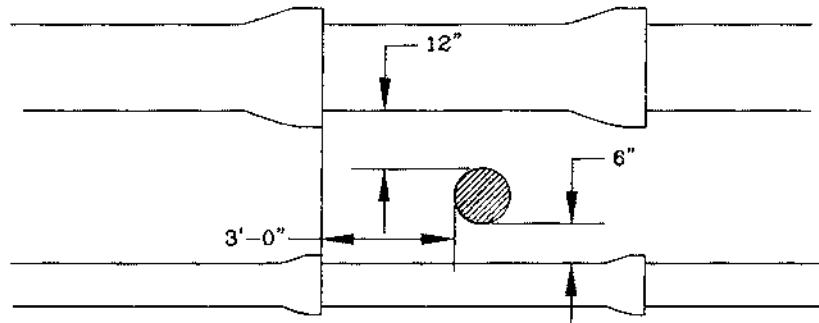
KEVIN BECOTTE, P.E.

REVISION:

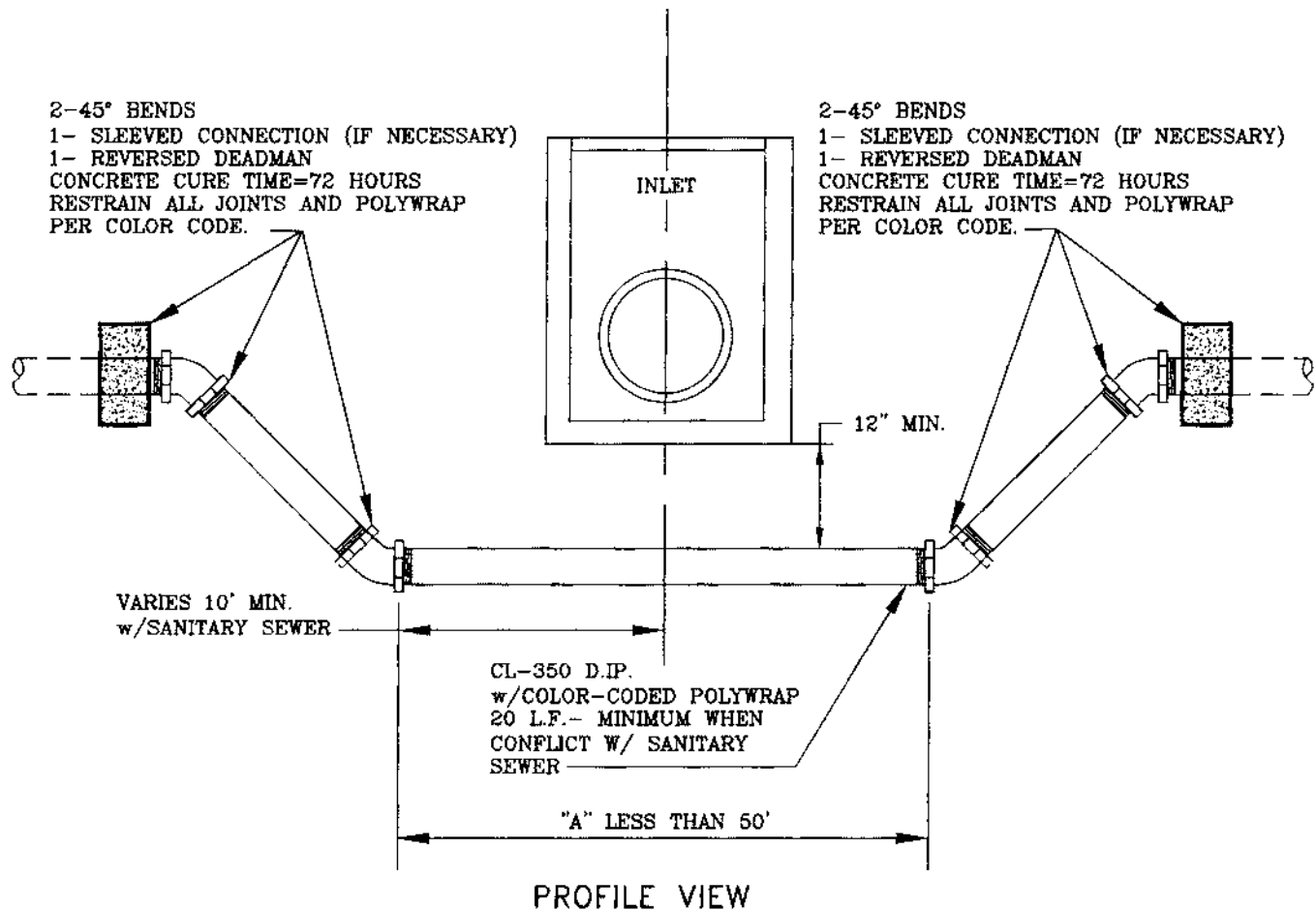


**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL AND TECHNICAL SPECIFICATIONS.
2. ALL WORK SHOWN ON THIS DRAWING SHALL BE PAID FOR UNDER THE OFFSET PAY-ITEM FOR THE APPLICABLE SIZE OF THE EXISTING PIPE TO BE RELOCATED DUE TO CONFLICT; NO SEPARATE PAYMENT SHALL BE MADE UNDER INDIVIDUAL PAY-ITEMS UNLESS "A" IS GREATER THAN 50'.



PIPE SEPERATION-MINIMUM



PROFILE VIEW

**PINELLAS COUNTY**

TYPICAL PRESSURE LINE  
OFFSET RELOCATION DETAIL

DETAIL INDEX I.D.:

PCU GD 13

DATE:

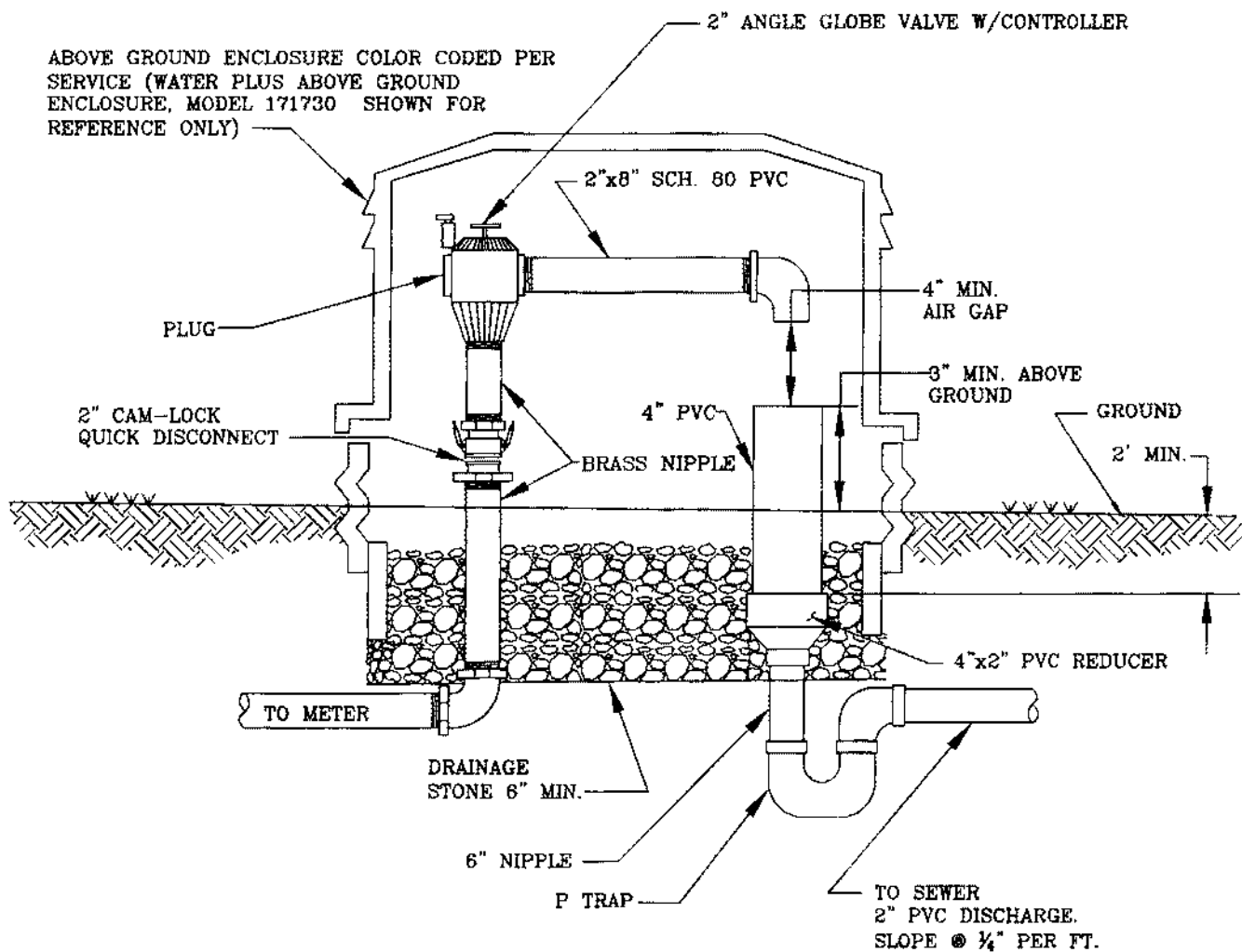
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTE:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.



## PINELLAS COUNTY

### AUTOMATIC FLUSHING ASSEMBLY DETAIL

DETAIL INDEX I.D.:

PCU GD 14

DATE:

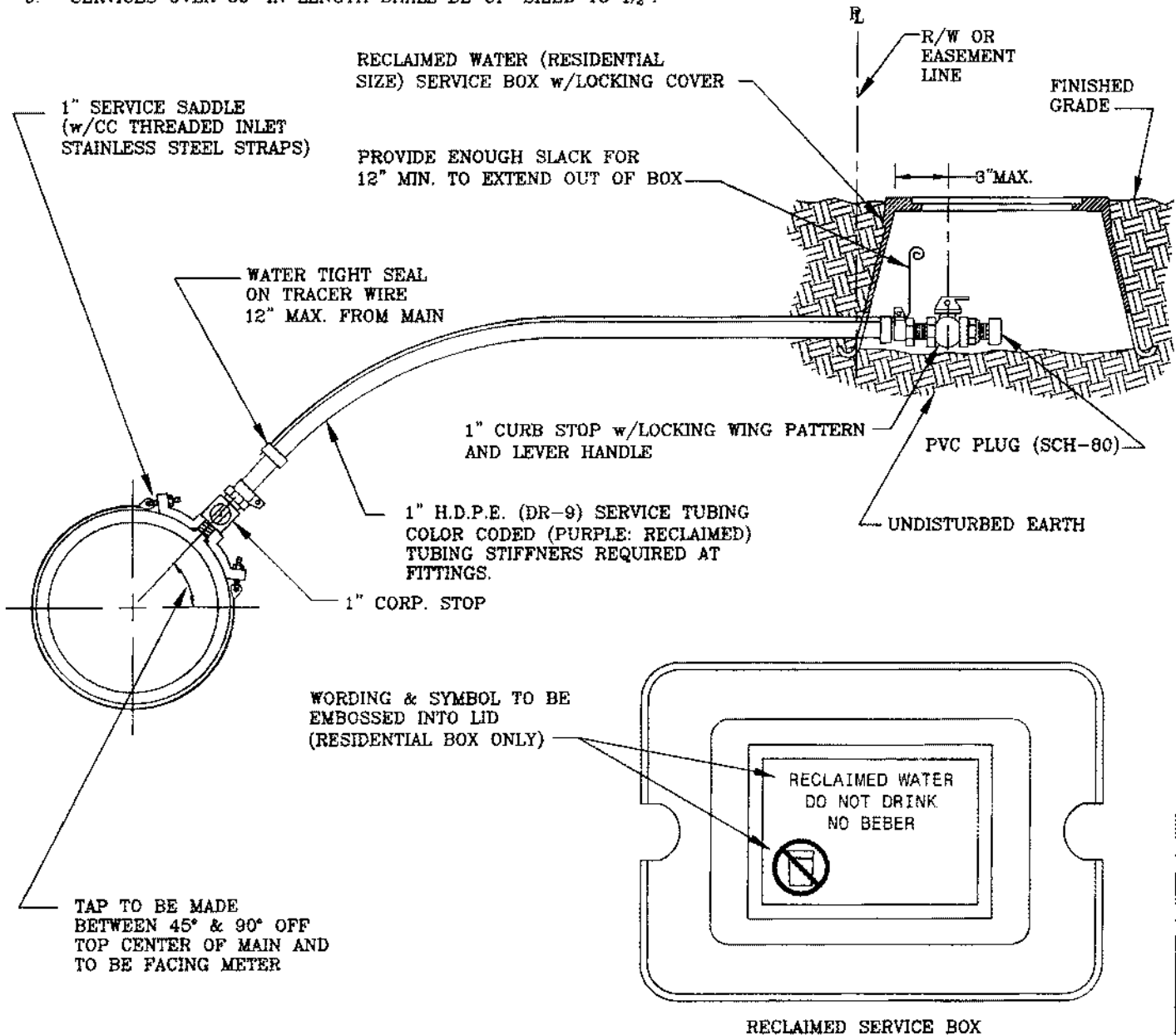
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. CORPORATION STOPS SHALL BE COMPATIBLE WITH DR 9 (C.T.S.) H.D.P.E. TUBING.
3. SERVICE SADDLE REQUIRED FOR ALL TAPS EXCEPT FOR 1" TAPS AND SMALLER ON D.I.P.
4. METER ONLY, TO BE FURNISHED BY P.C.U. (IF REQUIRED).
5. RESIDENTIAL SIZE RECLAIM METER BOX SHALL BE USED FOR UNMETERED SERVICES AND COMMERCIAL SIZE FOR METERED.
6. ALL METER BOXES LOCATED WITHIN VEHICULAR AREAS SHALL BE H-20 LOADING. ALL OTHERS SHALL BE H-10 LOADING.
7. TRACER WIRE REQUIRED ON ALL SERVICES.
8. TAP AND METER SHALL BE INSTALLED BY P.C.U. ON ALL PRIVATELY DEVELOPED PROJECTS.
9. SERVICES OVER 60' IN LENGTH SHALL BE UP-SIZED TO 1½".

**PINELLAS COUNTY**
**1" RECLAIMED SERVICE CONNECTION  
(NON-METERED) DETAIL**

DETAIL INDEX I.D.:

PCU RD 1

DATE:

FEB/2016

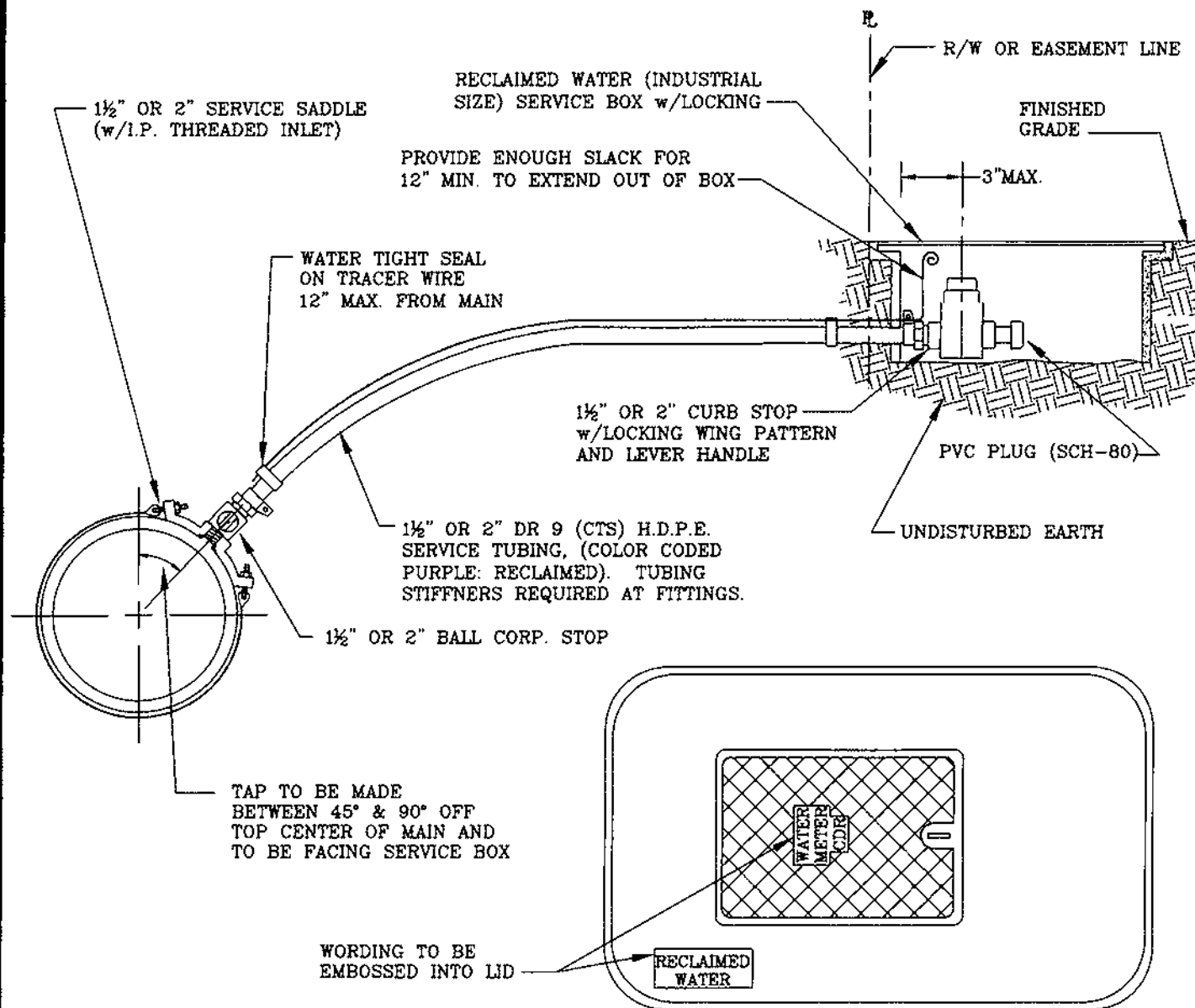
KEVIN BECOTTE, P.E.

REVISION:



NOTES:

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. CORPORATION STOPS SHALL BE COMPATIBLE WITH DR 9 (C.T.S.) H.D.P.E. TUBING.
3. SERVICE SADDLE REQUIRED FOR ALL TAPS.
4. SERVICE BOXES SHALL BE PER P.C.U. APPROVED MATERIAL SPECIFICATIONS.
5. ALL SERVICE BOXES LOCATED WITHIN VEHICULAR AREAS SHALL BE H-20 LOADING. ALL OTHERS SHALL BE H-10 LOADING.
6. TRACER WIRE REQUIRED ON ALL SERVICES.
7. TAP AND METER SHALL BE INSTALLED BY P.C.U. ON ALL PRIVATELY DEVELOPED PROJECTS.
8. SERVICES OVER 60' IN LENGTH SHALL BE UP-SIZED TO 2."
9. RESIDENTIAL RECLAIMED SERVICE BOXES SHALL BE USED ON ALL RESIDENTIAL PROPERTY REGARDLESS OF THE LENGTH AND SIZE OF THE SERVICE LINE.



# PINELLAS COUNTY

1½" OR 2" RECLAIMED SERVICE CONNECTION  
(NON-METERED) DETAIL

DETAIL INDEX I.O.:

PCU RD 2

DATE:

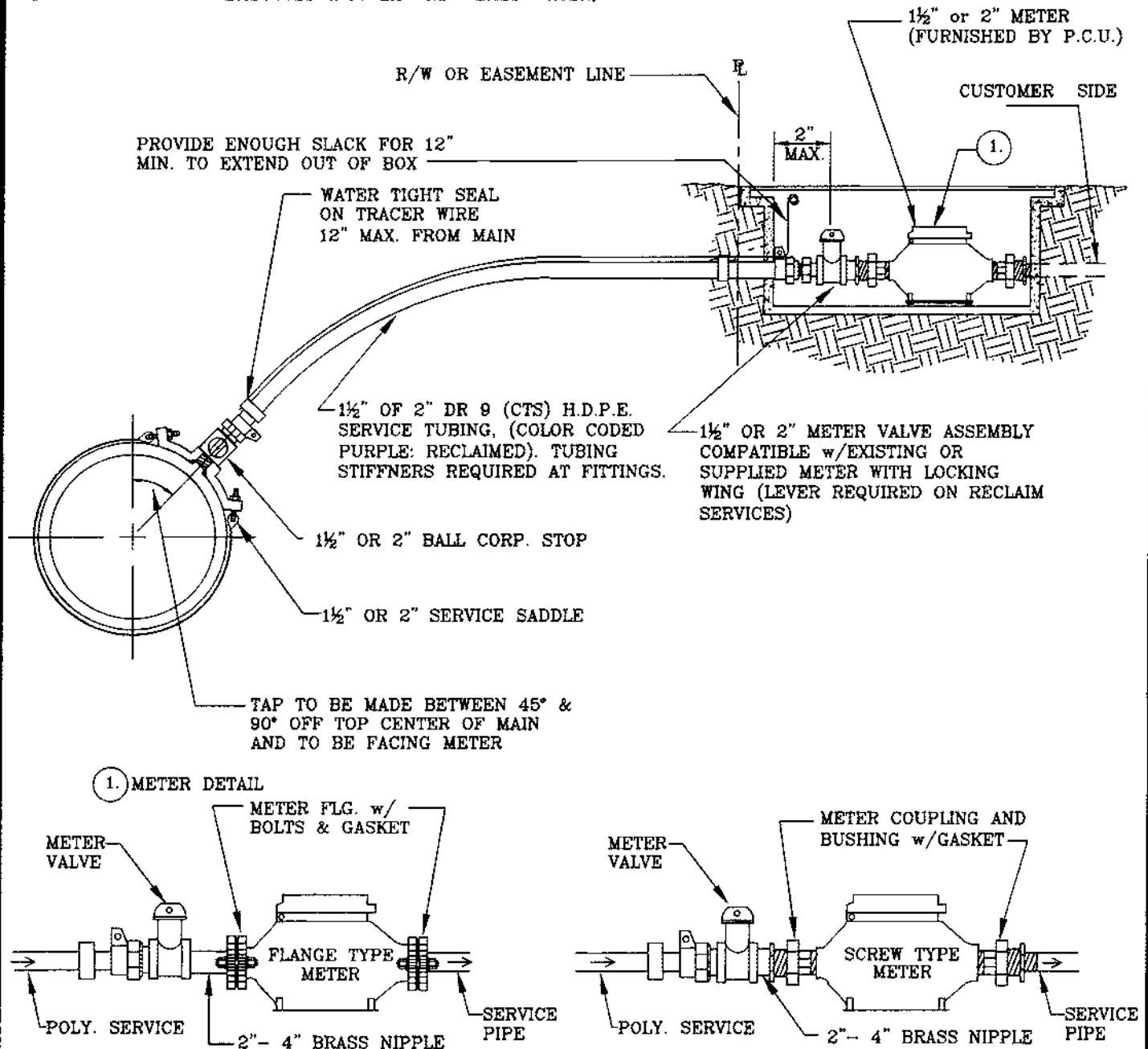
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. CORPORATION STOPS SHALL BE COMPATIBLE WITH DR 9 (C.T.S.) H.D.P.E. TUBING.
3. SERVICE SADDLE REQUIRED FOR ALL TAPS.
4. METER ONLY, TO BE FURNISHED BY P.C.U.
5. METER BOXES SHALL BE INDUSTRIAL SIZE.
6. ALL METER BOXES LOCATED WITHIN VEHICULAR TRAVEL AREAS SHALL BE H-20 LOADING. ALL OTHERS SHALL BE H-10 LOADING.
7. TRACER WIRE REQUIRED ON ALL SERVICES.
8. TAP AND METER SHALL BE INSTALLED BY P.C.U. ON ALL PRIVATELY DEVELOPED PROJECTS.
9. SERVICES OVER 60' IN LENGTH SHALL BE UP-SIZED TO 2".
10. WORDING TO BE EMBOSSED INTO LID "RECLAIMED WATER."

**PINELLAS COUNTY****1½" OR 2" METERED RECLAIMED WATER SERVICE  
DETAIL**

DETAIL INDEX I.D.:

PCU RD 3

DATE:

FEB/2016

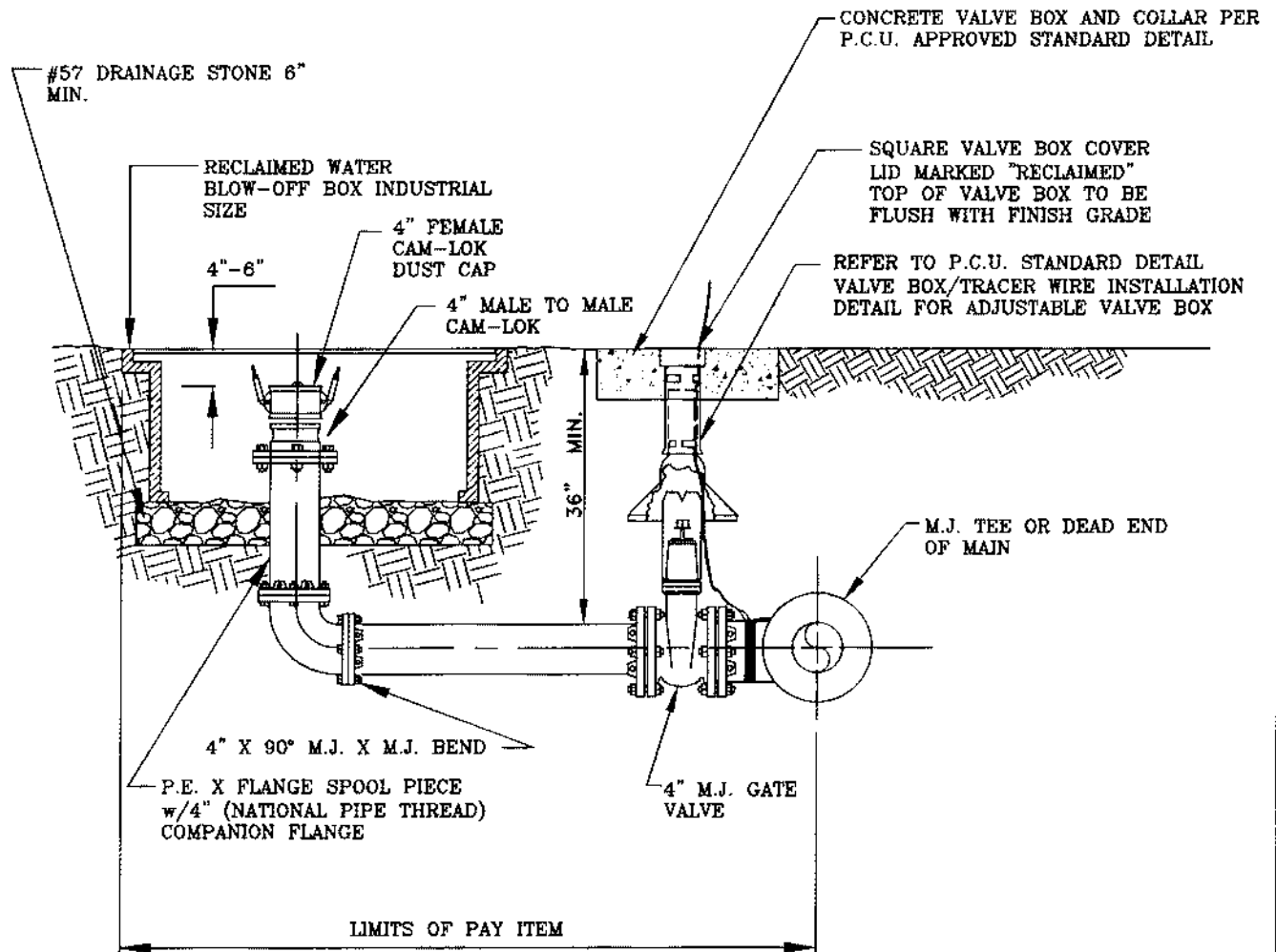
KEVIN BECOTTE, P.E.

REVISION:

*Kevin Becotte*

## NOTES:

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. ALL BURIED JOINTS SHALL BE RESTRAINED MECHANICAL JOINTS (M.J.).



## PINELLAS COUNTY

RECLAIMED WATER FLUSHING ASSEMBLY  
DETAIL

DETAIL INDEX I.D.:

PCU RD 4

DATE:

FEB/2016

KEVIN BECOTTE, P.E.

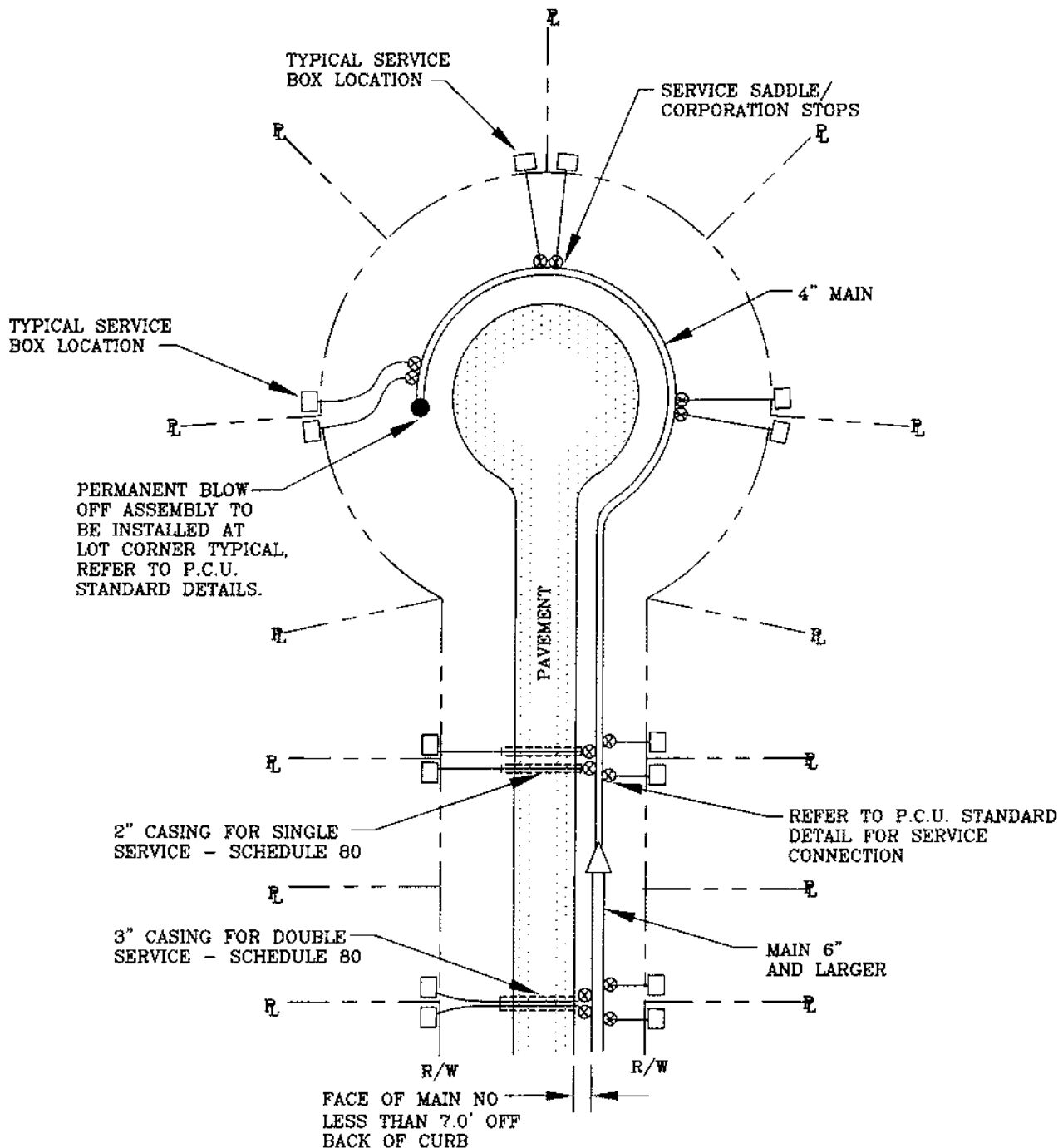
REVISION:

*Kevin Becotte*



**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. NO MORE THAN EIGHT (8) TO TEN (10) METER CONNECTIONS SHALL BE INSTALLED BETWEEN BLOW-OFF AND REDUCTION TO 4" MAIN.
3. CASINGS TO BE EXTENDED BEYOND E.P. OR B.O.C. IN ACCORDANCE WITH P.C.U. STANDARD DETAILS.
4. A 3' HORIZONTAL SEPARATION BETWEEN RECLAIMED AND POTABLE WATER MAINS.



# PINELLAS COUNTY

## CUL-DE-SAC LAYOUT - RECLAIMED WATER DETAIL

DETAIL INDEX I.D.:

PCU RD 5

DATE:

FEB/2016

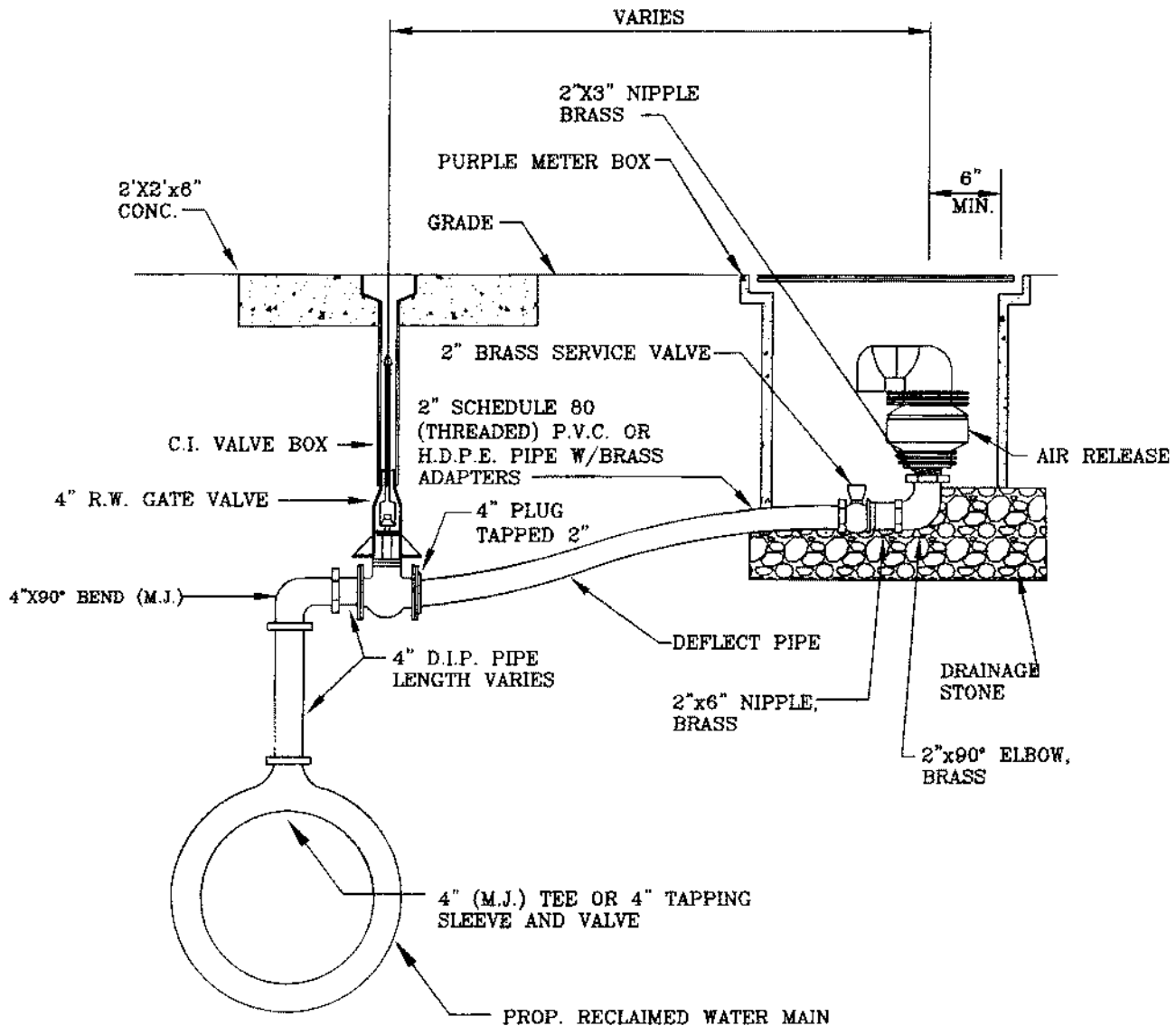
KEVIN BECOTTE, P.E.

REVISION:

*Kevin Becotte*

NOTES:

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.  
2. ALL JOINTS TO BE RESTRAINED.



NOTE:

CONTRACTOR SHALL EXERCISE CAUTION  
WHILE MIXING ROADWAY STABILIZATION

# PINELLAS COUNTY

### 2" OFFSET AIR RELEASE ASSEMBLY FOR RECLAIMED WATER (BELOW GROUND) DETAIL

DETAIL INDEX I.O.:

PCU RD 6

DATE:

FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

# SANITARY SEWER MANHOLE CONSTRUCTION NOTES

## ALL MANHOLES

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. PRECAST MANHOLE SECTIONS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE LATEST EDITIONS OF ASTM C-478 WITH 4000 P.S.I., TYPE II PORTLAND CEMENT.
3. ALL RISER UNITS SHALL HAVE A MINIMUM HEIGHT OF 12" WITH THE CONCENTRIC CONE SET BETWEEN  $2\frac{1}{2}$ " AND  $14\frac{1}{2}$ " BELOW THE BOTTOM OF MANHOLE COVER FRAME.
4. ALL KEYED JOINTS SHALL BE SEALED WITH TWO CONTINUOUS RINGS OF FLEXIBLE JOINT SEALANT, OR APPROVED EQUAL.
5. ALL INTERIOR AND EXTERIOR MANHOLE SURFACES SHALL BE PREPARED FOR COATING AND COATED IN ACCORDANCE WITH P.C.U. STANDARD SPECIFICATIONS AND APPROVED MATERIAL SPECIFICATIONS. INSIDE COATING OF MANHOLE MAY BE ELIMINATED IF USING P.C.U. APPROVED LINING SYSTEM.
6. MANHOLE BASE AND BOTTOM SECTION SHALL BE MONOLITHICALLY CAST.
7. ALL PIPE PENETRATIONS IN MANHOLE SHALL BE PRECAST OR CORE DRILLED.
8. MANHOLE COVER SHALL BE EQUIPPED WITH AN INFLOW PROTECTOR.
9. A DROP CONNECTION IS REQUIRED WHERE THE PIPE INVERT IS GREATER THAN 2' ABOVE THE MANHOLE INVERT. FOR DROPS 2' OR LESS A FLUME SHALL BE CONSTRUCTED.
10. ALL MANHOLES 5' IN DIAMETER OR GREATER SHALL REQUIRE THE USE OF A DOUBLE RING AND COVER.
11. ALL MANHOLES WITH A DEPTH OF 14' OR GREATER SHALL BE DESIGNED FOR ANTI-FLOATATION AND SHALL REQUIRE SUBMITTAL OF CALCULATIONS.

## INSIDE DROP MANHOLES

12. THERE SHALL BE NO MORE THAN 2 INSIDE DROPS PER MANHOLE.
13. WHEN USING A 90° BEND ON RISER, IT SHALL BE ROTATED BETWEEN  $22\frac{1}{2}$ ° AND 45° IN THE DIRECTION OF FLOW AND GROUTED INTO BENCH.
14. ALL FORCE MAIN CONNECTIONS REQUIRE THE USE OF A FORCE MAIN HOOD WITH INSIDE DROP BOWL.
15. ALL INSIDE DROPS SHALL BE CONSTRUCTED USING P.V.C. SDR-35 PIPE.

## OUTSIDE DROP MANHOLES

16. OUTSIDE DROP PIPING SHALL BE CONSTRUCTED USING THE SAME MATERIAL AS THE MAIN LINE.

TABLE

DIA.	FOR PIPES	CASTING SIZE CLEAR OPENING
4'-0"	24" & UNDER	22.375"
5'-0"	30" & 36" ALL INSIDE DROP AND AIR RELEASE MANHOLES	35"
6'-0"	42" & OVER	48"

**PINELLAS COUNTY**

MANHOLE CONSTRUCTION NOTES

DETAIL INDEX I.D.:

PCU SD 1

DATE:

FEB/2016

KEVIN BECOTTE, P.E.

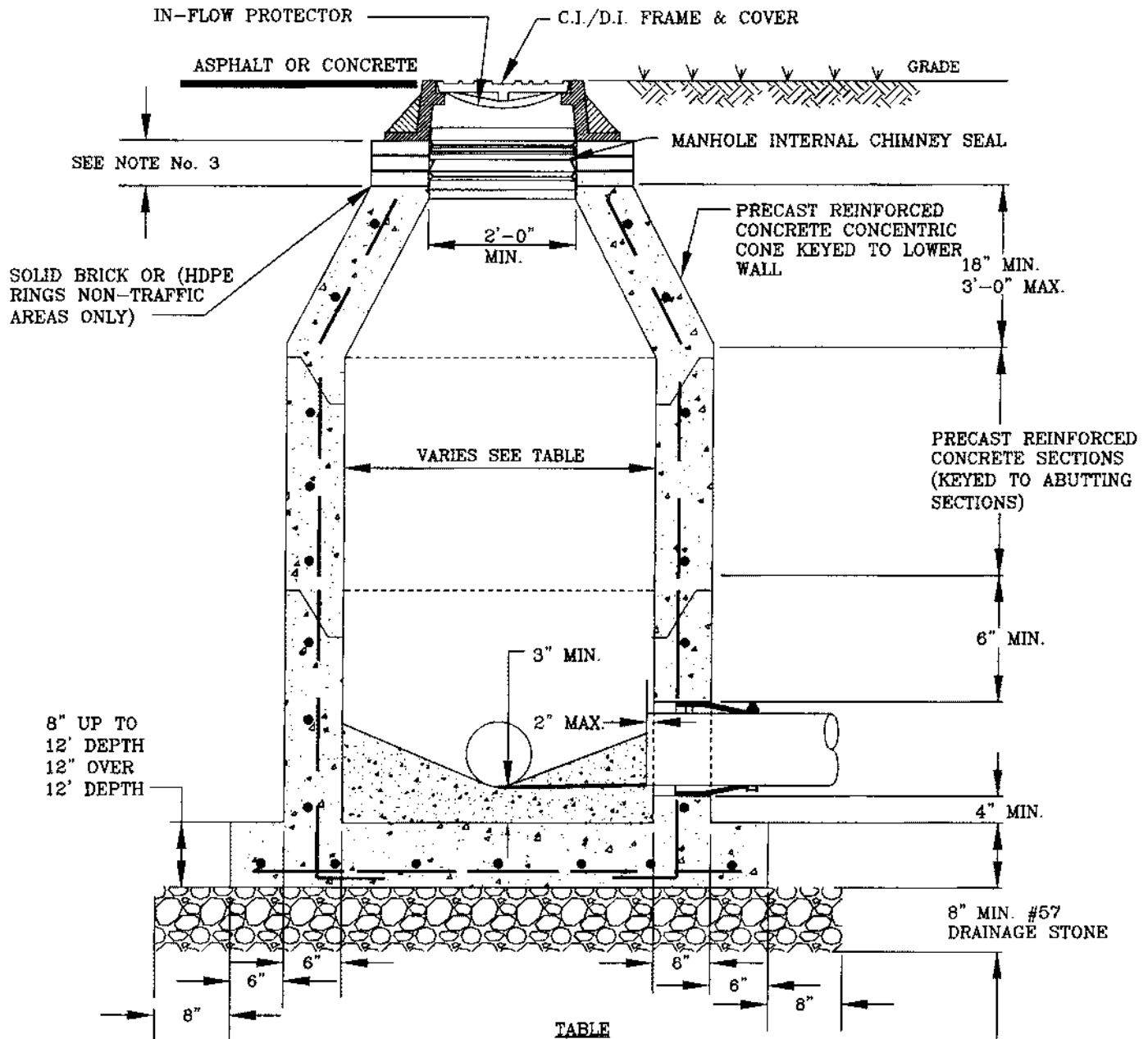
*Kevin Becotte*

REVISION:



**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIALS SPECIFICATION MANUAL.
2. REFER TO P.C.U. STANDARD DETAIL ON MANHOLE CONSTRUCTION NOTES.
3. ALL RISER UNITS SHALL HAVE A MINIMUM HEIGHT OF 12" WITH THE CONCENTRIC CONE SET BETWEEN  $2\frac{1}{2}$ " AND  $14\frac{1}{2}$ " BELOW THE BOTTOM OF MANHOLE COVER AND FRAME.

**TABLE**

DIA.	FOR PIPES	CASTING SIZE CLEAR OPENING
4'-0"	24" & UNDER	22.375"
5'-0"	30" & 36" ALL INSIDE DROP AND AIR RELEASE MANHOLES	35"
6'-0"	42" & OVER	48"

**PINELLAS COUNTY****STANDARD MANHOLE (PRE-CAST) DETAIL**

DETAIL INDEX I.D.:

PCU SD 1a

DATE:

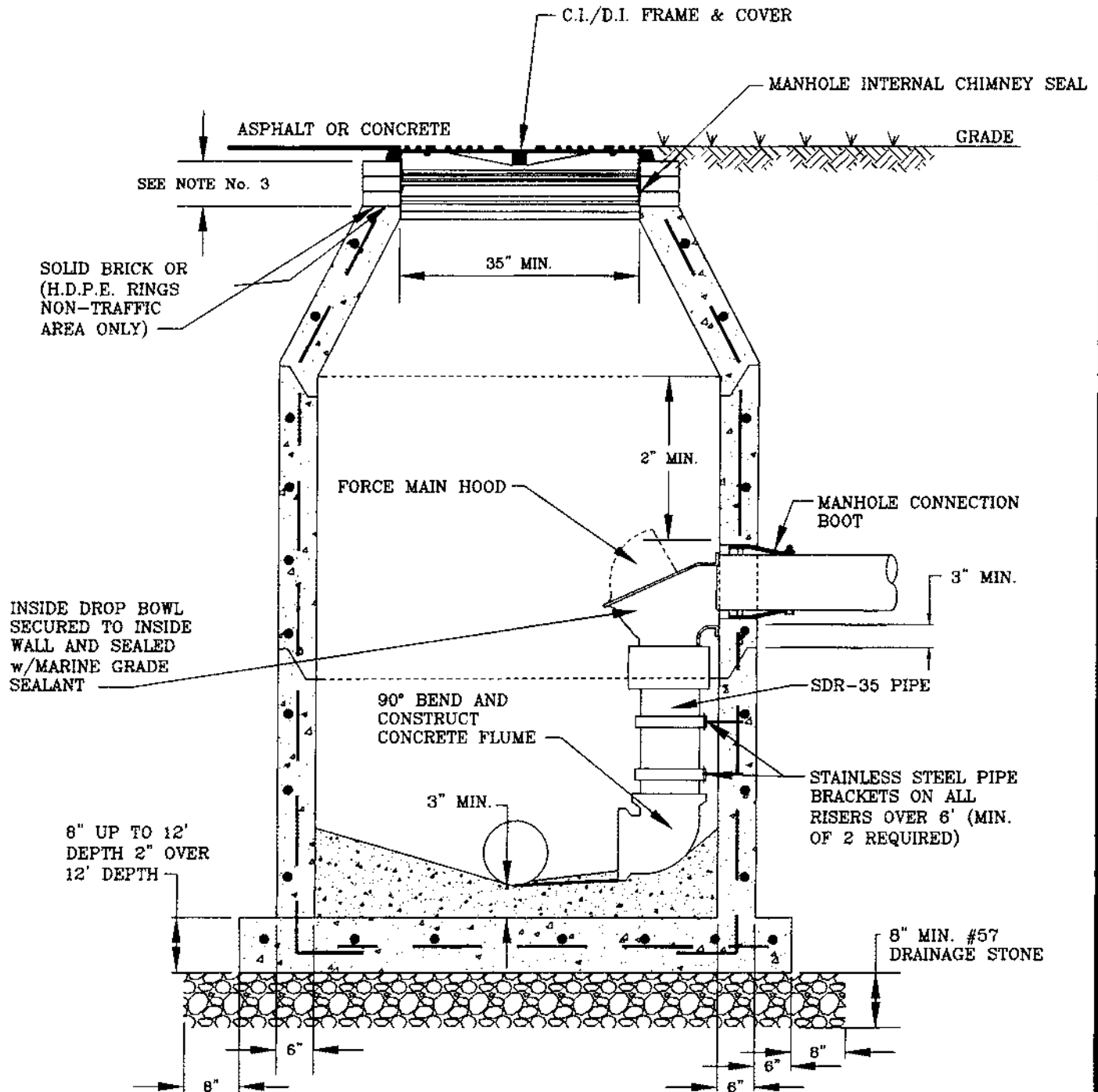
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

NOTES:

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. REFER TO P.C.U. STANDARD DETAIL ON MANHOLE CONSTRUCTION NOTES.
3. ALL RISER UNITS SHALL HAVE A MINIMUM HEIGHT OF 12" WITH THE CONCENTRIC CONE SET BETWEEN 2½" AND 14½" BELOW THE BOTTOM OF MANHOLE COVER AND FRAME.



# PINELLAS COUNTY

### INSIDE DROP MANHOLE CONNECTION DETAIL

DETAIL INDEX I.D.:

PCU SD 1b

DATE:

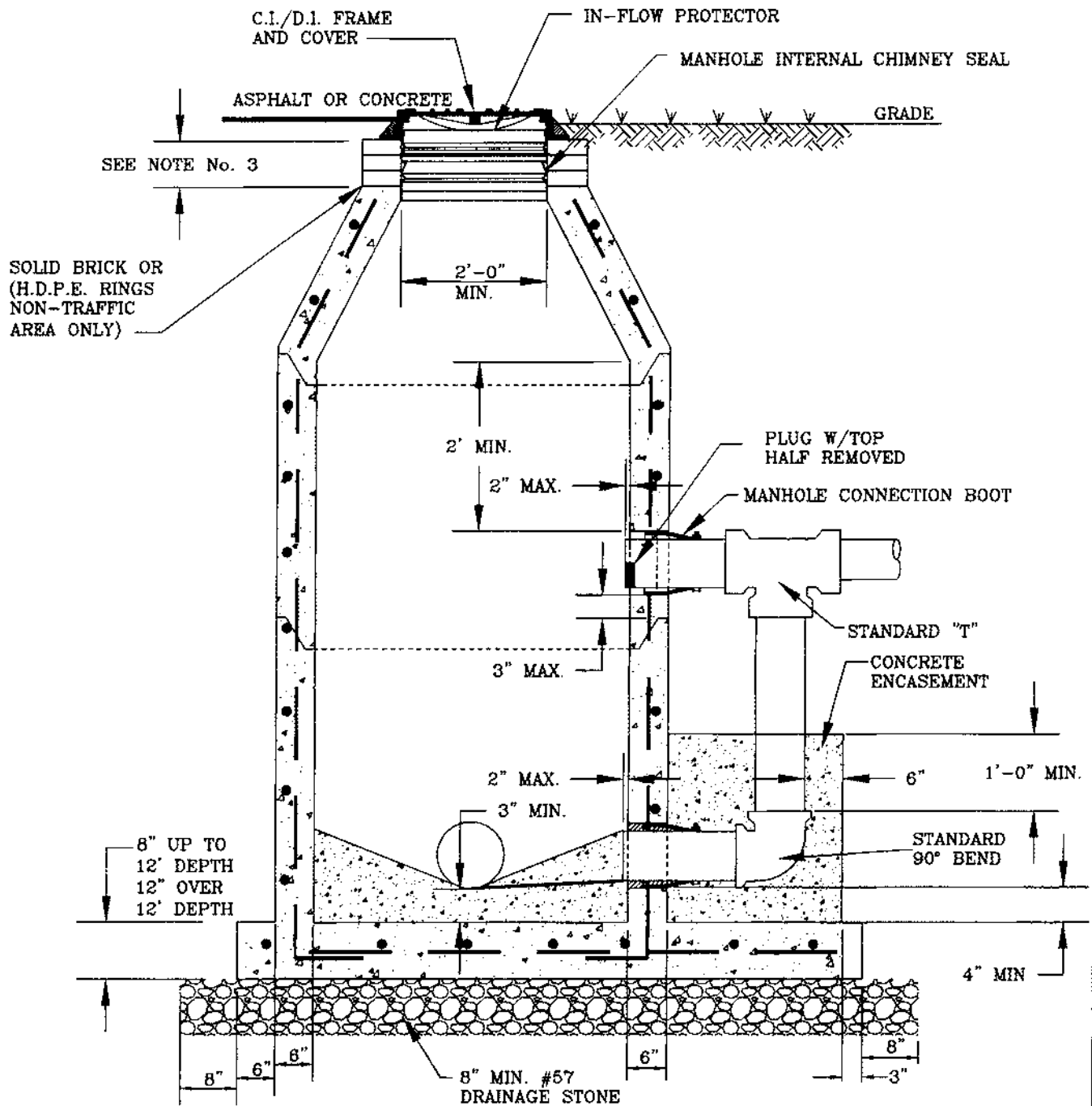
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. REFER TO P.C.U. STANDARD DETAIL ON MANHOLE CONSTRUCTION NOTES.
3. ALL RISER UNITS SHALL HAVE A MINIMUM HEIGHT OF 12" WITH CONCENTRIC CONE SET BETWEEN 2½" AND 14½" BELOW THE BOTTOM OF MANHOLE COVER AND FRAME.



# PINELLAS COUNTY

### OUTSIDE DROP MANHOLE CONNECTION DETAIL

DETAIL INDEX I.D.:

PCU SD 1c

DATE:

FEB/2016

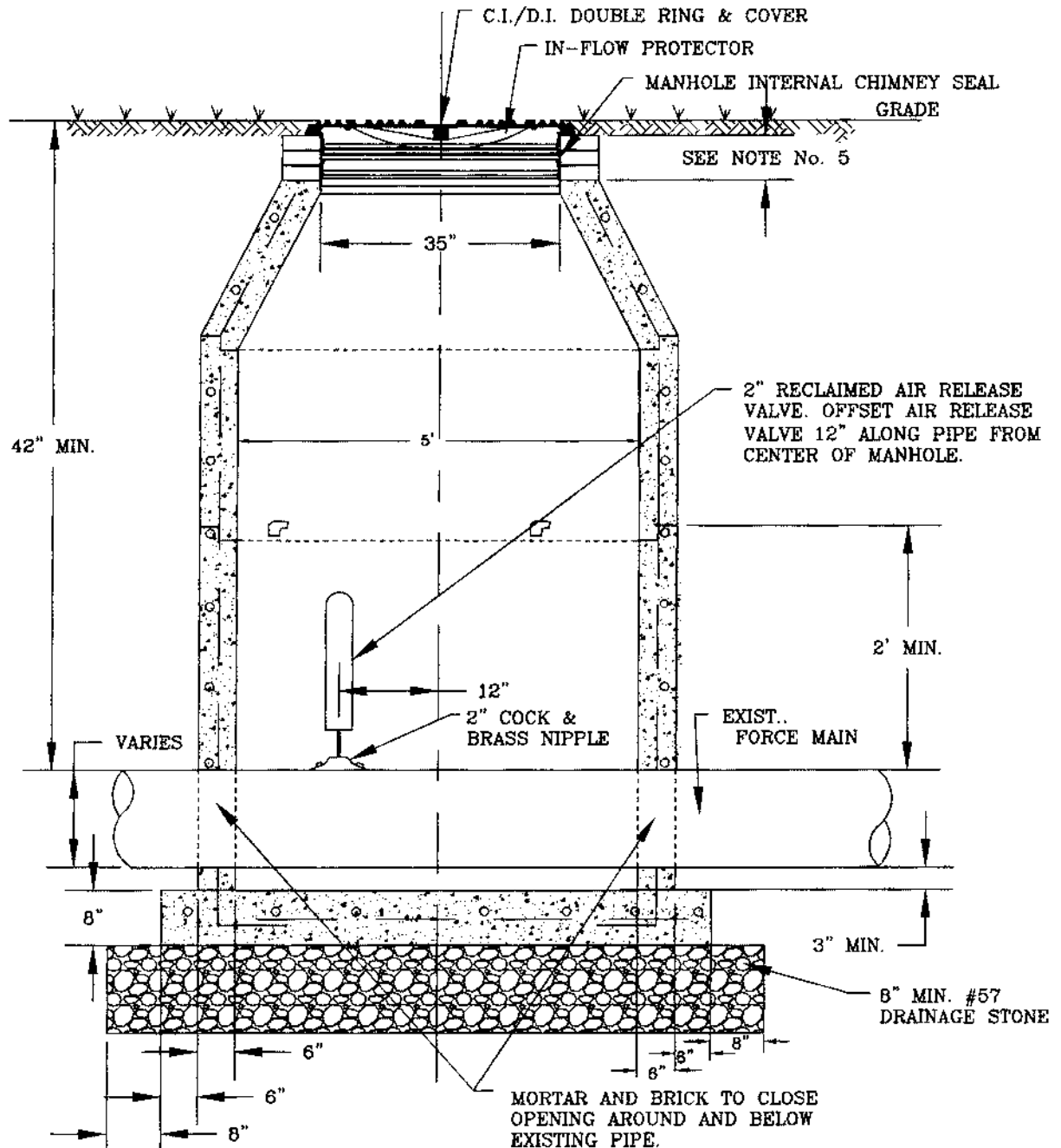
KEVIN BECOTTE, P.E.

REVISION:



NOTES:

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. PRECAST MANHOLES SHALL BE USED AND SHALL BE CONSTRUCTED TO STANDARD MANHOLE SPECIFICATIONS.
3. DOGHOUSE OPENING MAY ONLY BE USED WHEN PLACING A NEW MANHOLE OVER AN EXISTING LINE. OTHERWISE, THE OPENING MUST BE CAST.
4. OPENINGS IN PRECAST UNITS ARE TO BE 4" MINIMUM TO 8" MAXIMUM LARGER THAN THE OUTSIDE DIAMETER OF THE EXISTING PIPE.
5. ALL RISER UNITS SHALL HAVE A MINIMUM HEIGHT OF 12" WITH THE CONCENTRIC CONE SET BETWEEN 2½" AND 14½" BELOW THE BOTTOM OF MANHOLE COVER AND FRAME.



# PINELLAS COUNTY

### DOGHOUSE AIR RELEASE VALVE MANHOLE DETAIL

DETAIL INDEX I.O.:

PCU SD 1d

DATE:

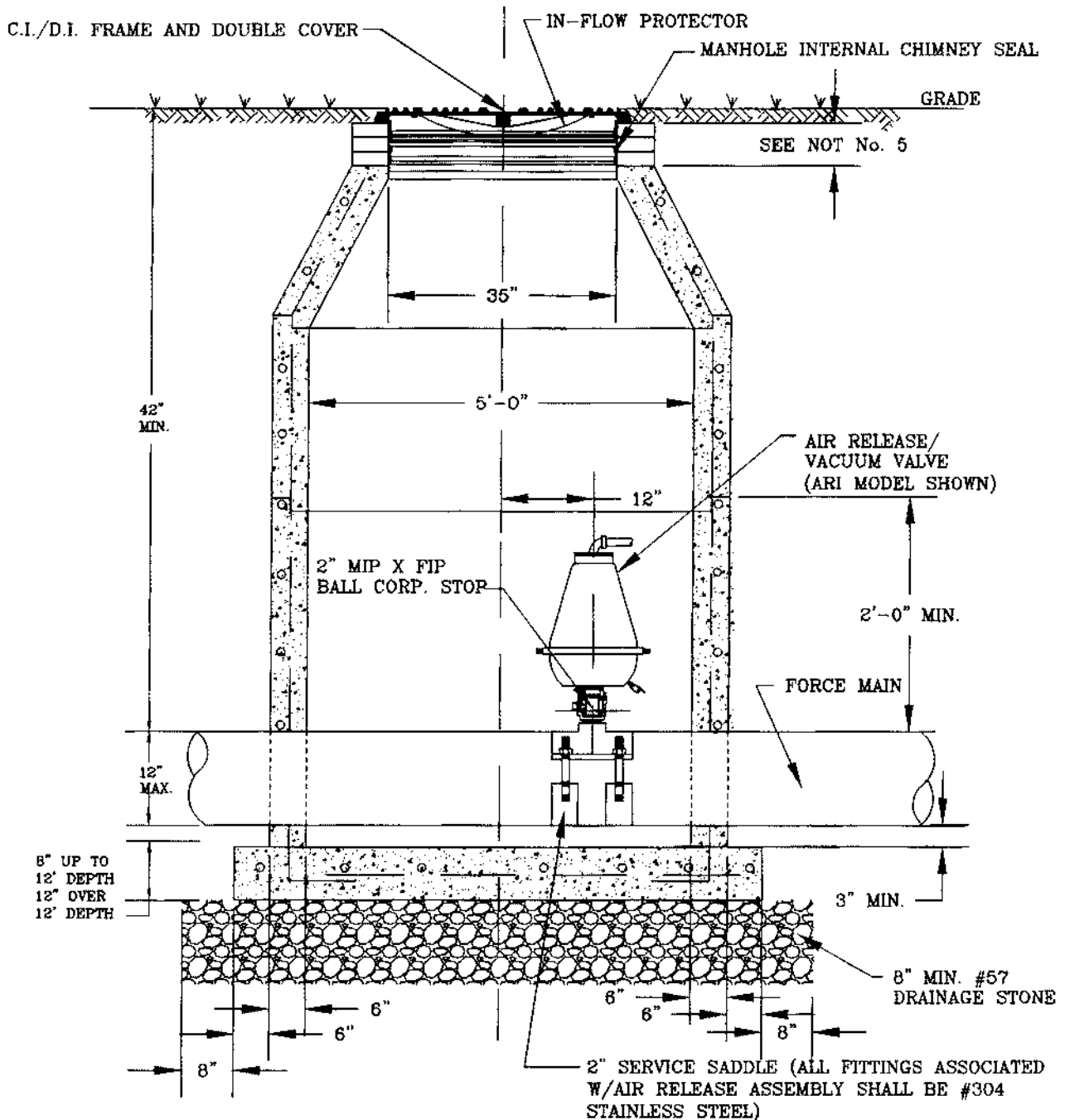
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. REFER TO P.C.U. STANDARD DETAIL ON MANHOLE CONSTRUCTION NOTES.
3. SEWER AIR RELEASE/VACUUM VALVE SHALL BE LOCATED AT THE HIGH ELEVATIONS ON THE FORCE MAIN.
4. LID SHALL INCLUDE HOLE OPENINGS TO ALLOW AIR RELEASE VALVE VENTING/
5. ALL RISER UNITS SHALL HAVE A MINIMUM HEIGHT IF 12" WITH THE CONCENTRIC CONE SET BETWEEN 2½" AND 14½" BELOW THE BOTTOM OF MANHOLE COVER AND FRAME.

**PINELLAS COUNTY**

SEWER AIR RELEASE/AIR VACUUM VALVE  
IN MANHOLE (12" PIPE OR LESS) DETAIL

DETAIL INDEX T.O.:

PCU SD 2

DATE:

FEB/2016

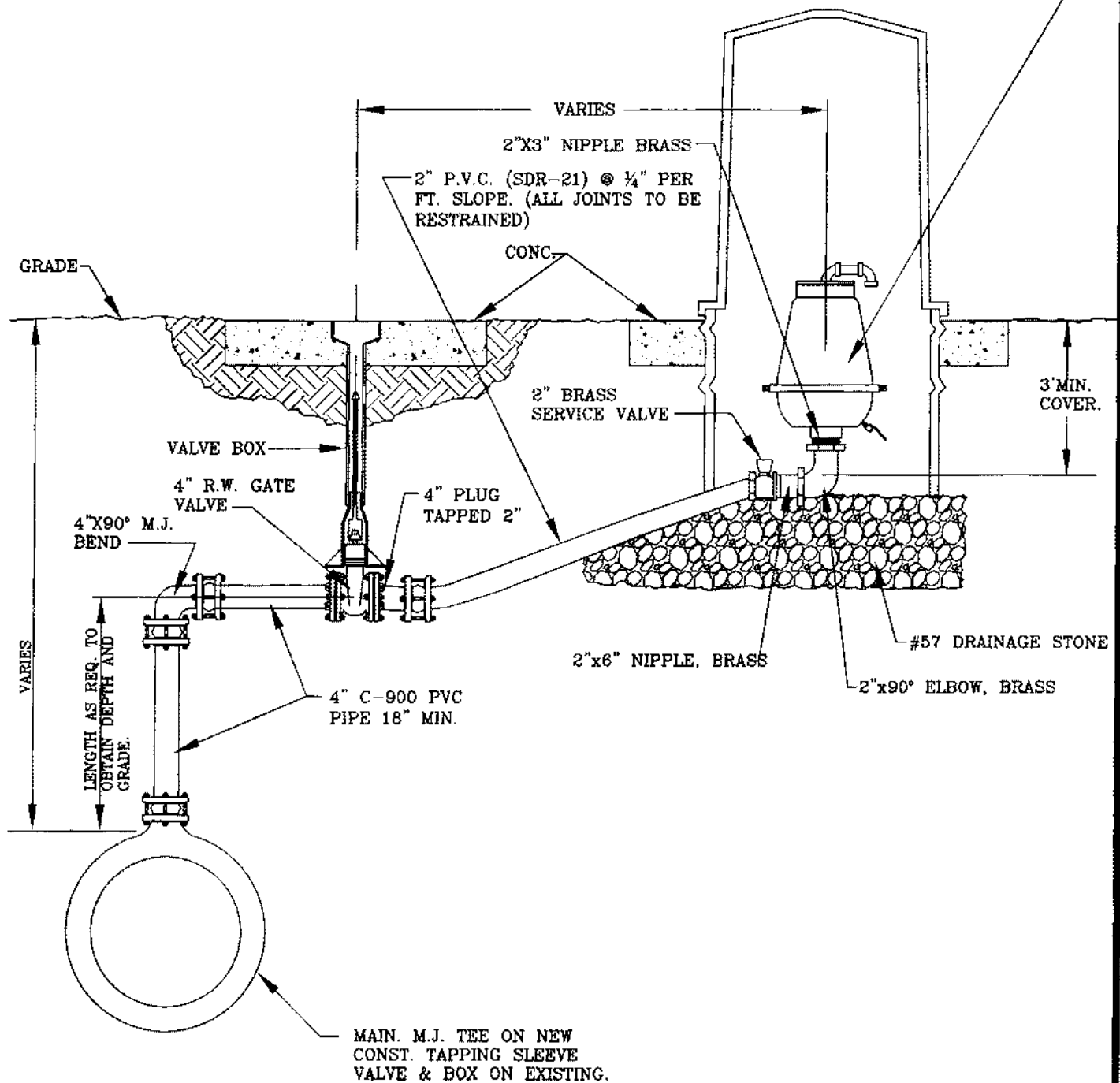
KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. SUPPORT/RESTRAINT MECHANISM FOR AIR RELEASE/AIR VACUUM VALVE SHALL REQUIRE APPROVAL BY COUNTY ENGINEER PRIOR TO INSTALLATION.

AIR RELEASE/AIR VACUUM VALVE  
AS SPECIFIED IN CONSTRUCTION  
PLANS. (A.R.I. MODEL SHOWN)



## PINELLAS COUNTY

OFFSET AIR RELEASE ASSEMBLY  
FOR 4"-12" AND LARGER SANITARY SEWER  
(ABOVE GROUND) DETAIL

DETAIL INDEX I.D.:

PCU SD 3

DATE:

FEB/2016

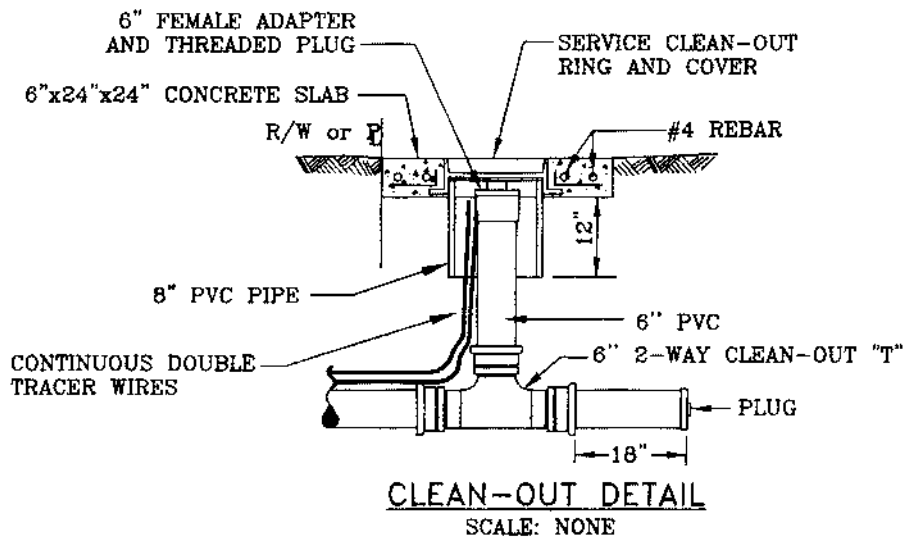
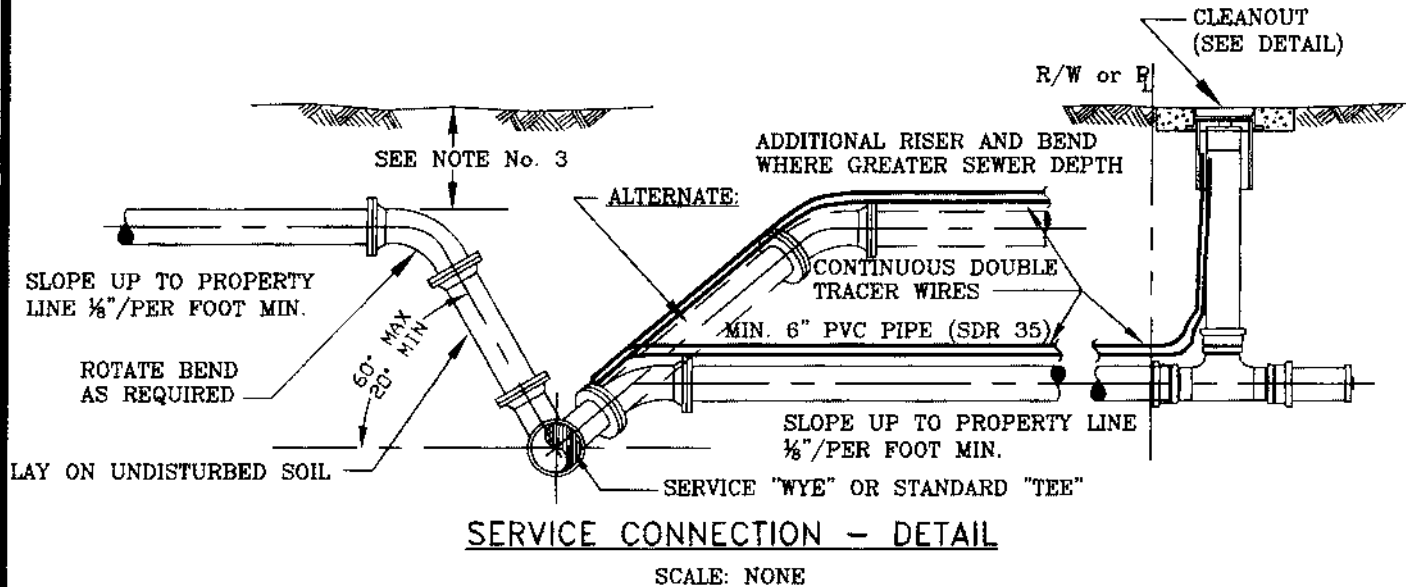
KEVIN BECOTTE, P.E.

REVISION:



**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. SERVICE CONNECTIONS MAY NOT HAVE BEEN SHOWN ON PLAN/PROFILE SHEETS. SERVICE CONNECTION LOCATIONS SHALL BE DETERMINED IN THE FIELD AND CONNECTIONS CONSTRUCTED ACCORDANCE WITH P.C.U. APPROVED TECHNICAL SPECIFICATIONS, MATERIALS MANUAL & THESE DETAILS. FOR NEW DEVELOPMENT, THE SERVICE CONNECTION SHALL BE CONSTRUCTED IN THE CENTER OF THE LOT.
3. MINIMUM DEPTH UNDER ROADWAY 42" MINIMUM DEPTH AT PROPERTY LINE 36" (OR AS REQUIRED FOR SERVICE).
4. SERVICE LINES SHALL BE A MIN. OF 6" TO ALL RESIDENCES.
5. NO DOUBLE WYE UNITS SHALL BE PERMITTED ON SERVICE LINE. ALL RESIDENCES SHALL BE SERVED BY A SINGLE SERVICE.
6. RISERS SHALL BE INSTALLED ON ALL WYES (BOTH PRESENT & FUTURE SERVICES).
7. RISERS SHALL PREFERABLY FOLLOW SLOPE OF BANK TO REQUIRED DEPTH.
8. THE TRACER WIRE SHALL START AT THE CLEAN-OUT AND RUN ALONG THE SEWER SERVICE TO THE MAIN AND BACK TO THE CLEAN-OUT AS ONE CONTINUOUS WIRE.

**PINELLAS COUNTY****SEWER SERVICE CONNECTION  
AND CLEAN-OUT DETAIL**

DETAIL INDEX I.D.:

PCU SD 4

DATE:

FEB/2016

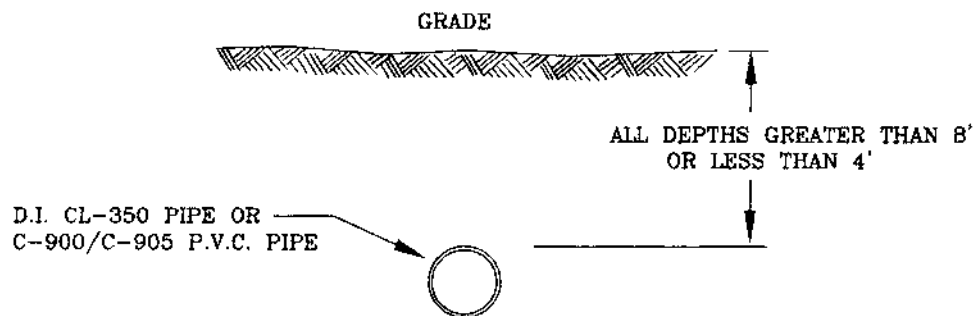
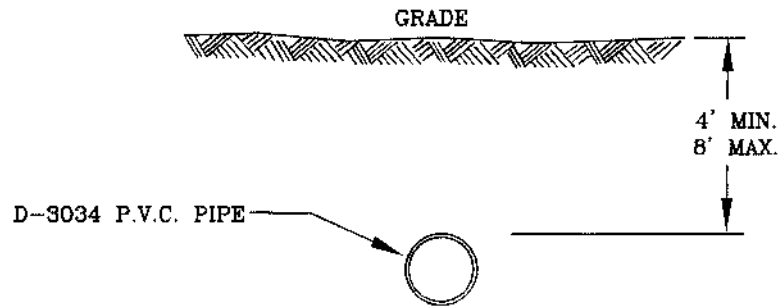
KEVIN BECOTTE, P.E.

REVISION:

*Kevin Becotte*

**NOTE:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.



# **PINELLAS COUNTY**

## DEPTH LIMITATIONS OF SANITARY SEWER PIPE DETAIL

DETAIL INDEX I.D.:

PCU SD 5

DATE:

FEB/2016

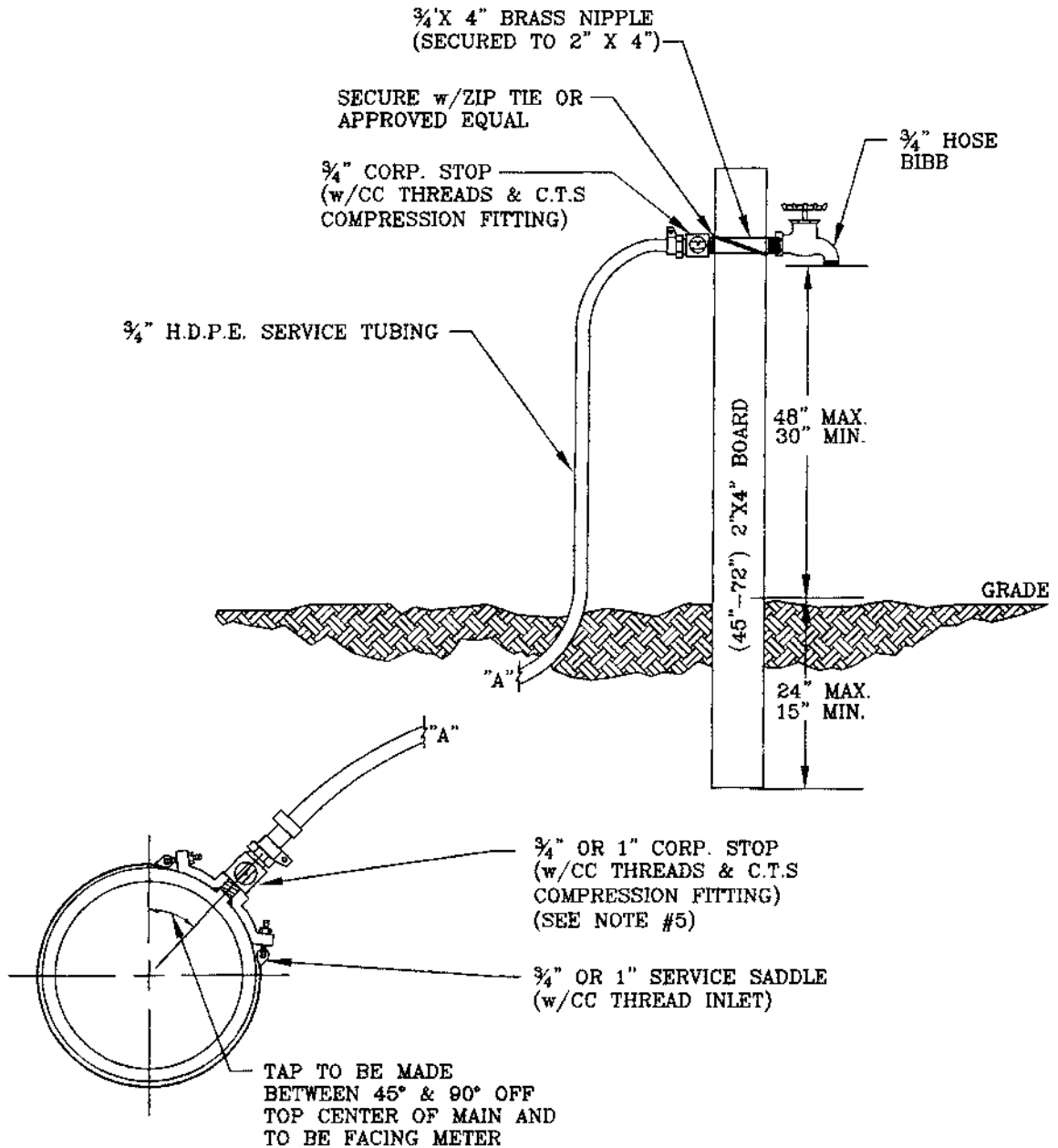
KEVIN BECOTTE, P.E.

REVISION:

*Kevin Becotte*

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. LOCATION OF SAMPLE POINT BIBB SHALL NOT BE WITHIN LIMITS OF ROADWAY BUT ROUTED TO ROADWAY SHOULDER (NON-TRAFFIC AREA)
3. CONTRACTOR SHALL UTILIZE SERVICE LINE CONNECTIONS, WHERE POSSIBLE.
4. WHEN UTILIZING TEMPORARY SAMPLE POINT AS A SERVICE CONNECTION, THEN A TRACER WIRE IS REQUIRED.
5. SAMPLE POINTS TO BE ABANDONED AFTER USE SHALL BE FITTED WITH A  $\frac{3}{4}$ " CC x F.I.P. CORP. STOP.
6. REMOVE ALL PIPE AND ABOVE GROUND FITTINGS AND PLUG CORP. STOP WITH  $\frac{3}{4}$ " PLUG.



**PINELLAS COUNTY**

TEMPORARY SAMPLING POINT  
DETAIL

DETAIL INDEX I.D.:

PCU WD 1

DATE:

FEB/2016

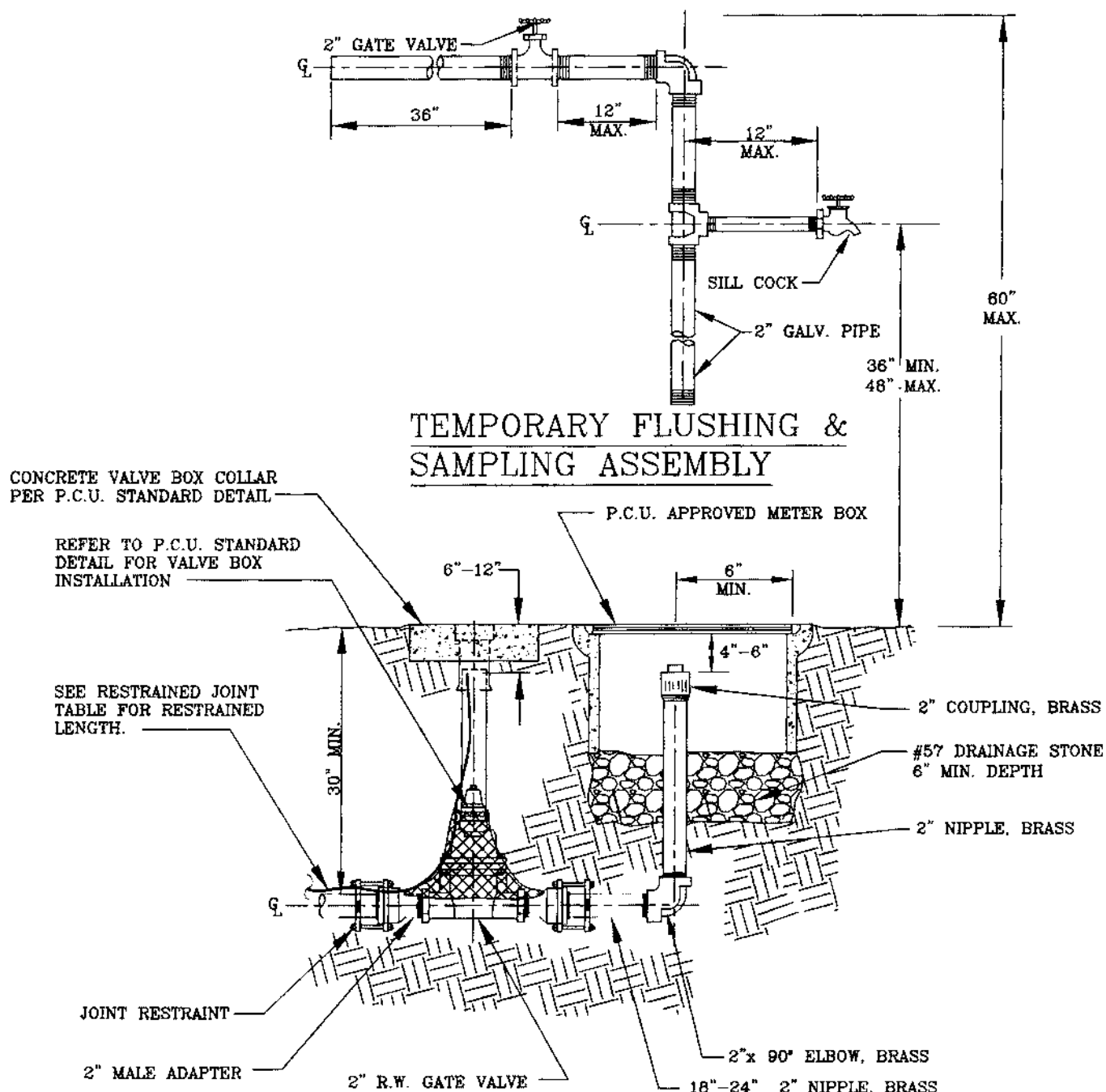
KEVIN BECOTTE, P.E.

REVISION:



**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. A VALVE KEY EXTENSION SHALL BE REQUIRED ON VALVES WITH OPERATOR NUT OVER 3' DEEP.
3. INSTALL AND REMOVE TEMP. FLUSHING AND SAMPLING ASSEMBLY AT 2" COUPLING.
4. INSTALL 2" BRASS PLUG UPON CLEARANCE OF THE P.C. HEALTH DEPARTMENT.
5. RESTRAIN 2" PIPE UP TO VALVE

**PINELLAS COUNTY**

2" PERMANENT WATER BLOW-OFF  
DETAIL

DETAIL INDEX I.D.:

PCU WD 2

DATE:

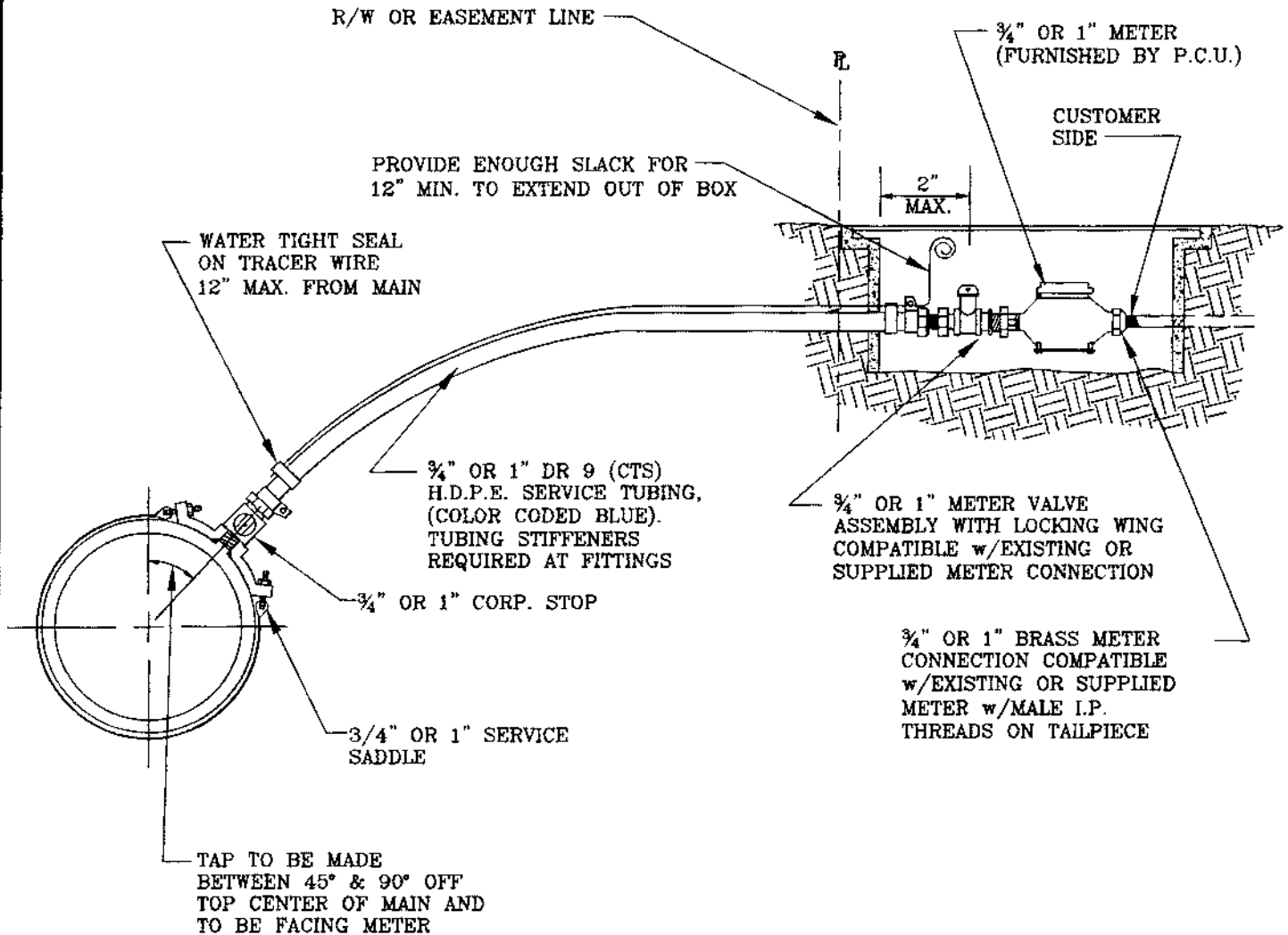
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. CORPORATION STOPS SHALL BE COMPATIBLE WITH DR 9 (C.T.S.) H.D.P.E. TUBING.
3. SERVICE SADDLE REQUIRED FOR ALL TAPS EXCEPT FOR D.I.P. 1" TAPS AND SMALLER.
4. METER ONLY TO BE FURNISHED BY P.C.U.
5. METER BOXES SHALL BE RESIDENTIAL SIZE.
6. ALL METER BOXES LOCATED WITHIN VEHICULAR TRAVEL AREAS SHALL BE H-20 LOADING. ALL OTHERS SHALL BE H-10 LOADING.
7. TRACER WIRE REQUIRED ON ALL SERVICES.
8. SERVICES OVER 60' IN LENGTH SHALL BE UP-SIZED TO 1".
9. TAP AND METER SHALL BE INSTALLED BY P.C.U. ON ALL PRIVATELY DEVELOPED PROJECTS.
10. METERS WITH DUAL CHECKS SHALL UTILIZE A METER BOX WITH OFFSET MOUSE HOLES.

**PINELLAS COUNTY**
**3/4" OR 1" POTABLE WATER SERVICE CONNECTION  
DETAIL**

DETAIL INDEX I.D.:

PCU WD 3

DATE:

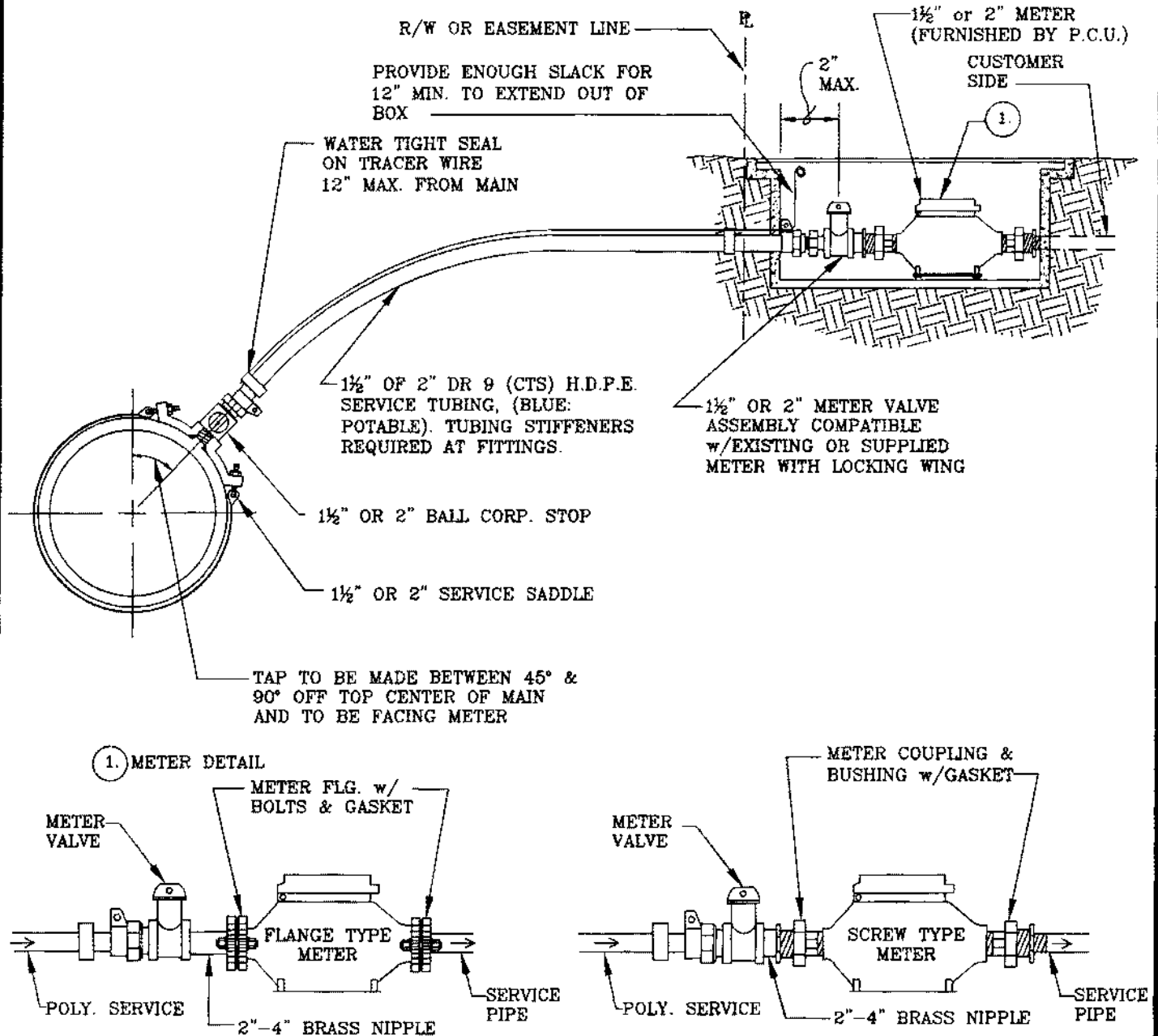
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. CORPORATION STOPS SHALL BE COMPATIBLE WITH DR 9 (C.T.S.) H.D.P.E. TUBING.
3. SERVICE SADDLE REQUIRED FOR ALL TAPS.
4. METER ONLY, TO BE FURNISHED BY P.C.U.
5. METER BOXES SHALL BE INDUSTRIAL SIZE.
6. ALL METER BOXES LOCATED WITHIN VEHICULAR TRAVEL AREAS SHALL BE H-20 LOADING. ALL OTHERS SHALL BE H-10 LOADING.
7. TRACER WIRE REQUIRED ON ALL SERVICES.
8. SERVICES OVER 60' IN LENGTH SHALL BE UP-SIZED TO 2".
9. TAP AND METER SHALL BE INSTALLED BY P.C.U. ON ALL PRIVATELY DEVELOPED PROJECTS.

**PINELLAS COUNTY****1/2" OR 2" POTABLE WATER SERVICE CONNECTION  
DETAIL**

DETAIL INDEX I.D.:

PCU WD 4

DATE:

FEB/2016

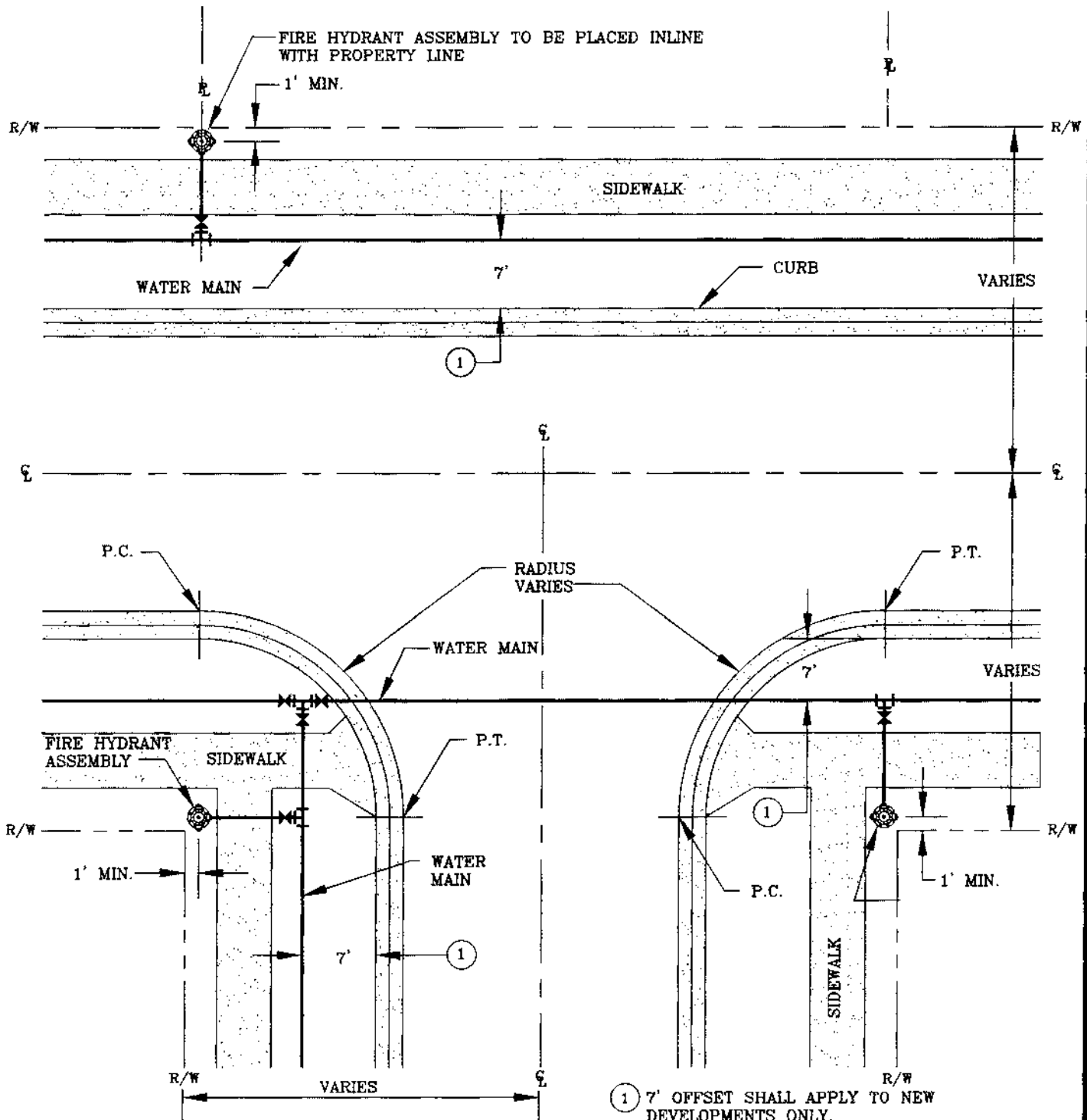
KEVIN BECOTTE, P.E.

REVISION:



**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. MATERIAL SPECIFICATION MANUAL.
2. HYDRANTS TO BE SET PARALLEL TO CURVE AT P.T. OR P.C. 1' MIN. FROM R/W LINE.

**PINELLAS COUNTY**
**TYPICAL FIRE HYDRANT LOCATIONS  
DETAIL**

DETAIL INDEX I.D.:

PCU WD 5

DATE:

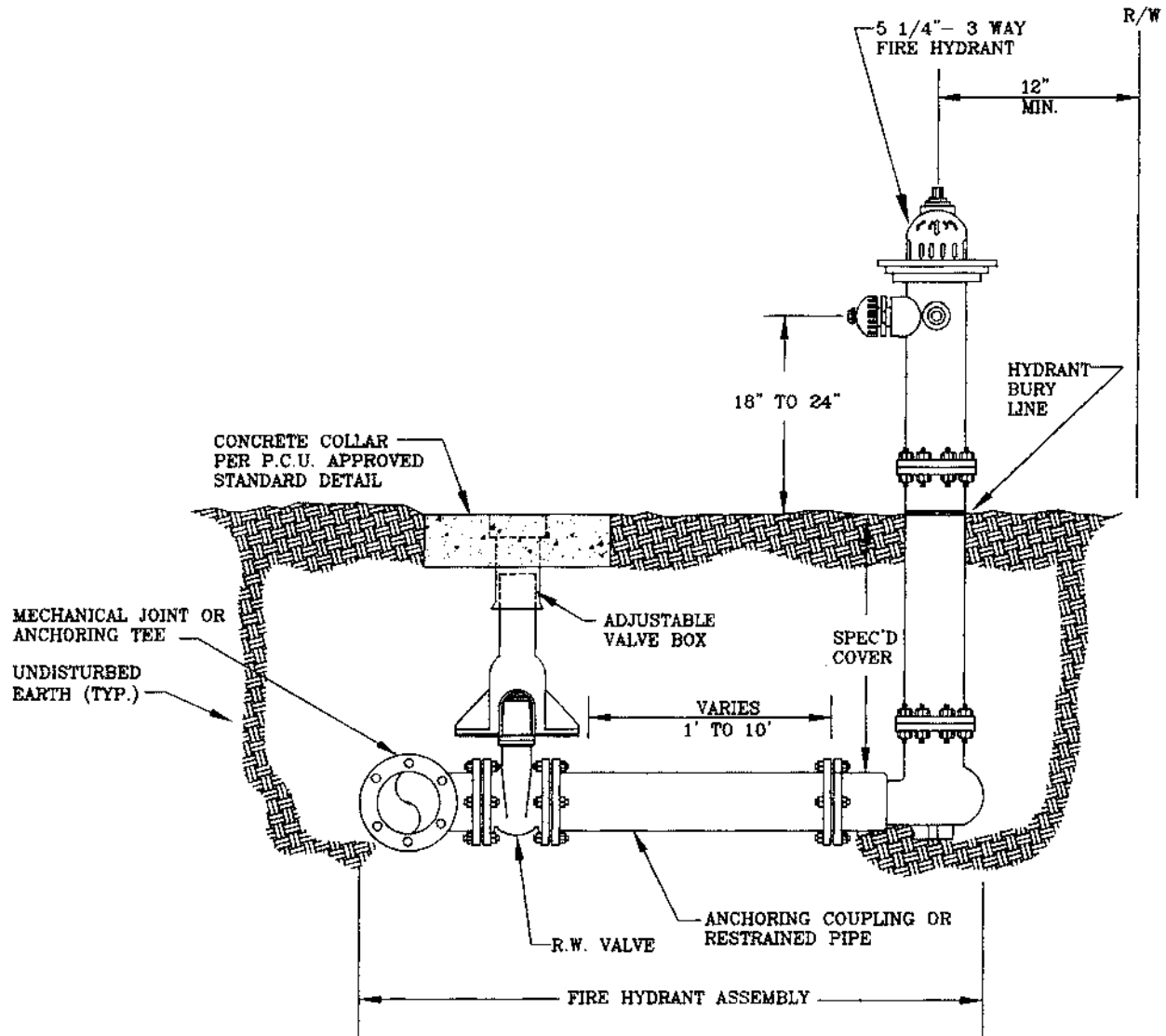
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. ALL BOLTED FITTINGS SHALL BE POLYETHYLENE WRAPPED, COLOR CODED PER SERVICE.
3. VALVE BOX(ES) SHALL HAVE A CONCRETE COLLAR PER P.C.U. APPROVED STANDARD DETAIL.
4. IF FIRE HYDRANT IS INSTALLED WITHIN AN OFF-STREET VEHICULAR AREA, AND IS LOCATED WITHIN 10 FT. OR LESS OF A VEHICULAR USE AREA, GUARD POSTS (BOLLARDS) SHALL BE INSTALLED PER P.C.U. APPROVED STANDARD DETAIL UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PINELLAS COUNTY UTILITIES ENGINEERING OR THEIR AUTHORIZED REPRESENTATIVE.
5. IF DISTANCE BETWEEN VALVE AND HYDRANT IS 10 FT. OR GREATER, AN ADDITIONAL VALVE SHALL BE INSTALLED FOR CONTROL OF HYDRANT UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PINELLAS COUNTY UTILITIES ENGINEERING OR THEIR AUTHORIZED REPRESENTATIVE.
6. HYDRANT SHALL BE INSTALLED PLUMB.
7. HYDRANT SHALL BE PAINTED UPON INSTALLATION PER P.C.U. APPROVED MATERIAL SPECIFICATIONS.
8. ALL CHAINS SHALL BE REMOVED AFTER INSTALLATION.



**PINELLAS COUNTY**

**FIRE HYDRANT ASSEMBLY  
DETAIL**

DETAIL INDEX I.D.:

PCU WD 6

DATE:

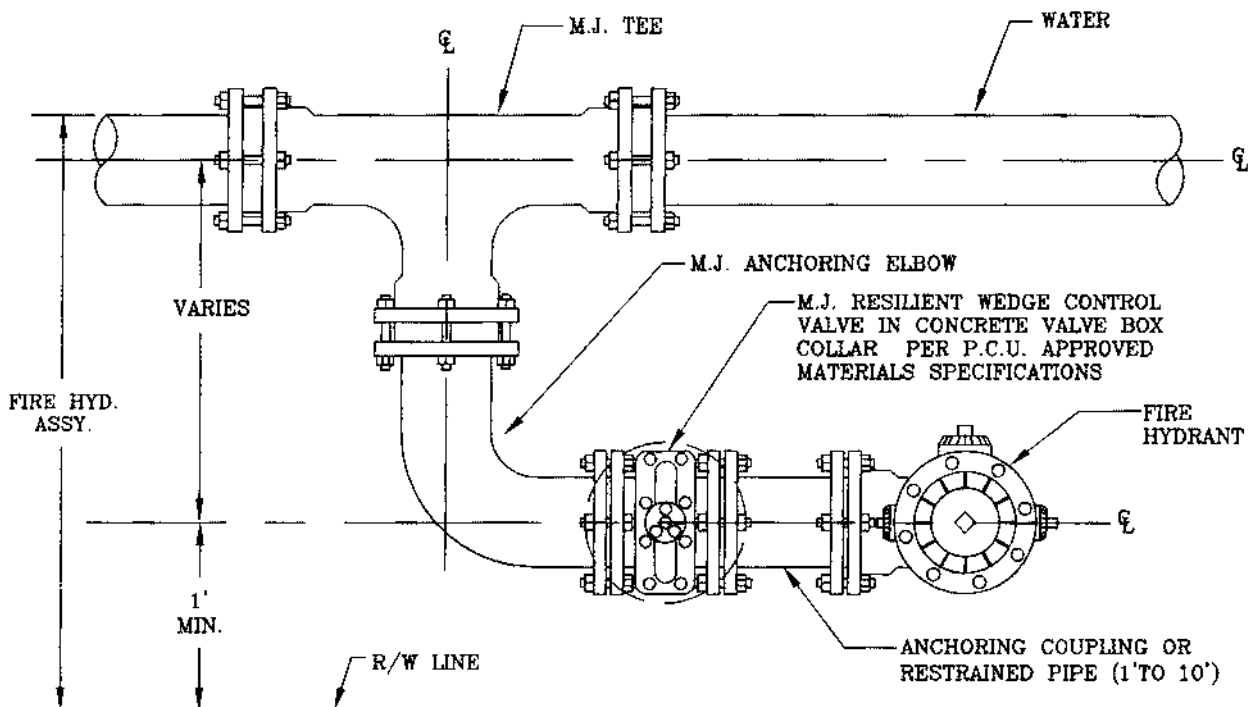
FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. ALL BOLTED FITTINGS SHALL BE POLYETHYLENE WRAPPED, COLOR CODED PER SERVICE.
3. VALVE BOX(ES) SHALL HAVE A CONCRETE COLLAR PER P.C.U. APPROVED STANDARD DETAIL.
4. HYDRANT SHALL BE INSTALLED PLUMB.
5. HYDRANT SHALL BE PAINTED AFTER INSTALLATION PER P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
6. TEE MAY BE ROTATED TO OBTAIN PROPER BURY ON FIRE HYDRANT.
7. ANCHORING ELBOW MAY BE SWITCHED (LONG vs. SHORT END) AND ROTATED TO SET FIRE HYDRANT IN OPPOSITE DIRECTION.
8. ANCHORING COUPLINGS MAY BE REPLACED WITH RESTRAINED PIPE.
9. ALL CHAINS SHALL BE REMOVED AFTER INSTALLATION.
10. IF FIRE HYDRANT IS INSTALLED WITHIN AN OFF-STREET VEHICULAR AREA, AND IS LOCATED WITHIN 10 FT. OR LESS OF A VEHICULAR USE AREA, GUARD POSTS (BOLLARDS) SHALL BE INSTALLED PER P.C.U. APPROVED STANDARD DETAIL UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF P.C.U. ENGINEERING OR THEIR REPRESENTATIVE.



# PINELLAS COUNTY

## PARALLEL FIRE HYDRANT DETAIL

DETAIL INDEX I.D.:

PCU WD 7

DATE:

FEB/2016

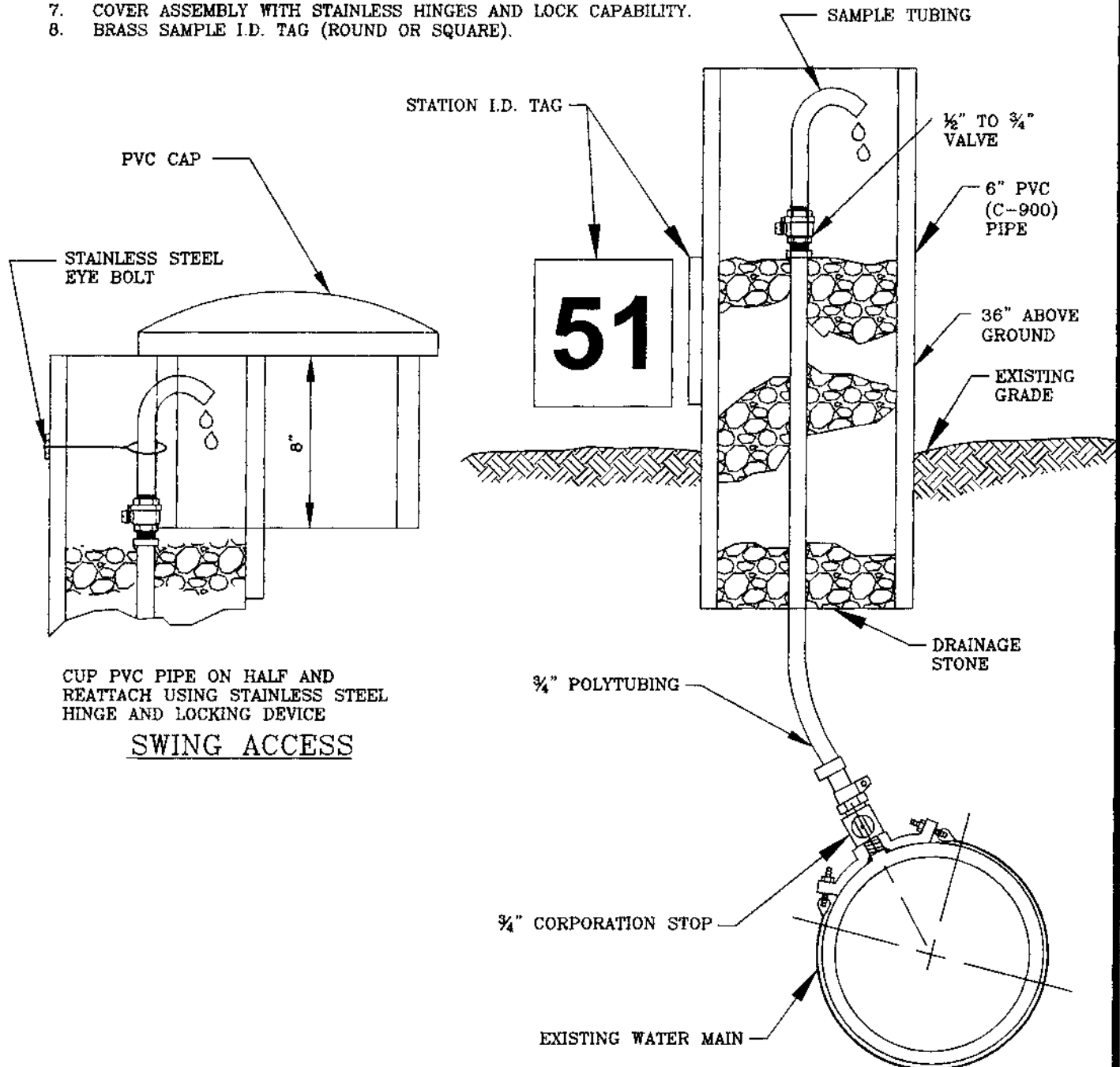
KEVIN BECOTTE, P.E.

REVISION:



**NOTE:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH P.C.U. APPROVED MATERIALS SPECIFICATION MANUAL.
2.  $\frac{3}{4}$ "x2"x8" TAPPING SADDLE AND  $\frac{3}{4}$ " CORPORATION VALVE INSTALLED AT 22 $\frac{1}{2}$ ".
3. ATTACH  $\frac{3}{4}$ " POLY VINYL TUBING.
4. PEA GRAVEL FOR STABILITY AND EYEBOLT FOR TUBING.
5.  $\frac{3}{4}$ " TO  $\frac{1}{2}$ " COMPRESSION VALVE CAPABLE TO CONNECT WITH TUBING.
6.  $\frac{1}{2}$ " STAINLESS STEEL GOOSE NECK FOR SAMPLING.
7. COVER ASSEMBLY WITH STAINLESS HINGES AND LOCK CAPABILITY.
8. BRASS SAMPLE I.D. TAG (ROUND OR SQUARE).



**PINELLAS COUNTY**

WATER QUALITY  
SAMPLING STATION DETAIL

DETAIL INDEX I.D.:

PCU WD 8

DATE:

FEB/2016

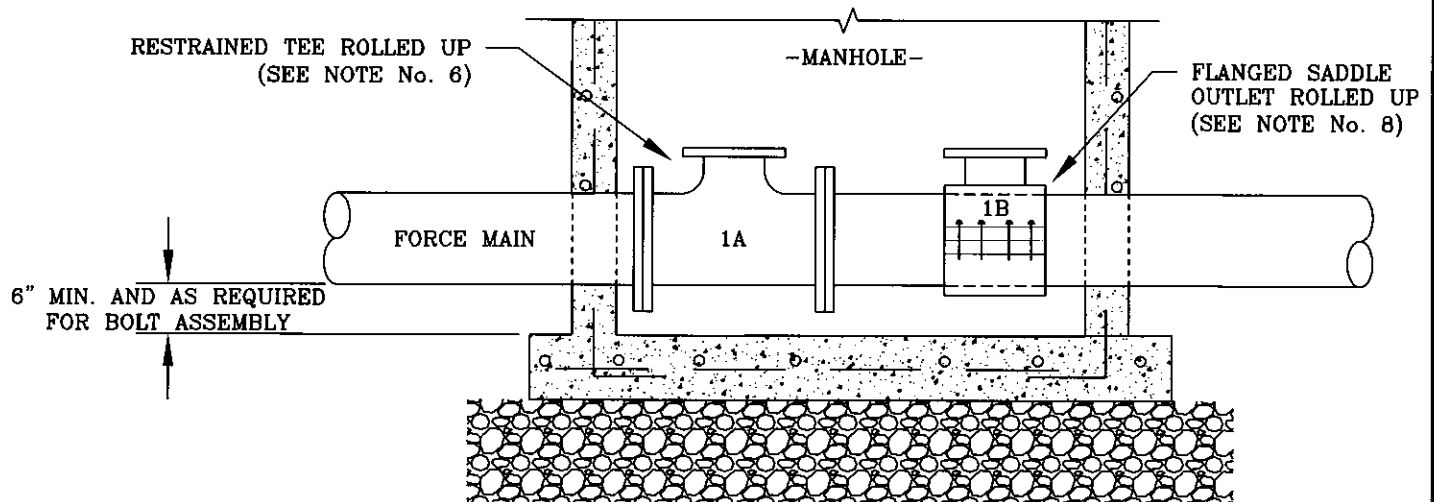
KEVIN BECOTTE, P.E.

REVISION:

AIR RELEASE VALVE CONFIGURATION DETAIL TABLE									
	ITEM NUMBER	NEW TEE	CLAMP-ON TEE	OFFSET	ON PIPE	VENTED TO NEAREST SANITARY	VENTED TO ODOR CONTROL	UNVENTED	
DETAIL	MAIN CONNECTION	1	A	B					
	LOCATION	2			A	B			
	ABOVE GRADE ARV	3				A	B	C	
	BELOW GRADE ARV	4				A	B	C	

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. REFER TO P.C.U. STANDARD DETAIL ON MANHOLE CONSTRUCTION NOTES.
3. SEWER AIR RELEASE/VACUUM VALVE SHALL BE LOCATED AT THE HIGH ELEVATIONS ON THE FORCE MAIN.
4. LID SHALL INCLUDE HOLE OPENINGS TO ALLOW AIR RELEASE VALVE VENTING.
5. ALL RISER UNITS SHALL HAVE A MINIMUM HEIGHT OF 12" WITH THE CONCENTRIC CONE SET BETWEEN 2½" AND 14½" BELOW THE BOTTOM OF MANHOLE COVER AND FRAME.
6. SIZE TEE DOWN ONE NOMINAL DIAMETER LESS THAN FORCE MAIN (E.G. 12"x10").
7. SIZE MANHOLE DIAMETER TO ACCOMMODATE VALVE EQUIPMENT AND OPERATION/MAINTENANCE.
8. SIZE TAPPING SADDLE OUTLET AT LEAST ONE-HALF DIAMETER OF FORCE MAIN.

**PINELLAS COUNTY**

SEWER AIR RELEASE/AIR VACUUM VALVE  
MATRIX AND MAIN CONNECTION DETAIL

DETAIL INDEX I.D.:

PCU ARV 1A, 1B

DATE:

JUL / 2018

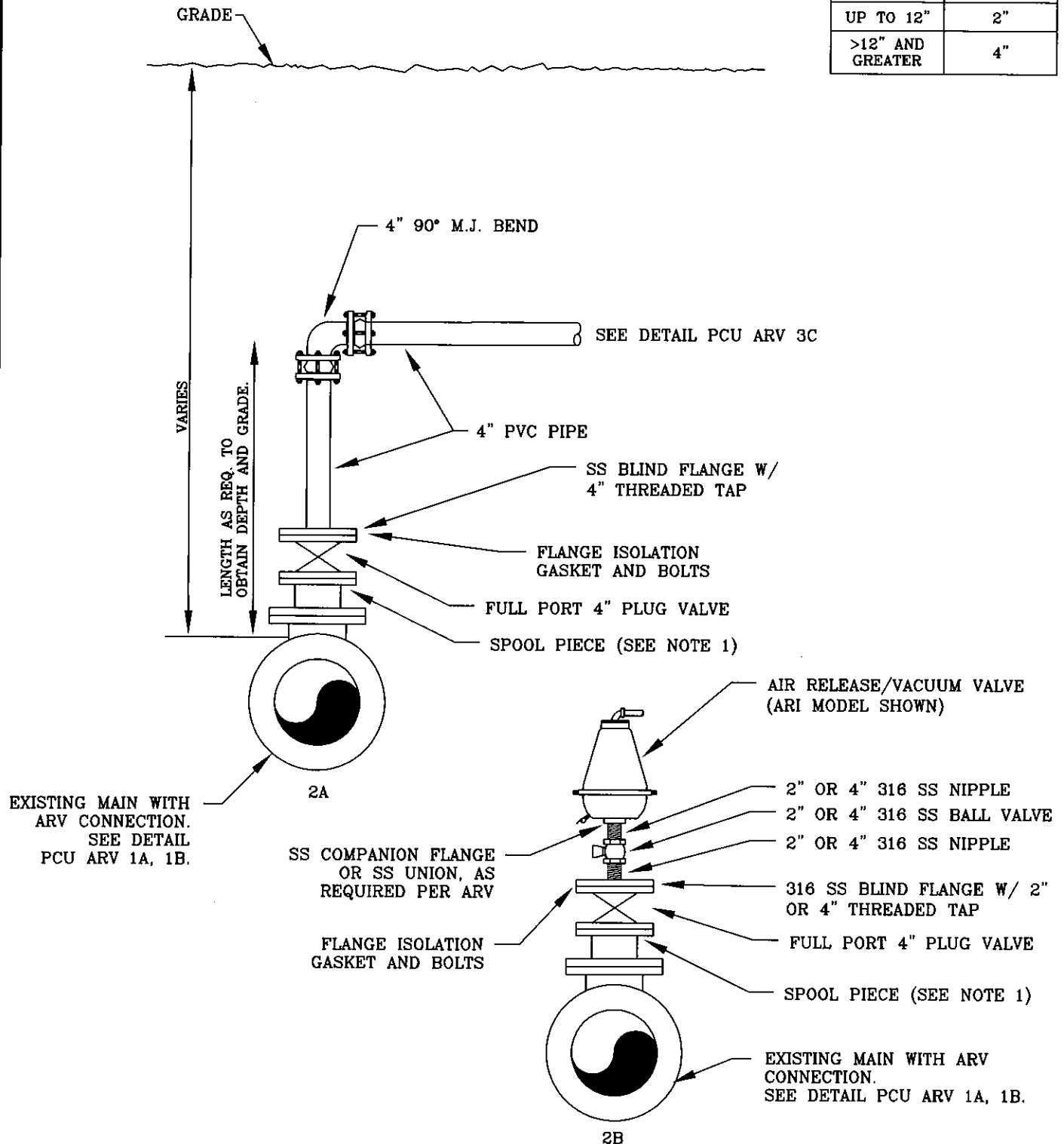
KEVIN BECOTTE, P.E.

REVISION:

**NOTES:**

1. DEPENDING ON PIPE SIZE, SPOOL PIECE CAN BE STANDARD, CUSTOM FABRICATED, OR THREADED FLANGE JOINED TO THREADED FLANGED COUPLING ADAPTER, E.G., 4" X 24" SPOOL PIECE.

ARV SIZE TABLE	
PIPE DIAMETER	ARV INLET SIZE
UP TO 12"	2"
>12" AND GREATER	4"

**PINELLAS COUNTY****SEWER AIR RELEASE/AIR VACUUM VALVE  
LOCATION DETAIL**

DETAIL INDEX I.D.:

**PCU ARV 2A, 2B**

DATE:

**JUL/2018**

KEVIN BECOTTE, P.E.

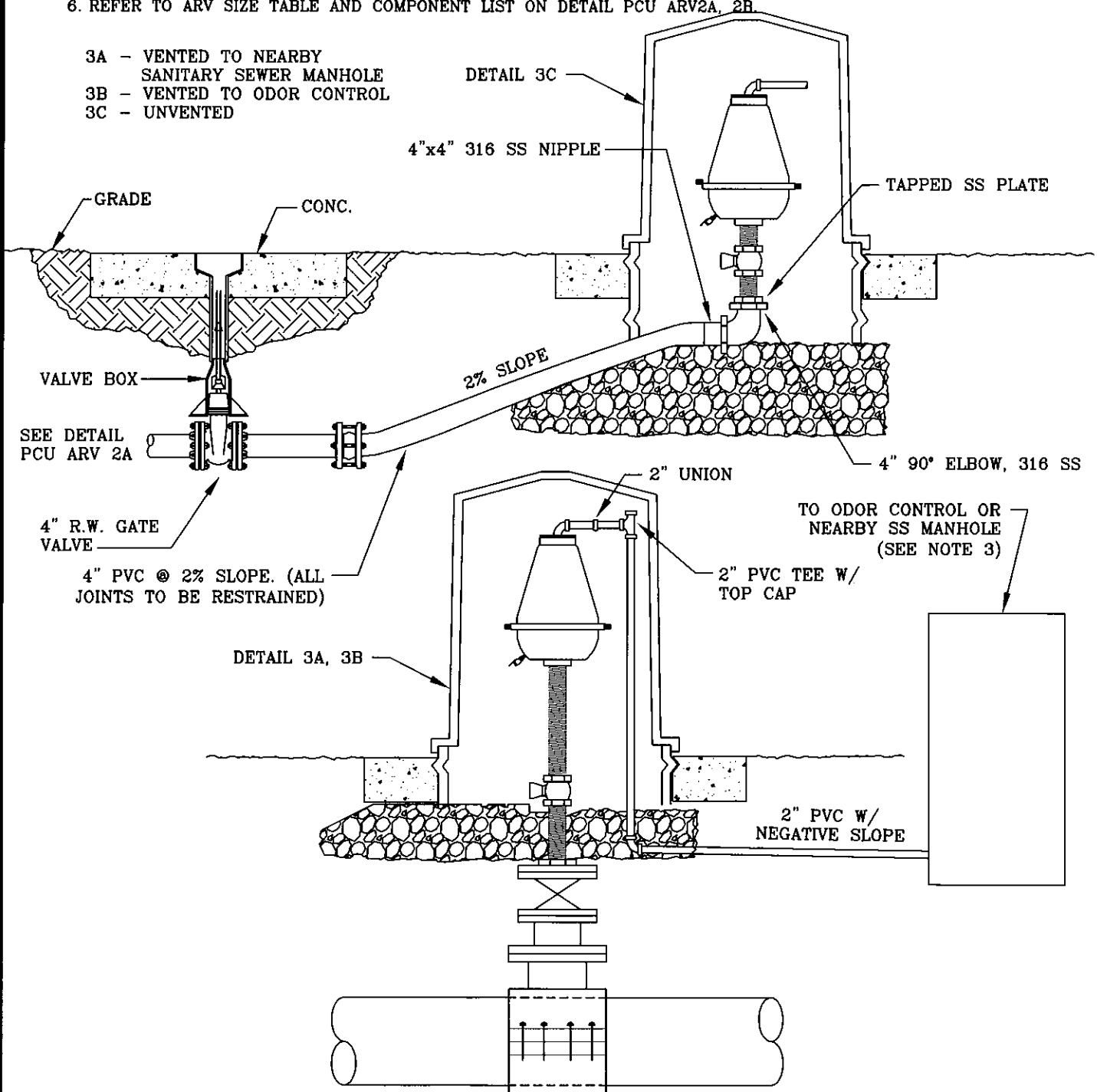
REVISION:



**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. SUPPORT/RESTRAINT MECHANISM FOR AIR RELEASE/AIR VACUUM VALVE SHALL REQUIRE APPROVAL BY COUNTY ENGINEER PRIOR TO INSTALLATION.
3. VENTING TO NEARBY SANITARY MANHOLE IS AT OWNER'S DISCRETION.
4. REFER TO ARV CONFIGURATION DETAIL TABLE ON DETAIL PCU ARV 1A, 1B.
5. IF USING DETAIL 3B, CONTRACTOR TO PROPOSE MEANS TO PENETRATE AND SEAL MANHOLE PENETRATION(S). REFER TO PINELLAS COUNTY STANDARD TECHNICAL SPECIFICATION (PC-STSS) GRAVITY SEWERS 33 33 01, SECTION 3.07 JOINING PIPE TO MANHOLES OR OTHER STRUCTURES.
6. REFER TO ARV SIZE TABLE AND COMPONENT LIST ON DETAIL PCU ARV2A, 2B.

- 3A - VENTED TO NEARBY  
SANITARY SEWER MANHOLE  
3B - VENTED TO ODOR CONTROL  
3C - UNVENTED



## PINELLAS COUNTY

### ABOVE GRADE SEWER AIR RELEASE ASSEMBLY DETAIL

DETAIL INDEX I.D.:

PCU ARV 3A, 3B, 3C

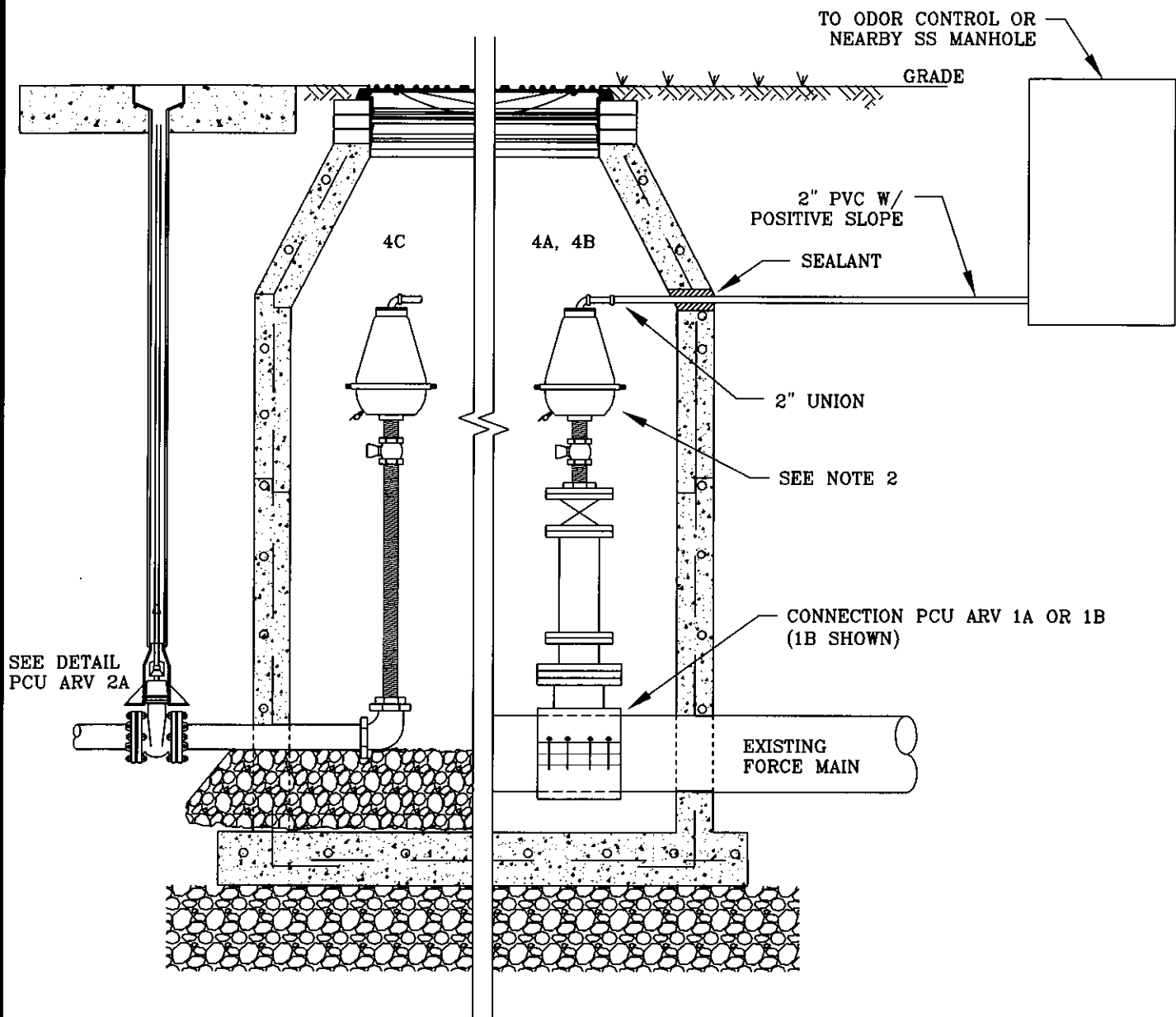
DATE:

JUL / 2018

KEVIN BECOTTE, P.E.

REVISION:

- 4A - VENTED TO NEARBY  
SANITARY SEWER MANHOLE  
4B - VENTED TO ODOR CONTROL  
4C - UNVENTED



**NOTES:**

1. REFER TO ARV CONFIGURATION DETAIL TABLE ON DETAIL PCU ARV 1A, 1B.
2. REFER TO ARV SIZE TABLE AND COMPONENT LIST ON DETAIL PCU ARV 2A, 2B.
3. IF USING DETAIL 4B, CONTRACTOR TO PROPOSE MEANS TO PENETRATE AND SEAL MANHOLE PENETRATION(S). REFER TO PINELLAS COUNTY STANDARD TECHNICAL SPECIFICATION (PC-ST) GRAVITY SEWERS 33 33 01, SECTION 3.07 JOINING PIPE TO MANHOLES OR OTHER STRUCTURES.

**PINELLAS COUNTY**

SEWER AIR RELEASE/AIR VACUUM VALVE  
VENTED/ODOR CONTROLLED DETAIL

DETAIL INDEX I.D.:

PCU ARV 4A, 4B, 4C

DATE:

JUL / 2018

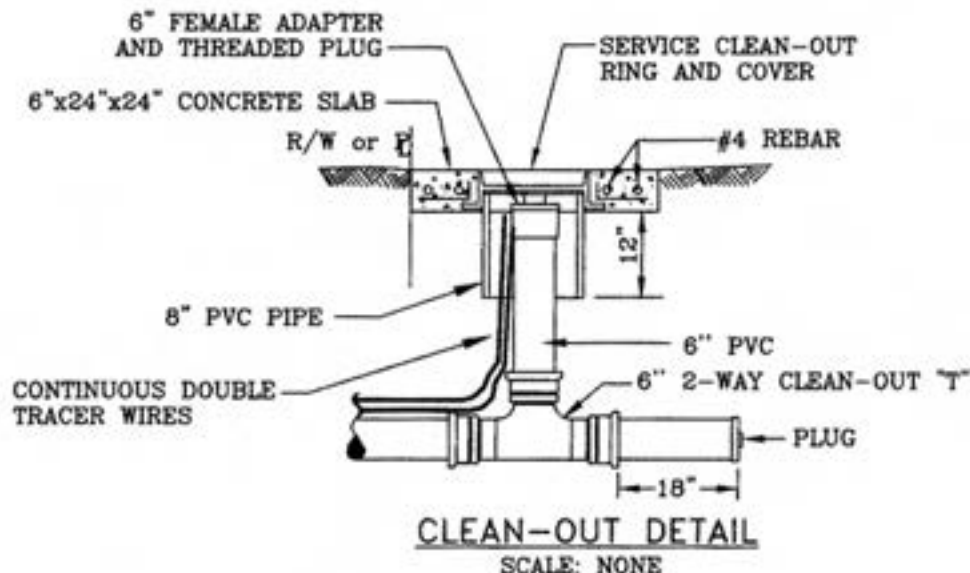
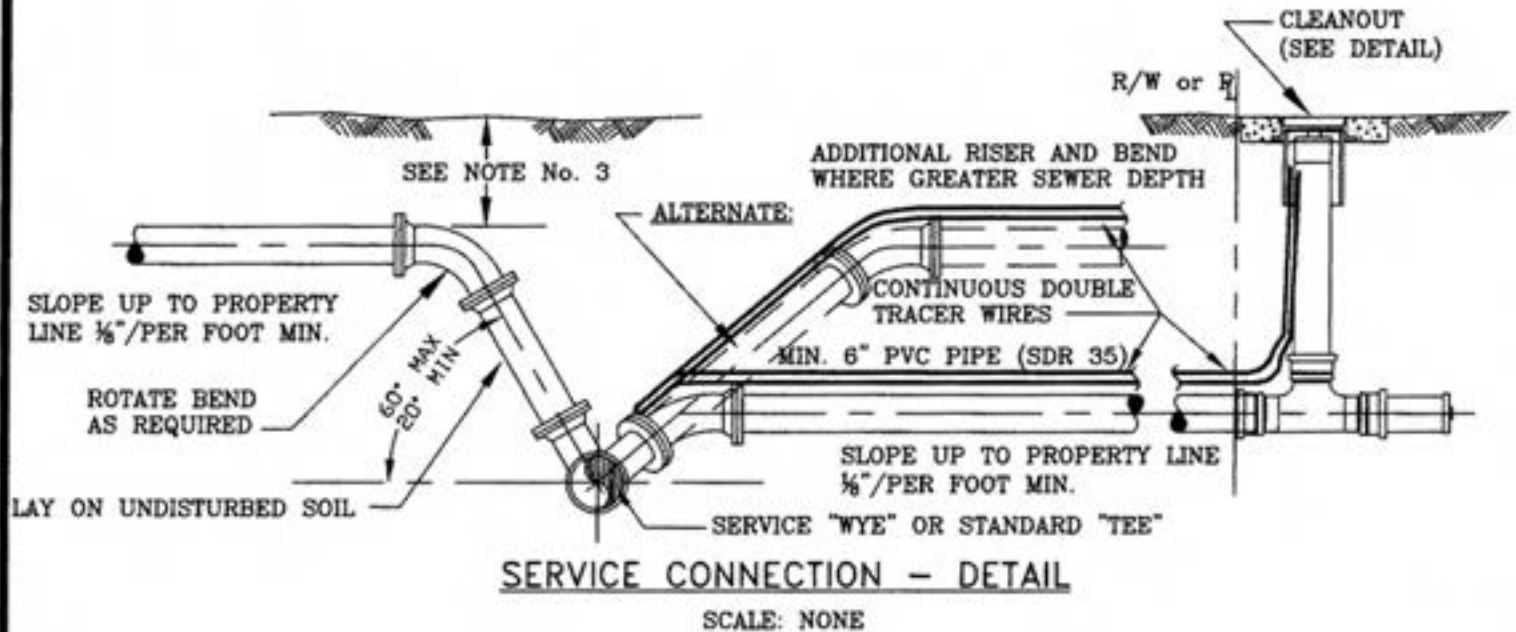
KEVIN BECOTTE, P.E.

REVISION:

*Kevin Becotte*

**NOTES:**

1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST P.C.U. APPROVED MATERIAL SPECIFICATION MANUAL.
2. SERVICE CONNECTIONS MAY NOT HAVE BEEN SHOWN ON PLAN/PROFILE SHEETS. SERVICE CONNECTION LOCATIONS SHALL BE DETERMINED IN THE FIELD AND CONNECTIONS CONSTRUCTED ACCORDANCE WITH P.C.U. APPROVED TECHNICAL SPECIFICATIONS, MATERIALS MANUAL & THESE DETAILS. FOR NEW DEVELOPMENT, THE SERVICE CONNECTION SHALL BE CONSTRUCTED IN THE CENTER OF THE LOT.
3. MINIMUM DEPTH UNDER ROADWAY 42" MINIMUM DEPTH AT PROPERTY LINE 36" (OR AS REQUIRED FOR SERVICE).
4. SERVICE LINES SHALL BE A MIN. OF 6" TO ALL RESIDENCES.
5. NO DOUBLE WYE UNITS SHALL BE PERMITTED ON SERVICE LINE. ALL RESIDENCES SHALL BE SERVED BY A SINGLE SERVICE.
6. RISERS SHALL BE INSTALLED ON ALL WYES (BOTH PRESENT & FUTURE SERVICES).
7. RISERS SHALL PREFERABLY FOLLOW SLOPE OF BANK TO REQUIRED DEPTH.
8. THE TRACER WIRE SHALL START AT THE CLEAN-OUT AND RUN ALONG THE SEWER SERVICE TO THE MAIN AND BACK TO THE CLEAN-OUT AS ONE CONTINUOUS WIRE.

**PINELLAS COUNTY****SEWER SERVICE CONNECTION  
AND CLEAN-OUT DETAIL**

DETAIL INDEX I.D.:

PCU SD 4

DATE:

FEB/2016

KEVIN BECOTTE, P.E.

REVISION:

*Kevin Becotte*



## **Appendix K: Standard Operating Procedure for I&I Reduction Effectiveness Analysis**



---

## TECHNICAL MEMORANDUM

**TO:** Daniel E. Glaser, P.E. - Pinellas County Utilities

**FROM:** Nestor Sotelo, P.E./Hazen  
Derek Wride, P.E./Wade Trim

**DATE:** June 18, 2022

**RE:** 004167A Wastewater Collection System Program - Task 6.3: Standard Operating Procedure (SOP) for I&I Reduction Effectiveness Analysis from Pipeline Rehabilitation Projects

---

### 1.0 OBJECTIVE

The objective of this SOP is to provide Pinellas County Utilities (PCU) with a clear and concise document that summarizes industry best-practice procedures for measuring the reduction of Inflow and Infiltration (I&I) from targeted rehabilitation projects by analyzing flow monitoring data that has been collected before and after the work has been completed. Analytical procedures detailed in this SOP will provide the means and methods to produce defensible data that can show the effectiveness of rehabilitation projects to reduce I&I and can be used by PCU to make informed decisions for ongoing I&I reduction strategies.

### 2.0 SUPPLEMENTAL DOCUMENTS

PCU staff is advised that this SOP provides direction solely on the strategies for locating flow monitors before and after rehabilitation as well as analytical procedures for determining the effectiveness of sewer rehabilitation projects. Heavy references to the Water Environment Federation Manual of Practice FD-6 (*WEF MOP 6*) will be provided throughout this SOP, and it is recommended that a thorough review of WEF MOP 6 be made prior to beginning any data analysis tasks with particular attention to Chapter 7 *Effectiveness of Sewer Rehabilitation*.

Guidance on the topics discussed above can be found in the following supplemental documents:

1. Detailed Steps for analyzing flow monitoring data - see *Existing Sewer Evaluation and Rehabilitation*, MOP FD-6, Water Environment Federation and American Society of Civil Engineers, 3<sup>rd</sup> Edition, 2009.

## 3.0 PROCEDURES

### 3.1 Background

The analytical procedures described in this section are for determining the effectiveness of rehabilitation projects for the reduction of I&I. Additional analytical methods for determining the effectiveness of rehabilitation for overflow remediation, capacity improvements, maintenance program improvement, regulatory compliance, structural rehabilitation, and reduction of public risk can be found in *WEF MOP 6*, Chapter 7.

PCU staff should become familiar with the following terminology and are advised to review *WEF MOP 6* and other supplemental documents for more information:

I&I – Infiltration and Inflow is a combination of groundwater, surface water, and stormwater that enters a sanitary sewer system indirectly through pipe and manhole defects or directly through manholes covers or cross connections with clear water drainage infrastructure such as roof drains, sump pumps, foundation drains, French drains, or surface stormwater drains.

RDI&I - Rainfall Dependent I&I is stormwater that enters the collection system either during or soon after rainfall events.

ADSF – Average Daily Sanitary Flow is wastewater discharged into the sanitary sewer system from toilets, showers, sinks, dishwashers, washing machines, and allowable discharges through internal drains.

GW - Ground Water Infiltration is groundwater that enters the sanitary sewer system through sanitary sewer system defects or from cross connected drains that are below the seasonal groundwater table. GWI will typically vary by season as the groundwater table varies. Infiltration from short-term changes in groundwater levels during and soon after rainfall events is considered RDI&I.

R-Value – The R-value is the percentage of rainfall by volume over a specified area that enters the sanitary sewer system as RDI&I.

Rehabilitation Area – This is the extents of the rehabilitation project. Flow is measured from the rehabilitation area before and after the rehabilitation work is performed.



**Control Area** – This is an area where flow is measured before and after a rehabilitation project but is outside of the rehabilitation area. The flow from the control area is compared to the flow from the rehabilitation area as part of the I&I reduction analysis. The use of the control area corrects for bias in flow measurement due to differing rainfall and antecedent conditions before and after rehabilitation.

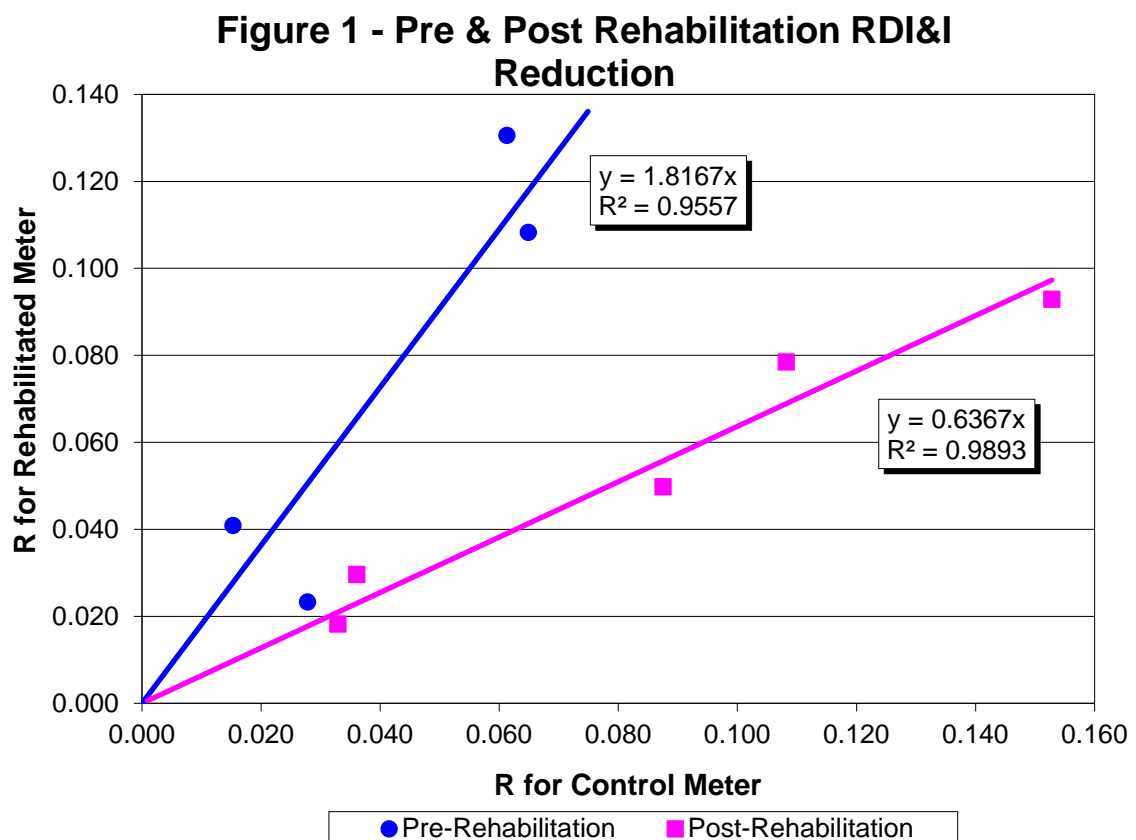
### 3.2 Collecting Flow Monitoring and Rainfall Data

1. To accurately determine the effectiveness of sewer rehabilitation projects, flow monitoring and rainfall data must be compared for a time period both before and after the sewer rehabilitation project is completed, which is known as the “pre-rehabilitation period” and “post-rehabilitation period”.
2. Verification of the rehabilitation effectiveness will also require a comparison of data collected from the rehabilitation project area and a control area (a selected location where no rehabilitation work has been performed). This comparison will show how much I&I reduction can be attributed to the sewer rehabilitation improvements vs. other naturally occurring conditions.
3. For comparison of results, select a control area (sub-basin) that has been exposed to the same wet weather events as the rehabilitation area (review rain gauge data). The selected control area should be similar in size, similar in geography and have similar pipe material (as well as having similar RDI&I responses in terms of timing and amount). PCU will approve the recommended control areas.
4. After the project area and control area have been selected, wastewater flow and rainfall data must be collected for a minimum of 90 days prior to commencing any rehabilitation work during the months of June through October where feasible. Note that monitoring will also be required for a minimum of 90 days after completion of the rehabilitation work also during the months of June through October where feasible. Monitoring may be required for a longer period of time to capture an adequate number of events. A minimum of four wet weather events with wet weather response is required both pre and post construction.
5. The flow meter equipment used shall be appropriate for the particular flow conditions. Where possible, flow meters shall be placed in the upstream pipe along a straight run with no other pipes entering the manhole. Flow velocity shall be at least 0.5 fps. PCU will approve the recommended locations of the flow meters before installation.
6. A minimum baseflow must be available from each of the selected sub-basins for accurate flow monitoring data analysis. This information is typically provided by the flow monitoring vendor, however, typical baseflow criteria are listed below:
  - a. For most readily available flow monitors a minimum of 1” of cover is required above the monitoring probe.
  - b. Flow monitors can typically monitor flows for up to 150 homes.

- Once the pre- and post-rehabilitation flow monitoring data has been processed and final data approved, proceed with the analytical steps described below.

### 3.3 Analyzing Collected Flow Monitoring Data – Volume

- For both the control area and rehabilitation area, select several rain events where a minimum rainfall of 1" or greater fell over both the rehabilitation area and the control area (if a common rainfall event cannot be identified other analytical methods may be needed).
- Determine the R-value for each selected storm event and each installed flow monitor. This analysis can be performed as described in **Section 4: R Value Calculation**.
- Plot the R-values from the selected rehabilitation area flow monitor versus the R-value for the selected control area flow monitor, as illustrated in **Figure 1**.



4. Perform linear regressions on the pre-rehabilitation R values and the post-rehabilitation R-values by forcing the regression line through “0,0” for both areas.
5. Calculate the correlation coefficient for each linear regression. Values as close to 1 as possible are desired.
6. Compute the RDI&I reduction by calculating the percent difference in the slopes of the lines from pre to post rehabilitation conditions. The percent reduction in the example shown in Figure 1, is  $(1.82-0.64)/1.82 = 65\%$  RDI&I reduction.
7. This resulting value represents the reduction of RDI&I entering the sanitary sewer system that can be directly attributed to the sewer rehabilitation improvements.
8. If common rain events cannot be found between the control and rehabilitation areas, other analysis methods must be utilized.

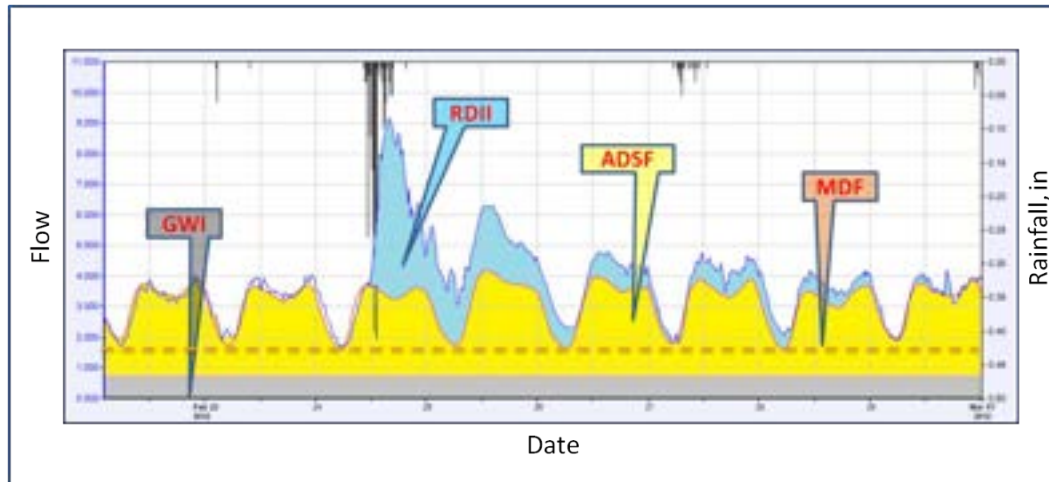
### 3.4 Analyzing Collected Flow Monitoring Data – Peak Flow

1. Plot the peak flows for each event for rehabilitation meter versus the control meter for both pre and post rehabilitation conditions. A minimum timestep of 15-minutes should be used to evaluate peak flows. The timestep could be increased up to 60-minutes where needed to evaluate excessive data variability (often caused by pump stations). Do not use 5-min peak flows.
2. Perform linear regressions on the pre-rehabilitation peak flows, and the post-rehabilitation peak flows, but do not force the regression through (0,0).

## 4.0 R-VALUE CALCULATION

The flow monitoring data provides the fundamental information necessary to calculate R values and characterize baseline sewer flow contributions. As shown in Figure 2, wastewater flows consist of three components, including Ground Water Infiltration (GWI), Average Daily Sanitary Flow (ADSF), and Rainfall Derived Inflow and Infiltration (RDI&I). GWI and ADSF are components that make up the Average Daily Flow (ADF) during dry weather conditions. Wet weather flow conditions consist of ADF and RDI&I. The following sections reference each of these components to derive the information necessary to characterize RDI&I.





**Figure 2: Wastewater Flow Components**

## 4.1 Analysis Tools

USEPA has published a Sanitary Sewer Overflow Analysis and Planning (SSOAP) toolbox consisting of six tools for analyzing capacity and condition of a sanitary sewer system. This toolbox can be utilized to perform the analysis steps indicated below. The SSOAP toolbox and supporting documentation can be downloaded at the following link:

<https://www.epa.gov/water-research/sanitary-sewer-overflow-analysis-and-planning-sssoap-toolbox>

## 4.2 Dry Weather Flow Analysis

The flow metering data characterizes the general spatial distribution of the wastewater flows. Dry weather days (i.e., days with no rainfall nor influence from previous wet weather events) should be extracted from the flow monitoring data to calculate the average daily flow (ADF), which represents the average sanitary loading rate that occurs on a daily basis. Periods of zero flow readings, abnormal low flow readings, or high spikes at peak flow should be excluded. SSOAP can be used to select dry weather periods for each meter and optimize pattern to include the most repeatable data for each day of the week on the hourly basis.

As discussed above, the ADF is subsequently decomposed into two basic flow components, including ground water infiltration (GWI) and average daily sanitary flow (ADSF). These flow components are functions involving characteristics of each sewershed hydrograph (i.e., ADF and minimum daily flow (MDF)). Given the dependency of ADSF and GWI on the hydrograph characteristics, fluctuations due to seasonal variation may impact the analysis.

### 4.3 Ground Water Infiltration (GWI)

GWI is associated with extraneous water entering the sewer system through defects in pipes and manholes. This component is related to the condition of the sewer pipes, manholes, and ground water levels. GWI may occur throughout the year, although rates are typically higher when the groundwater table is most elevated. The ground water infiltration associated with each sewershed can be calculated using an empirical method developed by Stevens and Schutzbach (Mitchell et al., 2007).

This empirical method overcomes the limitations of alternative GWI estimates by using the ratio of minimum daily flow to average daily flow. The ratio circumvents the tendency to overestimate infiltration from large sewersheds and underestimate infiltration from small sewersheds thereby providing consistent ground water infiltration estimates. Equation (1) is the ground water infiltration function derived by Stevens and Schutzbach, which was used in this analysis. Note that the empirical relationship used to develop Equation (1) is based on flow rate units of million gallons per day. Accordingly, this flow rate unit must be used to accurately estimate the GWI contribution.

$$GWI = \frac{0.4 \times MDF}{1 - 0.6 \times \left(\frac{MDF}{ADF}\right)^{ADF^{0.7}}} \quad (1)$$

### 4.4 Average Daily Sanitary Flow (ADSF)

The average daily sanitary flow represents the domestic, commercial, and industrial contributions to the average daily flow. Equation (2) allows for calculation of a consistent weekly diurnal pattern that represents ADSF as the GWI fluctuates due to seasonal variations. Special consideration should always be given in the event that flows change due to any significant seasonal industrial flow contributors. Since there are two flow components during dry weather conditions, specifically ADSF and GWI, the sanitary portion of the dry weather flow is defined by Equation (2). Similar to GWI, the average daily sanitary flow is also a function of the hydrograph characteristics (i.e., ADF and MDF).

$$ADSF = ADF - GWI \quad (2)$$

To properly identify ADSF and GWI, only dry weather periods should be considered when separating the flow components and developing infiltration estimates.

## 4.5 Rainfall Derived Inflow and Infiltration (RDI&I)

The total RDI&I volume for each event can be calculated by subtracting dry weather flow from the event period as shown in Equation (3), resulting in a value that represents only the wet weather response. The percentage of rainfall from a storm event that impacts the sewer flow, also known as the R-value, is calculated by dividing the wet weather volume from that event by the total volume of precipitation for a contributing area as shown in Equation (4).

$$RDII\ Volume = Total\ Flow - (ADSF + GWI) \quad (3)$$

$$R\ Value = \frac{RDI\&I\ Volume}{Precipitation\ Volume} \quad (4)$$

### References:

1. Water Environment Federation/American Society of Civil Engineers, *Existing Sewer Evaluation and Rehabilitation*, Manual of Practice FD-6, 3<sup>rd</sup> Edition, 2009



## Appendix L: Right of Entry Form Template

Project: \_\_\_\_\_  
PID No.: \_\_\_\_\_

Prepared by and return to:  
Pinellas County Department of Administrative Services  
Facilities and Real Property Division  
509 East Avenue South  
Clearwater, FL 33756

**TEMPORARY RIGHT OF ENTRY**

THIS TEMPORARY RIGHT OF ENTRY is granted this \_\_\_\_\_ day of \_\_\_\_\_, 2022, by \_\_\_\_\_, whose address is: \_\_\_\_\_, (“Owner”) to PINELLAS COUNTY, a political subdivision of the State of Florida (“County”).

Owner, for and in consideration of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, does hereby grant County, its employees, agents, successors, and assigns a nonexclusive Temporary Right of Entry over, across and upon the property located at \_\_\_\_\_, described as follows:

**The lands described in the legal description attached as Exhibit “A” attached hereto and made a part hereof (“Property”).**

The scope, nature and character of the Temporary Right of Entry shall be as follows:

1. County shall have the right to enter, travel over, across and upon the Property in order to perform \_\_\_\_\_ (“Engineering Activities”).
2. Except for those acts reasonably necessary to accomplish the purposes of this Temporary Right of Entry, County covenants not to do any acts or use the Property in a manner that could reasonably be expected to cause unnecessary damage or to interfere with Owner’s and the residents’ quiet enjoyment of the Property. In the event County causes damage to the Property, excluding ordinary wear and tear, County shall be responsible for restoring Property to as near to its original condition as practicable.
3. This Temporary Right of Entry will expire upon completion of the County’s Engineering Activities or \_\_\_\_\_, whichever event occurs earlier in time.
4. Each party is responsible for all personal injury and property damage attributable to the negligent acts or omissions of that party and its officers, employees, agents and invitees.

Nothing herein shall be construed as a waiver of any defense or further limitation of County’s sovereign immunity beyond Section 768.28, Florida Statutes, as now in effect or as may be amended from time to time, nor construed as consent to be sued by third parties in any manner arising out of this Temporary Right of Entry.

In witness whereof, Owner has fully executed this Temporary Right of Entry the day and year first written above.

SIGNED  
IN THE PRESENCE OF:

WITNESSES:

\_\_\_\_\_

Print Name:\_\_\_\_\_

\_\_\_\_\_

Print Name:\_\_\_\_\_

By:\_\_\_\_\_

Print Name:\_\_\_\_\_



## Appendix M: Temporary Construction Easement (TCE) Form Template

Project: \_\_\_\_\_  
 PID No.: \_\_\_\_\_

Prepared by and return to:  
 Administrative Services Department  
 Prepared by: Josh Rosado  
 509 East Avenue South  
 Clearwater, FL 33756

## TEMPORARY CONSTRUCTION EASEMENT

\_\_\_\_\_, whose address is \_\_\_\_\_ as owner (Owner), of the property located at \_\_\_\_\_ (Property), this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, do hereby grant and convey unto Pinellas County, whose address is 509 East Ave., Clearwater, FL 33756 (County) a Temporary Construction Easement (Easement) for the Project Identification Numbers (PID's) noted above (Project), over and upon the Property as particularly described in Exhibit A which is attached hereto and incorporated by reference herein (Easement Area).

For and in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and the following improvements, which will be performed by the County or its contractors:

\_\_\_\_\_, **in conformance with the County's approved construction plans for the Project, including any grading or filling, and ground cover restoration necessary to achieve such standards.**

1. Owner hereby grants to County this Easement. This Easement is being acquired for the purpose of constructing the Project and related improvements, including but not limited to modifications to the Owner's property within the Easement Area \_\_\_\_\_ **in conformance with the County's approved construction plans for the Project**, and includes the right to enter upon the Easement Area with personnel, vehicles and equipment by the County, its agents, employees and contractors.

2. This Easement will expire upon the earlier of the completion of the Project or \_\_\_\_\_ Years from the date of execution of the Easement.

3. Owner hereby warrants and covenants (a) that they are the Owner of the fee simple title

to the Property, in which the above-described Easement is located; and (b) that Owner has full rights and lawful authority to grant and convey this Easement to the County.

4. Recognizing that due care is to be exercised by the County to avoid, and to repair damage to as good or better condition than existed prior to the County utilizing the Easement Area and to any existing improvements caused by the County in its utilization of the Easement Area. This Easement will also grant access over said Property to allow County personnel and equipment necessary access for the purpose(s) described herein.

5. Nothing herein shall be construed as waiver of any defense or limitation available to the County or Grantor pursuant to Florida Statutes, Section 768.28, as now in effect or as may be amended from time to time.

6. In the event funds are not appropriated by the County in any succeeding fiscal year for purposes described hereunder, then this Easement shall be deemed to terminate at the expiration of the fiscal year for which funds were appropriated and expended, without penalty to the County. However, in the case of the considerations set forth herein, the County will use its best effort to obtain the necessary appropriation of funds in future fiscal years to complete its obligations.

IN WITNESS WHEREOF, the parties hereto have fully executed this Easement the day and year first written above.

SIGNED AND DELIVERED IN THE PRESENCE OF:

WITNESSES:

\_\_\_\_\_

Print Name: \_\_\_\_\_

\_\_\_\_\_

Print Name: \_\_\_\_\_

By: \_\_\_\_\_

Print Name: \_\_\_\_\_



## Appendix N: Studies and Investigation Reports



# PINELLAS COUNTY UTILITIES STRATEGIC PLAN

2020-2025





*Pinellas County is truly an exciting destination as well as a great place to call home. With an outstanding reputation for economic development and innovation combined with a history of award-winning beaches and 35 miles of coastline, Pinellas County is an organization that seeks to set the standard of excellence in public service. Our Utilities department is one of our many departments that provides vital services to our citizens and visitors. Our role in water resource management is fundamental to maintaining our vibrant community while enhancing our natural environment. This strategic plan will further our vision to be the standard for public service in America.*

*Barry Burton*

**Barry Burton**  
**County Administrator**



*The role of water and wastewater infrastructure is critical to public health and the natural environment in Pinellas County. As stewards of these valuable water resources and the infrastructure that supports it, Pinellas County Utilities seeks to harness innovative strategies to meet the needs of today while planning for tomorrow. Our department has embarked on this strategic planning effort to align effective utility management strategies with public outcomes that will allow us to continue to provide superior services to our customers and visitors for years to come.*

*Megan E. Ross*

**Megan E. Ross**  
**Director of Utilities**



## *Table of Contents*

Executive Summary .....	5
Introduction .....	6
Organizational Overview.....	8
Organizational Profile.....	8
Organizational History .....	9
Environmental Scan .....	10
Community Profile.....	10
Geography .....	10
Demographics .....	10
Unemployment .....	10
Top 10 Industry Trends.....	11
Trend 1    Workforce Issues .....	11
Trend 2    Technology.....	12
Trend 3    Adequate Funding for Utilities Infrastructure .....	13
Trend 4    Customer Expectations .....	14
Trend 5    Affordability of Services.....	15
Trend 6    Energy.....	15
Trend 7    Resiliency.....	16
Trend 8    Regional Collaboration for Water Management.....	17
Trend 9    Political Environment .....	18
Trend 10   Regulations.....	19
SWOT Analysis .....	20
Mission, Vision & Values.....	22
10 Strategic Goals.....	23
Product Quality .....	23
Operational Optimization .....	23
Financial Viability.....	23
Infrastructure Strategy & Performance .....	24
Employee & Leadership Development .....	24
Customer Satisfaction .....	24

Stakeholder Understanding & Support.....	24
Enterprise Resiliency .....	25
Community Sustainability.....	25
Water Resource Sustainability.....	25
Goals, Outcomes, & Strategies.....	26
Goal 1 Product Quality (PQ).....	26
Goal 2 Operational Optimization (OO).....	26
Goal 3 Financial Viability (FV) .....	27
Goal 4 Infrastructure Strategy & Performance (IS).....	27
Goal 5 Employee & Leadership Development (ED) .....	28
Goal 6 Customer Satisfaction (CS) .....	28
Goal 7 Stakeholder Understanding & Support (SS).....	28
Goal 8 Enterprise Resiliency (ER).....	29
Goal 9 Community Sustainability (SU) .....	29
Goal 10 Water Resource Sustainability (WS) .....	29
Communication Plan.....	30
Implementation & Monitoring Plan .....	31
Implementation Plan .....	31
Monitoring Plan.....	32
Strategic Planning Process .....	33
Resources & Acknowledgements.....	34

# Executive Summary

The development of the Pinellas County Utilities (PCU) department strategic plan is essential to advancing the overall mission and vision of Pinellas County. The PCU strategic plan is informed and guided by the Pinellas County Board of County Commissioners (BCC) strategic plan, supported by the PCU department work plan, and serves in unison with the County's comprehensive plan. This plan will guide the delivery of excellent public services that will facilitate stewardship of water resources, economic development and an improved quality of life for residents and visitors to Pinellas County.

The purpose of this planning effort is to put into place a systematic and ongoing inventory, analysis and assessment process that will help PCU now and in the future. Additionally, it will provide a platform for connecting ongoing work plan initiatives and resources with public outcomes. This, ultimately, will guide PCU in an appropriate direction for current and future programs and services.

This plan strives to be a tool that enables adaptation to a dynamic and complex operating environment through benchmarking, annual thoughtful reflection of progress and direction, and consideration of future initiatives. It is essential to the Department's success.

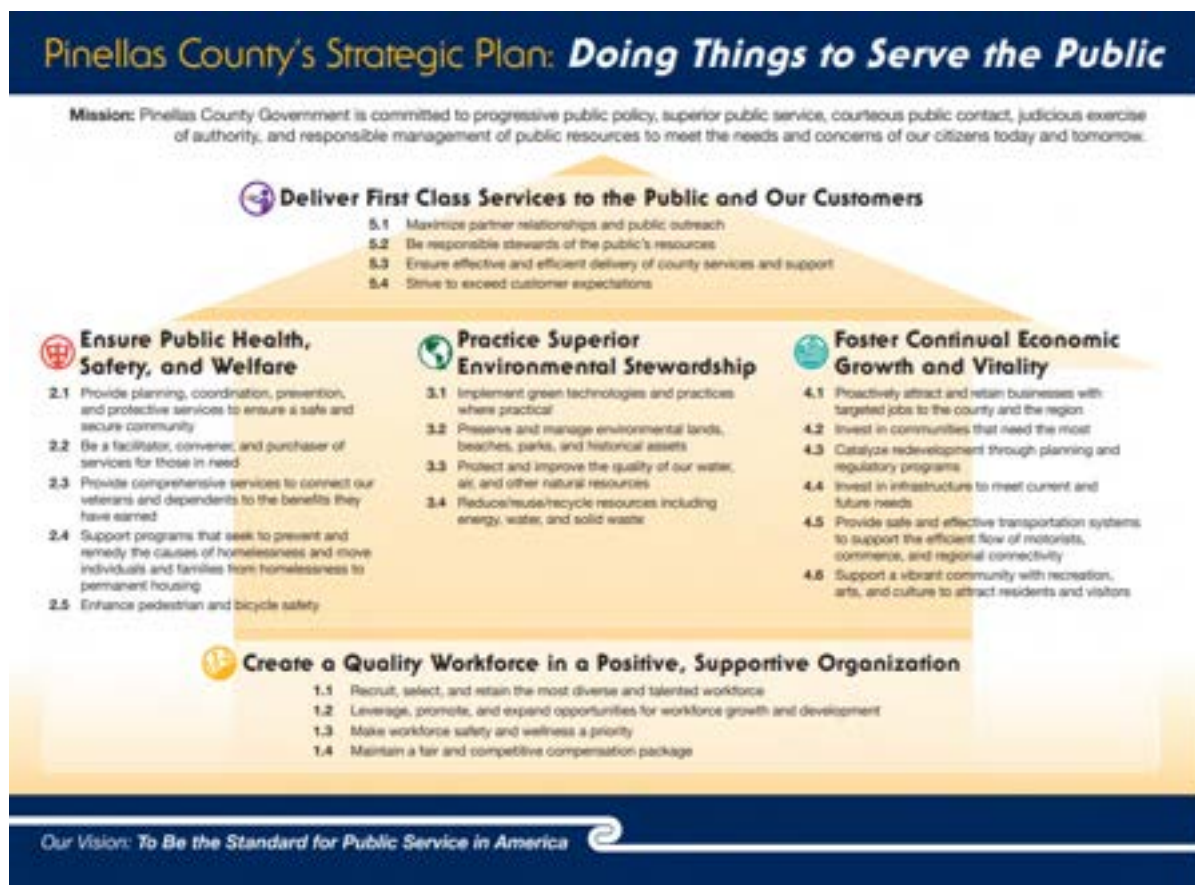
As part of the planning process, PCU participated in a self-assessment which identified strengths, weaknesses, opportunities and threats (SWOT). PCU identified reliable service and a passionate workforce as top strengths, while areas of weakness included communication, data management and workforce challenges.

Based on those evaluation processes, PCU sought to identify a clear basis and framework to align the strategic plan goals. After a best practices review, PCU embraced the concepts outlined in the Effective Utility Management Manual (EUM). This manual is a widely adopted management manual supported by leading industry associations and utilities nationwide. The EUM ten goals were then aligned with Pinellas County's desired public outcomes through evaluating forward-looking trends impacting the industry both nationally and locally.

Strategic Goal	Desired Outcome for PCU
Product Quality	Provide superior, reliable water resources to Pinellas County
Operational Optimization	Be an innovative industry leader
Financial Viability	Assure financial strength and understanding
Infrastructure Strategy and Performance	Proactively manage infrastructure to meet current and future needs
Employee and Leadership Development	Develop, maintain, and recruit a high performing workforce
Customer Satisfaction	Inspire customer confidence, enhance communication and perception
Stakeholder Understanding and Support	Be a trusted and collaborative partner
Enterprise Resiliency	Effectively manage risks
Community Sustainability	Fulfill our role as leaders in the entire community
Water Resource Sustainability	Protect and manage water resources

# Introduction

Pinellas County Utilities has initiated a strategic planning process to more closely achieve desired public outcomes through organizational objectives and performance measures. This approach is closely aligned with the countywide BCC strategic plan goals that cross several service delivery areas as shown below.



Through annual business planning and budgeting, the Utilities department will align activities and initiatives to the strategic plan, identify the performance measures used to gauge success, and seek the resources needed to execute plans. This strategic plan will provide a five-year outlook from 2020 through 2025.

In an effort to align the Utilities department strategic plan with best practices and global industry trends, two publications were primarily utilized in the development of this plan as follows:



### The One Water Policy Framework for America:

This document was published by the U.S. Water Alliance and encompasses significant trends facing the water sector today. The document also proposes solutions that can be adopted on a federal, state and local level with the “one water” approach.



### Effective

Utility Management: This document outlines the fundamental goals in achieving a balanced and effectively managed utility organization. It is supported by the leading national associations of the water industry. This document was utilized in aligning PCU’s strategic goals with the goals outlined in this manual.

Several department staff and stakeholders were involved in the strategic planning process including: front line staff, senior management, division directors, department leadership, Human Resources staff, and other county department staff. Key workshops were facilitated to develop the components of the plan as follows:

- Mission, vision and values development
- Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis
- Political, Economic, Sociocultural, Technological, Legislative and Environmental (PESTLE) Analysis
- Industry trends analysis
- Critical strategic goals and outcomes
- Strategic goals, strategies, and objectives formalization
- Implementation plan assignments and tracking
- County administration feedback
- Annual update and review of the plan

**EXHIBIT K - PERMITS****EXHIBIT K – PERMITS**

## PERMIT INDEX

AGENCY

PERMIT NO.

PAGE NO. (s)

Florida Statutes 218.80 require the County to disclose to the Contractor which permits and fees will have to be obtained and payable by the Contractor and the amounts of the permits (Phase 2)

**EXHIBIT L - PHASE 1 AND PHASE 2 PROJECT DESIGN MILESTONES AND DELIVERABLES**

## **EXHIBIT L - PHASE 1 AND PHASE 2 PROJECT DESIGN MILESTONES AND DELIVERABLES**

### **PHASE 1**

#### **Project Design Milestones and Deliverables**

##### **Phase 1 – “Find it” – Condition Assessment and Design Development 365 Days**

###### **Task 1 – Project Management, Kickoff Meeting, and Progress Meetings**

- Monthly invoicing and project status summary reports.
- Kickoff Meeting draft and final meeting agendas and summaries
- Progress meeting draft and final meeting agendas and summaries

###### **Task 2 - Data Collection and Review**

- Detailed data needs spreadsheet
- Updated data needs spreadsheet including review of data received
- Data updates after field review is performed

###### **Task 3 - Develop Condition Assessment Plan**

- Draft and FINAL Condition Assessment Plan submitted to THE COUNTY.
- Draft meeting agendas and summaries.
- Review comments for meeting agendas and summaries.

###### **Task 4 – Implement Condition Assessment Plan**

- Critical conditions such as surcharge conditions or other abnormal site conditions compared to other times will be identified during weekly data review and will be provided to the COUNTY.
- Draft and Final technical memorandum on flow monitoring and I&I analysis.
- Review comments for meeting agendas and summaries.
- Raw and final flow monitoring data (Excel or .csv file format).
- Draft Smoke Testing Memorandum with field data submitted in GIS format. Field data will be submitted on SharePoint Website.
- Final Smoke Testing Memorandum submitted in pdf format with field data submitted in GIS format. Field data will be submitted on SharePoint Website.
- Rehabilitation recommendation map and table submitted electronically in pdf format.
- Manholes scans will be submitted to the COUNTY electronically. Due to the size of the manholes scans files, they will be submitted via external hard drive as opposed to the SharePoint Website.
- Individual manhole inspections will be documented on COUNTY forms, if available, or in a format acceptable to the COUNTY.
- Rehabilitation recommendation maps and tables submitted electronically in pdf format.
- Section Reports in .pdf format will be provided to allow for quick review to the COUNTY
- Videos will be submitted to the COUNTY electronically. Due to the size of the video files, they may be submitted via external hard drive in addition to the SharePoint Website.
- PACP/LACP line segment ratings will be provided

###### **Task 6 – 90% Design Plans and Specifications**

- 90% Engineering Design Documents (plans and specifications).

**EXHIBIT L - PHASE 1 AND PHASE 2 PROJECT DESIGN MILESTONES AND DELIVERABLES**

- Review comments for meeting agendas and summaries.
- Guaranteed maximum price proposal for the DESIGN BUILDER's Phase 2 work.

**Task 7 – Public Outreach**

- Fact Sheet
- Preliminary Activity Notifications/Meeting Notifications
- Frequently Asked Questions (FAQs)
- Webpage content
- Prepare and distribute notifications/door hangers via door-to-door, mailer, or email to inform property owners, businesses, and tenants regarding Phase 1 activities
- Face-to-face/one-on-one interaction/meetings with property/business owners, tenants, HOAs, special interest groups, and other interested parties (as needed/required)
- Develop and maintain project Stakeholder Database
- Develop COUNTY webpage content and updates as needed
- Secure and maintain 24/7 project-specific phone number and email address
- Respond to inquiries received and document in Stakeholder Database
- Draft posts regarding key/milestone project developments for the COUNTY's social media platforms

**Project Schedule:** Updated Project Schedule



**EXHIBIT L - PHASE 1 AND PHASE 2 PROJECT DESIGN MILESTONES AND DELIVERABLES****PHASE 2****Project Design Milestones and Deliverables****Drawings:****Architectural**

Cover Sheet indicating name of projects, list of drawings, location map, County logo, County Project Number, Design/Builder and Design Professional(s) name, address and telephone number Life Safety Plan(s)

Site Plan

Floor Plan(s)

Enlarged Floor Plans

Exterior Elevations

Building Sections and Details

Roof Plan

Reflected Ceiling Plan(s)

Interior Elevations

Schedules – Room Finish, Door, Window, Hardware, & Equipment /Fixture

**Civil**

Location Plan

Existing Site Plan

Site Plan with layout dimensions and elevations

Grading and Drainage Plan

Utilities Plan

Sections & Details

Site Plans - piping distribution layout to all proposed facilities to be served.

**Structural**

Foundation Plan

Framing Plans

Elevations

Exterior Elevations

Sections and Details

Schedules

**HVAC**

Floor Plan(s) double-line drawings indicating locations of all equipment, air distributions, devices, air quantities for each room, piping runs and chases Control Diagrams, sequence of operations, control point list and control system electrical requirements

Equipment Schedules

Enlarged Plans and Details

**Plumbing**

Floor Plan(s) single-line drawings indicating fixture locations, piping Routes and sizes

Riser & Isometric Diagrams

Fixture Schedules

Enlarged Plans and Details

**Electrical**

Floor Plans indicating location and sizes of electrical, telephone/data and specialty equipment.

Site Plan indicating existing and proposed underground routing and structures.

**EXHIBIT L - PHASE 1 AND PHASE 2 PROJECT DESIGN MILESTONES AND DELIVERABLES**

Lighting Plan

Power Plan

Specialty Area Layout/Plan

Telephone/Data Plan

Systems Riser Diagrams

Equipment and Fixture Schedules

Enlarged Plans and Details

Specifications:

Complete specifications in CSI Format of only those materials and equipment used in the Project

Project Schedule:

Updated Project Schedule

Project Cost Statement: Final Project Cost Statement

**EXHIBIT L - PHASE 1 AND PHASE 2 PROJECT DESIGN MILESTONES AND DELIVERABLES****DESIGN SERVICE REQUIREMENTS AS TO PHASE 1 AND PHASE 2**

1. Design Builder's design documents shall be consistent with the Final Program at all phases of design unless expressly authorized otherwise in writing by Owner.
2. Design Builder shall submit to Owner design notes and computations to document the design conclusions reached during the development of the Project design as requested by Owner.
  - A. The design notes and calculations shall include, but not be limited to, the following data:
    - 1) Design criteria used for the Project;
    - 2) Lighting calculations;
    - 3) Structural calculations;
    - 4) Drainage calculations;
    - 5) Acoustical calculations;
    - 6) HVAC calculations;
    - 7) Security and communications calculations;
    - 8) Calculations as required by provisions of the Florida Energy Conservation Standards Act (Department of Community Affairs), latest revision;
    - 9) Thermal Efficiency Standards (Florida Energy Efficiency Code for Building Construction, Department of Community Affairs, F.S. 552.900)
    - 10) Life Cycle Costs (Florida Administrative Code and F.S. 235.26)
    - 11) Calculations showing probable cost comparisons of various alternatives considered;
    - 12) Documentation of decisions reached resulting from meetings, telephone conversations or site visits; and
    - 13) Other Project related correspondence as appropriate.
3. All drawing documents for the Project shall be accurate, legible, complete in design, suitable for bidding purposes and in conformance to Owner's design guidelines. Documents shall be furnished in accordance with the Design Schedule.
4. Owner in no way obligates itself to check Design Builder's work, and further, is not responsible for maintaining the Design Schedule.
5. Owner's approval or acceptance of any service in any phase does not relieve Design Builder of any of its duties, obligations or responsibilities under the Agreement.
6. Design Builder will establish a Project budget with the Owner during Phase 1. Once the budget has been established and agreed to by both the Owner and Design Builder, Design Builder will continue to maintain same through the end of Phase 1. The final lump sum price included in the proposal at the end of Phase 1 will be at or lower than the budget established in the earlier stages of Phase 1. Design Builder warrants that all professional services to be provided by it under the Agreement shall be in accordance with the terms and conditions set forth in the Agreement and the design of the Project shall be accomplished so that the total Project cost to Owner does not exceed the above noted Owner's budget. Notwithstanding anything herein to the contrary, Design Builder shall revise and modify the Construction Documents and rebid the Work at no additional cost to Owner, if subcontract bids from responsive and responsible bidders exceed Owner's Project budget, as said budget may be modified by Owner, as provided for herein. All such revisions and modifications of the Construction Documents shall be subject to the review and approval of Owner.

**EXHIBIT M - DESIGN PROFESSIONAL, ENGINEERS, & CONTRACTOR****EXHIBIT M - DESIGN PROFESSIONAL, ENGINEERS, & CONTRACTOR**

\_\_\_\_\_: Contractor

\_\_\_\_\_, Florida \_\_\_\_\_

\_\_\_\_\_: General Contractor

\_\_\_\_\_, Florida \_\_\_\_\_

\_\_\_\_\_: Mechanical Contractor

\_\_\_\_\_, Florida \_\_\_\_\_

\_\_\_\_\_: Design Professional

\_\_\_\_\_, Florida \_\_\_\_\_

\_\_\_\_\_: Civil & Environmental Engineering

\_\_\_\_\_, Florida \_\_\_\_\_

\_\_\_\_\_: Structural Engineering

\_\_\_\_\_, Florida \_\_\_\_\_

\_\_\_\_\_: Mechanical, Electrical, Plumbing, & Fire Protection Engineering

\_\_\_\_\_, Florida \_\_\_\_\_

\_\_\_\_\_: Other

\_\_\_\_\_, Florida \_\_\_\_\_



**EXHIBIT N - LUMP SUM AMENDMENT AGREEMENT FORM****EXHIBIT N - LUMP SUM AMENDMENT AGREEMENT FORM**

Pursuant to Sections 3B and 5A of the Design Build Agreement, dated \_\_\_\_\_, between Pinellas County, Florida (“Owner”) and “Design Builder”), for the design and construction of the (“Project”), Owner and Design Builder establish the Lump Sum Price and Contract Time for all the Work as set forth below:

**ARTICLE 1****SCOPE OF WORK**

The scope of the Work consists of the design and construction of the Project in accordance with the Agreement, this Amendment and other Contract Documents listed as Attachments 1 through 6 below, which are hereby incorporated into and made a part of the Amendment by this reference:

Attachment Number	Description	Pages	Dated
1.	List of Drawings and Specifications	____ through ____	_____
2.	Schedule of Values	____ through ____	_____
3.	Clarifications,& Exclusions	____ through ____	_____
4.	Completion Schedule	____ through ____	_____
5.	List of Subcontractors and Major Suppliers	____ through ____	_____
6.	Allowances	____ through ____	_____

**EXHIBIT N - LUMP SUM AMENDMENT AGREEMENT FORM****DIRECT PURCHASES**

The Owner, at its sole discretion, may elect to directly purchase materials and/or equipment included in the Guaranteed Maximum Price in order to take advantage of tax savings. Should the Owner elect to purchase materials and/or equipment directly, the general procedure shall be as follows:

1. All subcontracts shall be competitively bid by the Design Builder as outlined in other sections of this Agreement.
2. Each selected subcontractor shall submit a documented list of materials and/or equipment in the scope of its work in excess of \$15,000 along with the amount of sales tax applicable to such material and/or equipment.
3. The Design Builder shall forward these lists to the Owner, and the Owner shall obtain a purchase order for each item.
4. Once purchase orders have been obtained by the Owner for direct payment of these items, the Design Builder shall remove their direct cost from the schedule of Values accompanying its monthly pay applications. Tax savings realized from the Owner's direct purchase of each item, shall be transferred in the Schedule of Values to the line item for the Owner's Contingency. No retainage will be held on Direct Purchase material.
5. The Design Builder will order the materials as approved by the Owner (County Project Manager).
6. Invoices will be delivered directly to the Design Builder.
7. The Design Builder and the Owner will sign off on the packing slips to ensure materials ordered were received.

Design Builder will match the invoices to the packing slips and submit to the Owner (Pinellas County's Finance Department) via email to [ClerkConstructionAP@MyPinellasClerk.org](mailto:ClerkConstructionAP@MyPinellasClerk.org) to ensure the vendor/subcontractor is paid timely. The invoices must be received in a timely manner in order to comply with Section 218.735, Florida Statutes "Local Government Prompt Payment Act". Design Builder should date and time stamp all direct purchases invoices

**EXHIBIT N - LUMP SUM AMENDMENT AGREEMENT FORM****ARTICLE 2****LUMP SUM PRICE**

1. The Lump Sum Price for the Work, as defined in Section 3B of the Agreement, is Four Million nine hundred fifty-four thousand eight hundred ninety-three Dollars **\$ 4,954,893.00**.
2. Monthly installment payment of the Lump Sum Price shall be based upon the percent completion of the designated portion of the Work for each particular month.
3. In order to efficiently and timely address certain Change Order situations that may arise during Phase 2, the parties have agreed to establish an Owner controlled contingency ("Optional Tasks" and "Unspecified Work") within the Lump Sum Price in the amount of eight hundred three thousand three hundred eighty-six dollars \$803,386.00 ("Owner's Contingency"). The Design Builder acknowledges and agrees that any change work which is to be charged against the Owner's Contingency must be approved in advance in a Change Order or Construction Change Directive signed by **Kerstin Kenty**. The Owner reserves the right, at its sole discretion, to withhold its consent on Owner's Contingency expenditures. Unused Owner's Contingency remaining at Substantial Completion will be deducted from the Lump Sum Price. Design Builder has no entitlement to any portion of any unused Owner's Contingency.
4. If the parties agree to establish Allowances within the Lump Sum Price, said Allowances items and amounts will be identified in Attachment 6. Design Builder shall not proceed with any portion of the Work associated with the aforesaid Allowances ("Allowance Work") without first obtaining Owner's express written authorization to proceed with said Allowance Work.
5. Design Builder recognizes that this Contract includes work for trench excavation in excess of five feet deep. Design Builder acknowledges the requirements set forth in Section 553.63 of the Florida Statutes titled Trench Safety Act. Design Builder certifies that the required trench safety standards will be in effect during the period of construction of the Project and Design Builder agrees to comply with all such required trench safety standards.
  - A. The amount of one hundred dollars \$100.00 has been separately identified in Attachment 2, Schedule of Values, for the cost of compliance with the required trench safety standards; said amount is included within the Lump Sum Price.

**EXHIBIT N - LUMP SUM AMENDMENT AGREEMENT FORM****ARTICLE 3****CONTRACT TIME**

1. The Phase 2 Commencement Date for the Work is \_\_\_\_\_. The total period of time beginning with the Phase 2 Commencement Date through the date required for Substantial Completion of the Work is \_\_\_\_\_ days ("Contract Time"). THE SUBSTANTIAL COMPLETION DATE IS THEREFORE ESTABLISHED AS \_\_\_\_\_.
2. Pursuant to this Agreement, the parties have established a liquidated damage rate for reasons stated therein, which the parties acknowledge and agree apply to this Amendment and Design Builder's responsibility to complete the Work within the Contract Time as stated herein. Accordingly, the liquidated damage rate established in this Agreement shall be assessed from Design Builder for each calendar day Design Builder fails to achieve Substantial Completion for the Designated Work within the Contract Time.

**ARTICLE 4****MISCELLANEOUS**

1. Except as expressly modified herein, the terms and conditions of the Agreement remain unchanged. In the event of a conflict between the terms of this Amendment and those of the Agreement, Owner and Design Builder agree that the terms of this Amendment shall prevail and control.

Owner

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Its: \_\_\_\_\_

Date: \_\_\_\_\_

Design Builder

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Its: \_\_\_\_\_

Date: \_\_\_\_\_



**ATTACHMENT 1**

**Attachment 1 - List of Drawings, Specifications, and Addendums**

(See Attached)

**ATTACHMENT 2**

**Attachment 2 - Schedule of Values**

(See Attached)

**ATTACHMENT 3**

**Attachment 3 - Assumptions, Clarifications, & Exclusions**

(See Attached)

**ATTACHMENT 4**

**Attachment 4 - Completion Schedule**

(See Attached)



**ATTACHMENT 5**

**Attachment 5 - List of Subcontractors and Major Suppliers**

(See Attached)

**ATTACHMENT 6**

**Attachment 6 -Allowances**

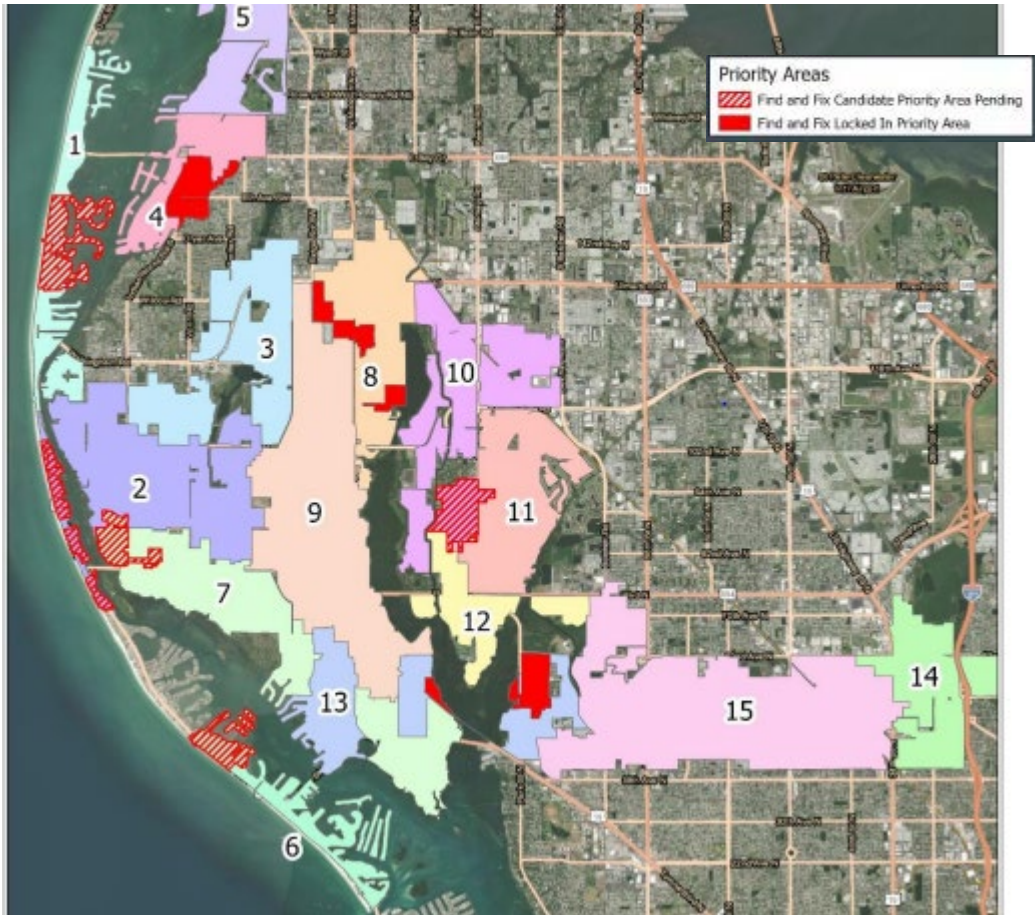
(See Attached)

# **EXHIBIT O - SCOPE OF SERVICES**

## **SCOPE OF PHASE 1 SERVICES**

### **1. DESCRIPTION OF PROJECT:**

- 1.1 This Project is located at as noted in red in the figure below in Pinellas County, Florida.



- 1.2 This Project consists of the design and construction of a **Find and Fix Gravity Sewer Rehabilitation**.

### **2. PROGRAM VERIFICATION:**

- 2.1 Design Services: Design Builder shall, consistent with applicable state licensing laws, provide design services, including architectural, engineering and other design professional services, required by this Agreement. Such design services shall be provided through qualified, licensed design professionals who are either (i) employed by Design Builder, or (ii) procured by Design Builder from independent sources. Nothing in this Agreement is intended to create any legal or contractual relationship between Owner and any independent design professional.
- 2.2 Owner shall provide Design Builder with Owner's Project Criteria describing Owner's program requirements and objectives for the Project. Owner's Project Criteria shall include Owner's use, space, price, time, site, performance and expandability requirements. Owner's Project Criteria may include conceptual documents, design criteria, performance requirements and other technical materials and requirements prepared by or for Owner. Design Builder shall review and prepare a written evaluation of such criteria, including recommendations to Owner for different and innovative approaches to the design and construction of the Project. The parties shall meet to discuss Design Builder's written evaluation of Owner's Project Criteria. Design Builder shall continue at Owner's direction until a detailed Final Program has been completed and has been approved by the Owner.
- 2.3 Design Builder shall review the Owner's budget and any applicable cost estimates as compared to the Owner's Design Criteria Package and the Final Program. The Design Builder shall confirm in writing to the Owner whether the Project can be designed and successfully constructed within the limits of the Owner's budget and program constraints.

- 2.4 Design Builder shall submit a presentation of results of user interviews and building program update, including the following: description of building functions and unique activities

### **3. SCHEMATIC DESIGN:**

- 3.1 Design Builder shall prepare three (3) Preliminary Conceptual Design Plans. The Schematic Design Documents will be based upon the Final Program. The Schematic Design Documents shall include design criteria, drawings, diagrams and specifications setting forth the requirements of the Project. The parties shall meet to discuss the Schematic Design Documents and agree upon what revisions, if any, should be made. Owner shall have final approval of such revisions, and Design Builder shall perform such revisions. Design Builder shall meet with Owner during Schematic Design as often as required until a Final Schematic Design has been completed and has been approved by the Owner. Design Builder shall certify that the Final Schematic Design totally complies with the Final Program except for such deviations that expressly have been brought to the Owner's attention and approved by Owner in writing. Design Builder shall prepare and include a statement with comments concerning constructability of the project and a cost estimate for construction in the Final Schematic Design.
- 3.2 Owner's acceptance of Schematic Design Documents in no way relieves Design Builder of its obligation to deliver complete and accurate documents necessary for successful construction of this Project.
- 3.3 Design Builder shall work with the Project Manager and other Users of the Project to meet design requirements and identify the areas within the facility design which offer the greatest potential for the elimination of unnecessary costs. The requirements of the Final Program shall not be eliminated as value engineering items, except with the Owner's express written approval.
- 3.4 Design Builder shall conduct a pre-submittal document review meeting with the Owner's Project Manager prior to submission of the Schematic Design Documents. Design Builder shall be required to conduct at least one formal presentation at completion of this phase to demonstrate how Owner's previously submitted comments have been incorporated into the design documents.
- 3.5 All Schematic Design Documents prepared by or for Design Builder are subject to Owner's review and approval. At completion of the Schematic Phase 1, Design Builder shall submit the Schematic Design Documents to the Project Manager for review and comment. Design Builder shall respond in writing to the review comments within 14 calendar days of receipt. Responses shall be forwarded directly to the Owner's Project Manager who will respond within 14 days of receipt. Design Builder shall revise the Schematic Design Documents as required by Owner in order to obtain Owner's written approval and authorization to proceed to the Design Development Phase.
- 3.6 As part of Phase 1 Services, Design Builder will be required to provide Owner with a cost estimate as part of the Schematic Design Documents, together with a written explanation for all variances between that cost estimate and Owner's approved Project budget. The cost estimate format shall be subject to Owner's approval and may require electronic submission of cost estimate information. If Design Builder's cost estimate or any other estimate prepared by or for Owner based upon the Schematic Design Documents indicate that costs will exceed Owner's approved Project budget, Design Builder shall revise the Schematic Design Documents to bring them within Owner's approved Project budget. Design Builder shall be solely responsible for all costs and expenses which it may incur in revising the Schematic Design Documents to bring them within Owner's approved Project budget. Design Builder shall also provide Owner with an updated Project Schedule.

### **4. DESIGN DEVELOPMENT PHASE:**

After Owner's review and approval of the Schematic Design Documents and issuance of Owner's written authorization to proceed, Design Builder shall commence the Design Development services and perform the following:

- 4.1 Design Builder shall prepare Design Development Documents based on the final Schematic Design as approved by the Owner in Section 3 hereof. Design Development Documents shall further develop Schematic Design to a level of definitiveness and detail to fix and describe the size and character of the various Project components and each Project discipline and system as may be appropriate for this state of development including long lead and special order materials and equipment, which will permit determination of whether the facility can be satisfactorily constructed in all task areas by all disciplines.
- 4.2 Design Builder shall continue developing the civil, architectural, structural, mechanical, electrical, security, plumbing, and other discipline's responsibilities to establish a final scope and details for that discipline's work.
- 4.3 Design Builder shall perform materials research and prepare specifications specific to project requirements in draft form.



- 4.4 Design Builder shall identify and properly coordinate the requirements of the various utility services that have an impact upon the project design. Drainage investigations and drainage designs shall be coordinated with storm water management district having jurisdiction on the site.
- 4.5 Design Builder shall evaluate alternative ideas in terms of their feasibility to construct, time, and cost. Design Builder shall work with the Owner's Project Manager and other users of the Project to meet design requirements and identify the areas within the facility design, which offer the greatest potential for the elimination of unnecessary costs.
- 4.6 The parties shall meet to discuss the Design Development Documents and agree upon what revisions, if any, should be made. Design Builder shall perform such agreed-upon revisions. Design Builder shall meet with Owner during Design Development as often as required until a final set of Design Development Document have been completed by Design Builder and approved by Owner. Design Builder shall prepare and include a statement with comments concerning constructability of the Project and a Project cost estimate, all based upon the final set of Owner approved Design Development documents.
- 4.7 Design Builder will develop selected alternative ideas in detail with emphasis on their technical durability, constructability and life cycle cost.
- 4.8 Design Builder's final Design Development Documents submittal and presentation shall include, but not be limited to, the requirements found in the Final Program, except to the extent such requirements have been expressly waived by Owner in writing. Design Builder shall certify that the final approval of Design Development Documents fully comply with the Final Program except for such deviations that have been expressly approved in writing by Owner.
- 4.9 Design Builder shall conduct a pre-submittal document review meeting with the Owner's Project Manager prior to submission of the Design Development Documents. Design Builder, may be required, to conduct at least one presentation at completion of this phase to demonstrate how Owner's previously submitted comments were incorporated into the design documents.
- 4.10 All Design Development Documents prepared by or for Design Builder are subject to Owner's review and approval. At completion of the Design Development Phase, Design Builder shall submit the Design Development Documents to the Project Manager for review and comment. Design Builder shall respond in writing to the review comments within 14 calendar days of receipt. Responses shall be forwarded directly to the Owner's Project Manager who will respond within 14 days. Design Builder shall revise the Design Development Documents as required by Owner in order to obtain Owner's written approval and authorization to proceed to the Construction Documents Phase.
- 4.11 As part of Phase 1 Services, Design Builder will be required to further develop and update the cost estimate as part of the Design Development Documents and bring to Owner's attention in writing any variances between that updated cost estimate and Owner's approved Project budget. Cost estimate format shall be subject to Owner's approval and may require electronic submission of cost estimate information. If Design Builder's updated cost estimate or any other estimate prepared by or for Owner based upon the Design Development Documents indicate that costs will exceed Owner's approved Project budget, Owner may elect to modify its budget and/or require Design Builder to revise the Design Development Documents to bring them within Owner's approved Project budget. Design Builder shall be solely responsible for all costs and expenses which it may incur in revising the Design Development Documents to bring them within Owner's approved Project budget. Design Builder shall also update the Project Schedule.

## **5. CONSTRUCTION DOCUMENTS:**

After Owner's review and approval of the Design Development Documents and issuance of Owner's written authorization to proceed, Design Builder shall commence the Construction Documents services and perform the following:

- 5.1 Design Builder shall prepare Construction Documents up to a 50% completion level based on the final Design Development Documents approved by the Owner in Section 4 hereof. Construction Documents shall include calculations and shall set forth each discipline's requirements in detail and into a cohesive and coordinated whole based upon the approved Design Development Documents, the Final Program and consultation with the Owner. The parties shall meet to discuss the 50% complete Construction Documents and agree upon what revisions, if any, should be made. Design Builder shall perform such agreed-upon revisions. Design Builder shall meet with Owner during Construction Documents as often as required until 50% complete Construction Documents have

been approved by the Owner. The 50% complete Construction Documents will include 90% complete specifications in CSI format.

5.2 Proposal. Based on the 50% complete Construction Documents approved by the Owner in Section 5.1 hereof, and any other documents upon which the parties may agree, Design Builder shall submit a proposal to Owner (the "Proposal") within forty-five (45) days, which shall include the following unless the parties mutually agree otherwise:

- 1) a proposed Lump Sum Price for completion of the construction documents, all permitting, and construction of the Project.
- 2) an updated Project Schedule and date of Substantial Completion of the Project upon which the Lump Sum Price for the Project is based;
- 3) all other information necessary for the parties to enter into Phase 2, with the accompanying General Conditions of Contract; and

5.3 Review of Proposal. Design Builder and Owner shall meet to discuss and review the Proposal. If Owner has any comments regarding the Proposal, or finds any inconsistencies or inaccuracies in the information presented, it shall give written notice to Design Builder of such comments or findings. If Design Builder finds the revisions acceptable, Design Builder shall, upon receipt of Owner's notice, adjust the Proposal.

5.4 At the completion of the 50% Construction Documents, Design Builder will provide a certification from itself and its Design Professional 1) that the Construction Documents reflect a structure, including the roof structure, that has been designed in strict compliance with the latest jurisdictional codes and 2) that the Construction Documents comply with the Final Program except for such deviations that have been expressly approved in writing by Owner.

5.5 Completion of This Phase of the Agreement. Design Builder's services under this Phase 1 of the Agreement shall be deemed completed upon meeting with Owner to discuss the Proposal and making those revisions to the Proposal, if any, Design Builder finds acceptable.

**SUBJECT:** *Scope of Services for PINELLAS COUNTY Find and Fix Gravity Sewer Rehabilitation  
Progressive DESIGN BUILDER Services  
Contract No. 24-0085 RFP*

The DESIGN BUILDER is pleased to provide this Scope of Services to PINELLAS COUNTY UTILITIES (COUNTY) for investigative, assessment and design services for the Find and Fix Gravity Sewer Rehabilitation project. We have assembled an industry leading team to deliver this project. The project consists of the planning, condition assessment, design, and construction of gravity sewer rehabilitation within Zones 4, 8, and 13 priority areas. Specifically, the work will be performed in two phases. The first phase (Phase I) will consist of the planning, investigation, and assessment, to be used in the development of a technical memorandum, preparation of 90% plans and specifications, and development of the Guaranteed Maximum Price (GMP). The second phase (Phase 2) will include final 100% design, Issued for Construction (IFC) Documents, and the construction of the Project. This scope and fee estimate is only for work associated with Phase I. The scope and fee associated with Phase 2 will be provided at a later date.

### Project Understanding

COUNTY adopted a Find and Fix policy in November of 2021. The purpose of the Find and Fix Policy is to identify the sources and locations of the infiltration and inflow (I&I) and provide for the appropriate rehabilitation and or replacement to target reduction of I&I into the COUNTY'S wastewater collection system. With the Find and Fix Policy in place, the COUNTY is implementing a Find and Fix program to remediate critical portions of its wastewater collection system as part of the Capital Improvement Program (CIP). The COUNTY has prioritized areas for I&I remediation in the South County for this phase of the project as Zones 4, 8 and 13. Work in Zones 1, 2, 6, and 12 could be completed under this program also, if authorized by the COUNTY at a later date. This project will be delivered as a Progressive Design Build project. The targeted assets within each priority area per the RFQ are as follows:

Table 1: Wastewater Collection System

Zone	Gravity Mains (LF)	Number of Sewer Laterals	Lateral Pipe (LF)	Number of Manholes
4	42,121	691	21,410	214
8	28,363	550	15,433	122
13	25,049	196	4,078	119
<b>Total</b>	<b>95,533</b>	<b>1,437</b>	<b>40,921</b>	<b>455</b>

### Key tasks that will be undertaken include:

- Collaboration with COUNTY staff to identify past collection system repairs, suspected areas of above average I&I, maintenance problem locations, condition issues, SSO's etc.
- Evaluate the historic wastewater flow data.
- Review previous COUNTY smoke testing and closed-circuit television (CCTV) data.
- Review recent lift station flow data, rainfall records and other applicable data.
- Verify wastewater and pump station collection system boundaries for flow monitoring.
- Conduct smoke testing on the COUNTY wastewater collection system.
- Perform nighttime flow isolation (NFI) measurements during dry weather and flow isolations during wet weather.
- Conduct NASSCO PACP/LACP-compliant pipeline condition assessment inspections using CCTV on the COUNTY'S wastewater collection system and private laterals within Zones 4, 8, and 13. Review, evaluate condition assessment reports and prepare recommendations for rehab and or replacement.
- Conduct NASSCO MACP-compliant manhole condition assessment inspections on the COUNTY'S wastewater manholes within Zones 4, 8, and 13. Review, evaluate condition assessment reports and prepare recommendations for rehab and or replacement.

- Pre-rehabilitation flow monitoring. The data from the pre-rehabilitation flow monitoring will be used at the end of the post-rehabilitation flow monitoring period, which will be performed at the end of Phase 2 of this project, to measure effectiveness of the Find and Fix program.
- Develop a condition assessment report, rehabilitation plan, 90% design drawings, specifications and Phase 2 GMP.

### Phase 1 Scope of Work

#### Task 1: Project Management, Kickoff Meeting, and Progress Meetings

The DESIGN BUILDER will perform project management activities and attend design review meetings as described in the below subtasks.

##### **Task 1.1: Project Management**

This Task is for general project management including contract management and coordination with the COUNTY, The DESIGN BUILDER and any other stakeholders. General project management activities include project coordination, preparation of miscellaneous correspondence, creation of meeting agendas and summaries, review of the baseline project schedule and monthly updates, maintenance of project documentation, and coordination services. The Project Management task includes submittal of monthly invoices and project status summary reports to the COUNTY.

##### *Task 1 Deliverables:*

- Monthly invoicing and project status summary reports.

##### **Task 1.2 Kickoff Meeting**

The DESIGN BUILDER will attend a kickoff meeting with the COUNTY. The purpose of the kickoff meeting is to discuss the team members from each organization, the lines of communication, scope, schedule, budget, critical success factors, and other project management related topics. The kickoff meeting will be attended in person by key members of the DESIGN BUILDER and a virtual component will also be available for others who do not attend in person. The DESIGN BUILDER will prepare meeting agendas and summaries. The DESIGN BUILDER will review draft meeting agendas and summaries for the COUNTY'S review. Once approved by the COUNTY, the DESIGN BUILDER will finalize and distribute the meeting agendas and summaries.

##### *Task 1.2 Deliverables:*

- Draft and final meeting agendas and summaries.

##### **Task 1.3: Progress Meetings**

The DESIGN BUILDER will attend virtual monthly meetings with the COUNTY pertaining to management of the work. Meetings include progress meetings with the DESIGN BUILDER, the COUNTY and other stakeholders and subconsultants as required.

The DESIGN BUILDER will prepare meeting agendas and summaries. The DESIGN BUILDER will review draft meeting agendas and summaries for the COUNTY'S review. Once approved by the COUNTY, the DESIGN BUILDER will finalize and distribute the meeting agendas and summaries. Specific meetings and workshops for technical objectives are included in the Design Services task and are not included in this subtask.

##### *Task 1.3 Deliverables:*

- Draft and final meeting agendas and summaries.

#### Task 2: Data Collection and Review

The DESIGN BUILDER will provide THE COUNTY with a list of data that it wishes to receive to develop the Condition Assessment Plan and the design for the rehabilitation. The DESIGN BUILDER will set up a SharePoint site that will be used to exchange data between the team members. The COUNTY will notify the DESIGN BUILDER of information that has been



requested by the DESIGN BUILDER that is unable to be provided by the COUNTY. The DESIGN BUILDER will review available existing information for each zone including, but not limited to:

- COUNTY documents including COUNTY'S GIS for each area and surrounding locations to be able to determine and verify the number of assets, lengths, size, zone configuration, priority areas, etc. DESIGN BUILDER will perform field investigations to verify information as necessary.
- The Design Criteria Package (DCP) documents in color pdf format.
- GIS for water, sewer, laterals, storm, reclaimed water mains, force mains, lift stations, lined sewers, streets, etc.
- Previous flow monitoring reports and updates
- Recent (5-year) rehab projects by area (CIPP, replace, etc.)
- Private Sewer Lateral and Systems Ordinance
- Private Sewer Lateral Find It Fix It Policy
- Anticipated limits of lateral inspection and rehabilitation with legal provisions
- COUNTY Standard Specifications and Details
- CCTV Standard Specification
- CIPP Specification
- Any other Standard Specifications currently used for I&I Reduction technologies
- Right of Entry Form Templates
- Temporary Construction Easement Form Template
- Flow Monitoring Protocol
- Record drawings of existing facilities
- Existing property and topographic surveys, etc.
- Existing 100-year flood plain information
- Plans prepared by others which provide points of connection to other parts of the system
- Historical telemetry data (runtimes) for the pump stations
- Historical data of known low sewer service locations prone to backups when jetting operations take place
- Other relevant reports and evaluations

#### *Task 2 Deliverables:*

- Submit a detailed data needs spreadsheet and review the data received summary.
- Submit data updates when field verification is performed.

### Task 3: Develop Condition Assessment Plan

Based on the information provided in Task 2: Data Collection and Review, the DESIGN BUILDER will develop a draft Condition Assessment Plan for review and approval by the COUNTY prior to beginning any of the field work identified in Task 4: Implement Condition Assessment Plan. The Condition Assessment Plan will be based upon the National Association of Sewer Service Companies (NASSCO) standards PACP (the proper version will be verified with THE COUNTY). The Condition Assessment Plan will include but not be limited to: flow monitoring locations, flow isolation plan, cleaning and inspection procedures, maps, diagrams, traffic control plans, bypass pumping methodology, and specifications for setting the requirements of the Condition Assessment Field Work. The Condition Assessment Plan will also identify and collaborate with the COUNTY and their program management team on the technology/software systems to be used in the assessment and reporting.

The DESIGN BUILDER and the COUNTY shall meet to discuss the draft Condition Assessment Plan and agree upon what revisions, if any, should be made. The COUNTY shall have final approval of such revisions, and the DESIGN BUILDER will make the revisions to the plan. At completion of the Condition Assessment Plan preparation, the DESIGN BUILDER will submit the documents to the COUNTY'S Project Manager for final review and comment. THE DESIGN BUILDER will respond in writing to the review comments within 21 calendar days of receipt. Responses shall be forwarded directly to the COUNTY's Project Manager who will respond within 21 calendar days of receipt. The DESIGN BUILDER will revise the Condition Assessment Plan as required by the COUNTY in order to obtain the COUNTY's written approval and authorization to proceed to the field work of the assessment.

After the COUNTY's review and approval of the Condition Assessment Plan and issuance of the COUNTY's written authorization to proceed, the DESIGN BUILDER will commence with the Condition Assessment Field Services.

*Task 3 Deliverables:*

- Draft and FINAL Condition Assessment Plan submitted to THE COUNTY.
- Draft meeting agendas and summaries.
- Review comments for meeting agendas and summaries.

## **Task 4: Implement Condition Assessment Plan**

In this task the DESIGN BUILDER will perform the services required to implement the Condition Assessment Plan. These tasks include the following:

### **Task 4.1: Flow Monitoring Data Analysis**

**Data Evaluation and I&I Reduction Effectiveness Analysis** – At the completion of the 90-day (or extended) flow monitoring period, and assuming an adequate number and intensity of rain events has occurred, the DESIGN BUILDER will perform an I&I analysis in accordance with the SOP for I&I Reduction Effectiveness Analysis. Results will include an explanation of how the analysis is performed, with calculations for arriving at infiltration and inflow values.

A technical report will be provided approximately 90 days after the completion of the flow monitoring program to the COUNTY. A review and discussion of these results will take place at a monthly progress meeting.

The technical report will generally include:

- Background information
- Summary of the flow and rainfall monitoring program
- I&I analysis results
- Installation sheet for each flow meter documenting specific installation site conditions, configuration, photos, and equipment.

*Task 4.1 Deliverables:*

- Critical conditions such as surcharge conditions or other abnormal site conditions compared to other times will be identified during weekly data review and will be provided to the COUNTY.
- Draft and Final technical memorandum on flow monitoring and I&I analysis.
- Review comments for meeting agendas and summaries.
- Raw and final flow monitoring data (Excel or .csv file format).

### **Task 4.2: Smoke & Dye Testing**

The DESIGN BUILDER will deploy three-person crews to perform smoke testing in approximately 100,000 linear feet of smoke testing in mainline sewers during the low groundwater period within the project study area. Smoke testing will use a gas-powered blower placed over centrally located manholes. Pressurized liquid smoke will then be released into the blower to fill the surrounding sewer system with non-toxic smoke vapor. Smoke testing is estimated to take approximately 10-15 days. This is in addition to the time it takes to provide notifications as described below.

Prior to conducting any smoke testing work, The DESIGN BUILDER will meet with the County to discuss the implementation schedule, public notification requirements, emergency response and communication requirements, traffic control and work hours. The DESIGN BUILDER will notify residents and emergency response personnel of the smoke testing activities. The notification may include newspaper ads, announcements on public access television or website, and doorknob hangers. Notice of work in the immediate area will be hand delivered using doorknob notifications three days prior to each respective smoke testing area.

The DESIGN BUILDER has also included performance of up to 10 days of dye testing with a two-person crew as needed to confirm sources of I&I entering the sewer system.

Maintenance of traffic (MOT) plans will be prepared, and the traffic control implemented by members of The DESIGN BUILDER. A budget allowance for the development of MOT plans and MOT permitting has been included in the fee estimate because the exact locations, duration, and requirements for the MOT have not yet been determined. The need for MOT and the requirements for MOT will be determined during the planning phase and will be based on the agency who has jurisdiction over the roadway.

#### *Task 4.2 Deliverables:*

- Draft Smoke Testing Memorandum with field data submitted in GIS format. Field data will be submitted on SharePoint Website.
- Final Smoke Testing Memorandum submitted in pdf format with field data submitted in GIS format. Field data will be submitted on SharePoint Website.
- ALL TESTING AND INSPECTIONS WILL BE PERFORMED ON COUNTY FORMS, IF THE COUNTY HAS A STANDARD FORM. ALL DATA NECESSARY FOR PROPER ASSET MANAGEMENT WILL BE COLLECTED, AS DETERMINED BY THE COUNTY.

#### **Task 4.3: Manhole Inspections**

Manhole inspections will be performed by the DESIGN BUILDER in accordance with NASSCO MACP (Version 7.0 or higher) Standards. Copies of the database and condition assessment reports will be provided to WP for analysis and inclusion into the final condition assessment report and 90% plans. Results, photos/video files and reports will be provided in an MACP exchange database (Version 7.0.4 or higher), and where appropriate the DESIGN BUILDER will utilize the COUNTY's standard forms.

Manhole investigations will be led by NASSCO MACP certified staff to identify manholes in need of repair, relining or replacement and will be performed based on system age and O&M history. Manhole inspections will document the existence of a storm water inflow abatement insert/dish, identify previously completed manhole repairs/ rehabilitation, establish the existence of active groundwater infiltration, determine the structural condition of the manhole, based on visual observation, and document any O&M related defects (roots/grease/sediment buildup). The following identifies the approach to be utilized for completing the inspections.

- Conduct First Pass (Level 1) Inspection – Document manhole location, piping connectivity, piping depths, piping materials, piping size, frame/cover dimensions, existence of inflow insert/dish and drop connections, manhole construction materials utilized, manhole dimensions, condition of connecting mainline gravity sewers, and establish general O&M and structural grades using NASSCO MACP guidelines and standard COUNTY forms
- Second Pass (Level 2) Inspection – Conduct digital side scan inspection of all structures using a 3D Sewer Manhole Scanner capable of stitching together photos of the interior of the structure to create a 3D model.

#### *Task 4.3 Deliverables:*

- Rehabilitation recommendation map and table submitted electronically in pdf format.
- Manholes scans will be submitted to the COUNTY electronically. Due to the size of the manholes scans files, they will be submitted via external hard drive as opposed to the SharePoint Website.
- Individual manhole inspections will be documented on COUNTY forms, if available, or in a format acceptable to the COUNTY.

#### **Task 4.4: Closed Circuit Televised (CCTV)**

CCTV of mainline and lateral sewers will be performed by the DESIGN BUILDER to assist in developing a rehabilitation scope. Copies of the database and condition assessment reports will be used for analysis and inclusion into the final condition assessment report and 90% plans. Results will be provided in an PACP / LACP exchange database (Version 7.0.4 or higher), video/photograph files, and PDF reports all on an external hard drive. The length of lateral to be examined will be dictated by the County prior to CCTV commencement.

Lateral CCTV Inspection will require an additional level of effort above the mainline effort. Lateral Inspections are performed utilizing specialized equipment designed to launch an additional sonde locatable camera into the lateral line from a mainline

connection point. The lateral crew is comprised of skilled camera operators and cleaning crews who have experience in launching laterals in this manner. The review process is also specialized, going through a lateral trenchless rehabilitation expert that is familiar with identifying sizes and shapes of lateral to main connections and to facilitate the proper material and repair recommendations.

Based upon our experience on numerous SSES projects, we have affirmed the necessity of creating a log of completed CCTV inspections. The log is created in order to determine and provide accurate mapping of sewer connectivity so that manhole inspection and smoke testing proceeds as seamlessly as possible. CCTV will be the critical path schedule item in Phase 1 and the DESIGN BUILDER intends to have a minimum of 3 CCTV units and jetters onsite for the project duration.

All CCTV sanitary sewer inspections will be performed by a National Association of Sewer Service Companies (NASSCO) certified operator in accordance with Pipeline Assessment and Certification Program (PACP) requirements. The DESIGN BUILDER understands that cleaning pipelines unnecessarily can be destructive to the system and therefore would only clean where necessary to complete a full inspection on a particular pipe segment. The approach will be to crawl a camera from manhole to manhole, without cleaning, to provide our DESIGN BUILDER with the information needed to properly make recommendations for rehabilitation. Where the DESIGN BUILDER requires additional information or cleaning to occur, our SSES crews will deploy the resources to the line in question to clean and re-televis. Using this approach will eliminate a significant amount of unnecessary cleaning, while also conserving water and limiting solids dumping at the wastewater treatment plant. Amount of debris removed during cleaning will be documented and locations where heavy cleaning is required will be noted and submitted to the COUNTY.

#### *Task 4.4 Deliverables:*

- Rehabilitation recommendation maps and tables submitted electronically in pdf format.
- Section Reports in .pdf format will be provided to allow for quick review to the COUNTY
- Videos will be submitted to the COUNTY electronically. Due to the size of the video files, they may be submitted via external hard drive in addition to the SharePoint Website.
- PACP/LACP line segment ratings will be provided

### Task 5: Develop Condition Assessment Technical Memorandum

The DESIGN BUILDER will develop a Condition Assessment Technical Memorandum presenting the rehabilitation methods studied, conditions discovered, recommended rehabilitation or replacement techniques and quantities, and alternative ideas with emphasis on their technical durability, constructability, and life cycle cost. The DESIGN BUILDER will utilize an in-house rehabilitation planning program called ToolBelt for this Task. The DESIGN BUILDER will conduct a pre-submittal document review meeting with the COUNTY's Project Manager prior to submission of the Condition Assessment Technical Memorandum.

Following submittal of the Condition Assessment Technical memorandum the DESIGN BUILDER and the COUNTY will meet to discuss the rehabilitation alternatives and agree upon the selected rehabilitation scope. The DESIGN BUILDER will update the Condition Assessment Technical Memorandum to include the agreed upon revisions.

Upon completion of the Condition Assessment Technical Memorandum preparation, the DESIGN BUILDER will submit the documents to the COUNTY's Project Manager for review and comment which will take up to 21 calendar days. The DESIGN BUILDER will respond in writing to the review comments within 21 calendar days of receipt. Responses shall be forwarded directly to the COUNTY's Project Manager who will respond within 21 days of receipt. The DESIGN BUILDER will revise the Condition Assessment Technical Memorandum as required by COUNTY to obtain COUNTY's written approval and authorization to proceed to the 90% Design task.

The DESIGN BUILDER's final Condition Assessment Technical Memorandum submittal and presentation will include the requirements found in the Condition Assessment Plan, except to the extent such requirements have been expressly waived by the COUNTY in writing. The DESIGN BUILDER will certify that the final version of the Condition Assessment Technical Memorandum fully complies with the Condition Assessment Plan except for such deviations that have been expressly approved in writing by the COUNTY.

The DESIGN BUILDER will conduct a review workshop at completion of this phase to demonstrate how COUNTY's previously submitted comments have been incorporated into the design documents.



connection point. The lateral crew is comprised of skilled camera operators and cleaning crews who have experience in launching laterals in this manner. The review process is also specialized, going through a lateral trenchless rehabilitation expert that is familiar with identifying sizes and shapes of lateral to main connections and to facilitate the proper material and repair recommendations.

Based upon our experience on numerous SSES projects, we have affirmed the necessity of creating a log of completed CCTV inspections. The log is created in order to determine and provide accurate mapping of sewer connectivity so that manhole inspection and smoke testing proceeds as seamlessly as possible. CCTV will be the critical path schedule item in Phase 1 and the DESIGN BUILDER intends to have a minimum of 3 CCTV units and jetters onsite for the project duration.

All CCTV sanitary sewer inspections will be performed by a National Association of Sewer Service Companies (NASSCO) certified operator in accordance with Pipeline Assessment and Certification Program (PACP) requirements. The DESIGN BUILDER understands that cleaning pipelines unnecessarily can be destructive to the system and therefore would only clean where necessary to complete a full inspection on a particular pipe segment. The approach will be to crawl a camera from manhole to manhole, without cleaning, to provide our DESIGN BUILDER with the information needed to properly make recommendations for rehabilitation. Where the DESIGN BUILDER requires additional information or cleaning to occur, our SSES crews will deploy the resources to the line in question to clean and re-televis. Using this approach will eliminate a significant amount of unnecessary cleaning, while also conserving water and limiting solids dumping at the wastewater treatment plant. Amount of debris removed during cleaning will be documented and locations where heavy cleaning is required will be noted and submitted to the COUNTY.

#### *Task 4.4 Deliverables:*

- Rehabilitation recommendation maps and tables submitted electronically in pdf format.
- Section Reports in .pdf format will be provided to allow for quick review to the COUNTY
- Videos will be submitted to the COUNTY electronically. Due to the size of the video files, they may be submitted via external hard drive in addition to the SharePoint Website.
- PACP/LACP line segment ratings will be provided

### Task 5: Develop Condition Assessment Technical Memorandum

The DESIGN BUILDER will develop a Condition Assessment Technical Memorandum presenting the rehabilitation methods studied, conditions discovered, recommended rehabilitation or replacement techniques and quantities, and alternative ideas with emphasis on their technical durability, constructability, and life cycle cost. The DESIGN BUILDER will utilize an in-house rehabilitation planning program called ToolBelt for this Task. The DESIGN BUILDER will conduct a pre-submittal document review meeting with the COUNTY's Project Manager prior to submission of the Condition Assessment Technical Memorandum.

Following submittal of the Condition Assessment Technical memorandum the DESIGN BUILDER and the COUNTY will meet to discuss the rehabilitation alternatives and agree upon the selected rehabilitation scope. The DESIGN BUILDER will update the Condition Assessment Technical Memorandum to include the agreed upon revisions.

Upon completion of the Condition Assessment Technical Memorandum preparation, the DESIGN BUILDER will submit the documents to the COUNTY's Project Manager for review and comment which will take up to 21 calendar days. The DESIGN BUILDER will respond in writing to the review comments within 21 calendar days of receipt. Responses shall be forwarded directly to the COUNTY's Project Manager who will respond within 21 days of receipt. The DESIGN BUILDER will revise the Condition Assessment Technical Memorandum as required by COUNTY to obtain COUNTY's written approval and authorization to proceed to the 90% Design task.

The DESIGN BUILDER's final Condition Assessment Technical Memorandum submittal and presentation will include the requirements found in the Condition Assessment Plan, except to the extent such requirements have been expressly waived by the COUNTY in writing. The DESIGN BUILDER will certify that the final version of the Condition Assessment Technical Memorandum fully complies with the Condition Assessment Plan except for such deviations that have been expressly approved in writing by the COUNTY.

The DESIGN BUILDER will conduct a review workshop at completion of this phase to demonstrate how COUNTY's previously submitted comments have been incorporated into the design documents.

As part of Phase 1 Services, the DESIGN BUILDER will be required to develop and update the rehabilitation cost estimate as part of the development of the Guaranteed Maximum Price (GMP) and of the Condition Assessment Technical Memorandum and bring to the COUNTY's attention in writing any variances between that updated cost estimate and COUNTY's approved Project budget.

After COUNTY's review and approval of the Condition Assessment Technical Memorandum and issuance of COUNTY's written authorization to proceed, DESIGN BUILDER will commence with preparation of the 90% design.

#### *Task 5 Deliverables:*

- Draft and final Condition Assessment Technical Memorandum submitted to the COUNTY.
- Written response to client's comments submitted to the COUNTY.
- Proposal for Phase 2 Services including the GMP submitted to the COUNTY.
- Review comments for meeting agendas and summaries.

#### **Task 6: 90% Design Plans and Specifications**

Based on the approved Condition Assessment Technical Memorandum DESIGN BUILDER will prepare the 90% Design set of construction documents for each zone. This task includes the preparation of deliverables that will comprise of a Master Set of Construction Documents which will include general notes, PCU standard details, Technical Specifications, and support information common to all priority areas. A specific set of plans for each priority area will reference the Master Set of Construction Documents and will include specific plans, technical special provisions, and details unique to each priority area.

It is anticipated that specific site plans will be developed using GIS and not CADD. The plans will be developed using the COUNTY GIS, aeriels or similar background images, and information developed from the field services. A table will be developed that identifies each asset to be rehabilitated and or repaired. No profiles will be provided except in areas where a dig repair is needed for the pipeline rehabilitation. No survey is anticipated, however there may be instances where survey is required. Therefore, in the cost proposal we have included an allowance for surveying that will only be billed to the COUNTY with written approval. Characteristics of the engineering services and deliverables to be produced under this Task include the following:

- Plan drawings will be presented on a 1"= 100' when plotted on standard 22" by 34" size sheets. The specific plan sheet will be developed in GIS and thus will not follow the requirements of the COUNTY CAD (Computer Aided Design) standards. Information will include but not be limited to connection details, existing conditions as obtained from the COUNTY'S or associated municipalities GIS, proposed gravity sanitary sewer system, and specific details developed for each asset or zone as needed. The design will include either rehabilitation, where feasible, or replacement to meet COUNTY standards.
- Profile drawings will be presented only for sections of the project where existing conditions or the proposed design require additional information or clarification for the contractor to clearly interpret the design intent. Additionally, sections will be prepared for dig repairs located within an FDOT right-of-way. In such cases, separate profile or cross section sheets will be provided following the general requirements of the COUNTY CAD standards.
- The design drawings will be used in developing construction cost estimates, permitting, and constructing the Project. The design drawings will under internal review before being submitted for COUNTY review at the 90% completion level. Final drawings will be performed in Phase 2.
- The DESIGN BUILDER will develop a construction sequencing plan submittal for making connections to the existing sanitary sewer system to minimize disruptions.
- The design will detail the sanitary sewer system components that are expected to be rehabilitated or replaced.
- Sewer laterals from the sanitary mains to the new cleanout located approximately five (5) feet (or as reasonably close as possible) off each home and at the right of way will be provided for each single-family dwelling owner who participates in the program, as required. (Limits to be set by the COUNTY)
- COUNTY standard specifications will be utilized whenever possible. Required sections not covered by COUNTY standard specifications will be prepared by the DESIGN BUILDER for review by the COUNTY.

Upon completion of the 90% drawings and specifications, the DESIGN BUILDER will submit the documents to the COUNTY's Project Manager for review and comment. 21 days after submittal of the 90% documents DESIGN BUILDER will attend a design review workshop at the COUNTY'S offices where we will review the COUNTY's comments. DESIGN BUILDER will respond in writing to the review comments within 14 calendar days of receipt. Responses shall be forwarded directly to the COUNTY's Project Manager who will respond within 21 days of receipt. DESIGN BUILDER will revise the 90% documents as required by the COUNTY to obtain the COUNTY's written approval.

At the completion of the preparation of the 90% Design Phase, The DESIGN BUILDER will develop a GMP for Phase 2. In addition to the construction services to be provided in Phase 2, the DESIGN BUILDER will provide costs for its services to complete the drawings and specifications, prepare permit applications, secure all required permits and respond to requests for additional information, perform reviews, prepare record drawings, and other construction related activities.

Since typical CADD drawings are not being developed, the COUNTY has specified that during Phase 2 of the project the as-built drawing phase will need to include updating the COUNTY'S GIS to include GIS attributes, which may include multiple attributes for each pipe, and that the COUNTY'S current attribute table must be used. Costs for as-built drawings/GIS attribute updates will be included in the Phase 2 proposal.

#### *Task 6 Deliverables:*

- 90% Engineering Design Documents (plans and specifications).
- Review comments for meeting agendas and summaries.
- Guaranteed maximum price proposal for the DESIGN BUILDER's Phase 2 work.

### Task 7: Public Outreach

The DESIGN BUILDER will provide proactive, transparent, and responsive communications with the COUNTY, stakeholders and other interested parties during Phase 1 of the Find and Fix Program. In addition, The DESIGN BUILDER will coordinate with the COUNTY and prepare outreach material consistent with the COUNTY branding guidelines.

#### **Task 7.1 Communications Plan**

The DESIGN BUILDER will develop a Communications Plan (Plan) tailored to the specifics of the project. Some key elements of the Plan include the development of engagement activities and the tools and techniques to be used during Phase 1 of the project.

#### **Task 7.2 Project Collateral Development**

The DESIGN BUILDER will develop the following collateral for Phase 1 of the project. All collateral will be in "plain language" and ADA-compliant.

- Fact Sheet
- Preliminary Activity Notifications/Meeting Notifications
- Frequently Asked Questions (FAQs)
- Webpage content

All deliverables will be provided to the COUNTY for review and approval before distribution.

#### **Task 7.3 Day to Day Public Engagement Activities**

- Prepare and distribute notifications/door hangers via door-to-door, mailer, or email to inform property owners, businesses, and tenants regarding Phase 1 activities
- Face-to-face/one-on-one interaction/meetings with property/business owners, tenants, HOAs, special interest groups, and other interested parties (as needed/required)
- Develop and maintain project Stakeholder Database
- Develop COUNTY webpage content and updates as needed

- Secure and maintain 24/7 project-specific phone number and email address
- Respond to inquiries received and document in Stakeholder Database
- Draft posts regarding key/milestone project developments for the COUNTY's social media platforms

#### **Task 7.4 Pre-Construction Public Meetings (One per Zone)**

Plan, coordinate, and conduct in-person pre-construction public meetings in an open house format. Elements of the public meetings planning include, but are not limited to:

- Identification of an ADA-compliant meeting facility
- Research of local agency calendars to ensure no conflict with public meeting/event date/time
- Preparation of public meeting collateral (meeting notification, press release, project information handout, content for posting to the COUNTY website/social media platforms, name badges, sign-in sheets, comment forms, etc.)
- Performing mail out of notifications regarding public meetings unless otherwise directed by the COUNTY
- Developing PowerPoint presentation (includes assisting the design-build team and
- PCU with content, script development, and presentation/PPT voiceover)
- Coordination with the COUNTY on event logistics
- Attendance as needed to assist with meeting activities (set-up/tear-down, staff sign in table, assist attendees, etc.)
- Preparation of public meeting/event summary

#### **Task 7.5 Right of Entry Assistance**

Obtaining Right-of-Entry (ROE) Agreements from property owners in order to gain access for PSL repairs/replacement. Includes up to three ROE mailouts to properties determined to need PSL repairs and in-person contacts as needed to collect approvals from non-responsive property owners. Received ROEs will be documented and matched to properties within each Zone.

#### **Task 7.6 Project Management**

Project management duties include oversight and coordination of outreach tasks, staff, schedule, and budget. Also includes QC/review of deliverables before submitting to the County for final approval.

#### *Task 7 Deliverables:*

- As detailed above

### **Task 8: Optional Services**

The following optional services will only be used upon authorization by PCU.

#### **Task 8.1: Pre-Assessment Flow Monitoring Program**

The following optional services will only be used upon authorization by PCU. As identified in Section 3.3 Flow Monitoring, of the *Gravity Sewer Rehabilitation Design Criteria Package*, as prepared by Wade Trim, August 2023, WP and our subconsultant (ADS) will implement a flow monitoring program, “to be conducted before, during and after the planning and execution of remedial work to measure, validate, and document the efficacy of the results of the work performed.” The work described in this Task is specific to the requirements of the flow monitoring for the Pre-Condition Assessment (planning) phase of the flow monitoring. Additionally, the flow monitoring and analysis will be performed in accordance with Appendix K: Standard Operation Procedure for I&I Reduction Effectiveness Analysis, of the Design Criteria Package, as modified during the scoping of this project which includes the elimination of any analysis of the data at this time. Data will be provided to the Find and Fix DESIGN BUILDER for them to analyze.



*Flow Monitoring Plan Development* –developed under a previous scope of work.

*Flow Meter Network* – DESIGN BUILDER will coordinate its activities with PCU and maintain monitoring devices and remove monitoring devices when directed. Flow meters will be utilized to establish wastewater flows during dry and wet weather conditions and tipping bucket rain gauges to log rainfall. Flow metering shall be conducted simultaneously with rainfall monitoring. The proposed period for flow monitoring will be a maximum of 120 calendar days starting as early as July 2024 and running through at least November 2024, based on historical rainfall for the Pinellas County area. The following tasks shall be performed by WP:

*Perform field equipment maintenance.* Field visits for maintenance will occur every other week, and if needed, based on daily data reviews. Maintenance activities may include battery replacement, manual meter calibration, and sensor cleaning. One additional maintenance is included during the flow monitoring program to cover unforeseen conditions.

The flow and rainfall measurements shall be recorded in 5-minute increments. The intent of the data collection is to determine the difference between pre-rehabilitation flows and post-rehabilitation flows and therefore the full data analysis described in the Flow Monitoring Methodology protocol is not required. Instead, the analysis will comply with Appendix K of the Gravity Sewer Rehabilitation Design Criteria Package. In compliance with this document, a minimum of two wet weather events totaling 1.5-inches or more and two wet weather events totaling 1.0-inch or more will be required for the analysis.

*Rain Gauge Network* – WP will coordinate its activities with the PCU and maintain four wireless rain gauges for the flow monitoring program within Zones 4, 8 and 13. Rain gauge equipment will be in accordance with the Flow Monitoring Methodology protocol with tipping bucket devices set to record rainfall in 5-minute intervals. Rain gauges will be monitored, remotely, on a weekly basis. Rain gauge equipment will be mounted in secure, PCU-controlled locations and easily accessible by WP personnel.

*Groundwater Monitoring* – WP will collect data from the groundwater monitoring well.

*Data Review* – Flow and rainfall monitoring data will be accessible through telemetry on a daily basis uploaded to an ADS-PRISM cloud database. ADS will perform daily data reviews to identify meter maintenance needs, and WP will perform weekly data reviews to identify notable flow conditions. **Note: COIUNTY does not require real-time access to the data, but raw and final data will be provided as a deliverable.**

*Task 8.1 Deliverables:*

- Critical conditions such as surcharge conditions or other abnormal site conditions compared to other times will be identified during weekly data review and will be provided to the PCU.
- Raw and final flow monitoring data (Excel or .csv file format).

## **Project Schedule**

We propose the services described above will be completed over a 12-month period from Notice to Proceed. The DESIGN BUILDER proposes to utilize Microsoft Project for all scheduling and schedule updates. This would allow the DESIGN BUILDER members to work seamlessly without necessitating additional software purchases.

## **Assumptions, Exclusions and Conditions**

The following is a list of the assumptions made during the preparation of this proposal, exclusions from this scope of services, and conditions of that are required to be met:

- Flow monitoring is for Phase 1 (Pre-Condition Assessment Phase) only. The costs for Phase 2 flow monitoring will be provided as part of the Phase 2 GMP.
- All deliverables will be electronic in PDF format and data will be provided in spreadsheet or database format.
- The drawings submitted to the COUNTY will be generated using GIS plan sheets and thus will not meet the current Pinellas County Public Works CADD standards. However, drawings that include plan and profile, standard details and other general drawings will meet the current Pinellas County Public Works CADD standards.
- The specifications submitted to the COUNTY will use the current Specification Language as per Pinellas County Public Works Standards.

### **Compensation**

We propose to provide the Scope of Services described above for tasks 1-7 on a Lump Sum basis for \$4,151,507.00, with an overall GMP inclusive of Task 8 (Optional Services) and an allowance for unspecified work of \$4,954,893.00 Supporting documentation will be provided with all pay requests. This project budget will not be exceeded without the COUNTY'S written approval.

As part of the total compensation for this project we have included a 5% PHASE 1 GMP allowance for unspecified work. The allowance for unspecified work is meant to cover unforeseen scope items or defined scope of work items that were not quantifiable at the time of writing this proposal. Non-quantifiable scope items include but are not limited to efforts such as survey, Public Outreach not specifically called out herein, additional Maintenance of Traffic, bypass pumping, geotechnical investigations, police escorts for night work, and environmental services. Additionally, while we estimated a cost for MOT permitting in the optional services, the level of effort and/or number of permits may change thus this would be another area where unspecified work funds may be used. The fee contained within the unspecified work allowance will only be used with approval by the COUNTY and all cost breakdowns will be provided to the COUNTY. The table below summarizes the fee per task on this project.

Table 2: Summary of PROJECT Costs

Task	Lump Sum Fee Amount
<i>Phase I – Scope of Work</i>	
Task 1 – Project Management, Kickoff Meeting, and Progress Meetings	\$415,196.00
Task 2 – Data Collection and Review	\$115,491.00
Task 3 – Develop Condition Assessment Plan	\$271,333..00
Task 4 – Implement Condition Assessment Plan	\$2,544,824.00
Task 5 – Develop Condition Assessment Technical Memorandum	\$217,440.00
Task 6 – 90% Design Plans and Specifications	\$321,123.00
Task 7 – Public Outreach	\$266,100.00
<b>Total</b>	<b>\$4,151,507.00</b>
Task 8 Optional Services	\$595,810.00
Unspecified Work (5%)	\$207,576.00
<b>Total (Inclusive of Optional Services and Unspecified Work)</b>	<b>\$4,954,893.00</b>

[illegible]



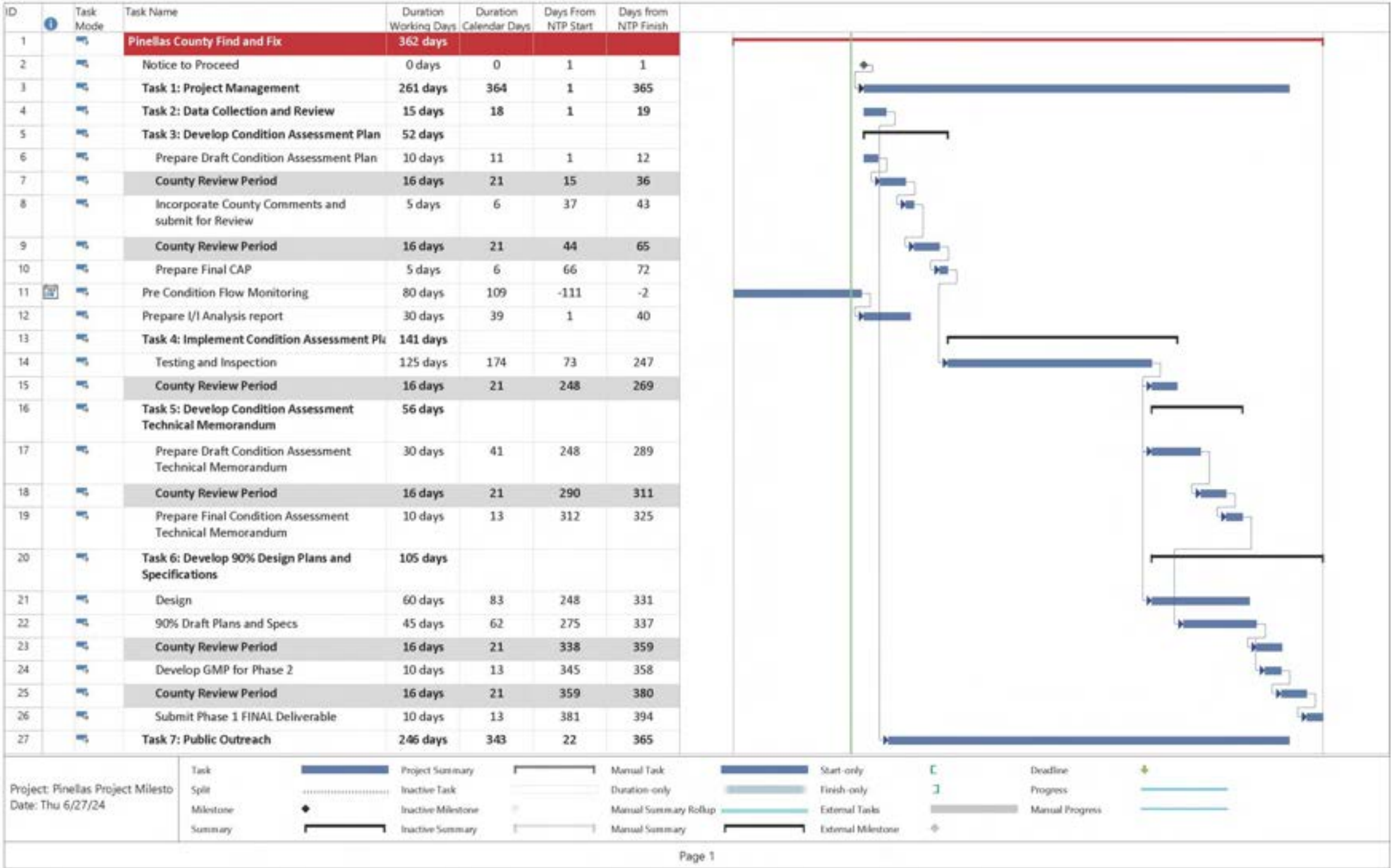
/1/2024

[illegible]



7/1/2024

DRAFT PROJECT SCHEDULE



7/1/2024

# SUPPORTING DOCUMENTATION





7/1/2024

Project Task Description	Principal in Charge		Senior Project Manager		QA/QC Manager		Lead Project Engineer		Collaborative Delivery Specialist		Project Engineer I		Engineering Intern		Senior CADD Operator		CADD Operator		Senior GIS Analyst		GIS Analyst		Field Services Manager		Field Service Technician		Senior Admin. Assistant		Admin. Assistant		Labor Subtotal		Subconsultant Expenses	Equipment Fee	Subtotal Task																																		
	Rate =	\$352.15	Rate =	\$284.61	Rate =	\$304.07	Rate =	\$278.87	Rate =	\$312.20	Rate =	\$156.16	Rate =	\$106.00	Rate =	\$169.76	Rate =	\$152.80	Rate =	\$167.65	Rate =	\$146.02	Rate =	\$172.47	Rate =	\$143.87	Rate =	\$135.11	Rate =	\$98.16																																							
	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost																																					
Task 4.4: CCTV Inspections																																																																					
A. CCTV Data QA/QC Review	0	\$0	8	\$2,277	0	\$0	64	\$17,848	0	\$0	30	\$4,685	0	\$0	0	\$0	0	\$0	0	\$0	16	\$2,336	0	\$0	0	\$0	0	\$0	0	\$0	118	\$27,146	\$0		\$0	\$27,145.68																																	
Subtotal Task 4.4																																			0	\$ -	8	\$ 2,277	0	\$ -	64	\$ 17,848	0	\$ -	30	\$ 4,685	0	\$ -	0	\$ -	0	\$ -	0	\$ -	16	\$ 2,336	0	\$ -	0	\$ -	0	\$ -	118	\$27,146	\$0	\$0	\$27,146		
Subtotal Task 4																																																																		\$207,698			
Task 5 - Develop Condition Assessment Technical Memorandum																																																																					
A. Final Data Evaluation	0	\$0	8	\$2,277	0	\$0	40	\$11,155	0	\$0	20	\$3,123	20	\$2,120	0	\$0	0	\$0	0	\$0	16	\$2,336	0	\$0	0	\$0	0	\$0	0	\$0	104	\$21,011	\$0	\$0	\$21,011.20																																		
B. Site Visits	0	\$0	10	\$2,846	0	\$0	25	\$6,972	0	\$0	4	\$625	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	29	\$10,442	\$0	\$0	\$10,442.39																																		
C. Prepare Pre-Submittal Condition Assessment TM	0	\$0	8	\$2,277	4	\$1,216	28	\$7,808	0	\$0	16	\$2,499	8	\$848	0	\$0	0	\$0	0	\$0	8	\$1,168	0	\$0	0	\$0	4	\$540	24	\$2,356	100	\$18,713	\$0	\$0	\$18,712.52																																		
D. Prepare Draft Condition Assessment TM	2	\$704	8	\$2,277	4	\$1,216	40	\$11,155	0	\$0	16	\$2,499	0	\$0	0	\$0	0	\$0	0	\$0	16	\$2,336	0	\$0	0	\$0	1	\$135	24	\$2,356	111	\$22,678	\$0	\$0	\$22,678.09																																		
E. Prepare Final Condition Assessment TM	0	\$0	8	\$2,277	4	\$1,216	40	\$11,155	0	\$0	16	\$2,499	0	\$0	0	\$0	0	\$0	0	\$0	16	\$2,336	0	\$0	0	\$0	1	\$135	24	\$2,356	109	\$21,974	\$0	\$0	\$21,973.79																																		
F. Review Workshop	0	\$0	6	\$1,708	0	\$0	12	\$3,346	3	\$937	6	\$937	0	\$0	0	\$0	0	\$0	0	\$0	6	\$876	0	\$0	0	\$0	0	\$0	0	\$0	33	\$7,804	\$0	\$0	\$7,803.78																																		
G. Rehabilitation Cost Estimate	0	\$0	8	\$2,277	4	\$1,216	24	\$6,693	0	\$0	8	\$1,249	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	4	\$393	48	\$11,828	\$0	\$0	\$11,827.96																																		
H. Deliverables (Written Responses, Proposal for Ph. 2, Review Comments for Meeting Agendas and Summaries)	0	\$0	10	\$2,846	4	\$1,216	10	\$2,789	0	\$0	0	\$0	8	\$848	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	4	\$393	36	\$8,092	\$0	\$0	\$8,091.72																																		
Subtotal Task 5																																			2	\$704	56	\$18,784	20	\$6,081	219	\$61,073	3	\$937	96	\$13,430	36	\$3,816	0	\$0	0	\$0	0	\$0	62	\$9,053	0	\$0	0	\$0	6	\$811	80	\$7,853	570	\$122,541	\$0	\$0	\$122,541
Task 6 - Develop 90% Design Plans and Specifications																																																																					
A. Design	0	\$0	20	\$5,692	0	\$0	140	\$39,042	0	\$0	80	\$12,493	40	\$4,240	0	\$0	8	\$1,222	0	\$0	24	\$3,504	0	\$0	0	\$0	0	\$0	0	\$0	312	\$66,194	\$0	\$0	\$66,193.68																																		
B. Preliminary Plan Preparation	0	\$0	8	\$2,277	10	\$3,041	48	\$13,386	0	\$0	24	\$3,748	0	\$0	4	\$679	80	\$12,224	4	\$671	80	\$11,682	0	\$0	0	\$0	0	\$0	0	\$0	258	\$47,706	\$0	\$0	\$47,706.42																																		
C. Preliminary Specification Preparation	0	\$0	8	\$2,277	10	\$3,041	32	\$8,924	0	\$0	24	\$3,748	8	\$848	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	4	\$540	24	\$2,356	110	\$21,734	\$0	\$0	\$21,733.54																																				
D. Review Workshop	0	\$0	6	\$1,708	0	\$0	12	\$3,346	3	\$937	6	\$937	0	\$0	0	\$0	0	\$0	0	\$0	6	\$876	0	\$0	0	\$0	0	\$0	0	\$0	33	\$7,804	\$0	\$0	\$7,803.78																																		
E. 90% Plan Completion	2	\$704	16	\$4,554	24	\$7,298	100	\$27,887	0	\$0	24	\$3,748	0	\$0	4	\$679	120	\$18,336	4	\$671	120	\$17,522	0	\$0	0	\$0	0	\$0	0	\$0	414	\$81,399	\$0	\$0	\$81,398.62																																		
F. 90% Specification Completion	2	\$704	8	\$2,277	24	\$7,298	56	\$15,617	0	\$0	24	\$3,748	8	\$848	0	\$0	0	\$0	0	\$0	8	\$1,168	0	\$0	0	\$0	4	\$540	24	\$2,356	158	\$34,556	\$0	\$0	\$34,555.86																																		
G. Develop GMP Proposal	0	\$0	8	\$2,277	4	\$1,216	16	\$4,462	0	\$0	4	\$625	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	8	\$785	40	\$9,365	\$0	\$0	\$9,365.00																																		
H. Permits and Construction Prep	0	\$0	8	\$2,277	0	\$0	16	\$4,462	0	\$0	16	\$2,499	0	\$0	0	\$0	0	\$0	0	\$0	4	\$584	0	\$0	0	\$0	0	\$0	4	\$393	48	\$10,214	\$0	\$0	\$10,214.08																																		
I. Deliverables (Engineering Design Docs, Review Comments for Meeting A	0	\$0	8	\$2,277	2	\$608	12	\$3,346	0	\$0	4	\$625	4	\$424	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	16	\$1,571	46	\$8,851	\$0	\$0	\$8,850.66																																		
Subtotal Task 6																																			4	\$1,409	90	\$25,615	74	\$22,501	432	\$120,472	3	\$937	206	\$32,169	60	\$6,360	8	\$1,358	208	\$31,782	8	\$1,341	242	\$35,337	0	\$0	0	\$0	8	\$1,081	76	\$7,460	1419	\$287,822	\$0	\$0	\$287,822
Task 7 - Public Outreach																																																																					
A. Preparatory Meetings (3)	0	\$0	12	\$3,415	0	\$0	24	\$6,693	0	\$0	12	\$1,874	0	\$0	0	\$0	0	\$0	0	\$0	6	\$876	0	\$0	0	\$0	0	\$0	0	\$0	54	\$12,858	\$0	\$0	\$12,858.24																																		
B. Community Meetings (3)	0	\$0	12	\$3,415	0	\$0	24	\$6,693	0	\$0	12	\$1,874	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	48	\$11,982	\$0	\$0	\$11,982.12																																		
Subtotal Task 7																																			0	\$0	24	\$6,831	0	\$0	48	\$13,386	0	\$0	24	\$3,748	0	\$0	0	\$0	0	\$0	0	\$0	6	\$876	0	\$0	0	\$0	0	\$0	102	\$24,840	\$0	\$0	\$24,840		
Task 8 - Optional Services - Additional Pre-Assessment Flow Monitoring Plan																																																																					
A. Data Management & Development	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	\$0	\$0	\$0.00																																		
B. Flow Meter Site Scouting	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	\$0	\$0	\$0.00																																		
C. Review Existing Groundwater Monitoring	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	\$0	\$0	\$0.00																																		
D. Pre-Rehab Flow Meters (15); Maint., Removal	0	\$0	8	\$2,277	0	\$0	8	\$2,231	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	16	\$4,508	\$155,210	\$0	\$159,717.84																																		
E. Rain Gauge Network (4); Maint., Removal	0	\$0	0	\$0	0	\$0	4	\$1,115	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	4	\$1,115	\$20,848	\$0	\$21,963.48																																		
F. Flow Meter Weekly Data Review	0	\$0	8	\$2,277	0	\$0	20	\$5,577	0	\$0	33	\$5,153	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	61	\$13,008	\$0	\$0	\$13,007.56																																		
G. Rain Gauge Weekly Data Review	0	\$0	0	\$0	0	\$0	2	\$558	0	\$0	5	\$781	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	7	\$1,339	\$0	\$0	\$1,338.54																																		
K. Maintenance of Traffic Coordination	0	\$0	4	\$1,138	0	\$0	4	\$1,115	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	8	\$2,254	\$0	\$0	\$2,253.92																																		
L. Deliverables (Deleted)																																																																					
Subtotal Task 8																																			0	\$0	20	\$5,692	0	\$0	38	\$10,597	0	\$0	38	\$5,934	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	96	\$22,223	\$176,058	\$0	\$198,281		
PROJECT TOTAL																																			9	\$ 3,169	470	\$ 136,613	118	\$ 35,880	1349	\$ 376,196	22	\$ 6,868	580	\$ 90,573	266	\$ 28,196	8	\$ 1,358	208	\$ 31,782	60	\$ 10,059	644	\$ 94,037	30	\$ 5,174	149	\$ 21,437	29	\$ 3,918	312	\$ 30,626	4,254	\$875,886	\$ 176,058	\$ 10,284	\$1,062,228

7/1/2024

MEADE & HUNT LOE TABLE

Project Task Description	Senior Project Manager		Project Manager		QA/QC Manager		Senior Project Engineer		Lead Project Engineer		Collaborative Delivery Specialist		Project Engineer I		Senior GIS Analyst		GIS Analyst		Field Service Technician		Field Service Technician		Senior Admin. Assistant		Admin. Assistant		Labor Subtotal		Subconsultant Expenses			Equipment Fee	5%	Expenses	Subtotal Task
	Rate =	\$300.00	Rate =	\$265.00	Rate =	\$300.00	Rate =	\$254.00	Rate =	\$254.00	Rate =	\$398.00	Rate =	\$171.00	Rate =	\$161.00	Rate =	\$139.00	Rate =	\$139.00	Rate =	\$139.00	Rate =	\$133.00	Rate =	\$109.00			Cornerstone		Equip Subs				
	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost							
Task 1: Project Management																																			
Task 1.1: Project Management																																			
A. Project Management	100	\$30,000	8	\$2,120	0	\$0	8	\$2,032	0	\$0	8	\$3,184	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	8	\$1,064	0	\$0	132	\$38,400.00	\$0	\$0	\$0	\$0	\$0	\$0	\$38,400.00
B. Health and Safety Plan	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
B. QA/QC	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
D. Site Visits	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
E. Deliverables (Invoicing, Project Status Reports, Schedule Updates, etc.)	8	\$2,400	0	\$0	0	\$0	0	\$0	30	\$7,620	20	\$7,960	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	24	\$3,192	0	\$0	82	\$21,172.00	\$0	\$0	\$0	\$0	\$0	\$0	\$21,172.00
Subtotal Task 1.1	108	\$ 32,400	8	\$ 2,120	0	\$ -	8	2032	30	\$ 7,620	28	\$ 11,144	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	32	\$ 4,256	0	\$ -	214	\$59,572.00	\$0	\$0	\$0	\$0	\$0	\$0	\$59,572.00
Task 1.2: Kickoff Meeting																																			
A. Virtual Kick-Off Meeting (1)	4	\$1,200		\$0	0	\$0	0	\$0	4	\$1,016	0	\$0	0	\$0	4	\$644	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	12	\$2,860.00	\$0	\$0	\$0	\$0	\$0	\$0	\$2,860.00
B. Deliverables (Review Agenda and Summary)	1	\$300		\$0	0	\$0	0	\$0	4	\$1,016	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2	\$266	0	\$0	7	\$1,582.00	\$0	\$0	\$0	\$0	\$0	\$0	\$1,582.00
Subtotal Task 1.2	5	\$ 1,500	0	\$ -	0	\$ -	0	\$ -	8	\$ 2,032	0	\$ -	0	\$ -	4	\$ 644	0	\$ -	0	\$ -	0	\$ -	2	\$ 266	0	\$ -	19	\$4,442.00	\$0	\$0	\$0	\$0	\$0	\$0	\$4,442.00
Task 1.3: Progress Meetings																																			
A. Virtual Monthly Progress Meetings (12)	24	\$7,200	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	24	\$7,200.00	\$0	\$0	\$0	\$0	\$0	\$0	\$7,200.00
B. Deliverables (Review Agendas and Summaries)	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
Subtotal Task 1.3	24	\$ 7,200	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	24	\$7,200.00	\$0	\$0	\$0	\$0	\$0	\$0	\$7,200.00
Task 2 - Data Collection and Review																																			
A. Review existing County and GIS info, pump station runtimes for each Zone	24	\$7,200	0	\$0	0	\$0	0	\$0	15	\$3,810	4	\$1,592	13	\$2,223	35	\$5,635	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	91	\$20,460.00	\$0	\$0	\$0	\$0	\$0	\$0	\$20,460.00
B. Review existing Reports, County Design Criteria Packages, Policies, Ordinances, Specifications, Protocols, Surveys, Record Drawings, and Templates	20	\$6,000	0	\$0	0	\$0	0	\$0	12	\$3,048	3	\$1,194	6	\$1,026	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	41	\$11,268.00	\$0	\$0	\$0	\$0	\$0	\$0	\$11,268.00
C. Deliverables (Data needs Spreadsheet, Data received Summary)	10	\$3,000	0	\$0	2	\$600	0	\$0	2	\$508	1	\$398	2	\$342	0	\$0	0	\$0	0	\$0	0	\$0	2	\$218	19	\$5,066.00	\$0	\$0	\$0	\$0	\$0	\$0	\$5,066.00		
Subtotal Task 2	54	\$ 16,200	0	\$ -	2	\$ 600	0	\$ -	29	\$ 7,366	8	\$ 3,184	21	\$ 3,591	35	\$ 5,635	0	\$ -	0	\$ -	0	\$ -	0	\$ -	2	\$ 218	151	\$36,794.00	\$0	\$0	\$0	\$0	\$0	\$0	\$36,794.00
Task 3 - Develop Condition Assessment Plan																																			
A. Prepare Draft Condition Assessment Plan (CAP)	8	\$2,400	0	\$0	0	\$0	80	\$20,320	20	\$5,080	8	\$3,184	20	\$3,420	16	\$2,576	80	\$11,120	0	\$0	0	\$0	2	\$266	8	\$872	242	\$49,238.00	\$0	\$0	\$0	\$0	\$0	\$0	\$49,238.00
B. CAP Review, Comment Response	8	\$2,400	0	\$0	0	\$0	8	\$2,032	8	\$2,032	4	\$1,592	4	\$684	0	\$0	0	\$0	0	\$0	0	\$0	4	\$436	36	\$9,176.00	\$0	\$0	\$0	\$0	\$0	\$0	\$9,176.00		
C. Prepare Final CAP	8	\$2,400	0	\$0	0	\$0	20	\$5,080	8	\$2,032	4	\$1,592	10	\$1,710	0	\$0	40	\$5,560	0	\$0	0	\$0	0	\$0	8	\$872	98	\$19,246.00	\$0	\$0	\$0	\$0	\$0	\$0	\$19,246.00
Subtotal Task 3	24	\$ 7,200	0	\$ -	0	\$ -	108	\$ 27,432	36	\$ 9,144	16	\$ 6,368	34	\$ 5,814	16	\$ 2,576	120	\$ 16,680	0	\$ -	0	\$ -	2	\$ 266	20	\$ 2,180	376	\$77,660.00	\$0	\$0	\$0	\$0	\$0	\$0	\$77,660.00
Task 4 - Implement Condition Assessment Plan																																			
Task 4.1: Pre-Condition Assessment Flow Monitoring Plan																																			
A. Data Management & Development	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
B. Flow Meter Site Scouting	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
C. Review Existing Groundwater Monitoring	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
D. Pre-Rehab Flow Meters (X); Install, Maint., Removal	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
E. Rain Gauge Network (X); Install, Maint., Removal	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
F. Weekly Data Review	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
G. NFI Site Scouting	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
H. Night Flow Isolations	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
I. Maintenance of Traffic Coordination	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
J. Data Evaluation and I&I Analysis	4	\$1,200	0	\$0	8	\$2,400	0	\$0	24	\$6,096	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	36	\$9,696.00	\$0	\$0	\$0	\$0	\$0	\$0	\$9,696.00
K. Prepare Draft TM for I&I Analysis	8	\$2,400	0	\$0	0	\$0	0	\$0	20	\$5,080	8	\$3,184	30	\$5,130	0	\$0	0	\$0	0	\$0	0	\$0	4	\$532	20	\$2,180	90	\$18,506.00	\$0	\$0	\$0	\$0	\$0	\$0	\$18,506.00
L. TM Review Meeting	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
M. Prepare Final TM for I&I Analysis	10	\$3,000	0	\$0	8	\$2,400	0	\$0	10	\$2,540	8	\$3,184	10	\$1,710	0	\$0	0	\$0	0	\$0	0	\$0	2	\$266	8	\$872	56	\$13,972.00	\$0	\$0	\$0	\$0	\$0	\$0	\$13,972.00
N. Deliverables (Meeting Agenda and Summary, Flow Data)	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2	\$796	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2	\$218	4	\$1,014.00	\$0	\$0	\$0	\$0	\$0	\$0	\$1,014.00		
Subtotal Task 4.1	22	\$ 6,600	0	\$ -	16	\$ 4,800	0	\$ -	54	\$ 13,716	18	\$ 7,164	40	\$ 6,840	0	\$ -	0	\$ -	0	\$ -	0	\$ -	6	\$ 798	30	\$ 3,270	186	\$43,188.00	\$0	\$0	\$0	\$0	\$0	\$0	\$43,188.00


7/1/2024

Project Task Description	Senior Project Manager		Project Manager		QA/QC Manager		Senior Project Engineer		Lead Project Engineer		Collaborative Delivery Specialist		Project Engineer I		Senior GIS Analyst		GIS Analyst		Field Service Technician		Field Service Technician		Senior Admin. Assistant		Admin. Assistant		Labor Subtotal		Subconsultant Expenses			Equipment Fee	5%	Expenses	Subtotal Task
	Rate =	\$300.00	Rate =	\$265.00	Rate =	\$300.00	Rate =	\$254.00	Rate =	\$254.00	Rate =	\$398.00	Rate =	\$171.00	Rate =	\$161.00	Rate =	\$139.00	Rate =	\$139.00	Rate =	\$139.00	Rate =	\$133.00	Rate =	\$109.00			Cornerstone		Equip Subs				
	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost							
Task 4.2: Smoke and Dye Testing																																			
A. Implementation Meeting	6	\$1,800	0	\$0	0	\$0	0	\$0	6	\$1,524	4	\$1,592	4	\$684	0	\$0	0	\$0	4	\$556	0	\$0	0	\$0	0	\$0	24	\$6,156.00	\$0	\$0	\$0	\$0	\$0	\$0	\$6,156.00
B. Public Notification	4	\$1,200	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	4	\$556	0	\$0	0	\$0	0	\$0	8	\$1,756.00	\$0	\$0	\$0	\$0	\$0	\$0	\$1,756.00
C. Smoke Testing	8	\$2,400	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	40	\$5,560	144	\$20,016	0	\$0	0	\$0	0	\$0	192	\$27,976.00	\$0	\$0	\$0	\$0	\$0	\$0	\$27,976.00
D. Dye Water Testing	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
E. Smoke and Dye Water Test Data Review	8	\$2,400	0	\$0	0	\$0	0	\$0	40	\$10,160	8	\$3,184	16	\$2,736	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	72	\$18,480.00	\$0	\$0	\$0	\$0	\$0	\$0	\$18,480.00
F. Maintenance of Traffic Coordination	8	\$2,400	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	8	\$2,400.00	\$0	\$0	\$0	\$0	\$0	\$0	\$2,400.00
G. Prepare Draft TM for Smoke Testing Analysis	10	\$3,000	0	\$0	2	\$600	0	\$0	4	\$1,016	2	\$796	2	\$342	0	\$0	0	\$0	0	\$0	0	\$0	4	\$532	4	\$436	28	\$6,722.00	\$0	\$0	\$0	\$0	\$0	\$0	\$6,722.00
H. Prepare Final TM for Smoke Testing Analysis	10	\$3,000	0	\$0	2	\$600	0	\$0	4	\$1,016	2	\$796	2	\$342	0	\$0	0	\$0	0	\$0	0	\$0	4	\$532	4	\$436	28	\$6,722.00	\$0	\$0	\$0	\$0	\$0	\$0	\$6,722.00
Subtotal Task 4.2	54	\$16,200	0	\$0	4	\$1,200	0	\$0	54	\$13,716	16	\$6,368	24	\$4,104	0	\$0	40	\$5,560	152	\$21,128	0	\$0	8	\$1,064	8	\$872	360	\$70,212.00	\$0	\$0	\$0	\$0	\$0	\$0	\$70,212.00
Task 4.3: Manhole Inspections																																			
A. Coordination of Manhole Inspections	8	\$2,400	0	\$0	0	\$0	0	\$0	40	\$10,160	8	\$3,184	8	\$1,368	80	\$12,880	20	\$2,780	200	\$27,800	200	\$27,800	0	\$0	0	\$0	564	\$88,372.00	\$0	\$0	\$0	\$0	\$0	\$0	\$88,372.00
B. Manhole Inspection Data Review	0	\$0	0	\$0	0	\$0	0	\$0	40	\$10,160	8	\$3,184	40	\$6,840	30	\$4,830	20	\$2,780	100	\$13,900	0	\$0	0	\$0	0	\$0	238	\$41,694.00	\$0	\$0	\$0	\$0	\$0	\$0	\$41,694.00
Subtotal Task 4.3	8	\$2,400	0	\$0	0	\$0	0	\$0	80	\$20,320	16	\$6,368	48	\$8,208	110	\$17,710	40	\$5,560	300	\$41,700	200	\$27,800	0	\$0	0	\$0	802	\$130,066.00	\$0	\$0	\$0	\$0	\$0	\$0	\$130,066.00
Task 5 - Develop Condition Assessment Technical Memorandum																																			
F. Prepare Draft Condition Assessment TM	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2	\$796	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2	\$796.00	\$0	\$0	\$0	\$0	\$0	\$0	\$796.00
E. QA/QC	12	\$3,600	0	\$0	4	\$1,200	0	\$0	20	\$5,080	8	\$3,184	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	44	\$13,064.00	\$0	\$0	\$0	\$0	\$0	\$0	\$13,064.00
G. Prepare Final Condition Assessment TM	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2	\$796	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	2	\$796.00	\$0	\$0	\$0	\$0	\$0	\$0	\$796.00
I. Deliverables (Written Responses, Proposal for Ph. 2, Review Comments for Meeting Agendas and Summaries)	16	\$4,800	0	\$0	0	\$0	0	\$0	8	\$2,032	2	\$796	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	26	\$7,628.00	\$0	\$0	\$0	\$0	\$0	\$0	\$7,628.00
Subtotal Task 5	28	\$8,400	0	\$0	4	\$1,200	0	\$0	28	\$7,112	14	\$5,572	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	74	\$22,284.00	\$0	\$0	\$0	\$0	\$0	\$0	\$22,284
Task 7 - Public Outreach																																			
A. Preparatory Meetings (3)	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
B. Community Meetings (9)	12	\$3,600	0	\$0	0	\$0	0	\$0	12	\$3,048	12	\$4,776	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	36	\$11,424.00	\$0	\$0	\$0	\$0	\$0	\$0	\$11,424.00
C. QA/QC	2	\$600	0	\$0	8	\$2,400	0	\$0	2	\$508	2	\$796	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	14	\$4,304.00	\$0	\$0	\$0	\$0	\$0	\$0	\$4,304.00
D. Deliverables (Review Agendas and Summaries)	3	\$900	0	\$0	3	\$900	0	\$0	3	\$762	3	\$1,194	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	12	\$3,756.00	\$0	\$0	\$0	\$0	\$0	\$0	\$3,756.00
Subtotal Task 7	17	\$5,100	0	\$0	11	\$3,300	0	\$0	17	\$4,318	17	\$6,766	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	62	\$19,484.00	\$0	\$0	\$0	\$0	\$0	\$0	\$19,484.00
Task 8 - Option Services (Flow Monitoring)																																			
A. Flow Meter Site Scouting	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00
B. Pre-Rehab Flow Meters (15); Install, Maint., Removal	4	\$1,200	0	\$0	0	\$0	0	\$0	4	\$1,016	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	8	\$2,216.00	\$0	\$0	\$0	\$0	\$0	\$0	\$2,216.00
F. Maintenance of Traffic Coordination	16	\$4,800	0	\$0	0	\$0	30	\$7,620	16	\$4,064	4	\$1,592	0	\$0	0	\$0	0	\$0	16	\$2,224	0	\$0	0	\$0	0	\$0	82	\$20,300.00	\$0	\$0	\$0	\$0	\$0	\$0	\$20,300.00
C. Rain Gauge Network (4); Install, Maint., Removal	4	\$1,200	0	\$0	0	\$0	0	\$0	4	\$1,016	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	8	\$2,216.00	\$0	\$0	\$0	\$0	\$0	\$0	\$2,216.00
Subtotal Task 8	24	\$7,200	0	\$0	0	\$0	30	\$7,620	24	\$6,096	4	\$1,592	0	\$0	0	\$0	0	\$0	16	\$2,224	0	\$0	0	\$0	0	\$0	98	\$24,732.00	\$0	\$0	\$0	\$0	\$0	\$0	\$24,732.00
PROJECT TOTAL	368	\$110,400	8	\$2,120	37	\$11,100	146	\$37,084	360	\$91,440	137	\$54,526	167	\$28,557	165	\$26,565	200	\$27,800	468	\$65,052	200	\$27,800	50	\$6,650	60	\$6,540	2366	\$495,634	\$0	\$0	\$0	\$0	\$0	\$0	\$495,634



7/1/2024

MCKIM & CREED LOE TABLE

 MCKIM & CREED ENGINEERS SURVEYORS PLANNERS																
Project Task Description							Labor Subtotal						Equipment Subtotal			TASK Subtotal
	Closed Circuit Television (CCTV) Inspection Equipment Operator		Vacuum / Combination Truck Operator		General Labor				CCTV Inspection Van		Vacuum / Combination Truck					
	Rate =	\$139.00	Rate =	\$139.00	Rate =	\$98.00			Rate =	\$95.00	Rate =	\$150.00				
	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost		
Task 4.4: CCTV Inspections																
C. Mainline CCTV Inspections	80	\$11,120.00	80	\$11,120.00	80	\$7,840.00	240	\$30,080.00	80	\$7,600.00	80	\$12,000.00	160.00	\$19,600.00	\$49,680.00	
D. Lateral CCTV Inspections	160	\$22,240.00	160	\$22,240.00	160	\$15,680.00	480	\$60,160.00	160	\$15,200.00	0	\$0.00	160.00	\$15,200.00	\$75,360.00	
Subtotal Task 4.4	240	\$33,360.00	240	\$33,360.00	240	\$23,520.00	720	\$90,240.00	240	\$22,800.00	80	\$12,000.00	320	\$34,800.00	\$125,040.00	

**Professional Design Build Services: Contract No. 24-0085 RFP****Schedule of Rate Values: GCU, LLC.****Burdened Rates for January 2<sup>nd</sup>, 2024 through December 31<sup>st</sup>, 2028**

<b>PERSONNEL</b>	<b>UNIT</b>	<b>PRICE</b>
Principal in Charge	HR	\$ 398.00
Collaborative Delivery Specialist	HR	\$ 312.20
Technical Advisor	HR	\$ 284.61
QA/QC Manager	HR	\$ 304.07
Senior Project Manager	HR	\$ 348.00
Project Manager	HR	\$ 279.00
Assistant Project Manager	HR	\$ 206.00
Lead Project Engineer	HR	\$ 278.87
Senior Civil Engineer	HR	\$ 299.93
Civil Engineer	HR	\$ 281.12
Senior Project Engineer	HR	\$ 262.27
Project Engineer III	HR	\$ 189.68
Project Engineer II	HR	\$ 201.00

<b>PERSONNEL – continued</b>	<b>UNIT</b>	<b>PRICE</b>
Project Engineer I	HR	\$ 171.00
Engineering Intern	HR	\$ 106.00
Senior Resident Project Representative	HR	\$ 172.47
Resident Project Representative	HR	\$ 164.68
Field Services Manager / Senior Foreman	HR	\$ 172.47
Field Service Technician	HR	\$ 143.87
GIS Analyst	HR	\$ 161.00
Senior GIS Analyst	HR	\$ 167.65
Senior Administrative Assistant	HR	\$ 135.11
Administrative Assistant	HR	\$ 98.16
Construction Manager	HR	\$ 139.00
Construction Administrator	HR	\$ 133.00
Closed Circuit Television (CCTV) Inspection Equipment Operator	HR	\$ 139.00
Vacuum / Combination Truck Operator	HR	\$ 139.00
General Labor / Equipment Operator	HR	\$ 97.50

The above billing rates are fully loaded (burdened) rates and shall remain fixed for the initial contract term. The above rates include all labor, direct/indirect overhead, margins/profit, salary escalations, customary expenses such as copies, postage, etc., and travel within the Tampa Bay Metropolitan Statistical Area. Travel expenses outside of the Tampa Bay Metropolitan Statistical Areas shall be reimbursed in accordance with Florida Statutes.

**EXHIBIT P - SCOPE OF PHASE 2 SERVICES**

<b>EQUIPMENT</b>	<b>UNIT</b>	<b>PRICE</b>
Smoke Testing Equipment	HR	\$ 7.50
Liquid Smoke (0.5gal/1000 lf) charge is per gallon	GAL	\$ 90.00
Field Truck with Standard Field Equipment	HR	\$ 52.00
Gas can be by receipt or added Equipment rate	HR	\$ 12.15
Manhole Scans (RinnoVision/Phoenix/Pioneer)	UNIT	\$ 18.00
As-needed Field Service (Truck, 2-person crew, std equipment)	HR	\$ 362.75
Closed Circuit Television (CCTV) inspection van	HR	\$ 95.00
Vacuum / Combination Truck	HR	\$ 150.00
Jetter Trailer	HR	\$ 60.00
GPS / Trimble Unit - per day	DAY	\$ 150.00
GPS / Trimble Unit - per week	WK	\$ 600.00
GPS / Trimble Unit - per month	MO	\$ 1,800.00

The above billing rates are fully loaded (burdened) rates and shall remain fixed for the initial contract term. The above rates include all labor, direct/indirect overhead, margins/profit, salary escalations, customary expenses such as copies, postage, etc., and travel within the Tampa Bay Metropolitan Statistical Area. Travel expenses outside of the Tampa Bay Metropolitan Statistical Areas shall be reimbursed in accordance with Florida Statute



## EXHIBIT P - SCOPE OF PHASE 2 SERVICES



3820 Northdale Blvd, Suite 202  
Tampa, FL 33624  
800.422.1095 | wright-pierce.com

## Exhibit A: Pinellas County Find and Fix Gravity Sewer Rehabilitation

Professional Design Build Services: Contract No. 24-0085 RFP  
Schedule of Rate Values: Wright-Pierce, Inc.

Burdened Rates for January 2, 2024, through December 31, 2028

Job Classification	Burdened Hourly Rate
Principal in Charge	\$352.15
Collaborative Delivery Specialist	\$312.20
Technical Advisor	\$284.61
QA/QC Manager	\$304.07
Senior Project Manager	\$284.61
Project Manager	\$250.81
Lead Project Engineer	\$278.87
Senior Civil Engineer	\$299.93
Civil Engineer	\$281.32
Senior Instrumentation Engineer	\$285.29
Instrumentation Engineer	\$176.07
Senior Electrical Engineer	\$275.62
Electrical Engineer	\$259.31
Senior Structural Engineer	\$317.74
Structural Engineer	\$299.14
Senior Project Engineer	\$262.27
Senior Architect	\$255.17
Architect	\$157.83
Project Engineer III	\$189.68
Project Engineer II	\$178.36

## EXHIBIT P - SCOPE OF PHASE 2 SERVICES

Job Classification	Burdened Hourly Rate
Project Engineer I	\$156.16
Engineering Intern	\$106.00
Senior Resident Project Representative	\$172.47
Resident Project Representative	\$164.68
Senior CADD Operator	\$169.76
CADD Operator	\$152.80
Field Services Manager	\$172.47
Field Service Technician	\$143.87
GIS Analyst	\$146.02
Sr GIS Analyst	\$167.65
Sr. Administrative Assistant	\$135.11
Administrative Assistant	\$98.16

The above billing rates are fully loaded (burdened) rates and shall remain fixed for the initial contract term. The above rates include all labor, direct/indirect overhead, margins/profit, salary escalations, customary expenses such as copies, postage, etc., and travel within the Tampa Bay Metropolitan Statistical Area. Travel expenses outside of the Tampa Bay Metropolitan Statistical Areas shall be reimbursed in accordance with Florida Statutes.

## Equipment Rates

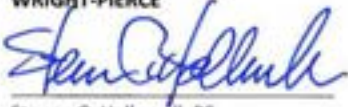
Equipment Name	Rate
Enterprise Database/WP Raindrop (per meter or rain gauge one time charge either app used)	\$38/per each site
Liquid Smoke (0.5gal/1000 lf)	\$90 per gal
Field Truck w/ Standard Field equipment (includes fuel)	\$520/day
Gas can be by receipt or add \$90/day to above	\$97/day
Manhole Scans (RinnoVision/Phoenix/Pioneer)	\$18/Manhole
As needed Field Service (Truck, 2-person crew, std equip)	\$2,901.92 per 8-hr Day
<i>Software Use - WP Toolbelt/InfoAsset/SWMM, WaterGems, WinCan, modeling/AM) per unit (manhole, valve, pipe segments, hydrants, nodes)</i>	
• Asset Analysis Software - Less than 100	\$500/year
• Asset Analysis Software - 100 to 250	\$1,000/year

## EXHIBIT P - SCOPE OF PHASE 2 SERVICES

Equipment Name	Rate
• Asset Analysis Software - 250 to 500	\$1,500/year
Asset Analysis Software - 500 to 750	\$3,000/year
Asset Analysis Software - 750 or More	\$5,000/year
<i>Flow Meters and Rain Gauge's:</i>	
• Area Velocity Flow Meter	\$38/day
• Non-Contact Meters	\$55/day
• Rain Gauges	\$22/day
• GPS - Trimble unit	\$150/day; \$600/week; \$1800/month
• Drone - Matrice 210 (Equipment Cost)	\$500/ hour
• Drone - Mavic 2 Pro (Equipment Cost)	\$100/hour
• Drone - Mavic 3 (Equipment Cost)	\$100/hour

Sincerely,

WRIGHT-PIERCE



Steven C. Hallowell, PE

Vice President

[steve.hallowell@wright-pierce.com](mailto:steve.hallowell@wright-pierce.com)


Date

## EXHIBIT P - SCOPE OF PHASE 2 SERVICES

April 22, 2024



Mead &amp; Hunt, Inc.

Billable Hourly Rates by Position

Pinellas County Utilities – Find and Fix Gravity Sewer Rehabilitation

Professional Design Build Services

Contract # 24-0085-RFP

Position	Billable Hourly Rate
Clerical	\$109.00
CAD Designer / GIS Analyst	\$139.00
Senior CAD Designer	\$186.00
Construction Administrator	\$133.00
Construction Manager /Field Staff	\$139.00
Engineer 1	\$171.00
GIS Specialist	\$161.00
Engineer 2	\$201.00
Senior Engineer / Lead Project Engineer	\$254.00
Project Manager	\$265.00
Senior Project Manager / QA/QC Manager	\$300.00
Principle in Charge / Collaborative Delivery Specialist	\$398.00



EXHIBIT P - SCOPE OF PHASE 2 SERVICES



FIND AND FIX GRAVITY SEWER REHABILITATION

Contract No. 24-0085 RFP

PINELLAS COUNTY

THE VALERIN GROUP, INC.

SCHEDULE OF RATES

<u>Classifications</u>	<u>Hourly Billing Rate</u>
Community Outreach Manager	\$140.00
Community Outreach Specialist	\$135.00
Graphic Designer	\$122.00
Multimedia Specialist	\$127.00
 Valerie Ciudad-Real President	<div>3/15/2024</div> <div>Date</div>

**EXHIBIT P - SCOPE OF PHASE 2 SERVICES****February 16, 2024**

Robert Lindley  
 Contract Manager  
 Gulf Coast Underground, LLC  
 5655 Middle Road  
 Theodore, AL 36582  
 Office: 251.725.020  
 rlindley@gogcu.com

RE: District 7, Pinellas, GCU - Pinellas Find and Fix Sewer Rehab

District 7, Pinellas, GCU - Pinellas Find and Fix Sewer Rehab			
ITEM NO.	ITEM DESCRIPTION	UNIT	DAILY
	MOBILIZATION	LS	\$ 1,500.00
0102-60	WORK ZONE SIGN	ED	\$ 4.00
0102-74- 1	CHANNELIZING DEVICE- TYPES I, II, DI, VP, DRUM, OR LCD	ED	\$ 3.00
0102-74- 3	TYPE III BARRICADE	ED	\$ 5.00
	ARROW BOARD / ADVANCE WARNING ARROW PANEL	ED	\$ 65.00
	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	\$ 125.00
	MOBILIZATION	LS	\$ 750.00
	FDOT INDEX 102-602 Shoulder Closure	LS	\$ 500.00
	FDOT INDEX 102-602 Shoulder Closure (Nighttime and Weekends)	LS	\$ 750.00
	FDOT INDEX 102-603 Flagging Operation (2 Flaggers/ 8hr Maximum)	LS	\$ 1,575.00
	FDOT INDEX 102-603 Flagging Operation (2 Flaggers Nights and Weekends)	LS	\$ 1,900.00
	FDOT INDEX 102-604 Flagging Operation at Intersection (4 Flaggers/ 8hr Maximum)	LS	\$ 3,000.00
	FDOT INDEX 102-604 Flagging Operation at Intersection (4 Flaggers/ Nights and Weekends)	LS	\$ 3,600.00
	FDOT INDEX 102-613 Lane Closure	LS	\$ 1,200.00
	FDOT INDEX 102-613 Lane Closure (Nighttime and Weekends)	LS	\$ 1,500.00
	FDOT INDEX 660- Sidewalk Closure	LS	\$ 500.00
	FDOT INDEX 660- Sidewalk Closure (Nighttime and Weekends)	LS	\$ 750.00

We are pleased to submit our PROPOSAL for the project stated above. Please note the following regarding all pricing as itemized:

- Contractor will provide appropriate equipment and access under bridge, if required.
- Pricing does not contemplate taxes, if project and or any work within is not tax-exempt, applicable taxes will apply.
- Anticipated Start Date: TBD
- Pricing reflects contract time periods for above itemized temporary traffic control supply scope and is per provided bid documents/ correspondence stating (365) contract days. Additional costs will be applicable for any time above contract time.
- As contract days or time period is not provided in bid documents/ correspondence, the above lump sum bid assumes max (365) days. Additional costs will be applicable for any time above contract time.
- Pricing assumes daytime/ weekday temporary traffic control supply unless explicitly itemized otherwise. If nighttime and or weekend temporary traffic control supply is required additional costs will apply.
- Estimate includes on site supervisor.

3301 SW 43<sup>rd</sup> Street, Suite 5  
 Gainesville, FL 32608

5434 56th Commerce Park Boulevard  
 Tampa, FL 33610

560 Village Boulevard, Suite 120  
 West Palm Beach, FL 33409

**EXHIBIT P - SCOPE OF PHASE 2 SERVICES**

**From:** Derek Holderman <[DHolderman@mckimcreed.com](mailto:DHolderman@mckimcreed.com)>

**Subject:** McKim & Creed - Pinellas County Hourly Rates

**Date:** December 29, 2023 at 9:27:27 AM CST

**To:** Spencer Tuell <[stuell@gogcu.com](mailto:stuell@gogcu.com)>

Spencer, as discussed earlier this week, here are our proposed hourly rates for the Pinellas County F&F Program

Please let me know if you have any questions, would like any additional services added or if you would like an explanation on any of the pricing build up.

Task	Hourly Rate
Two Person CCTV Crew with Lateral Launch	\$ 410.00
Three Person CCTV Crew with Lateral Launch	\$ 510.00
One Person Mainline Cleaning Crew	\$ 210.00
Two Person Mainline Cleaning Crew	\$ 310.00

**Derek Holderman** | Wet Weather Program Operations Manager  
T 757.965.2848 | M 812.987.1551  
2400 Colley Avenue, Norfolk, VA 23517

[DHolderman@mckimcreed.com](mailto:DHolderman@mckimcreed.com) | [www.mckimcreed.com](http://www.mckimcreed.com)

Voted "Best Firm To Work For" - Zweig Group



**EXHIBIT P - SCOPE OF PHASE 2 SERVICES**



## **Public Engagement | Outreach Services**

### **Find and Fix Program Pinellas County, FL**

**(Phase 1 – 12 Months)**

**Prepared by:**

**The Valerin Group, Inc. (Valerin)  
13014 N. Dale Mabry Highway, #820  
Tampa, FL 33618**

**Submitted: June 7, 2024**



**EXHIBIT P - SCOPE OF PHASE 2 SERVICES**



## **Public Engagement | Outreach Services**

### **Find and Fix Program Pinellas County, FL**

**(Phase 1 – 12 Months)**

**Prepared by:**

**The Valerin Group, Inc. (Valerin)  
13014 N. Dale Mabry Highway, #820  
Tampa, FL 33618**

**Submitted: June 7, 2024**

**EXHIBIT P - SCOPE OF PHASE 2 SERVICES****SCOPE OF SERVICES****PUBLIC ENGAGEMENT AND COMMUNITY OUTREACH SERVICES**

The Valerin Group, Inc. (Valerin) will serve as the project Public Outreach Officer providing proactive, transparent, and responsive communications with stakeholders and other interested parties during Phase 1 of the Find and Fix Program. Anticipated Phase 1 pre-construction activities include flow monitoring, smoke testing, and use of a CCTV to investigate the gravity sewer mains, laterals, and manholes located in the three (3) Zones included in the program area. In addition, Valerin will coordinate with Pinellas County Utilities communications and prepare outreach material consistent with Pinellas County branding guidelines.

**Communications Plan**

Valerin will develop a Communications Plan (Plan) tailored to the specifics of the project. Some key elements of the Plan include the development of engagement activities and the tools and techniques to be used during Phase 1 of the project.

**Project Collateral Development**

Valerin will develop the following collateral for Phase 1 of the project. All collateral will be in "plain language" and ADA-compliant.

- Fact Sheet
- Preliminary Activity Notifications/Meeting Notifications
- Frequently Asked Questions (FAQs)
- Webpage content

All deliverables will be provided to the County for review and approval before distribution.

**Day to Day Public Engagement Activities**

- Prepare and distribute notifications/door hangers via door-to-door, mailer, or email to inform property owners, businesses, and tenants regarding Phase 1 activities
- Face-to-face/one-on-one interaction/meetings with property/business owners, tenants, HOAs, special interest groups, and other interested parties (as needed/required)
- Develop and maintain project Stakeholder Database
- Develop Pinellas County webpage content and updates as needed
- Secure and maintain 24/7 project-specific phone number and email address
- Respond to inquiries received and document in Stakeholder Database
- Draft posts regarding key/milestone project developments for the County's social media platforms

**Pre-Construction Public Meetings (One per Zone)**

Plan, coordinate, and conduct in-person pre-construction public meetings in an open house format. Elements of the public meetings planning include, but are not limited to:

- Identification of an ADA-compliant meeting facility
- Research of local agency calendars to ensure no conflict with public meeting/event date/time
- Preparation of public meeting collateral (meeting notification, press release, project information handout, content for posting to the County website/social media platforms, name badges, sign-in sheets, comment forms, etc.)
- Performing mail out of notifications regarding public meetings unless otherwise directed by PCU

**EXHIBIT P - SCOPE OF PHASE 2 SERVICES**

- Developing PowerPoint presentation (includes assisting the design-build team and PCU with content, script development, and presentation/PPT voiceover).
- Coordination with PCU on event logistics
- Attendance as needed to assist with meeting activities (set-up/tear-down, staff sign-in table, assist attendees, etc.)
- Preparation of public meeting/event summary

**Right of Entry Assistance**

Assist contractor with obtaining Right-of-Entry (ROE) Agreements from property owners in order to gain access for PSL repairs/replacement. Includes up to three ROE mailouts to properties determined to need PSL repairs and in-person contacts as needed to collect approvals from non-responsive property owners. Received ROEs will be documented and matched to properties within each Zone.

**Project Management**

Project management duties include oversight and coordination of outreach tasks, staff, schedule, and budget. Also includes QC/review of deliverables before submitting to the County for final approval.

**\*Estimated Fee: \$184,020/Labor + \$19,675/Direct Expenses = \$203,695**

7/1/2024



4924 Distribution Dr. Tampa, FL 33605  
PHONE: 470-825-6157

[www.adsenv.com](http://www.adsenv.com)

A DIVISION OF ADS LLC

11 April 2024

Mr. Dennis Davis, PE, Assoc. DBIA  
Senior Client Service Manager  
Wright-Pierce  
Phone: (407) 710-9259  
Cell: (407) 785-5794  
Email: [dennis.davis@wright-pierce.com](mailto:dennis.davis@wright-pierce.com)

**Re: Contract Option #2: Temporary Flow Monitoring for Pinellas County, Florida for four-months: Includes Maintenance and data/monitor review (Pinellas County Find and Fix portion)**

Dear Mr. Davis:

ADS Environmental Services is pleased to submit this quote for your evaluation and review. This proposal is for the pre-construction flow monitoring work to be conducted by ADS for Wright-Pierce for Pinellas County under the Find and Fix program. The quote includes pricing for flow monitoring services for Wright-Pierce in Pinellas County, Florida. The duration of the temporary flow monitoring study is four-months. The quote also includes cellular communication from the flow monitors and rain gauges along with access for your team to PRISM, our web-based data software. For the flow monitors and rain gauges, ADS will provide the full mobilization/demobilization, installation, equipment, monitoring, full service and maintenance, and data delivery. The final deliverables for this project will be monthly, finalized data delivered via Excel file by the 20<sup>th</sup> day of the next month. For the flow monitoring services, ADS will follow the Pinellas County Sanitary Sewer Flow Monitoring Methodology/Protocols published on February 13, 2017.

This contract is the second of two contracts which will be executed as part of the same scope. This contract is executed under Wright-Pierce's Find and Fix contract with Pinellas County to continue the flow monitoring services as originally executed under Wright-Pierce's Continuing Services Contract.

If you have any questions regarding this proposal, please do not hesitate to call me at (470) 825-0157 or email me at [pwootton@idexcorp.com](mailto:pwootton@idexcorp.com).

Sincerely,

Patrick D. Wootton, P.E.  
Business Development Manager  
ADS Environmental Services



7/1/2024



4924 Distribution Dr. Tampa, FL 33605  
PHONE: 470-825-6157

[www.adsenv.com](http://www.adsenv.com)

A DIVISION OF ADS LLC

ADS Environmental Service ("ADS") will conduct a temporary flow monitoring study to collect one hundred twenty (120) days of flow data at fifteen (15) flow monitoring and four (4) rain gauge locations in the sanitary collection system in Pinellas County, Florida for Wright-Pierce ("Client") as part of the Continuing Services Contract. For the overall flow monitoring services, ADS will follow the Pinellas County Sanitary Sewer Flow Monitoring Methodology/Protocols published on February 13, 2017.

The field work will be performed by ADS crews with ADS owned equipment and will be conducted in phases as set forth below:

**Mobilization and Equipment Installation (may have already been conducted as part of Contract#1)**

1) **Project Initialization Meeting.** The project will begin with a kick-off meeting between representatives of the Client and ADS. The purpose of the meeting is to finalize project scope, the detailed monitor locations, establish lines of communication, set milestones, and confirm the project schedule. The kick-off meeting will be scheduled before the planned start date of monitoring after contract execution and Notice to Proceed.

2) **Site Locations.** ADS will work with Client representatives to identify, verify, and finalize the locations of the flow monitoring and rain gauge installations on maps or schematics supplied.

3) **Site Investigations / Installations.** Following the kick-off meeting, ADS field crew(s) will mobilize to perform the site investigations and installations. ADS will utilize an experienced field crew for field work and will comply with Federal standards for confined-space entry. The proposed flow monitoring locations will be located, and the manholes entered following OSHA confined space entry and DOT traffic control procedures. Field crews consist of two workers, both of whom have received extensive and specialized flow monitoring and safety training and certifications.

The proposed flow monitoring locations will be inspected and verified for hydraulic suitability. ADS will also check for debris in the manhole that could impact data quality and coordinate any required cleaning efforts with the Client. Field crews will look for evidence and signs of erratic flow patterns and will also investigate adjacent manholes, if necessary, to identify the best monitoring locations to achieve the desired results. ADS requests for a Client representative to be available for consultation, during the investigation and installation phases so as to approve any changes in location of the flow monitors to achieve better data results.

The rain gauge sites will also be investigated and installed during this phase. The locations will be selected so that good coverage of the study area is provided to accurately measure storm intensity as they move across the basins. Topography, rain shadowing, accessibility, service concerns and security will be reviewed before final selections are made. A rain gauge is typically mounted on roofs of structures or in fenced in areas to avoid local rain shadowing and to dissuade vandalism.

7/1/2024



4924 Distribution Dr. Tampa, FL 33605  
PHONE: 470-825-6157

[www.adsenv.com](http://www.adsenv.com)

A DIVISION OF ADS LLC

**4) Equipment.** ADS will utilize the ADS owned Triton<sup>+</sup> flow monitors and Rain Alert III rain gauges for equipment during this project. A typical monitor installation will include sensors that will be mounted in the pipe or manhole to maximize data quality and a monitor hung near the manhole cover; the sensors will measure a combination of velocity and depth. Ultrasonic depth along with a redundant pressure depth will be used to provide redundancy and surcharge height levels should they occur.

**5) Installation and Site Reports.** A site report will be generated upon completion of the site investigations and installation for each site. The site reports will include details of the general location and installation, physical characteristics and diameters of the proposed monitoring locations, manhole depths, flow measurements, and other comments pertinent to the location such as any special traffic or safety issues.

**6) Monitor Activation.** Once installed the monitors will be activated and set to take readings at 5-minute intervals. Field crews will take manual depth and velocity readings to validate monitor performance compared to the actual hydraulic conditions at each location.

#### **Flow Monitoring**

**7) Flow Monitoring.** Once the monitors are installed and verified, ADS will monitor the flow and rainfall for a period of one hundred twenty (120) calendar days ("monitoring period"). ADS will follow the Pinellas County Sanitary Sewer Flow Monitoring Methodology/Protocols published on February 13, 2017.

**8) Data Collection and Equipment Maintenance.** Data will be pushed to ADS' PRISM cloud application. An ADS Data Analyst will review the data daily for quality control and issue work orders for Field Crews to perform maintenance and site confirmations as necessary to maximize data uptime and accuracy. ADS will respond to needed maintenance within 48 hours and will replace any deficient equipment within three days after verifying the requirement.

ADS field services teams will perform weekly confirmations at each of the flow monitoring locations during dry weather conditions, and perform more frequent confirmations, if needed, during wet weather.

**9) Demobilization.** ADS will continue data collection and review until the end of the monitoring period; at which point crews will begin removing the flow monitors.

#### **Data Analysis and Delivery**

**10) Data Analysis.** During the monitoring period, the Data Analyst will utilize hydrographs, scattergraphs (depth vs. velocity readings) and other analysis tools to verify flow data accuracy. Upon completion of each monthly monitoring period, the analyst will finalize the data. Final data will be available to the Client on the 20<sup>th</sup> day of the following month.

7/1/2024



4924 Distribution Dr. Tampa, FL 33605  
PHONE: 470-825-0157

www.adsinc.com

A DIVISION OF ADS LLC

11) **PRISM Data Access.** From the PRISM interface an authorized user can review collected data, access hydrographs, scattergraphs, and tables. Data can also be exported for use in external applications.

**Client's assistance requested:**

ADS requests the following items from the Client in connection with this Project:

- 1) Map of the sanitary sewer collection system and connections
- 2) Flow schematic
- 3) Provide assistance with locating and access to manholes, pump stations, or other locations necessary for the completion of the flow monitoring and analysis described herein
- 4) Assist ADS in securing access to the sites of work with sufficient area for placement of personnel and equipment, including all right-of-way and ramps, if required.
- 5) Provide a representative that can approve alternate locations.
- 6) Provide all permits and police escorts as required.
- 7) Have the monitoring sites cleaned, if necessary to minimize hydraulic deficiencies.
- 8) Provide any information concerning bypasses, overflows, base flows, critical surcharge areas, and maintenance habits as needed.
- 9) Provide a copy of previous studies

**Pricing Scope: Temporary flow monitoring with 15 flow monitors and 1 rain gauge for a duration of four-months for Wright-Pierce in Pinellas County, Florida**

<u>DESCRIPTION</u>	<u>Qty</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total</u>
Flow Monitoring Data Collection and Analysis; Field Service and Maintenance  (15 monitors x 1 months = 15 monitor-months)	Monitor-Month	15	\$2,306.00	\$34,590.00
Rain Gauging Data Collection and Analysis; Field Service and Maintenance  (4 monitors x 1 months = 4 monitor-months)	Monitor-Month	4	\$1,153.00	\$4,612.00

7/1/2024



4924 Distribution Dr. Tampa, FL 33605  
PHONE: 470-825-0157

[www.adsenv.com](http://www.adsenv.com)

A DIVISION OF ADS LLC

PRISM Data Hosting and Cellular Communications (19 monitors x 1 months = 19 monitor-months)	Monitor-Month	19	\$25.00	\$375.00
<b>Total Price (120-Day Monitoring Period)</b>				<b>\$39,577.00</b>
<b>Optional Adders</b>				
Monitor Relocations	Each	TBD	\$1,250.00	TBD



**EXHIBIT P - SCOPE OF PHASE 2 SERVICES****EXHIBIT P - SCOPE OF PHASE 2 SERVICES**

After Owner's review and approval of the 50% Construction Documents and upon the Parties' ability to reach agreement as to the Proposal evidenced by the Parties' execution of the Notice to Proceed, and Owner's written authorization to proceed, Design Builder shall provide the following:

**1. COMPLETION OF CONSTRUCTION DOCUMENTS**

- 1.1 Design-Builder shall prepare Construction Documents up to a 100% completion level based on the final 50% Construction Documents approved by the Owner in Section 5 hereof. Construction Documents shall include calculations and shall set forth each discipline's requirements in detail and into a cohesive and coordinated whole based upon the approved 50% Construction Documents, the Final Program and consultation with the Owner. The parties shall meet to discuss the 100% complete Construction Documents and agree upon what revisions, if any, should be made. Design Builder shall perform such agreed-upon revisions. Design Builder shall meet with Owner during completion of the Construction Documents as often as required until 100% complete Construction Documents have been approved by the Owner. The 100% complete Construction Documents will include 100% complete specifications in CSI format.
- 1.2 At the completion of the 100% Construction Documents, Design Builder will provide a certification of the structural standards to which the facility has been designed.
- 1.3 Design Builder shall furnish documents in type, format, version and quantities indicated in the Final Program. Design Builder shall provide Owner with reproducible copies of all design documents, including electronic copies if so required by the Owner.

**2. BUILDING PERMIT PHASE**

- 2.1 Design Builder is responsible for applying for and obtaining all necessary and required building permits and approvals for the Project.
- 2.2 As part of the building permit application package, the Design Builder shall provide the applicable building permit office with the number of complete sets of signed and sealed Construction Documents. Each of the drawings and the cover sheet of the Project Manual shall be signed, sealed, and dated by the Design Builder.

**3. CONSTRUCTION**

- 3.1 Design Builder shall provide the following services in addition to all other Phase 2 Services required by the terms of this Contract:
  - 1) Prepare a list of required submittals for shop drawings, product data, samples, warranties, and other submittals required by Contract Documents, in tabular form which will indicate specification section number and section name (CSI Format).
- 3.2 Process, review, respond and distribute in accordance with the terms of the Contract Documents shop drawings, product data, samples, substitutions and other submittals required by the Construction Documents within ten (10) business days.
- 3.3 Maintain a master file of all submittals, including submittal register. Owner's copy shall be in electronic/CD format and submitted at time of Substantial Completion.
- 3.4 Prepare, reproduce and distribute supplemental drawings, specifications and interpretations in response to requests for clarification by Owner or Subcontractors as required by construction exigencies. Design Builder's response to any such request must be received by Owner and the effected Subcontractor within ten (10) business days. Design Builder will review and respond to all submittals from Subcontractors, including but not limited to shop drawings, within a reasonable period of time so as not to delay the progress of the Work, but in no event, more than ten (10) business days, unless Owner expressly agrees otherwise in writing. Review of Design Builder's submittals by Owner is not conducted for the purpose of determining the accuracy and completeness of such submittals, such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of Design Builder as required by the Contract Documents. Owner's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences or procedures. Owner's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

**EXHIBIT P - SCOPE OF PHASE 2 SERVICES**

- 3.5 Owner shall have authority to reject Work which does not conform to the Construction Documents. Whenever, in its reasonable opinion, Owner considers it necessary or advisable to insure the proper implementation or the intent of the Construction Documents, Owner will have authority to require special inspection or testing of any Work in accordance with the provisions of the Construction Documents whether or not such Work be then fabricated, installed or completed.
- 3.6 Design Builder shall submit to the applicable building permit office the number of sets of drawings and/or documents reflecting the approved changes in the Work as may be required by that office. Code compliance issues must be approved by the applicable building permit office prior to inspection of the subject Work.
- 3.7 Review the Work to confirm that the construction complies with the current applicable Florida Building Code, and maintain a copy of the current applicable Florida Building Code at its Project Site office for review by Design Builder. Report any discrepancies observed or noted to Owner.
- 3.8 Assist Owner in the training of the facility operation and maintenance personnel with respect to the proper operations, schedules, procedures and inventory controls for the various Project equipment and systems. Such assistance shall include assisting Owner in arranging for and coordinating the instruction and training on operations and maintenance of the Project's equipment and systems in conjunction with the various manufacturer representatives. Further, Design Builder is to attend all such training sessions, unless otherwise consented to by Owner in writing.
- 3.9 Review for compliance with Design Builder's obligation under the Contract Documents, all operation and maintenance manual submittals, prior to submittal to Owner.
- 3.10 Schedule and visit with Owner at the Project at six (6) and eleven (11) months after issuance of the Certificate of Substantial Completion. During each Project visit, Design Builder shall observe, troubleshoot and advise in the operation of building systems. This shall not relieve Design Builder of its obligation to make other visits to the Project based on need should specific issues arise.
- 3.11 Design Builder will revise the final approved Construction Documents to incorporate all "As-Built" information contained in the Design Builder's marked-up "As-Built" drawings and specifications, as well as to reflect all addenda, contract changes and field changes (sometimes referred to herein as the "Record Documents"). Design Builder shall provide Owner with one (1) electronic copy on compact disk (CD) of the Record Documents, two sets of the conformed, signed and sealed drawings and prints, and two sets of the conformed Project Manual/Specifications signed and sealed.
- 1) The electronic copy on CD of the Record Documents shall be provided in AutoCAD.dwg format, "purged and bound", and compatible with Owner's system.
  - 2) Throughout Phase 2, Design Builder shall review its marked-up "As-Built" drawings and Project Manual/Specifications, on a daily basis, to reflect all "As-Built" conditions at the Site, maintaining such "As-Built" drawings and specifications is a condition precedent to Design Builder's entitlement to payment hereunder.
- 3.12 Consult with, and recommend solutions to, Owner during the duration of warranties in connection with inadequate performance of equipment, materials or systems under warranty.
- 3.13 Submit a facility and equipment review schedule to Owner at the time of Substantial Completion. Perform reviews of facilities and equipment prior to expiration of warranty period(s) to ascertain adequacy of performance, materials, systems and equipment. Submit a written report to Owner.
- 3.14 Document noted defects or deficiencies and assist Owner in confirming Design Builder's correction of such noted defects.
- 3.15 Design Builder shall arrange for all job-site facilities as required by Owner and otherwise necessary to enable Design Builder to perform its respective duties and to accommodate any representatives of Owner which Owner may choose to have present on the job, the description of such facilities to be finalized prior to the execution of Notice to Proceed.
- 1) Tangible personal property, otherwise referred to as job-site facilities, include, but are not limited to such things as trailers, toilets, typewriters, computers and any other equipment necessary to carry on the Work. The method of acquiring such job-site facilities, which are planned to become the property of Owner at the conclusion of the Work, shall be evaluated based on their cost over the life of the Project. Owning versus leasing shall be considered by Design Builder, obtaining at least three (3) proposals for leasing and at least three (3) proposals for purchasing and then analyzing which is least

**EXHIBIT P - SCOPE OF PHASE 2 SERVICES**

expensive over the usable life of the item. Design Builder shall present its evaluation with recommendation to Owner for approval.

- 2) When Design Builder wishes to supply job-site facilities from its own equipment pool, it shall first evaluate buy versus lease as discussed in subparagraph 3.15.1 above. If leasing is found to be the least expensive approach, then it may lease such job-site facilities from its own equipment pool at a price not greater than the lowest of the three (3) lease proposals obtained.
- 3) For all such job-site facilities purchased, which may become the property of Owner at the conclusion of the Work, Design Builder shall maintain ownership responsibilities of such facilities until final acceptance of the Work. Reimbursement for cost of such equipment will be made at the conclusion of the Work at the documented purchase price. At that time, Design Builder shall provide Owner with a complete inventory for each unit of equipment. The inventory shall describe the equipment and identify the purchase price, serial number, model number and condition. Where said equipment has a title, said title shall be properly transferred to Owner or to its designee.
- 4) Design Builder is responsible for proper care and maintenance of all equipment while in its control. At the time of transfer to Owner, Owner may refuse acceptance of the equipment if Owner determines, in its sole discretion, that the equipment has not been properly cared for by Design Builder or that such acquisition would not otherwise be in the best interest of Owner. In such event, Design Builder will be reimbursed for such item in accordance with Section 3C to the Agreement.

3.16 Design Builder's administration of the Work shall include the following:

- 1) Maintain a log of daily activities, including manpower records, weather, delays, major decisions, etc.
- 2) Maintain a roster of companies on the Project with names and telephone numbers of key personnel.
- 3) Establish and enforce job rules governing parking, clean-up, use of facilities and worker discipline.
- 4) Provide labor relations management for a harmonious, productive Project.

3.17 Design Builder also shall provide job site administration functions during construction to assure proper documentation, including but not limited to the following:

- 1) Job Meetings: Design Builder shall attend meetings such as pre-construction conferences, progress meetings, job conferences, pre-closeout meetings, and other Project-related meetings, as may be directed by Owner. Design Builder's Design Professionals are also required to attend any such meetings as directed by Owner. Design Builder shall provide meeting minutes for these meetings. Conduct a preconstruction conference with each subcontractor after award of the subcontract and prior to the start of its portion of the Work. Hold weekly progress and coordination meetings, or more frequently if required by Work progress, to provide for the timely completion of the Work. In addition, Design Builder shall arrange and conduct regular monthly Project status meetings with Owner.
- 2) Design Builder shall use the job site meetings as a tool for the preplanning of Work and enforcing schedules, and for establishing procedures, responsibilities, and identification of authority for all parties to clearly understand. During these meetings, Design Builder shall identify the party or parties responsible for following up on any problems, delay items or questions, and Design Builder shall note the action to be taken by such party or parties. Design Builder shall revisit each pending item at each subsequent meeting until resolution is achieved. Design Builder shall attempt to obtain from all present any problems or delaying event known to them for appropriate attention and resolution.
- 3) Shop Drawing Submittals/Approvals: Provide staff to review and approve shop drawings and other submittals and to implement procedures for transmittal to Owner of such submittals for action, and closely monitor their review process. Owner reserves the right to review the shop drawings and other submittals and require Design Professional's approval on such shop drawings and other submittals.
- 4) Material and Equipment Expediting: Provide staff to closely monitor material and equipment deliveries, check and follow-up on supplier commitments for all subcontractors and maintain a material and equipment expediting log.
- 5) Payments to Subcontractors: Develop and implement a procedure for the review, processing and payment of applications by subcontractors for progress and final payments.
- 6) Document Interpretation: Promptly respond to all questions for interpretation of the Contract Documents made by subcontractors and copy Owner on all such responses.

**EXHIBIT P - SCOPE OF PHASE 2 SERVICES**

- 7) Reports and Project Site Documents: Record the progress of the Work. Submit written progress reports to Owner, including information on subcontractors' Work, and the percentage of completion. Keep a daily log available to Owner and any permitting authority inspectors.
  - 8) Subcontractors Progress: Prepare periodic punch lists for subcontractors' work including unsatisfactory or incomplete items and schedules for their completion.
  - 9) Substantial Completion: Pursuant to the provisions of Paragraph 23.1 of the General Terms and Conditions, notify Owner in writing when the Work or designated portions thereof are ready for the Substantial Completion inspections. From the punch lists of incomplete or unsatisfactory items prepared by Design Builder and reviewed and supplemented by Owner, prepare a schedule for their completion indicating completion dates for Owner's review and approval. At Substantial Completion, Design Builder will provide a certification from itself and its Design Professional that the building was constructed in accordance with the approved Construction Documents.
  - 10) Final Completion: Monitor the subcontractors' performance on the completion of the Work and provide notice to Owner when the Work is ready for final inspection. Secure, review and certify compliance with the Contract Documents, then transmit to Owner all required guarantees, warranties, affidavits, releases, bonds, waivers, manuals, record drawings, and maintenance books.
  - 11) Start-Up: With Owner's personnel, direct the check-out of utilities, operations, systems and equipment for readiness and assist in their initial start-up and testing by the subcontractors.
  - 12) Record Drawings: Pursuant to the terms of Paragraph 8.2 of the General Terms and Conditions, Design Builder shall monitor the progress of its own forces and its subcontractors on marked up field prints which shall be developed by Design Builder into the final record drawings.
- 3.18 Design Builder shall maintain at the Project site, originals or copies of, on a current basis, all Project files and records, including, but not limited to, the following administrative records:
- 1) Subcontracts and Purchase Orders
  - 2) Shop Drawing Submittal/Approval Logs
  - 3) Equipment Purchase/Delivery Logs
  - 4) Contract Drawings and Specifications with Addenda
  - 5) Warranties and Guarantees
  - 6) Cost Accounting Records
  - 7) Labor Costs
  - 8) Material Costs
  - 9) Equipment Costs
  - 10) Cost Proposal Request
  - 11) Payment Request Records
  - 12) Meeting Minutes
  - 13) Cost-Estimates
  - 14) Bulletin Quotations
  - 15) Lab Test Reports
  - 16) Insurance Certificates and Bonds
  - 17) Contract Changes
  - 18) Permits
  - 19) Material Purchase Delivery Logs
  - 20) Technical Standards
  - 21) Design Handbooks



**EXHIBIT P - SCOPE OF PHASE 2 SERVICES**

- 22) “As-Built” Marked Prints
- 23) Operating & Maintenance Instruction
- 24) Daily Progress Reports
- 25) Monthly Progress Reports
- 26) Correspondence Files
- 27) Transmittal Records
- 28) Inspection Reports
- 29) Bid/Award Information
- 30) Bid Analysis and Negotiations
- 31) Punch Lists
- 32) Schedule and Updates
- 33) Suspense (Tickler) Files of Outstanding Requirements
- 34) Policy and Procedure Manual
- 35) Subcontractor licenses
- 36) Final Program

The Project files and records shall be available at all times to Owner or its designees for reference, review or copying.

3.19 Design Builder shall provide the following services with respect to the Work, to facilitate the smooth, successful and timely occupancy of the Project by Owner:

- 1) Design Builder shall provide consultation and Project management to facilitate Owner's occupancy of the Project and provide transitional services to place the Work “on line” in such conditions as will satisfy Owner's operations requirements. The services include Design Builder's coordination of the delivery of Owner supplied furniture, fixtures and equipment for the Project.
- 2) Design Builder shall catalog operational and maintenance requirements of equipment to be operated by maintenance personnel and convey these to Owner in such a manner as to promote their usability. Design Builder shall provide Owner's operations and maintenance personnel with operations and maintenance training with respect to the equipment and systems being provided as part of the Work. This training may be recorded by Owner for subsequent presentation to Owner's operations and maintenance personnel.
- 3) Design Builder shall secure required guarantees and warranties, and shall assemble and deliver same to Owner in the manner required by Owner

**EXHIBIT Q - PHASE 1 COMPENSATION SCHEDULE****EXHIBIT Q - PHASE 1 COMPENSATION SCHEDULE**

Task 1 – Project Management, Kickoff Meeting, and Progress Meetings	\$ 415,196.00
Task 2 – Data Collection and Review	\$ 115,491.00
Task 3 – Develop Condition Assessment Plan	\$ 271,333.00
Task 4 – Implement Condition Assessment Plan	\$2,544,824.00
Task 5 – Develop Condition Assessment Technical Memorandum	\$ 217,440.00
Task 6 – 90% Design Plans and Specifications	\$ 321,123.00
Task 7 – Public Outreach	<u>\$ 266,100.00</u>
<b>Total</b>	<b>\$4,151,507.00</b>
Task 8 Optional Services	\$ 595,810.00
Unspecified Work (5%)	<u>\$ 207,576.00</u>
Total (Inclusive of Optional Services and Unspecified Work)	<u><b>\$4,954,893.00</b></u>

**EXHIBIT R - TRUTH-IN-NEGOTIATION CERTIFICATE****EXHIBIT R - TRUTH-IN-NEGOTIATION CERTIFICATE**

In compliance with the Consultants' Competitive Negotiation Act, Section 287.055, Florida Statutes, \_\_\_\_\_ hereby certifies that wage rates and other factual unit costs supporting the compensation for the design and construction management services of DESIGN BUILDER to be provided under this Agreement, concerning \_\_\_\_\_ (the Project) are accurate, complete and current as of the time of contracting.

DESIGN BUILDER:

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**EXHIBIT S - DESIGN BUILDER'S KEY PERSONNEL****EXHIBIT S - DESIGN BUILDER'S KEY PERSONNEL**

_____:	Design/Build Contractor	
Project Executive		_____
Senior Project Developer		_____
Contracting Manager		_____
Project Manager		_____
_____:	General Contractor	
Project Executive		_____
Project Superintendent		_____
_____:	Mechanical Contractor	
Project Executive		_____
Senior Estimator		_____
_____:	Architect	
Project Executive		_____
Project Manager		_____
Architect & Designer		_____
_____:	Civil & Environmental Engineering	
Project Executive & Manager		_____
_____:	Structural Engineering	
Project Executive & Manager		_____
_____:	Mechanical, Plumbing & Fire Protection Engineering	
Project Executive & Manager		_____
_____:	Electrical Engineering	
Project Executive & Manager		_____
_____:	Other	
_____		_____



## Stored Materials Record

[illegible]

[illegible]

PINELLAS COUNTY BOARD OF COUNTY COMMISSIONERS  
400 S. FT. HARRISON AVENUE  
ANNEX BUILDING – 6TH FLOOR  
CLEARWATER, FL 33756

**REQUEST FOR PROPOSAL**

*CCNA PROFESSIONAL SERVICES - DESIGN BUILD*

*SUBMITTALS ARE OPENED PUBLICLY AND  
ARE ACCEPTED VIA OPENGOV*

**THE MISSION OF PINELLAS COUNTY**

Pinellas County Government is committed to progressive public policy, superior public service, courteous public contact, judicious exercise of authority and sound management of public resources to meet the needs and concerns of our citizens today and tomorrow.

ISSUE DATE: November 3, 2023

SOLICITATION NUMBER: 24-0085-RFP-DB

SOLICITATION TITLE: Find and Fix Gravity Sewer Rehabilitation - Professional Design-Build Services

DEADLINE FOR WRITTEN QUESTIONS: **November, 23** by 3:00 PM Eastern Time

SUBMIT QUESTIONS: ALL QUESTIONS MUST BE SUBMITTED IN OPENGOV WITHIN THE Q&A - SECTION.

ALL SUBMITTALS ARE DUE BY: December 5, 2023 by 3:00 PM Eastern Time

PRE-CONFERENCE INFORMATION: N/A

SITE VISIT INFORMATION: N/A

SOLICITATION CONTACT INFORMATION:

NAME: Pamela Ulrich, Lead Procurement Analyst

EMAIL: [plulrich@pinellas.gov](mailto:plulrich@pinellas.gov)

SUBMITTALS MAY NOT BE WITHDRAWN FOR 120 DAYS AFTER OPENING DATE.

The Purchasing and Risk Management Division for the Pinellas County Board of County Commissioners has transitioned to OpenGov Procurement for contractor/vendor registration, and for posting, submitting and receiving bids, quotes and proposals for active solicitations. Contractors/Vendors must register with OpenGov Procurement (<https://procurement.opengov.com/signup>) to bid on active County solicitations.

Should you need technical assistance with OpenGov, the following options are available for assistance:

- Phone: (855) 680-4747, 8 a.m. to 8 p.m., Monday - Friday
- Email: [procurement-support@opengov.com](mailto:procurement-support@opengov.com)
- Chat is available in the OpenGov application
- Web: <https://help.procurement.opengov.com>

***Please Note:***

From time to time, addenda may be issued to this solicitation. Any such addenda will be posted on the same Web site, [www.pinellascounty.org/purchase/Current\\_Bids1.htm](http://www.pinellascounty.org/purchase/Current_Bids1.htm) , from which you obtained this solicitation.

Before submitting, you should check our Web site to download any addenda that may have been issued. Please remember to sign and return Addenda Acknowledgement Form with completed bid package if applicable.

AUTHORIZED BY:

A handwritten signature in dark ink, appearing to read "Merry Celeste", is written over a horizontal line.

Merry Celeste, CPPB

Division Director of Purchasing and Risk Management



**VENDORS MUST COMPLETE THE FOLLOWING**

NO CHANGES REQUESTED BY A PROPOSER WILL BE CONSIDERED AFTER THE RFP OPENING DATE AS ADVERTISED. BY SIGNING THIS PROPOSAL FORM YOU ARE AGREEING TO ALL PROPOSAL TERMS AND CONDITIONS INCLUDING ALL INSURANCE REQUIREMENTS.

VENDOR NAME: \_\_\_\_\_ (As shown on W-9)  
DBA: \_\_\_\_\_ (If applicable)  
MAILING ADDRESS: \_\_\_\_\_ (As shown on W-9)  
CITY / STATE / ZIP: \_\_\_\_\_ (As shown on W-9)  
VENDOR EMAIL: \_\_\_\_\_ (Primary Company Email Address)  
REMIT TO NAME: \_\_\_\_\_ (As Shown on Vendor Invoice)  
FEIN#: \_\_\_\_\_ (As shown on W-9)

PAYMENT TERMS: \_\_\_\_% \_\_\_\_DAYS, NET 45 (PER F.S. 218.73)

DEPOSIT, IF REQUIRED, IS ATTACHED IN THE AMOUNT OF \$ \_\_\_\_\_

Proper Corporate Identity is needed when you submit your quote, especially how your firm is registered with the Florida Division of Corporations. Please visit [dos.myflorida.com/sunbiz/](https://dos.myflorida.com/sunbiz/) for this information. It is essential to return a copy of your W-9 with your quote. Thank you.

**VENDOR CONTACT INFORMATION**

CONTACT NAME: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_  
FAX NUMBER: \_\_\_\_\_  
EMAIL ADDRESS: \_\_\_\_\_

I HEREBY AGREE TO ABIDE BY ALL CONDITIONS OF THIS SOLICITATION, INCLUDING ALL INSURANCE REQUIREMENTS, AND CERTIFY THAT I AM AUTHORIZED TO SIGN THIS SOLICITATION FOR THE VENDOR.

AUTHORIZED SIGNATURE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

SEE SECTION F FOR PRICING SUMMARY

THIS FORM MUST BE RETURNED WITH YOUR RESPONSE

## **TABLE OF CONTENTS**

<b>TABLE OF CONTENTS .....</b>	<b>4</b>
<b>SECTION A - GENERAL CONDITIONS .....</b>	<b>6</b>
1. CONTRACTOR SUBMISSION .....	6
2. WRITTEN REQUESTS FOR INTERPRETATIONS/CLARIFICATIONS .....	6
3. RIGHTS OF PINELLAS COUNTY IN REQUEST FOR PROPOSAL PROCESS .....	6
4. COSTS INCURRED BY PROPOSERS .....	6
5. ORAL PRESENTATION .....	6
6. CONFLICT OF INTEREST .....	6
7. WITHDRAWAL OF PROPOSAL .....	7
8. LATE PROPOSAL OR MODIFICATIONS .....	7
9. LOCAL, STATE, AND FEDERAL COMPLIANCE REQUIREMENTS .....	7
10. RIGHT TO AUDIT .....	7
11. SCRUTINIZED COMPANIES AND PUBLIC ENTITIES CRIME ACT .....	7
12. COUNTY INDEMNIFICATION .....	7
13. TERMINATION .....	8
14. ASSIGNMENT/SUBCONTRACTING/CORPORATE ACQUISITIONS AND/OR MERGERS .....	8
15. LOBBYING .....	8
16. PROTEST PROCEDURE .....	9
17. INTEGRITY OF REQUEST FOR PROPOSAL (RFP) DOCUMENTS .....	10
18. AGREEMENT .....	10
19. OWNERSHIP OF DOCUMENTS .....	10
20. INDEPENDENT CONTRACTOR STATUS AND COMPLIANCE WITH THE IMMIGRATION REFORM AND CONTROL ACT OF 1986 .....	10
21. PROHIBITION AGAINST CONTINGENT FEE .....	11
22. TRUTH IN NEGOTIATIONS: .....	11
23. JOINT VENTURES .....	11
24. PAYMENT/INVOICES .....	11
25. TAXES .....	12
26. DISPUTE RESOLUTION FOR PINELLAS COUNTY BOARD OF COUNTY COMMISSIONERS IN MATTERS OF INVOICE PAYMENTS .....	12
27. INSURANCE .....	13
28. PUBLIC RECORDS/TRADE SECRETS .....	13
29. PUBLIC RECORDS – CONTRACTOR’S DUTY .....	14
30. SMALL BUSINESS ENTERPRISE (SBE) PROGRAM .....	14
31. E-VERIFY .....	14
<b>SECTION B – SPECIAL CONDITIONS .....</b>	<b>16</b>
1. INTENT .....	16
2. PERIOD OF CONTRACT .....	16
3. EVALUATION CRITERIA FOR WRITTEN PROPOSALS .....	16
4. EVALUATION CRITERIA FOR ORAL PRESENTATIONS .....	17
5. LICENSES, PERMITS, FEES AND TAXES .....	18
6. BID BOND GARAUNTEE .....	18
7. CONTRACT SECURITY .....	19
8. INFORMATION PACKAGE .....	19
9. SUBMITTAL REQUIREMENTS .....	19
10. PROPOSAL SUBMITTAL COPIES .....	21
11. NON-MANDATORY SITE VISIT – Not Applicable .....	22
12. PRE-COMMENCEMENT MEETING – Not Applicable .....	22
13. BREACH OF CONTRACT .....	22
14. EQUAL OPPORTUNITY / GIFT & GRATUITY POLICY .....	22
<b>SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS .....</b>	<b>23</b>
1. LIMITATIONS ON LIABILITY .....	23
2. INDEMNIFICATION .....	23
3. INSURANCE: .....	23
1. LIMITATIONS ON LIABILITY .....	26
2. INDEMNIFICATION .....	26

3. INSURANCE:.....26

SECTION D – CONTRACTOR REFERENCES .....30

SECTION E – SCOPE OF WORK.....31

ELECTRONIC PAYMENT (EPAYABLES).....40

W-9 REQUEST FOR TAXPAYER ID NUMBER AND CERTIFICATION .....41

SECTION F - ADDENDUM.....42

SECTION G – STATEMENT OF NO BID.....43

APPENDIX 1 – E-VERIFY AFFIDAVIT .....44

ATTACHMENT A: SMALL BUSINESS ENTERPRISE (SBE) STATUS FORM .....45

## SECTION A - GENERAL CONDITIONS

**SECTION A - GENERAL CONDITIONS****1. CONTRACTOR SUBMISSION**

- a. Submittals shall be uploaded utilizing OpenGov procurement website (<https://secure.procurenow.com/portal/pinellasfl>). Failure to comply could result in the submittal being rejected.
- b. Submittals must be on the forms furnished. Submittals sent via email will not be considered.

**2. WRITTEN REQUESTS FOR INTERPRETATIONS/CLARIFICATIONS**

No oral interpretations will be made to any firms as to the meaning of specifications or any other contractor documents. All questions pertaining to the terms and conditions or scope of work of this solicitation must be sent in writing (electronically) to the Purchasing and Risk Management Division and received by the date specified in solicitation. Responses to questions may be handled as an addendum if the response would provide clarification to requirements of the solicitation. All such addenda shall become part of the agreement documents. The County will not be responsible for any other explanation or interpretation of the proposed solicitation made or given prior to the award of the agreement. The Purchasing and Risk Management Division will be unable to respond to questions received after the specified time frame.

**3. RIGHTS OF PINELLAS COUNTY IN REQUEST FOR PROPOSAL PROCESS**

In addition to all other rights of the County under Florida law, the County specifically reserves the following:

- a. Pinellas County reserves the right to rank firms and negotiate with the highest-ranking firm. Negotiation with an individual proposer does not require negotiation with others.
- b. Pinellas County reserves the right to select the proposal that it believes will serve the best interest of Pinellas County.
- c. Pinellas County reserves the right to reject any or all submittals. The respective constitutional officer, county administrator on behalf of the board of county commissioners or within their delegated financial approval authority, or director of purchasing, within their delegated financial approval authority shall have the authority when the public interest will be served thereby to reject all submittals or parts of submittals at any stage of the procurement process through the award of the agreement.
- d. Pinellas County reserves the right to cancel the entire Request for Proposal.
- e. Pinellas County reserves the right to remedy or waive minor informalities or irregularities, or immaterial errors in the Request for Proposal or in proposals submitted.
- f. Pinellas County reserves the right to request any necessary clarifications or proposal data without changing the terms of the proposal.

**4. COSTS INCURRED BY PROPOSERS**

All expenses involved with the preparations and submissions to the County and any oral presentations, or any work performed in connection therewith, shall be borne solely by the contractor(s). No payment will be made for any responses received, or for any other effort required of, or made by, the contractor(s) prior to contract commencement unless otherwise specified in the Scope of Work in this solicitation.

**5. ORAL PRESENTATION**

An oral presentation may be requested of any contractor, at the Evaluation Committee's discretion. If an oral presentation is requested the written evaluation process shall be utilized to short list proposals. If required as part of the evaluation process, the oral presentation shall be scored as specified in the Scope of Work of the RFP. The most qualified contractor as determined by evaluation process shall proceed with the contracting process.

**6. CONFLICT OF INTEREST**

- a. The contractor represents that it presently has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner with the performance or services required hereunder. The contractor further represents that no person having any such interest shall be employed during the agreement term and any extensions. In addition, the contractor shall not offer gifts or gratuities to County employees as County employees are not permitted to accept gifts or gratuities. By signing this document, the contractor acknowledges that no gifts



**SECTION A - GENERAL CONDITIONS**

or gratuities have been offered to County employees or anyone else involved in this competitive solicitation process.

- b. The contractor shall promptly notify the County's representative, in writing, by certified mail, of all potential conflicts of interest for any prospective business association, interest, or other circumstance, which may influence or appear to influence the contractor's judgment or quality of services being provided hereunder. Such written notification shall identify the prospective business association, interest or circumstance, the nature of work that the contractor may undertake and request an opinion of the County as to whether the association, interest or circumstance would, in the opinion of the County, constitute a conflict of interest if entered into by the contractor. The County agrees to notify the contractor of its opinion, by certified mail, within thirty days of receipt of notification by the contractor.
- c. It is essential to government procurement that the process be open, equitable and ethical. To this end, if potential unethical practices including but not limited to collusion, receipt or solicitation of gifts and conflicts of interest (direct/indirect) etc. are observed or perceived, please report such activity to:

Pinellas County Clerk of Circuit Court – Division of Inspector General

Phone – (727) 45FRAUD (453-7283)

Fax – 727-464-8386

**7. WITHDRAWAL OF PROPOSAL**

The submittal may be withdrawn prior to the bid opening date, however, a submittal may not be withdrawn for a period of time as specified in this solicitation document.

**8. LATE PROPOSAL OR MODIFICATIONS**

- a. Submittals and modifications received after the time set for the submission will not be considered. This upholds the integrity of the process.
- b. Modifications in writing received prior to the time set for the submittal will be accepted.

**9. LOCAL, STATE, AND FEDERAL COMPLIANCE REQUIREMENTS**

The laws of the State of Florida apply to any purchase made under this solicitation. contractors shall comply with all local, state, and federal directives, orders and laws as applicable to this solicitation and subsequent agreement(s) including but not limited to Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act of 1973, Equal Employment Opportunity (EEO), Minority Business Enterprise (MBE), and OSHA as applicable to this agreement.

**10. RIGHT TO AUDIT**

Pinellas County reserves the privilege of auditing a contractor's records as such records relate to purchases between Pinellas County and said contractor. Such audit privilege is provided for within the text of the Pinellas County Code §2-187. Records should be maintained for five (5) years from the date of final payment.

**11. SCRUTINIZED COMPANIES AND PUBLIC ENTITIES CRIME ACT**

Contractor is directed to the Florida Public Entity Crime Act, Fla. Stat. 287.133, and Fla. Stat. 287.135 regarding Scrutinized Companies, and Contractor agrees that its bid and, if awarded, its performance of the agreement will comply with all applicable laws including those referenced herein. Contractor represents and certifies that Contractor is and will at all times remain eligible to bid for and perform the services subject to the requirements of these, and other applicable, laws. Contractor agrees that any contract awarded to Contractor will be subject to termination by the County if Contractor fails to comply or to maintain such compliance.

**12. COUNTY INDEMNIFICATION**

If the CONSULTANT is an individual or entity licensed by the State of Florida who holds a current certificate of registration or is qualified under Chapter 481, Florida Statutes, to practice architecture or landscape architecture, under Chapter 472, Florida Statutes, to practice land surveying and mapping, or under Chapter 471, Florida Statutes, to practice engineering, and who enters into a written agreement with the COUNTY relating to the planning, design, construction, administration, study, evaluation, consulting, or other professional and technical support services furnished in connection with any actual or proposed construction, improvement, alteration, repair, maintenance,

**SECTION A - GENERAL CONDITIONS**

operation, management, relocation, demolition, excavation, or other facility, land, air, water, or utility development or improvement, the CONSULTANT will indemnify and hold harmless the COUNTY, and its officers and employees, from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct, or for any violation of requirements of the Americans with Disabilities Act of 1990, as may be amended, and all rules and regulations issued pursuant thereto (collectively the "ADA") of the CONSULTANT and other persons employed or utilized by the CONSULTANT in the performance of the Agreement.

**13. TERMINATION**

- a. Pinellas County reserves the right to terminate this agreement, without cause by giving thirty (30) days prior written notice to the Contractor of the intention to terminate or with cause if at any time the Contractor fails to fulfill or abide by any of the terms or conditions specified.
- b. Failure of the Contractor to comply with any of the provisions of this Agreement shall be considered a material breach of Agreement and shall be cause for immediate termination of the Agreement at the sole discretion of Pinellas County.
- c. In addition to all other legal remedies available to the Pinellas County, the Pinellas County reserves the right to terminate and obtain from another source any services which have not been provided within the period of time stated in the proposal, or if no such time is stated, within a reasonable period of time from the date of request, as determined by the Pinellas County.
- d. In the event that sufficient budgeted funds are not available for a new fiscal period, the Pinellas County shall notify the Contractor of such occurrence and the Agreement shall terminate on the last day of the then current fiscal year period without penalty or expense to the Pinellas County.

**14. ASSIGNMENT/SUBCONTRACTING/CORPORATE ACQUISITIONS AND/OR MERGERS**

The contractor shall perform this agreement. If a contractor intends to subcontract a portion of this work, the contractor must disclose that intent in the solicitation. No assignment or subcontracting shall be allowed without prior written consent of the County. In the event of a corporate acquisition and/or merger, the contractor shall provide written notice to the County within thirty (30) business days of contractor's notice of such action or upon the occurrence of said action, whichever occurs first. The right to terminate this agreement, which shall not be unreasonably exercised by the County, shall include, but not be limited to, instances in which a corporate acquisition and/or merger represent a conflict of interest or are contrary to any local, state, or federal laws. Action by the County awarding an agreement to a contractor, which has disclosed its intent to assign or subcontract in its response to the solicitation, without exception shall constitute approval for purposes of this agreement. The contractor must inform the County in writing within forty-five (45) business days if the contractor's business entity's name changes. The contractor will bear all responsibility and waive any rights it may have to relief for any delay in processing a payment associated with the County's inability to issue payment to the contractor for a business entity name change that the County was not made aware of as reflected herein.

**15. LOBBYING**

"Lobbying shall be prohibited on all county competitive selection processes and purchasing contract awards pursuant to this division, including, but not limited to, requests for proposals, requests for quotations, requests for qualifications, bids or the award of purchasing contracts of any type. The purpose of this prohibition is to protect the integrity of the procurement process by shielding it from undue influences prior to the contract award, or the competitive selection process is otherwise concluded. However, nothing herein shall prohibit a prospective bidder/proposer/protestor from contacting the purchasing department or the county attorney's office to address situations such as clarification and/or pose questions related to the procurement process.

Lobbying of evaluation committee members, county government employees, elected/appointed officials, or advisory board members regarding requests for proposals, requests for quotations, requests for qualifications, bids, or purchasing contracts, by the bidder/proposer, any member of the bidder's/proposer's staff, any agent or representative of the bidder/proposer, or any person employed by any legal entity affiliated with or representing a bidder/proposer/protestor, is strictly prohibited from the date of the advertisement, or on a date otherwise established by the board, until either an award is final, or the competitive selection process is otherwise concluded. Any lobbying

**SECTION A - GENERAL CONDITIONS**

activities in violation of this section by or on behalf of a bidder/proposer shall result in the disqualification or rejection of the proposal, quotation, statement of qualification, bid or contract.

For purposes of this provision, "lobbying" shall mean influencing or attempting to influence action or non-action, and/or attempting to obtain the goodwill of persons specified herein relating to the selection, ranking, or contract award in connection with any request for proposal, request for quotation, request for qualification, bid or purchasing contract through direct or indirect oral or written communication. The final award of a purchasing contract shall be the effective date of the purchasing contract.

Any evaluation committee member, county government employee, elected/appointed official, or advisory board member who has been lobbied shall immediately report the lobbying activity to the director."

(Ord. No. 02-35, 5-7-02; Ord. No. 04-64, § 12, 9-21-04; Ord. No. 04-87, § 1, 12-7-04; Ord. No. 10-09, § 6, 2-16-10; Ord. No. 11-23, § 2, 7-26-11; Ord. No. 14-11, § 5, 2-11-14; Ord. No. 18-34, 10-23-18).

**16. PROTEST PROCEDURE**

As per Section 2-162 of County Code

- a. Right to Protest. "A vendor who is aggrieved by the contents of the bid or proposal package, or a vendor who is aggrieved in connection with the recommended award on a bid or proposal solicitation, may file a written protest to the director, as provided herein. This right to protest is strictly limited to those procurements of goods and/or services solicited through invitations to bid or requests for proposals, including solicitations pursuant to F.S. § 287.055, the "Consultants' Competitive Negotiation Act." No other actions or recommendations in connection with a solicitation can be protested, including: (i) requests for quotations, negotiations, qualifications or letters of interest; (ii) rejection of some, all or parts of bids or proposals; (iii) disqualification of bidders or proposers as non-responsive or non-responsible; or (iv) recommended awards less than the mandatory bid or proposal amount. Protests failing to comply with the provisions of this section shall not be reviewed."
- b. "Posting. The purchasing department shall post the recommended award on or through the departmental website."
- c. Requirements to protest.
  1. "If the protest relates to the content of the bid or proposal package, a formal written protest must be filed no later than 5:00 p.m. EST on the fifth full business day after issuance of the bid or proposal package."
  2. "If the protest relates to the recommended award of a bid or proposal, a formal written protest must be filed no later than 5:00 p.m. EST on the fifth full business day after posting of the award recommendation."
  3. "The formal written protest shall identify the protesting party and the solicitation involved; include a statement of the grounds on which the protest is based; refer to the statutes, laws, ordinances or other legal authorities which the protesting party deems applicable to such grounds; and specifically request the relief to which the protesting party deems itself entitled by application of such authorities to such grounds."
  4. "A formal written protest is considered filed with the county when the purchasing department receives it. Accordingly, a protest is not timely filed unless it is received within the time specified above by the purchasing department. Failure to file a formal written protest within the time period specified shall constitute a waiver of the right to protest and result in relinquishment of all rights to protest by the bidder or proposer."
- d. "Sole remedy. These procedures shall be the sole remedy for challenging the content of the bid or proposal package or the recommended award."
- e. "Lobbying. Protestors and anyone acting on their behalf, are prohibited from attempts to influence, persuade, or promote a bid or proposal protest through any other channels or means, and contacting any county official, employee, advisory board member, or representative to discuss any matter relating in any way to the solicitation being protested, other than the purchasing department's or county attorney's office to address situations such as clarification and/or pose questions related to the procurement process. The prohibitions provided for herein shall begin with the filing of the protest and end upon the final disposition of the protest; provided, however, at all times protestors shall be subject to the procurement lobbying prohibitions in section 2-189 of this Code. Failure to adhere to the prohibitions herein shall result in the rejection of the protest without further consideration."

**SECTION A - GENERAL CONDITIONS**

- f. "Time limits. The time limits in which protests must be filed as specified herein may be altered by specific provisions in the bid or proposal."
- g. "Authority to resolve. The director shall resolve the protest in accordance with the documentation and applicable legal authorities and shall issue a written decision to the protestor no later than 5:00 p.m. EST on the tenth full business day after the filing thereof."
- h. "Review of director's decision."
  - 1. "The protesting party may request a review of the director's decision to the county administrator by delivering written request for review of the decision to the director by 5:00 p.m. EST on the fifth full business day after the date of the written decision. The written notice shall include any materials, statements, and arguments which the bidder or proposer deems relevant to the issues raised in the request to review the decision of the director."
  - 2. "The county administrator shall issue a decision in writing stating the reason for the action with a copy furnished to the protesting party no later than 5:00 p.m. EST on the seventh full business day after receipt of the request for review. The decision shall be final and conclusive as to the county unless a party commences action in a court of competent jurisdiction."
- i. "Stay of procurement during protests. There shall be no stay of procurement during protests."

(Ord. No. 94-51, § 5, 6-7-94; Ord. No. 04-87, § 1, 12-7-04; Ord. No. 14-11, § 2, 2-11-14; Ord. No. 18-34, 10-23-18)

**17. INTEGRITY OF REQUEST FOR PROPOSAL (RFP) DOCUMENTS**

Contractors shall use the original solicitation form(s) provided by the Purchasing & Risk Management Division and enter information only in the spaces where a response is requested. Contractors may use an attachment as an addendum to the solicitation form(s) if sufficient space is not available on the original form for the contractor to enter a complete response. Any modifications or alterations to the original solicitation documents by the contractor, whether intentional or otherwise, will constitute grounds for rejection of a solicitation. Any such modifications or alterations a contractor wishes to propose must be clearly stated in the contractor's submittal response and presented in the form of an addendum to the original solicitation documents.

**18. AGREEMENT**

In addition to being subject to all terms and conditions in this solicitation, all responses are subject to the terms and conditions in the agreement attached to the solicitation. Additional or modified terms and conditions in the agreement may be necessary depending on the responses to the solicitation, including any exceptions stated by the contractor as required by Section A, PREPARATION OF SUBMITTAL of this solicitation. However, the County may reject any exception proposed by the contractor and shall not be bound by any additional or modified terms and conditions that are in conflict with the terms and conditions in the agreement, or are not acceptable to, or have been declared to be non-negotiable by the County, as determined in its sole discretion.

**19. OWNERSHIP OF DOCUMENTS**

- a. Drawings, specifications, designs, models, photographs, reports, surveys, calculations, and other data provided in connection with this solicitation are and shall remain the property of the County whether the project for which they are made is executed or not. Such finished or unfinished documents, data, calculations, studies, surveys, specifications, drawings, maps, models, photographs and reports prepared by the contractor shall be delivered by the contractor to the County at the conclusion of the project or the termination of the contractor's services.
- b. When such documents are provided to other parties, the contractor shall ensure return of the County's property.

**20. INDEPENDENT CONTRACTOR STATUS AND COMPLIANCE WITH THE IMMIGRATION REFORM AND CONTROL ACT OF 1986**

Contractor acknowledges that it is functioning as an independent contractor in performing under the terms of this agreement, and it is not acting as an employee of Pinellas County. The contractor acknowledges that it is responsible for complying with the provisions of the Immigration Reform and Control Act of 1986, located at 8 U.S.C. Section 1324, et seq., and regulations relating thereto. Failure to comply with the above provisions of the agreement shall be considered a material breach and shall be ground for immediate termination of the agreement.



**SECTION A - GENERAL CONDITIONS****21. PROHIBITION AGAINST CONTINGENT FEE**

The contractor warrants that he has not employed or retained any company or person, other than a bona fide employee working solely for the contractor to solicit or secure this agreement and that he has not paid or agreed to pay any person, company, corporation, individual, or firm other than a bona fide employee working solely for the contractor, any fee, commission, percentage, gift or any other consideration, contingent upon or resulting from the award or making of this agreement.

**22. TRUTH IN NEGOTIATIONS:**

The contractor certifies to truth-in-negotiation and that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current at the time of contracting. Further, the original agreement amount and any additions thereto shall be adjusted to exclude any significant sums where the County determines the agreement price was increased due to inaccurate, incomplete or non-current wage rates and other factual unit costs. Such adjustments must be made within one (1) year following the end of the agreement.

**23. JOINT VENTURES**

All contractors intending to submit as a joint venture are required to have filed proper documents with the Florida Department of State, the Division of Professions, Construction Industry Licensing Board and any other state or local licensing Agency prior to submitting (see Section 489.119 Florida Statutes).

Joint ventures must provide an affidavit attesting to the formulation of a joint venture and provide either proof of incorporation as a joint venture or a copy of the formal joint venture agreement between all joint venture parties, indicating their respective roles, responsibilities and levels of participation for the project.

**24. PAYMENT/INVOICES**

Contractor shall submit invoices for payment as provided herein with such documentation as required by Pinellas County and all payments shall be made in accordance with the requirements of Section 218.70 et. Seq, Florida Statutes, "The Local Government Prompt Payment Act." Invoices shall be submitted to the address below unless instructed otherwise on the purchase order, or if no purchase order, by the ordering department:

Finance Division Accounts Payable

Pinellas County Board of County Commissioners

P.O. Box 2438

Clearwater, FL 33757

Email: ClerkConstructionAP@MyPinellasClerk.org

Each invoice shall include, at a minimum, the contractor's name, contact information and the standard purchase order number. In order to expedite payment, it is recommended the contractors also include the information shown in below. The County may dispute any payments invoiced by contractor in accordance with the County's Dispute Resolution Process for Invoiced Payments, established in accordance with Section 218.76, Florida Statutes, and any such disputes shall be resolved in accordance with the County's Dispute Resolution Process.

Remit To: Billing address to which you are requesting payment be sent

Invoice Date: Creation date of the invoice

Contractor Information: Company name, mailing address, phone number, contact name and email address as provided on the purchase order

Invoice Number: Company tracking number

Shipping Address: Address where goods and/or services were delivered

Ordering Department: Name of ordering department, including name and phone number of contact person

Purchase order Number: Standard purchase order number

**SECTION A - GENERAL CONDITIONS**

Ship Date: Date the goods/services were sent/provided

Quantity: Quantity of goods or services billed

Description: Description of services or goods delivered

Unit Price: Unit price for the quantity of goods/services delivered

Line Total Amount due by line item

Invoice Total: Sum of all line totals for the invoice

Pinellas County offers a credit card payment process (ePayables) through Bank of America. Pinellas County does not charge contractor to participate in the program; however, there may be a charge by the company that processes your credit card transactions. For more information please visit Pinellas County purchasing website at:

[www.pinellascounty.org/purchase](http://www.pinellascounty.org/purchase).

## **25. TAXES**

- a. The County is exempt from all state and federal sales, use, transportation and excise taxes. 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 be deemed to have been included in the solicitation.
- b. Payments to Pinellas County are subject to applicable Florida taxes.

## **26. DISPUTE RESOLUTION FOR PINELLAS COUNTY BOARD OF COUNTY COMMISSIONERS IN MATTERS OF INVOICE PAYMENTS**

Payment of invoices for work performed for Pinellas County Board of County Commissioners is made, by standard, in arrears in accordance with Section 218.70, et. seq., Florida Statutes, the Local Government Prompt Payment Act. If a dispute should arise as a result of non-payment of a payment request or invoice the following Dispute Resolution process shall apply:

- a. Pinellas County shall notify a contractor in writing within ten (10) days after receipt of an improper invoice, that the invoice is improper. The notice should indicate what steps the contractor should undertake to correct the invoice and resubmit a proper invoice to the County. The steps taken by the contractor shall be that of initially contacting the requesting department to validate their invoice and receive a sign off from that entity that would indicate that the invoice in question is in keeping with the terms and conditions of the agreement. Once sign off is obtained, the contractor should then resubmit the invoice as a corrected invoice to the requesting department which will initiate the payment timeline.
  1. Requesting department for this purpose is define as the County department for whom the work is performed.
  2. Proper invoice for this purpose is defined as an invoice submitted for work performed that meets prior agreed upon terms or conditions to the satisfaction of Pinellas County.
- b. Should a dispute result between the contractor and the County about payment of a payment request or an invoice then the contractor should submit their dissatisfaction in writing to the requesting department. Each Requesting Department shall assign a representative who shall act as a dispute manager to resolve the issue at departmental level.
- c. The dispute manager shall first initiate procedures to investigate the dispute and document the steps taken to resolve the issue in accordance with section 218.76 Florida Statutes. Such procedures shall be commenced no later than forty-five (45) days after the date on which the payment request or invoice was received by Pinellas County, and shall not extend beyond sixty (60) days' after the date on which the payment request or invoice was received by Pinellas County.
- d. The dispute manager should investigate and ascertain that the work, for which the payment request or invoice has been submitted, was performed to Pinellas County's satisfaction and duly accepted by the proper authority. Proper authority for this purpose is defined as the Pinellas County representative who is designated as the approving authority for the work performed in the contractual document. The dispute manager shall perform the required investigation and arrive at a solution before or at the sixty (60) days' timeframe for resolution of the

**SECTION A - GENERAL CONDITIONS**

dispute, per section 218.76, Florida Statutes. The County Administrator or his or her designee shall be the final arbiter in resolving the issue before it becomes a legal matter. The County Administrator or his or her designee will issue their decision in writing.

- e. Pinellas County dispute resolution procedures shall not be subject to Chapter 120 of the Florida Statutes. The procedures shall also, per section 218.76, Florida Statutes, not be intended as an administrative proceeding which would prohibit a court from ruling again on any action resulting from the dispute.
- f. Should the dispute be resolved in the County's favor interest charges begin to accrue fifteen (15) days after the final decision made by the County. Should the dispute be resolved in the contractor's favor the County shall pay interest as of the original date the payment was due.
- g. Pursuant to sections 218.70 et. seq., Florida Statutes, an award will be made to cover court costs and reasonable attorney fees, including fees incurred as a result of an appeal to the prevailing party. This provision is applicable if the non-prevailing party held back payment that was the reason for the dispute without any reasonable lawful basis or fact to dispute the prevailing party's claim to those amounts.

**27. INSURANCE**

Notice: The contractor must provide a certificate of insurance and endorsement in accordance with the insurance requirements listed in the insurance section below. Failure to provide the required insurance within a ten (10) day period following the determination or recommendation of lowest responsive, responsible submitter may result in the County to vacate the original determination or recommendation and proceed with recommendation to the second lowest, responsive, responsible submitter.

**28. PUBLIC RECORDS/TRADE SECRETS**

Pinellas County Government is subject to the Florida Public Records law (Chapter 119, Florida Statutes), and all documents, materials, and data submitted to any solicitation as part of the response are governed by the disclosure, exemption and confidentiality provisions relating to public records in Florida Statutes. Except for materials that are "trade secrets" or "confidential" as defined by applicable Florida law, ownership of all documents, materials, and data submitted in response to the solicitation shall belong exclusively to the County.

To the extent that contractor desires to maintain the confidentiality of materials that constitute trade secrets pursuant to Florida law, trade secret material submitted must be identified by some distinct method that the materials that constitute a trade secret, and contractor shall provide an additional copy of the contractors submittal that redacts all designated trade secrets. By submitting materials that are designated as trade secrets and signature of the contractor signature page, contractor acknowledges and agrees:

- i. That after notice from the County that a public records request has been made for the materials designated as a trade secret, the contractor shall be solely responsible for defending its determination that submitted material is a trade secret that is not subject to disclosure at its sole cost, which action shall be taken immediately, but no later than ten (10) calendar days from the date of notification or contractor will be deemed to have waived the trade secret designation of the materials;
- ii. That to the extent that the contractor with trade secret materials is evaluated, the County and its officials, employees, agents, and representatives in any way involved in processing, evaluating, negotiating agreement terms, approving any agreement based on the contractor, or engaging in any other activity relating to the competitive selection process are hereby granted full rights to access, view, consider, and discuss the materials designated as trade secrets through the final agreement award;
- iii. To indemnify and hold the County, and its officials, employees, agents and representatives harmless from any actions, damages (including attorney's fees and costs), or claims arising from or related to the designation of trade secrets by the contractor, including actions or claims arising from the County's non-disclosure of the trade secret materials.
- iv. That information and data it manages as part of the services may be public record in accordance with Chapter 119, Florida Statutes and Pinellas County public record policies. contractor agrees prior to providing goods/services it will implement policies and procedures to maintain, produce, secure and retain public records in accordance with applicable laws, regulations, and County policies, which are subject to approval by the County, including but limited to the Section 119.0701, Florida Statutes.

**SECTION A - GENERAL CONDITIONS**

Notwithstanding any other provision in the solicitation, the classification as trade secret of the entire submission document, line item and/or total contractor prices, the work, services, project, goods, and/or products to be provided by contractor, or any information, data, or materials that may be part of or incorporated into an agreement between the County and the contractor is not acceptable to the County and will result in a determination that the contractor submittal is nonresponsive; the classification as trade secret of any other portion of a submittal document may result in a determination that the submittal is nonresponsive.

**29. PUBLIC RECORDS – CONTRACTOR’S DUTY**

**If the contractor has questions regarding the application of Chapter 119, Florida Statutes, to the contractor’s duty to provide public records relating to this agreement, the contractor shall contact:**

**Pinellas County Board of County Commissioners**

**Purchasing and Risk Management Division**

**400 S. Ft. Harrison Ave, 6th Floor,**

**Clearwater, FL 33756**

**Phone: 727-464-3237**

**Email: [mcchartier@pinellas.gov](mailto:mcchartier@pinellas.gov)**

**30. SMALL BUSINESS ENTERPRISE (SBE) PROGRAM**

It is the policy of the Board of County Commissioners that SBE certified firms have the maximum opportunity to participate on County projects either as a prime or sub-consultant. To be certified as a Pinellas County SBE, firms must apply through Pinellas County Economic Development. To qualify for the SBE program, your firm must serve a commercially useful function; must be located in one of four (4) counties (Pinellas / Hillsborough / Pasco / Manatee) and have annual sales of goods and services not exceeding the maximum three (3) year average of three (3) million dollars for goods/services or gross revenues not exceeding eight (8) million dollars for construction and not exceed a maximum of three (3) year average of fifty (50) employees.

To apply for the SBE Program, please visit the Pinellas County Economic Development website at [pinellascounty.sbecompliance.com](http://pinellascounty.sbecompliance.com)

**31. E-VERIFY**

The contractor and their subcontractor(s) must register with and use the E-verify system in accordance with Florida Statute 448.095. A contractor and subcontractor may not enter into a contract with the County unless each party registers with and uses the E-verify system.

If a contractor enters a contract with a subcontractor, the subcontractor must provide the contractor with an affidavit stating that the Subcontractor does not employ, contract with, or subcontract with unauthorized aliens. The contractor must maintain a copy of the affidavit for the duration of the contract.

If the County, Contractor, or Subcontractor has a good faith belief that a person or entity with which it is contracting has knowingly violated Florida Statute 448.09(1) they shall immediately terminate the contract with the person or entity.

If the County has a good faith belief that a Subcontractor knowingly violated this provision, but the Contractor otherwise complied with this provision, the County will notify the Contractor and order that the Contractor immediately terminate the contract with the Subcontractor.



**SECTION A - GENERAL CONDITIONS**

A contract terminated under the provisions of this section is not a breach of contract and may not be considered such. Any contract termination under the provisions of this section may be challenged to Section 448.095(2)(d), Florida Statute. Contractor acknowledges upon termination of this agreement by the County for violation of this section by Contractor, Contractor may not be awarded a public contract for at least one (1) year. Contractor acknowledges that Contractor is liable for any additional costs incurred by the County as a result of termination of any contract for a violation of this section.

Contractor or Subcontractor shall insert in any subcontracts the clauses set forth in this section, requiring the subcontracts to include these clauses in any lower tier subcontracts. Contractor shall be responsible for compliance by any Subcontractor or Lower Tier Subcontractor with the clause set for in this section.

**SECTION B – SPECIAL CONDITIONS****SECTION B – SPECIAL CONDITIONS****1. INTENT**

The purpose of this competitive process is to ensure Pinellas County compliance with Section 287.055 Florida Statutes known as the “Consultants’ Competitive Negotiation Act” (CCNA). The CCNA establishes contracting procedures by which counties must select architects, professional engineers, landscape architects, and surveyors and mappers (“Professional Firms”) for architectural, engineering, landscaping and mapping services (“Professional Services”). The CCNA process allows for professional firms to be chosen on quality of personnel, minority business enterprise consideration, past performance, willingness to meet time and budget requirements, location, workload, and volume of work previously awarded to each Professional Firm by the County.

**2. PERIOD OF CONTRACT**

Services performed pursuant to this contract shall remain in effect for the time specified in the Notice to Proceed for Phase 1 and Phase 2 services. This Agreement shall become effective on the date of execution of the Agreement.

**3. EVALUATION CRITERIA FOR WRITTEN PROPOSALS**

Following is the criteria that will be used by the County to evaluate and score responsive written proposals. Proposers shall include sufficient information to allow the County to thoroughly evaluate and score their proposals. Each proposal submitted shall be evaluated and ranked by an evaluation committee. If an oral presentation is requested, a minimum of 3 highest ranked firms (if at least three firms submitted and are deemed qualified to proceed) shall be shortlisted and invited to an oral presentation. The average written scores from the short-listed firms are carried forward. Final ranking recommendation is based on the combined average scores obtained for a total potential 2,000 points.

**A. Ability of Firm and its Professional Personnel. Willingness and Ability to Meet Schedule and Budget Based on Current and Projected Workload. 425 Points**

1. Reviews the level of qualifications and experience of the firm and project team and appropriateness of the organization of the project team.
2. Reviews the professional resources available to properly provide services as requested in the RFP document.
3. Reviews the project team to ensure the team proposed contains all of the critical disciplines required.
4. Prime team proposed should have exceptional professional resources to properly provide services.
5. The project manager and proposed team should be uniquely qualified to provide the desired services.
6. Evaluates the workload commitments that will impact the firm’s ability to complete services on schedule.
7. The submittal should demonstrate that the firm has adequate time available and personnel to compete services on schedule and additional backup staffing capability in the event of unforeseen circumstances.

**B. Firm Experience with Projects of Similar Size and Past Performance 375 Points**

1. Reviews the firms experience with projects of similar size, type and scope and the performance on those specific projects.
2. The prime firm must have adequate, recent (within the past five years) experience with projects of similar type as defined in the RFP document.
3. Experience pertaining to specific Pinellas County projects may also be considered. Pinellas County staff shall not however furnish references for such projects.
4. The scope of services provided should represent projects that are similar to those defined in the RFP document.
5. The overall performance of the firm relative to projects of similar size and scope should be evaluated.

**C. Volume of Work Previously Awarded by the County 50 Points**

Pre-populated by the Purchasing Department, the purpose of this criterion is to effect an equitable distribution of contracts. This criterion is evaluated based on all CCNA Non-Continuing contracts awarded to a firm during the two (2) previous completed fiscal years through to current date. The date utilized for establishing award shall be

**SECTION B – SPECIAL CONDITIONS**

the date the Board of County Commissioners or County Administrator initially awards the contract. The points are worth 5 percent of the overall points available and are distributed as follows:

- \$0 - \$200,000 – 5% of points available
- \$200,001 - \$400,000 – 4% of points available
- \$400,001 – \$600,000 – 3% of points available
- \$600,001- \$800,000 – 2% of points available
- \$800,001 - \$1,000,000 – 1% of points available
- Over \$1,000,000 – 0% of points available

Based on a typical 1,000-point evaluation scoring process, a firm deemed to be in the \$0-\$200,000 category threshold would be allotted 50 points etc.

**D. Minority Business Status 25 Points**

Provides points pre-populated by the Purchasing Department for minority business status as designated by the State of Florida. If the firm, or its sub-consultant, is designated as a minority business by the Florida State Office of Supplier Diversity, Department of Management Services, 2.5% of the total evaluation points are awarded. If the firm does not have minority business status as per the Florida State Office of Supplier Diversity, Department of Management Services, 0% of the points available are awarded.

**E. Pinellas County Small Business Enterprise (SBE) Status 100 Points**

Provides points pre-populated by the Purchasing Department for SBE status as designated by Pinellas County. To qualify, a firm or its sub consultants must be located in one of 4 counties (Pinellas / Hillsborough / Pasco / Manatee) and have annual sales of goods/services not exceeding the maximum 3 year average of 3 million dollars or gross revenues not exceeding 8 million dollars for construction and not exceed a maximum 3 year average of 50 employees.

Prime firm or sub-consultant must directly associate Small Business Enterprise (SBE) and be an integral part as defined by CCNA Florida Statute Section 287.055 and cannot consist of vendors or suppliers from office supply, printing services, etc.

If the prime firm is certified as a Pinellas County SBE, 100 points will be awarded. If the prime firm is not a certified Pinellas County SBE and utilizes 1 certified Pinellas County SBE as sub-consultant, 50 points will be awarded. If the prime firm utilizes more than 1 certified Pinellas County SBE as sub-consultant, 75 points will be awarded. Failure to utilize certified sub-consultants, as presented in your submittal and evaluated accordingly may affect future awards to your company. A prime firm or sub-consultant must be certified through Pinellas County Economic Development as an SBE prior to submission of your proposal document. If the prime firm nor any of its sub-consultants are not certified as a Pinellas County SBE, 0% of the points available will be awarded.

Proposer must provide complete SBE Status Form (Attachment A).

**F. Location 25 Points**

Provides points pre-populated by the Purchasing Department. Evaluates the location of the project team relative to Pinellas County including the prime firm and project manager. If firm has an established office located in Pinellas, Manatee, Hillsborough or Pasco counties, 25 points are awarded. If not, no points will be awarded.

**Total 1,000 Points**

**4. EVALUATION CRITERIA FOR ORAL PRESENTATIONS**

An oral presentation may be requested at the evaluation committee's discretion. The average scores from the written evaluation phase will be carried forward (for the shortlisted firms deemed qualified to proceed) and combined with average scores from the oral presentation process for one total average score potential of 2,000 points.

**a. Understanding of Project /Firm Qualifications 500 Points**

1. Evaluation of the firm's understanding of the overall project including the scope of work which may include but is not limited to; studies performed that affect the project, key design elements and effect on the community involved.

**SECTION B – SPECIAL CONDITIONS**

2. Evaluation of the firm's qualifications and qualifications of the individuals proposed for the project including the project manager and staff of the firm to be assigned. Qualifications shall include but not be limited to experience with similar projects, management experience, firm experience etc.

**b. Ability to Provide Required Services Within the Schedule and Budget 300 Points**

Evaluation of the firm's overall approach including experience in scheduling projects, systems that will be used to keep track of the project schedule, cost control, quality assurance and quality control, issues and methods employed to avoid cost overruns and project delays.

**c. Managerial Methods used to Plan, Design and Administer the Project 200 Points**

Evaluation of the overall approach to the project proposed by the firm and the appropriateness of the methods proposed to plan, design and administer the project in relation to the scope of work and County requirements.

**Total: 1,000 Points**

**5. LICENSES, PERMITS, FEES AND TAXES**

- A. Pursuant to section 218.80, Florida Statutes, Pinellas County discloses to the Contractor the following permits and fees generally which will have to be obtained by and will be payable by the Contractor who is the successful bidder or proposer. Specific permits required will be shown in Exhibit K of Agreement – Permits. Contractor will be reimbursed for the actual amount paid for the permits as evidenced by official receipts from the office(s) collecting the fees. No reimbursement will be provided for license fees. Permits/fees may include the following:

1. Impact Fees.
2. Inspection Fees.
3. Other Permits or Fees Required by Pinellas County for the Completion of the Work, if applicable.
4. License Fees: The Pinellas County Construction Licensing Board (PCCLB), an independent government agency, may require licensure or registration of a State of Florida Construction License. These are not Pinellas County Government fees, but the Contractor is hereby put on notice that fees may be required by the PCCLB. License fees are not reimbursable.

The foregoing list of fees apply only to those fees imposed by Pinellas County or imposed by another governmental agency which has assigned or delegated the responsibility for issuance of permits, licenses and conduction of inspections and attendant collection of fees to Pinellas County. The Contractor is responsible for determining if other fees and permits are required by any other Federal, State, or local governmental entity, agency, or board.

- B. All sales, consumer, use, and other similar taxes associated with the Work or portions thereof, which are applicable during the performance of the work, shall be paid by the Contractor.
- C. Compliance with Permit and Licenses Requirements: The Contractor shall comply with all applicable Local, State and Federal permit conditions and license requirements, applicable building and construction code requirements and such other rules and regulations as may apply to the prosecution of work. Failure of the Contractor to comply with the above-specified requirements shall result in Contractor being prohibited from performing work pursuant to this Agreement. Any additional costs incurred by the Contractor as a result of non-compliance shall be the responsibility of the Contractor and shall not be paid by the County. Additionally, Contractor shall be required to pay any fines due as a result of non-compliance with the applicable requirements.

**6. BID BOND GARAUNTEE**

- A. All bids must be accompanied by a Bid Bond guarantee in the sum of five percent (5%) of the Phase 2 base bid and made payable to Pinellas County. Said bid bond shall be a guarantee that should the bid be accepted, the Bidder will, within ten (10) days after the acceptance of its bid, enter into an Agreement with Pinellas County for the services proposed to be performed and will at that time furnish an acceptable Agreement surety. Cash, certified check, cashier's check, trust company treasurer check, company or personal checks and bank draft of any national or state bank are not acceptable.
- B. Said bid bond and the monies payable thereon, will, at the option of the County, be forfeited if the Bidder fails to execute the written Agreement and furnish the required surety bond within ten (10) consecutive calendar days following written notice of the award of the Contract.



**SECTION B – SPECIAL CONDITIONS**

- C. Attorneys-in-fact who sign bonds must file with such bond one (1) certified copy of their power of attorney to sign said bond.
- D. Bid bond shall have been issued within thirty (30) days of the date for receiving bids.

**7. CONTRACT SECURITY**

For work related to Construction Phase 2:

- A. The Bidder shall provide a Performance Bond and a Payment Bond in the form prescribed in Exhibit A of Agreement and each in the amount of 100% of the Agreement amount, the costs of which are to be paid by the Bidder. The Bonds will be acceptable to the County only if the following conditions are met:
  - 1. For contracts that do not exceed \$500,000.00, the Surety Company:
    - a) is licensed to do business in the State of Florida;
    - b) holds a certificate of authority authorizing it to write surety bonds in this state and provides proof of same;
    - c) has twice the minimum surplus and capital required by the Florida Insurance Code at the time the invitation to bid is issued;
    - d) is otherwise in compliance with the provisions of the Florida Insurance Code; and
    - e) holds a currently valid certificate of authority issued by the United States Department of Treasury under 31 U.S.C. ss 9304-9308.
  - 2. For contracts over \$500,000.00, all of the requirements of paragraph A.1 above apply. In addition, the Surety Company must have a current rating of at least Excellent (A or A-) all as reported in the most current Best Key Rating Guide, published by A.M. Best Company, Inc., of 75 Fulton Street, New York, New York 10038, with an underwriting limitation of at least two times the dollar amount of the Agreement.
  - 3. All bonds must be signed by an insurance agent who is licensed to do business in the state of Florida. The license may be held by a resident agent or a non-resident agent.
- B. If the Surety for any Bond furnished by the Bidder is declared bankrupt, becomes insolvent, its right to do business is terminated in the State of Florida, or it ceases to meet the requirements imposed by the Contract Documents, the Bidder shall, within five (5) calendar days thereafter, substitute another Bond and Surety, both of which shall be subject to the County's approval.
- C. By execution of these bonds, the Surety acknowledges that it has read the Surety qualifications and Surety obligations imposed by the Contract Documents and hereby satisfies those conditions.

**8. INFORMATION PACKAGE**

Request for Letters of Interest for Professional Services As Governed by Florida Statute 287.055

- 1. "Professional services" is defined as those services within the scope of the practice of architecture, professional engineering, landscape architecture, or registered surveying and mapping, as defined by the laws of the state, or those performed by any architect, professional engineer, landscape architect, or registered surveyor and mapper in connection with his or her professional employment or practice.
- 2. An award may not be issued without proof that your firm is registered with the Florida Division of Corporations, as per Florida Statute §607.1501 [www.flsenate.gov/Laws/Statutes/2011/607.1501](http://www.flsenate.gov/Laws/Statutes/2011/607.1501).
- 3. A foreign corporation (foreign to the State of Florida) may not transact business in this state until it obtains a certificate of authority from the Department of State. Please visit [dos.myflorida.com/sunbiz/](http://dos.myflorida.com/sunbiz/) for this information on how to become registered.

**9. SUBMITTAL REQUIREMENTS**

Submittal of current SF-330 (federal Standard Form), Part I and II, with all sections completed. SF-330 can be obtained from U. S. General Services Administration (GSA) website [www.gsa.gov/reference/forms](http://www.gsa.gov/reference/forms), then select Standard Form on the menu and go to the 330.

The submittals shall be in the format of Standard Forms (SF) 330. The submittal shall be limited to 100 pages (includes ALL pages). The selection of the firms will be based on the information provided on the forms and in the additional sections.

**SECTION B – SPECIAL CONDITIONS**

A contractor may submit a response as a prime and also be a subcontractor to another firm.

**Note:** Standard Form (SF) 330 - Part II should be submitted for each firm and for each subcontractor.

Submittal requirements must be indexed and listed in the order described below:

A. Introduction Tab

1. Letter of Interest by corporate office or principal of the firm.
2. Specific Professional services to be offered (please delineate each service your firm offers).
3. Table of Contents.

B. Tab 1 - Standard Form (SF) 330 – Part I & II

Should be a Maximum of 50 pages and fully completed as required by the law governing Standard Form (SF) 330.

Please furnish a list of 10 projects, where multiple team members worked together, if possible, illustrating the proposed team's qualifications for performance pertaining to this project. The County does not request nor require an amount greater than 10 projects be submitted. Your firm will not be penalized if more than 10 projects are furnished as part of your submittal; however, submitting more than 10 projects will not provide your firm an advantage during the evaluation process.

Note: Information submitted in Tab 2 through Tab 6 should be a maximum of 50 pages.

C. Tab 2 - Statements and Documentation

1. Proof of licenses/certifications
2. Provide proof of proper State of Florida business licensure and professional certifications/registration(s) in the State of Florida.
3. Provide proof of corporate registration to operate in the State of Florida by the Department of State, Division of Corporations. Information concerning certification with the Secretary of State can be obtained at: [dos.myflorida.com/sunbiz/](https://dos.myflorida.com/sunbiz/). Must be active status.
4. Provide Certificate of Florida Small and Minority Business issued by the Florida State Office of Supplier Diversity, Department of Management Services (if applicable).
5. Provide Attachment A: Small Business Enterprise (SBE) Status Form
6. Provide certificate for each firm claiming Pinellas County SBE status, issued by the Pinellas County Economic Development (if applicable).
7. State and provide address, phone number, contact, etc., if firm has an established office located in Pinellas, Manatee, Hillsborough or Pasco counties.

D. Tab 3 - Certificate(s) of Insurance

Section C reflects the insurance requirements deemed necessary for this project by County Risk Management. It is not necessary to have this level of insurance in effect at the time of submission, but certificates indicating that the insurance is currently carried, or acknowledgment from the carrier indicating upgrade availability will speed the review process.

E. Tab 4 - Key Personnel Statement

Submit a statement that personnel listed in the submittal will be available for and shall be assigned to this project. Failure to produce the proposed key personnel may be grounds for dismissal.

F. Tab 5 -

1. Acknowledgment of Addenda (if applicable).
2. W-9 Request for Taxpayer Identification Number and Certification
3. Section D Vendor References
4. Page 1, Signature Page of the RFP

**SECTION B – SPECIAL CONDITIONS**

5. Electronic Payment (ePayable) form
6. Section F – Electronic Payment (ePayable) form
7. Attachment A: Small Business Enterprise (SBE) Status Form
8. Attachment B: E-Verify Affidavit
9. Bid Bond

- G. Tab 6 - Include any additional information to represent your firm for consideration.

Original letters shall be signed by an authorized representative of the firm. All information requested must be submitted. Failure to submit all information may delay evaluation of the proposal. Letters, which are substantially incomplete or lack key information, may be rejected by the County at its discretion.

The submittals shall be in the format of Standard Forms (SF) 330. The submittal should be limited to 100 pages (includes ALL possible pages). The selection of the firms will be based on the information provided on the forms and in the additional sections.

Information submitted with your letter of interest should include documentation to demonstrate your firm's qualifications and abilities to perform as noted in the scope of services and also include information to allow for a clear understanding of past projects, especially in Florida, staff experience and abilities, and any additional information to present your firm for consideration.

An evaluation committee will review the information submitted. Once review is complete and the firm confirms the maximum ceiling for establishing a fee schedule, a recommendation to the Board of County Commissioners will be prepared. This contract will result in negotiated rates that will be fully loaded and will encompass all profit, markup, and local travel expenses. Award(s) resulting from this solicitation shall be subject to the provisions of Section 2-178, contracting for Designated Professional Services of the Ordinances of Pinellas County and Section 10 of the Purchasing Policies and Procedures of Pinellas County.

For questions and additional information, contact person indicated on page 1.

Submittals will be evaluated using the criteria listed in Item 3 of this Section. Firms will be notified in writing if they have been selected in a reasonable time after submittal date.

All proposals shall be signed by authorized principals of the firm.

#### **10. PROPOSAL SUBMITTAL COPIES**

The preferred method is PDF conversion from the Proposer's source files (to minimize file size and maximize quality and accessibility) rather than scanning.

Instructions for Providing Files in PDF Format to Pinellas County Government

- A. How do I convert my files to PDF format?

Answer- If you have a program such as Adobe Acrobat, creating a PDF of any file is a simple print function. Rather than printing to a traditional printer, the file converts to a PDF format copy of your original. Any program (such as Word, PowerPoint, Excel, etc.) can be converted this way by simply selecting the print command and choosing PDF as the printer.

- B. Should I scan everything and save as PDF?

Answer- Not unless you are scanning with OCR (optical character recognition). Scanning will create unnecessarily large files because a scan is just a picture of a page rather than actual page text. Furthermore, the result of scanning is that your pages will not look nearly as "clean" or professional as simply using the print to PDF method from the program from which the file originates. Additionally, since scan pages are pictures of text, not really text, they may not be considered accessible\* under Federal ADA guidelines (\*unless the scans are OCR.)

- C. My document is a compilation of multiple sources. Should I send multiple PDF files?

Answer- You may, however merging pages/files is a very simple process within PDF.

**SECTION B – SPECIAL CONDITIONS****11. NON-MANDATORY SITE VISIT – Not Applicable****12. PRE-COMMENCEMENT MEETING – Not Applicable****13. BREACH OF CONTRACT**

Failure of Contractor to perform any of the services required by this contract within ten (10) days of receipt of written demand for performance from the County shall constitute a breach of contract.

**14. EQUAL OPPORTUNITY / GIFT & GRATUITY POLICY**

Pinellas County is committed to a workplace, which is free from harassment or discrimination of any kind. All Contractors and their agents, while performing work and/or services pursuant to this Agreement, are expected to conduct themselves accordingly.

All employees of Pinellas County are prohibited from accepting gifts and/or gratuities from Contractors. Contractor agrees to cause all of its employees, subcontractors, consultants and other agents to honor this policy.



**SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS****SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS****1. LIMITATIONS ON LIABILITY**

By submitting a Bid, the Vendor acknowledges and agrees that the services will be provided without any limitation on the Vendor's liability. The County objects to and shall not be bound by any term or provision that purports to limit the Vendor's liability to any specified amount in the performance of the services. The Vendor shall state any exceptions to this provision in its response, including specifying the proposed limits of liability in the stated exception to be included in the Services Agreement. The Vendor is deemed to have accepted and agreed to provide the services without any limitation on the Vendor's liability that the Vendor does not take exception to in its response. Notwithstanding any exceptions by the Vendor, the County reserves the right to declare its prohibition on any limitation on the Vendor's liability as non-negotiable, to disqualify any Bid I that includes exceptions to this prohibition on any limitation on the Vendor's liability, and to proceed with another responsive, responsible proposal, as determined by the County in its sole discretion.

**2. INDEMNIFICATION**

Vendor agrees to indemnify, pay the cost of defense, including attorney's fees, and hold harmless the County, its officers, employees and agents from all damages, suits, actions or claims, including reasonable attorney's fees incurred by the County, of any character brought on account of any injuries or damages received or sustained by any person, persons, or property, or in any way relating to or arising from the Agreement; or on account of any act or omission, neglect or misconduct of Contractor; or by, or on account of, any claim or amounts recovered under the Workers' Compensation Law; or of any other laws, regulations, ordinance, order or decree; or arising from or by reason of any actual or claimed trademark, patent or copyright infringement or litigation based thereon; or for any violation of requirements of the Americans with Disabilities Act of 1990, as may be amended, and all rules and regulations issued pursuant thereto (collectively the "ADA") except when such injury, damage, or violation was caused by the sole negligence of the County.

**3. INSURANCE:**

The Vendor must provide a certificate of insurance and endorsement in accordance with the insurance requirements listed below, prior to recommendation for award.

The Vendor shall obtain and maintain and require any subcontractor to obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth. For projects with a Completed Operations exposure, Vendor shall maintain coverage and provide evidence of insurance for two (2) years beyond final acceptance. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and have an AM Best rating of A- VIII or better.

- A. Submittals should include, the Vendor's current Certificate(s) of Insurance. If Vendor does not currently meet insurance requirements, Vendor shall also include verification from their broker or agent that any required insurance not provided at that time of submittal will be in place prior to the award of contract.

Upon selection of Vendor for award, the selected Vendor shall email certificate that is compliant with the insurance requirements. If the certificate received is compliant, no further action may be necessary. The Certificate(s) of Insurance shall be signed by authorized representatives of the insurance companies shown on the Certificate(s). **The Certificate holder section shall indicate Pinellas County, a Subdivision of the State of Florida, 400 S Fort Harrison Ave, Clearwater, FL 33756. Pinellas County shall be named as an Additional Insured for General Liability. A Waiver of Subrogation for Workers Compensation shall be provided if Workers Compensation coverage is a requirement.**

- B. Approval by the County of any Certificate(s) of Insurance does not constitute verification by the County that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate(s) of Insurance is in compliance with the requirements of the Agreement. County reserves the right to require a certified copy of the entire insurance policy, including endorsement(s), at any time during the Bid and/or contract period.
- C. If any insurance provided pursuant to the Agreement expires or cancels prior to the completion of the Work, you will be notified by CTrax, the authorized vendor of Pinellas County. Upon notification, renewal Certificate(s) of Insurance and endorsement(s) shall be furnished to Pinellas County Risk Management at

## SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS

[InsuranceCerts@pinellascounty.org](mailto:InsuranceCerts@pinellascounty.org) and to CTrax c/o JDi Data at [PinellasSupport@ididata.com](mailto:PinellasSupport@ididata.com) by the Vendor or their agent prior to the expiration date.

- 1) Vendor shall also notify County within twenty-four (24) hours after receipt, of any notices of expiration, cancellation, nonrenewal or adverse material change in coverage received by said Vendor from its insurer. Notice shall be given by email to Pinellas County Risk Management at [InsuranceCerts@pinellascounty.org](mailto:InsuranceCerts@pinellascounty.org). Nothing contained herein shall absolve Vendor of this requirement to provide notice.
  - 2) Should the Vendor, at any time, not maintain the insurance coverages required herein, the County may terminate the Agreement,
- D. If subcontracting is allowed under this Bid, the Primary Vendor shall obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth; and require any subcontractors to obtain and maintain, at all times during its performance of the Agreement, insurance limits as it may apply to the portion of the Work performed by the subcontractor; but in no event will the insurance limits be less than \$500,000 for Workers' Compensation/Employers' Liability, and \$1,000,000 for General Liability and Auto Liability if required below.

All subcontracts between the Vendor and its Subcontractors shall be in writing and are subject to the County's prior written approval. Further, all subcontracts shall

1. Require each Subcontractor to be bound to the Vendor to the same extent the Vendor is bound to the County by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the Subcontractor.
  2. Provide for the assignment of the subcontracts from the Vendor to the County at the election of Owner upon termination of the Contract.
  3. Provide that County will be an additional indemnified party of the subcontract.
  4. Provide that the County will be an additional insured on all insurance policies required to be provided by the Subcontractor except workers compensation and professional liability.
  5. Provide a waiver of subrogation in favor of the County and other insurance terms and/or conditions
  6. Assign all warranties directly to the County; and
  7. Identify the County as an intended third-party beneficiary of the subcontract. The Vendor shall make available to each proposed Subcontractor, prior to the execution of the subcontract, copies of the Contract Documents to which the Subcontractor will be bound by this Section C and identify to the Subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Contract Documents.
- E. Each insurance policy and/or certificate shall include the following terms and/or conditions:
- 1) The Named Insured on the Certificate of Insurance and insurance policy must match the entity's name that responded to the solicitation and/or is signing the agreement with the County.
  - 2) Companies issuing the insurance policy, or policies, shall have no recourse against County for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of Vendor.
  - 3) The term "County" or "Pinellas County" shall include all Authorities, Boards, Bureaus, Commissions, Divisions, Departments and Constitutional offices of County and individual members, employees thereof in their official capacities, and/or while acting on behalf of Pinellas County.
  - 4) All policies shall be written on a primary, non-contributory basis.

The minimum insurance requirements and limits for this Agreement, which shall remain in effect throughout its duration and for two (2) years beyond final acceptance for projects with a Completed Operations exposure, are as follows:

- 1) **Workers' Compensation Insurance** Worker's Compensation Insurance is required if required pursuant to Florida law. If, pursuant to Florida law, Worker's Compensation Insurance is required, employer's liability, also known as Worker's Compensation Part B, is also required in the amounts set forth herein.

Limits

**SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS**

Employers' Liability Limits	Florida Statutory
Per Employee	\$ 500,000
Per Employee Disease	\$ 500,000
Policy Limit Disease	\$ 500,000

If Vendor/Contractor is not required by Florida law, to carry Workers Compensation Insurance in order to perform the requirements of this Agreement, County Waiver Form for workers compensation must be executed, submitted, and accepted by Risk Management. Failure to obtain required Worker's Compensation Insurance without submitting and receiving a waiver from Risk Management constitutes a material breach of this Agreement.

**2) Commercial General Liability Insurance** including, but not limited to, Independent Vendor, Contractual Liability Premises/Operations, Products/Completed Operations, and Personal Injury.

Limits	
Combined Single Limit Per Occurrence	\$ 1,000,000
Products/Completed Operations Aggregate	\$ 2,000,000
Personal Injury and Advertising Injury	\$ 1,000,000
General Aggregate	\$ 2,000,000

**3) Professional Liability (Errors and Omissions) Insurance** with at least minimum limits as follows. If "claims made" coverage is provided, "tail coverage" extending three (3) years beyond completion and acceptance of the project with proof of "tail coverage" to be submitted with the invoice for final payment. In lieu of "tail coverage", Proposer may submit annually to the County, for a three (3) year period, a current certificate of insurance providing "claims made" insurance with prior acts coverage in force with a retroactive date no later than commencement date of this contract.

Limits	
Each Occurrence or Claim	\$ 5,000,000
General Aggregate	\$ 5,000,000

For acceptance of Professional Liability coverage included within another policy required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence must be greater than or equal to the amount of Professional Liability and other coverage combined.

**4) Property Insurance** Vendor will be responsible for all damage to its own property, equipment and/or materials.

**PHASE 2 INSURANCE REQUIREMENTS - CONSTRUCTION SERVICES**

The Design Builder must provide a certificate of insurance and endorsement in accordance with the insurance requirements listed below, prior to recommendation for award. The Design Builder shall obtain and maintain, and require any subcontractor to obtain and maintain, at all times during its performance of the Agreement in Phase 2 insurance of the types and in the amounts set forth. For projects with a Completed Operations exposure, Design Builder shall maintain coverage and provide evidence of insurance for 2 years beyond final acceptance. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and have an AM Best rating of A- VIII or better.

**SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS****1. LIMITATIONS ON LIABILITY**

By submitting a Bid, the Vendor acknowledges and agrees that the services will be provided without any limitation on the Vendor's liability. The County objects to and shall not be bound by any term or provision that purports to limit the Vendor's liability to any specified amount in the performance of the services. The Vendor shall state any exceptions to this provision in its response, including specifying the proposed limits of liability in the stated exception to be included in the Services Agreement. The Vendor is deemed to have accepted and agreed to provide the services without any limitation on the Vendor's liability that the Vendor does not take exception to in its response. Notwithstanding any exceptions by the Vendor, the County reserves the right to declare its prohibition on any limitation on the Vendor's liability as non-negotiable, to disqualify any Bid I that includes exceptions to this prohibition on any limitation on the Vendor's liability, and to proceed with another responsive, responsible proposal, as determined by the County in its sole discretion.

**2. INDEMNIFICATION**

Vendor agrees to indemnify, pay the cost of defense, including attorney's fees, and hold harmless the County, its officers, employees and agents from all damages, suits, actions or claims, including reasonable attorney's fees incurred by the County, of any character brought on account of any injuries or damages received or sustained by any person, persons, or property, or in any way relating to or arising from the Agreement; or on account of any act or omission, neglect or misconduct of Contractor; or by, or on account of, any claim or amounts recovered under the Workers' Compensation Law; or of any other laws, regulations, ordinance, order or decree; or arising from or by reason of any actual or claimed trademark, patent or copyright infringement or litigation based thereon; or for any violation of requirements of the Americans with Disabilities Act of 1990, as may be amended, and all rules and regulations issued pursuant thereto (collectively the "ADA") except when such injury, damage, or violation was caused by the sole negligence of the County.

**3. INSURANCE:**

The Vendor must provide a certificate of insurance and endorsement in accordance with the insurance requirements listed below, prior to recommendation for award.

The Vendor shall obtain and maintain and require any subcontractor to obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth. For projects with a Completed Operations exposure, Vendor shall maintain coverage and provide evidence of insurance for two (2) years beyond final acceptance. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and have an AM Best rating of A- VIII or better.

- F. Submittals should include, the Vendor's current Certificate(s) of Insurance. If Vendor does not currently meet insurance requirements, Vendor shall also include verification from their broker or agent that any required insurance not provided at that time of submittal will be in place prior to the award of contract.

Upon selection of Vendor for award, the selected Vendor shall email certificate that is compliant with the insurance requirements. If the certificate received is compliant, no further action may be necessary. The Certificate(s) of Insurance shall be signed by authorized representatives of the insurance companies shown on the Certificate(s). **The Certificate holder section shall indicate Pinellas County, a Subdivision of the State of Florida, 400 S Fort Harrison Ave, Clearwater, FL 33756. Pinellas County shall be named as an Additional Insured for General Liability. A Waiver of Subrogation for Workers Compensation shall be provided if Workers Compensation coverage is a requirement.**

- G. Approval by the County of any Certificate(s) of Insurance does not constitute verification by the County that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate(s) of Insurance is in compliance with the requirements of the Agreement. County reserves the right to require a certified copy of the entire insurance policy, including endorsement(s), at any time during the Bid and/or contract period.
- H. If any insurance provided pursuant to the Agreement expires or cancels prior to the completion of the Work, you will be notified by CTrax, the authorized vendor of Pinellas County. Upon notification, renewal Certificate(s) of Insurance and endorsement(s) shall be furnished to Pinellas County Risk Management at [InsuranceCerts@pinellascounty.org](mailto:InsuranceCerts@pinellascounty.org) and to CTrax c/o JDi Data at [PinellasSupport@jdidata.com](mailto:PinellasSupport@jdidata.com) by the Vendor or their agent prior to the expiration date.



## SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS

- 1) Vendor shall also notify County within twenty-four (24) hours after receipt, of any notices of expiration, cancellation, nonrenewal or adverse material change in coverage received by said Vendor from its insurer. Notice shall be given by email to Pinellas County Risk Management at [InsuranceCerts@pinellascounty.org](mailto:InsuranceCerts@pinellascounty.org). Nothing contained herein shall absolve Vendor of this requirement to provide notice.
  - 2) Should the Vendor, at any time, not maintain the insurance coverages required herein, the County may terminate the Agreement,
- I. If subcontracting is allowed under this Bid, the Primary Vendor shall obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth; and require any subcontractors to obtain and maintain, at all times during its performance of the Agreement, insurance limits as it may apply to the portion of the Work performed by the subcontractor; but in no event will the insurance limits be less than \$500,000 for Workers' Compensation/Employers' Liability, and \$1,000,000 for General Liability and Auto Liability if required below.
- All subcontracts between the Vendor and its Subcontractors shall be in writing and are subject to the County's prior written approval. Further, all subcontracts shall
8. Require each Subcontractor to be bound to the Vendor to the same extent the Vendor is bound to the County by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the Subcontractor.
  9. Provide for the assignment of the subcontracts from the Vendor to the County at the election of Owner upon termination of the Contract.
  10. Provide that County will be an additional indemnified party of the subcontract.
  11. Provide that the County will be an additional insured on all insurance policies required to be provided by the Subcontractor except workers compensation and professional liability.
  12. Provide a waiver of subrogation in favor of the County and other insurance terms and/or conditions
  13. Assign all warranties directly to the County; and
  14. Identify the County as an intended third-party beneficiary of the subcontract. The Vendor shall make available to each proposed Subcontractor, prior to the execution of the subcontract, copies of the Contract Documents to which the Subcontractor will be bound by this Section C and identify to the Subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Contract Documents.
- J. Each insurance policy and/or certificate shall include the following terms and/or conditions:
- 1) The Named Insured on the Certificate of Insurance and insurance policy must match the entity's name that responded to the solicitation and/or is signing the agreement with the County.
  - 2) Companies issuing the insurance policy, or policies, shall have no recourse against County for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of Vendor.
  - 3) The term "County" or "Pinellas County" shall include all Authorities, Boards, Bureaus, Commissions, Divisions, Departments and Constitutional offices of County and individual members, employees thereof in their official capacities, and/or while acting on behalf of Pinellas County.
  - 4) All policies shall be written on a primary, non-contributory basis.

The minimum insurance requirements and limits for this Agreement, which shall remain in effect throughout its duration and for two (2) years beyond final acceptance for projects with a Completed Operations exposure, are as follows:

- 5) **Workers' Compensation Insurance** Worker's Compensation Insurance is required if required pursuant to Florida law. If, pursuant to Florida law, Worker's Compensation Insurance is required, employer's liability, also known as Worker's Compensation Part B, is also required in the amounts set forth herein.

Limits

Employers' Liability Limits

Florida Statutory

## SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS

Per Employee	\$ 500,000
Per Employee Disease	\$ 500,000
Policy Limit Disease	\$ 500,000

If Vendor/Contractor is not required by Florida law, to carry Workers Compensation Insurance in order to perform the requirements of this Agreement, County Waiver Form for workers compensation must be executed, submitted, and accepted by Risk Management. Failure to obtain required Worker's Compensation Insurance without submitting and receiving a waiver from Risk Management constitutes a material breach of this Agreement.

- 6) **Commercial General Liability Insurance** including, but not limited to, Independent Vendor, Contractual Liability Premises/Operations, Products/Completed Operations, and Personal Injury. No explosion, collapse, or underground damage, crane length or boom weight exclusions allowed.

7)

Limits

Combined Single Limit Per Occurrence	\$ 1,000,000
Products/Completed Operations Aggregate	\$ 2,000,000
Personal Injury and Advertising Injury	\$ 1,000,000
General Aggregate	\$ 2,000,000

- 8) **Business Automobile or Trucker's/Garage Liability Insurance** covering owned, hired, and non-owned vehicles. If the Consultant does not own any vehicles, then evidence of Hired and Non-owned coverage is sufficient. Coverage shall be on an "occurrence" basis, such insurance to include coverage for loading and unloading hazards, unless Consultant can show that this coverage exists under the Commercial General Liability policy.

Limit

Combined Single Limit Per Accident	\$1,000,000
------------------------------------	-------------

- 9) **Excess or Umbrella Liability Insurance** excess of the primary coverage required, in paragraphs (1), (2), and (3) above. No explosion, collapse, or underground damage, crane length or boom weight exclusions allowed.

Limits

Each Occurrence	\$ 5,000,000
General Aggregate	\$ 5,000,000

- 10) **Pollution Legal/Environmental Legal Liability Insurance** for pollution losses arising from all services performed to comply with this contract. Coverage shall apply to sudden and gradual pollution conditions including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants, or pollutants into or upon land, the atmosphere or any watercourse or body of water, which results in Bodily Injury or Property Damage. If policy is written on a Claims Made form, a retroactive date is required, and coverage must be maintained for 3 years after completion of contract or "tail coverage must be purchased. Coverage should include and be for the at least the minimum limits listed below:

- a. Bodily injury, sickness, disease, mental anguish or shock sustained by any person, including death; property damage including physical injury to or destruction of tangible property including the resulting loss of use thereof, cleanup costs, and the loss of use of tangible property that has not been physically injured or

## SECTION C – LIMITATION ON LIABILITY, INDEMNIFICATION, AND INSURANCE REQUIREMENTS

destroyed.

- b. Defense including costs, charges and expenses incurred in the investigation, adjustment, or defense of claims for such compensation damages.
- c. Cost of Cleanup/Remediation.

Limits

Per Claim or Occurrence	\$ 1,000,000
General Aggregate	\$ 1,000,000

For acceptance of Pollution Legal/Environmental Legal Liability coverage included within another policy coverage required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence must be greater than or equal to the amount of Pollution Legal/Environmental Legal Liability and other coverage combined.

- 11) **Professional Liability (Errors and Omissions) Insurance** with at least minimum limits as follows. If “claims made” coverage is provided, “tail coverage” extending three (3) years beyond completion and acceptance of the project with proof of “tail coverage” to be submitted with the invoice for final payment. In lieu of “tail coverage”, Proposer may submit annually to the County, for a three (3) year period, a current certificate of insurance providing “claims made” insurance with prior acts coverage in force with a retroactive date no later than commencement date of this contract.

Limits

Each Occurrence or Claim	\$ 1,000,000
General Aggregate	\$ 1,000,000

For acceptance of Professional Liability coverage included within another policy required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence must be greater than or equal to the amount of Professional Liability and other coverage combined.

- 12) **Property Insurance** Vendor will be responsible for all damage to its own property, equipment and/or materials.

**SECTION D – CONTRACTOR REFERENCES****SECTION D – CONTRACTOR REFERENCES**

THE FOLLOWING INFORMATION IS REQUIRED IN ORDER THAT YOUR PROPOSAL MAY BE REVIEWED AND PROPERLY EVALUATED.

COMPANY NAME: \_\_\_\_\_

LENGTH OF TIME COMPANY HAS BEEN IN BUSINESS: \_\_\_\_\_

BUSINESS ADDRESS: \_\_\_\_\_

HOW LONG IN PRESENT LOCATION: \_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

FAX NUMBER: \_\_\_\_\_

TOTAL NUMBER OF CURRENT EMPLOYEES: \_\_\_\_\_ FULL TIME \_\_\_\_\_ PART TIME

NUMBER OF EMPLOYEES YOU PLAN TO USE TO SERVICE THIS CONTRACT: \_\_\_\_\_

All references will be contacted by a County Designee via email, fax or phone call to obtain answers to questions, as applicable before an evaluation decision is made.

Bidders must have experience in work of the same or similar nature, and must provide references that will satisfy the County. Proposer must furnish a reference list of at least four (4) customers for whom they have performed similar services.

EITHER LOCAL COMMERCIAL OR GOVERNMENTAL REFERENCE(S) (PINELLAS COUNTY GOVERNMENT REFERENCES WILL NOT BE ACCEPTED) THAT YOU HAVE PREVIOUSLY PERFORMED SIMILAR CONTRACT SERVICES FOR:

1.	2.
COMPANY:	COMPANY:
ADDRESS:	ADDRESS:
TELEPHONE/FAX:	TELEPHONE/FAX:
CONTACT:	CONTACT:
CONTACT EMAIL:	CONTACT EMAIL:
COMPANY EMAIL ADDRESS:	COMPANY EMAIL ADDRESS:
3.	4.
COMPANY:	COMPANY:
ADDRESS:	ADDRESS:
TELEPHONE/FAX:	TELEPHONE/FAX:
CONTACT:	CONTACT:
CONTACT EMAIL:	CONTACT EMAIL:
COMPANY EMAIL ADDRESS:	COMPANY EMAIL ADDRESS:



**SECTION E – SCOPE OF WORK****SECTION E – SCOPE OF WORK****A. OBJECTIVE:**

Pinellas County Utilities (Owner) is implementing a Find and Fix program to remediate critical portions of excess Inflow and Infiltration (I&I) as part of the Capital Improvement Program (CIP). The South County I&I Remediation for Priority Areas in the South County Zones identified Zones 4, 8 and 13 (the Project) as priority zones and will be delivered as a Progressive Design Build (PDB) project. However, work in Zones 1, 2, 6, and 12 could be completed under this Design Build agreement at the Owner's discretion. The Design Criteria Package (DCP) included as Exhibit J includes objectives and criteria for accomplishing the work contemplated by this scope. Figure 1.1 of the DCP shows the South County Zones and the Priority Areas included as part of the project. I&I studies and area evaluations have been completed and used to develop the design criteria for the Project's various components.

This Project consists of the condition assessment, planning, design, and construction of gravity sewer rehabilitation within the priority areas. Specifically, the work will be performed in two phases. The first phase will consist of the planning, investigation, and assessment, to be used in the development of a technical memorandum and development of the GMP. The second phase will include final 100% design, Issued for Construction (IFC) Documents, and the construction of the Project. Once the Phase 1 GMP is negotiated, approved and notice to proceed is provided by the Owner, the final design will proceed to conformed documents and then the Contractor will perform and certify the work in accordance with the Design Build Agreement.

**A. BACKGROUND:**

Pinellas County is located on the west coast of Florida and boasts the most densely populated county in Florida. Pinellas County is a mostly built-out urban county. The main purpose of this project is to eliminate infiltration and inflow in the sewer mains located within the public right of way and the infiltration and inflow entering the public system from private sewer laterals adjacent to the public system. The private sewer laterals will be addressed with individual agreements for each private lateral owner. The work to be done on private sewer laterals will include inspection and rehabilitation or replacement all to be done with the permission of the private property owner. This work only includes single private sewer laterals and not more complex private sewer systems.

**B. FIND AND FIX POLICY:**

Pinellas County Utilities (PCU) is committed to protecting public health and the environment through effective management of our wastewater treatment facilities and wastewater collection system. Groundwater and surface water inflow and infiltration (I&I) entering the wastewater collection system take up valuable sewer capacity, contribute to causes of sanitary sewer overflows (SSOs), and adds costs for excess wastewater treatment. Defective private sanitary sewer laterals allow a significant amount of I&I into the wastewater collection system, and therefore, Pinellas County institutes this Private Sewer Lateral Find and Fix Policy (Find and Fix Policy).

The purpose of the Find and Fix Policy is to provide for the targeted reduction of I&I in PCU's wastewater collection system in selected neighborhoods where this approach is considered cost-effective. PCU will achieve this I&I reduction effort by implementing cost-effective, comprehensive rehabilitation and replacement of wastewater collection mains, manholes, and public and private laterals within selected Capital Improvement Program (CIP) project areas.

Reducing the I&I will increase available capacity within the PCU wastewater service area, aid in reducing the risk of SSOs, reduce flows to the treatment facilities, and reduce the need for new or expanded infrastructure system-wide.

**C. SCOPE OF WORK: - PHASE ONE (1)**

Design Services: Design Builder shall, consistent with applicable state licensing laws, provide design services, including architectural, engineering and other design professional services, required by this Agreement. Such design services shall be provided through qualified, licensed design professionals who are either (i) employed by Design Builder, or (ii) procured by Design Builder from independent sources. Nothing in this Agreement is intended to create any legal or contractual relationship between Owner and any independent design professional.

Owner shall provide Design Builder with Owner's Project Criteria describing Owner's program requirements and objectives for the Project. Owner's Project Criteria shall include Owner's use, space, price, time, site, performance

**SECTION E – SCOPE OF WORK**

and expandability requirements. Owner's Project Criteria may include conceptual documents, design criteria, performance requirements and other technical materials and requirements prepared by or for Owner. Design Builder shall review and prepare a written evaluation of such criteria, including recommendations to Owner for different and innovative approaches to the design and construction of the Project. The parties shall meet to discuss Design Builder's written evaluation of Owner's Project Criteria. Design Builder shall continue at Owner's direction until a detailed Final Program has been completed and has been approved by the Owner.

Design Builder shall review the Owner's budget and any applicable cost estimates as compared to the Owner's Design Criteria Package. The Design Builder shall confirm in writing to the Owner whether the Project can be designed and successfully constructed within the limits of the Owner's budget and program constraints.

**D. CONDITION ASSESSMENT PLAN:**

Design Builder shall prepare a Condition Assessment Plan. The Condition Assessment Plan will be based upon the National Association of Sewer Service Companies (NASSCO) standards. The Condition Assessment Plan shall include cleaning and inspection criteria, maps, diagrams, traffic control, bypassing methods, and specifications setting forth the requirements of the Project. The parties shall meet to discuss the Condition Assessment Plan and agree upon what revisions, if any, should be made. Owner shall have final approval of such revisions, and Design Builder shall perform such revisions. Design Builder shall meet with Owner during Condition Assessment as often as required until the assessment has been completed and has been approved by the Owner.

Owner's acceptance of Condition Assessment Plan in no way relieves Design Builder of its obligation to deliver complete and accurate assessment as necessary for successful construction of this Project.

Design Builder shall work with the Owner's Project Manager and other Users of the Project to meet design requirements and identify the areas within the project limits which offer the greatest potential for the elimination of unnecessary costs.

Design Builder shall conduct a pre-submittal document review meeting with the Owner's Project Manager prior to submission of the Condition Assessment Plan. Design Builder shall be required to conduct at least one review meeting at completion of this phase to demonstrate how Owner's previously submitted comments have been incorporated into the design documents.

All Condition Assessment Plan Documents prepared by or for Design Builder are subject to Owner's review and approval. At completion of the Condition Assessment Plan preparation, Design Builder shall submit the documents to the Owner's Project Manager for review and comment. Design Builder shall respond in writing to the review comments within 14 calendar days of receipt. Responses shall be forwarded directly to the Owner's Project Manager who will respond within 14 days of receipt. Design Builder shall revise the Condition Assessment Plan as required by Owner in order to obtain Owner's written approval and authorization to proceed to the field work of the assessment.

As part of Phase 1 Services, Design Builder will be required to provide Owner with a Condition Assessment cost estimate as part of the Condition Assessment Plan, together with a written explanation for all variances between that cost estimate and Owner's approved Project budget. The cost estimate format shall be subject to Owner's approval and may require electronic submission of cost estimate information. If Design Builder's Condition Assessment GMP cost estimate or any other estimate prepared by or for Owner based upon the Condition Assessment Plan indicate that costs will exceed Owner's approved Project budget, Design Builder shall revise the Condition Assessment Plan to bring them within Owner's approved Project budget. Design Builder shall be solely responsible for all costs and expenses which it may incur in revising the Condition Assessment Plan to bring them within Owner's approved Project budget. Design Builder shall also provide Owner with an updated Project Schedule.

**6. CONDITION ASSESSMENT & TECHNICAL MEMORANDUM:**

After Owner's review and approval of the Condition Assessment Plan and issuance of Owner's written authorization to proceed, Design Builder shall commence the Condition Assessment field services and perform the following:

Design Builder shall proceed with the system cleaning and testing services based on the Condition Assessment Plan as approved by the Owner.

**SECTION E – SCOPE OF WORK**

Design Builder shall perform manhole inspections (MACP Level 2) and videos followed by cleaning and video recording the inside of the lines within the system prioritized areas. All inspection videos provided to Owner must be compatible with the latest version of GraniteNet, as described in their specifications.

Design Builder shall prepare cleaning and inspection reports for the manholes and sewer lines as the field work progresses.

Design Builder shall identify and properly coordinate the requirements of the various utility services that have an impact upon the field work being performed.

Design Builder shall evaluate alternative ideas in terms of their feasibility to construct, time, and cost. Design Builder shall work with the Owner's Project Manager and other users of the Project to meet design requirements and identify the areas within the project design, which offer the greatest potential for the elimination of unnecessary costs.

The parties shall meet to discuss the rehabilitation alternatives and agree upon what methods should be pursued. Design Builder shall perform such agreed-upon revisions. Design Builder shall meet with Owner during design development as often as required during the field assessment for coordination of the work while maintaining service to the customers.

Design Builder will develop a Technical Memorandum presenting the conditions discovered, rehabilitation methods proposed, and alternative ideas with emphasis on their technical durability, constructability, and life cycle cost.

Design Builder's final Technical Memorandum submittal and presentation shall include, but not be limited to, the requirements found in the Condition Assessment Plan, except to the extent such requirements have been expressly waived by Owner in writing. Design Builder shall certify that the final approval of Technical Memorandum fully complies with the Condition Assessment Plan except for such deviations that have been expressly approved in writing by Owner.

Design Builder shall conduct a pre-submittal document review meeting with the Owner prior to submission of the Condition Assessment Technical Memorandum. Design Builder may be required to conduct at least one presentation at completion of this phase to demonstrate how Owner's previously submitted comments were incorporated into the design documents.

The Condition Assessment Technical Memorandum prepared by or for Design Builder are subject to Owner's review and approval. At completion of the Condition Assessment field testing Phase, Design Builder shall submit the Condition Assessment Technical Memorandum to the Owner's Project Manager for review and comment. Design Builder shall respond in writing to the review comments within 14 calendar days of receipt. Responses shall be forwarded directly to the Owner's Project Manager who will respond within 14 days. Design Builder shall revise the Condition Assessment Technical Memorandum as required by Owner and obtain Owner's written approval and authorization to proceed to the Phase 2.

As part of Phase 1 Services, Design Builder will be required to develop and update the rehabilitation cost estimate as part of the Condition Assessment Technical Memorandum and bring to Owner's attention in writing any variances between that updated cost estimate and Owner's approved Project budget. Cost estimate format shall be subject to Owner's approval and may require electronic submission of cost estimate information. If Design Builder's updated cost estimate or any other estimate prepared by or for Owner based upon the Design Development Documents indicate that costs will exceed Owner's approved Project budget, Owner may elect to modify its budget and/or require Design Builder to revise the Condition Assessment Technical Memorandum to bring it within Owner's approved Project budget. Design Builder shall be solely responsible for all costs and expenses which it may incur in revising the Condition Assessment Technical Memorandum to bring it within Owner's approved Project budget. Design Builder shall also update the Project Schedule.

After Owner's review and approval of the Condition Assessment Technical Memorandum and issuance of Owner's written authorization to proceed, Design Builder shall commence the Construction Documents services and perform the following:

**SECTION E – SCOPE OF WORK**

Design Builder shall prepare Construction Documents up to a 90% completion level based on the final Condition Assessment Technical Memorandum approved by the Owner. Construction Documents shall set forth each discipline's requirements in detail and into a cohesive and coordinated whole based upon the approved Condition Assessment Technical Memorandum and consultation with the Owner. The parties shall meet to discuss the 90% complete Construction Documents and agree upon what revisions, if any, should be made. Design Builder shall perform such agreed-upon revisions. Design Builder shall meet with Owner during development of the Construction Documents as often as required until 90% complete Construction Documents have been approved by the Owner. The 90% complete Construction Documents will include 90% complete specifications in CSI format.

Guaranteed Maximum Price (GMP) Proposal. Based on the 90% complete Construction Documents approved by the Owner in Section 1.1 hereof, and any other documents upon which the parties may agree, Design Builder shall submit a proposal to Owner (the "Proposal") within forty-five (45) days, which shall include the following unless the parties mutually agree otherwise:

- 1 a proposed Lump Sum Price for completion of the construction documents, all permitting, and construction of the Project;
- 2 an updated Project Schedule and date of Substantial Completion of the Project upon which the Lump Sum Price for the Project is based;
- 3 all other information necessary for the parties to begin Phase 2, with the accompanying General Conditions of the Contract; and

Review of Proposal. Design Builder and Owner shall meet to discuss and review the Proposal. If Owner has any comments regarding the Proposal or finds any inconsistencies or inaccuracies in the information presented, it shall give written notice to Design Builder of such comments or findings. If Design Builder finds the revisions acceptable, Design Builder shall, upon receipt of Owner's notice, adjust the Proposal.

At the completion of the 90% Construction Documents, Design Builder will provide a certification from itself and its Design Professional 1) that the Construction Documents reflect work that has been designed in strict compliance with the latest jurisdictional codes and 2) that the Construction Documents comply with the design criteria except for such deviations that have been expressly approved in writing by Owner.

Completion of This Phase of the Agreement. Design Builder's services under this Phase 1 of the Agreement shall be deemed completed upon meeting with Owner to discuss the Proposal and making those revisions to the Proposal, if any, Design Builder finds acceptable.



<b>SECTION E – SCOPE OF WORK</b>
----------------------------------

## **SCOPE OF PHASE 2 SERVICES**

### **A. 100% CONSTRUCTION DOCUMENTS:**

After Owner's review and approval of the Condition Assessment Technical Memorandum and issuance of Owner's written authorization to proceed, Design Builder shall commence the Construction Documents services and perform the following:

Design-Builder shall prepare Construction Documents up to a 100% completion level based on the final 90% Construction Documents approved by the Owner. Construction Documents shall include calculations, if required, and shall set forth each discipline's requirements in detail and into a cohesive and coordinated whole based upon the approved 90% Construction Documents, the Final Program and consultation with the Owner. The Design Builder and Owner shall meet to discuss the 100% complete Construction Documents and agree upon what revisions, if any, should be made. Design Builder shall perform such agreed-upon revisions. Design Builder shall meet with Owner during completion of the Construction Documents as often as required until 100% complete Construction Documents have been approved by the Owner. The 100% complete Construction Documents will include 100% complete specifications in CSI format.

At the completion of the 100% Construction Documents, Design Builder will provide a certification of the standards to which the facility has been designed.

Design Builder shall furnish documents in type, format, version and quantities indicated. Design Builder shall provide Owner with reproducible copies of all design documents, including electronic copies.

### **B. PERMITTING PHASE:**

Design Builder is responsible for applying for and obtaining all necessary and required permits and approvals for the Project.

As part of any permit application package, the Design Builder shall provide the applicable permit office with the number of complete sets of signed and sealed Construction Documents. Each of the drawings and the cover sheet of the specifications package shall be signed, sealed, and dated by the Design Builder.

### **C. CONSTRUCTION:**

Design Builder shall provide the following services in addition to all other Phase 2 Services required by the terms of this Contract:

Prepare a list of required submittals for shop drawings, product data, samples, warranties, and other submittals required by Contract Documents, in tabular form which will indicate specification section number and section name (CSI Format).

Process, review, respond and distribute in accordance with the terms of the Contract Documents shop drawings, product data, samples, substitutions and other submittals required by the Construction Documents within ten (10) business days.

Maintain a master file of all submittals, including submittal register. Owner's copy shall be in electronic/CD format and submitted at time of Substantial Completion.

**SECTION E – SCOPE OF WORK**

Prepare, reproduce and distribute supplemental drawings, specifications and interpretations in response to requests for clarification by Owner or Subcontractors as required by construction exigencies. Review of Design Builder's submittals by Owner is not conducted for the purpose of determining the accuracy and completeness of such submittals, such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of Design Builder as required by the Contract Documents. Owner's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences or procedures. Owner's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Owner shall have authority to reject Work which does not conform to the Construction Documents. Whenever, in its reasonable opinion, Owner considers it necessary or advisable to ensure the proper implementation or the intent of the Construction Documents, Owner will have authority to require special inspection or testing of any Work in accordance with the provisions of the Construction Documents whether or not such Work be then fabricated, installed or completed.

Design Builder shall submit to the applicable permit office the number of sets of drawings and/or documents reflecting the approved changes in the Work as may be required by that office. Code compliance issues must be approved by the applicable permit office prior to inspection of the subject Work.

Design Builder will revise the final approved Construction Documents to incorporate all "As-Built" information contained in the Design Builder's marked-up "As-Built" drawings and specifications, as well as to reflect all addenda, contract changes and field changes (sometimes referred to herein as the "Record Documents"). Design Builder shall provide Owner with one (1) electronic copy on USB Flash Drives of the Record Documents, two sets of the conformed, signed and sealed drawings and prints, and two sets of the conformed Project Manual/Specifications signed and sealed.

The electronic copy on CD of the Record Documents shall be provided in AutoCAD.dwg format, "purged and bound", and compatible with Owner's system.

Throughout Phase 2, Design Builder shall review its marked-up "As-Built" drawings and Project Manual/Specifications, on a daily basis, to reflect all "As-Built" conditions at the Site, maintaining such "As-Built" drawings and specifications is a condition precedent to Design Builder's entitlement to payment hereunder.

Consult with, and recommend solutions to, Owner during the duration of warranties in connection with inadequate performance of equipment, materials or systems under warranty.

For each subject area to be completed, a substantial completion inspection is required. Inspections shall be scheduled a minimum of 14 days prior to inspection date. Document noted defects or deficiencies and assist Owner in confirming Design Builder's correction of such noted defects.

Design Builder shall arrange for all job-site facilities as required by Owner and otherwise necessary to enable Design Builder to perform its respective duties and to accommodate any representatives of Owner which Owner may choose to have present on the job, the description of such facilities to be finalized prior to the execution of the Lump Sum Amendment.

Tangible personal property, otherwise referred to as job-site facilities, include, but are not limited to such things as trailers, toilets, computers and any other equipment necessary to carry on the Work. The method of acquiring such job-site facilities, which are planned to become the property of Owner at the conclusion of the Work, shall be evaluated based on their cost over the life of the Project. Owning versus leasing shall be considered by Design Builder, obtaining at least three (3) proposals for leasing and at least three (3) proposals for purchasing and then analyzing which is least expensive over the usable life of the item. Design Builder shall present its evaluation with

For all such job-site facilities purchased, which may become the property of Owner at the conclusion of the Work, Design Builder shall maintain ownership responsibilities of such facilities until final acceptance of the Work. Reimbursement for cost of such equipment will be made at the conclusion of the Work at the documented purchase price. At that time, Design Builder shall provide Owner with a complete inventory for each unit of equipment. The inventory shall describe the equipment and identify the purchase price, serial number, model number and condition. Where said equipment has a title, said title shall be properly transferred to Owner or to its designee.

Design Builder's administration of the Work shall include the following:

**SECTION E – SCOPE OF WORK**

Maintain a log of daily activities, including manpower records, weather, delays, major decisions, etc.  
 Maintain a roster of companies on the Project with names and telephone numbers of key personnel.  
 Establish and enforce job rules governing parking, clean-up, use of facilities and worker discipline.  
 Provide labor relations management for a harmonious, productive Project.

Design Builder also shall provide job site administration functions during construction to assure proper documentation, including but not limited to the following:

Job Meetings: Design Builder shall attend meetings such as pre-construction conferences, progress meetings, job conferences, pre-closeout meetings, and other Project-related meetings, as may be directed by Owner. Design Builder's Design Professionals are also required to attend any such meetings as directed by Owner. Design Builder shall provide meeting minutes for these meetings. Conduct a preconstruction conference with each subcontractor after award of the subcontract and prior to the start of its portion of the Work. Hold weekly progress and coordination meetings, or more frequently if required by Work progress, to provide for the timely completion of the Work. In addition, Design Builder shall arrange and conduct regular monthly Project status meetings with Owner.

Design Builder shall use the job site meetings as a tool for the preplanning of Work and enforcing schedules, and for establishing procedures, responsibilities, and identification of authority for all parties to clearly understand. During these meetings, Design Builder shall identify the party or parties responsible for following up on any problems, delay items or questions, and Design Builder shall note the action to be taken by such party or parties. Design Builder shall revisit each pending item at each subsequent meeting until resolution is achieved. Design Builder shall attempt to obtain from all present any problems or delaying event known to them for appropriate attention and resolution.

Shop Drawing Submittals/Approvals: Provide staff to review and approve shop drawings and other submittals and to implement procedures for transmittal to Owner of such submittals for action, and closely monitor their review process. Owner reserves the right to review the shop drawings and other submittals and require Design Professional's approval on such shop drawings and other submittals.

Reports and Project Site Documents: Record the progress of the Work. Submit written progress reports to Owner, including information on subcontractors' Work, and the percentage of completion. Keep a daily log available to Owner and any permitting authority inspectors.

Record Drawings: Design Builder shall monitor the progress of its own forces and its subcontractors on marked up field prints which shall be developed by Design Builder into the final record drawings.

Design Builder shall maintain at the Project site, originals or copies of, on a current basis, all Project files and records, including, but not limited to, the following administrative records:

- Subcontracts and Purchase Orders
- Shop Drawing Submittal/Approval Logs
- Equipment Purchase/Delivery Logs
- Contract Drawings and Specifications with Addenda
- Warranties and Guarantees
- Cost Accounting Records
- Labor Costs
- Material Costs
- Equipment Costs
- Cost Proposal Request
- Payment Request Records
- Meeting Minutes
- Cost-Estimates
- Bulletin Quotations
- Lab Test Reports
- Insurance Certificates and Bonds
- Contract Changes
- Permits

**SECTION E – SCOPE OF WORK**

Material Purchase Delivery Logs  
 Technical Standards  
 Design Handbooks  
 "As-Built" Marked Prints  
 Operating & Maintenance Instruction  
 Daily Progress Reports  
 Monthly Progress Reports  
 Correspondence Files  
 Transmittal Records  
 Inspection Reports  
 Bid/Award Information  
 Bid Analysis and Negotiations  
 Punch Lists  
 Schedule and Updates  
 Suspense (Tickler) Files of Outstanding Requirements  
 Policy and Procedure Manual  
 Subcontractor licenses

The Project files and records shall be available at all times to Owner or its designees for reference, review or copying.

Design Builder shall provide the following services with respect to the Work, to facilitate the smooth, successful and timely occupancy of the Project by Owner:

Design Builder shall provide consultation and Project management to facilitate Owner's occupancy of the Project and provide transitional services to place the Work "on-line" in such conditions as will satisfy Owner's operations requirements. The services include Design Builder's coordination of the delivery of any Owner supplied material and equipment for the Project.

Design Builder shall catalog operational and maintenance requirements of equipment to be operated by maintenance personnel and convey these to Owner in such a manner as to promote their usability. Design Builder shall provide Owner's operations and maintenance personnel with operations and maintenance training with respect to the equipment and systems being provided as part of the Work. This training may be recorded by Owner for subsequent presentation to Owner's operations and maintenance personnel.

Design Builder shall secure required guarantees and warranties, and shall assemble and deliver same to Owner in the manner required by Owner.

**D. SCHEDULE:**

Eighteen Hundred and Twenty-Five (1,825) Calendar Days

**E. ATTACHMENTS:**

1. Attachment A: Small Business Enterprise (SBE) Status Form
2. Appendix 1: E-Verify Affidavit
3. Attachment B – Sample Agreement
4. Permits (if applicable) – See Exhibit K of Agreement
5. Design Build Criteria Package

Appendix A: Pinellas County Private Sewer Lateral and Systems Ordinance

Appendix B: Private Sewer Lateral Policy

Appendix C: Pinellas County Sanitary Sewer Flow Monitoring Methodology/Protocols Document

Appendix D: Maps with Boundary Locations



**SECTION E – SCOPE OF WORK**

Appendix E: Pinellas County Standard Specifications for Sanitary Sewer Cured-In Place Pipelining

Appendix F: National Association of Sewer Service Companies (NASSCO) Standards

Appendix G: Pinellas County Standard Specification for Sanitary Sewer Cleaning and Televising

Appendix H: Pinellas County Manhole Rehabilitation Standards

Appendix I: Manhole Insert Inflow Dish Standards

Appendix J: Pinellas County Standard Details

Appendix K: Standard Operating Procedure for I&I Reduction Effectiveness Analysis

Appendix L: Right of Entry Form Template

Appendix M: Temporary Construction Easement (TCE) Form Template

Appendix N: Studies and Investigation Reports

**(DESIGN BUILD CRITERIA PACKAGE DOCUMENTS ARE ATTACHED AS SEPARATE PDFs TO THE SOLICITATION)**

RFP # 24-0085-RFP-DB

RFP Title: Find and Fix Gravity Sewer Rehabilitation - Professional Design-Build Services

**ELECTRONIC PAYMENT (EPAYABLES)****ELECTRONIC PAYMENT (EPAYABLES)**

The Board of County Commissioners (County) is offering faster payments. The County would prefer to make payment using credit card through the ePayables system. See above.

Would your company accept to participate in the ePayables credit card program?

Yes \_\_\_\_\_ No \_\_\_\_\_

For more information about ePayables credit card program please visit Purchasing Department website

[www.pinellascounty.org/purchase/](http://www.pinellascounty.org/purchase/)

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Signature

\_\_\_\_\_  
Phone Number

\_\_\_\_\_  
Email

**W-9****W-9 REQUEST FOR TAXPAYER ID NUMBER AND CERTIFICATION****\*Instructions to form W-9 available upon request**

The contractor must complete and submit to the County Form W-9 available: Through the following link:

[www.irs.gov/forms-pubs/about-form-w-9](http://www.irs.gov/forms-pubs/about-form-w-9)

Section 119.071(5), Florida Statutes Notice:

Your Tax Identification Number (which for individuals is your social security number) is collected on Form W9 for use in filing information returns with the IRS as described more fully below. Collection of the Internal Revenue Code (26 U.S.C § 6109).

Privacy Act Notice:

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons who must file information returns with the IRS to report interest, dividends, and certain other income paid to you, mortgage interest you paid, the acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA, or Archer MSA or HAS. The IRS may also provide this information to the Department of Justice for civil and criminal litigation, and to cities, states, and District of Columbia, and U.S. possessions to carry out their tax laws. We may also disclose this information to other countries under the tax treaty, to federal and state agencies to enforce federal nontax criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism.

You must provide your TIN whether or not you are required to file a tax return. Payers must generally withhold 28% of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to a payer.

**SECTION F - ADDENDUM****SECTION F - ADDENDUM**

PLEASE ACKNOWLEDGE RECEIPT OF ADDENDA FOR THIS SOLICITATION BY SIGNING AND DATING BELOW:

ADDENDA NO.	SIGNATURE/PRINTED NAME	DATE RECEIVED

Note: Prior to submitting the response to this solicitation, it is the responsibility of the firm submitting a response to confirm if any addenda have been issued. If such document(s) have been issued, acknowledge receipt by signature and date in section above. Failure to do so may result in response being considered non-responsive or result in lowering the rating of a firm's proposal.

Information regarding addenda issued is available on the OpenGov website, <https://secure.procurenow.com/portal/pinellasfl>, listed under the bid attachments.



**SECTION G – STATEMENT OF NO BID****SECTION G – STATEMENT OF NO BID**

**NOTE:** If you do not intend to bid on this requirement, please complete this form. **Thank you.**

We, the undersigned have declined to submit a bid for No. **24-0085-RFP-DB for Find and Fix Gravity Sewer Rehabilitation - Professional Design-Build Services.**

\_\_\_\_\_ Specifications too "tight", i.e., geared toward one brand or manufacturer only (explain below).

\_\_\_\_\_ Insufficient time to respond to the Invitation to Bid.

\_\_\_\_\_ We do not offer this product or service.

\_\_\_\_\_ Our schedule would not permit us to perform.

\_\_\_\_\_ Unable to meet specifications.

\_\_\_\_\_ Unable to meet Bond requirement.

\_\_\_\_\_ Specifications unclear (explain below).

\_\_\_\_\_ Unable to Meet Insurance Requirements.

\_\_\_\_\_ Remove Us from Your "Notification List" Altogether

\_\_\_\_\_ Other (specify below).

**REMARKS:**

---

---

---

---

COMPANY NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

TYPED NAME OF ABOVE: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

FAX: \_\_\_\_\_

COMPANY EMAIL: \_\_\_\_\_

**APPENDIX 1 – E-VERIFY AFFIDAVIT****APPENDIX 1 – E-VERIFY AFFIDAVIT**

I hereby certify that \_\_\_\_\_ [insert contractor company name] does not employ, contract with, or subcontract with an unauthorized alien, and is otherwise in full compliance with Section 448.095, Florida Statutes.

All employees hired on or after January 1, 2021 have had their work authorization status verified through the E-Verify system.

A true and correct copy of \_\_\_\_\_ [insert contractor company name] proof of registration in the E-Verify system is attached to this Affidavit.

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Date: \_\_\_\_\_

Federal Work Authorization User Identification No.: \_\_\_\_\_

Name of Pinellas County Contract and Contract No.: \_\_\_\_\_

STATE OF FLORIDA COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me by means of 1) physical presence \_\_ or 2) online notarization \_\_, this \_\_\_\_\_ (date) by \_\_\_\_\_ (name of officer or agent, title of officer or agent) of \_\_\_\_\_ (name of contractor company acknowledging), a \_\_\_\_\_ (state or place of incorporation) corporation, on behalf of the corporation. He/she is personally known to me or has produced \_\_\_\_\_ (type of identification) as identification.

[Notary Seal]

Notary Public: \_\_\_\_\_

Name typed, printed, or stamped: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

**ATTACHMENT B: AGREEMENT****ATTACHMENT A: SMALL BUSINESS ENTERPRISE (SBE) STATUS FORM****IMPORTANT:**

1. There is a maximum of 100 points available under this section, which will be awarded as follows:
  - a. If the prime firm is certified as a Pinellas County SBE, 100 points will be awarded.
  - b. If the prime firm utilizes 1 certified Pinellas County SBE as sub-consultant, 50 points will be awarded.
  - c. If the prime firm utilizes more than 1 certified Pinellas County SBE, as sub-consultant, 75 points will be awarded.
  - d. If the prime firm nor any of its sub-consultants are not certified as a Pinellas County SBE, 0% of the points available will be awarded.
2. Proof of certification for each firm claiming Pinellas County SBE status should be included in the submittal.

PRIME FIRM	PINELLAS COUNTY CERTIFIED SBE	
	Yes	N
1.		

SUB-CONSULTANT(S):	PINELLAS COUNTY CERTIFIED SBE	
	Yes	N
1.		
2.		
3.		
4.		
5.		

I certify that the information included in this Form is true and complete to the best of my knowledge and belief. I further understand and agree points awarded to this section will be based on the information provided and that this Form shall become a part of my contract with Pinellas County.

Name and Title of Authorized Representative: \_\_\_\_\_

Signature: \_\_\_\_\_

**FOR PINELLAS COUNTY USE ONLY**

MAXIMUM AVAILABLE POINTS	AWARDED POINTS			
100	<input type="checkbox"/> 100 Points (Prime Firm is Pinellas County SBE)	<input type="checkbox"/> 75 Points (More than 1 sub consultant is Pinellas County SBE)	<input type="checkbox"/> 50 Points (Only 1 sub consultant is Pinellas County SBE)	<input type="checkbox"/> 0 Does not meet criteria requirements