



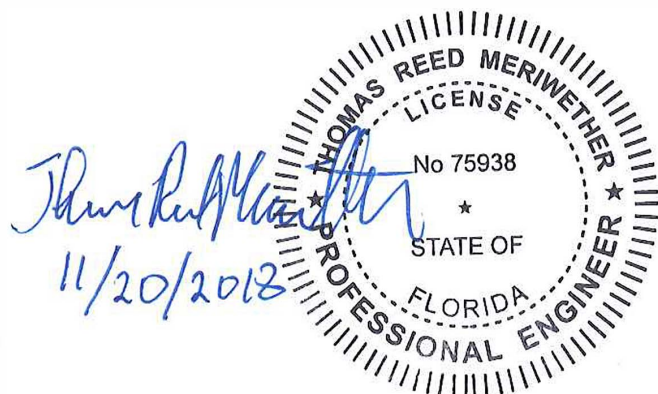
TECHNICAL SPECIFICATIONS

For

Pinellas County Utilities
Financial Project ID No. 002160A

Redundant New Force Main
From PS 016 to South Cross Bayou WRF

November 2018



REDUNDANT NEW FORCE MAIN FROM PS 016 TO SCBWRF

TABLE OF CONTENTS

1	DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS
2	00 73 00 Special Conditions (S)
3	00 75 00 Special Provisions and Supplemental Technical Specific (S)
4	DIVISION 01 – GENERAL REQUIREMENTS
5	01 20 01 Measurement and Payment (S)
6	01 31 13 Coordination (S)
7	01 32 33 Color Audio-Video Construction Records
8	01 33 00 Submittals (S)
9	01 35 00 Special Project Procedures
10	01 42 01 Reference Standards and Definitions
11	01 45 17 Pipeline Pressure and Leakage Testing Requirements
12	01 52 01 Owner/Engineers Office (S)
13	01 55 26 Traffic Regulation
14	01 57 00 Control of Work
15	01 57 13 Erosion and Sedimentation Control
16	01 58 01 Project Identification Signs
17	01 78 39 Project Record Documents
18	DIVISION 02 – EXISTING CONDITIONS <i>(NOT USED)</i>
19	DIVISION 03 – CONCRETE
20	03 10 01 Concrete Materials
21	DIVISION 04 – MASONRY <i>(NOT USED)</i>
22	DIVISION 05 – METALS <i>(NOT USED)</i>
23	DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES <i>(NOT USED)</i>
24	DIVISION 07 – THERMAL AND MOISTURE PROTECTION <i>(NOT USED)</i>

REDUNDANT NEW FORCE MAIN FROM PS 016 TO SCBWRF

TABLE OF CONTENTS

1	DIVISION 08 – OPENINGS <i>(NOT USED)</i>
2	DIVISION 09 – FINISHES
3	09 91 00 Painting and Protective Coatings
4	DIVISION 10 – SPECIALTIES <i>(NOT USED)</i>
5	DIVISION 11 – EQUIPMENT <i>(NOT USED)</i>
6	DIVISION 12 – FURNISHINGS <i>(NOT USED)</i>
7	DIVISION 13 – SPECIAL CONSTRUCTION <i>(NOT USED)</i>
8	DIVISION 14 – CONVEYING EQUIPMENT <i>(NOT USED)</i>
9	DIVISION 21 – FIRE SUPPRESION <i>(NOT USED)</i>
10	DIVISION 22 – PLUMBING <i>(NOT USED)</i>
11	DIVISION 23 – HEATING, VENTILATING, AND AIR CONDITIONING (HVAC) <i>(NOT USED)</i>
12	DIVISION 25 – INTEGRATED AUTOMATION <i>(NOT USED)</i>
13	DIVISION 26 – ELECTRICAL <i>(NOT USED)</i>
14	DIVISION 27 – COMMUNICATIONS <i>(NOT USED)</i>
15	DIVISION 28 – ELECTRONIC SAFETY AND SECURITY <i>(NOT USED)</i>
16	DIVISION 31 – EARTHWORK
17	31 23 33 Excavation and Backfill for Pipes
18	31 23 34 Excavation and Backfill for Structures
19	DIVISION 32 – EXTERIOR IMPROVEMENTS
20	32 12 01 Stabilized and Asphalt Roadway Restoration
21	32 13 01 Concrete Sidewalks, Driveways, and Gutters
22	32 92 01 Seeding and Sodding
23	DIVISION 33 – UTILITIES

REDUNDANT NEW FORCE MAIN FROM PS 016 TO SCBWRF

TABLE OF CONTENTS

1	33 01 31	Sanitary Sewer Cured in Place Pipelining
2	33 01 32	Sanitary Sewer Cleaning and Televising
3	33 01 34	Sanitary Sewer Pipe Repairs
4	33 05 20	Jacking and Boring
5	33 05 22	Horizontal Directional Drilling Subaqueous Crossings and Large Diameter Installations
6	33 33 01	Gravity Sewers
7	33 34 00	Sanitary Sewage Force Mains and Appurtenances
8	33 35 01	Reclaimed Water Main Piping and Appurtenances
9	33 39 00	Sanitary Sewer Structures
10		DIVISION 34 – TRANSPORTATION (<i>NOT USED</i>)
11		DIVISION 35 – WATERWAY AND MARINE CONSTRUCTION (<i>NOT USED</i>)
12		DIVISION 40 – PROCESS INTEGRATION (<i>NOT USED</i>)
13		DIVISION 41 – MATERIAL PROCESSING AND HANDLING EQUIPMENT (<i>NOT USED</i>)
14		DIVISION 42 – PROCESS HEATING, COOLING, AND DRYING EQUIPMENT (<i>NOT USED</i>)
15		DIVISION 43 – PROCESS GAS AND LIQUID HANDLING, PURIFICATION, AND STORAGE
16		EQUIPMENT (<i>NOT USED</i>)
17		DIVISION 44 – POLLUTION CONTROL EQUIPMENT (<i>NOT USED</i>)
18		DIVISION 45 – INDUSTRY SPECIFICATION MANUFACTURING EQUIPMENT (<i>NOT USED</i>)
19		DIVISION 48 – ELECTRICAL POWER GENERATION (<i>NOT USED</i>)

1 SECTION 00 73 00 (S)

2
3 SPECIAL CONDITIONS

4
5 PART 1 – GENERAL

6
7 1.01 SUMMARY

8
9 A. Section Includes:

- 10 1. Administrative and procedural requirements for:
- 11 a. Ceramic Epoxy Lined Ductile Iron Fittings
 - 12 b. 36-inch Diameter Gate Valves and Eccentric Plug Valves
 - 13 c. 36-inch Diameter AWWA C 900 PVC Pipe and External Joint
 - 14 Restraints
 - 15 d. 36-inch Diameter Tapping Sleeves and Valves
 - 16 e. Combination Air and Vacuum Relief Valves
 - 17 f. 30-inch Magnetic Flowmeter
 - 18 g. Assessment of Existing 20-inch Cast Iron Force Main once
 - 19 Removed from Service
 - 20 h. Permits
 - 21 i. Pavement Restoration
- 22

23 1.02 CERAMIC EPOXY LINED DUCTILE IRON FITTINGS

- 24
- 25 1. Ductile iron fittings shall meet the requirements of the Standard
- 26 Technical Specifications for Utilities and Related Construction and
- 27 the Material Specifications Manual as shown for 24-inch fittings,
- 28 except 36-inch diameter fittings are required. Fittings that have
- 29 been previously lined with cement mortar are not acceptable.

30
31 1.03 36-INCH DIAMETER GATE VALVES AND ECCENTRIC PLUG VALVES

- 32
- 33 1. Eccentric Plug Valves:
- 34 a. General: Provide quarter turn valves having an eccentric
 - 35 action that causes the plug to rise off the seat contact
 - 36 during the opening movement rather than sliding from its
 - 37 seat.
 - 38
 - 39 b. Plugs: Provide plug valves with Neoprene faced plugs.
 - 40
 - 41 c. Materials: Construct plug valves of cast iron or semi-
 - 42 steel at least equal to ASTM A 126, Class B. For valve
 - 43 sizes 3-inch and larger, construct the body seats with a
 - 44 welded-in overlay, of not less than 90 percent pure
 - 45 nickel, on all surfaces contacting the plug face. For valve
 - 46 sizes under 3-inch provide uncoated or epoxy coated
 - 47 body seats. Make the overlay a minimum of 1/16-inch

1 thick for valve sizes 20-inch and smaller and a minimum
2 of 1/8-inch thick for valve sizes 24-inch and larger.
3 Provide zinc plated bonnet bolts, studs and nuts.
4

5 d. Seat Adjustment: Make the water-tightness or gas-
6 tightness of the valve seating adjustable. Provide a
7 seating adjustment device that is external to the valve
8 and that can be used without the need to remove the
9 valve from the piping and with the valve under pressure.
10

11 e. Lubrication: Furnish plug valves with oil impregnated,
12 permanently lubricated, Type 316 stainless steel
13 bearings in the upper and lower journals.
14

15 f. Stem Seal: Provide a stem seal consisting of multiple,
16 self-adjusting and replaceable chevron type packing
17 rings and a packing gland or provide two replaceable,
18 self-adjusting, U-cup seals. Make the stem seal
19 adjustable and replaceable without removing the valve
20 from the piping and without the need to disassemble the
21 valve and operator. For buried or submerged service,
22 provide a sealed enclosure to keep the stem seal clean.
23

24 g. Port: Unless otherwise specified, construct the valve
25 with a minimum port area of 80 percent of the full area of
26 the pipe in which the valve is installed.
27

28 h. Operators: Unless otherwise shown or specified, equip
29 6-inch and smaller valves with wrench or lever operators
30 and 8-inch and larger valves with gear operators. Equip
31 all valves in low pressure gas service with gear
32 operators. Furnish one wrench for each size valve in
33 each individual room or space in which valves are
34 located. House gear operators for submerged or buried
35 service in a watertight enclosure. For buried or
36 submerged service, equip valve operators with stainless
37 steel external bolting.
38

39 2. Gate Valves:

40 a. General: Gate Valves shall meet the requirements of the
41 Standard Technical Specifications for Utilities and
42 Related Construction and the Material Specifications
43 Manual, Section D – 2.5.
44

45
46 1.04 36-INCH DIAMETER AWWA C 900 PVC PIPE AND EXTERNAL JOINT
47 RESTRAINTS
48

- 1 1. 36-inch diameter AWWA C 900 PVC Pipe and External Joint
2 Restraints shall meet the requirements of the Standard Technical
3 Specifications for Utilities and Related Construction and the
4 Material Specifications Manual as shown for 24-inch PVC pipe
5 except use DR 21. For restraining bell and spigot joints use EBBA
6 Iron Series 2800 or approved equal. For restraining mechanical
7 joints use EBBA Series 2000PV or 2500. Foreign castings are not
8 acceptable. Provide castings with coatings of EBBA Megabond or
9 approved equal.

10
11 1.05 36-INCH DIAMETER TAPPING SLEEVES AND VALVES

- 12
13 1. Provide 36-inch diameter tapping valves by Mueller Company T-
14 2361 Resilient Wedge Gate – DI, MJ x FL or approved equal.
15 2. Provide 36-inch by 36-inch tapping sleeves by JCM 414 Fabricated
16 Mechanical Joint of ASTM A-36 steel with fusion bonded epoxy in
17 accordance with AWWA C 213, or ASTM A 36 with heavy coat of
18 corrosion resistant shop primer and two field coats of Carboline
19 300M coal tar epoxy or type 304 stainless steel.

20
21 1.06 COMBINATION AIR AND VACUUM RELIEF VALVES

- 22
23 1. At Stations 21+00.0, 32+41.0, 50+10.4, 54+60.1, 60+29.0,
24 73+69.30, 87+18.6, 104+40.0, 141+00.0, 175+40.5.0, 183+75.4,
25 provide 4-inch diameter combination valves ARI model D-025,
26 stainless steel in accordance with Pinellas County approved
27 products list, or equal.

28
29 1.07 30-INCH MAGNETIC FLOW METER(BY OTHERS)

- 30
31 1. General: Provide a 30-inch, flanged, ABB WaterMaster DN 750
32 magnetic flowmeter. Type shall be flow tube with pulsed DC
33 magnetic flow transmitter. The transmitter shall display the
34 monitored flow value and shall output an analog, 4 to 20 mA dc
35 signal proportional to the monitored flow.
36
37 2. Performance Requirements:
38 a. Range: As shown on Instrument Schedule
39 b. Accuracy
40 (a) $\pm 0.4\%$ of flow rate, or better
41 (b) Accuracy unaffected by changes in fluid velocity,
42 density, pressure, temperature, or conductivity (above
43 minimum conductivity limits)
44 (c) System accuracy shall be proven by submittal of flow
45 test curves of the actual meters being furnished. Test
46 curves shall show a minimum of three equally spaced
47 flow points. Tests shall be performed using water and a
48 weight or volume tank or reference meters that are
49 traceable and calibrated to NAMAS or NIST standards.

1 The test setup shall be submitted and approved prior to
2 testing. A Hydrostatic Pressure Test shall be performed
3 and a computer printout verifying this test shall be
4 provided with the meter.

- 5 c. Drift: Complete zero stability
- 6 d. Minimum Fluid Conductivity Limit: Twenty (20) micro Siemens
7 per centimeter or more.
- 8 e. Power: 120 VAC $\pm 10\%$, 60 Hz, ± 3 Hz power supply.
- 9 f. Output: 4 to 20 mA dc, direct acting and isolated, into no less
10 than 0 to 1000 ohms.
- 11 g. Pressure Rating: 150 psi minimum pressure rating.

12
13 3. Construction Features

14 a. Flow Tube

- 15 (a) Type: Lined metal flow tubes.
- 16 (b) Interchangeability: Ratio of flow velocity to voltage
17 reference signals generated identical for all meter sizes
18 to permit interchangeability with transmitter without
19 requiring circuit modifications.
- 20 (c) Tube Material: Type 316 stainless steel with wall
21 thickness 0.125" or greater with liner as indicated.
- 22 (d) Electrode:
 - 23 1) TFE for detecting partially filled tubes
 - 24 2) Material: Hastalloy C, or Platinum / Iridium.
- 25 (e) Lining: Hard rubber, Neoprene, Polyurethane.

26 b. Enclosure:

- 27 (a) Materials shall be cast low-copper aluminum alloy or
28 fabrication sheet steel, NEMA 4X rated. The meter shall
29 have a factory potted cable attached to the flow tube.
- 30 (b) Finish exterior, except flange faces, with a high build
31 epoxy paint.
- 32 (c) End Connections: Standard ANSI Class 150 flanged
33 suitable for mating with pipe specified shall withstand
34 275 PSIG. Meters larger than 24 inches shall have
35 AWWA Class E Flanges.
- 36 (d) Electrical Connections: 3/4-inch NPT tapped holes for
37 power conduit fitting and signal conduit fittings.

38 c. Pulsed DC Magnetic Flow Transmitter

- 39 (a) Materials shall be single-compartment housing of die-
40 cast, low-copper aluminum alloy
- 41 (b) Remote mounted, above grade; suitable for wall
42 mounting, 120 VAC powered.
- 43 (c) Solid state construction
- 44 (d) Local Indication with a 3-1/2-digit minimum LCD meter
45 with field selectable engineering units and a non-volatile
46 eight digit electronic LCD totalizer with reset. Totalizer
47 shall be integral with transmitter and visible through
48 viewing window.

- (e) Pulse and analog outputs galvanically isolated from input and earth ground. Provide 4-20mA signal (rated at 750 ohms) from transmitter for use by remote SCADA.
- (f) Automatic zeroing feature making it unnecessary to zero the instrument before or after placing it in operation.
- (g) Pre-calibration span adjustment providing continuous span adjustment over entire range.
- (h) Range Adjustment: Fully adjustable.
- (i) Signal Conditioning: Adjustable damping circuit with response times of 1 to 25 seconds minimum.
- (j) Low Flow Cutoff: Provide automatic low flow cutoff circuitry to stop pulse output and local totalization when flow drops below a programmable value as percent of the calibrated upper range value.

4. Accessories

- a. Provide complete Type 316 stainless steel mounting hardware. All transmitter and driver electronics shall be remotely mounted from the flow tubes at locations shown as remote on the instrument schedule. Transmitter and driver electronics shall be easily accessible. Type of mounting (wall, support frame, or pipe stand) as required.
- b. Shielded cable assemblies of sufficient length for connection between flow tube and transmitter electronics.
- c. Two (2) Type 316 stainless steel or Hastelloy C grounding rings for each flow tube sized for each installation. Grounding electrodes alone are not acceptable. Provide type 316 stainless steel grounding straps.
- d. NEMA 4X rated 120 VAC power on-off selector switch.
- e. A spool piece for replacement of the flow tube where no bypass piping is provided.
- f. Built in calibrator for each transmitter.

5. Products and Manufacturing: ABB WaterMaster DN 750 (remote transmitter configuration) or approved equal

1.08 ASSESSMENT OF EXISTING 20-INCH CAST IRON FORCE MAIN ONCE REMOVED FROM SERVICE

- 1. Install and 8-inch tap the existing 20-inch force main just upstream of the 20-inch isolation valve located on the west side of the SCBWRF plant site. Provide temporary piping and appurtenances for flushing the 20-inch force main.
- 2. Use reclaimed water to flush the domestic wastewater out of the existing 20-inch force main from SCBWRF toward PS 16. Pressurized reclaimed water can be accessed from the above grade blowoff-type valve at approximate station 192+77, 57' left.

1 Provide all other temporary pipe, hose, taps, valves, etc to
2 accommodate the flushing and assessment. Coordinate all valve
3 operation with the County Project Manager and the Engineer. The
4 domestic wastewater and reclaimed water can be discharged to an
5 existing manhole on an existing 36-inch sanitary sewer located at
6 approximate station 11+41, 345' left. The west end of the 20-inch
7 cast iron force main is located at approximate station 17+45, 40'
8 left. At this location, the 20-inch force main shall be disconnected
9 from the existing 36-inch force main and the open end of 20-inch
10 force main temporarily piped to the aforementioned manhole
11 including a pig catching appurtenance.

12 3. Then use a pipeline mapping pig/probe equal to that manufactured
13 by Geospatial Corporation or AMP (Accurate Mapping Probe) by
14 Cues, or approved equal to generate a three dimensional shape file
15 for use by Geographical Information Systems (GIS). Three
16 dimensional alignment shall be accurate to within 0.5 feet. This will
17 require excavating and exposing the pipe at periodic intervals.
18 Include such costs in the lump sum pay item for assessment and
19 abandonment of the 20-inch cast iron force main. Surface
20 restoration quantities will be measured for payment under other
21 appropriate pay items. Submit shape file to Engineer for approval
22 and analysis. Allow three weeks for review.

23 4. Engineer shall identify up to four locations where the 20-inch force
24 main shall be excavated and exposed, Perform ultrasonic thickness
25 testing of the cast iron pipe wall at the 10, 12 and 2 o'clock
26 positions at each of the four locations. Perform testing in the
27 presence of the County representative and submit data to the
28 Engineer.

29 5. Remove all temporary appurtenances provided to accommodate
30 flushing and pigging/probing. Plug the west end 20-inch force main
31 with concrete. Cut and plug the 20-inch force main at station
32 507+30, 30' left (Park Boulevard & 83rd Street) just upstream of the
33 existing 20-inch isolation valve. Install cast in place concrete thrust
34 wall bearing against west side of existing 20-inch isolation valve.
35

36 1.09 PERMITS

37
38 1. The Owner has acquired the following permits for this project:

- 39 • Pinellas County Department of Environmental Management
- 40 • FDEP Notification/Application to Construct a Domestic
- 41 Wastewater Collection/Transmission System
- 42 • FDEP ERP Exemption
- 43 • US Army Corps of Engineers

44
45
46 Acquisition of all other permits required for the Work is the
47 responsibility of the Contractor. Comply with all provisions and
48 requirements of permits. The cost of permit compliance is included

1 in the various Bid Items for the Work and no separate payment will
2 be made therefore.

3
4 1.10 PAVEMENT RESTORATION

- 5
6 1. PARK BOULEVARD AND PARK STREET - After backfilling above
7 the pipe and successful completion of leakage testing, saw cut the
8 undisturbed pavement at the boundary of the next traffic lane,
9 stabilize the subgrade and place and compact base material as
10 specified. Construct 3-inch thickness of asphaltic concrete surface
11 course in two layers of 1.5 inches each. Finish restoration of
12 median, curb and concrete traffic separators. Restripe with
13 temporary striping. Open to traffic when ready. Place permanent
14 striping no sooner than 30 days later and no longer than 60 days
15 later.
- 16 2. 84THth LANE - After backfilling above the pipe and successful
17 completion of leakage testing, saw cut the adjacent undisturbed
18 pavement to provide a clean joint, stabilize the subgrade and place
19 and compact base material as specified. Construct 1.5-inch
20 thickness of asphaltic concrete surface course with the surface 1
21 inch below adjacent undisturbed pavement. Post un-even
22 pavement signs if necessary. Mill existing adjacent pavement down
23 1 inch and overlay entire roadway from curb to curb.
- 24 3. At intersections milling and final overlay should generally extend
25 from the center of the main road to the point of curvature of the
26 side road edge of pavement, unless otherwise directed by the
27 Engineer.
- 28
29

30 END OF SECTION
31

1 SECTION 00 75 00 (S)

2
3 SPECIAL PROVISIONS AND SUPPLEMENTAL TECHNICAL SPECIFICATIONS

4
5 These Special Provisions provide additional information and modify the Pinellas County
6 Standard Technical Specifications (PC-STC) for Utilities Construction. Unless noted
7 herein, all conditions of the (STC) apply.
8

9 ARTICLE SP-1 SUMMARY OF WORK

10
11 Installation of approximately 15,400 linear feet of new 36-inch diameter force
12 main with ductile iron pipe or PVC pipe and approximately 3,400 linear feet of
13 42-inch diameter HDPE pipe by horizontal directional drill. Much of the force
14 main installed along Park Boulevard is designed for installation by open-cut
15 within the median of the roadway, requiring maintenance of traffic and
16 landscaping and asphalt restoration. The work includes valves, fittings, hot taps,
17 combination air and vacuum release assemblies, temporary leakage test plugs,
18 permanent plugs, thrust control, testing, three trenchless crossings along Park
19 Boulevard; two near Lake Seminole, one across Park Street N., one across
20 Joe's Creek along Park Street N., and one across Joe's Creek Canal at
21 Westchester Blvd. just south of 62nd Ave. N. All five trenchless crossings are
22 designed for horizontal directional drilling using HDPE pipe. The work also
23 includes new connections at seven existing pump stations, abandoning force
24 mains and appurtenances placed out of service, maintenance of traffic, surface
25 restoration, record drawings, survey and all appurtenant work. The work also
26 includes assessment activities to be performed on the existing 20-inch cast iron
27 force main once it has been placed out of service.
28

29 ARTICLE SP-2 CONTINUITY OF SERVICE

30
31 All existing services shall be maintained without interruption throughout the
32 entire construction period, except as specifically noted on the Drawings. No
33 facility or structure shall be taken out of service until the replacement facility or
34 structure is fully constructed, tested and accepted by the Owner. The
35 Contractor shall furnish all labor, materials and equipment to setup, maintain
36 and operate an approved bypass system as necessary during the proposed
37 construction. The Contractor shall submit a detailed work plan describing
38 equipment to be used, times and sequence of operation, and monitoring
39 capabilities for approval.
40

- 41 A. Brief shutdown of equipment may be allowed during critical phases. The
42 Contractor shall notify the Owner and Engineer for approval a minimum of two
43 (2) weeks prior to any temporary shutdowns. Contractor shall provide the
44 Owner and Engineer a written notice of any requested change in operations,
45 bypass requirements or connections to existing facilities, and shall obtain the
46 Engineer's written approval before scheduling this work.

1
2 B. The following requirements shall apply to all temporary shutdowns:
3

- 4 1. All connections to existing equipment which may affect operations of the
5 facility shall be coordinated to accommodate staff schedule and facility
6 operations.
7
- 8 2. Some shutdowns may be required to be made during the weekend, or
9 after normal working hours.
10
- 11 3. Only one (1) shutdown will be permitted during any one 24-hour period
12 unless otherwise authorized in writing by the Engineer.
13
- 14 4. No additional overtime costs shall be incurred by the Owner due to
15 scheduled nighttime or weekend construction activities required as part
16 of the work or in coordination/scheduling of operations activities. All
17 work requiring shut-downs shall be coordinated to accommodate pump
18 station operations staff schedules and facility operations.
19
20

21 ARTICLE SP-3 ADDITIONAL INFORMATION AND STUDIES

22
23 Geotechnical investigations were conducted to support design of the subject
24 project. Investigations included soil borings, laboratory sample analysis,
25 corrosion testing and a brief report discussing the results of the investigations.
26 The report prepared by MC Squared, Inc. titled "Redundant New Force Main
27 from PS 16 to South Cross Bayou Water Reclamation Facility" updated March
28 2017 is available from Pinellas County Utilities for information. Prospective
29 bidders should conduct the additional investigations they deem necessary for a
30 satisfactory basis for bidding.
31

32 ARTICLE SP-4 SUPPLEMENTAL TECHNICAL SPECIFICATIONS

33
34 Note: The Supplemental Technical Specifications presented herein are
35 project specific, are only related to this project and are not part of
36 Pinellas County Standard Technical Specifications (STS). All STS will
37 be designated as such in lower right hand corner of document by
38 Pinellas County-STS. All Supplemental Technical Specifications will
39 have a **(S)** designation following the section title in the Table of
40 Contents and each specification will be designated in lower right hand
41 corner as PCU-2160A, where 2160A designates the specific Project
42 Job Number. If a conflict occurs between the Supplemental Technical
43 Specifications and the STS, the Supplemental Technical Specifications
44 will govern.

00 73 00	Special Conditions (S)
01 20 01	Measurement and Payment (S)
01 31 13	Coordination (S)
01 33 00	Submittals (S)
01 52 01	Owner/Engineer's Field Office (S)

ARTICLE SP-5 MODIFICATIONS TO THE STANDARD TECHNICAL SPECIFICATIONS

A. 01 35 00 Special Project Procedures

1. Add Section 1.04 – Temporary Facilities

- a. SANITARY FACILITIES: Contractor shall furnish temporary sanitary facilities at the site for the needs of all construction workers and others performing work or furnishing services on the project. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet will be furnished for each 20 men. Contractor shall enforce the use of such sanitary facilities by all personnel at the site.
- b. PARKING: Contractor shall park where directed by the Owner, such as to not obstruct facility operations, occupy or block public or facility personnel parking spaces, or violate any permit conditions.
- c. POLLUTION CONTROL: Contractor shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris and other substances resulting from construction activities. No sanitary wastes will be permitted to enter any drain or watercourse other than sanitary sewers. No sediment, debris or other substance will be permitted to enter sanitary sewers and reasonable measures will be taken to prevent such materials from entering any drain or watercourse.
- d. FUEL STORAGE: Contractor shall submit a plan for all locations of fuel and vehicle storage through the duration of the project, updated as necessary to address specific phases or locations of the work. Fuel storage containers shall be equipped with double wall containment, limited to 549 gallons or less. The Contractor is solely responsible for maintaining fuel containers and ensuring that all measures for protection and containment are provided as required by law.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46

e. OFFICE TRAILER PLACEMENT & SITE USE: It shall be the responsibility of the Contractor to obtain property – or written permission from the owners thereof – to provide for locations of office and administration, deliveries, storage, and parking. The Contractor shall provide all necessary utility services to the trailer. Trailer placement shall conform to all local permit conditions and ordinances. It shall be the Contractor’s responsibility to revise/modify any such conflicting conditions once trailer placement location is determined.

f. TEMPORARY WATER: The Contractor shall establish service and install temporary water meters with reduced pressure zone backflow preventers on any potable water service line necessary for use in construction operations. No use of un-metered potable water will be allowed for construction services without authorization from the Owner.

B. 01 45 17 Pipeline Pressure and Leakage Testing Requirements

1. Add Section 3.02 D:

a. Do not pressure test against existing valves.

C. 33 05 22 Horizontal Directional Drilling Subaqueous Crossings and Large Diameter Installations

1. After the last sentence in Section 1.01 A., Add the following sentences: “The final reamer diameter shall be as recommended in the Horizontal Directional Drilling Good Practices Guidelines published by the HDD Industry Consortium. If the HDD pipe material is ductile iron pipe, the outside diameter of the bell shall be used in determining the reamer diameter.”

2. In Section 2.02 A. 1. Delete the allowance of Restrained Joint PVC Pipe.

D. 32 13 01 Concrete Sidewalks, Driveways and Gutters

1. Replace Section 2.01, A. to read as follows:

Sidewalks shall be 3000 psi concrete, at least four feet wide or as shown on the drawings and shall be six inches thick with 6”x6” #10 wire mesh reinforcing. Driveways shall be six inches thick with 6”x6” #10 wire mesh reinforcing.

1
2
3
4
5
6
7
8
9

E. 33 34 00 Sanitary Sewage Force Mains and Appurtenances

1. Add Paragraph 2.02.B.:

See General Notes on Plans for Pipe and Fitting specifications specific to this project. Install all gate valves in the vertical position so the gate rises when the valve is opened. Coordinate with the Owner and Engineer where gate valves are preferred to be installed horizontally. Install plug valves on existing Sanitary Force Mains only where specifically shown.

TECHNICAL SPECIFICATION CHECKLIST

Project Name: Redundant New Force Main from PS 016 to SCBWRF

Project Number: 002160A

The following sections of the Standard Technical Specifications will apply to this contract if marked "X" as shown below:

00 75 00	X	Special Provisions and Supplemental Technical Specifications
01 32 33	X	Color Audio-Video Construction Records
01 35 00	X	Special Project Procedures
01 42 01	X	Reference Standards and Definitions
01 45 17	X	Pipeline Testing Requirements
01 55 26	X	Traffic Regulation
01 57 00	X	Control of Work
01 57 13	X	Erosion and Sedimentation Control
01 58 01	X	Project Identification Signs
01 78 39	X	Project Record Documents
03 10 01	X	Concrete Materials
09 91 00	X	Painting and Protective Coatings
31 23 33	X	Excavation and Backfill for Pipes
31 23 34	X	Excavation and Backfill for Structures
32 12 01	X	Stabilized and Asphalt Roadway Restoration
32 13 01	X	Concrete Sidewalks, Driveways and Gutters
32 92 01	X	Seeding and Sodding
33 01 31	<input type="checkbox"/>	Sanitary Sewer Cured in Place Pipelining
33 01 32	<input type="checkbox"/>	Sanitary Sewer Cleaning and Televising
33 01 33	<input type="checkbox"/>	Manhole Rehabilitation
33 01 34	X	Sanitary Sewer Pipe Repairs
33 01 35	<input type="checkbox"/>	Multi-Component Stress Panel Manhole Liner System
33 01 36	<input type="checkbox"/>	Urethane/Epoxy, Polyurea Manhole Liner System
33 01 37	<input type="checkbox"/>	Polyurethane Manhole Liner System
33 01 38	<input type="checkbox"/>	Polymorphic Resin Manhole Liner System
33 01 39	<input type="checkbox"/>	Calcium Aluminate Manhole Liner System
33 01 40	<input type="checkbox"/>	CIPP Structural Lateral Connection Lining
33 05 20	X	Jacking and Boring
33 05 22	X	Horizontal Directional Drilling - Subaqueous Crossings and Large Diameter Installations
33 11 01	<input type="checkbox"/>	Potable Water Main Piping and Appurtenances
33 13 01	<input type="checkbox"/>	Disinfection of Potable Water Mains
33 32 00	<input type="checkbox"/>	Submersible Wastewater Pumping Stations
33 33 01	X	Gravity Sewers
33 34 00	X	Sanitary Sewage Force Mains and Appurtenances
33 35 01	<input type="checkbox"/>	Reclaimed Water Main Piping and Appurtenances
33 39 00	X	Sanitary Utility Sewerage Structures

40 95 01	<input type="checkbox"/>	Wastewater Pump Station SCADA Remote Telemetry Unit (RTU)
48 11 30	<input type="checkbox"/>	Standby Diesel Generators
13 34 19	<input type="checkbox"/>	Metal Building Systems

END OF SECTION

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30

1 SECTION 01 20 01 (S)

2
3 MEASUREMENT AND PAYMENT

4
5
6 PART 1 – GENERAL

7
8 1.01 SCOPE OF WORK

- 9
10 A. This section covers methods of measurement and payment for items of
11 Work under the Contract.
12
13 B. Separate payment will be made only for the items of work described herein
14 and listed on the Bid Form. Any related work not specifically listed, but
15 required for satisfactory completion of the work, shall be considered to be
16 included in the scope of the appropriate listed work items.
17
18 C. Unless specifically called out as a separate Pay Item. No separate payment
19 will be made for the following items and the cost of such work shall be
20 included in the applicable Pay Items or work:
21
22 1. Clearing and grubbing
23 2. Excavation, including necessary surface improvements removal
24 3. Sheeting, shoring and/or dewatering
25 4. Backfill materials, except as specified hereinafter
26 5. Grading
27 6. Clean-up and restoration
28 7. Refill materials except as specified hereinafter
29 8. Testing and placing system in operation
30 9. Protection, repair, and replacement of existing utilities facilities not
31 shown on the plans to be relocated

32
33 1.02 ESTIMATED QUANTITIES

- 34
35 A. All estimated quantities stipulated in the Bid Form or other Contract
36 Documents are approximate and are to be used only (a) as a basis for
37 estimating the probable cost of the Work and (b) for the purpose of
38 comparing the bids submitted for the Work. The actual amounts of work
39 done and materials furnished under unit price items may differ from the
40 estimated quantities. The basis of payment for work and materials will be
41 the actual amount of work done and materials furnished. Contractor
42 agrees that he will make no claim for damages, anticipated profits, or
43 otherwise on account of any difference between the amounts of work
44 actually performed and materials actually furnished and the estimated
45 amounts thereof, as described in the supplementary conditions.
46

1
2 1.03 TAXES AND PERMITS
3

4 A. The Bidder's attention is directed to the fact that the tax laws of the State
5 of Florida, including but not limited to Chapter 212, Florida Statutes, apply
6 to this bid matter and that all applicable taxes and fees shall be deemed to
7 have been included in Bidder's proposal.
8

9 1.04 Item deleted
10
11
12

13 1.05 Mobilization/Demobilization
14

15 A. BID ITEM – Mobilization/Demobilization
16

17 1. Description: The work specified in this Item consists of the preparatory
18 work and operations in mobilizing for beginning and ending work on the
19 Project, including, but not limited to, those operations necessary for the
20 movement of personnel, equipment, supplies and incidentals to and from
21 the project site, and for the establishment of temporary offices, buildings,
22 safety equipment and first aid supplies, sanitary and other facilities, as
23 required by these specifications, and State and local laws and regulations.
24 The costs of bonds and any required insurance and any other pre-
25 construction expense necessary for the start of the work, excluding the
26 cost of construction materials, shall also be included in this Section. This
27 Bid Item will include mobilization and demobilization for all parts or phases
28 of the total project.
29

30 2. Measurement: The quantity of mobilization to be paid for under this Item
31 shall be measured as one lump sum quantity. Partial payments will be
32 made therefore in accordance with the following:
33

Percent of Original Contract Amount Earned	Allowable Percent of the Lump Sum price for Mobilization/Demobilization
5	25
10	50
35	75
65	90
90	100

34
35 3. Payment: The quantities, as determined above, shall be paid for at the
36 contract lump sum price set out in the Proposal, which price and payment
37 constitutes full compensation for all the work described herein.
38

1 B. BID ITEM – Owner/Engineer’s Office
2

3 1. Description: The work covered by this item consists of furnishing the
4 office, furnishings and services as described in the technical specifications
5 and as directed by the Engineer.
6

7 2. Measurement: The quantity of Owner/Engineer’s Office to be measured
8 for payment will be the actual number of days the office is available for
9 use by the Owner from the day requested by the Engineer that the office
10 be available to the day the Contractor is advised that the office is no
11 longer required.
12

13 3. Payment: Payment will be made at the unit price bid per day.
14

15 1.06 EROSION AND SEDIMENTATION CONTROL
16

17 A. BID ITEM – Erosion Control
18

19 1. Description: The work consists of all labor, equipment, material,
20 installation, maintenance, replacement and removal of approved erosion
21 control devices from commencement to final acceptance. The pay item
22 for Erosion Control shall include all erosion control devices necessary to
23 control erosion on the project unless otherwise specified to be paid for
24 under other items of work.
25

26 2. Measurement: Payment for Erosion Control shall be at the Lump Sum bid
27 price. The lump sum Erosion Control shall be paid on a pro-rated monthly
28 amount based on contract time.
29

30 3. Payment: Payment will be made at the lump sum price shown in the Bid
31 Form for the Erosion Control, as designated on the plans, and acceptably
32 completed.
33

34 B. BID ITEM – Drain Pipe with Sock – Sedimentation Control
35

36 1. Description: The work consists of all labor, equipment, material,
37 installation, maintenance, replacement and removal of drain pipe with
38 sock (sedimentation control) for preventing and controlling erosion into
39 stormwater drainage systems. Drain Pipe with Sock is shown on the
40 construction documents as a “Filter Sock”.
41

42 2. Measurement: The quantity of Drain Pipe with Sock - Sedimentation
43 Control, required to span the inlet opening shall be the number of curb
44 inlets protected with drain pipe with sock satisfactorily installed and
45 accepted.
46

- 1 3. Payment: Payment will be made at the unit bid price per each for up to 15
2 linear feet of Drain Pipe with Sock each.

3
4 1.07 EXCAVATION, BACKFILL AND COMPACTION

5
6 A. BID ITEM - Additional Earth Excavation - Unsuitable

- 7 1. Description: Under the Contract item for Additional Earth Excavation -
8 Unsuitable, perform additional earth excavation ordered in writing by the
9 Engineer. The work includes all clearing, protection of the structures and
10 adjacent property, placing, maintenance, and removal of shoring, sheeting
11 and bracing, removal of water, backfilling, disposal of surplus excavated
12 material, and other work appurtenant to the additional earth excavation as
13 specified.

- 14 2. Measurement: The quantity of Additional Earth Excavation- Unsuitable, in
15 cubic yards, to be measured for payment under this Contract Item will be
16 the total excavation, as ordered and approved, beyond and outside the
17 established lines and grades which would have controlled and been
18 maintained had not the additional excavation been ordered. Additional
19 earth excavation for placement of select fill material other than that for
20 pipe bedding or to permit construction of other types of pipeline
21 foundations will be included for payment under this Contract Item.
22 Unauthorized additional earth excavation will not be measured or paid for.

- 23 3. Payment: Payment for Additional Earth Excavation- Unsuitable ordered in
24 writing will be made at the Contract unit price per cubic yard.

25 B. BID ITEM – Select Bedding and Backfill

- 26 1. Description: Under the Contract item for Select Bedding and Backfill,
27 furnish, transport, place and compact select crushed stone or select sand
28 fill material which may be required in addition to that shown or specified,
29 including disposal of surplus excavated material and all labor and
30 equipment. This item does not include transporting, placing and
31 compacting approved surplus sand from excavations made under this
32 Contract. Use all such approved surplus sand available from excavations
33 made under this Contract prior to supplying select sand from other
34 sources. Excavation for placement of additional select fill material will be
35 paid for under other Contract Items. Provide select crushed stone and
36 select sand fill material that meets the requirements of Section 31 23 33.
37 Only material that has been ordered in writing and approved will be paid
38 for under this Contract Item.

- 39 2. Measurement: The quantities of Select Bedding and Backfill, in cubic
40 yards, to be measured for payment under this Contract Item will be the
41 total volume of select crushed stone or select sand fill material, compacted
42 in place, within the limiting lines shown or directed. Select crushed stone

1 and select sand fill material used to fill voids resulting from unauthorized
2 excavation, or where required for dewatering, will not be measured for
3 payment. Select crushed stone or select sand fill material shown on the
4 Plans for pipe bedding will not be measured for payment under this
5 Contract Item. Crushed stone or sand shown on the Plans for pipe
6 bedding is included under various classified unit price Contract Items for
7 pipelines. Crushed stone used for the Contractor's convenience will not be
8 measured for payment.

9 3. Payment: Payment for Select Bedding and Backfill, ordered in writing by
10 the engineer will be made at the Contract unit price per cubic yard.

11 a. Payment shall be made under:

- 12 Additional Select Fill Material - Sand
- 13 Additional Select Fill Material - Crushed Stone

14
15 C. BID ITEM – Flowable Fill – Backfill (excavatable)

- 16 1. Description: The work consists of furnishing all labor, equipment and
17 materials to place flowable fill as trench backfill or other bulk placement as
18 directed by the engineer. Flowable fill shall conform to FDOT Standard
19 Specification Section 121 for excavatable flowable fill.
20
- 21 2. Measurement: The quantity of Flowable Fill – Backfill (excavatable), in
22 cubic yards, to be measured for payment under this Contract Item will be
23 the total volume placed within the limiting lines shown or directed.
24
- 25 3. Payment: Payment will be made at the unit price bid per cubic yard.
26

27 1.08 SANITARY FORCE MAIN CONSTRUCTION

28
29 A. BID ITEM – DI or PVC Pipe (Open-Cut)

- 30
31 1. Description: The work consists of furnishing all labor, equipment and
32 materials and installing pipe by open cut or insertion into a casing pipe
33 that has been installed under another Bid Item. The unit price shall
34 include all costs necessary to install the pipe restrained or unrestrained as
35 shown and including survey layout; materials; clearing and grubbing; tree
36 removal and replacement; root pruning; excavation; backfilling;
37 dewatering; polyethylene encasement of ductile iron pipe; ceramic epoxy
38 lining of ductile iron pipe, cutting and removal of pavement and other
39 surface improvements including sidewalks, driveways, etc; sheeting;
40 bracing; utility crossings; clearing of the right-of-way; protection of
41 property; protection, repair and replacement of utilities and landscaping;
42 protection, repair and replacement of sprinklers; temporary leakage test
43 plugs; temporary blow-offs; and pressure testing. The unit prices for 36-

1 inch diameter force main also includes all 36-inch diameter fittings,
2 including bends, sleeves/closures, tees and outlets.
3

4 2. Measurement: The quantities of pipe to be paid for under this Item shall be
5 the horizontal length in linear feet of pipe measured along the centerline of
6 the pipe through valves and fittings in place, completed and accepted.
7 Whether a particular pay item is for restrained joint pipe or unrestrained
8 joint pipe is indicated in the proposal.
9

10 3. Payment: Payment will be made at the unit price bid per linear foot of the
11 various pipe sizes for restrained or unrestrained joint pipe.
12

13 B. BID ITEM - Valves
14

15 1. Description: The work consists of furnishing all labor, equipment and
16 materials to install valves as shown, specified and directed. The unit price
17 shall include the cost of the jointing materials, including rings, bolts and
18 gaskets, polywrap, filter fabric, installation costs, roadway box, concrete
19 support and concrete valve box pad with bronze disc, where required,
20 operator extension stems so nuts are no more than 3 feet below
21 surrounding grade, and dewatering.
22

23 2. Measurement: The quantities of valves to be paid for under these Items
24 shall be the number of each measured in place, completed and accepted.
25

26 3. Payment: Payment will be made at the unit price bid for each type valve of
27 the various sizes.
28

29 C. BID ITEM - Ductile Iron Fittings
30

31 1. Description: The work consists of furnishing all labor, equipment and
32 materials and installing ductile iron fittings less than 24-inches in diameter
33 and not included in other items. The unit price shall cover the cost of
34 furnishing the fittings, bends and sleeves, transportation, jointing
35 materials, glands, bolts, gaskets, and polyethylene wrap. All fittings shall
36 be installed with restrainers.
37

38 2. Measurement: The quantity of ductile iron fittings, bends, and sleeves to
39 be measured for payment under this Item shall be the weight of the
40 fittings; not including cement mortar lining, retainer glands, restrainers,
41 bolts, or gaskets; installed in the Work measured in tons as listed in the
42 appropriate AWWA Standard (C 110 for standard fittings and C 151 for
43 compact fittings).
44

45 3. Payment: Payment will be made at the unit price bid per ton of fittings.
46

1 D. BID ITEM - Taps

- 2
- 3 1. Description: The work consists of furnishing all labor, equipment and
- 4 materials, including tapping saddle, tapping valve, valve box, polywrap,
- 5 shoring if required, dewatering and performing taps on existing PVC, C.I.
- 6 and D.I. mains. A pressure test of the completed installation is required
- 7 and included in this item.
- 8
- 9 2. Measurement: The quantities of taps to be paid for under this Item shall be
- 10 the actual number of each size measured in place, completed and
- 11 accepted.
- 12
- 13 3. Payment: Payment will be made at the unit price bid for each size of tap
- 14 listed in the Bid Form.
- 15

16 E. BID ITEM - Sleeved or Fitting Connections

- 17
- 18 1. Description: The work consists of furnishing all labor and equipment and
- 19 constructing sleeved connections or using various fittings or bends to
- 20 connect to existing mains. The unit price shall include notification of
- 21 shutdown to customers, coordination and scheduling with the Engineer
- 22 and County, removal of groundwater, dewatering pipe contents,
- 23 establishing alignment, moving and aligning old and new pipe, cleaning
- 24 and cutting old pipe, cleaning, polyethylene encasement, and all other
- 25 operations required to make the connection. Connections two inches and
- 26 smaller shall include the cost of the sleeves, couplings and valves.
- 27 Fittings larger than two inches in diameter shall be paid for under a
- 28 separate Bid Item. This Item shall be measured for payment only where a
- 29 new force main and an old (existing) force main are being connected.
- 30 Connections between pipes both installed under this Contract will not be
- 31 measured for payment.
- 32
- 33 2. Measurement: The quantity of sleeved or fitting connections to be paid for
- 34 under this Item shall be the number of each measured in place, completed
- 35 and accepted.
- 36
- 37 3. Payment: Payment will be made at the unit price bid for each sleeve or
- 38 fitting connection.
- 39

40 F. BID ITEM - Disconnect and Permanent Plug Existing Force Mains

- 41
- 42 1. Description: The work consists of furnishing all labor, equipment and
- 43 materials to cut and permanently plug existing force mains. The unit price
- 44 shall include coordination with Pinellas County Utilities to operate existing
- 45 valves, all nuts, bolts, gaskets, restrained joint plugs or caps, notification
- 46 of shutdown to customers, cutting existing pipe, groundwater removal,

1 dewatering pipe contents, polywrap, and all other operations required to
2 disconnect and plug the force mains. The cost of grouting an out of
3 service main, line stops and removal of appurtenances from out of service
4 mains, if required, will be paid for under separate Bid Items. All work
5 required to physically plug the mains placed out of service from remaining
6 active force mains shall be included.
7

8 2. Measurement: The quantity of disconnect and permanent plug existing
9 force mains to be paid for under this Item shall be the number of each
10 measured in place, completed and accepted.
11

12 3. Payment: Payment will be made at the unit price bid for each size listed in
13 the Bid Form.
14

15 G. BID ITEM – 8-Inch Line Stop
16

17 1. Description: The work consists of furnishing all labor, equipment, line stop
18 assemblies, and materials required for installation of and performing the 8-
19 inch line stop. The unit price shall include all nipples, valves, piping,
20 fittings, taps, dewatering, etc. as called for on the Drawings. All relevant
21 submittals and supervision (when line stops are in service) of the line
22 stops are included within the bid item. Surface restoration shall be paid for
23 under separate bid items.
24

25 2. The quantity of the 8-Inch Line Stop to be paid for under this item shall be
26 measured as one lump sum.
27

28 3. Payment: Payment will be made at the lump sum price shown in the Bid
29 Form for the 8-Inch Line Stop, as designated on the plans, and acceptably
30 completed.
31

32 H. BID ITEM - Air Release Systems
33

34 1. Description: The work consists of furnishing all labor, equipment and
35 materials and installing air release systems. The unit price shall include
36 all nipples, valves, fittings, taps, polywrap if required, valve chamber
37 (manhole with frame and cover), above ground enclosure, piping, bollards
38 if shown or specified, dewatering, etc. as called for on the Drawings.
39 Surface restoration shall be paid for under separate Bid Items.
40

41 2. Measurement: The quantities of air release systems to be paid for under
42 this Item shall be the actual number of the respective air release
43 assemblies measured in place, completed and accepted.
44

45 3. Payment: Payment will be made at the unit price bid for each air release
46 assembly.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46

a. Payment shall be made under:

- ARV 1A/2A/3C, New Tee, Offset, Above Grade, Unvented
- ARV 1A/2B/3C New Tee, On Main, Above, Grade, Unvented
- ARV 1A/2A/4C New Tee, Offset, Below Grade, Unvented
- ARV 1A/2B/4C New Tee, On Main, Below Grade, Unvented

I. BID ITEM - Unfinished Concrete

- 1. Description: The work consists of furnishing all labor, equipment dewatering, materials and installing unfinished concrete for encasement, trench restoration or as directed by the Engineer.
- 2. Measurement: The quantities of unfinished concrete to be paid for under this Item shall be the number of cubic yards in place, completed and accepted.
- 3. Payment: Payment will be made at the unit price bid per cubic yard of unfinished concrete.

J. BID ITEM – PS 016 Connection

- 1. Description: Payment shall be full compensation for tapping of existing 36-inch pipe, protection of adjacent pipe to remain, furnishing and installing adapter, pipe dewatering, cleaning, coordination with Pinellas County Utilities for operation of existing valves, all labor and material including restraining devices, and constructing the connection in accordance with the details and sequence of construction shown on the plans and specified. Includes pig port, vault, valves and tapping sleeve. Pipe will be measured for payment under another Bid Item.
- 4. Measurement: The quantity of PS 016 Connection to be paid for under this item shall be measured as one lump sum completed and accepted.
- 5. Payment: Payment will be made at the lump sum price shown in the Bid Form for the PS 016 Connection, as designated on the plans, and acceptably completed.

K. BID ITEM – South Cross Bayou Connection

- 1. Description: Payment shall be full compensation for tapping of existing 42-inch pipe, protection of adjacent pipe to remain, furnishing and installing adapter, pipe dewatering, cleaning, coordination with Pinellas County Utilities for operation of existing valves, all labor and material including restraining devices, and constructing the connection in accordance with the

1 details and sequence of construction shown on the plans and specified. Pipe
2 will be measured for payment under another Bid Item.

3
4 2. Measurement: The quantity of South Cross Bayou Connection to be paid
5 for under this item shall be measured as one lump sum completed and
6 accepted.

7
8 3. Payment: Payment will be made at the lump sum price shown in the Bid
9 Form for the South Cross Bayou Connection, as designated on the plans,
10 and acceptably completed.

11
12 L. BID ITEM - Reverse Deadman & Interties

13
14 1. Description: The work covered by this item consists of reverse deadman
15 and intertie installations in accordance with the details on the plans and
16 includes ductile iron restraints that are encapsulated in reinforced
17 concrete, curing and formwork. Fittings less than 36-inches in diameter,
18 force main pipe, valves and hot taps will be measured for payment under
19 other pay items.

20
21 2. Measurement: The quantities of reverse deadman & interties to be
22 measured for payment under this Item shall be the actual number installed
23 complete and accepted.

24
25 3. Payment: Payment will be made at the respective unit prices bid for each
26 reverse deadman & interties installed of the appropriate size.

27
28 a. Payment shall be made under:

29 Reverse Deadman for 21" to 36" Force Mains

30 Reverse Deadman for 13" to 20" Force Mains

31 36" FM Intertie

32 20" FM Intertie

33
34 M. BID ITEM - Abandonment of Force Mains Placed Out of Service

35
36 1. Description: Payment shall be full compensation for coordination with
37 Pinellas County Utilities for operation of existing valves to depressurize
38 the mains; removal of all valve boxes, fire hydrants, blow offs and air
39 release valves from pipe placed out of service, protection of adjacent pipe
40 to remain, removal and disposal of certain pipe as shown, specified or
41 required, excavation, backfilling, dewatering, sheeting, shoring and
42 bracing, and all work required to physically abandon the mains placed out
43 of service from remaining active force mains shall be included. All work
44 associated with plugging shall be paid under a separate pay item.
45

- 1 2. Measurement: The quantity of Abandonment of Force Mains Placed Out
2 of Service to be paid for under this item shall be measured as one lump
3 sum once completed and accepted.
4
5 3. Payment: Payment will be made at the lump sum price shown in the Bid
6 Form for Abandonment of Force Mains as shown on the plans, specified,
7 and acceptably completed.
8

9 N. BID ITEM – Grout Filling Existing Pipe

- 10
11 1. Description: The work covered by this Item consists of furnishing and
12 installing grout, flowable fill material or slurry inside existing pipelines as
13 shown, specified and as directed by the Engineer. The work includes
14 cutting open existing pipe for fill placement and placement of grout tubes.
15 Grout shall have a maximum 28-day compressive strength of 100 psi and
16 be submitted for approval. Flowable fill conforming to FDOT Standard
17 Specification Section 121 for excavatable flowable fill is acceptable,
18 however, mixes with less fine aggregate and more admixtures to increase
19 pump ability will also be considered.
20
21 2. Measurement: The quantity of Grout Filling Existing Pipe to be measured
22 for payment will be the volume, in cubic yards, of Grout placed as
23 calculated using the inside diameter and the length of pipe grouted
24 completed and accepted.
25
26 3. Payment: Payment will be made at the unit price bid per cubic yard.
27

28 O. BID ITEM – Pig Launching Station

- 29
30 1. Description: The work consists of furnishing all labor, equipment and
31 materials and installing pig launching station. The unit price shall include
32 all nipples, valves, wye fittings, plugs, taps, polywrap if required, reinforced
33 concrete vault, H-20 rated hatch, grout, enclosure, PVC piping and
34 appurtenances, dewatering, etc. as called for on the Drawings. Surface
35 restoration shall be paid for under separate Bid Items.
36
37 2. Measurement: The quantities of pig launch stations to be paid for under
38 this Item shall be the actual number of pig launch stations measured in
39 place, completed and accepted.
40
41 3. Payment: Payment will be made at the unit price bid for each pig launching
42 station installed.
43

44 P. BID ITEM – Magnetic Flowmeter Installation (By Others)

- 1 1. Description: The work consists of furnishing all labor, equipment and materials
2 and installing magnetic meter installation. The unit price shall include flanged
3 30-inch diameter magnetic meter, jointing accessories, 36-inch by 30-inch
4 concentric reducers, two 4-inch flanged outlets with 4-inch gate valves for
5 testing and calibration, all concrete saddle type pipe supports, air release
6 system shown, etc. as called for on the Drawings. 36-inch force main pipe and
7 bends will be measured for payment under other bid items. The work includes a
8 totalizer installed in a weather proof enclosure on the exterior wall of the nearby
9 raw sewage lift station approximately 100' away, all connecting wiring, testing,
10 assistance of the manufacturer's representative for a complete trouble free
11 metering system.
- 12 2. Measurement: The magnetic meter is to be paid for under this item shall be the
13 actual number measured in place, completed and installed.
- 14 3. Payment: Payment will be made at the unit price bid for magnetic meter
15 installation installed and approved.

16
17 1.09 SPECIAL INSTALLATIONS

18
19 A. BID ITEM – 42-Inch Diameter H.D.P.E. Sanitary Force Main by HDD

- 20
21 1. Description: The work consists of furnishing all labor, equipment and
22 materials, and fusing and installing 42-Inch Diameter HDPE Sanitary
23 Force Main by HDD. The unit price shall include all costs necessary to
24 install the pipe including survey layout; materials, including HDPE Flange
25 adapters; clearing and grubbing; tree removal; root pruning; excavation;
26 backfilling; dewatering; cutting and removal of pavement and other surface
27 improvements including sidewalks, driveways, etc; sheeting; bracing;
28 utility crossings; guidance system, HDD plan submittal, clearing of the
29 right-of-way; protection of property; protection, repair and replacement of
30 utilities; protection, repair and replacement of sprinklers; temporary
31 leakage test plugs; temporary blow-offs; and pressure testing.
- 32
33 2. Measurement: The quantities of HDD pipe to be paid for under this Item
34 shall be the horizontal length as shown on the plans from adapter to
35 adapter installed and approved. If additional length is installed for the
36 Contractor's convenience, such additional length shall be measured for
37 payment under the appropriate pay item for adjacent pipe installed in open
38 cut trench.
- 39
40 3. Payment: Payment will be made at the unit price bid per linear foot of the
41 various pipe sizes.

42
43 1.10 PAVEMENT, SIDEWALKS AND DRIVEWAY RESTORATION

44
45 A. BID ITEM – Type "B" Stabilization

46

- 1
2
3
4
5
6
7
8
9
1. Description: The work consists of all labor, equipment, and material necessary to install Type B Stabilization as specified.
 2. Measurement: The quantity to be measured for payment shall be the area in square yards of Type B Stabilization completed and accepted.
 3. Payment: Payment will be made at the contract unit price per square yard.
- 10
- B. BID ITEM – Pavement Base Restoration
- 11 1. Description: The work consists of all labor, equipment, and material
12 necessary to install Limerock Roadway Base as specified.
 - 13 2. Measurement: The quantity to be measured for payment shall be the area
14 in square yards of Limerock Roadway Base completed and accepted.
 - 15 3. Payment: Payment will be made at the contract unit price per square yard.
- 16
17
18
- C. BID ITEM – Pavement Surface Restoration, 1-1/2-Inch Thick
- 19 1 Description: The work consists of all labor, equipment, and material
20 necessary to install the first lift of Superpave asphaltic concrete surface
21 course on the backfilled trench for the force main installations as specified.
 - 22 2 Measurement: The quantity to be measured for payment shall be the area
23 in square yards of Asphaltic Concrete Type SP 12.5 – 1-1/2 inch thick
24 surface course placed within the payment limits shown and described,
25 completed and accepted.
 - 26 3 Payment: Payment will be made based on the contract unit price per
27 square yard adjusted as specified in the Technical Specifications,
28 amended by the Special Provisions, based on the Asphalt Price Index
29 published monthly by the FDOT.
- 30
31
32
33
34
- D. BID ITEM – Pavement Surface Restoration– 1-1/2-Inch Thick
- 35 1. Description: The work consists of all labor, equipment, and material
36 necessary to install the final lift of superpave asphaltic concrete surface
37 course (overlay) on the first lift of asphalt surface course placed and on
38 the milled surfaces of the existing undisturbed roadway, as shown,
39 specified and directed.
 - 40 2. Measurement: The quantity to be measured for payment shall be the area
41 in square yards of Asphaltic Concrete, Type SP 12.5, 1-1/2 inch thick
42 surface course (overlay) completed and accepted.
- 43
44
45
46

- 1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
3. Payment: Payment will be made based on the contract unit price per square yard adjusted as specified in the Technical Specifications, amended by the Special Provisions, based on the Asphalt Price Index published monthly by the FDOT.
- E. BID ITEM – Milling Existing Asphalt Pavement down 1-1/2 inches
1. Description: The work consists of all labor, equipment, and material specified for the milling of the existing asphalt including hauling off, and stockpiling or otherwise disposing of the milled material. Milling shall conform to FDOT Standard Specification Section 327.
 2. Measurement: The quantity to be measured for payment shall be the area in square yards of milling completed and accepted.
 3. Payment: Payment will be made at the contract unit price per square yard.
- F. BID ITEM - Shell Driveway Base
1. Description: The work consists of all labor, equipment and materials for the construction of 6-inch thick shell driveway base, or alley, as directed by the Engineer. The unit price includes compaction to a minimum density of ninety-eight (98) percent of the maximum determined by AASHTO T180.
 2. Measurement: The quantity to be measured for payment under this Bid Item will be the area in square yards of such shell driveway base or alley placed in the work within the payment limits for surface restoration shown or as directed by the Engineer.
 3. Payment: Payment will be made at the contract unit price per square yard.
- G. BID ITEM - Concrete Sidewalk - 4-Inch Thickness
1. Description: The work consists of all labor, equipment and materials for the construction of 4-inch thick concrete sidewalk, as directed by the Engineer.
 2. Measurement: The quantity to be measured for payment under this Bid Item will be the area in square yards of such 4-inch thick concrete sidewalk placed in the work within the payment limits for surface restoration shown or as directed by the Engineer.
 3. Payment: Payment will be made at the contract unit price per square yard.
- H. BID ITEM – Concrete Sidewalk - 6-inch Thickness

- 1
2
3
4
5
6
7
8
9
10
1. Description: The work consists of all labor, equipment and materials for the construction of 6-inch thick concrete sidewalk, as directed by the Engineer.
 2. Measurement: The quantity to be measured for payment under this Bid Item will be the area in square yards of such 6-inch thick concrete sidewalk placed in the work within the payment limits for surface restoration shown or as directed by the Engineer.
 3. Payment: Payment will be made at the contract unit price per square yard.

11 I. BID ITEM – Concrete Driveway

- 12
13
14
15
16
17
18
19
20
21
22
1. Description: The work consists of all labor, equipment and materials for the construction of 6-inch thick concrete driveway, as directed by the Engineer.
 2. Measurement: The quantity to be measured for payment under this Bid Item will be the area in square yards of such 6-inch thick concrete driveway placed in the work within the payment limits for surface restoration shown or as directed by the Engineer.
 3. Payment: Payment will be made at the contract unit price per square yard.

23 J. BID ITEM – Concrete Traffic Separator Replacement

- 24
25
26
27
28
29
30
31
32
33
34
35
36
1. Description: The work consists of all labor, equipment and materials for the construction of Concrete Traffic Separator Replacement in accordance with FDOT Standard Specifications and as modified herein and directed by the Engineer. The work includes curb around the separator.
 2. Measurement: The quantity to be measured for payment under this Bid Item will be the length area in linear feet placed in the work within the payment limits for surface restoration shown or as directed by the Engineer. Measurement will extend to the nose of the separator.
 3. Payment: Payment will be made at the contract unit price per linear foot.

37 K. BID ITEM - Curb or Curb and Gutter

- 38
39
40
41
42
43
44
45
46
47
48
1. Description: The work consists of all labor, equipment and materials for the construction of Curb or Curb and Gutter in accordance with FDOT Standard Specifications and as directed by the Engineer.
 2. Measurement: The quantity of curb or curb and gutter to be measured for payment will be the number of lineal feet of curb or curb and gutter acceptably replaced within the payment limits for surface restoration shown and as directed by the Engineer. Curb associated with traffic separators will not be measured for payment under this pay item.

1 3. Payment: Payment will be made at the contract unit price per linear foot.

2
3 L. BID ITEM – Underdrain Replacement

4
5 1. Description: This item shall provide all labor, equipment and materials
6 necessary to replace or repair roadway underdrain removed as part of force
7 main construction. Repair and replacement shall meet Pinellas County
8 Public Works standards for Roadside Underdrain Installation.

9
10 2. Measurement: Underdrain shall be measured per linear foot of underdrain
11 replaced or repaired within the payment limits for surface restoration shown
12 and as directed by Engineer.

13
14 3. Payment: Payment shall be made at the unit price bid per linear foot of
15 underdrain.

16
17 1.11 GRASS RESTORATION

18
19 A. BID ITEM - Sodding

20
21 1. Description: The work consists of furnishing all labor, equipment and
22 materials and placing, rolling and watering grass sod complete in place
23 regardless of grass type (St. Augustine/Bahia).

24
25 2. Measurement: The quantity of sod to be measured for payment will be the
26 number of square yards of acceptable sod measured in place within the
27 payment limits for surface restoration shown and as directed by the
28 Engineer.

29
30 3. Payment: Payment shall be made at the unit price bid per square yard.

31
32
33 1.12 TRAFFIC CONTROL

34
35 A. BID ITEM - Maintenance of Traffic

36
37 1. Description: Work shall include furnishing all labor, materials and equipment
38 required to implement the MOT plan and to cover the required work from
39 commencement to final closeout. The work includes all items of work
40 necessary for complete maintenance of traffic including, but not limited to,
41 traffic control devices, warning devices, safety devices, barricading,
42 signing, lighting, removal of existing pavement markings, installation and
43 removal of temporary pavement striping (paint), markings and reflective
44 markers, traffic signal relocation and adjustments for MOT phasing, and all
45 materials and construction necessary to create temporary connections for
46 street, driveways and pedestrian traffic. The pay item for “Maintenance of

Traffic” shall include all work necessary for maintenance of vehicular traffic and pedestrian traffic, **unless otherwise specified to be paid under other bid items.**

- 2. Measurement: Payment will be made at the lump sum price shown in the Bid Form for Maintenance of Traffic as shown on the plans, specified, and required for construction activities.
- 3. Payment: Payment will be made in accordance with the following schedule.

Percent of Original Contract Amount Earned	Allowable Percent of the Lump Sum price for Maintenance of Traffic
10	25
35	50
65	75
90	100

B. BID ITEM - Off-Duty Police Officer for Traffic Control

- 1. Description: The work covered by this item consists of the actual manhours required, and authorized for employment, of uniformed off-duty policemen to assist in maintaining and regulating traffic through the project.
- 2. Measurement: The quantity of Off-Duty Police Office for Traffic Control shall be the number of manhours required to construct the pipeline.
- 3. Payment: Payment will be made at the unit bid price per man hour.

C. BID ITEM - Changeable Variable Message Boards

- 1. Description: The work covered by this item consists of furnishing, programming and placing FDOT approved variable message boards as required and as directed by the Engineer.
- 2. Measurement: The Changeable Variable Message Boards will be measured for payment each day they are in place, operating satisfactorily and accepted.
- 3. Payment: Payment will be made at the unit bid price per day.

D. BID ITEM - Traffic Signal Detector Loop Assembly Replacement

- 1 1. Description: The work covered by this item consists of furnishing all
2 materials, labor and equipment to completely replace traffic signal detector
3 loop assemblies that are damaged during pipeline installation.
4
5 2. Measurement: Each traffic signal detector loop assembly replaced,
6 complete and accepted will be measured for payment.
7
8 3. Payment: Payment will be made at the unit bid price for each loop.
9
- 10 E. BID ITEM – Advanced Warning Arrow Panel
11
12 1. Description: The work covered by this item consists of furnishing,
13 programming and placing FDOT approved Advanced Warning Arrow
14 Panels as required and as directed by the Engineer.
15
16 2. Measurement: The Advanced Warning Arrow Panel will be measured for
17 payment each day in place, operating satisfactorily and accepted.
18
19 3. Payment: Payment will be made at the unit bid price per day.
20
- 21 F. BID ITEM – Concrete Barrier Wall
22
23 1. Description: The work covered by this item consists of furnishing,
24 installing, relocating and removal of FDOT approved temporary concrete
25 barrier wall as required. Payment for temporary concrete barrier wall shall
26 include mounted lights, reflectors and incidentals.
27
28 2. Measurement: Concrete Barrier Wall to be measured for payment will be
29 the length in feet along the top of the wall, including transitional and end
30 sections, when originally incorporated into the project. Concrete barrier
31 wall will not be measured for payment when it is simply relocated from one
32 part of the project to another.
33
34 3. Payment: Payment will be made at the unit bid price per linear foot.
35
- 36 G. BID ITEM – Vehicular Impact Attenuators
37
38 1. Description: The work covered by this item consists of furnishing installing,
39 relocating, repair and removal of FDOT approved Vehicular Impact
40 Attenuators as required.
41
42 2. Measurement: The quantity of Vehicular Impact Attenuators to be
43 measured for payment will be each Vehicle Impact Attenuator when
44 originally incorporated into the project. Vehicular Impact Attenuators will
45 not be measured for payment when it is simply relocated from one part of
46 the project to another.

- 1
2 3. Payment: Payment will be made at the unit bid price for each Vehicular
3 Impact Attenuator.
4
5

6 1.13 STRIPING AND PAVEMENT MARKING
7

8 A. BID ITEM – Final Pavement Markings - Paint
9

- 10 1. Description: The work covered by this item consists of the submittal and
11 approval of a replacement pavement marking plan and furnishing all labor,
12 materials, and equipment required to install painted pavement markings in
13 accordance with the FDOT design standards and Section 710 of the
14 FDOT Standard Specifications. The work also includes cleaning and
15 preparing of surfaces, curing and protection of all items, maintenance of
16 traffic, and incidentals necessary to complete the work.
17
18 2. Measurement: The quantity of Final Pavement Markings - Paint to be paid
19 for under this item shall be measured as one lump sum once completed
20 and accepted.
21
22 3. Payment: Payment for Final Pavement Markings - Paint shall be made at
23 the lump sum bid price.

24 B. BID ITEM – Final Pavement Markings - Thermoplastic
25

- 26 1. Description: The work covered by this item consists of the submittal and
27 approval of a replacement pavement marking plan and furnishing all labor,
28 materials, and equipment required to install thermoplastic pavement
29 markings in accordance with the FDOT design standards and Section 711
30 of the FDOT Standard Specifications. The work also includes cleaning and
31 preparing of surfaces, curing and protection of all items, maintenance of
32 traffic, and all incidentals necessary to complete the work.
33
34 2. Measurement: The quantity of Final Pavement Markings - Thermoplastic
35 to be paid for under this item shall be measured as one lump sum once
36 completed and accepted.
37
38 3. Payment: Payment for Final Pavement Markings (Thermoplastic) shall be
39 made at the lump sum bid price.

40 C. BID ITEM – Retro-Reflective Pavement Markers
41

- 1 1. Description: The work covered by this item consists of the submittal and
2 approval of a replacement pavement marking plan and furnishing all labor,
3 materials, and equipment required to install retro-reflective pavement
4 markers in accordance with the FDOT design standards and Section 706
5 of the FDOT Standard Specifications. The work also includes cleaning and
6 preparing of surfaces, protection of all items, maintenance of traffic, and
7 incidentals necessary to complete the work.
8
- 9 2. Measurement: The quantity of Retro-Reflective Pavement Markers to be
10 paid for under this item shall be measured as one lump sum completed
11 and accepted.
12
- 13 3. Payment: Payment for Retro-Reflective Pavement Markers shall be made
14 at the lump sum bid price.
15

16 1.14 BID ITEM – Assessment of 20-Inch CI Force Main
17

- 18 1. Description: The work covered by this item consists of performing the 3D
19 pipe mapping and other work items as described in 00 73 00 Special
20 Conditions, 1.08.
21
- 22 2. Measurement: The quantity of Assessment of 20-Inch CI Force Main to be
23 paid for under this item shall be measured as one lump sum once
24 completed and accepted.
25
- 26 3. Payment: Payment for Assessment of 20-Inch Cast Iron Force Main shall
27 be at the Lump Sum bid price.
28

29 1.15 BID ITEM – Unspecified Work
30

31 A. Description – The Work under this Section includes unspecified Work that
32 may be associated with the Work in this contract or as otherwise identified by
33 the Engineer. Any amount of extra work and/or alterations to this contract
34 charged to Unspecified Work shall be fully documented and approved in writing,
35 in advance, by the County or designee. All Work performed under
36 “Unspecified Work” shall be completed in accordance with all conditions and
37 requirements of this contract and shall include the Work to be done by all
38 necessary subcontractors and/or suppliers. Unspecified Work shall mean the
39 stated fixed sum of money to be used only at the Engineer’s specified direction.
40 The particular requirements and items for the allowances will be provided to
41 the Contractor at the appropriate time and shall apply only to additional items
42 over and above those specified in the plans for this contract. For equipment
43 under the control of the Contractor through direct ownership, leasing, renting or
44 other method of acquisition not included in the bid, the Contractor shall furnish

1 cost data which may assist the Engineer in the establishment of equitable
2 rate.

- 3
4 B. Measurement – The Work in this Section shall be paid for by a portion of the
5 allowance under “Unspecified Work” in the Schedule of Values for this
6 contract. Use of any portion of this pay item shall require pre-approval by the
7 County or designee. This Work, materials, and equipment, when
8 required will be ordered in writing by the Engineer, at a lump sum price or
9 a non lump sum price.

10
11 Lump Sum/Unit Price

12 When a lump/unit price is used, the lump/unit price will be determined by
13 negotiation, and only require written pre-approval by the County or designee
14 as backup documentation for payment purposes. The total compensation for
15 Work negotiated under a unit price will be a measurement (i.e. linear feet) or
16 a count (i.e. each) of the item as installed.

17 Non Lump Sum

18 When a non lump sum price is used, compensation shall be limited to the
19 Contractor’s reasonable costs plus markup percentages stipulated in this
20 contract. The basis of the non lump sum negotiated prices and subcontractor
21 invoices will be included in pay application; copies of invoices, equipment cost
22 estimations and other supporting documentation will be included.

- 23
24 C. Payment – The quantities of Unspecified Work to be paid for under this item
25 shall be measured in the units of pay as agreed and approved in writing, the
26 total of which shall not exceed the amount listed on the Bid Form for Work in
27 place, completed and accepted. The value of a unit shall be One and 00/100
28 Dollars (\$1.00).

29
30
31 PART 2 – PRODUCTS (Not Used)

32
33
34 PART 3 – EXECUTION (Not Used)

35
36
37 END OF SECTION
38

1 SECTION 01 31 13 (S)

2
3 COORDINATION

4
5 PART 1 – GENERAL

6
7 1.01 RELATED DOCUMENTS

- 8
9 A. Drawings and general provisions of Contract, including General and
10 Special Provisions and other Division-1 Specification Sections, apply to
11 this section.

12
13 1.02 COORDINATION

14
15 A. Coordination

- 16
17 1. The Contractor shall be solely responsible for the coordination of
18 the work and shall devote such attention thereto and apply such
19 skills and expertise as are necessary to perform the work, including
20 but not limited to the means, methods, sequences, and procedures
21 of construction including assurance of safety at the construction
22 site. The Divisions and Sections of the specifications and the
23 identifications of any drawings shall not control the Contractor in
24 dividing or coordinating the work among subcontractors or suppliers
25 or delineating the work to be performed by any trade. Coordinate
26 construction activities included under various Sections of these
27 Specifications to assure efficient and orderly installation of each
28 part of the work. Coordinate construction operations included
29 under different Sections of the Specifications that are dependent
30 upon each other for proper installation, connection, and operation.
31
32 2. Where installation of one part of the work is dependent on
33 installation of other components, schedule construction activities in
34 the sequence required to obtain the best results.
35
36 3. Where availability of space is limited, coordinate installation of
37 different components to assure maximum accessibility for required
38 maintenance, service and repair. Make adequate provisions to
39 accommodate items scheduled for later installation.
40
41 4. Where necessary, prepare memoranda for distribution to each
42 party involved outlining special procedures required for
43 coordination. Include such items as required notices, reports, and
44 attendance at meetings. Prepare similar memoranda for the Owner
45 and separate Contractors where coordination of their work is
46 required.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45

5. The Contractor shall cooperate fully with the Engineer during the prosecution of the work.

B. Coordination with Existing Plant Operations

1. The Plant is an existing, operating facility. The Contractor must schedule his work so as to maintain the required degree of operating service to meet permit conditions at all times.

2. When the work shall interface directly with an existing on-line facility, the Contractor shall give 7 days written notice to the Owner prior to beginning the work. The written notice shall detail the work to be done, the interface with the on-line system and the precautionary measures to be taken.

3. The Contractor shall have sole responsibility, including financial liability, for interruption of service caused by the work done, and for compliance to existing Plant Operating permits including, but not limited to, EPA/NPDES Discharge permits, and FDEP Operating permits which are impacted by the work done, during this construction project.

4. The Contractor shall have responsibility for the containment and removal of wastewater generated as a result of construction efforts.

C. Coordination with Other Utilities. The Contractor shall coordinate all work interfaces with utility Owners for all related work including but not limited to electrical, water, sewer, and communication utilities. The Contractor shall pay all charges of utility Owners for connections to the work unless stated otherwise in the contract documents, and shall properly connect and schedule the work with the utilities to avoid delays.

D. Administrative Procedures. Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the work. Such administrative activities include, but are not limited to, the following:

- 1. Preparation of schedules.
- 2. Installation and removal of temporary facilities.
- 3. Delivery and processing of submittals.
- 4. Weekly Progress meetings.
- 5. Project Close-out activities.

1 1.03 SUBMITTALS

2
3 A. Coordination Drawings

- 4
5 1. Prepare and submit coordination Drawings where close and careful
6 coordination is required for installation of products and materials
7 fabricated off-site by separate entities, and where limited space
8 availability necessitates maximum utilization of space for efficient
9 installation of different components.
10
11 2. Show the interrelationship of components shown on separate Shop
12 Drawings.
13
14 3. Indicate required installation sequences.
15
16 4. Comply with requirements contained in Section "Submittals."

- 17
18 B. Staff Names. Within 30 days of Notice to Proceed, submit an
19 Organization Chart of the Contractor's principal staff assignments,
20 including the Superintendent and other key personnel in attendance at the
21 site; identify individuals, their duties and responsibilities; list their
22 addresses and telephone numbers, all in compliance with General
23 Conditions and Special Provisions.
24

25 PART 2 – PRODUCTS (Not Used)

26
27 PART 3 – EXECUTION

28
29 3.01 GENERAL INSTALLATION PROVISIONS

- 30
31 A. Inspection of Conditions: Require the Installer of each major component
32 to inspect both the substrate and conditions under which work is to be
33 performed. Do not proceed until unsatisfactory conditions have been
34 corrected in an acceptable manner.
35
36 B. Manufacturer's Instructions: Comply with manufacturer's printed
37 installation instructions and recommendations where more explicit or
38 stringent than requirements contained in Contract Documents.
39
40 C. Inspect materials or equipment immediately upon delivery and again prior
41 to installation. Reject damaged and defective items.
42
43 D. Provide attachment and connection devices and methods necessary for
44 securing work. Secure work true to line and level. Allow for expansion
45 and building movement.
46

- 1 E. Visual Effects: Provide uniform joint widths in exposed work. Arrange
2 joints in exposed work to obtain the best visual effect. Refer questionable
3 choices to the Consultant for final decision.
4
- 5 F. Recheck measurements and dimensions, before starting each installation.
6
- 7 G. Install each component during weather conditions and Project status that
8 will ensure the best possible results. Isolate each part of the completed
9 construction from incompatible material as necessary to prevent
10 deterioration.
11

12
13 3.02 CLEANING AND PROTECTION
14

- 15 A. During handling and installation, clean and protect construction in
16 progress and adjoining materials in place. Apply protective covering
17 where required to ensure protection from damage or deterioration at
18 Substantial Completion.
19
- 20 B. Clean and maintain completed construction activities as frequently as
21 necessary through the remainder of the construction period.
22

23 3.03 LIMITING EXPOSURES
24

- 25 A. Supervise construction activities to ensure that no part of the construction
26 completed or in progress, is subject to harmful, dangerous, damaging, or
27 otherwise deleterious exposure during the construction period. Where
28 applicable, such exposures include, but are not limited to, the following:
29
- 30 1. Excessive static or dynamic loading
 - 31 2. Excessive internal or external pressures
 - 32 3. Excessively high or low temperatures
 - 33 4. Thermal shock
 - 34 5. Excessively high or low humidity
 - 35 6. Water or ice
 - 36 7. Solvents
 - 37 8. Chemicals
 - 38 9. Light
 - 39 10. Puncture
 - 40 11. Abrasion
 - 41 12. Heavy traffic
 - 42 13. Soiling, staining and corrosion
 - 43 14. Combustion
 - 44 15. Electrical current
 - 45 16. High speed operation
 - 46 17. Improper lubrication

- 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10
 - 11
 - 12
 - 13
- 18. Unusual wear or other misuse
 - 19. Contact between incompatible materials
 - 20. Destructive testing
 - 21. Misalignment
 - 22. Excessive weathering
 - 23. Unprotected storage
 - 24. Improper shipping or handling
 - 25. Theft
 - 26. Vandalism

END OF SECTION

1 SECTION 01 33 00 (S)

2
3 SUBMITTALS

4
5 PART 1 – GENERAL

6
7 1.01 SECTION INCLUDES

- 8
9 A. Procedures
- 10
11 B. Product Data
- 12
13 C. Shop Drawings
- 14
15 D. Operations and Maintenance Manuals
- 16
17 E. Installation Manuals
- 18
19 F. Samples
- 20
21 G. Manufacturer's Certificates
- 22
23 H. Inspections Reports & Procedures

24
25 1.02 RELATED SECTIONS

- 26
27 A. Divisions 00 through 44; all sections.

28
29 1.03 DEFINITIONS

- 30
31 A. Product Data and Shop Drawing, general definition: drawings, diagrams,
32 illustrations, brochures, schedules, bills of materials and other data
33 prepared by the Contractor, his subcontractors, suppliers or distributors,
34 or equipment manufacturer's and fabricators, illustrating manufacture,
35 fabrication, construction, installation of the Work or a portion thereof.
- 36
37 B. Manufacturer's Representative: a representative from the manufacturer's
38 plant, familiar with the actual problems of manufacturing, installing, and
39 operating the particular product, and with applicable experience in this
40 field. Sales representatives or agents of the manufacturers will not be
41 acceptable.
- 42
43 C. Working Drawings: Working drawings are Contractor-prepared plans for
44 temporary structures and facilities. Working drawings for elements of
45 work that may affect the safety of persons or property shall be certified by
46 an Owner registered in the state of Florida. Calculations, as necessary,

1 shall accompany working drawings. Submit copies as specified for shop
2 drawings.

- 3
4 D. Installation Instruction: To be submitted at the time of submittals for shop
5 drawing approval to allow for comparison with installation drawings.
6

7 PART 2 – PRODUCTS (NOT USED)

8
9 PART 3 – EXECUTION

10
11 3.01 SUBMITTAL GENERAL REQUIREMENTS

- 12
13 A. The Contractor shall submit a Schedule of Submittals at the
14 preconstruction meeting listing his anticipated submittals and their
15 proposed submittal date. The Contractor shall develop the schedule of
16 submittals such that the number of submittals does not exceed 60. The
17 Engineer will review and approve the Schedule of Submittals for general
18 completeness and with respect to the project schedule. In general, one
19 submittal shall be provided for each specification section.
20

- 21 B. The Contractor shall submit to the Owner for review shop drawings,
22 samples, materials lists, equipment data, test plans, dimensional and
23 layout drawings, instruction manuals, record documents, manufacturers'
24 equipment manuals, and other submittals required by the Contract
25 Documents and specified herein, or subsequently required by Change
26 Order. All such items required to be submitted for review shall be
27 furnished by and at the expense of the Contractor and any work affected
28 by them shall not proceed without such review and subsequent approval.
29 Submittals and their contents shall be properly prepared, identified, and
30 transmitted as provided herein or as may otherwise be directed. Except
31 for record documents, test plans, and instructional manuals for operation
32 and maintenance, submittal shall be reviewed and approved before the
33 material or equipment covered by the submittal is delivered to the site.
34 The progress schedule and schedule of values required under General
35 Conditions shall be coordinated to this requirement.
36

- 37 C. Submittals to the Engineer shall be made electronically and via hardcopy
38 and shall consist of:

- 39
40 1. Four (4) paper copies of all submittal materials, each accompanied
41 by a stamped Contractor review cover sheet in accordance with
42 Paragraph 3.02.B. below. All copies will be retained by the Owner
43 and/or Engineer.
44
45 2. One (1) digital copy in Adobe PDF format, delivered by email, FTP,
46 or Dropbox as directed by the Owner or Engineer, including each a

1 stamped Contractor review cover sheet in accordance with
2 Paragraph 3.02.B. below.
3

4 3.02 PROCEDURES 5

6 A. Assign a sequential number to each submittal, and retain assigned
7 number, with appropriate subscript, on required resubmissions. The
8 assigned number shall consist of the Specification Section number where
9 the item is specified, followed by a sequential number indicating the
10 number of submittals in that Section (e.g., 01 70 00-11 is the 11th
11 separate submittal for items specified in Section 01 70 00). Identify
12 resubmittals with the same number as the original submittal, followed by
13 A, B, C, etc. Clearly identify materials with name and tag numbers as
14 they appear on the Contract Documents.
15

16 1. Submittals describing items or satisfying requirements of the
17 Instruction to Bidders document, General Conditions, Special
18 Conditions, Supplemental Conditions, Agreement documents, or
19 any other general submittals not covered under these technical
20 specifications, the project drawings, the Pinellas County Standard
21 Technical Specifications, or the Pinellas County Materials
22 Specifications Manual shall be assigned numbers of the "00 00 00-
23 XX" series, where "XX" indicates the sequential number of the
24 submittal (i.e., Emergency Contact List may be submittal number
25 00 00 00-11).
26

27 2. Submittals describing items shown only on the project drawings
28 shall be assigned numbers based on the applicable sheet number,
29 using the series "00 AA.AA-XX," where "AA.AA" indicates the sheet
30 number (i.e., M1.01) and "XX" indicates the sequential number of
31 the submittal.
32

33 3. Submittals describing items shown only in the Pinellas County
34 Material Specifications Manual (MSM) shall be assigned numbers
35 based on the applicable Section number, using the series "00
36 AB.BB-XX," where "A" indicates the Section number, "A.AA"
37 indicates the three-digit series, and "XX" indicates the sequential
38 number of the submittal. (Example: Submittal 00 A2.00-01
39 represents the first submittal for Schedule 80 PVC pipe)
40

41 B. Every submittal of shop drawings, samples, materials lists, equipment
42 data, instruction manuals, and other submittals upon which the proper
43 execution of the work is dependent shall be accompanied by a submittal
44 review sheet bearing the Contractor's review and approval stamp with
45 signature and date in every case. This review sheet shall specifically
46 certify that the Contractor (1) has reviewed, checked, and approved the

1 submittal and has coordinated the contents with the requirements of the
2 work and the contract documents including related work. (2) has
3 determined and verified all quantities, field measurements, field
4 construction criteria, materials, equipment, catalog numbers, and similar
5 data. (3) states the work covered by the submittal is recommended by the
6 Contractor and the Contractor's guarantee will fully apply thereto. In
7 addition, the Contractor's review cover sheet shall indicate the
8 Contractor's name and address, the Owner's project name and number,
9 the submittal number, all applicable specification sections and/or
10 applicable paragraphs, and Contractor drawing number.

11
12 C. The Contractor's review cover sheet shall identify any and all variations
13 from the requirements of the applicable section(s) of the Contract
14 Documents. Contractor will not be relieved of responsibility for executing
15 Work in full conformance with the Contract Documents for submittals not
16 so noted even though such submittals have been approved. The
17 submittal shall indicate conformance with all applicable sections of the
18 Contract Documents.

19
20 D. It shall be the responsibility of the Contractor to check and verify all field
21 measurements and quantities and conform to requirements of the General
22 Conditions and Special Provisions before submittal.

23
24 E. Submissions shall be made to the Owner's Representative by the
25 Contractor only. Submit through the Contractor data prepared by
26 subcontractors and suppliers and correspondence originating with
27 subcontractors and suppliers. Each submittal shall be accompanied by a
28 letter of transmittal.

29
30 F. Submit shop drawings and product data in accordance with the approved
31 submittal schedule, and in proper sequence and time, with due regard to
32 the time required for transmittal, review, approval, and resubmittal.

33
34 G. Submit shop drawings and product data covering related items of
35 equipment or material or integrated systems of equipment or material at
36 the same time. Partial submittals will not be considered.

37
38 H. Coordinate shop drawings and product data with drawings previously
39 submitted, with drawings being prepared, and with drawings and data
40 previously approved. All such coordination shall be indicated by
41 reference.

42
43 I. Do not deliver either to storage, to the job site, or incorporate into the
44 Work materials or equipment for which required shop drawings and
45 product data have been submitted for approval until copies of approved
46 drawings and data have been received or until the Owner has authorized

1 in writing to do so. Do not perform Work until shop drawings have been
2 submitted and such approval has been received.

- 3
4 J. Corrections and Resubmittals. The Contractor shall make all required
5 corrections and shall resubmit the required number of corrected
6 submittals. The Contractor shall direct specific attention in writing to
7 revisions other than the corrections called for on previous submittals.
8 Review and comment on up to ONE (1) resubmittal of any given item by
9 the Owner and/or Engineer is included in the Contract; review of
10 additional resubmittals of the same item to confirm compliance with these
11 specifications will be at the additional expense to the Contractor, based on
12 the Engineer's Standard Hourly Rate of \$150.00.

13
14 3.03 SUBSTITUTIONS

- 15
16 A. Only after execution of the contract will the Engineer consider requests
17 from the Contractor for substitutions. Substitutions will be considered only
18 when a product becomes unavailable due to no fault of Contractor.
19
20 B. Items identified as "equal" shall be accompanied by product literature and
21 a written itemized comparison of the published specifications (feature by
22 feature from the manufacturer's literature) for the item specified and for
23 the item proposed. The burden of proof of "equality" shall be on the
24 supplier and the Owner's/ Engineer's review time shall be charged as
25 additional work to the Contractor.
26
27 C. Request constitutes a representation that Contractor:
28 1. Has investigated proposed product and determined that it meets or
29 exceeds, in all respects, specified product.
30 2. Will provide the same warranty for substitution as for specified
31 product.
32 3. Will coordinate installation and make other changes which may be
33 required for Work to be complete in all respects.
34 4. Waives claims for additional costs which may subsequently
35 become apparent.
36
37 D. Substitutions will not be considered when they are indicated or implied on
38 shop drawing or product data submittals without separate written request,
39 or when acceptance will require substantial revision of Contract
40 Documents.
41
42 E. Engineer will determine acceptability of proposed substitution, and will
43 notify Contractor of acceptance or rejection in writing within a reasonable
44 time.
45
46

1 3.04 OWNER'S/ ENGINEER'S REVIEW

2
3 A. Incomplete submittals, including those not correctly transmitted, not
4 correctly titled and identified, or not bearing the Contractor's review and
5 approval stamp, will be returned to the Contractor without review.
6 Submittals reviewed by the Owner or Engineer will be returned with the
7 Owner's and/or Engineer's comments, if any.
8

9 B. Engineer's review of submittal is for general conformance with the design
10 concept of the project and for general compliance with information given
11 and requirements of the Contract Documents only, subject to the detailed
12 requirements of the Contract Documents.
13

14 C. Owner's/Engineer's review does not relieve the Contractor of obligation
15 and responsibility to coordinate the Work and plan the details of the Work,
16 or fulfilling the purpose and intent of the Contract. Review by the
17 Owner/Engineer shall not be construed as relieving the Contractor of
18 responsibility for the accuracy, proper fit, functioning, or performance of
19 Work.
20

21 D. Copies of submittals which are returned to the Contractor and which are
22 subject to approval will be marked with action notations (A, B, C, D, E, or
23 FYI), in which case the action so indicated shall be taken by the
24 Contractor.
25

26 A "NO EXCEPTIONS NOTED" is assigned when there are no
27 notations or comments on the submittal. When returned
28 under this code the Contractor may release the equipment
29 and/or material for manufacture.
30

31 B "EXCEPTIONS AS NOTED" is assigned when notations or
32 comments have been made on the submittal pointing out
33 minor discrepancies as compared with the Contract
34 Documents. Resubmittal or confirmation is not necessary
35 prior to release for manufacturing.
36

37 C "EXCEPTIONS AS NOTED – CONFIRM." This combination
38 of codes is assigned when a confirmation of the notations
39 and comments is required from the Contractor. The
40 Contractor may release the equipment or material for
41 manufacture; however, all notations and comments must be
42 incorporated into the final product. This confirmation is to
43 address the omissions and/or nonconforming items that
44 were noted. Only the items to be "confirmed" need to be
45 resubmitted.
46

- 1 D "EXCEPTIONS AS NOTED – RESUBMIT." This
2 combination of codes is assigned when a resubmittal is
3 required by the Contractor. The Contractor may release a
4 portion of the equipment or material for manufacture;
5 however, all notations and comments must be incorporated
6 into the final submittal. This resubmittal is to address the
7 omissions and/or nonconforming items that were noted.
8
- 9 E "REJECTED – REVISE AND RESUBMIT." This
10 combination of codes is assigned when the submittal is in
11 noncompliance with the Contract Documents and must be
12 corrected and the entire package resubmitted. This code
13 generally means that the equipment or material cannot be
14 released for manufacture unless the Contractor takes full
15 responsibility for providing the submitted items in
16 accordance with Contract Documents.
17
- 18 FYI "FOR YOUR INFORMATION" is assigned when the package
19 provides information of a general nature that may or may not
20 require a response.
21
- 22 E. Returned copies of submittals marked with either notation (A) or (B)
23 authorize Contractor to proceed with the fabrication, installation or
24 construction, or any combination thereof, covered by such returned
25 drawings, provided that such fabrication, installation or construction shall
26 be subject to the comments, if any, shown on such returned copies.
27
- 28 F. Returned copies of submittals marked with notation (C) direct the
29 Contractor to address or respond to comments in writing prior to
30 proceeding with fabrication, installation or construction. Returned copies
31 of submittals marked with the notation (D) direct the Contractor to revise
32 and resubmit the portions of the work associated with comments indicated
33 prior to proceeding with that portion of the work, though other components
34 not including such comments may proceed. The re-submitted portions
35 shall be corrected as necessary and revised drawings shall be submitted
36 in the same manner as before.
37
- 38 G. Returned copies of drawings marked with either notation (E) shall be
39 resubmitted by the Contractor not later than 15 days after date of
40 transmittal by Owner/Engineer of such copies of such drawings.
41
- 42 H. The Owner reserves the right to require written confirmation from the
43 Contractor that the comments placed on submittals stamped "Exceptions
44 Noted" will actually be followed.
45

1 I. Not less than 21 calendar days shall be allowed for the review of
2 submittals, not including the time necessary for delivery or mailing, and
3 shall cause no delay in the work. Extension of the Contract time will not
4 be granted because of the Contractor's failure to make timely and
5 correctly prepared and presented submittals with allowance for the
6 checking and review periods. The need for resubmission or delay in
7 obtaining the Owner's review or approval of submittals will not entitle the
8 Contractor to an extension of time for Contract Completion.

9
10 J. Engineer will return a signed copy of his review sheet and comments, if
11 any, scanned in Adobe PDF format to the Contractor via email and/or file
12 transfer protocol (FTP) location.

13
14 3.05 PRODUCT DATA

15 A. Product data, including materials reproduced from manufacturer's product
16 catalogs.

17
18 B. Catalog data shall be explicit with regard to details of the products being
19 furnished and complete enough to enable the Owner to determine that the
20 products submitted conform to the requirements of the specifications. For
21 submittals with more than one style, size, capacity, etc., of a product on a
22 sheet, clearly indicate exactly which product type is being submitted for
23 approval. Failure to do this is cause for rejection.

24
25 C. Catalog data shall bear the name of the manufacturer of the product.

26
27
28 3.06 SHOP DRAWINGS

29 A. Submit detailed drawings and descriptions of proposed deviations from
30 details or component arrangement indicated on the drawings.

31
32 B. Provide finished drawings for approval indicating proposed installation of
33 Work, and materials and equipment being furnished.

34
35 C. Single line drawings will not be acceptable unless prior approval has been
36 received from Owner. Copies of the plans will not be accepted for
37 submission as drawings, nor will catalog numbers alone of materials or
38 equipment.

39
40 D. Data shown on the working drawings shall be complete with respect to
41 dimensions, design criteria, material of construction, and other detail to
42 enable review.

43
44 E. The Contractor shall organize the shop drawings in the following manner
45 such that a maximum of 40 original shop drawings shall be submitted to
46

1
2
3
4
5
6
7

the Engineer. Should more than 40 original (not including resubmittals) be submitted, the Contractor shall be responsible for reimbursing the Engineering per Section 01 33 00, 3.02, J.

F. The shop drawings as submitted by the Contractor shall include, but not be limited to, the following:

1	Shop Drawing Submittal Schedule
2	Schedule of Values
3	Contractor's Schedule
4	Project Organization Chart
5	Hurricane Preparedness Plan
6	MOT and Pedestrian Control Plan
7	Dewatering Plan
8	Preconstruction Video
9	Temporary Facilities Plan
10	System Testing Procedures Plan
11	Project ID and Signage
12	Warranties and Bonds
13	Erosion and Sedimentation Control
14	Surface Restoration (Sod, Seed, etc.)
15	Concrete Accessories
16	Concrete Formwork
17	Concrete Reinforcement
18	Concrete Mix Designs and Sources
19	Drainage Structures
20	Concrete Traffic Separators & Medians
21	Concrete Testing Reports
22	Polyethylene Encasement
23	High Performance Coatings & Linings
24	Base/Asphalt
25	PVC Pipe
26	DI Pipe and Fittings
27	HDPE Pipe and Fittings
28	Gate Valves and Appurtenances
29	Plug Valves and Appurtenances
30	Tapping Valves and Sleeves
31	Air Release and Vacuum Valves
32	Valves and Appurtenances O & M Manual
33	Startup Schedule/Sequence
34	HDD Submittals
35	Bypass Pumping or Sewage Hauling Plans
36	Other Miscellaneous Shop Drawing
37	Other Miscellaneous Shop Drawing
38	Other Miscellaneous Shop Drawing

39	Other Miscellaneous Shop Drawing
40	Other Miscellaneous Shop Drawing

1
2 3.07 OPERATION AND MAINTENANCE MANUALS
3

- 4 A. Operations and Maintenance (O&M) Manuals shall be comprehensive of
5 all aspects of the completed process or equipment, and may include
6 multiple individual vendor installation, operation and maintenance
7 manuals, as well as electrical, instrumentation, and SCADA control of a
8 process. The manual shall be prepared specifically for this installation
9 and shall include detailed operating and maintenance instructions and
10 Specifications relative to the assembly, alignment, checking, lubrication,
11 placing in operation, adjustment, and maintenance schedule of each unit
12 of equipment and auxiliaries furnished under this contract, together with
13 complete parts lists, and copies of shop drawings, certified dimension
14 drawings and design calculations. All such material shall be in addition to
15 any instructions or parts lists packed with or attached to the equipment
16 when delivered. Two (2) printed, bound copies of operating and
17 maintenance manuals and one (1) electronic version on CD including the
18 full manual and all multimedia information shall be furnished in
19 accordance with specifications for review and approval. Only a signed
20 review sheet, with comments and exceptions noted, scanned in Adobe
21 PDF format, will be returned to the Contractor. This process shall be
22 followed for each subsequent re-submittal or confirmation required per the
23 Engineer's comments.
24
- 25 B. Upon final review and comment by the Engineer, revisions shall be made
26 as directed, and three (3) printed, bound copies and three (3) electronic
27 copies and multimedia data on CDs shall be submitted. For consistency
28 of all O&Ms, the final bound copies shall be contained in white, 3-ring
29 binders at minimum 1-inch thick, with a clear plastic slip on the front
30 binder cover for inserting a title cover. The title cover shall be the same
31 format for all submittals, and shall read as follows, in bold lettering:
32

33 **PINELLAS COUNTY**

34
35 **REDUNDANT NEW FORCEMAIN PROJECT**
36 **FROM P.S. 16 TO THE SOUTH CROSS BAYOU WRF**

37
38 **002160A**

39
40 **OPERATION & MAINTENANCE MANUAL**

41
42 **EQUIPMENT NAME (GENERAL)**

43
44 **MAKE/MODEL**

1
2 **SUPPLIER NAME**

3
4 **ADDRESS**

5
6 **TELEPHONE**

7
8 C. Each final manual shall contain a plastic laminated pull-out lubrication
9 card detailing all lubrication points, lubricant type and frequency of
10 lubrication.

11
12 D. Each final O&M Manual shall contain a section reserved for a copy of the
13 Start-up report by the manufacturer's start-up technician and any field
14 comments noted by the technician, Owner, or Engineer.

15
16 E. Each O&M Manual shall contain exploded views showing the assembly of
17 all major and subassemblies. These exploded views shall be labeled with
18 specific part numbers and identified.

19
20 F. Provide data for:

21
22 1. Mechanical equipment (including bearing sizes and alloys)

23
24 G. Part 1: Directory, listing names, addresses, and telephone numbers of:
25 Manufacturer and Contractor.

26
27 H. Part 2: Operation and maintenance instructions, arranged by system. The
28 systems are defined by the process. For each system, give names,
29 addresses, and telephone numbers of suppliers including but not limited
30 to the following:

31
32 1. List of equipment.

33 2. Parts list.

34 3. Operating instructions.

35 4. Maintenance instructions, equipment.

36 5. Shop drawings and product data.

37 6. Warranties.

38 7. Baseline Predictive Maintenance (PDM) report.

39
40 I. Format of information submitted on electronic thumb drive shall be as
41 follows:

42
43 1. All manuals, drawings, photographs, and any other documentation
44 that supports facility operations and maintenance (hereinafter
45 referred to collectively as "documents" or "document") shall be
46 delivered in electronic format, as specified below. Additionally

1 documents that are normally paper based shall be submitted in
2 Adobe Portable Document Format (PDF), and linked/bookmarked,
3 as specified below.
4

5 2. Submittal Requirements – Format and linking or bookmarking
6 requirements are as defined in subsequent sub-paragraphs, for
7 each document type.
8

9 3. Operations & Maintenance Manual – The O&M manual shall be in
10 Adobe PDF format, latest version. They shall be PDF Formatted
11 Text and Graphics (formerly Normal) or PDF Searchable Image
12 (formerly Image+Text). If submitted in Searchable Image format,
13 they shall be OCR'ed at a 95% confidence level, using Adobe
14 Acrobat® Capture® 3.x or an equivalent product. This manual shall
15 be linked and bookmarked as follows:
16

17 a. There shall be links from all Table of Contents, List of
18 Tables, List of Figures, etc., entries to the actual occurrence
19 in the body of the manual.
20

21 b. There shall be internal links from table, paragraph, or figure
22 references within the body of the manual to the actual table,
23 paragraph, or figure.
24

25 c. There shall be external links from references within the body
26 of the manual to other documents to the actual document
27 (vendor manual, photograph, drawing, etc.).
28

29 d. Bookmarks shall be created for all linked TOC entries
30

31 4. Photographs – Any available digital photographs that support
32 facility operations and maintenance shall be provided in JPEG or
33 BMP format. JPEG is preferred due to its smaller file size.
34

35 5. Other – Any other documents that support facility operations and
36 maintenance shall be provided in PDF format, compliant with the
37 Adobe PDF Specification Version 1.3 or latest version. They shall
38 be PDF Formatted Text and Graphics (formerly Normal) or PDF
39 Searchable Image (formerly Image+Text). If submitted in
40 Searchable Image format, they shall be OCR'ed at a 95%
41 confidence level, using Adobe Acrobat Capture 3.x or an equivalent
42 product. If any document contains a Table of Contents, it shall be
43 linked and bookmarked in Section 3.07, 3.
44

1 3.08 WARRANTIES AND BONDS

2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44

A. Shall be submitted in accordance with Section 01 70 00.

3.09 SPARE PARTS AND MAINTENANCE MATERIALS

A. Shall be submitted in accordance with Section 01 70 00.

3.10 CERTIFICATES AND AFFIDAVITS

A. Each product's certificate and affidavit shall be submitted to the Owner for approval of a particular product, or component of a product, such submittals shall be made in accordance with the following:

1. A certificate submitted for a product, or component of a product indicates test results proving that product, or component, meets the requirements of the standard specified in the Contract Documents.
2. An affidavit consisting of a sworn statement by an official of the company manufacturing the product indicating that the information on the certificate is true and accurate shall accompany the certificate.
3. A statement originating from the Contractor, or his subcontractors, suppliers, or other agent which merely indicates that a particular item of equipment, product, or component of a product, meets the requirements of the Contract Documents shall not be considered a certificate. A submittal made in this manner will not be approved and the corresponding equipment, product, or component, shall not be finally accepted.

3.11 MANUFACTURER'S WARRANTIES

A. Provide the Owner with Manufacturer's warranties.

B. Submit three (3) executed copies, included with equipment O&M Manuals.

1 3.12 OTHER MISCELLANEOUS SUBMISSIONS

2
3
4
5
6
7
8
9

A. Inspection and Test Reports: Submit 3 copies unless otherwise specified.

B. As-built Drawings: Submit 1 - 11" X 17" set and 1 - 24" X 36" set of drawings and 1 – CD of all drawings in AutoCAD (Civil 3D).

END OF SECTION

1 SECTION 01 52 01 (S)

2
3 OWNER/ENGINEER'S OFFICE

4
5
6 PART 1 - GENERAL

7
8 1.01 SCOPE OF WORK

- 9
10 A. The work shall include the furnishing of office space for the
11 Owner/Engineer's use during construction of the project. Locate office
12 within one half mile of the construction site. The County will not provide
13 land for such office.
14

15
16 PART 2 – PRODUCTS

- 17
18 2.01 The Contractor shall provide, from the start of construction to the date of
19 final certificate, a separate temporary field office near the construction site
20 for the Owner/Engineer and field inspectors. The temporary office shall be
21 ready for service within 21 days of issuance of Notice to Proceed.
22
23 2.02 The Owner reserves the right to assess liquidated damages against the
24 Contractor for non-compliance with this section. Liquidated damages
25 shall not exceed \$500.00 per day for each day of non-compliance.
26
27 2.03 All costs of the temporary office, complete as hereinafter provided
28 including cost of heat, air conditioning, lighting and utilities shall be paid
29 by the Contractor and included in the Contract price.
30
31 2.04 Owner/Engineer's Office/Trailer shall be weather-tight, with lighting,
32 electrical outlets, heating, cooling, ventilating equipment, toilet facilities,
33 and equipped with furniture. Provide, in addition, space for Project
34 meetings, with table and chairs to accommodate 10 persons. Provide
35 with one separate private office, similarly equipped and furnished, for use
36 of Owner/Engineer.
37
38 2.05 The temporary field office shall be (minimum) 400 square feet and shall
39 be complete with the following items of equipment and furniture:
40 a. One desk, steel with lock (36 in. by 60 in.), and chair.
41 b. One drafting table (36 in. by 60 in.), and stool.
42 c. One vertical drawing file.
43

- 1 d. Two fireproof legal size, four drawer filing cabinets with locks and
- 2 keys, equipped with hanging folder systems and 100 hanging
- 3 folders.
- 4 e. One 3'-0' by 8'-0" folding conference table with 10 chairs.
- 5 f. One copy machine capable of reproducing 8 ½ by 11-inch and 11
- 6 by 17-inch sheets. Provide and pay for service, repair, and
- 7 maintenance on this equipment for the life of the project. Copy
- 8 Machine shall have collating and automatic feed function, and
- 9 capable of copying 40 sheets per minute.
- 10 g. One automatic defrost refrigerator with a minimum capacity of 4
- 11 cubic feet.
- 12 h. One 18 by 26 by 72 inch high freestanding bookshelf/storage unit
- 13 containing a minimum of 6 adjustable shelves.
- 14 i. One battery operated, quartz regulated, wall clock, minimum of 12-
- 15 inch diameter.
- 16 j. Two wastebaskets, minimum 6.5-gallon capacity.
- 17 k. One 3 by 4 foot dry eraser board with 4 different colored markers
- 18 and eraser.
- 19 l. 19-inch color television.
- 20 m. High speed internet access or approved equal.
- 21 n. DVD Player.
- 22 o. Daily maintenance and janitorial service (including all sanitary
- 23 supplies) shall be provided by the Contractor. The temporary office
- 24 shall be complete with approved sanitary facilities, said sanitary
- 25 facilities not to be those herein before specified for employees of
- 26 the Contractor.
- 27 p. The temporary office shall present a neat business-like appearance
- 28 and shall be of substantial construction, all satisfactory to the
- 29 Engineer. A mobile type office will be acceptable. The office shall
- 30 be identified by a suitable sign, approved by the Consultant.

31 The office shall be provided with at least six parking spaces

32
33
34 PART 3 – EXECUTION – NOT USED

35
36
37
38
39
40
41 END OF SECTION