



**City of Tampa**  
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**ADDENDUM 1**

**Via E-Mail**

**DATE: September 18, 2020**

Contract 20-C-00045; Sunset Park Water Main Replacement (West)

Bidders on the above referenced project are hereby notified that the following addendum is made to the Contract Documents. BIDS TO BE SUBMITTED SHALL CONFORM TO THIS NOTICE.

Item 1: The Bid Opening date is hereby changed to September 29, 2020.

Item 2: Replace Proposal pages P-2, P-3 and P-4 with the attached Proposal pages P-2R, P-3R and P-4R.

Item 3: Replace the Contract Pay Items section with the attached Contract Pay Items section.

All other provisions of the Contract Documents and Specifications not in conflict with this Addendum shall remain in full force and effect. Questions are to be e-mailed to Contract Administration@tampagov.net.

*Jim Greiner*

Jim Greiner, P.E., Contract Management Supervisor

**Contract 20-C-00045;  
Sunset Park Water Main Replacement (West)**

COT Water Department  
Sunset Park Water Main Replacement  
TWD Work Order #: 8407

Itemized Bid Sheet

Item	Description	Unit	Approx. Quantity	Unit Price in Word	Unit Price	Total Price
2100	F&I 4" ductile iron pipe with 5' trench or less	LF	13			
2151	F&I 4" PVC pipe with 5' trench or less	LF	3267			
2152	F&I 4" PVC pipe with more than 5' trench	LF	80			
2153	F&I 6" PVC pipe with 5' trench or less	LF	8746			
2154	F&I 6" PVC pipe with more than 5' trench	LF	40			
2213	F&I 8" TR Flex@RI DIP w/TR Flex@fittings at various depths	LF	55			
2251	F&I 6" HDPE pipe by Pipe Bursting at various depths	LF	2695			
2252	F&I 8" HDPE pipe by Pipe Bursting at various depths	LF	3235			
2300	F&I and remove 2" temporary services lines	LF	5930			
2600	Cut and plug 3" and smaller in diameter pipe	EA	23			
2601	Cut and plug 4", 6" and 8" diameter pipe	EA	2			
3000	F&I 4" wedge-action or flange restraint	EA	12			
3001	F&I 6" wedge-action or flange restraint	EA	50			
3002	F&I 8" wedge-action or flange restraint	EA	39			
3003	F&I 12" wedge-action or flange restraint	EA	4			
3050	F&I 4" wedge-action MJ restraints on new PVC pipe	EA	50			
3051	F&I 6" wedge-action MJ restraints on new PVC pipe	EA	176			
3061	F&I 6" wedge-action, mechanical joint restraints on HDPEP	EA	22			
3062	F&I 8" wedge-action, mechanical joint restraints on HDPEP	EA	50			
4000	F&I 4" ductile iron plug or cap w/DIP, CIP or PVC/P	EA	4			

**Contract 20-C-00045;  
Sunset Park Water Main Replacement (West)**

4001	F&I 4" ductile iron bends, offsets, sleeves or reducers w/DIP, CIP or PVC	EA	15			
4002	F&I 4" ductile iron tee w/DIP, CIP or PVC	EA	1			
4005	F&I 6" ductile iron bends, offset, sleeves or reducers w/ DIP, CIP or PVC	EA	45			
4006	F&I 6" ductile iron tee w/ DIP, CIP or PVC	EA	24			
4009	F&I 8" bend, offset, sleeve or reducer w/ DIP, CIP or PVC	EA	2			
4054	F&I 6" ductile iron plug or cap w/ HDPEP	EA	1			
4055	F&I 6" ductile iron bends, offsets, sleeves or reducers w/ HDPEP	EA	7			
4056	F&I 6" ductile iron tee w/ HDPEP	EA	7			
4059	F&I 8" ductile iron bends, offset, sleeves or reducers w/ HDPEP	EA	16			
4060	F&I 8" ductile iron tee w/ HDPEP	EA	13			
5000	F&I full fire hydrant assembly on new or existing mains	EA	32			
5200	Remove and salvage of fire hydrant	EA	17			
6001	F&I 4" gate or tapping valve with box on DIP, CIP or PVC	EA	11			
6002	F&I 6" gate or tapping valve with box on DIP, CIP or PVC	EA	42			
6003	F&I 8" gate or tapping valve with box on DIP, CIP or PVC	EA	2			
6072	F&I 6" gate valve and box on HDPEP	EA	2			
6073	F&I 8" gate valve and box on HDPEP	EA	2			
6102	F&I 6" Limestone on Existing Water Main (0-5')	EA	2			
6104	F&I 8" Limestone on Existing Water Main (0-5')	EA	2			
7001	F&I 6" tapping sleeve and make tap	EA	2			
7002	F&I 8" tapping sleeve and make tap	EA	8			
7003	F&I 12" tapping sleeve and make tap	EA	2			
8100	Furnish tap and install 3/4" or 1" meter service on PVC, DIP, or CIP (0-15' HDPE)	EA	248			

**Contract 20-C-00045;  
Sunset Park Water Main Replacement (West)**

8101	Furnish, tap and install 3/4" meter service on PVC-P, DIP or CIP (+ 15-80' HDPE)	EA	253					
9201	Furnish, place, and compact crushed concrete base	CY	1663					
9205	Furnish and install asphalt concrete surface Superpave Type SP-12.5	TN	415					
9207	Furnish, place, grade and compact Superpave Type SP-9.5 asphaltic concrete overlay	TN	1894					
9208	Mobilization to perform mechanical milling	EA	1					
9209	Mechanical milling of asphalt roadways in 1-inch increments	SY-IN	34521					
9210	Restore 6" thick concrete driveway	SY	7					
9303	Furnish and install Type "F" concrete curb	LF	84					
9307	Furnish and install 4" thick concrete sidewalk	SY	110					
9309	Grade and sod roadside/ditch bottoms and sides - Bahia	SY	1356					
9400	Grout abandoned pipe	CY	7					
9500	Furnish, form and place reinforced concrete	CY	8					
9505	Video photography	LF	18133					
9910	Valve Box Adjustment or Removal	EA	54					
9921	F&I blow-off assembly per Detail 2.17A	EA	7					
9950	F&I new project signs	EA	1					
9970	As-Built Survey Installed Pipeline	LF	18102					
9980	Contingency allowance (Water) to be used as directed by the Engineer	LS				Five Hundred Thirty One Thousand Two Hundred and Eighty Eight		
9100	Maintenance of Traffic	LS				Two Hundred Seventy Four Thousand Two Hundred and Sixty Four		
10000	Mobilization	LS				Two Hundred Thirty Five Thousand and Eighty Three		
							<b>TOTAL</b>	

## **C-1.00 GENERAL**

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

It is the intent of these contract documents that any cost for which compensation is not directly provided by a bid item shall be prorated and included in the bid item for which they are required. Failure of the Contractor to follow this procedure shall be basis for rejection of his bid.

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

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

1. Clearing and grubbing;
2. Excavation, including necessary pavement/slab removal;
3. Shoring and sheeting as required by OSHA trench excavation safety standards unless specifically provided for in a pay item;
4. Dewatering and proper disposal of all water unless specifically provided for in a pay item;
5. Backfill and proper compaction, including suitable fill;
6. Grading;
7. Replacement or restoration of paved or unpaved roadways, grass and shrubbery plots outside of established pay limits;
8. Temporary facilities and controls during construction such as water/sanitary facilities, traffic control, informational signs and environmental protection, unless specifically provided for in a pay item;
9. Providing and maintaining silt barriers for drainage structures and silt fences for the duration of the project;
10. Removing and legally disposing of waste material due to construction, including but not limited to valve boxes that need to be removed from abandoned water mains;
11. Cleanup and restoring the job site to its original condition, which includes but is not necessarily limited to restoring the ground surface to its original grade;
12. Testing and placing system in operation, including re-mobilization for FDEP testing;
13. Any material and equipment required to be installed and used for the tests;

14. Maintaining the existing quality of service during construction, including flushing mains that are cleared but not put into service after the bac-T tests are complete;
15. Repair of sanitary sewer house laterals that were properly marked (see Specific Provision S-20.01)
16. Repair of water services damaged during construction;
17. Adjusting new or existing water meter boxes to grade which are affected by construction;
18. Appurtenant work as required for a complete and operable system;
19. Coordination with all Federal, State and Local agencies and utilities;
20. Cutting of existing or new pipe for purposes of abandonment or installation of new pipe, valves or fittings;
21. Tree trimming as required by the City of Tampa Parks Department or any other agency unless specifically provided for as a contract item;
22. Verification of pipe elevation as stated in Section 8 of the General Provisions and Section S-23.01 the Specific Provisions;
23. Repair of private irrigation systems damaged during construction;
24. Furnishing and installing suitable temporary fences, as directed by the Engineer, to adequately secure areas protected by a permanent fence when that permanent fence must be removed. The temporary fence shall remain in place until the permanent fence is replaced;
25. Furnishing and installing all HDPE MJ adapters, HDPE flanged adapters, HDPE electrofusion tapping tees, electrofusion corporation saddles or HDPE electrofusion couplings;
26. Maintaining red-line drawings of changes to construction plans, to be submitted for FDEP clearance;
27. Furnishing record drawings based on the redline drawings in AutoCAD 2015 or higher and one set of drawings on paper. The City will provide the AutoCAD plans used for the design. **Final Payment will not be made until As-built drawings are received.**
28. Furnishing and installing polyethylene encasement per Standard Detail 2.05 for all buried ductile iron pipe, all fittings and tapping sleeves.

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

The City shall have the option of making monthly partial payments on work that exceeds \$100,000.00. Payment of these partial payment requests shall be for the approved and accepted amount of work that the Contractor has accomplished in the previous month. The approved amount of work is defined as that amount of work associated with an active work within the project which, in the opinion of the Engineer, is progressing at a satisfactory rate of completion. Satisfactory rate of completion is interpreted to mean that once project is started by the Contractor, the job must be actively pursued to include site preparation, utility and agency coordination, installation of all pipe and appurtenances, restoration, clean up, testing, disinfection, and final acceptance.

Following final payment by the City, the Contractor shall maintain the surface of the unpaved trenches, shrubbery, fences, sod, and other surfaces disturbed for a period of one (6) months thereafter and shall maintain the repaved areas, curbs, gutters and sidewalks, trees, if replaced by the Contractor, for one (1) year after acceptance. The cost of maintaining the restored areas is considered incidental to the cost of restoring the areas disturbed by the Contractor. These costs shall be prorated and included in the cost for the bid item for which it is required.

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

All work and materials shall be in accordance with the Workmanship & Materials specifications and Standard Details herein.

### **C-2.10 DUCTILE IRON AND PVC PIPE**

The Contractor shall provide all labor, equipment, and materials to furnish and install the ductile iron pipe or PVC pipe.

Furnishing and/or installing ductile iron or PVC pipe shall include, but may not be limited to:

1. Furnishing all construction layouts as outlined in Section S-14.01 and S-23.01;
2. Field locating all utilities to confirm horizontal and vertical location in areas of possible conflict;
3. Furnishing all labor equipment and materials to excavate the trench;
4. Maintaining the trench which shall include dewatering and sheeting and bracing as required by OSHA or as directed by the Engineer standards unless specifically provided for in a pay item;
5. Cleaning dirt and foreign material from within pipe and bell;
6. Beveling field-cut joints and pipe shorts;
7. Furnishing and installing EPDM gaskets for all DIP and PVCP;
8. Furnishing and installing Department approved pipe and any pipe shorts as part of the pipeline;
9. Furnishing and installing Department approved pipe in casing pipe when shown on the plans;
10. Installing push-on joint restraint gaskets for DIP as shown on the plans or as directed by the Engineer (furnishing push-on restraint gaskets will be compensated under appropriate pay items);
11. Furnishing and installing blue for polyethylene encasement per standard detail 2.05;
12. Furnishing and installing 2, 4, 6, 8, 12, and 16-inch nominal diameter PVC pipe or 4, 6, 8, 12, 16, 20, 24, 30, 36, 42, or 48-inch nominal diameter ductile iron pipe at various depths;
13. Furnishing and installing 2-inch PVC fittings when necessary at various depths;
14. Furnishing and installing on all PVC pipe and fittings, a continuous double run of 14-gauge wire attached to the top of the pipe with duct tape. The wire shall be looped around each bell. There shall be no dead ends and the locator wire shall be brought into a separate curb stop box at every valve box;
15. Cleaning up and removing excess water main pipe and appurtenances;

16. Pressure testing the water main pipe;
17. Furnishing and installing temporary pipe short's valves and bends for full port flushing;
18. Furnishing and installing valve location protection devices per Standard Detail 3.05 whenever needed to keep valve locations visible;
19. Disinfecting the water main pipe and bacteriological testing;
20. Furnish and apply paint for any above ground or aerial crossing pipe and appurtenances. Paint to be high-grade enamel, OSHA blue for potable water or purple for reclaim water as directed by the Engineer;
21. Backfilling and compacting the trench;
22. Cleaning up and restoring the job site which shall include re-grading the terrain; and
23. Removing and legally disposing all waste materials.

Cover over pipe shall be defined as the vertical distance from the top of the pipe to the surface grade above the main. Trench depth shall be defined as the vertical distance from the bottom of the barrel of the pipe to the surface grade above the main.

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

The cost to hydrostatically test and disinfect the ductile iron or PVC water mains shall be prorated and included in the pipeline construction unit prices. The prorated cost should include, but may not be limited to furnishing and installing all:

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

Necessary to pressure test and disinfect various sizes and depths of ductile iron pipe or PVC pipe. Furthermore, no extra compensation shall be paid to the Contractor for:



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

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

The pipe quantities to be paid for under this section shall be based on the size and the horizontal distance in linear feet of ductile iron pipe, PVC pipe, or steel casing pipe measured along the top centerline of the pipe in place complete and acceptable to the Engineer.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
2100	Furnish and install 4" ductile iron pipe (0-5' trench)	LF
2151	Furnish and install 4" PVC pipe (0-5' trench)	LF
2152	Furnish and install 4" PVC pipe (+5' trench)	LF
2153	Furnish and install 6" PVC pipe (0-5' trench)	LF
2154	Furnish and install 6" PVC pipe (+5' trench)	LF

### **C-2.20 Pipe Installed via Horizontal Directional Drilling (HDD)**

The contractor shall provide all material, equipment, transportation, tools, and labor to install the specified pipe using horizontal directional drilling (HDD) as a work method.

This section covers High Density Polyethylene (HDPE), Restrained Joint Integral Bell Certa-Lok® Poly-Vinyl Chloride (RJIB Certa-Lok® PVC) pipe, and TR Flex® Restrained Joint Ductile Iron pipe (TR Flex® RJ DIP) installed in accordance with the approved NASTT "HDD Good Practices Guideline", latest edition. Pipe is intended for use as a pressure rated potable water delivery system.

The installation of watermain via HDD shall conform to the workmanship and materials specifications and the plans, unless specified otherwise. For installations not within the jurisdiction of the City, the HDD Contractor shall comply with regulations of the governing authority. Directional boring operations shall be performed within the right-of-way, permanent easements, temporary construction easements or access agreements with individual property owners.

The overall work for a complete installation shall include, but may not be limited to:

1. Furnish and install construction layout by a registered professional land surveyor;
2. Furnish the HDD Contractor's Experience Record for review;
3. Furnish the HDD's Contractor's work and bore plans for review,
4. Field locating all utilities to confirm horizontal and vertical location in areas of possible conflict;

5. Excavating the access pits;
6. Maintaining the pits which shall include dewatering and sheeting and bracing as required by OSHA or as directed by the Engineer;
7. Joining HDPE pipe sections by butt fusion
8. Joining PVC pipe sections by inserting manufacturer provided spline into precision-machined grooves on the pipe in accordance with manufacturer recommendations;
9. Joining DIP or PVC pipe section to HDPE in accordance with manufacturer's instruction and Detail 8.03;
10. Furnishing and installing department approved restrained couplings, flexible elastomeric seals (O-rings), gaskets and pipe specific non-spray-on lubricant when applicable;
11. Pigging, cleaning or flushing the line to remove dirt, debris if directed by the engineer;
12. Furnishing and installing temporary valve, pipe shorts and bends to accomplish full port flushing of mains;
13. Furnishing and installing Department approved pipe and any pipe shorts as part of the pipeline;
14. Furnishing and installing on all HDPE pipe two continuous 10-gauge wires along the top of the pipe, with no dead ends, and with each locator wire brought into tracer wire boxes installed within a valve box's concrete pad, in isolated concrete pads (if no valve present), or in asphalt without a concrete pad. Connections between wire ends shall be made using an approved connection as shown in the standard details;
15. Tracer wire for directional drill installations shall be approved insulated copper clad steel (CCS) wire such as Copperhead SoloShot Extra HS or Pro-Trace HD-CCS PE45. For directional drilled pipe, a 1" conduit may be pulled back with the locating wires to ease installation and to prevent the wires from breaking. Wire splices made must be with wire connectors suitable for buried service and be corrosion and moisture-proof, such as DBR Kit by 3M, Snakebite by Copperhead Industries or equal;
16. Removing excess or ancillary water main pipe and/or appurtenances;
17. Installing miscellaneous appurtenances to complete the entire work as shown on the Contract Drawings,
18. Pressure testing the water main pipe;
19. Disinfecting the water main pipe;
20. Furnishing and installing push-on and mechanical joint restrainers on existing pipe as shown on the plans or as directed by the Engineer;
21. Backfilling and compacting the trenches or pits including re-grading the terrain;
22. Cleaning up and restoring the job site which shall include re-grading the terrain; and
23. Removing and legally disposing of all waste materials.
24. Providing acceptable Record Drawings of the directional drilled installation in accordance with the HDD Specifications.

Cover over pipe shall be defined as the vertical distance from the top of the pipe to the surface grade above the main. Trench depth shall be defined as the vertical distance from the bottom of the barrel of the pipe to the surface grade above the main.

Payment for connecting new water mains to existing water mains will be made utilizing the contract unit price for installing the tapping sleeves, restraints, fittings or valves used in the connection.

The cost to hydrostatically test and disinfect the water mains shall be prorated and included in the pipeline construction unit prices. The prorated cost should include, but may not be limited to furnishing and installing all:

- 1) Material
- 2) Labor
- 3) Necessary pumps
- 4) Recorder charts
- 5) Gages (200 PSIG limit, oil filled)
- 6) Chemicals
- 7) Temporary valves
- 8) Temporary plugs
- 9) Sample Taps, (including furnishing and installation of brass dry main plugs in corporation saddles after sample tap removal)
- 10) Blow off assemblies (including removal after disinfection is complete)
- 11) Dry main plugs installed in the corporation saddles.

Furthermore, no extra compensation shall be paid to the Contractor for:

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

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

The pipe quantities to be paid for under this section shall be based on the size and the horizontal distance in linear feet of specified pipe measured along the top centerline of the pipe in place, complete and acceptable to the Engineer.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
2213	F&I 8" TR Flex® RJ DIP w/TR Flex® fittings at various depths	LF

**C2.25 Furnish and Install HDPE Pipe by Pipe Bursting**

The Contractor shall provide all labor, equipment, and materials to furnish and install HDPE pipe using pipe bursting techniques. The installation of HDPE water main shall conform to the Technical Specifications, the Material Specifications section headed "Pipe Bursting" and the Plans, unless specified otherwise. The furnishing and installation of HDPE pipe shall include, but may not be limited to:

1. Furnish the Pipe Bursting Contractor's Experience Record for review for approval;
2. Furnish the Pipe Bursting Contractor's Work Plan for review for approval, as outlined in the Pipe Bursting Technical Specifications;
3. Field locating all utilities to confirm horizontal and vertical location in areas of possible conflict;
4. Excavating the access pits;
5. Maintaining the pits which shall include dewatering and sheeting and bracing as required by OSHA or as directed by the Engineer;
6. Joining HDPE by butt fusion methods described in the technical specifications in accordance with manufacturer recommendations;
7. Furnishing and installing approved Stainless Steel Insert for HDPE connections, per manufacturer's recommendations and Detail 8.03.
8. Pigging, cleaning or flushing the line to remove dirt, debris if directed by the engineer;
9. Furnishing and installing temporary valve, pipe shorts and bends to accomplish full port flushing of mains;
10. Furnishing and installing Department approved pipe and any pipe shorts as part of the pipeline;
11. Furnishing and installing on all HDPE pipe two continuous 10-gauge wires along the top of the pipe, with no dead ends, and with each locator wire brought into tracer wire boxes installed within a valve box's concrete pad, in isolated concrete pads (if no valve present), or in asphalt without a concrete pad. Connections between wire ends shall be made using an approved connection as shown in the standard details;
12. Tracer wire for directional drill installations shall be approved insulated copper clad steel (CCS) wire such as Copperhead SoloShot Extra HS or Pro-Trace HD-CCS PE45. Wire splices made must be with wire connectors suitable for buried service and be corrosion and moisture-proof, such as DBR Kit by 3M, Snakebite by Copperhead Industries or equal;
13. Removing ancillary water main pipe and/or appurtenances;
14. Backfilling and compacting the trenches or pits including re-grading the terrain;
15. Cleaning up and restoring the job site which shall include re-grading the terrain; and
16. Removing and legally disposing of all waste materials;
17. Restoration of the job site to equal or better conditions than prior to performing the required work. This includes restoration of any asphalt, concrete, driveways, vegetation, landscaping, sod or any other above ground feature prior to performing the required work.
18. Providing acceptable Record Drawings of the pipe bursting installation in accordance with the Pipe Bursting Technical Specifications.

Cover over pipe shall be defined as the vertical distance from the top of the pipe to the surface grade above the main. Trench depth shall be defined as the vertical distance from the bottom of the barrel of the pipe to the surface grade above the main.

Payment for connecting new water mains to existing water mains will be made utilizing the contract unit price for installing the tapping sleeves, restraints, fittings or valves used in the connection.

The cost to hydrostatically test and disinfect the water mains shall be prorated and included in the pipeline construction unit prices. The prorated cost should include, but may not be limited to furnishing and installing all:

- 1) Material
- 2) Labor
- 3) Necessary pumps
- 4) Recorder charts
- 5) Gages (200 PSIG limit, oil filled)
- 6) Chemicals
- 7) Temporary valves
- 8) Temporary plugs
- 9) Sample Taps, (including furnishing and installation of brass dry main plugs in corporation saddles after sample tap removal)
- 10) Blow off assemblies (including removal after disinfection is complete)
- 12) Dry main plugs installed in the corporation saddles.

Furthermore, no extra compensation shall be paid to the Contractor for:

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

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

The pipe quantities to be paid for under this section shall be based on the size and the horizontal distance in linear feet of HDPE pipe measured along the top centerline of the pipe, in place, complete and acceptable to the Engineer.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
2251	Furnish & install 6" HDPE pipe by Pipe Bursting at various depths	LF

**C-2.30 TEMPORARY LINE SERVICE**

The Contractor shall provide all labor, equipment and materials necessary to furnish, install and remove temporary 2-inch service lines, connect the existing meters to the temporary service lines, and remove and dispose of all waste materials. The cost to reconnect the meters to the new mains will be paid under the appropriate meter set item.

Work shall include but may not be limited to:

1. Making all necessary excavations;
2. If necessary, burying the pipe to prevent a tripping hazard or securing the pipe to prevent damage during construction;
3. Making necessary taps to existing main or service line;
4. Making all necessary taps (2 may be required) that are required to affect the tie-in connection;
5. Furnishing and installing all necessary materials required to make the tie-in connections;
6. Furnishing and installing 2-inch high density polyethylene (HDPE) tubing;
7. Furnishing and installing cap(s) or plug(s) and restraints adequate to withstand a working pressure of 150 psi, on all in-service open end(s) of pipe;
8. Furnishing all labor equipment and materials to remove the temporary service when no longer needed;
9. Backfilling, compacting, and re-grading the terrain;
10. Cleaning up and restoring the job site which shall include re-grading the terrain;
11. Removing and legally disposing of all waste materials.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
2300	Furnish, install and remove 2-inch temporary service lines	LF

**C-2.60 CUTTING & PLUGGING**

The Contractor shall provide all labor, equipment and materials to cut and plug 16-inch and smaller pipe as designed on the plans or as directed by the Engineer. To cut and plug pipe shall include, but may not be limited to:

1. Excavating and maintaining the trench;
2. Performing a minimum of two complete cuts of the pipe to facilitate the plugging.
3. Removing of pipe or appurtenances to allow for the installation of plugs on 8" or less open ends of pipe;
4. Furnishing and installing grout to plug any abandoned open end(s) pipe;

5. Furnishing and installing cap(s) or plug(s) and restraints to adequately withstand a working pressure of 150 psi, on all in-service open end(s) of pipe;
6. Backfilling and compacting the trench;
7. Cleaning up and restoring the job site which shall include re-grading the terrain;
8. Removing and legally disposing of all waste materials.

Payment shall be made for each cut and plug accomplished and accepted by the Engineer.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
2600	Cut and Plug 3" and smaller	EA
2601	Cut and Plug 4", 6" and 8" Pipe	EA

**C-3.00 THRUST RESTRAINT**

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

1. Excavating the trench;
2. Maintaining the trench that shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
3. Furnishing and installing approved wedge action restraint fitting or flange joint restraints;
4. Furnishing and installing manufactured restrained joints;
5. Furnishing of approved push-on restraint EPDM rubber gasket-type restraining devices (gaskets with stainless steel locking segments vulcanized into the rubber) on new push-on ductile iron pipe;
6. Furnishing and installing approved restraining devices on proposed PVC push-on joint pipe;
7. Furnishing and installing approved restraining devices on joints of existing pipe;
8. Furnishing and installing approved Stainless Steel Insert for HDPE connections, per manufacturer's recommendations and Detail 8.03.
9. Backfilling and compacting the trench;
10. Cleaning up and restoring the job site which shall include re-grading the terrain;
11. Removing and legally disposing of all waste materials.

Payment for installation of manufactured restrained joints shall be for each bell and spigot joint assembled.

No additional compensation shall be made to the Contractor for field poured concrete in excess of the amount detailed in the Technical Specification or Standard Details without approval by the Engineer.

Payment will not be credited for restraining devices installed in conjunction with fire hydrant installations. Payment for installation of thrusting restraints for fire hydrants and for pipe on fire hydrant leads is to be included in the price quoted for installation of fire hydrant assemblies.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
3000	Furnish & install 4" wedge-action or flange restraints	EA
3001	Furnish & install 6" wedge-action or flange restraints	EA
3002	Furnish & install 8" wedge-action or flange restraints	EA
3003	Furnish & install 12" wedge-action or flange restraints	EA
3050	Furnish & install 4" wedge-action, mechanical joint restraints on new PVC pipe	EA
3051	Furnish & install 6" wedge-action, mechanical joint restraints on new PVC pipe	EA
3061	Furnish & install 6" wedge-action, mechanical joint restraints on HDPEP	EA
3062	Furnish & install 8" wedge-action, mechanical joint restraints on HDPEP	EA

#### **C-4.00 FITTINGS**

The Contractor shall provide all labor and equipment to completely install plugs, caps, bends, sleeves, reducers, tees, crosses, and offsets. The installation of ductile iron fittings shall include, but not be limited to:

1. Excavating the trench;
2. Maintaining the trench which shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
3. Furnishing and installing the appropriate fitting;
4. For HDPE pipe, furnishing and installing the appropriate HDPE mechanical joint and Stainless Steel Insert per manufacturer's recommendations and Detail 8.03;
5. Backfilling and compacting the trench;
6. Cleaning up and restoring the job site which shall include re-grading the terrain;
7. Removing and legally disposing of all waste materials.

Additional compensation shall not be made for restraining devices used in conjunction with hydrant installations. Payment will be made for the number of each size and type of fittings installed and incorporated into the piping system complete, working, and operating to the satisfaction of the Engineer.



Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
4000	Furnish and install 4" plug or cap w/ DIP, CIP or PVC	EA
4001	Furnish and install 4" bend, offset, sleeve or reducer w/ DIP, CIP or PVC	EA
4002	Furnish and install 4" tee w/ DIP, CIP or PVC	EA
4003	Furnish and install 4" cross w/ DIP, CIP or PVC	EA
4005	Furnish and install 6" bend, offset, sleeve or reducer w/ DIP, CIP or PVC	EA
4006	Furnish and install 6" tee w/ DIP, CIP or PVC	EA
4009	Furnish and install 8" bend, offset, sleeve or reducer w/ DIP, CIP or PVC	EA
4054	Furnish and install 6" plug or cap w/ HDPE	EA
4055	Furnish and install 6" bend, offset, sleeve or reducer w/ HDPE	EA
4056	Furnish and install 6" tee w/ HDPE	EA
4059	Furnish and install 8" bend, offset, sleeve or reducer w/ HDPE	EA
4060	Furnish and install 8" tee w/ HDPE	EA

### **C-5.00 FIRE HYDRANTS**

The Contractor shall provide all labor, equipment and specified materials to completely furnish and/or install standard fire hydrant assemblies on new and existing water mains as shown on the construction plans or as directed by the Engineer.

The "standard hydrant assembly" to be furnished is 10 LF or less of 6" DIP, hydrant elbow, and hydrant barrel extension and hydrant barrel as shown in Standard Detail 4.01. When agreed by the Engineer, an "alternate hydrant assembly" to be furnished is 7 LF or less of 6" DIP and a Gradelok offset fitting, hydrant elbow, hydrant barrel extension, and hydrant barrel as generally shown in Standard Detail 4.01. (Note that whenever a GRADELOK fitting is used with a fire hydrant installation, the standard 3' to 5' depth of bury required at the hydrant must be maintained.)

Hydrant assembly installation shall include, but may not be limited to:

1. Excavation of hydrant assembly trench;
2. Maintaining the trench that shall include dewatering, bracing and sheeting where required or as directed by the Engineer;
3. Anchoring the hydrant to existing or new main;
4. Furnishing and installing of up to and including ten (10) feet of 6-inch ductile iron pipe;
5. Removing any plugs, caps, restraining devices, etc. from existing water mains;
6. Furnishing and installing all mechanical thrust restraint beginning at the hydrant valve as required in the Technical

Specifications or as directed by the Engineer;

7. Furnish and installing polyethylene encasement for all underground pipe and fittings;
8. Furnish and install hydrant in the plumb position with 4.5' clearance in the back and 7' clearance in the front and on each side from walls, poles and obstructions;
9. Furnishing and installing a concrete thrust collar around the barrel of the hydrant and 12" below grade as shown in standard detail 4.01;
10. Furnishing and installing of a concrete "support block" under each hydrant;
11. Furnishing and installing of a concrete support cradle under each hydrant tee on PVC mains;
12. Backfilling and compacting hydrant assembly trench;
13. Furnish high grade enamel OSHA yellow paint and paint hydrant barrel as required in the Technical Specifications;
14. Furnishing high grade enamel OSHA green paint and paint the hydrant bonnet;
15. Furnishing and installing one blue, reflective pavement marker (RPM) in the street adjacent to the hydrant at a location to be determined by the Engineer. The RPM shall meet or exceed all provisions of the Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, Section 706;
16. Pressure testing the hydrant assembly in conformance with these documents;
17. Backfilling and compacting the trench;
18. Cleaning up and restoring the job site which shall include re-grading the terrain;
19. Removing and legally disposing of all waste materials.

The Contractor shall do all things necessary to completely install a fire hydrant assembly in accordance with the Technical Specifications, Standard Details or as directed by the Engineer. Payment will be based on the number of hydrant assemblies incorporated into the pipeline system complete and working to the satisfaction of the Engineer. Payment for tees, valves, taps, fittings, and restoration will be made utilizing the appropriate contract bid item. Separate payment will be made for any 6-inch ductile iron pipe in excess of 10 feet connecting the hydrant gate valve to the hydrant.

In addition, it will be the Contractor's responsibility to determine the correct size (bury depth) of each hydrant installed so that the requirements of the Technical Specifications are satisfied. Any hydrant not installed to the proper grade shall be replaced with one of the correct size by the Contractor at his expense prior to final approval and acceptance.

Fittings required because of contractor convenience, (i.e. installed because the contractor elected to install a shallow bury hydrant) shall be furnished and installed at the contractor's expense.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
5000	Furnish and install full std. fire hydrant assembly on new or existing mains	EA

**C-5.20 FIRE HYDRANT (REMOVAL OF EXISTING)**

The Contractor shall provide all labor, equipment, and material for removal and salvage of each existing fire hydrant assembly on an existing water pipeline. Hydrant removal and salvage includes, but may not be limited to:

1. Excavating the hydrant pit;
2. Furnish and install restraining devices anchoring the hydrant shut off valve to the pipeline tee;
3. Remove hydrant from hydrant lead;
4. Furnish & install thrust block (if required) behind cap or plug;
5. Remove hydrant protection post(s);
6. Backfilling and compacting the hydrant pit;
7. Cleaning up and restoring the job site which shall include re-grading the terrain;
8. Removing and legally disposing of all waste materials;
9. Transporting the removed hydrant without delay to the location designated by the Engineer or legally disposing the hydrant;
10. Unload the removed hydrant at the designated location.

Contractor shall be paid for each hydrant removed, salvaged, returned or disposed. All hydrants removed shall remain the property of the City unless otherwise directed by the Engineer. If the City opts not to remain the owner, the Contractor shall remove and properly dispose of the hydrant at his expense. The installation of the plug or cap and thrust block if required shall be paid for using the appropriate bid item.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
5200	Remove and salvage hydrant	EA

**C-6.00 VALVES**

The Contractor shall provide all labor, equipment and materials to completely furnish and install 2-inch through 16-inch gate valves, 16-inch through 48-inch plug valves and 4-inch through 42-inch tapping valves including all accessories and incidentals. The valve installation shall include, but may not be limited to:

1. Excavating the trench;
2. Maintaining the trench that shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
3. Furnish and install a gate valve in a mainline of DIP, CIP or PVC/P with a valve box or a tapping valve on a tapping sleeve with a valve box;

4. Furnish and install a gate valve on HDPEP along with all associated HDPE mechanical joint adapters and appurtenances;
5. Backfilling and compacting the trench;
6. Furnishing, forming and pouring a 6-inch thick concrete pad around each valve box installed in non-paved areas;
7. Furnishing paint and painting valve cover;
8. Furnishing and installing or forming and pouring concrete support blocks under valves installed on PVC and HDPE pipeline;
9. Cleaning up and restoring the job site which shall include re-grading the terrain;
10. Removing and legally disposing of all waste materials.

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

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
6001	Furnish and install 4" gate or tapping valve and box on DIP, CIP or PVCP	EA
6002	Furnish and install 6" gate or tapping valve and box on DIP, CIP or PVCP	EA
6003	Furnish and install 8" gate or tapping valve and box on DIP, CIP or PVCP	EA
6072	Furnish and install 6" gate valve and box on HDPEP	EA
6073	Furnish and install 8" gate valve and box on HDPEP	EA

### **C-6.10 LINE STOPS**

The Contractor shall furnish all labor, equipment, tools and materials to install line stops on existing water mains.

The line stop installation shall include but is not limited to:

1. Excavating the trench;
2. Maintaining the trench that shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
3. Furnishing and installing the line stop;
4. Furnishing and installing polywrap on line stop appurtenances remaining on the pipe after the line stop is removed;
5. Furnishing and installing reverse dead-man restraint with split wedge action restraints as shown in Standard 2.10A.
6. Compacting soil in trench around dead-man and line stop to a minimum 90% modified proctor density;

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

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
6102	F&I 6" Line Stop on Existing Water Main (0'-5')	EA
6104	F&I 8" Line Stop on Existing Water Main (0'-5')	EA

Payment for reverse dead-man restraints shall be paid for under the appropriate items for split wedge action restraints and poured concrete thrust blocking. Restoration items shall be paid for under the appropriate item as needed.

### **C-7.00 TAPS**

The Contractor shall provide all labor and equipment for installing tapping sleeves and making the appropriate full port tap complete and operable. The tapping sleeve installation shall include:

1. Excavating the trench;
2. Maintaining the trench that shall include dewatering and bracing and sheeting where required or as directed by the Engineer;
3. Furnishing and installing the tapping sleeve;
4. Pressure testing the tapping sleeve and valve;
5. Making the full port tap, up to and including 42";
6. Furnishing and installing mechanical joint tapping sleeves for size on size pipe taps or as directed by the engineer;
7. Furnishing, installing and sealing the tapping sleeve with blue polyethylene encasement of not less than 8 mils thick;
8. Backfilling and compacting the trench;
9. Cleaning up and restoring the job site which shall include re-grading the terrain;
10. Removing and legally disposing of all waste materials.

Payment shall be based on the number and size of tapping sleeves installed and incorporated into the piping system complete, working and operating to the satisfaction of the Engineer. Valves and valve boxes shall be paid for by the appropriate pay item.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
7001	Furnish and install 6" tapping sleeve and tap	EA
7002	Furnish and install 8" tapping sleeve and tap	EA
7003	Furnish and install 12" tapping sleeve and tap	EA

#### **C-8.10 METERED SERVICES TWO-INCH & LESS WITH PIPE WORK**

The Contractor shall provide all labor, materials and equipment for the installation and/or transfer of 3/4" (single or dual service), 1", 1½", and 2" meters and 2" double detector check valves, as specified, and issued in conjunction with a pipeline project.

Meter service lengths (as described in the pay items) are defined as follows:

- 0-15' service line required from main to meter is up to 15' long
- +15-80' service line required is greater than 15', up to and including 80'
- +80-150' service line required is greater than 80', up to and including 150'

All water meters and double detector check valve assemblies will be furnished by the City.

Meter service installation shall include, but may not be limited to:

1. Excavating and maintaining the trench;
2. Making the appropriate size tap;
3. When directed by the Engineer or as indicated in the standard details, furnish and install an appropriately sized steel, PVC or HDPE sleeve under paved areas for long-side meter service by open cut, horizontal directional drilling/directional bore or "moling" as directed by the Engineer or as indicated in the standard details;
4. For use on DIP, CIP or PVC, furnish and install the appropriate size and type of corporation stop, high density polyethylene, PVC pipe, any required service fittings, curb stop, meter box, and tail piece extension as designated by the Tampa Water Department's Technical Specifications. For use on HDPE pipe, furnish and install the appropriate size and type of electrofusion tapping tee or electrofusion corporation, HDPE tubing or pipe, any required service fittings, curb stop, meter box and tail piece extension as designated by the Tampa Water Department's Technical Specifications;
5. On all long-side HDPE service lines, furnishing and installing, two continuous 12 gauge wires along the top of the pipe, inside the sleeve. There shall be no dead ends and each locator wire shall be routed from the corporation to the meter box. Connections between wire ends shall be made using an approved connections at each end as shown in the standard details;

6. Installation of the appropriate sized, furnished, meter or transferring an existing meter to the new service line;
7. Relocating existing meters and/or adjusting existing meters to grade;
8. Backfilling and compacting of all excavations;
9. Clean-up and return the job site to its original condition which includes but is not limited to restoring the elevation of surface to its original grade;
10. Removing and legally disposing of all waste materials.

Payment shall be made for each meter service furnished and installed, and accepted by the Engineer. Any restoration required shall be compensated in accordance with the restoration pay items in the Contract.

Payment shall be made under:

<u>Item No.</u>	<u>Description for Services on PVCP, DIP, OR CIP</u>	<u>Unit</u>
8100	Furnish, tap, & install 3/4" or 1" meter service (0-15', HDPE)	EA
8101	Furnish, tap, & install 3/4" meter service (+15-80', HDPE)	EA

**C-9.10 MAINTAINENCE OF TRAFFIC (MOT)**

The Contractor shall furnish all materials, equipment, and labor to establish and maintain all traffic maintenance devices and personnel as shown on the Plans, specified, and directed by the Engineer

The work includes installation of all necessary signs, pavement markings, barricades, lights and flagmen, saw-cutting of pavement, earth excavation & selected fill, temporary wearing surfaces, detour facilities, testing and installation of a signalization loop complete in place, access to residences and businesses, and all appurtenant work complete in place as necessary to control traffic and provide for safety to the public, all in compliance with the latest edition of the Florida Department of Transportation Roadway and Traffic Design Standards and the FHWA Manual on Uniform Traffic Control Devices “MUTCD”, with subsequent revisions and additions, and to the satisfaction of the Engineer.

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

The Contractor will be required to have a licensed Professional Engineer sign and seal a M.O.T plan to be submitted to the City’s Right-of-Way Department for permit.

Payment for Maintenance of Traffic shall be for all work, equipment, materials, tools, labor and any incidentals required to maintain safe traffic routes past the work site and will be made at the appropriate Contract Lump Sum Price.

The Contractor shall be compensated on an incremental basis corresponding to the percent of original contract amount earned.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
9100	Maintenance of Traffic	LS

## **C-9.20 PAVEMENT AND MOT**

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

1. Furnishing, placing, grading, and compacting approved lime rock base;
2. Furnishing, placing, grading, and compacting approved crushed concrete base;
3. Furnishing, placing, grading, and compacting approved asphalt base course, ABC-3 or Superpave Type B-12.5;
4. Furnishing, placing, grading and compacting approved "Type S-1" or "Superpave Type SP-12.5" asphaltic concrete surface course;
5. Furnishing, placing, grading and compacting to full depth approved "Type S-1" or "Superpave Type SP-12.5" asphaltic concrete surface course;
6. Restoring 6" thick concrete driveway;
7. Furnishing and installing brick pavement;
8. Installing brick pavement;
9. Furnishing and installing Thermo Striping;
10. Furnishing, placing, and grading Type S-III or Superpave "Type SP-9.5" asphaltic concrete overlay;
11. Mechanical milling of 1-inch of existing asphalt including proper disposal of the milled material;
12. Mobilization required for mechanical milling operations;
13. Furnishing and installing traffic loops as specified and directed by the Engineer;
14. Furnishing and installing signalization loops as specified and directed by the Engineer;
15. Furnishing Traffic Control Officer (Off-Duty Law Enforcement);
16. Furnishing and installing work zone signs;
17. Furnishing and installing traffic control devices to right-of-way permit requirements;
18. Removing, transporting and disposing of pavement, concrete curb, asphaltic curb and other items removed during construction;
19. Cleaning up and restoring the job site which shall include re-grading the terrain;
20. Removing and legally disposing of all waste materials.

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



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

City street pavement shall be in accordance with of Tampa’s PAVEMENT/RIGHT OF WAY RESTORATION REQUIREMENTS – REV-2012 guidelines.

Bricks shall be replaced in accordance with the of Tampa’s Vitrified Brick Replacement (Revised 4/27/2009) guidelines. See Technical Specifications T4.08.

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

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

The Contractor shall be compensated for any thermoplastic striping required based on the striping sub-contractor’s invoice for work done for a given work order, plus 10% OH&P.

The Contractor shall be compensated for any maintenance of traffic required for a given work order based on the MOT sub-contractor’s invoice for a given work order (corroborated by count records the Contractor shall provide to the Engineer daily) plus 10% OH&P.

Asphalt restoration quantities shall be paid per square-yard per inch.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
9201	Furnish, place, and compact crushed concrete base	CY
9205	Furnish and install asphalt concrete surface Superpave Type SP-12.5	TN
9207	Furnish, place and grade Superpave Type SP-9.5 asphaltic concrete overlay	TN
9208	Mobilization to perform milling operations	EA
9209	Mechanical milling of asphalt roadways in 1-inch increments	SY-IN
9210	Furnish and install 6" thick concrete driveway	SY

### **C-9.30 ROADSIDE RESTORATION**

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

1. Restoring typical concrete curb and gutter including stabilization of sub-base and installation of curb pads;
2. Restoring stone or pre-cast curb;
3. Furnishing and placing asphaltic concrete curb;
4. Remove and restoring 4-inch thick concrete sidewalk, including applicable sidewalk ramps;
5. Restoring concrete hexagon block sidewalk;
6. Restoring the roadside areas with approved sod. Restoring the roadside area and ditch bottoms and sides with sod shall include furnishing, grading, and placing the sod;
7. Restoring the roadside areas with approved sprig and seed. Restoring the roadside area with sprig and seed shall include furnishing, grading, placing, fertilizing, mulching, sprigging and seeding.
8. Furnishing and installing detectable warnings walking surfaces as directed by Engineer. The detectable warning surface will conform to the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, current edition. The detectable warnings shall be installed in conformance with FDOT Standard Indexes 304 and 310 or in conformance with the requirements of the right-of-way regulatory agency with responsibility of the affected right-of-way. (Payment for curb and sidewalk associated with pedestrian access ramps will be made under the appropriate sidewalk and curb pay items.)
9. Cleaning up and restoring the job site which shall include re-grading the terrain;
10. Removing and legally disposing of all waste materials.

Sidewalk and curb replacement pay quantities shall have maximum limits as specified in these documents, as shown the plans or as directed by the Engineer. All linear foot units shall be measured along the curb line. In all cases, the sod or seed placed is to conform in kind to the existing at the particular location.

Permanent fence agreed to be removed or disturbed for water or stormwater main construction shall be replaced in-kind, to match existing, subsequent to construction. Fence restoration shall be coordinated with the property owner and the City, and shall be to the satisfaction of the Engineer. Compensation for permanent fence restoration shall be based on the fencing sub-contractor's invoice plus 15% OH&P; or if restoration is executed by Contractor, in accordance with Specific Provision 4.05.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
9303	Furnish and install Type "F" concrete curb	LF
9307	Furnish and install 4" thick concrete sidewalk	SY
9309	Grade and sod roadside, ditch bottoms and sides - Bahia	SY

**C-9.40 GROUTING ABANDONED PIPE**

The Contractor shall provide all labor and material necessary to grout abandoned pipes in place including but not limited to taps, caps, plugs, pipes, valves and fittings necessary to complete the work in a manner acceptable to the Engineer. Under this section, payment shall be made for:

1. Excavating the trench;
2. Maintain the trench;
3. Furnishing and installing the appropriate fittings necessary to inject and blow-off the grout in a manner acceptable to the Engineer;
4. Completely filling the designated pipe with an approved grout material;
5. Removing injection and blow-off pipes and fitting and plugging tapped plugs and caps;
6. Removing excess concrete from the trench;
7. Backfilling and compacting the trench.
8. Cleaning up and restoring the job site which shall include re-grading the terrain;
9. Removing and legally disposing of all waste materials.

Restoration shall be paid separately under the appropriate pay item.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
9400	Grout abandoned pipe	CY

**C-9.50 INCIDENTALS**

The Contractor shall provide all labor, equipment and material for reinforced concrete construction and repairs, replacement of various sizes of vitrified clay sanitary sewer pipes, and repair of sanitary laterals hit but that were improperly marked (“improperly”, as defined in the SSOCOF “Damage Prevention Guide” and Chapter 556, F.S. See Specific Provision S-20.01.).

Reinforced concrete construction can include concrete pads, concrete vault walls, ditch pavement, headwalls, manholes, inlets, shocks pads, concrete "dead-man" restraints, etc.

The Contractor shall provide all labor, equipment and materials for professional quality video photography documentation of the preconstruction site condition along the proposed pipeline route.

Under this section, payment shall be made for:

1. Furnishing, forming and placing 3,000 psi concrete with reinforcement as required;
2. Furnishing and replacement of standard sand cement rip-rap in reinforced cloth or paper bags;

3. Restoring sanitary sewer service lines (laterals) by furnishing and installing the necessary C-900, DR 18 green PVC pipe and flexible couplings, in accordance with City Wastewater Department requirements <Pay Item No. 9504>;
4. Replace or restore 4", 6", 8" or 10" vitrified clay sanitary sewer pipes (sewer main lines - not laterals) found parallel with and too close to proposed water mains to avoid being compromised by the water construction, with C-900, DR 18 green PVC pipe and flexible couplings, in accordance with City Wastewater Department requirements <Pay Item No. 9502 and 9503>
5. Furnishing professional quality video photography of pre-construction site conditions along proposed pipeline route as specified in these contract documents and as required. Video resolution shall be at minimum 1920x1080 pixels (also known as 1080P, Full HD, or FHD and BT. 709).
6. Backfilling and compacting the excavation;
7. Cleaning up and restoring the job site which shall include re-grading the terrain;
8. Removing and legally disposing of all waste materials.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
9500	Furnish, form, place reinforced concrete	CY
9505	Furnish video photography	LF

**C-9.91 VALVE BOX, VAULT & MANHOLE ADJUSTMENT OR REMOVAL**

The Contractor shall provide all labor, equipment, and materials to remove, replace, and/or adjust valve boxes, vaults or manholes. Valve box, vaults, and manhole adjustment shall include, but may not be limited to:

1. Excavating existing valve box, vault or manhole.
2. Determining if existing material is reusable, if not, provide new Water Department approved material;
3. Furnishing and installing the appropriate cast iron riser for valve boxes and manholes;
4. Constructing any traffic bearing structure required to make the adjustment;
5. Setting the valve box, vault or manhole top flush to proposed grade or as directed by the Engineer;
6. Backfilling and compacting the excavation;
7. Cleaning up and restoring the job site which shall include re-grading the terrain;
8. Removal and disposal of all waste materials.

The valve box, vault or manhole adjustment shall be paid for per each valve box, vault or manhole adjusted and backfilled to meet future grades or as directed by the Engineer. Conditions of the adjustments to vaults and manholes shall be based the location of the vault whether traffic bearing or not.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
9910	Valve Box Adjustment or Removal	EA

**C-9.95 PROJECT SIGN**

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

The Contractor will furnish and install a new sign for each project or shall re-letter and install a sign used a previous project.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
9950	Furnish and install a new sign as directed by the Engineer	EA

**C-9.97 AS-BUILT SURVEY**

The as-built survey shall be submitted by the Contractor to the Engineer as verification of project completion.

Payment shall include all workmanship performed in connection with specified items of piping, fittings, valves and hydrants with all the required accessories and/or appurtenances, including in part: all labor, tools, materials and equipment for the complete as-built survey in accordance with the specifications and applicable drawings.

Payment will be based on linear footage, as measured along the centerline of the installed or abandoned pipeline.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
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**C-9.98 CONTIGENCY ALLOWANCE**

The contingency allowance shall be used by the City of Tampa as directed by the Engineer. Payment shall be made as a lump sum to pay for furnishing and installing items not listed in the Contract. Contractor shall provide an invoice listing the items and quantities along with the lump sum price. The Engineer may request a cost estimate for a contingency item from the Contractor prior to construction.

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
9980	Contingency Allowance	LS

**C-10.00 MOBILIZATION/DEMOBILIZATION**

The Contractor shall furnish all equipment, labor, and materials necessary to mobilize his forces as necessary to perform all the work under this Contract. Work under this section includes permits, bonding and insurance; construction stakeout and as-built documentation; transportation, and otherwise movement of all personnel, equipment, supplies, materials and incidentals to and from the project site; establishment of temporary offices, buildings, safety equipment and first aid supplies, sanitary and other facilities; and all other preconstruction expense necessary for the start of the work, excluding the cost of construction materials, to be constructed under this Contract as shown on the Plans and directed by the Engineer.

Payment for mobilization/demobilization will be made at the appropriate Contract Lump Sum Price and based on an incremental basis such that:

- a) Payment of 65% of the applicable lump sum price shall be made for the preparatory work and operations in mobilizing for the beginning work on the project.
- b) Payment of the remaining 35% shall be made for finalization of the project, including demobilization, contract closeout documents, removal of field office, and final site clean-up. Retainage requirements as stated in the General Conditions shall apply to this pay item.

Payment for mobilization/demobilization will be made on an incremental basis in accordance with the following:

Percent of Original Contract Amount Earned	:	5	10	25	100
Allowable Percent of the Lump Sum Price for the Item:		25	50	75	100

Payment shall be made under:

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>
10000	Mobilization/Demobilization	LS