2014 Water Work Order Construction Project

Solicitation Number: B-14-067-DB
Job No.: 14-4005

ADDENDUM #3

November 6, 2014

To Respondent of Record:

This addendum, applicable to work referenced above, is an amendment to the proposal and plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the proposal.

1.0 Addendum Purpose

The purpose of this addendum is to issue revisions and clarifications for the 2014 Water Work Order Construction Project.

MODIFICATIONS TO THE SPECIFICATIONS

1. Insert Bid Proposal

2 Insert Special Specification 4000 – Reconstruction of Potable Water Main by Pipe Bursting/Crushing Replacement Process

ACKNOWLEDGEMENT BY RESPONDENT

Each Respondent shall acknowledge receipt of this Addendum No. 3 by noting such and signing the Price Proposal.

This undersigned acknowledges receipt of this Addendum No. 3 and the proposal submitted herewith is in accordance with the information and stipulations set forth.

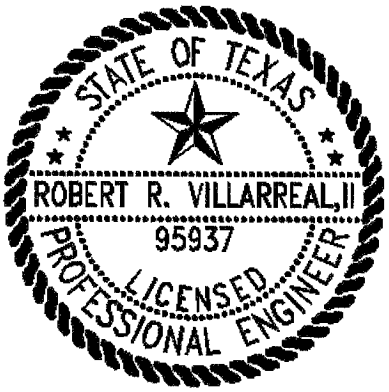
_____ _____

Date Signature of Respondent

END OF ADDENDUM

The seal appearing on this
document was authorized by

ROBERT R. VILLARREAL,II
on 11/5 2014



Robert R. Villarreal, II, P.E.
San Antonio Water System

BID PROPOSAL

PROPOSAL OF _____ , a corporation

a partnership consisting of

_____

an individual doing business as

_____

THE SAN ANTONIO WATER SYSTEM:
Pursuant to Instructions and Invitations to Bidders, the undersigned proposes to furnish all labor and materials as specified and perform the work required for the replacement of water distribution mains by open cut construction and required appurtenances for the San Antonio Water System (SAWS) in accordance with the plans and specifications for the 2014 Water Work Order Construction Project, Job No. 14-4005. The undersigned acknowledges and understands that some projects are unspecified at the time of bidding, all quantities are estimated, and it is the intent of this proposal and quantities herein to establish a unit price for various line items to be paid the Contractor by SAWS on an annual basis. No change in the unit price will be made, regardless of the actual quantity of the item of work performed. The work will be performed for the following prices to wit:

Item No.	Description (Unit Price to be written in Words)	Unit	Quantity	Unit Price (Figures)	Total Price (Figures)
103.1	Remove Concrete Curb	LF	50	_____	_____
	_____ Dollars				
	and _____ Cents				
103.3	Remove Sidewalks and Driveways	SF	200	_____	_____
	_____ Dollars				
	and _____ Cents				
103.4	Remove Miscellaneous Concrete	SF	50	_____	_____
	_____ Dollars				
	and _____ Cents				
202.1	Prime Coat	GAL	20	_____	_____
	_____ Dollars				
	and _____ Cents				
203.1	Tack Coat	GAL	10	_____	_____
	_____ Dollars				
	and _____ Cents				
205.4	Hot Mix Asphaltic Pavement Type “D” (2” Pavement Thickness)	SY	1000	_____	_____
	_____ Dollars				
	and _____ Cents				

205.4	Hot Mix Asphaltic Pavement Type “D” (3” Pavement Thickness)	SY	1000	_____	_____
	_____ Dollars and _____ Cents				
206.1	Asphalt Treated Base (12” Compacted Depth)	SY	300	_____	_____
	_____ Dollars and _____ Cents				
208.1	Salvage, Haul, Stockpile Reclaimable Asphalt Pavement (2” Depth)	SY	1000	_____	_____
	_____ Dollars and _____ Cents				
208.1	Salvage, Haul, Stockpile Reclaimable Asphalt Pavement (3” Depth)	SY	1000	_____	_____
	_____ Dollars and _____ Cents				
247	Flexible Base – Type A, Grade 1 with 2% Cement (TxDOT Spec)	CY	25	_____	_____
	_____ Dollars and _____ Cents				
306.1	Structural Excavation	CY	30	_____	_____
	_____ Dollars and _____ Cents				
340	HMAC Pavement Type “C” (TxDOT Spec)	CY	25	_____	_____
	_____ Dollars and _____ Cents				
500.1	Concrete Curb	LF	25	_____	_____
	_____ Dollars and _____ Cents				
502.1	Concrete Sidewalks- Conventionally Formed	SY	15	_____	_____
	_____ Dollars and _____ Cents				
503.1	Concrete Driveway	SY	20	_____	_____
	_____ Dollars				

and _____ Cents

BP-2

503.2	Concrete Driveway- Commercial	SY	20	_____	_____
	_____ Dollars and _____ Cents				
503.4	Asphaltic Concrete Driveway	SY	20	_____	_____
	_____ Dollars and _____ Cents				
503.5	Gravel Driveway	SY	20	_____	_____
	_____ Dollars and _____ Cents				
504.1	Concrete Median	SY	10	_____	_____
	_____ Dollars and _____ Cents				
504.2	Concrete Directional Island	SY	10	_____	_____
	_____ Dollars and _____ Cents				
505.1	Concrete Riprap (5" Thick)	SY	10	_____	_____
	_____ Dollars and _____ Cents				
506.1	Concrete Retaining Walls-Combination Type	CY	5	_____	_____
	_____ Dollars and _____ Cents				
507.2	Temporary Chain Link Wire Fence	LF	25	_____	_____
	_____ Dollars and _____ Cents				
507.4	Gates – Pedestrian	EA	1	_____	_____
	_____ Dollars and _____ Cents				
507.5	Gates- Vehicular	EA	1	_____	_____
	_____ Dollars and _____ Cents				
509.1	Metal Beam Guard Rail	LF	10	_____	_____

	_____ Dollars and _____ Cents				
		BP-3			
510	Timber Guard Posts	EA	2	_____	_____
	_____ Dollars and _____ Cents				
511.4	Replacing with Portland Cement Concrete Pavement – 16”	SY	10	_____	_____
	_____ Dollars and _____ Cents				
513.1	Removing and Relocating Mailboxes	EA	1	_____	_____
	_____ Dollars and _____ Cents				
513.3	Removing and Relocating Mailboxes (Masonry)	EA	1	_____	_____
	_____ Dollars and _____ Cents				
515.1	Top Soil (3”)	CY	50	_____	_____
	_____ Dollars and _____ Cents				
516.1	Bermuda Sodding	SY	15	_____	_____
	_____ Dollars and _____ Cents				
516.2	St. Augustine Sodding	SY	15	_____	_____
	_____ Dollars and _____ Cents				
518.1	Shrubs	EA	5	_____	_____
	_____ Dollars and _____ Cents				
518.2	Landscaping/Flower Beds	SY	15	_____	_____
	_____ Dollars and _____ Cents				
518.3	Tree (3” Trunk Diameter)	EA	1	_____	_____
	_____ Dollars and _____ Cents				
518.3	Tree (6” Trunk Diameter)	EA	1	_____	_____

	_____ Dollars and _____ Cents				
		BP-4			
520.1	Hydromulching (Residential or Commercial)	SY	25	_____	_____
	_____ Dollars and _____ Cents				
530.1	Barricades, Signs and Traffic Handling (1 per Work Order)	EA	5	_____	_____
	_____ Dollars and _____ Cents				
535.1	4 Inch Wide Yellow Line	LF	20	_____	_____
	_____ Dollars and _____ Cents				
535.2	4 Inch Wide White Line	LF	20	_____	_____
	_____ Dollars and _____ Cents				
535.7	24 Inch Wide White Line	LF	20	_____	_____
	_____ Dollars and _____ Cents				
537.6	Pavement Marker (Type I-C)	LF	10	_____	_____
	_____ Dollars and _____ Cents				
537.8	Pavement Marker (Type II-A-A)	LF	10	_____	_____
	_____ Dollars and _____ Cents				
550	Trench Excavation Safety Protection	LF	2000	_____	_____
	_____ Dollars and _____ Cents				
551.1	Temporary Special Shoring	SF	100	_____	_____
	_____ Dollars and _____ Cents				
552.1	Remove and Relocate Irrigation Systems	LF	20	_____	_____
	_____ Dollars and _____ Cents				
553	Storm Water Pollution Prevention Plan	EA	3	_____	_____

(3W3P) (1 per Work Order)

_____ Dollars

and _____ Cents

BP-5

554	Erosion Control Matting (Including Seeding)	SY	200	_____	_____

_____ Dollars

and _____ Cents

805	Traffic Control Plan (1 per Work Order, if required)	EA	5	_____	_____

_____ Dollars

and _____ Cents

809	Reinforced Concrete Vaults for Metered Fire Line Complete with DCDA, All Sizes & Types	EA	1	_____	_____

_____ Dollars

and _____ Cents

813	Water Service for Fire Line, All Sizes & Types	LF	35	_____	_____

_____ Dollars

and _____ Cents

814	12” DI Waterline (Pressure Class 350, Restrained)	LF	100	_____	_____

_____ Dollars

and _____ Cents

818	8” PVC Waterline (Restrained as Required)	LF	1000	_____	_____

_____ Dollars

and _____ Cents

818	12” PVC Waterline (Restrained as Required)	LF	500	_____	_____

_____ Dollars

and _____ Cents

818	16” PVC Waterline (Restrained as Required)	LF	400	_____	_____

_____ Dollars

and _____ Cents

818	20” PVC Waterline (Restrained as Required)	LF	200	_____	_____

_____ Dollars

and _____ Cents

818	24” PVC Waterline (Restrained as Required)	LF	200	_____	_____

_____ Dollars

and _____ Cents

BP-6

822	Short Yard Piping	LF	100	_____	_____
	_____ Dollars				
	and _____ Cents				
822	Long Yard Piping	LF	100	_____	_____
	_____ Dollars				
	and _____ Cents				
823	Yard Piping – Direction Bore Method (All Sizes 3" Diameter and Smaller)	LF	20	_____	_____
	_____ Dollars				
	and _____ Cents				
824	Reconnect 3/4" Short Service	EA	5	_____	_____
	_____ Dollars				
	and _____ Cents				
824	Reconnect 3" Short Service	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
824	Reconnect 6" Short Service	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
824	Relay 3/4" Short Service	EA	5	_____	_____
	_____ Dollars				
	and _____ Cents				
824	Relay 3/4" Long Service	EA	5	_____	_____
	_____ Dollars				
	and _____ Cents				
824	New 3/4" Short Service	EA	5	_____	_____
	_____ Dollars				
	and _____ Cents				
824	New 3/4" Long Service	EA	5	_____	_____
	_____ Dollars				

and _____ Cents

824 Relay 1” Short Service EA 3 _____ _____

_____ Dollars

and _____ Cents

824 Relay 1” Long Service EA 3 _____ _____

_____ Dollars

and _____ Cents

824 New 1” Short Service EA 2 _____ _____

_____ Dollars

and _____ Cents

824 New 1” Long Service EA 3 _____ _____

_____ Dollars

and _____ Cents

824 Relay 1 1/2” Short Service EA 2 _____ _____

_____ Dollars

and _____ Cents

824 Relay 1 1/2” Long Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 New 1 1/2” Short Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 New 1 1/2” Long Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 Relay 2” Short Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 Relay 2” Long Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 New 2” Short Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 New 2” Long Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 Relocate 3/4” Short Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 Relocate 3/4” Long Service; EA 1 _____ _____

_____ Dollars

and _____ Cents

BP-8

824 Relocate 1” Short Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 Relocate 1” Long Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 Relocate 1 1/2” Short Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 Relocate 1 1/2” Long Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 Relocate 2” Short Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 Relocate 2” Long Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 New 4” Short Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824 New 4” Long Service EA 1 _____ _____

_____ Dollars

and _____ Cents

824	Relay 4” Short Service	EA	1	_____	_____

_____ Dollars

and _____ Cents

824	Relay 4” Long Service	EA	1	_____	_____

_____ Dollars

and _____ Cents

824	Relocate 4” Long Service	EA	1	_____	_____

_____ Dollars

and _____ Cents

824	Relocate 4” Short Service	EA	1	_____	_____

_____ Dollars

and _____ Cents

824	New 6” Short Service	EA	1	_____	_____

_____ Dollars

and _____ Cents

824	New 6” Long Service	EA	1	_____	_____

_____ Dollars

and _____ Cents

824	Relay 6” Short Service	EA	1	_____	_____

_____ Dollars

and _____ Cents

824	Relay 6” Long Service	EA	1	_____	_____

_____ Dollars

and _____ Cents

824	Relocate 6” Long Service	EA	1	_____	_____

_____ Dollars

and _____ Cents

824	Relocate 6” Short Service	EA	1	_____	_____

_____ Dollars

and _____ Cents

824	New Unmetered 3/4” Short Service	EA	1	_____	_____

	_____ Dollars and _____ Cents				
824	New Unmetered 3/4” Long Service	EA	1	_____	_____
	_____ Dollars and _____ Cents				
824	New Unmetered 1” Short Service	EA	1	_____	_____
	_____ Dollars and _____ Cents				
824	New Unmetered 1” Long Service	EA	1	_____	_____
	_____ Dollars and _____ Cents				
824	New Unmetered 1 1/2” Short Service	EA	1	_____	_____
	_____ Dollars and _____ Cents				
824	New Unmetered 1 1/2” Long Service	EA	1	_____	_____
	_____ Dollars and _____ Cents				
824	New Unmetered 2” Short Service	EA	1	_____	_____
	_____ Dollars and _____ Cents				
824	New Unmetered 2” Long Service	EA	1	_____	_____
	_____ Dollars and _____ Cents				
824	New Unmetered 4” Short Service	EA	1	_____	_____
	_____ Dollars and _____ Cents				
824	New Unmetered 4” Long Service	EA	1	_____	_____
	_____ Dollars and _____ Cents				
824	New Unmetered 6” Short Service	EA	1	_____	_____
	_____ Dollars and _____ Cents				
824	New Unmetered 6” Long Service	EA	1	_____	_____

	_____ Dollars and _____ Cents				
824	New 2” SCH 80 Conduit for Water Service _____ Dollars and _____ Cents	LF	100	_____	_____
824	2” Bore for 2” SCH 80 PVC Conduit for Water Service _____ Dollars and _____ Cents	LF	100	_____	_____
826	Valve Box Adjustment _____ Dollars and _____ Cents	EA	3	_____	_____
828	6” Gate Valve _____ Dollars and _____ Cents	EA	1	_____	_____
828	8” Gate Valve _____ Dollars and _____ Cents	EA	4	_____	_____
828	10” Gate Valve _____ Dollars and _____ Cents	EA	1	_____	_____
828	12” Gate Valve _____ Dollars and _____ Cents	EA	3	_____	_____
828	16” Gate Valve _____ Dollars and _____ Cents	EA	2	_____	_____
830	20” Butterfly Valve _____ Dollars and _____ Cents	EA	1	_____	_____
830	24” Butterfly Valve _____ Dollars and _____ Cents	EA	1	_____	_____

831	8” x 6” Tee Cut In	EA	1	_____	_____

_____ Dollars

and _____ Cents

831	8” x 8” Tee Cut In	EA	1	_____	_____

_____ Dollars

and _____ Cents

831	8” x 10” Tee Cut In	EA	1	_____	_____

_____ Dollars

and _____ Cents

831	12” x 8” Tee Cut In	EA	1	_____	_____

_____ Dollars

and _____ Cents

BP-12

831	12” x 10” Tee Cut In	EA	1	_____	_____

_____ Dollars

and _____ Cents

831	12” x 12” Tee Cut In	EA	1	_____	_____

_____ Dollars

and _____ Cents

831	16” x 8” Tee Cut In	EA	1	_____	_____

_____ Dollars

and _____ Cents

831	16” x 12” Tee Cut In	EA	1	_____	_____

_____ Dollars

and _____ Cents

831	16” x 16” Tee Cut In	EA	1	_____	_____

_____ Dollars

and _____ Cents

831	20” x 8” Tee Cut In	EA	1	_____	_____

_____ Dollars

and _____ Cents

831	20” x 12” Tee Cut In	EA	1	_____	_____

_____ Dollars

and _____ Cents

831	20” x 16” Tee Cut In	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
831	20” x 20” Tee Cut In	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
831	24” x 8” Tee Cut In	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
831	24” x 12” Tee Cut In	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				

831	24” x 16” Tee Cut In	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
831	24” x 20” Tee Cut In	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
831	24” x 24” Tee Cut In;	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
832	12” x 8” Tapping Sleeves and Valves	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
832	16” x 8” Tapping Sleeves and Valves	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
832	16” x 12” Tapping Sleeves and Valves	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
832	20” x 8” Tapping Sleeves and Valves	EA	1	_____	_____

	_____ Dollars and _____ Cents				
832	20” x 12” Tapping Sleeves and Valves	EA	1	_____	_____
	_____ Dollars and _____ Cents				
832	20” x 16” Tapping Sleeves and Valves	EA	1	_____	_____
	_____ Dollars and _____ Cents				
832	24” x 8” Tapping Sleeves and Valves	EA	1	_____	_____
	_____ Dollars and _____ Cents				
832	24” x 12” Tapping Sleeves and Valves	EA	1	_____	_____
	_____ Dollars and _____ Cents				
832	24” x 16” Tapping Sleeves and Valves	EA	1	_____	_____
	_____ Dollars and _____ Cents				
832	24” x 20” Tapping Sleeves and Valves	EA	1	_____	_____
	_____ Dollars and _____ Cents				
832	24” x 30” Tapping Sleeves and Valves	EA	1	_____	_____
	_____ Dollars and _____ Cents				
832	24” x 48” Tapping Sleeves and Valves	EA	1	_____	_____
	_____ Dollars and _____ Cents				
833	Existing Meter and (New Meter) Box Relocation	EA	10	_____	_____
	_____ Dollars				

and _____ Cents

833	Meter Box	EA	10	_____	_____

_____ Dollars

and _____ Cents

834	Fire Hydrant	EA	4	_____	_____

_____ Dollars

and _____ Cents

836	Pipe Fittings (All Sizes & Types)	TON	6	_____	_____

_____ Dollars

and _____ Cents

840	8” Water Tie-In	EA	5	_____	_____

_____ Dollars

and _____ Cents

BP-15

840	12” Water Tie-In	EA	4	_____	_____

_____ Dollars

and _____ Cents

840	16” Water Tie-Ins	EA	4	_____	_____

_____ Dollars

and _____ Cents

840	20” Water Tie-Ins	EA	1	_____	_____

_____ Dollars

and _____ Cents

840	24” Water Tie-Ins	EA	1	_____	_____

_____ Dollars

and _____ Cents

841	Hydrostatic Testing	EA	5	_____	_____

_____ Dollars

and _____ Cents

844	2” Blow-off, Permanent	EA	2	_____	_____

_____ Dollars

and _____ Cents

844	2” Blow-off, Temporary	EA	2	_____	_____

	_____ Dollars and _____ Cents				
844	4” Blow-off, Permanent	EA	1	_____	_____
	_____ Dollars and _____ Cents				
844	4” Blow-off, Temporary	EA	1	_____	_____
	_____ Dollars and _____ Cents				
846	1” Air Release Assemblies	EA	3	_____	_____
	_____ Dollars and _____ Cents				
846	2” Air Release Assemblies	EA	1	_____	_____
	_____ Dollars and _____ Cents				
	BP-16				
856.1	Jacking, Boring, or Tunneling 24”	LF	200	_____	_____
	_____ Dollars and _____ Cents				
856.1	Jacking, Boring, or Tunneling 30”	LF	100	_____	_____
	_____ Dollars and _____ Cents				
856.1	Jacking, Boring, or Tunneling 36”	LF	100	_____	_____
	_____ Dollars and _____ Cents				
856.1	Jacking, Boring, or Tunneling 42”	LF	100	_____	_____
	_____ Dollars and _____ Cents				
856.2	8” Carrier Pipe for Jacking, Boring, or Tunneling	LF	200	_____	_____
	_____ Dollars and _____ Cents				
856.2	12” Carrier Pipe for Jacking, Boring, or Tunneling	LF	100	_____	_____
	_____ Dollars and _____ Cents				
856.2	16” Carrier Pipe for Jacking, Boring, or Tunneling	LF	100	_____	_____

	_____ Dollars				
	and _____ Cents				
856.2	24” Carrier Pipe for Jacking, Boring, or Tunneling	LF	100	_____	_____
	_____ Dollars				
	and _____ Cents				
856.3	Steel Casing 24”	LF	200	_____	_____
	_____ Dollars				
	and _____ Cents				
856.3	Steel Casing 30”	LF	100	_____	_____
	_____ Dollars				
	and _____ Cents				
856.3	Steel Casing 36”	LF	100	_____	_____
	_____ Dollars				
	and _____ Cents				
856.3	Steel Casing 42”	LF	100	_____	_____
	_____ Dollars				
	and _____ Cents				
858	Concrete Encasement	CY	30	_____	_____
	_____ Dollars				
	and _____ Cents				
1015	3/4” & 1” Service Line Leak/Break Repair, all types	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
1015	1.5” & 2” Service Line Leak/Break Repair, all types	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
1020	6-inch Main Break/Leak Repair, all types	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
1020	8-inch Main Break/Leak Repair, all types	EA	1	_____	_____
	_____ Dollars				

	and _____ Cents				
1020	10-inch Main Break/Leak Repair, all types	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
1020	12-inch Main Break/Leak Repair, all types	EA	2	_____	_____
	_____ Dollars				
	and _____ Cents				
1020	16-inch Main Break/Leak Repair, all types	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
1020	20-inch Main Break/Leak Repair, all types	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				

BP-18

1020	24-inch Main Break/Leak Repair, all types	EA	1	_____	_____
	_____ Dollars				
	and _____ Cents				
1040	4" Temporary Waterline (Restrained as Required)	LF	50	_____	_____
	_____ Dollars				
	and _____ Cents				
1040	8" Temporary Waterline (Restrained as Required)	LF	50	_____	_____
	_____ Dollars				
	and _____ Cents				
2026	Directional Drill 12" O.D. HDPE Pipe (DR 9)(200 PSI) (IPS)	LF	800	_____	_____
	_____ Dollars				
	and _____ Cents				
3000	Removal, Transportation, and Disposal of A.C. Pipe (All Pipe Sizes)(Includes Asbestos Abatement Work Plan, if required)	LF	100	_____	_____
	_____ Dollars				
	and _____ Cents				
4000	Pipe Bursting of an 8" Water Main (DR11 I.P.S)	LF	500	_____	_____

	_____ Dollars and _____ Cents				
4000	Pipe Bursting of a 12” Water Main (DR11 I.P.S)	LF	500	_____	_____
	_____ Dollars and _____ Cents				
4438	Flowable Backfill (TxDOT Spec.)	CY	100	_____	_____
	_____ Dollars and _____ Cents				
9101.1	Grout and Abandon Existing 12” Water Main	LF	1000	_____	_____
	_____ Dollars and _____ Cents				
9101.2	Existing 12” Steel Water Main Removal	LF	50	_____	_____
	_____ Dollars and _____ Cents				

BP-19

TOTAL BID AMOUNT $_____

_____**DOLLARS AND**

_____ **CENTS**

_____
BIDDER’S SIGNATURE & TITLE

_____
FIRM’S NAME (TYPE OR PRINT)

_____
FIRM’S ADDRESS

_____
FIRM’S PHONE NO. /FAX NO.

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FIRM’S EMAIL ADDRESS

The Contractor herein acknowledges receipt of the following:
Addendum Nos._____

OWNER RESERVES THE RIGHT TO ACCEPT THE OVERALL MOST RESPONSIBLE BID.

The bidder offers to construct the Project in accordance with the Contract Documents for the contract price, and to complete the Project within **365** calendar days after the start date or until funds are exhausted, whichever comes first, as set forth in the Authorization to Proceed. **The bidder understands and accepts the provisions of the contract Documents relating to liquidated damages of the project if not completed on time.**

Complete the additional requirements of the Bid Proposal which are included on the following pages.

BP-20

ITEM NO. 4000
RECONSTRUCTION OF POTABLE WATER MAIN BY PIPE BURSTING/CRUSHING REPLACEMENT PROCESS

1. DESCRIPTION: This specification includes requirements to rehabilitate existing potable water mains by pipe bursting / crushing method. The pipe bursting / crushing process is defined as the reconstruction of existing potable water mains by simultaneous insertion (breaking and expanding the old pipe) of liner pipe with the within the bore of the existing pipe. Also covered in this specification is pipe, pipe joining, pipe fittings, connection of water services and water tie-ins, site restoration, erosion control requirements, and warranty requirements.

The pipe bursting/crushing process involves the rehabilitation of aged water mains by installing new pipe material within the enlarged bore created by the use of using a static, hydraulic, or pneumatic hammer "moling" device, suitably sized to break the existing main or by using a modified boring "knife" with a flared plug that crushes the existing water main. Forward progress of the "mole" or the "knife" may be aided by hydraulic equipment or other apparatus. Replacement pipe is either pulled or pushed into the bore. Water services are reconnected to the new pipe through small excavations from the surface. All excavations required for reconnecting services, entry pits, exit pits, among others, are to be kept to a minimum and all damage to surface and underground features, facilities, utilities and improvements are to be repaired at the contractors expense.

2. MATERIALS: a. High density polyethylene pipe (HDPE) related to pipe bursting or pipe crushing for a potable water main or related pipe line rehabilitation:

i. Pipe shall be high-density polyethylene (HDPE) of the specified SDR ratings. HDPE resin shall be PE3408 resin characterized by ASTM D3350. The HDPE pipe shall be easily identifiable with a minimum of one stripe integrally extruded longitudinally in the exterior of the pipe wall or be of a solid color according to the color applicable to the service. HDPE pipe on will further be required to have a pressure rating of 200 psi (DR 11 IPS 200 psi).

ii. Pipe Manufacturer: Fittings for pressure systems shall be ductile iron with a minimum working pressure rating of 200 psi using HDPE MJ adapters to transition from the HDPE pipe to the fitting.

b. Service connection fittings for pressure systems shall be HDPE electrofusion type fittings with a minimum working pressure rating of 200 psi. Service saddles shall be self-tapping and sealing. Double-strapped ductile iron body service saddles may be used in lieu of electrofusion type. Except for self-tapping saddle tees, hole cutting is required for field installed side outlet fittings. Polyethylene pipe hole saws shall be used.

Existing service connections shall be located before initiating main replacement operations. Replacement service lines shall be ¾", 1", 1-1/2", or 2" Endopure ENDOT polyethylene tubing conforming to specifications in AWWA C800 and AWWA C901. Existing services shall be reconnected to the new line after testing and replacement are completed.

Surface materials to be removed for excavation purposes shall be replaced to the condition they were prior to excavation. Affected grassed area shall be sodded.

Saddle fusion outlets may be used for eight-inch and smaller outlets applied to twelve inch and larger mains. Larger outlets for larger main sizes shall be factory fabricated.

Socket fusion shall be used with ½ inch through four-inch pipe and fittings.

Electrofusion is a heat fusion process where a coupling or saddle fitting contains an integral heating source. After surface preparations, the fitting is installed on the pipe, and the heating source is energized. During heating, the fitting and pipe materials melt, expand, and fuse together. Heating and cooling cycles are automatically controlled.

Stainless steel stiffener inserts, ASTM 240, shall be used for all fittings and connections to HDPE pipe. Stiffeners shall be of SS 304, wedge-type design.

c. The pipe produced from this resin will have a minimum cell Classification of 345434C (inner wall will be light in color) under ASTM D3350. A higher

number cell classification limit which gives a desirable higher primary property, per ASTM D3350 may also be accepted by the Engineer at no extra cost to SAWS. The value for the Hydrostatic Design basis will not be less than 1,600 psi (11.03 MPa) per ASTM D2837. Pipe will have ultraviolet protection.

d. Pipe Color and Quality: HDPE Water Pipe to have blue strip along it's length to denote it is a water pipe and shall be free of visible cracks, holes, foreign material, foreign inclusions, blisters, or other deleterious or injurious faults or defects. Pipe and fittings shall be as uniform as commercially practical in color, opacity, density, and other physical properties.

e. Pipe Diameter: Polyethylene plastic pipe will meet the applicable requirements of ASTM F714 Polyethylene (PE) Plastic Pipe (SDRPR) Based on Outside Diameter, ASTM D1248, and ASTM D3550. Internal diameter of the pipe indicated on the plans will be the minimum allowable pipe size.

f. Pipe Joining: Solid wall pipe shall be produced with plain end construction for heat-joining (butt fusion) conforming to ASTM D2657.

The polyethylene pipe will be assembled and joined at the site using the thermal butt-fusion method to provide a leak proof and structurally sound joint. Threaded or solvent-cement joints and connections are not permitted. All equipment and procedures will be used in strict compliance with the manufacturer's recommendations. Fusing will be accomplished by personnel certified as fusion technicians by a manufacturer of polyethylene pipe and/or fusing equipment. The butt-fused joint will be true alignment and will have uniform roll back beads resulting from the use of proper temperature and pressure. The joint surfaces will be smooth. The fused joint will be watertight and will have tensile strength equal to that of the pipe.

All joints will be subject to acceptance by the Inspector prior to insertion. All defective joints will be cut out and replaced at no cost to SAWS. Any section of the pipe with a gash, blister, abrasion, nick, scar, or other deleterious fault greater in depth than 10% of the wall thickness, will not be used and must be removed from the site.

However, a defective area of the pipe may be cut out and the joint fused in accordance with the procedures stated above. In addition, if in the opinion of the Inspector that any section of pipe has other defects, including those hereinafter listed, that may indicate damaged, improperly manufactured, faulty, or substandard pipe, said pipe will be discarded and not used. Defects warranting pipe rejection include the following: concentrated ridges, discoloration, excessive spot roughness, and pitting; insufficient or variable wall thickness; pipe damage from bending, crushing, stretching or other stress; pipe damage that impacts the pipe strength, the intended use, the internal diameter of the pipe, internal roughness characteristics; or any other defect of manufacturing or handling.

Clamps and Gaskets: Clamps shall be stainless steel, including bolts and lugs as manufactured by JCM Industries Type 108, or other approved equal. Furnish full circle, universal clamp couplings with a minimum 3/16 inch thick neoprene, grid-type gasket. Select clamps to fit outside diameter of pipe.

Use minimum clamp length of 30 inches for replacement pipes O.D. of 10.75 inches (10inch
nominal) or greater and 18 inches for replacement pipe O.D. less than 10.75 inches.

Terminal sections of pipe that are joined within the insertion pit will be connected with a full circle pipe repair clamp. The butt gap between pipe ends will not exceed ½ inch.

g. Pipe Marking: Each standard and non-standard length of pipe or fitting shall be clearly marked with pipe size, pipe class, production code, material designation and other relevant identifying information.

h. Pipe Inspections: The Engineer and Inspector reserves the right to inspect pipes or witness pipe manufacturing. Such inspection shall in no way relieve the manufacturer of the responsibilities to provide products that comply with the applicable standards and these Specifications. Should the Engineer wish to witness the manufacture of specific pipes, the manufacturer shall provide the Engineer with adequate advance notice of when and where the production of those specific pipes will take place. Approval of the San Antonio Water System Standard Specifications for Construction products or tests is not implied by the Engineer's decision not to inspect the manufacturing, testing, or finished pipes.

3. CONSTRUCTION: a. Pit Location: Location and number of insertion or launching pits will be chosen by the contractor at logical breaks in the construction phasing, or at locations to comply with access or maintenance requirements. Pits shall be placed and located to minimize the total number of pulls and maximize the length of pipe replaced per pull, within the constraints of maintaining service and access and other requirements. Pits shall be kept as dry as possible and shall be excavated to at least one foot below the pipe invert to minimize the potential for contamination during connection of the new main valves, fittings, and services.

b. Operations: The contractor shall provide equipment, planning, and job execution necessary to accomplish the work in an efficient manner and consistent with the objectives of these specifications, including preventing damage to existing infrastructure, maintaining pedestrian and vehicular access, and providing continual water service to customers. Pipe shall be assembled and fused on the ground in sections equivalent to the length of the anticipated pull. During installation, all bending and loading of the pipe shall be in conformance with manufacturer's recommendations and shall not damage pipe.

NOTE: The discharge of large quantities of water from a main must be planned to avoid flooding or causing dangerous road conditions.

c. Equipment: The Contractor shall utilize pipe bursting/crushing equipment with adequate pulling/pushing force to complete pulls in a timely manner. The contractor shall provide equipment on the pulling mechanism to verify the pulling/pushing force exerted on the pipe does not exceed the manufacturer's recommendation for allowable pulling force to prevent damage to the pipe. The pulling force may not exceed the following: 6 tons for 8.625 inch O.D.; 10 tons for 10.75 inch O.D.; 17 tons for 14 inch O.D.; 23

tons for 16 inch O.D.; 28 tons for 18 inch O.D. Allowable pulling force for all diameters shall be determined by the contractor depending on the pipe size, wall thickness, manufacturer, field conditions, pull distance, bearing capacity of soils, adjacent infrastructure, related equipment and cable strength, and related considerations. Equipment shall be configured with adequate knives or other appropriate devices to minimize interruptions in the installation process due to obstruction removal and other problems. Pipe shall be secured to the pulling/pushing device in accordance with standard practice. The diameter of the pulling/pushing head shall be equal or slightly greater than the pipe OD.

d. Minimize Noise Impact: Equipment used to perform the work will be located away from businesses or residents so as not to create a noise impact. Provide silencers or other approved devices to reduce machine noise, when it exceeds regulated limits.

e. Protection: The Contractor shall provide for the general safety of workers, pedestrians and traveling public throughout this project. Existing surface improvements and underground facilities and utilities shall also be protected. Damage caused by the Contractor shall be repaired at his own expense. Protection to be provided includes:

Protection of pipe: The Contractor will install all pulleys, rollers, bumpers, alignment control devices to protect the pipe from damage during installation. Lubrication may be used as recommended by the manufacturer. Under no circumstances will the pipes be stressed beyond their elastic limit. Protect the new pipe and components during all phases of work, including hauling, installation, entry into the launching pit, and prevention of scarring or gouging of the pipe or components.

f. Do not allow sand, debris, or runoff to enter potable water distribution system.

4. TESTING: All field testing of the potable water mains will follow SAWS standard specification No. 841.

5. MEASUREMENT AND PAYMENT: The inserted pipe will be measured and paid for per linear foot of pipe installed using pipe-bursting/pipe crushing method for the pipe diameter, type, quantity, and depth specified and will include all pipe installation materials, labor, tools ,equipment, all submittals, launching pits, receiving pits, shoring, bedding, backfill, and all necessary, corresponding, and related work specified herein. (Item No. 4000)

END OF SECTION