



Santa Maria WATER DISTRICT

SUPPLEMENTAL/ BID BULLETIN NO 2018-005

For the Project, “Supply and Delivery of uPVC Pipes and Elbows for Pipe Laying Activities I Additional Projects of the SMWD for the Year 2018.”

In accordance with Section 22.5.2 of IRR of RA No. 9184 this Supplemental/Bid Bulletin No. 2018-005 is hereby issued to amend the following: These shall form part of the bidding documents.

1. Section III - the Bid Data Sheet – specifically for ITB Clause 2 for the Funding Source of the Contract; ITB Clause 13.2 for the Approved Budget of the Contract; ITB Clause 18.1 for the amount of Bid Security;
2. Section V- Special Conditions of the Contract – GCC Clause 1.1(i) for the Funding Source, GCC 10.2 Request for Payment, GCC Clause 10.3 for Terms of Payment;
3. Additional Permits Required to be Submitted as Additional Eligibility Documents
4. Section VI - Schedule of Requirements;
5. Adjusted Technical Specifications;
6. Drawings/Illustrations have been attached

FROM	TO
<p>ITB CLAUSE 2 The Funding Source is:</p> <p>The Government of the Philippines (GOP) through Fund which will be Coming from the Savings from the First Semester of 2018 Budget <i>in the amount of Thirteen Million Five Hundred Twenty Two Thousand Pesos (P 13,522,000.00).</i></p> <p>The name of the Project is: <i>“Supply and Delivery of uPVC Pipes and Elbows for Pipe Laying Activities in Additional Project of the SMWD for the year 2018”.</i></p> <p><i>Project Contract No. BD 2018-10-012-G</i></p>	<p>ITB CLAUSE 2 The Funding Source is:</p> <p>The Government of the Philippines (GOP) through Fund which will be Coming from the Savings from the First Semester of 2018 Budget <i>in the amount of Thirteen Million Three Hundred Eighty Four Thousand Pesos (P 13,384,000.00).</i></p> <p>The name of the Project is: <i>“Supply and Delivery of uPVC Pipes and Elbows for Pipe Laying Activities in Additional Project of the SMWD for the year 2018”.</i> <i>Project Contract No. BD 2018-10-012-G</i></p>
<p>ITB CLAUSE 13.2 The ABC is Thirteen Million Five Hundred Twenty Two Thousand Pesos (P 13,522,000.00), inclusive of tax. Any bid with a financial component exceeding this amount shall not be accepted.</p>	<p>ITB CLAUSE 13.2 The ABC is Thirteen Million Three Hundred Eighty Four Thousand Pesos (P 13,384,000.00), inclusive of tax. Any bid with a financial component exceeding this amount shall not be accepted.</p>
<p>ITB CLAUSE 18.1 The bid security shall be in the form of a Duly Notarized Bid Securing Declaration, or any of the following forms and amounts:</p> <p>The amount of not less than Php 270,440.00 [2% of ABC], if bid security is in cash, cashier’s/manager’s check, bank draft/guarantee or irrevocable Php 676,100.00 [5% of ABC] if bid security is in Surety Bond.</p>	<p>ITB CLAUSE 18.1 The bid security shall be in the form of a Duly Notarized Bid Securing Declaration, or any of the following forms and amounts:</p> <p>The amount of not less than Php 267,680.00 [2% of ABC], if bid security is in cash, cashier’s/manager’s check, bank draft/guarantee or irrevocable Php 669,200.00 [5% of ABC] if bid security is in Surety Bond.</p>
<p>GCC CLAUSE 1.1(i)</p>	<p>GCC CLAUSE 1.1(i)</p>



Santa Maria WATER DISTRICT

<p>GCC CLAUSE 1.1(i)</p> <p>The Funding Source is</p> <p>The Government of the Philippines (GOP) through Fund which will be coming from the Savings from the First Semester of 2018 Budget duly approved by the Head of the Procuring Entity in the amount of Thirteen Million Five Hundred Twenty Two Thousand Pesos (P 13,522,000.00).</p>	<p>GCC CLAUSE 1.1(i)</p> <p>The Funding Source is</p> <p>The Government of the Philippines (GOP) through Fund which will be coming from the Savings from the First Semester of 2018 Budget duly approved by the Head of the Procuring Entity in the amount of Thirteen Million Three Hundred Eighty Four Thousand Pesos (P 13,384,000.00).</p>
<p>GCC CLAUSE 10.2</p> <p>Payment shall be made for complete delivery of the items listed in the Purchase Order/s to be issued by the Procurement Entity and only upon presentation of an Inspection and Acceptance Report by the General Services Division to the effect that the GOODS have been ordered and delivered in accordance with the terms of this contract and have been duly inspected and accepted.</p>	<p>GCC CLAUSE 10.2</p> <p>Payment shall be made only for the items/goods actually delivered and accepted by the Procuring Entity thru General Services Division and only upon presentation of an Inspection and Acceptance Report by the General Services Division to the effect that the GOODS have been delivered and accepted in accordance with the terms of this contract and have been duly inspected and accepted.</p>
<p>GCC CLAUSE 10.3</p> <p>Payments shall be made within 30 days provided that all the goods listed in the Purchase Order have been completely delivered with the corresponding Inspection and Acceptance Report issued by General Services Division of the SMWD.</p>	<p>GCC CLAUSE 10.3</p> <p>Payments shall be made within 30 days only for the actual items/goods delivered and accepted with the corresponding Inspection and Acceptance Report issued by General Services Division of the SMWD.</p>

Additional Permits Required to be Submitted as Part of Eligibility Documents are as follows:

1. LWUA Certification
2. Environmental Compliance Certificate
3. Proof of Compliance-Clean Air Act of the Philippines

FROM: Section VI. Schedule of Requirements

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item #	Description	Unit	Qty	Delivered, Weeks/Months
1	uPVC Pipe 150mmø with Rubber Ring	620	l.m	All items shall be delivered within 15 days upon receipt of duly approved Purchase Order (PO)
2	uPVC Pipe 200mmø with Rubber Ring	528	l.m	
3	uPVC Pipe 300mmø with Rubber Ring	2,300	lm	
4	uPVC Elbow 200mmø x 22.5°	2	pc	
5	uPVC Elbow 200mmø x 45°	4	pc	
6	uPVC Elbow 300mmø x 22.5°	2	pc	
7	uPVC 150mm x 22.5° Deg. Elbow	2	pc	
8	uPVC 150mm x 45° Deg. Elbow	2	pc	
	nothing follows			



Santa Maria WATER DISTRICT

TO: Section VI. Schedule of Requirements

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item #	Description	Qty	Unit	Delivered, Weeks/Months
1	uPVC Pipe 150mmø with Rubber Ring	620	l.m	All items shall be delivered within 15 days upon receipt of duly approved PO
2	uPVC Pipe 200mmø with Rubber Ring	528	l.m	
3	uPVC Pipe 300mmø with Rubber Ring	2,300	lm	
4	uPVC Elbow 200mmø x 22.5"	2	pc	
5	uPVC 150mm x 22.5" Deg. Elbow	2	pc	
	nothing follows			
	Grand Total			

THE NEW TECHNICAL SPECIFICATIONS ARE AS FOLLOWS:

Section VII. Technical Specifications

<p>UPVC (POLY-VINYL CHLORIDE) PIPE</p>	<p>This standard specifies the requirements for unplasticized polyvinyl chloride (uPVC) pipes with nominal outside diameter of 63mm to 500mm intended for the conveyance of potable water under pressure and of temperatures up to 45°C for use below ground.</p> <p>The pipe shall conform with the requirements of the Philippine National Standard Specification for Unplasticized Polyvinyl Chloride (uPVC) Pipes for Potable Water Supply (PNS 65:1993) except as otherwise specified herein.</p> <p>a. Definitions For the purpose of this standard, the following definitions shall apply:</p> <ol style="list-style-type: none"> 1. nominal pressure (PN) – The normal maximum internal pressure that the pipe can sustain in continuous use. This is expressed in megapascals (MPa) at 28°C. 2. design maximum induced stress – The estimated maximum tensile stress on the wall of the pipe along the transverse axis due to internal pressure to which the pipe can be subjected continuously without failure. This is used in calculating the wall thickness of the pipe. For the purpose of this standard, the maximum induced stress is 8.5MPa at 28°C.
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Santa Maria

WATER DISTRICT

3. pipe series (s) – It is used in classifying the pipe, which is the ratio of the design maximum induced stress to the nominal pressure of the pipe. The pipe series number may be rounded off to the nearest whole number.
4. nominal dimensions – Nominal dimensions and values indicated herein are minimum limits as defined in this standard.
5. unplasticized polyvinyl chloride (uPVC) pipe – A pipe produced basically from an extrusion grade PVC material of high molecular weight which does not contain any plasticizer.
6. rework material – PVC plastics from a processor’s own production that has been reground, palletized or solvated after having been previously processed.

b. Classification

Pipes shall be classified in accordance with the pipe series and/or the nominal pressure as follows:

1. **Series 8 (PN 1.03 MPa) ----- 150 psi**

In designing the maximum nominal pressure of the uPVC pipe under ambient temperatures other than 28°C, Table 1 – Maximum Induced Stress for other Temperatures may be utilized in arriving at the maximum induced stress to be used. The said table may also be used in derating the nominal pressures of the pipe specified in this standard. Table 1

Maximum Induced Stress for Other Temperatures

Water Temperatures, t, °C	Coefficient to be Applied to the Maximum Induced Stress
0 < t < 25	1
25 < t < 35	0.8
35 < t < 45	0.63

c. Requirements

1. Materials

(a). Class 12454-A or 12454-B Virgin Compound as Defined in ASTM D1784, with HDR Rating of 4,000 psi at 23°C.

(b). The material from which the pipes are made shall consist substantially of polyvinyl chloride that conforms with PNS 291, to which may be added only those additive necessary to facilitate the manufacture of quality pipes of good surface finish and sound physical, mechanical and chemical properties.

(c). None of the additives shall be used separately or together in quantities sufficient to constitute a toxic, organoleptic or microbial growth hazard or to impair the fabrication or



Santa Maria

WATER DISTRICT

welding properties of the product, or to impair the chemical, mechanical and physical properties (particularly long-term hydrostatic and impact strength) as defined in this standard.

(d). The use of the manufacturer's own clean rework material produced during the manufacture and production testing of products conforming with this standard is permissible. No other rework material shall be used.

2. Physical Characteristics

(a) Appearance – The pipe shall be homogeneous throughout and free from cracks, holes, encrustations and other foreign inclusions. Excessive die lines and/or stress marks (particularly in the socket and bell groove) as well as discernible material marbling are not allowed. The ends of the pipe shall be cleanly cut and square to the axis of the pipe.

(b) Color – The color of the pipe shall be blue nearest to RAL 5012 and shall be uniform throughout the entire surface of the pipe.

(c) Effect of Materials on Water Quality – When used under the conditions for which they are designed, non-metallic materials in contact with, or likely to come into contact with potable water shall not constitute a toxic hazard, shall not support microbial growth and shall not give rise to unpleasant taste or odor, cloudiness or discoloration of the water. Concentration of substances, chemicals and biological agents leached from materials in contact with potable water, and measurements of the relevant organoleptic /physical parameters shall not exceed the maximum values recommended by the World Health Organization in its publication "Guidelines for Drinking Water Quality" Vol. 1 "Recommendations" (WHO, Geneva, 1984).

(d) Pipe Ends – should be cleanly cut and square to the axis of the pipe. 15% chamfering at the spigot end.

(e) Ovality and Waviness – pipe should be round and should not have wavy inside and outside surface.

If lead or mono/di-alkyl tin compound are permitted to be used as stabilizers, the quantities of lead on tin measured as metals shall be determined in accordance with the method described in PNS 966/ISO 3114. The permitted levels shall not exceed the limits specified in Table 3.

Table 3. Maximum Levels of Toxic Substances

Toxic Substances	Extraction		Total Concentration Of 3 Extracts
	1 st	3 rd	
Lead, mg/L	1.00	0.05	
Di-alkyl Tin, C4 and other higher monologues measured as tin, mg/L		0.02	
Cadmium, mg/L			0.01



Santa Maria WATER DISTRICT

Mercury, mg/L			0.001
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(f) Physical Properties – The pipe shall conform with the physical properties specified in Table 4.

Table 4. Physical Properties

Property	Value	Test Method
Vicat Softening Temperature, °C, minimum	76	PNS 952/ISO 2507
Longitudinal Reversion, %, max.	5	PNS 951/ISO 2505
Water Absorption, g/m ² , max	40	PNS 953/ISO 2508

(g) Resistance to Acetone – The pipe shall not show signs of delamination or disintegration when immersed in acetone. Flattening and/or swelling of the pipe shall not be deemed constitute failure when tested in accordance with PNS 978/ISO 3472.

(h) Resistance to Sulfuric Acid – The mass of the specimen shall not increase by more than 0.316 g nor decrease by more than 0.013 g when tested in accordance with PNS 979/ISO 3473. the effect of the acid on the surface appearance of the specimen (roughening, bleaching or blackening) shall be ignored.

3. Mechanical Properties

The pipe shall conform with the applied pressure for the hydrostatic pressure tests indicated in Table 5 of PNS 65:1993 when tested in accordance with PNS 509/ISI 1167

Table 5 – Applied Pressure for Pressure Test at 280

Series	Unit: MPa			
	10	8	7	5
Burst Pressure	3.80	4.56	5.49	7.10
Short Term Pressure	3.60	4.30	5.20	6.70
Long Term Pressure	2.50	3.00	3.60	4.65

For specific calculation, the following formula for deriving the applied pressure may be used:



Santa Maria WATER DISTRICT

$$p = \frac{2 \times S \times t_{\text{min.}}}{D_m \times 1 \text{ min.}}$$

where:

p is the applied pressure, MPa

S is the design stress at 28°C, MPa

$t_{\text{min.}}$ is the minimum wall thickness, mm

D_m is the maximum mean outside diameter, mm

(a) Hydrostatic Pressure Test Requirement

(1) Burst Pressure – The pipe shall withstand the applied pressure for at least 60 seconds without failure. The value for the induced stress used in calculating pressure requirements is 37.5 MPa at 28°C.

(2) Short Term Pressure – The pipe shall withstand the applied pressure for at least one hour without failure. The value for the induced stress used in calculating pressure requirement is 35.7 MPa at 28°C.

(3) Long Term Pressure – The pipe shall withstand the applied pressure for at least 1000 hours without failure. The value for the induced stress used in calculating pressure requirement is 24.6 MPa at 28°C.

(b) Resistance to External Blows – The true impact rate of the batch at 28°C shall not exceed 10% when tested in accordance with PNS 967/ISO 3127.

NOTE – The true impact rate is the total number of broken test pieces divided by the total number of blows, expressed as percentage as if the whole bath had been tested. In practice, test pieces are drawn at random from the batch and only estimate of the true impact rates are obtained.

(c) Flattening – The pipe shall not show evidence of splitting, cracking and breaking when flattened to a minimum of 40% of its outside diameter when tested in accordance with PNS 800/ASTM D2241.

4. Joints

Elastomeric Neoprene rubber sealing ring type joints shall be used for sizes 63mm up to 500mm.

The Elastomeric Neoprene rubber conforming to ASTM D3139 with Back Flow Design and Stiffener for permanent lock.

Please provide sample upon submission of bid.



Santa Maria

WATER DISTRICT

d.

Sampling and Testing

1. At least one piece or set (depending on the quantities specified by the test method) of sample/s per production batch (one production run or one production shift, whichever is shorter) shall be taken at random for testing in accordance with the methods and procedures specified in this standard.
2. The pipes shall be tested in accordance with the method prescribed in this standard.
3. The frequency of sampling and testing of pipes is shown in Table 6.

e.

Marking

The pipe shall be clearly marked with the following information spaced at intervals of not more than one meter:

1. Name of Product
2. Nominal outside diameter, mm
3. Series and/or Nominal Pressure MPa
4. Manufacturer's name and/or its recognized trademark
5. The words "Made in the PHL" or Made in the Phil."
6. The words "For Potable Water"

Table 6 – Sampling and Testing Schedule for

Assessment of Compliance

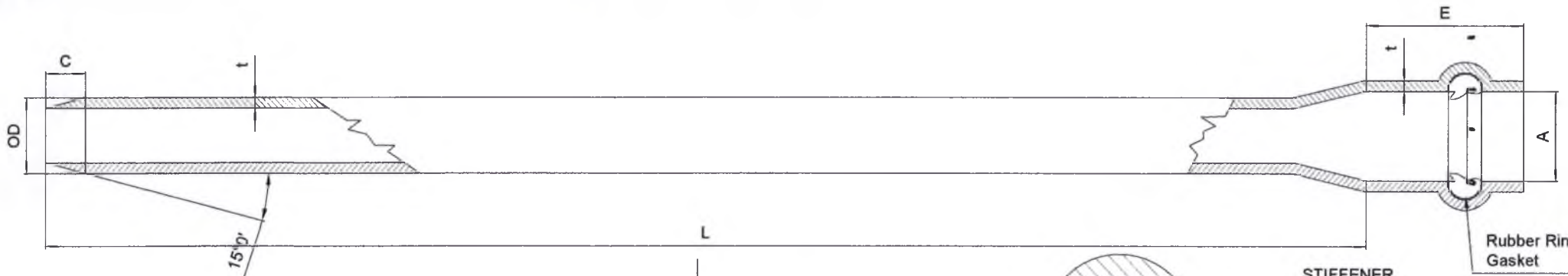
<u>Requirements</u>	<u>Minimum Frequency</u>
General Requirements	
Diameter and Wall Thickness	Hourly
Length	Every 8 hours
Appearance	Every pipe
Type Test	
Material	Once every 6 months or every change of formulation
Effect of materials on water quality	-do-
Vicat Softening	-do-
Water Absorption	-do-
Resistance to Sulfuric Acid	-do-
Long Term Pressure	-do-
Joints	-do-
Quality Control Test	
Longitudinal Reversion	Every 8 hours
Resistance to Acetone	-do-



Santa Maria

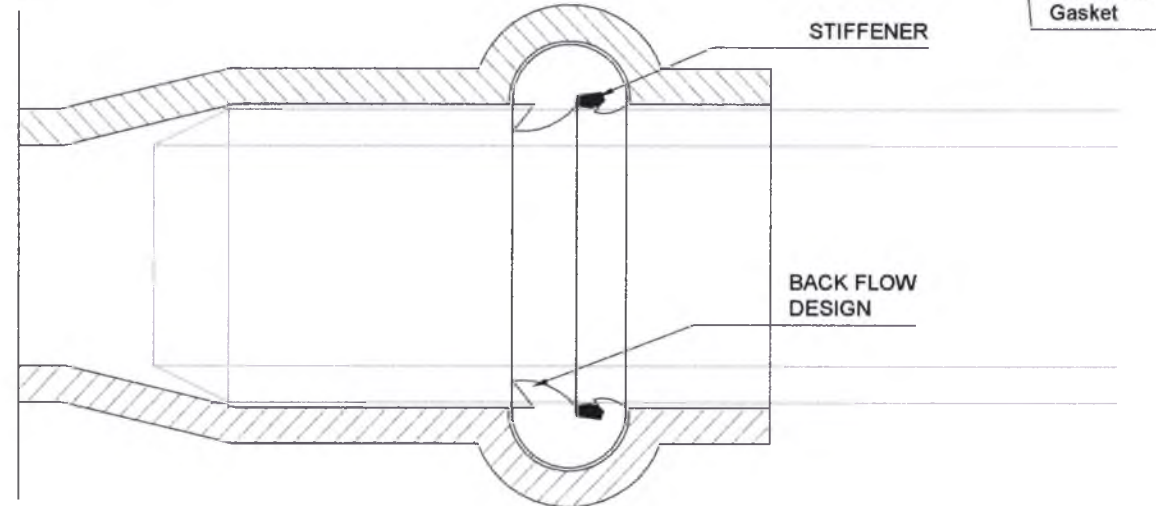
WATER DISTRICT

	Burst Pressure	-do-
	Short Term Pressure	Every 24 hours
	Resistance to External Blows	Every 8 hours



Pipe Material: Class 12454-A or 12454-B
 Virgin Compound as Defined
 in ASTM D1784, with HDR
 Rating of 4,000 PSI at 23 C°

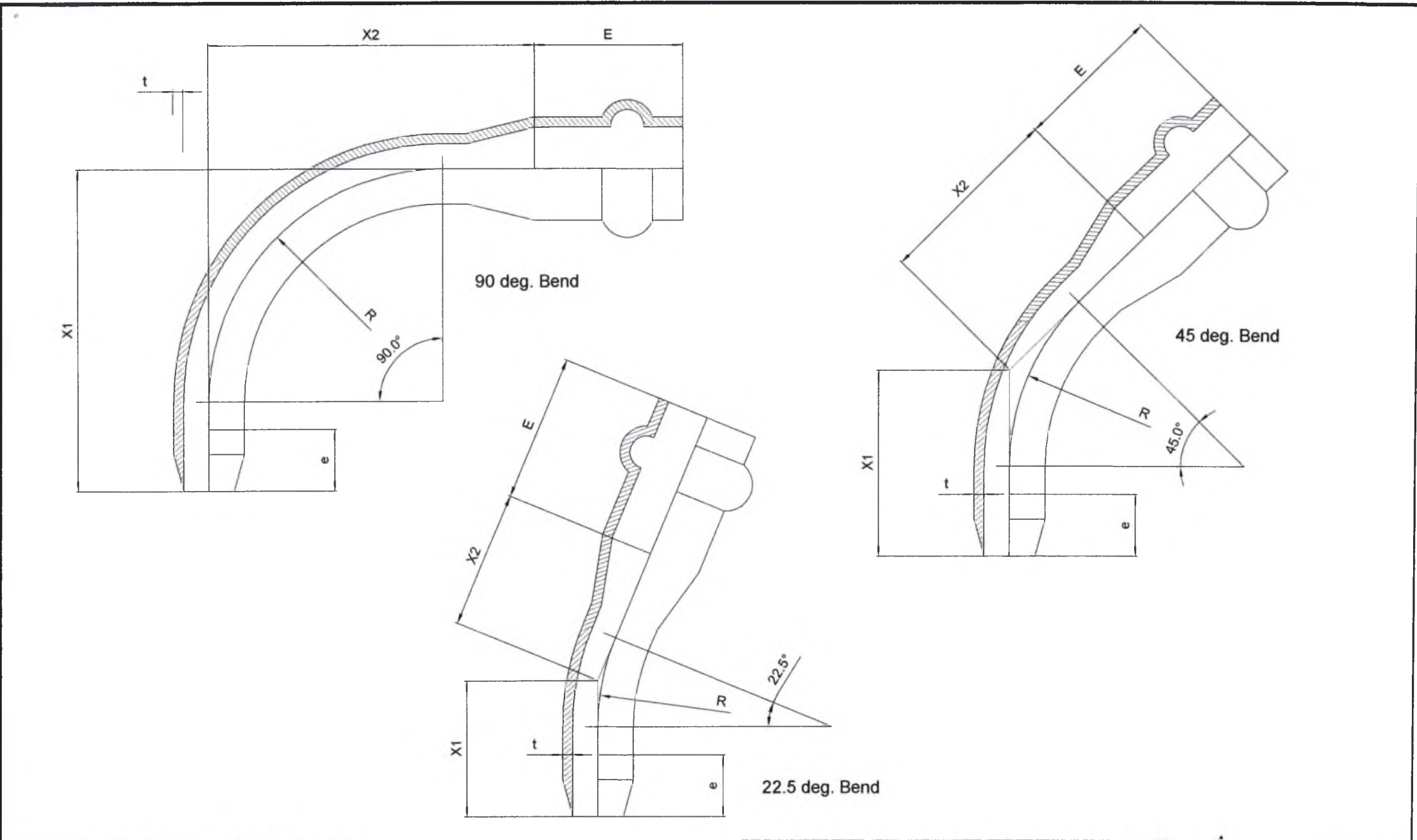
Rubber Ring Gasket: Elastomeric Neoprene
 Rubber Conforming to ASTM
 D3139 with BACK FLOW DESIGN
 and STIFFENER for PERMANENT LOCK


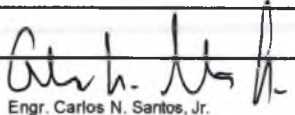


OD	diameter tolerance		A (mm)	C (mm)	L (M)	E (mm)	SERIES 8 (CLASS 150) PN 1.03 MPa
	OD (mm)	oval (mm)					Min. "t" (mm)
63	0.30	+ 0.8	63.6 - 64.1	8	6	97	3.6
90	0.30	+ 1.1	91.8 - 91.4	12	6	107	5.1
110	0.40	+ 1.4	111.4 - 111.8	14	6	114	6.3
160	0.50	+ 2.0	162.0 - 162.5	16	6	131	9.1
225	0.70	+ 2.7	227.7 - 228.4	20	6	154	12.8
280	0.90	+ 3.0	283.0 - 283.9	26	6	173	16.0
315	1.00	+ 3.8	318.8 - 319.8	36	6	195	18.0

Applied Pressure for Pressure Test	
SERIES 8 (CLASS 150) PN 1.03 MPa	
Burst Pressure (psi)	658.65
Short Term Pressure (psi)	621.09
Long Term Pressure (psi)	433.32

STANDARD SHOP DRAWING	STA. MARIA WATER DISTRICT		SHEET NO.
uPVC PIPES (Series 8/Class 150)	Prepared By: Emmanuel Antonio A. de Vera Department Manager B	Approved By: Engr. Carlos N. Santos, Jr. General Manager	1



STANDARD SHOP DRAWING	STA. MARIA WATER DISTRICT		SHEET NO.
uPVC PIPES (Series 8/Class 150)	Prepared By:  Engr. Emmanuel Carlos A. de Vera Department Manager B	Approved By:  Engr. Carlos N. Santos, Jr. General Manager	2

90 deg. Bend

OD	diameter tolerance		R (mm)	X1 (mm)	X2 (mm)	E (mm)	e (mm)	SERIES 8 (CLASS 150) PN 1.03 MPa
	OD (mm)	oval (mm)						Min. "t" (mm)
90	0.30	+ 1.1	250	450	320	107	110	5.2
110	0.40	+ 1.4	290	500	370	114	121	6.3
160	0.50	+ 2.0	480	720	580	131	145	9.2
225	0.70	+ 2.7	750	1020	880	154	177	12.9
280	0.90	+ 3.0	1050	1360	1200	173	204	16.0

Pipe Material: Class 12454-A or 12454-B
Virgin Compound as Defined
in ASTM D1784, with HDR
Rating of 4,000 PSI at 23 C°

Rubber Ring Gasket: Elastomeric Neoprene
Rubber Conforming to ASTM
D3139 with BACK FLOW DESIGN
and STIFFENER for PERMANENT LOCK

45 deg. Bend

OD	diameter tolerance		R (mm)	X1 (mm)	X2 (mm)	E (mm)	e (mm)	SERIES 8 (CLASS 150) PN 1.03 MPa
	OD (mm)	oval (mm)						Min. "t" (mm)
90	0.30	+ 1.1	250	300	170	107	110	5.2
110	0.40	+ 1.4	290	330	200	114	121	6.3
160	0.50	+ 2.0	480	440	290	131	145	9.2
225	0.70	+ 2.7	750	580	440	154	177	12.9
280	0.90	+ 3.0	1050	740	580	173	204	16.0

Applied Pressure for Pressure Test	
SERIES 8 (CLASS 150) PN 1.03 MPa	
Burst Pressure (psi)	658.65
Short Term Pressure (psi)	621.09
Long Term Pressure (psi)	433.32

22.5 deg. Bend

OD	diameter tolerance		R (mm)	X1 (mm)	X2 (mm)	E (mm)	e (mm)	SERIES 8 (CLASS 150) PN 1.03 MPa
	OD (mm)	oval (mm)						Min. "t" (mm)
90	0.30	+ 1.1	250	250	120	107	110	5.2
110	0.40	+ 1.4	290	270	140	114	121	6.3
160	0.50	+ 2.0	480	335	185	131	145	9.2
225	0.70	+ 2.7	750	420	280	154	177	12.9
280	0.90	+ 3.0	1050	520	360	173	204	16.0

STANDARD SHOP DRAWING

STA. MARIA WATER DISTRICT

SHEET NO.

uPVC PIPES (Series 8/Class 150)

Prepared By:

Emmanuel Enrique A. de Vera
Department Manager B

Approved By:

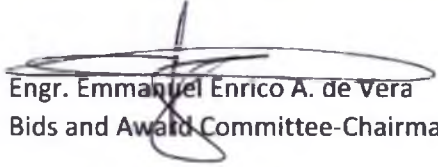
Carlos N. Santos, Jr.
Engr. Carlos N. Santos, Jr.
General Manager

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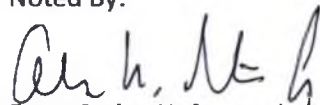
Santa Maria WATER DISTRICT

This SUPPLEMENTAL/BID BULLETIN, No. 2018-005 is issued this 30th day of October 2018 for clarifications and adjustments of some information in the Bid Data Sheet, Special Conditions of the Contract, Schedule of Requirements, Technical Specifications and Drawings which will become an integral part of the bidding documents. For the guidance and information of all concerned.



Engr. Emmanuel Enrico A. de Vera
Bids and Award Committee-Chairman

Noted By:



Engr. Carlos N. Santos Jr.
General Manager