



Republika ng Pilipinas
National Irrigation Administration
 (PAMBANSANG PANGASIWAAN NG PATUBIG)
 Lungsod ng Quezon

Annex "B"

SUMMARY OF CY 2019 PROGRAM OF WORK (POW)

Attachment "A"

REGION/PMO	: Region IV-A / Quezon IMO	Program No. :	: <u>1</u>
PROJECT TITLE :	: CIS Extension	Date:	: Feb-19
NAME OF SYSTEM/PROJECT	: ANAWAN SIP		
SYSTEM CATEGORY (NIS/CIS,NIP/SIP)	: SIP		
PROJECT DESCRIPTION	: Construction of Diversion Works, Canal Structures, Canal Lining and Canalization		

I GENERAL INFORMATION		Original	Revised
1. Project Location			
a. Region	IV- A		
b. Province/	Pollilo		
City / Municipality	Quezon		
District	I		
2. Service area/			
Designed area (Ha.)	20 has.		
3. Source of Water	Boboyog & Tugpan Creek		
3. a. Drainage Area			
3. b. Dependable Flow			
4. Type of Irrigation			
a. Run off the River	Latitude		
b. Reservoir	14-47-48.75"N		
c. Ground Water Pump	Longitude		
d. Others (surface pump)	121-35-6.03"E		
6. Overall Project Cost (P)			
a. GOP			
b. Loan Proceeds			
c. Others (Equity, etc.)			
TOTAL			
7. Physical Target (Overall)			
a. New Area (Ha.)	20 has.		
b. Restored Area (Ha.)			
c. Repair works (Ha.) (specific for rehab.)			
d. Other Activities: (pls. specify)	CANAL LINING - 0.83 PIPE LAYING - 0.26		
8. Overall Implementation Schedule		Original	Revised
a. Physical Starting Date		Feb-19	
b. Completion Date		Sep-19	

II WORK TO BE DONE (OVERALL Program)		Original	Revised
1. Performance Weight			
a. Contract Works (Civil Works)	94.41%		
b. Force Account Works	0.00%		
c. Others	5.59%		
TOTAL	100%		
2. Starting Date:	upon release of fund		
3. No. of days to Complete	240 days		
4. Physical Target			
a. New Area (Ha.)	20has.		
b. Restored Area (Ha.)			
c. Repair works (specific for rehab.)			
d. Other Activities: (Pls. specify)			

III BREAKDOWN OF CURRENT YEAR PROGRAM			
	Field Office	Central Office	Total
DIRECT COST			
I. CIVIL WORKS			
a. Contract Works	7,080,999.65		7,080,999.65
b. Force Account Works			
2. INSTITUTIONAL DEV'T PROGRAM	150,000.00		150,000.00
3. CONSTRUCTION SURVEY	44,000.35		44,000.35
4. PARCELLARY MAPPING/ SURVEY			
5. RIGHT OF WAY ACQUISITION PLANT/PROPERTY DAMAGES			
6. PROCUREMENT OF EQUIPMENT & VEHICLES			
7. FIELD SUPPORT, SUPERVISION & MONITORING	225,000.00		225,000.00
8. CONSULTING SERVICES			
9. TAXES (For selected FAPs)			
10. CONTINGENCIES			
TOTAL DIRECT COST			7,500,000.00

IV. SOURCES OF FUNDS
A. CAPITAL OUTLAY
1. GOP
2. Loan Proceeds

Prepared by:

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 Engineer A

Checked / Reviewed by:

REYNALDO M. CRISTOSTOMO
 Sr. Engineer A

Approved by:

FIDEL P. MARTINEZ
 Division Manager A

Noted by:

ROMEO M. LOPEZ
 Acting Regional Manager
 CDR-8 RMA-8 GWH-8

**PROJECT COST AND QUANTITIES DETAILED BREAKDOWN
CURRENT YEAR 2019 / OVERALL PROGRAM OF WORK
ANAWAN SIP / Polillo, Quezon**

Attachment D

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	ESTIMATED DIRECT COST		INDIRECT COST				TOTAL	
				UNIT COST	TOTAL EDC	OCM	PROFIT	VAT	TOTAL	UNIT COST	PROJECT COST
A.	Direct Cost										
	1. Civil Works										
	1. Contract Works										
	I. DIVERSION WORKS (Protection Works)										
	INTAKE STRUCTURE # 1										
	1 Cofferdamming	cu. m.	16.88	242.00	4,084.96	29.04	19.36	14.52	62.92	304.92	5,147.05
	2 Dewatering	cu. m.	27.36	93.20	2,549.95	11.18	7.46	5.59	24.23	117.43	3,212.88
	3 Class "A" Concrete (Ordinary)	cu. m.	2.65	10,927.71	28,958.43	1,311.33	874.22	655.66	2,841.21	13,768.92	36,487.64
	4 Class "A" Concrete (Ret. Wall)	cu. m.	5.64	14,084.88	79,438.72	1,690.19	1,126.79	845.09	3,662.07	17,746.95	100,092.80
	5 Class "A" Concrete (Barrel)	cu. m.	2.41	14,084.88	33,944.56	1,690.19	1,126.79	845.09	3,662.07	17,746.95	42,770.15
	6 Class "A" Concrete (Pier)	cu. m.	1.93	14,084.88	27,183.82	1,690.19	1,126.79	845.09	3,662.07	17,746.95	34,251.61
	7 Structure Excavation (Manual)	cu. m.	31.00	168.00	5,208.00	20.16	13.44	10.08	43.68	211.68	6,562.08
	8 Structure Backfill (Manual)	cu. m.	14.00	179.20	2,508.80	21.50	14.34	10.75	46.59	225.79	3,161.06
	sub-total				183,877.24						231,685.27
	INTAKE STRUCTURE # 2										
	1 Plain Concrete	cu. m.	2.88	5,879.38	16,932.61	705.53	470.35	352.76	1,528.64	7,408.02	21,335.10
	Cofferdamming	cu. m.	25.83	242.00	6,250.86	29.04	19.36	14.52	62.92	304.92	7,876.08
	Dewatering	cu. m.	291.55	93.20	27,172.46	11.18	7.46	5.59	24.23	117.43	34,236.72
	Class "A" Concrete (Ordinary)	cu. m.	8.27	10,927.71	90,372.16	1,311.33	874.22	655.66	2,841.21	13,768.92	113,868.97
	Class "A" Concrete (Ret. Wall)	cu. m.	16.44	14,084.88	231,555.43	1,690.19	1,126.79	845.09	3,662.07	17,746.95	291,759.86
	Class "A" Concrete (Barrel)	cu. m.	1.99	14,084.88	28,028.91	1,690.19	1,126.79	845.09	3,662.07	17,746.95	35,316.43
	Class "A" Concrete (Pier)	cu. m.	2.13	14,084.88	30,000.79	1,690.19	1,126.79	845.09	3,662.07	17,746.95	37,801.00
	Structure Excavation (Manual)	cu. m.	117.71	168.00	19,775.28	20.16	13.44	10.08	43.68	211.68	24,916.85
	Structure Backfill (Manual)	cu. m.	218.33	179.20	39,124.74	21.50	14.34	10.75	46.59	225.79	49,296.73
	Filter Drain	cu. m.	2.84	3,501.08	9,943.07	420.13	280.09	210.07	910.29	4,411.37	12,528.29
	sub-total				499,156.31						628,936.03

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	ESTIMATED DIRECT COST		INDIRECT COST				TOTAL	
				UNIT COST	TOTAL EDC	OCM	PROFIT	VAT	TOTAL	UNIT COST	PROJECT COST
	PROPOSED COREWALL										
	1 Plain Concrete	cu. m.	5.72	5,879.38	33,630.05	705.53	470.35	352.76	1,528.64	7,408.02	42,373.87
	2 Gravel Blanket	cu. m.	8.61	3,737.20	32,177.29	448.46	298.98	224.23	971.67	4,708.87	40,543.37
	3 Gravel Fill	cu. m.	9.24	2,296.00	21,215.04	275.52	183.68	137.76	596.96	2,892.96	26,730.95
	4 Dry Boulder	cu. m.	17.22	3,612.00	62,198.64	433.44	288.96	216.72	939.12	4,551.12	78,370.29
	5 Rubble Masonry 211ksm	cu. m.	17.22	6,794.29	116,997.67	815.31	543.54	407.66	1,766.51	8,560.80	147,416.98
	6 Class "B" Curt. Wall	cu. m.	9.88	9,555.18	94,405.18	1,146.62	764.41	573.31	2,484.34	12,039.52	118,950.46
	7 Cofferdamming	cu. m.	59.63	242.00	14,430.46	29.04	19.36	14.52	62.92	304.92	18,182.38
	8 Dewatering	cu. m.	585.64	93.20	54,581.65	11.18	7.46	5.59	24.23	117.43	68,771.71
	9 Concrete Blocks	cu. m.	35.00	7,937.40	277,809.00	952.49	634.99	476.24	2,063.72	10,001.12	350,039.20
	10 Class "A" Concrete (Ordinary)	cu. m.	45.35	10,927.71	495,571.65	1,311.33	874.22	655.66	2,841.21	13,768.92	624,420.52
	11 Class "A" Concrete (Ret. Wall)	cu. m.	45.08	14,084.88	634,946.39	1,690.19	1,126.79	845.09	3,662.07	17,746.95	800,032.51
	12 Class "A" Concrete (Barrel)	cu. m.	6.20	14,084.88	87,326.26	1,690.19	1,126.79	845.09	3,662.07	17,746.95	110,031.09
	13 Class "A" Concrete (Pier)	cu. m.	7.22	14,084.88	101,692.83	1,690.19	1,126.79	845.09	3,662.07	17,746.95	128,132.98
	14 Structure Excavation (Manual)	cu. m.	355.71	168.00	59,759.28	20.16	13.44	10.08	43.68	211.68	75,296.69
	15 Structure Backfill (Manual)	cu. m.	392.33	179.20	70,305.54	21.50	14.34	10.75	46.59	225.79	88,584.19
	16 Flashboard	bd. Ft.	40.65	130.00	5,284.50	15.60	10.40	7.80	33.80	163.80	6,658.47
	17 Reverse Filter	cu. m.	26.54	2,063.88	54,775.38	247.67	165.11	123.83	536.61	2,600.49	69,017.00
	18 Filter Drain	cu. m.	28.22	3,501.08	98,800.48	420.13	280.09	210.07	910.29	4,411.37	124,488.86
	<i>sub-total</i>				2,315,907.29						2,918,041.52
	<i>sub-total for DIVERSION WORKS</i>				2,998,940.84						3,778,662.82

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	ESTIMATED DIRECT COST		INDIRECT COST				TOTAL	
				UNIT COST	TOTAL EDC	OCM	PROFIT	VAT	TOTAL	UNIT COST	PROJECT COST
	II. CANAL STRUCTURES										
	1 Class "A" Concrete (Ordinary)	cu. m.	0.68	12,488.82	8,492.40	1,498.66	999.11	749.33	3,247.10	15,735.92	10,700.43
	2 Class "B" Concrete (Flooring)	cu. m.	59.84	9,424.29	563,949.51	1,130.91	753.94	565.46	2,450.31	11,874.60	710,576.06
	3 Class "B" Concrete (Wall & Tie Beam)	cu. m.	99.68	11,425.54	1,138,897.83	1,371.06	914.04	685.53	2,970.63	14,396.17	1,435,010.23
	4 Structure Excavation (Manual)	cu. m.	451.00	134.40	60,614.40	16.13	10.75	8.06	34.94	169.34	76,372.34
	5 Structure Backfill (Manual)	cu. m.	444.40	179.20	79,636.48	21.50	14.34	10.75	46.59	225.79	100,341.08
	6 Borrowhaul with Compaction	cu. m.	32.00	729.20	23,334.40	87.50	58.34	43.75	189.59	918.79	29,401.28
	7 6" dia. X 6m HDPE Pipe SDR 11	pcs.	45.00	14,488.29	651,973.05	1,738.59	1,159.06	869.30	3,766.95	18,255.24	821,485.80
	8 2" dia. X 6m HDPE Pipe SDR 11	pcs.	2.00	2,076.23	4,152.46	249.15	166.10	124.57	539.82	2,616.05	5,232.10
	9 2" dia. HDPE 45 deg. Elbow	pcs.	1.00	200.00	200.00					200.00	200.00
	10 6" dia. Gate Valve	pcs.	3.00	16,677.20	50,031.60	2,001.26	1,334.18	1,000.63	4,336.07	21,013.27	63,039.81
	11 Sand Bedding	cu. m.	5.44	1,663.20	9,047.81	199.58	133.06	99.79	432.43	2,095.63	11,400.23
	sub-total				2,590,329.94						3,263,759.36
	III. CANALIZATION										
	1 Common Excavation	cu. m.	39.00	134.40	5,241.60	16.13	10.75	8.06	34.94	169.34	6,604.26
	2 Common Backfill	cu. m.	63.80	112.00	7,145.60	13.44	8.96	6.72	29.12	141.12	9,003.46
	3 Borrowhaul w/ Compaction	cu. m.	25.00	729.20	18,230.00	87.50	58.34	43.75	189.59	918.79	22,969.75
	sub-total				30,617.20						38,577.47
	TOTAL FOR CIVIL WORKS				5,619,887.98						7,080,999.65
	2. Institutional Development Program	l.s.	1.00	150,000.00	150,000.00					150,000.00	150,000.00
	TOTAL										150,000.00
	3. Construction Survey	l.s.	1.00	44,000.35	44,000.35					44,000.35	44,000.35
	TOTAL										44,000.35
	4. Parcellary Survey										0.00
	TOTAL										0.00
	5. Field Support, Supervision & Monitoring	l.s.	1.00	225,000.00	225,000.00					225,000.00	225,000.00
	TOTAL										225,000.00
B.	INDIRECT COST										
	TOTAL										
	GRAND TOTAL				6,038,888.33						7,500,000.00

MASTERLIST OF ITEMS OF WORK

ANA N SIP
Polillo, Quezon

FUND SOURCE : GAA CY 2019 SIP

NAME OF STRUCTURES	PARTICULAR ITEM OF WORKS																	
	Plain Concrete	Gravel Blanket	Gravel Fill	Dry Boulder	Rubble Masonry 211ksm	Class "B" Curt. Wall	Cofferdamming	Dewatering	Concrete Blocks	Class "A" Concrete (Ordinary)	Class "A" Concrete (Ret. Wall)	Class "A" Concrete (Barrel)	Class "A" Concrete (Pier)	Structure Excavation (Manual)	Structure Backfill (Manual)	Flashboard	Reverse Filter	Filter Drain
	cu.m	cu.m	cu.m	cu.m	cu.m	cu.m	cu.m	cu.m	cu.m	cu.m	cu.m	cu.m	cu.m	cu.m	cu.m	bd. Ft.	cu.m	cu.m
I. CONTRACT WORKS																		
A. CIVIL WORKS																		
I. DIVERSION WORKS																		
1. Proposed Intake # 1	-	-	-	-	-	-	16.88	27.36	-	2.65	5.64	2.41	1.93	31.00	14.00	-	-	-
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	16.88	27.36	0.00	2.65	5.64	2.41	1.93	31.00	14.00	0.00	0.00	0.00
2. Proposed Intake # 2	2.88						25.83	291.55		8.27	16.44	1.99	2.13	117.71	218.33			2.84
TOTAL	2.88	0.00	0.00	0.00	0.00	0.00	25.83	291.55	0.00	8.27	16.44	1.99	2.13	117.71	218.33	0.00	0.00	2.84
Proposed Corewall	2.84	8.61	9.24	17.22	17.22	9.88	16.92	266.73	35.00	34.43	23.00	1.80	3.16	207.00	160.00	40.65	26.54	25.38
TOTAL	5.72	8.61	9.24	17.22	17.22	9.88	59.63	585.64	35.00	45.35	45.08	6.20	7.22	355.71	392.33	40.65	26.54	28.22

ITEM OF WORKS	NAME OF CANAL	STATION	Length	Class "A" Concrete (Ordinary)	Class "B" Concrete (Flooring)	Class "B" Concrete (Wall & Tie Beam)	Structure Excavation (Manual)	Structure Backfill (Manual)	Borrowhaul with Compaction	6" dia. X 6m HDPE Pipe SDR 11	2" dia. X 6m HDPE Pipe SDR 11	2" dia. HDPE 45 deg. Elbow	6" dia. Gate Valve	Sand Bedding
				cu.m.	cu.m.	cu.m.	cu.m.	cu.m.	cu.m.	cu.m.	cu.m.	cu.m.	cu.m.	cu.m.
I. CONTRACT WORKS														
A. CIVIL WORKS														
II. CANAL STRUCTURE														
1 Proposed Canal Lining	MC - 1	0+000.00 - 0+060.00	60.00	-	4.37	8.14	16.00	26.40	11.00	-	-	-	-	-
3 Proposed Canal Lining	MC - 1	0+060.00 - 0+180.00	120.00	-	8.74	13.15	70.00	55.00	-	-	-	-	-	-
4 Proposed Turn Out	MC - 1	0+180.00 - 0+181.00	1.00	0.68	-	-	1.00	1.10	-	-	-	-	-	-
5 Proposed Canal Lining	MC - 1	0+181.00 - 0+193.00	12.00	-	-	-	-	-	-	-	2.00	1.00	-	0.24
7 Proposed Canal Lining	SFD - MC1	0+000.00 - 0+080.00	80.00	-	5.82	8.77	25.00	27.50	2.50	-	-	-	-	-
8 Proposed Canal Lining	Brass Dam	0+000.00 - 0+200.00	200.00	-	14.56	27.12	32.00	35.20	3.00	-	-	-	-	-
9 Proposed Cut and Cover	MC - 2	0+000.00 - 0+070.00	70.00	-	5.10	10.19	85.00	61.60	-	-	-	-	-	-
10 Proposed Canal Lining	MC - 2	0+070.00 - 0+360.00	290.00	-	21.11	31.79	131.00	137.50	6.50	-	-	-	-	-
Proposed Pipe Laying	MC - 3	0+000.00 - 0+260.00	260.00	-	0.14	0.52	91.00	100.10	9.00	45.00	-	-	3.00	5.20
TOTAL			1092.00	0.68	59.84	99.68	451.00	444.40	32.00	45.00	2.00	1.00	3.00	5.44

ITEM OF WORKS	NAME OF CANAL	STATION	Length	Common Excavation	Common Backfill	Borrowhaul w/ Compaction
				cu.m.	cu.m.	cu.m.
I. CONTRACT WORKS						
A. CIVIL WORKS						
III. CANALIZATION						
1 Proposed Earth Canal	MC - 3	0+320.00 - 0+520.00	200.00	39.00	63.80	25.00
TOTAL			200.00	39.00	63.80	25.00