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Bcc: Tina Muna Barnes <tinamunabarnes@gmail.com>

Fri, Jan 31, 2020 at 11:09 AM

01-30-20	3:00 PM	01-30-20	Related materials for the CCU meeting dated January 28, 2020.*	Consolidated Commission on Utilities	35GL-20-1489

Sinseru yan Minagâhet,

Office of the Speaker • Tina Rose Muña Barnes
Committee on Public Accountability, Human Resources & the Guam Buildup

35th Guam Legislature
I Mina'trentai Singko na Liheslaturan Guåhan

Guam Congress Building | 163 Chalan Santo Papa | Hagatna, GU 96910
T: (671) 477-2520/1
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35GL-20-1489
Speaker Tina Rose Muña Barnes

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Gumai pribilehu yan konfedensia este siha na mensåhi. Solo espesiåtmente para hågu ma entensioña pat ma aturisa para unrisibi. Sen prubidu kumu ti un ma aturisa para manribisa, na'setbe, pat mandespåtcha. Yanggen lachi rinisibu-mu nu este na mensåhi , put fabot ago' guatu gi I numa'huyong gi as speaker@guamlegislature.org yan despues destrosa todu siha I kopian mensåhi. Si Yu'os ma'åse'.

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Dear Gov. Lou and Speaker Tina:

Pursuant to P. L. 31-233, attached are the following Consolidated Commission on Utilities [CCU] related materials for the CCU meeting dated January 28, 2020:

1. CCU Mtg packet for Jan 28, 2020
2. Approved Minutes of 8/27/19 and 9/4/19
3. GPA Resolutions 2020-02, 2020-03, 2020-04
4. GWA Resolutions 10-FY2020, 11-FY2020, 12-FY2020, 14-FY2020 & 15-FY2020

Respectfully submitted,
B. Lou Sablan
CCU Board Secretary

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11 items

CCU 1.28.20E.pdf
20.1 MB

Minutes August 27, 2019_GWA.pdf
555 KB

Minutes September 4, 2019, _Special Mtg.pdf
269 KB

Resolution 10-FY2020 Approval of Construct Contract for Tank Repair and Bypass Project.pdf
1.39 MB

Resolution 11-FY2020 Approval of Constrution Contract for Pressure Zone Realigment Phase I.pdf
4.78 MB

Resolution 12-FY2020 Relative to Change Order No1 for Pressure Zone Realignment and Tank Repair_Replacement Design Project.pdf
1.36 MB

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CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

Regular Board Meeting
CCU Conference Room, Gloria B. Nelson Public Service Building
5:30 p.m., January 28, 2020

AGENDA

1. CALL TO ORDER

2. APPROVAL OF MINUTES

3. COMMUNICATIONS
   - 3.1 Public Comments (2 min. per person)

4. GWA
   - 4.1 GM Report
   - 4.2 Financials
   - 4.3 Resolution 10-FY2020 Construction Contract for the Tank Repair and Bypass Project
   - 4.4 Resolution 11-FY2020 Construction Contract for the Pressure Zone Realignment Construction Phase I Project
   - 4.5 Resolution 12-FY2020 Change Order No. 1 for the Pressure Zone Realignment and Tank Repair/Replacement Design Project
   - 4.6 Resolution 13-FY2020 Re Modernization of the Guam Waterworks Authority Enterprise Resource Planning System
   - 4.7 Resolution 14-FY2020 Re Fund Increase to the Construction Management Contract for the Route 4 Relief Sewerline Rehabilitation and Replacement Project
   - 4.8 Resolution 15-FY2020 Issuance and Sale of Guam Waterworks Authority Water and Wastewater System Revenue Bonds, Approving Forms of Related Documents, Agreements and Actions, and Authorizing the Execution and Delivery

5. GPA
   - 5.1 GM Report
   - 5.2 Financials
   - 5.3 Resolution 2020-01 NEM Policy Requiring Installation of ESS for New NEM Solar PV & Wind Turbine Customers
   - 5.4 Resolution 2020-02 Procurement of a Contractor for the Bulk Supply of Diesel Fuel Oil No.2 for Power Generating Plants
   - 5.5 Resolution 2020-03 Extension of the Existing Contract for the Mgmt., Operations and Maint. of the Fuel Bulk Storage Facility with IP&E
   - 5.6 Resolution 2020-04 Recognizing & Congratulating GPA's Recent Professional Engineers

6. OTHER DISCUSSION
   - 6.1 CCU Rules Committee Update
   - 6.2 Management Pay Issues

7. ANNOUNCEMENTS
   - 7.1 Next CCU Meetings: GWA WS – Feb 18; GPA WS – Feb 20; CCU Mtg – Feb25

8. EXECUTIVE SESSION
   - 8.1 GWA Litigation Matters
   - 8.2 GPA Litigation Matter

9. ADJOURNMENT

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

Regular Board Meeting
GUAM WATERWORKS AUTHORITY
CCU Conference Room, Gloria B. Nelson Public Service Building
5:30 p.m., August 27, 2019

MINUTES

1. CALL TO ORDER

The CCU Chairman called the CCU regular monthly meeting for Guam Waterworks Authority for August 27, 2019 to order at 5:38 p.m. He said all five (5) Commissioners were present for a quorum. Others in attendance include:

Commissioners:

Joseph T. Duenas	CCU Chairman
Francis E. Santos	CCU Vice Chairman
Michael T. Limtiaco	CCU Secretary
Judith P. Guthertz	CCU Treasurer
Simon A. Sanchez	Commissioner

Executive Mgmt.:

Miguel Bordallo	GM / GWA
John Benavente	GM / GPA
Melinda Mafnas	AGMO / GPA
John Cruz	AGMET / GPA
Tricee Limtiaco	AGMA / GPA
Chris Budasi	AGMA / GWA
John Kim	CFO / GPA
Gilda Mafnas	CFO (A) / GWA
Kelly Clark	Legal Counsel / GWA
Graham Botha	Legal Counsel / GPA

Management & Staff:

Karen Grape	GWA
Vangie Lujan	Compliance & Safety / GWA
Heidi Ballendorf	Communications / GWA
Zina Pangelinan-Charfaurros	Personnel Administrator / GWA
Jason Tudela	GWA
Dave Fletcher	GWA
Ron Topasna	O&M Mgr., Water Treatment / GWA
Joyce Sayama	Mgmt. Analyst / GPA Ex.Office
Ann Borja-Gallarde	Mgmt. Analyst / GWA Ex.Office

Lou Sablan	Board Secretary / CCU

Guest:

Kurt Bilz	B&C
Ann Marie Muna;	AM Insurance

2. APPROVAL OF MINUTES

The Minutes of June 5, 2019 and July 23, 2019 were presented for approval.

Comm. Guthertz motioned to approve the Minutes subject to verification and written correction, second by Comm. Santos. There was no further discussion or objection and the motion passed.

3. COMMUNICATIONS

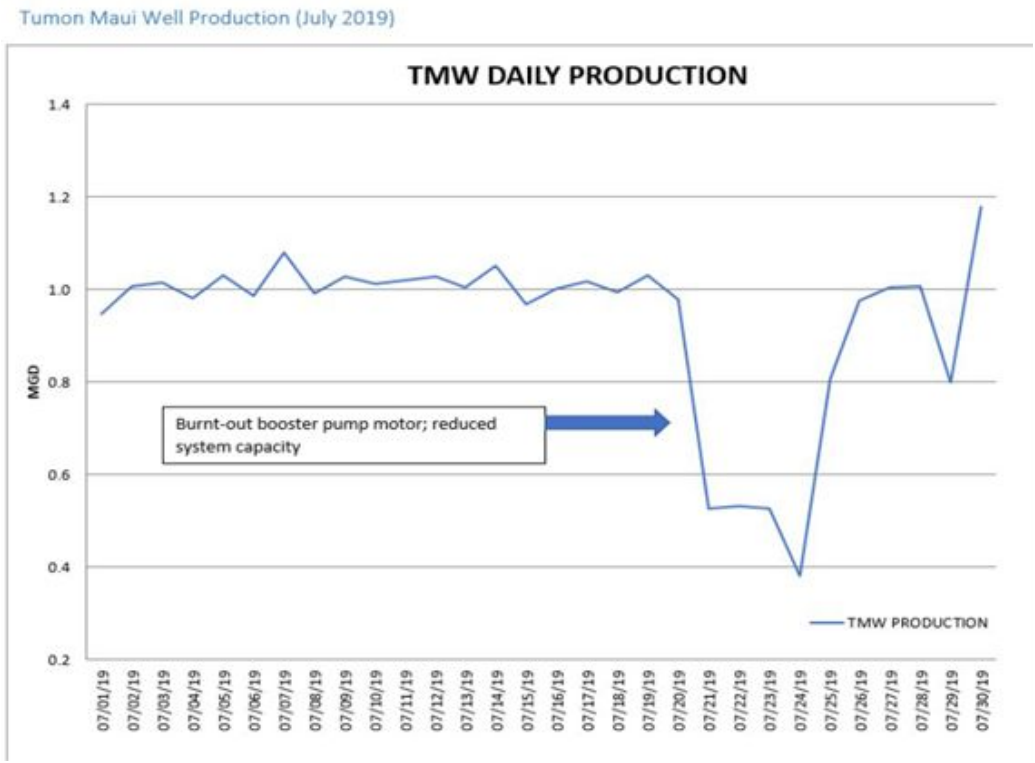
3.1 Public Comments - None

4. GWA

4.1 New Business

4.1.1 GM Report

GM Miguel provided his usual General Manager's Report.



Distribution (July 2019)

Monthly Distribution Summary - July 2019

Water Booster Pump Stations

	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	20	18	90.0%
	Central	7	15	15	100.0%
	Southern	7	15	15	100.0%
		25	50	48	96.0%



Wastewater Collections (July 2019)

Monthly Collections Summary - July 2019

Wastewater Pump Stations

	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	42	80.8%
	Central	29	63	52	82.5%
	Southern	27	58	49	84.5%
		78	173	143	82.7%





Wastewater Collections –Cleaning/Jetting (July 2019)

Astumbo, Dededo (by Fire Station)



Astumbo Gardens, Dededo



Carlos Heights, Tamuning

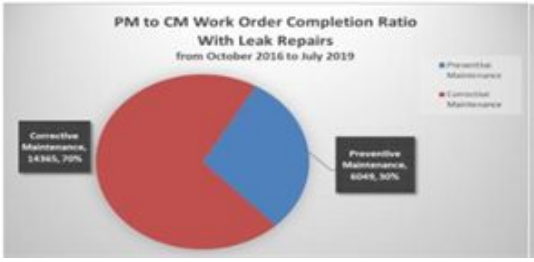


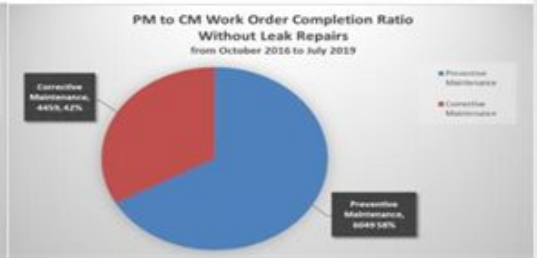
Harmon Industrial Park



Asset Management (July 2019)







Operational Issues

Production & Distribution

- Issues with Yigo production were resolved end of June and reservoir level improvements seen in early July. No major production issues.
- Continuing with increased security monitoring after hours due to attempted wire thefts
- Ugum WTP:
  - Membrane changeouts on-going
  - CIP in planning stages

Wastewater Collection & Treatment

- Pump stations
  - Route 1 pump stations and bypasses continue to be an on-going challenge
  - Asan by-pass pumps were changed out in early July to larger pumps; GPA assisted with change to 3-phase service
  - Piti pump station being operated manually to manage flows and in coordination with contractor's work in Asan
  - WW Hills pump station required warranty repairs on two of three pumps; repairs completed.
- Collection System:
  - Piti Sewer / Storm Water Interconnection
  - DPW, GEPA and GWA Working to resolve interconnection which has resulted in impacts to private property
  - Wet-weather complicating efforts to maintain flows
  - Piti pump station manual operation and bypass pumping also make this issue challenging
- NDWWTP
  - Oil & Grease discharged into plant from neighboring lot (CoreTech)
  - Temporarily impacted treatment process at the plant
  - Investigation by GWA staff with cooperation from CoreTech identified their on-site lift station as source of oil & grease
- Hagatna WWTP
  - Corrective maintenance on process equipment is on-going (mixers, aerators and gates for effluent pumps)
  - Working to get resolved before any major storm events
- EPA Inspections: inspections were conducted at
  - Several pump stations,
  - Umatac-Merizo WWTP
  - Agat-Santa Rita WWTP: inspector commented that WWTP was best he has seen anywhere in U.S.

Meters from January 2017 through July 2019

COMPLETED FIELD ACTIVITY JAN 2017 THRU JULY 2019 (POSTED IN CIS)	2017	2018	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	TOTAL:	COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Test Meter	5206	12191	1330	759	717	1317	664	703	326	23213	203
GWA - Meter Exchange	6487	13353	158	140	444	1583	1212	922	862	25161	5
TOTAL:	11693	25544	1488	899	1161	2900	1876	1625	1188	48374	208

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	6079	12259	937	730	518	1231	1135	621	643	24153
# OF FIELD CREW PERFORMING CHANGE OUTS:	19.4	16.1	1	1	10	8	7	7	7	
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS	10	6.3	0	0	4	9	6	6	7	
# OF SUPPLY STAFF TO ISSUE MATERIALS AND PROGRAM NEW METERS:	2	2	0	0	2	2	2	2	1	
# OF TEST FACILITY PERSONNEL TESTING METERS:	3	2	2	2	2	2	3	3	3	
TOTAL:	36.4	29.4	8	8	21	23	19	21	22	

REMAINING ACTIVE BADGER LP MODELS AS OF July 31, 2019: 7165

Stock #	Size	Meter Description	New Meters	Passed Field Meters	MMP	Meters Available	Meters at MTF	Total Count
60484	3/4"	METER, Badger AMR 5/8" X 3/4" RCDL Model M25 Disc Meter	37	0	0	37	18	55
74131	3/4"	METER, Badger AMR 5/8" x 3/4" * *WARRANTY* * RCDL Model M25	0	0		0	0	0
65293	3/4"	METER,Badger 5/8"x3/4" NSF61-G RCDL M25LL Disc Meter Integral	52	2	0	54	0	54
74131	3/4"	METER, Badger AMR 5/8" x 3/4" RCDL Model M25 ***RMI***	0			0	13	13
84769	3/4"	METER, Badger E-SERIES 5/8"X3/4" ULTRASONIC	975			975	5	980

Backbilling through July 31, 2019

Guam Waterworks Authority
Collections Report * on Accounts Backbilled thru July 31, 2019
For fiscal years 2015, 2016, 2017 and 2019 (Jul 31)

	Meter Changeout Period									
	FY2016		FY2017		FY2018		FY2019		TOTAL	
	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
FY2015										
FY2016	17	$ 882	0	$ -	0	$ -	0	$ -	17	$ 882
FY2017	0	$ -	535	$ 396,667	2	$ 578	0	$ -	537	$ 397,245
FY2018	0	$ -	1,335	$ 732,446	39	$ 9,664	0	$ -	1,374	$ 742,109
FY2019	0	$ -	492	$ 226,547	3,663	$ 1,721,944	3,183	$ 747,367	7,338	$ 2,695,857
Total Billed	**17**	**$ 882**	**2,362**	**$1,355,659**	**3,704**	**$ 1,732,186**	**3,183**	**$ 747,367**	**9,266**	**$3,836,094**

	Account Status														
	Total Collected			Current - Not Yet Due			Total Adjusted			Total Uncollected (Active)			Total Uncollected		
	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%
FY2015															
FY2016	17	$ 882	100%												
FY2017	486	310,431	78%	0	-	-	14	16,257	4%	16	50,244	13%	22	20,517	5%
FY2018	1,262	576,876	78%	0	-	-	41	50,543	7%	28	79,318	11%	43	35,373	5%
FY2019	6,346	1,380,171	51%	355	773,351	29%	69	61,273	2%	435	410,390	15%	134	70,745	3%
Total Collected	**8,111**	**$2,268,360**		**355**	**$773,351**		**124**	**$128,074**		**479**	**$ 539,952**		**199**	**$126,635**	
Collection Ratio		**59%**			**20%**			**3%**			**14%**			**3%**	

* Collections thru August 14, 2019

One Guam Update

- Santa Rosa Tank
  - No update on AAFB response to request for data substantiating operational improvements.
  - GWA to proceed with Santa Rosa Tank project with intertie up to AF property – no delay to the GWA project
- GAC Changeout
  - Scheduled after completion of GIAA; should be completed in August
- Navy Water Billing
  - Change in DoD funding: eliminated 'working capital fund' for FY20 to 'General Fund'
  - No more annual stabilized commodity rates
  - Funding must be received in advance of service; on quarterly basis for recurring products/services

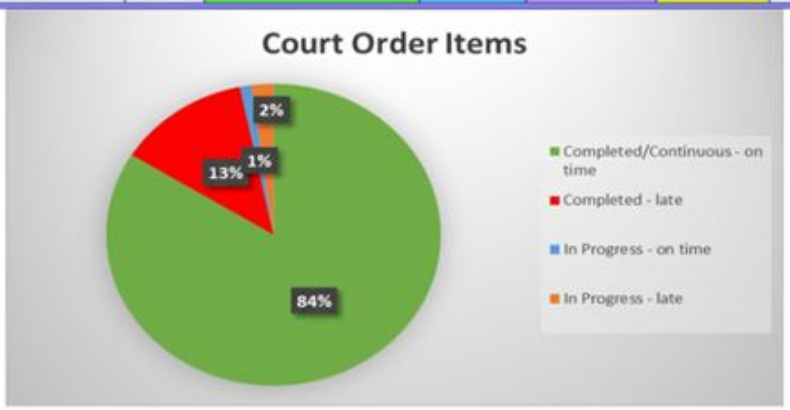
UTILITIES	FY19 Rate	FY20 WCF [1]	FY20 GF [2]	FY20 WCF to GF Delta
Electricity ($/MWH)	$203.53	$317.61	$397.52	$79.91
Potable Water ($/KGAL)	$10.18	$10.66	$9.13	($1.53)
Steam ($/MBTU)	$82.40	$117.37	$158.51	$41.14
Sewage NBG ($/KGAL)	$18.09	$22.75	$33.57	$10.82
Sewage AAFB ($/KGAL)	$18.09	$22.75	$21.19	($1.56)
Demin/Pure Water ($/GAL)	$0.47	-	$0.38	

$3.01/kgal GWA lifeline cost
$10.73/kgal above 5k

- PUC Rate Case Intervention
  - Navy Consultant engaged to review the matter
  - GWA provided presentation on August 22nd
  - Still waiting on Navy's decision

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	78	2	12	1	97.8%



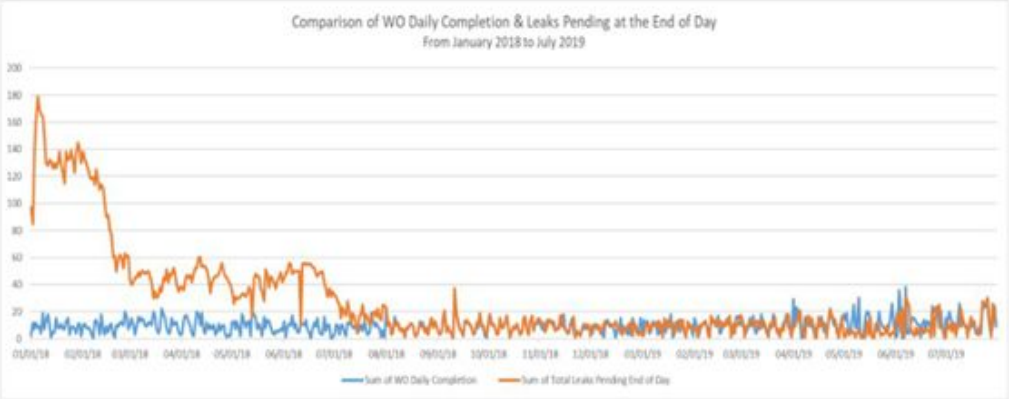
Status Information

- 2 items delayed
  - Water Reservoir Repair. Replacement or Relocation program, CO II C 29(b)(6)(i) – (10 additional tanks by 7th CO anniversary). (Affects final date of the Court Order.)
  - Umatac-Merizo Wastewater Treatment Plant – July/August 2019
- Final Date to complete all Court Order items may be delayed past December 31, 2020. [CO 29(b) has been expanded by 31% beyond the original Court Order Requirements [General Counsel is reviewing filing requirements and content).]
- Overflow or Bypass events reported to USEPA:
  - 08-03-2019, Umatac TP (Bypass) continues
  - 08-04-2019 Vietnam Veterans Memorial Highway, Barrigada [manhole across from Wendy's] (rain)
  - (Note: GWA has contracted security services that continue to prevent well-site break-ins.)

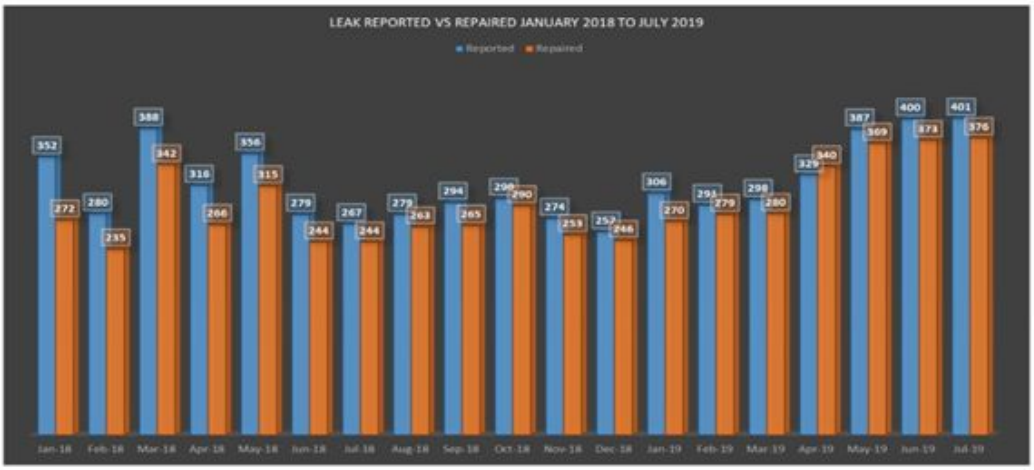
Land Acquisition Summary (as of July 2019)

GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
Tanks	Astumbo	Gov't. - CLTC	GWA and DLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DLM.
	Piti	Private	License Agreement for Piti Tank that fall on Dept. of Park Services property currently under DOI review 07/17/19.
Deep Wells	AG-12	Dept. of Agriculture/Manhita Farms	Right of Entry Agreement sent to Dept of AG for signature 05/24/18. 2nd follow up sent on 09/12/18. 3rd follow up sent on 04/10/19. Retracement Survey Property Map with DLM for review 03/06/19. Retracement Survey Property Map with DLM for final approval 06/05/19.
Booster Pump Station	Agfayan	Private	Authorization Form to perform appraisal and investigative services for L28, B19, T3734, Inarajan signed by CLTC 10/29/2018.
Sewer Pump Stations	2nd Adjacent Property to Southern Link	Private	Escrow & Title Land Purchase Accepted 06/03/19. Change Order 4 for Parceling Property Survey Map approved 06/26/19.
Asan Springs	Asan	Federal	License Agreement for Asan Springs facility that fall on Dept. of Park Services property currently under DOI review.

Leak Repair Summary (July 2019)



Comparison of Leaks Reported vs. Leaks Repaired (July 2019)



Monthly Leak Report Cost (July 2019)



Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00

There was discussion on purchase of Navy Water the CCU was surprised to learn that GWA has 20-30 Navy master meter connections around the island. It was mentioned that they purchase from GWA a total of $6.4M annually

Relative to the rate case, it was mentioned that November is the current timeframe for Navy's input on the rate case and that this may hamper bond borrowing for this year due to tight timelines

ACTION: CCU wants list of all the Navy Master Meters around the island (Assignee(s): GM/Karen Grape; Due Date: 09/24/2019).

4.1.2 Financials

The Commission reviewed the finances during the work session last week. There was some discussion on collections for GovGuam - CCU told management to stay on top of this issue and collect aggressively.

Discussion on GIAA - AGMA explained status to date on the 193k; credit adjustment will be given $25k with balance of $30k; 3rd account 100k in arrears - still in discussion; DPHSS has been settled and a credit was applied. There was suspicion of theft of water but cannot be proven. There is a credit applied to this account and this account has been settled. All gov accounts have been contacted and management is working with then to resolve their arrears

Comm. Guthertz said perhaps the senators are not budgeting / allocating enough funds for the agencies.

4.1.3 Resolution No. 40-FY2019 Relative to Approval of the Contract with JMI-Edison for the Purchase of Splicing Gels and Submersible Cables for Islandwide Deepwell Water Production

If approved, this resolution will authorize the purchase splicing gels and submersible cables of various sizes utilized for pump and motor maintenance activities at the over 100 existing water wells at various locations island wide. The purchases under this authorization will be used to replenish stock levels of these gels and submersible cables at the warehouse to ensure adequate quantities are available at all times to repair production wells and insure consistent and stable water supply. The project is necessary and urgent to maintain critical inventory levels. The materials to be procured under this authorization will be utilized at GWA Deep-well Production Facilities Island-wide.

Ten (10) entities registered for the bid procurement and there was one (1) responsive and responsible bidder who qualified – JMI Edison. Their bid was for three (3) years at an estimated amount of $754,371.00. The source of funding for this purchase is the FY2019/FY2020 GWA Water Production and Treatment Operations and Maintenance Budget.

Chairman Duenas said that this matter was discussed in depth at GWA's work session and if there were no other questions or discussion, he called for the question.

Comm. Sanchez motioned to approve Resolution 40-FY2019, second by Comm. Santos. There was no further discussion or objection and the motion passed unanimously.

4.1.4 Resolution No. 41-FY2019 Relative to Approval of the Construction Contract for the Santa Rosa, Santa Rita and Sinifa Reservoir Replacement with AIC International Inc.

The project is spread across three different water reservoir sites, including a new booster pump station and various control valve and line upgrades. The reservoirs are listed under the U.S. District Court Order. The following are project locations and general scope of work.

Santa Rosa Reservoir

Base Bid Items 1 to 6:

- A new Santa Rosa Reservoir (1.0 MG) will be constructed adjacent to the existing steel tank. Work will include the new reservoir, new booster pump station, off-site improvements and various site upgrades.
- The existing booster pump station will be demolished and replaced with a new building structure, piping, pump system, instrumentation, controls, and a SCADA system.
- Once the new reservoir has been constructed, the existing steel reservoir will be taken offline for inspection. After the API and structural inspection, the steel tank will be either repaired or demolished.
- Work will also occur at several off-site locations (6 locations). The work consists of line interconnections and installation of new valves. The work is in line with the Pressure Zone Realignment plan.

Additive Bid Items 7 and 8:

- The work includes the construction of the Department of Defense inter-tie on GWA and possibly DoD property. Work is separated into two bid items. Additive Bid Item 7 is for work within GWA property, while Additive Bid Item 8 is for work within DoD property.

Additive Bid Item 9:

- The work includes the construction of 4,042 L.F. of 12" waterline on Route No. 1.

Additive Bid Item 10 and 11:

- The work includes the demolition of the existing steel tank and disposal of the oiled sand foundation in accordance with applicable regulations.
- The inclusion of the additive work will be determined after the API and structural inspections have been conducted.

Eighteen (18) bid packets were picked up and three (3) proponents submitted bids. All bid proposals were reviewed and the engineering and construction management team determined that AIC International was the most responsive and responsible bidder and met all the bid requirements. The total cost for the construction is $26,417,650 and GWA management is

seeking CCU approval to enter into a contract for this amount. He funding source for this project will be from bond, grant, SDC and internally funded CIP funds.

Comm. Sanchez motioned to approve Resolution 41-FY2019, second by Comm. Santos.

In discussion, Comm. Sanchez asked when the tanks will be completed; GM Miguel said they have to wait for the $40M bond borrowing in order to complete the tank projects which would be determined by the rate case.

On motion the motion, the vote was unanimous and the resolution was approved.

5. ANNOUNCEMENTS

6.1 Next CCU Meetings:

The Chairman announced that the next meeting would be for GPA on August 29th at 5:30 p.m.

In addition, he called for a special meeting at 10 a.m. on Sept. 4th to discuss the request from the Attorney General's request for GWA to join the lawsuit on PFAS because we may have damages as well and GPA's budget review**.**

6. ADJOURNMENT

There being no other business to bring before the Commission,

Comm. Guthertz motioned to adjourn the meeting; second by comm. Santos. It was unanimous and the meeting adjourned at 6:43 p.m.

\\s\\
Bls

Attested

_____ _____

JOSEPH T. DUENAS, Chairman MICHAEL T. LIMTIACO Secretary

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671) 648-3002 | guamccu.org

Special Board Meeting
CCU Conference Room, Gloria B. Nelson Public Service Building
10:00 a.m., September 4, 2019

MINUTES

1. CALL TO ORDER

The CCU Chairman called the CCU SPECIAL MEETING to order at 10:07 a.m. He said four (4) Commissioners were present for a quorum. Comm. Guthertz was excused. Others in attendance include:

Commissioners:

Joseph T. Duenas	CCU Chairman
Francis E. Santos	CCU Vice Chairman
Michael T. Limtiaco	CCU Secretary
Simon A. Sanchez	Commissioner

Executive Mgmt.:

Miguel Bordallo	GM / GWA
John Benavente	GM / GPA
Melinda Mafnas	AGMO / GPA
John Cruz	AGMET / GPA
Tricee Limtiaco	AGMA / GPA
Cora Montellano	CFO (A) / GPA
Kelly Clark	Legal Counsel / GWA
Graham Botha	Legal Counsel / GPA

Management & Staff:

Art Perez	Communications / GPA
Lorraine Guerrero	Budget/ GPA
Monica Calvo	Budget / GPA
Roman Cruz-Sablan	Budget / GPA
Vien Wong	IT / GPA
Joyce Sayama	Mgmt. Analyst / GPA Ex.Office
Ann Borja-Gallarde	Mgmt. Analyst / GWA Ex.Office
Lou Sablan	Board Secretary / CCU

2. COMMUNICATIONS

2.1 Public Comments – None

The Chairman said he would like to modify the Agenda and begin the meeting with executive session discussion first and then the budget resolution matter. There was no objection and the meeting agenda was modified accordingly.

Comm. Santos motioned to move the meeting to Executive Session; second by Comm. Sanchez.

Executive session was called to order immediately; it was 10:15 a.m. After Executive Session, the meeting recessed for 10 minutes. It was 10:45 a.m.

The Chairman called the meeting back to order at 11:01 a.m., for discussions in regular session beginning with the GPA Budget.

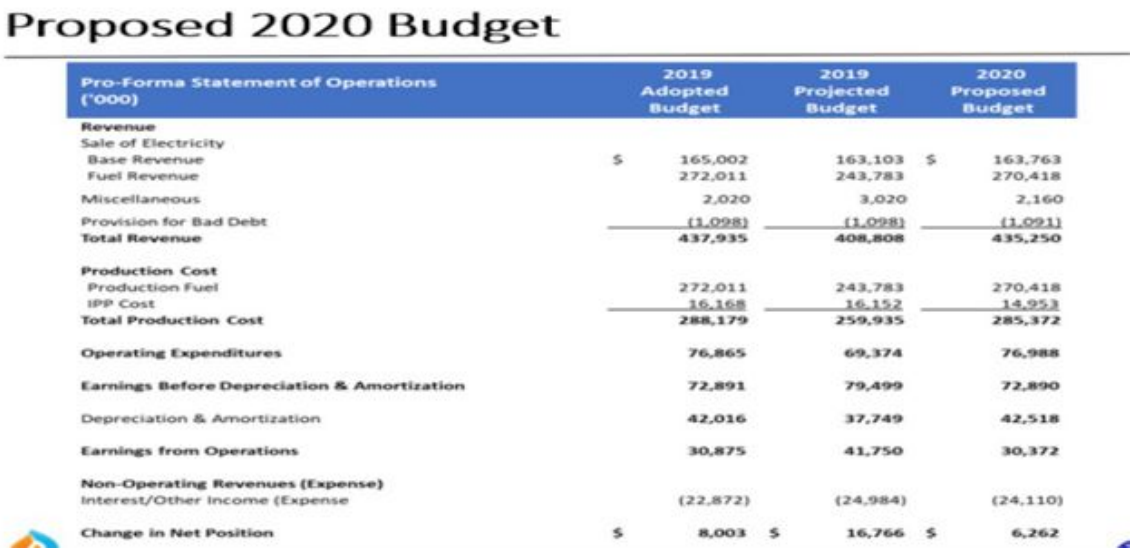
3. GPA

3.1 Resolution 2019-12 Approval of FY2010 Budget

Section 6.11 of the GPA Bond Indenture Agreement requires the Authority to provide a copy of an approved budget to the Bond Trustee prior to the beginning of each fiscal year. The General Manager has carefully reviewed and proposes the budget for Fiscal Year 2020 totaling $435,250,000 provision for bad debt of $1,091,000. The GM has reviewed and proposes a Revenue Funded Capital Improvement Project budget totaling $27,620,571. The Fiscal Year 2020 Budget is based on a Non-Fuel Revenue forecast of $163,763,000 and miscellaneous revenues of $2,160,000 and a Fuel Revenue forecast of $270,418,000 and less $1,091,000 provision for bad debt for *total revenues of $435,250,000.* Total Operations and Maintenance budget includes Labor and Retiree's benefit costs of $48,221,673; Non-Labor cost of $35,250,324; less Capitalized O&M of $6,484,303 for total O&M Budget of $76,987,694; Bad Debt Expense of $1,091,000, Independent Power Producers costs plus Aggreko of $27,648,000; Debt Service of $47,737,000; Production Fuel of $270,418,000 and revenue Funded Capital Improvement Projects of $27,620,571. Funds pledged for the Bond Reserves are not included in the overall budget amounts.

The General Manager of the Guam Power Authority has created and thoroughly reviewed the budget for *Fiscal Year 2020 totaling $436,431,000.* The CCU Commissioners noted that the budget provides funding of Revenue Funded Capital Improvement Projects totaling $27,620,571.

GPA CFO John Kim presented the Budget for FY2020.



Proposed 2020 Budget

Pro-Forma Statement of Operations ('000)	2019 Adopted Budget	2019 Projected Budget	2020 Proposed Budget
Revenue			
Sale of Electricity			
Base Revenue	$ 165,002	163,103	$ 163,763
Fuel Revenue	272,011	243,783	270,418
Miscellaneous	2,020	3,020	2,160
Provision for Bad Debt	(1,098)	(1,098)	(1,091)
Total Revenue	437,935	408,808	435,250
Production Cost			
Production Fuel	272,011	243,783	270,418
IPP Cost	16,168	16,152	14,953
Total Production Cost	288,179	259,935	285,372
Operating Expenditures	76,865	69,374	76,988
Earnings Before Depreciation & Amortization	72,891	79,499	72,890
Depreciation & Amortization	42,016	37,749	42,518
Earnings from Operations	30,875	41,750	30,372
Non-Operating Revenues (Expense)			
Interest/Other Income (Expense	(22,872)	(24,984)	(24,110)
Change in Net Position	$ 8,003	$ 16,766	$ 6,262

Proposed 2020 Budget (continued)

Operating Expenses Budget - Highlight

High System Reliability

- Reduce outage due to vegetation
  - Vegetation Management- $497k
  - Village Management Program - $230k
- Provide wider coverage of security - $1.3 million
- Improve Business Risk
  - Fire Alarm/ Gas Suppression Maintenance - $250k
  - USDA Snake Controls - $219k
- Improve Environmental Concerns
  - EPA Emission Testing - $200k
  - Used Oil Disposal - $250k
  - Oxidation Catalyst - $200k
  - Batteries & Waste - $100k
- Monotube Refurbishment (T&D) - $100k
- New generation
  - LNG Feasibility Study - $250k

Proposed 2020 Budget (continued)

Operating Expenses Budget - Highlight

Commitment to Workforce

- Train new generation of employees – 20 new apprentice - $1.2 million
- Move employees to 20th market percentile - $500k

Superior Customer Service

- Improve process efficiency
  - Process improvement
    - Update SOP and remove unnecessary steps and documents
- One utility – GPWA
- Customer Bill Printing Services and newsletters - $375k
- DSM Program - $300k

Optimize the use of Technology

- Data Circuit Lines (PSCC) - $230k
- Robotics Process Automation (RPA) - $87k

Proposed 2020 Budget (continued)

Debt Service (Interest & Principal Combined) '000	2018	2019	2020 Proposed
2010 Senior Lien	$ 2,000	$ -	$ -
2012 Revenue Bond	17,086	31,467	35,232
2014 Revenue Bond	5,083	5,084	5,087
2017 Revenue Bond	5,915	7,607	7,418
	$ 30,084	$ 44,158	$ 47,737

Debt Service Coverage Ratio	2019 Projected	2020 Proposed
Debt Service Coverage Ratio (Bond Method)	1.90	1.56
Debt Service Coverage Ratio (S&P Method) (Bond DSCR - 1.3)	1.57	1.37

Proposed 2020 Budget (continued)

Capital Projects	2018 Adopted	2019 Adopted	2020 Proposed
Carry Over	$ 3,500,000	$ 6,176,661	$ 7,686,882
General Plant	13,280,813	13,437,426	13,515,696
Line Extensions	4,270,187	4,451,434	3,840,293
Engineering Projects	4,179,000	2,407,924	2,577,700
	$ 25,230,000	$ 26,473,445	$ 27,620,571

Proposed 2020 Budget (continued)

Capital Expenditures Budget - Highlight

High System Reliability

Improve generation reliability

- Cabras 1 & 2 - $5.2 million
  - Replacement of Burner Front System
  - Overhaul and Upgrades to Feedwater Heaters and Service Water Coolers
  - Boiler Tube Replacements, Parts, Fire Pumps, etc.
- Gas CT - $1.2 million
  - Overhauls and Upgrades at Macheche CT and Dededo CT
- Diesel Plants - $1.7 million
  - Continued Overhaul and upgrades
- T&D Substations - $1.1 million
  - Upgrades of Circuit Breakers

Optimize the use of Technology

- Disaster recovery
  SCADA - $1.4 million
- E1 Upgrade - $1.4 million

	Guam Power Authority	
	FY 20 PROPOSED Revenue Requirement ($000)	
	as of August 22,2019	
1	**Proforma Income Statement**	**FY2020**
2		
3	Existing Base Rate Revenues	$ 163,763
4	Fuel Revenues	270,418
5	Miscellaneous Revenues	2,160
6	**Total Revenues**	$ 436,341
7	Bad Debt Expense	$ (1,091)
8	**Net Operating Revenues**	**$ 435,250**
9		
10	Production Fuel	270,418
11	IPP Costs	11,586
12	Aggreko Lease Payment	3,368
13		
14	Production Non-fuel	23,040
15	Transmission and Distribution	13,288
16	Administrative and General	34,727
17	Customer Accounting	5,933
18	**Total O&M Expenses**	76,988
19	Depreciation	42,518
20		
21	**Total Operating Expenses**	$ 404,878
22		
23	**Earnings From Operations**	**30,372**
24		
25	Other Revenues (Expenses):	
26	Investment Income	2,004
27	Interest expense (ST Debt)	(29)
28	Interest expense (2010 Senior Lien TE Bond)	-
29	Interest Expense (Aggreko Lease Payment)	(531)
30	Interest expense (2012 Revenue Bond)	(16,237)
31	Interest expense (2014 Revenue Bond)	(3,567)
32	Interest expense (2017 Refunding Bond)	(7,418)
33	Interest expense (IPP's)	-
34	AFUDC	-
35	Other Expense/Income	
36	Amortization of Issuance Costs	1,667
37		
38	**Net Earnings(Loss) Before Capital Contribution**	**6,261**
39	Capital Contributions	-
40		
41	**Increase (Decrease) in Net Assets**	**$ 6,261**

	Guam Power Authority	
	FY 20 PROPOSED Revenue Requirement ($000)	
42		
43	**Debt Service Coverage Calculation**	
44	Earnings From Operations	$ 30,372
45	Add Interest Income (Net of Const. Fund Interest)	1,415
46	Add: Depreciation	42,518
47	Balance Available for Debt Service	74,305
48	IPP Debt Service + Aggreko lease	8,929
49	Balance After IPP Debt Service	65,376
50	**Debt Service**	
51	Bond Interest Expense	27,222
52	Bond Principal	20,515
53	Total Debt Service	47,737
54		
55	Debt Service Coverage (Bond Method)	**1.56**
56	Debt Service Coverage (S&P Method)	**1.37**
57		
58	**Internal Cashflow Statement**	
59	Total Cash Generated	$ 47,113
60	CIP's-Internally Funded	(27,621)
61	Principal Payment (2010 Senior Lien TE Bond)	-
62	Principal Payment (Aggreko Lease Payment)	(8,399)
63	Principal Payment (2012 Revenue Bond)	(18,995)
64	Principal Payment (2014 Revenue Bond)	(1,520)
65	Principal Payment (2017 Refunding Bond)	-
66	MEC Recapitalization	(3,764)
67	Decrease (Increase) in WC Requirements:	-
68	Materials Inventory	(1,000)
69	Other WC Requirement	1,174
70	Construction Fund Interest Income	(589)
70	Cash carry over- surplus (deficit)	(113)
71	Surplus Fund Shortfall/(Excess)	13,714

There was discussion on CC&B. Comm, Santos said this project is going on 5 years since its inception. He asked about a timeline – when it will be completed. AGMA Limtiaco said that the processes are in place but what she is finding is that there is a lot of preliminary work that needs to get done before the program is fully operational. The AGMA said it requires a lot of cleanup and it affects human processes and it affects not only customer service but IT, finance etc. A lot of work is being done and she said she will detail this in her next report to update ongoing work and the work ahead. Comm. Duenas recommended that when making the report that she ask GWA AGMA Budasi to also be present and do a joint update.

The CCU encouraged GPA and GWA to meet and discuss this issue. GM Benavente said they would plan for an October work session.

ACTION: CC&B combined meeting GPA/GWA to update status of project (Assignee(s): John Benavente, John Kim; Due Date: Oct 2019)

Comm Sanchez asked about LEAC does this budget anticipate any recovery of the $9-10M for LEAC or does the cash flow for this budget takes no position of whether the LEAC money is recovered. The CFO confirmed that the under-recovery is included in the $27M proposed budget.

There was discussion on SCADA and the renovation of upper Tumon for remote operations. Comm. Santos was concerned that we continue to budget and spend money out side of our house and that GPA/GWA should be looking at investing in-house.

It was discussed to develop a periodic / ongoing progress report for projects like CC&B, Oracle, E One upgrade and SCADA so that everyone is on the same page and invite the Commission. GM Benavente said perhaps we can begin at the October work session to initiate this progress report and perhaps a schedule / timeline.

Comm. Limtiaco asked about the 20th market percentile matter – it was confirmed that this is being funded by base rates; there is no impact on rates. It was mentioned that the pay for performance is currently at 2-4% for those that are below the 20th market percentile.

Comm. Sanchez asked about the summary of the payroll budget – FY20 asks for $48.2M how does this compare to the total actual payroll. CFO said that the projections for FY2019 is $46.3M for 456 FTE's, not including apprentices. The projected overtime for FY19 is $3.2M due to Saipan; with Saipan netted out the $1.2-1.4M.

Comm Santos asked management to give the Commission a list of all transfers that was affected in FY2019 soon after the end of the fiscal year.

Comm. Sanchez asked confirmation if the Commission is being asked to approve the budget for FY2020 – everything on page 4, 5 and 6 of the FY20 Budget Presentation Booklet. The CFO confirmed yes.

I was mentioned that relative to transfer authority, the GM is authorized to transfer 10% of the non-labor budget.

Comm. Sanchez motion to approve Resolution 2019-12 relative to FY 2020 budget, second by Comm. Santos.

In discussion Comm. Sanchez said we will be approving the expenditures as detailed on Page 4-5-6 of the FY Budget Presentation Booklet.

Relative to bond reserves, Comm. Sanchez motioned to delete Subsection E, page 2, lines 46-48, second by Comm. Santos. There was no further discussion or objection and the motion passed.

Comm. Sanchez motioned to add verbiage "no more than 10% of" and delete the word "within", second by Comm. Santos. There was - no objection and the motion passed.

Comm. Sanchez motioned to approve increasing the GM's obligating authority to $1M and add verbiage " which the GM shall advise the Commission of all expenditures authorized in excess of $1M", second by Comm. Santos. There was no further discussion or objection and the motion passed.

The vote on the main motion with all the amendments; - 4ayes / 1 absent – the motion passed.

The chairman called for a 5-minute recess; it was 12:15

4. ANNOUNCEMENTS

4.1 Next CCU Meetings:

The Chairman announced that the next CCU meeting would be a work session for GWA on Sept. 17; a work session for GPA on Sept. 19 and the regular monthly CCU meeting on Sept. 24.

5. EXECUTIVE SESSION

5.1 GWA Litigation / Atty. Kelly Clark: Northern Wastewater Treatment Plant Litigation

5.2 GWA Litigation / Atty. Kelly Clark: Litigation Filed by GovGuam for PFAS Damages

After the 5-minute recess the Chairman called the meeting back to open session.

GWA Legal Counsel Clark presented a resolution relative to the GovGuam PFAS damages litigation.

Comm. Sanchez motioned to approve Resolution 42-FY2019 relative to joining the Government of Guam litigation against the manufacturers PFAS chemicals that have entered into the ground water of Guam, second by Comm. Limtiaco. The vote was 4 yes / 1 absent.

In discussion Comm. Sanchez said he met with the Attorney General this morning in executive session and he briefed the commission on the perspective litigation being developed. There seems to be an advantage for GWA ratepayers to participate and agree with management that we should adopt this resolution.

6. ADJOURNMENT

There being no other business to bring before the Commission,

Comm. Santos motioned to adjourn the meeting; second by Comm. Sanchez. It was unanimous and the meeting adjourned at 1:43 p.m.

\\s\\
Bls

Attested

_____ _____

JOSEPH T. DUENAS, Chairman MICHAEL T. LIMTIACO Secretary

GUAM WATERWORKS AUTHORITY

Management Report
GWA Work Session, January 21, 2020

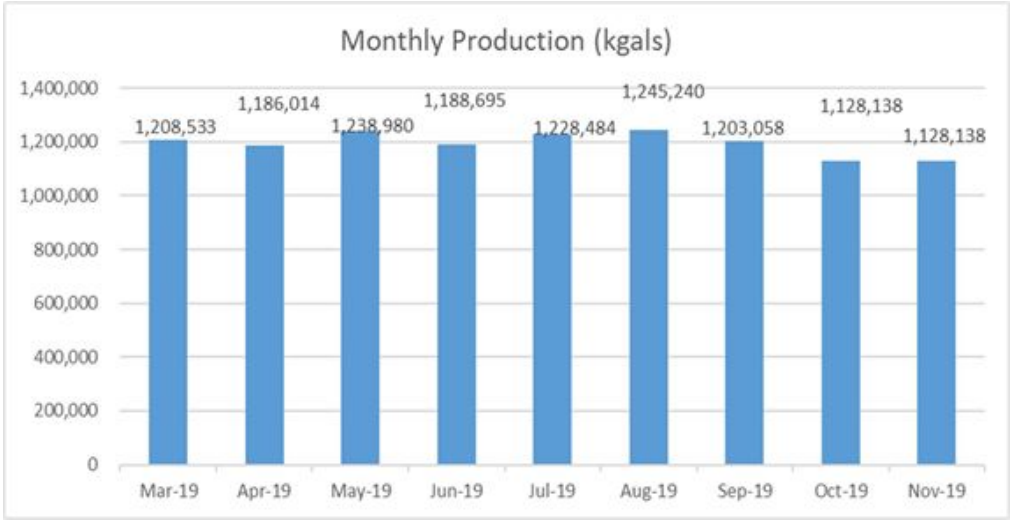


Operations Update

Production (November 2019)

Monthly Production Summary - November 2019					
Deep Wells				36.2	MGD
	Active wells =	97	of 120		
	Avg days in operation =	30	days		
	Total Production =	1,086,758	Kgals		
Springs				0.41	MGD
	Avg days in operation =	30	days		
	Total Production =	12303	Kgals		
Ugum Surface Water Plant				2.2	MGD
	Avg days in operation =	30	days		
	Total Production =	66,365	Kgals		
Tumon Maui Well				0.91	MGD
	Avg days in operation =	30	days		
	Total Production =	27,315	Kgals		
		1,192,741	Kgals	39.8	MGD

DW Status as of 11/30/2019		
Active	97	
Grounded motor or Pump Failure	4	A26-D03-F06-Y05
Out of commission	8	A02-A07-A28-D05-D13-M14-MJ01-MJ05
Temporarily Secured	3	A23-A25-F10
Standby	8	A10-A29-D20-D24-F05-F09-F16-M12
TOTAL	120	

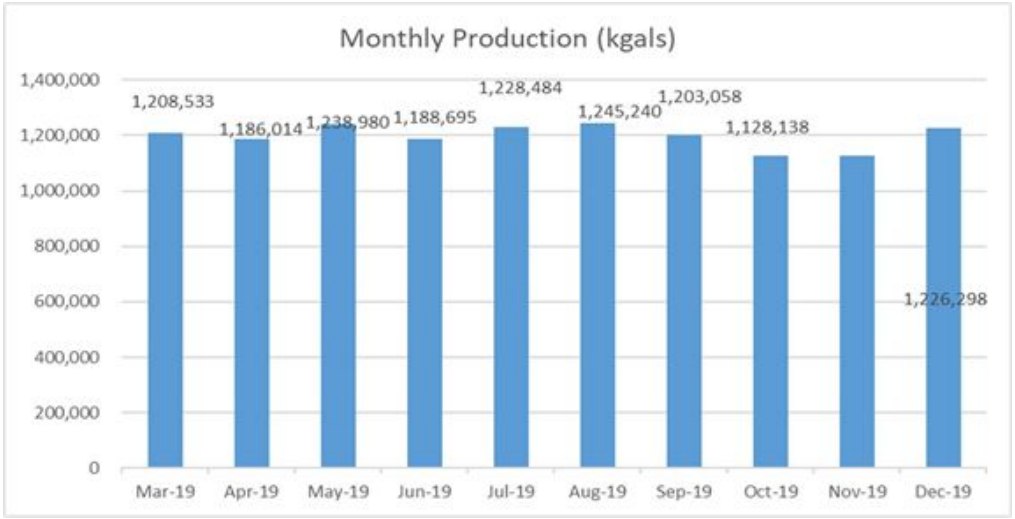


Operations Update

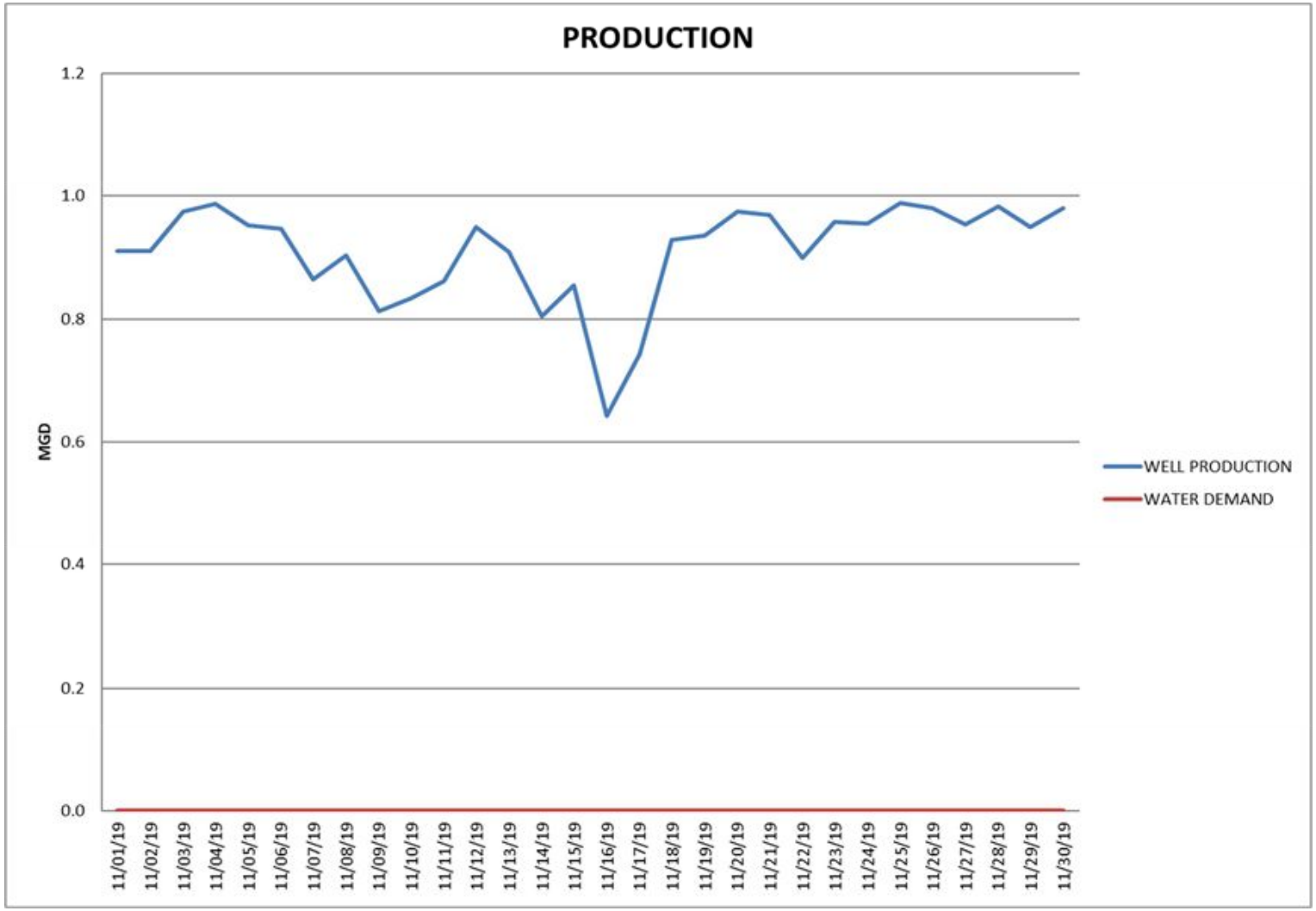
Production (December 2019)

Monthly Production Summary - December 2019					
Deep Wells				35.7	MGD
	Active wells =	99	of 120		
	Avg days in operation =	31	days		
	Total Production =	1,108,046	Kgals		
Springs				0.51	MGD
	Avg days in operation =	31	days		
	Total Production =	15,953	Kgals		
Ugum Surface Water Plant				2.3	MGD
	Avg days in operation =	31	days		
	Total Production =	72,019	Kgals		
Tumon Maui Well				0.98	MGD
	Avg days in operation =	31	days		
	Total Production =	30,280	Kgals		
		1,226,298	Kgals	39.6	MGD

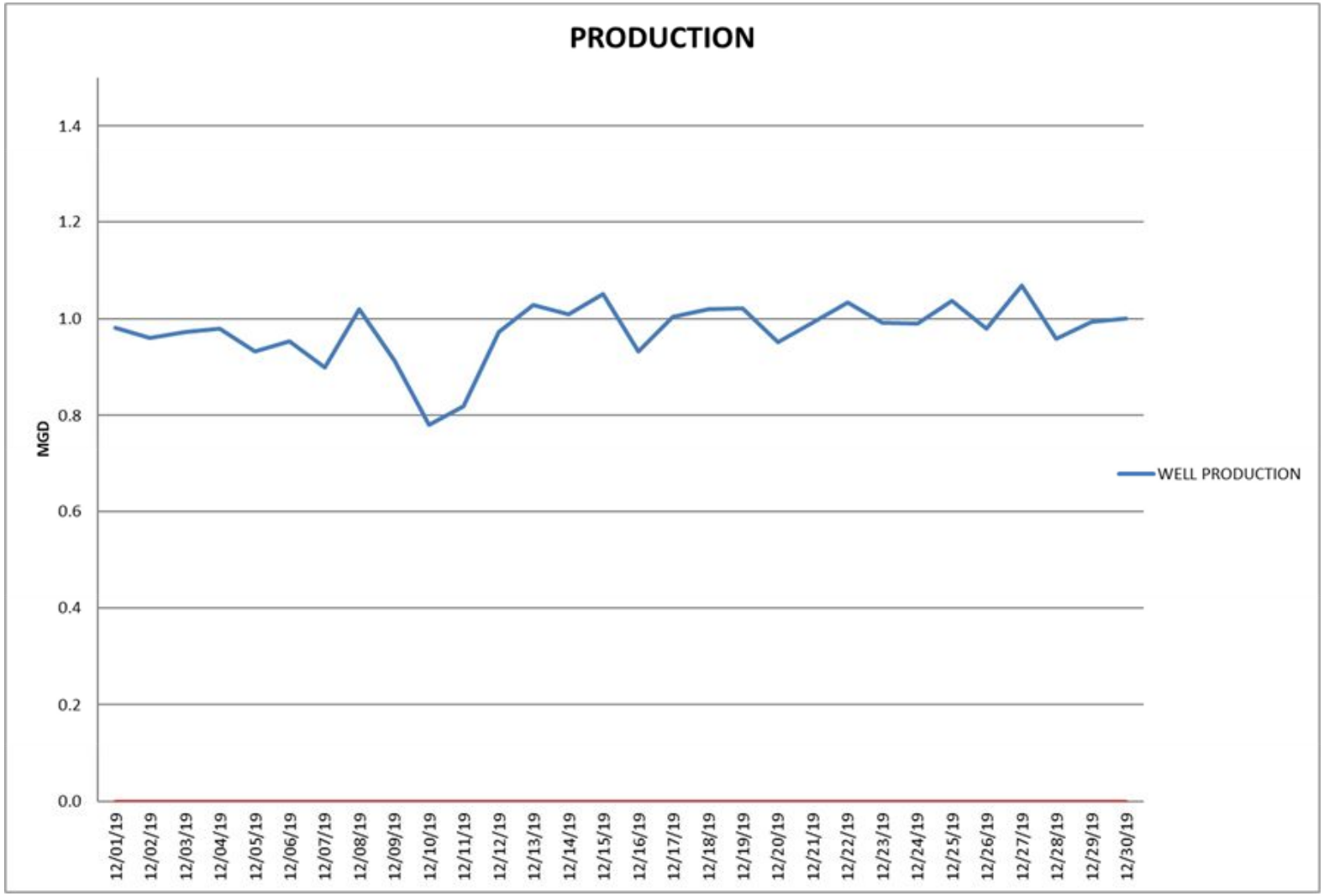
DW Status as of 12/31/2019		
Active	99	
Grounded motor or Pump Failure	6	A26-D03-D08-D20-F06-M17B
Out of commission	8	A02-A07-A28-D05-D13-M14-MJ01-MJ05
Temporarily Secured	3	A23-A25-F10
Standby	4	A10-A29-F16-M12
TOTAL	120	



Tumon Maui Well Production (November 2019)



Tumon Maui Well Production (December 2019)



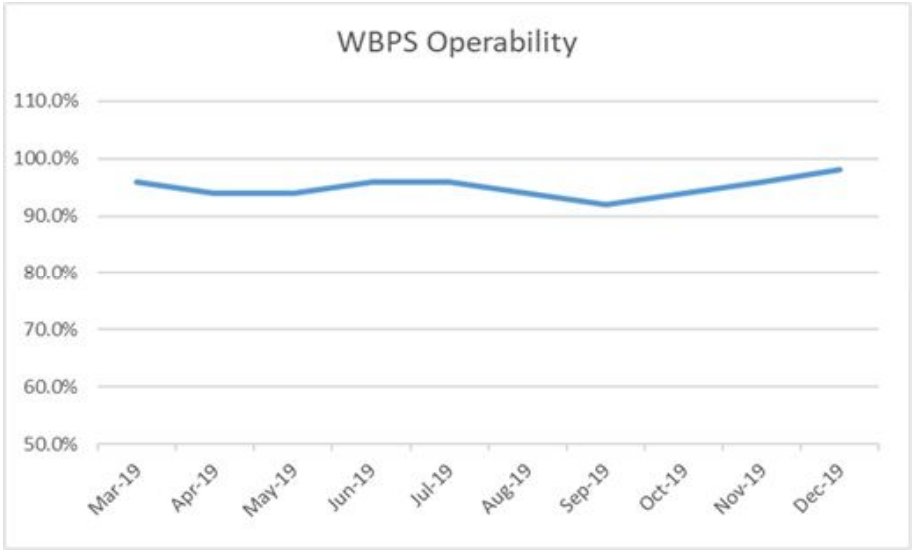
Distribution (November 2019)

Monthly Distribution Summary - November 2019					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	11	20	18	90.0%
	Central	7	15	15	100.0%
	Southern	7	15	15	100.0%
		25	50	48	96.0%

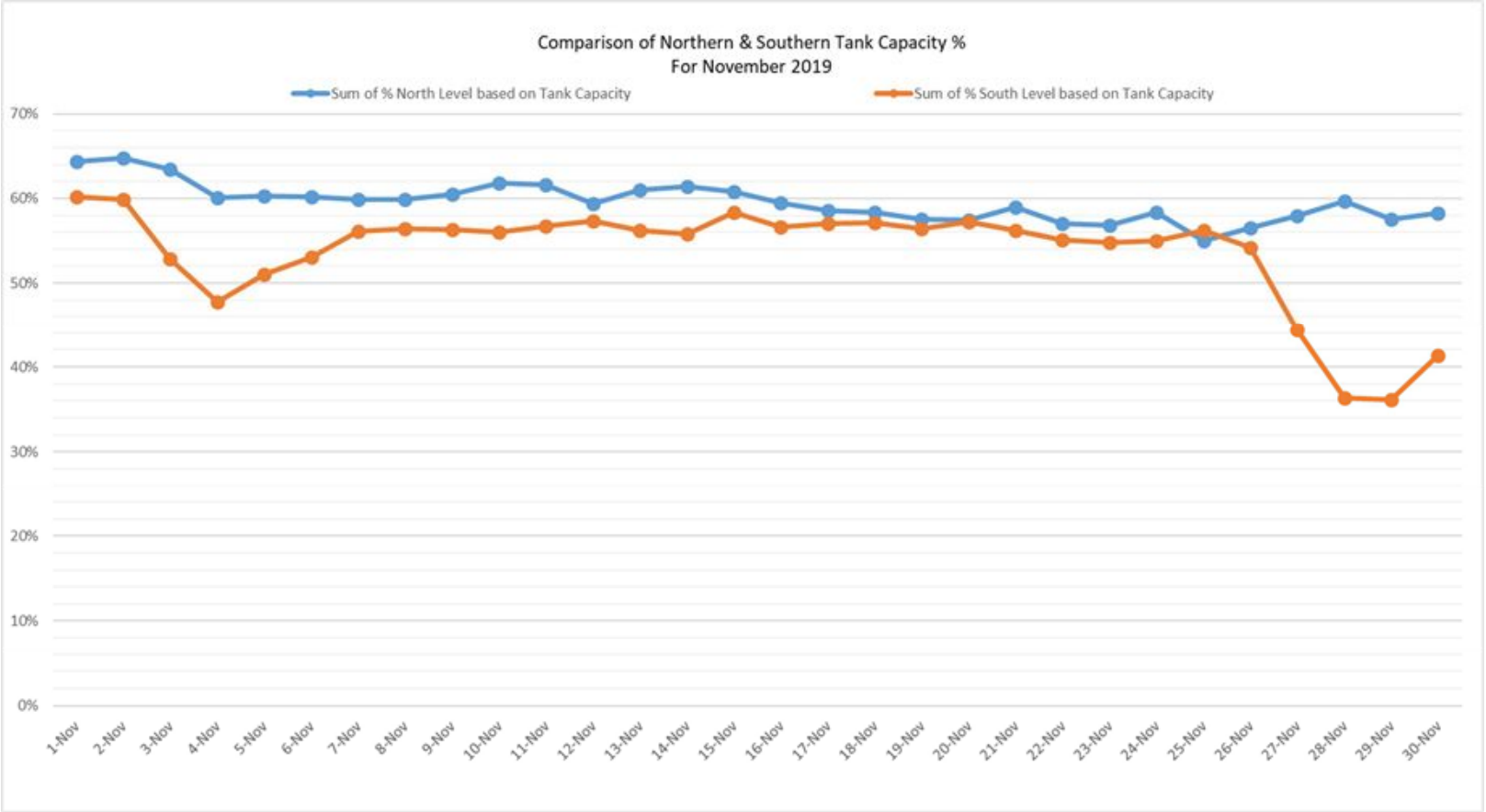


Distribution (December 2019)

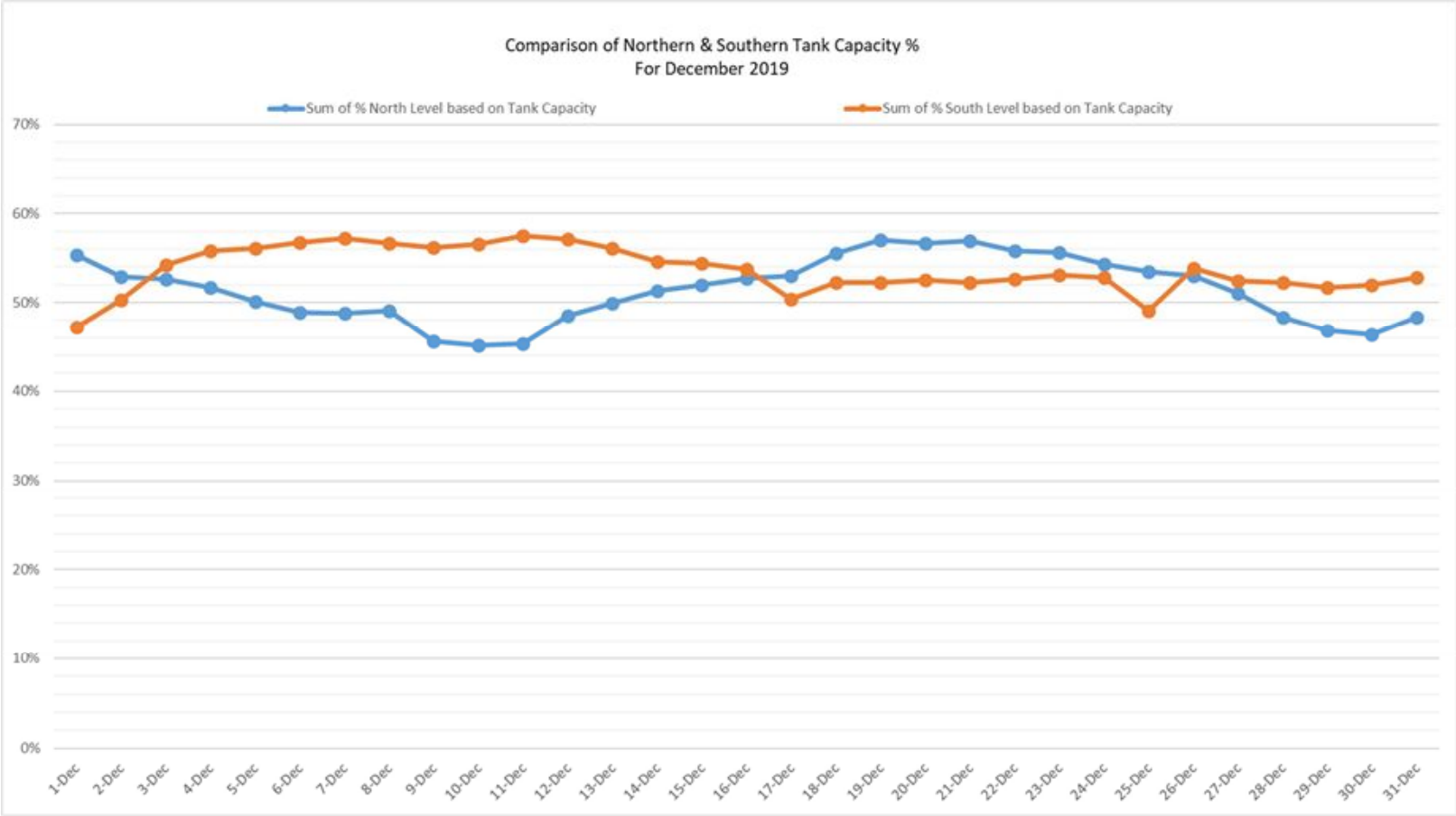
Monthly Distribution Summary - December 2019					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	13	26	25	96.2%
	Central	7	15	15	100.0%
	Southern	7	15	15	100.0%
		27	56	55	98.2%



Distribution – Tank Levels (November 2019)

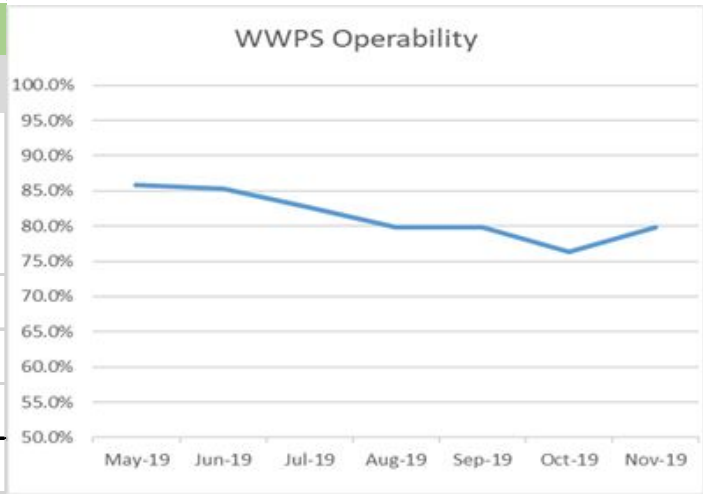


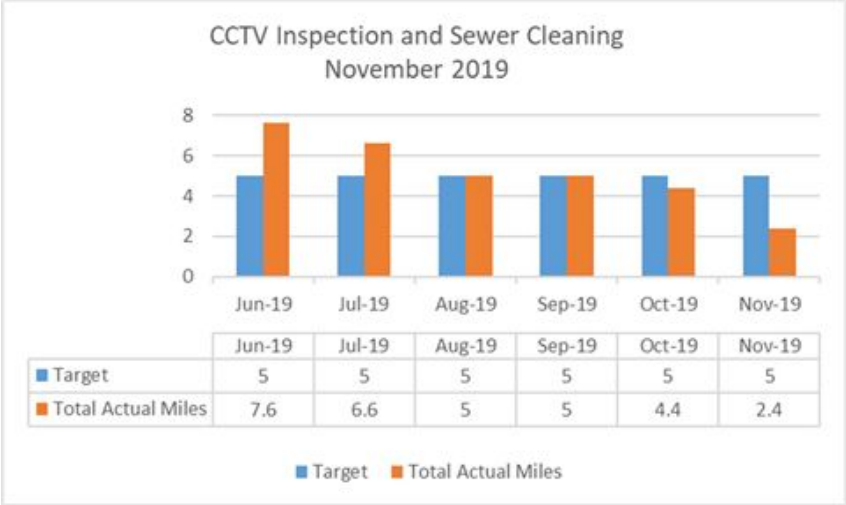
Distribution – Tank Levels (December 2019)



Wastewater Collections (November 2019)

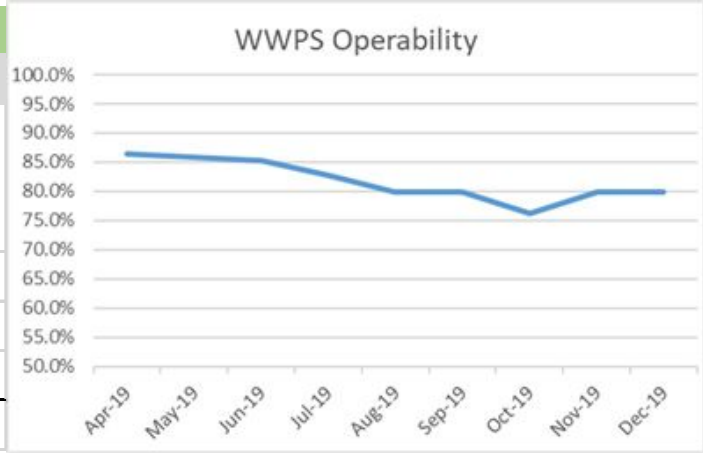
Monthly Collections Summary - November 2019					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	41	78.8%
	Central	29	63	53	84.1%
	Southern	27	58	44	75.9%
		78	173	138	79.8%

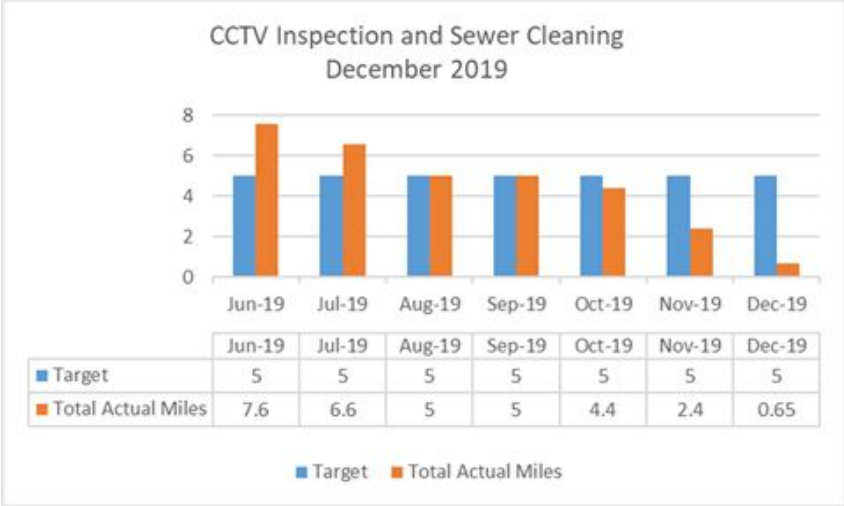




Wastewater Collections (December 2019)

Monthly Collections Summary - December 2019					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	41	78.8%
	Central	29	63	53	84.1%
	Southern	27	58	49	84.5%
		78	173	143	82.7%





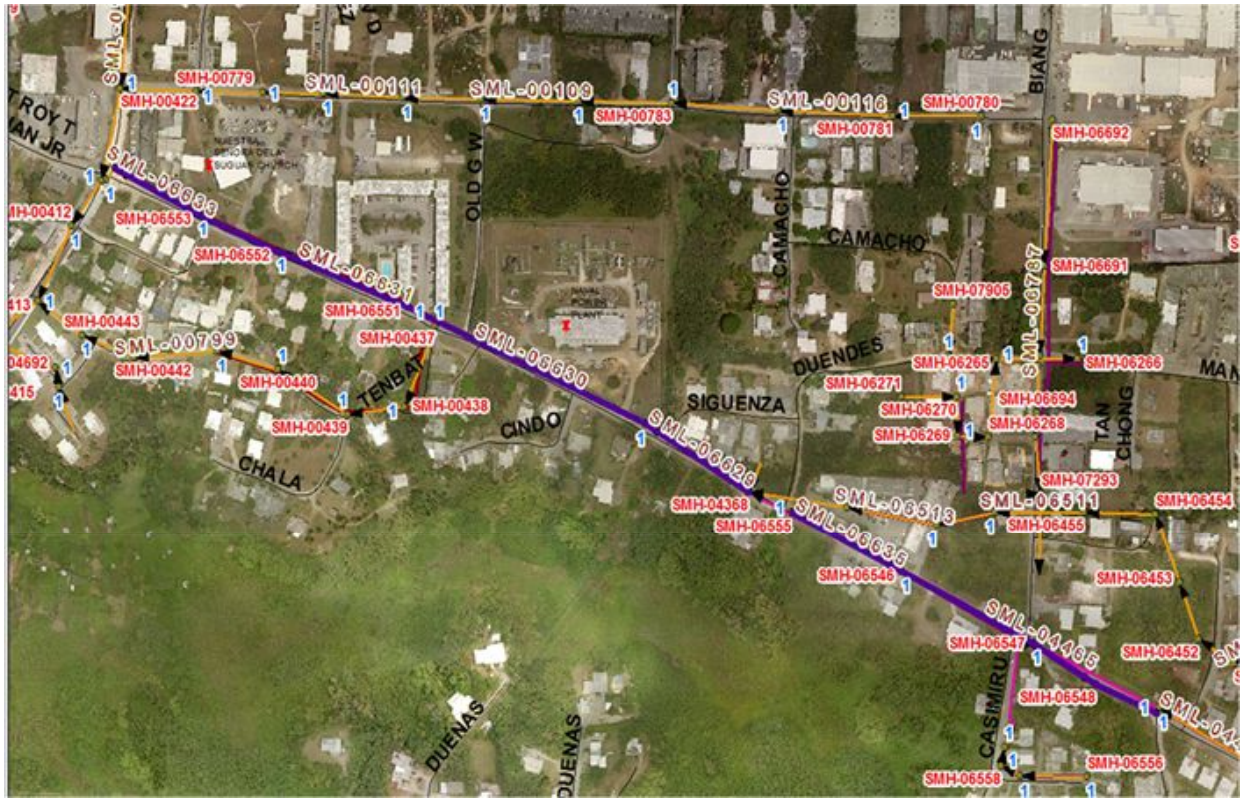
Wastewater Collections –Cleaning/Jetting (November 2019)

Anigua



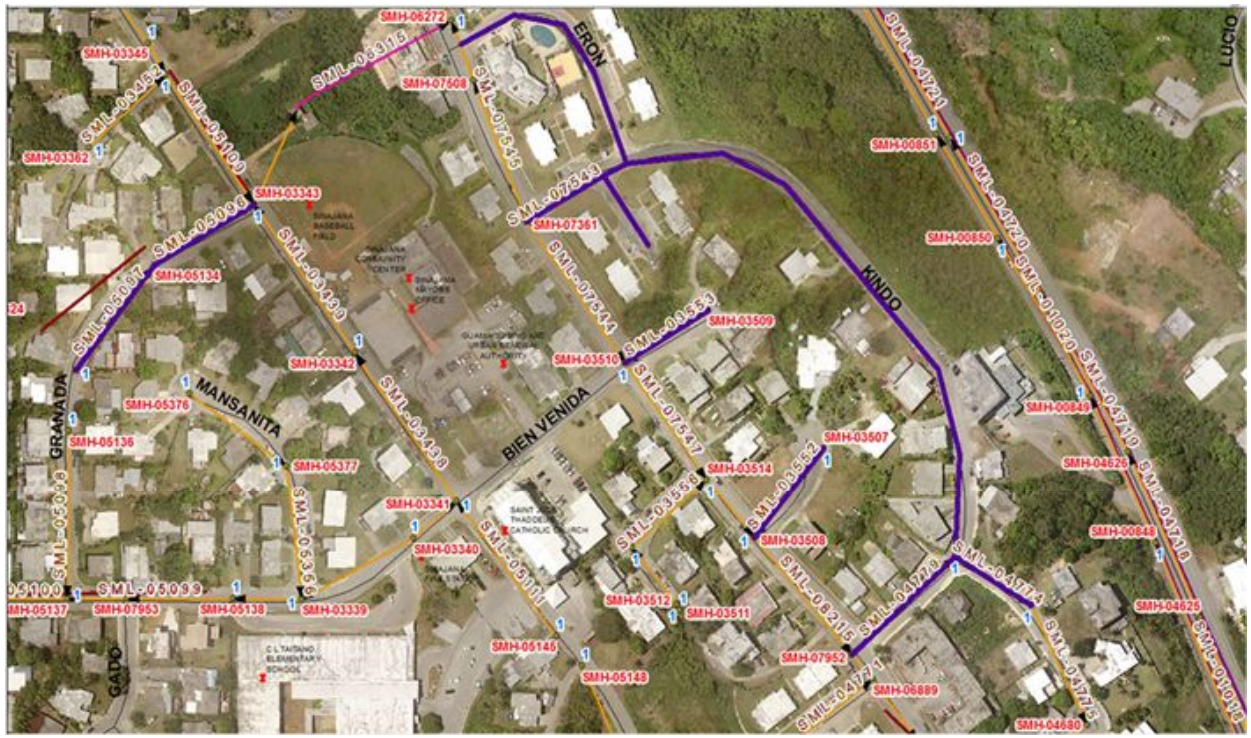
Wastewater Collections –Cleaning/Jetting (November 2019)

Mongmong-Toto-Maite



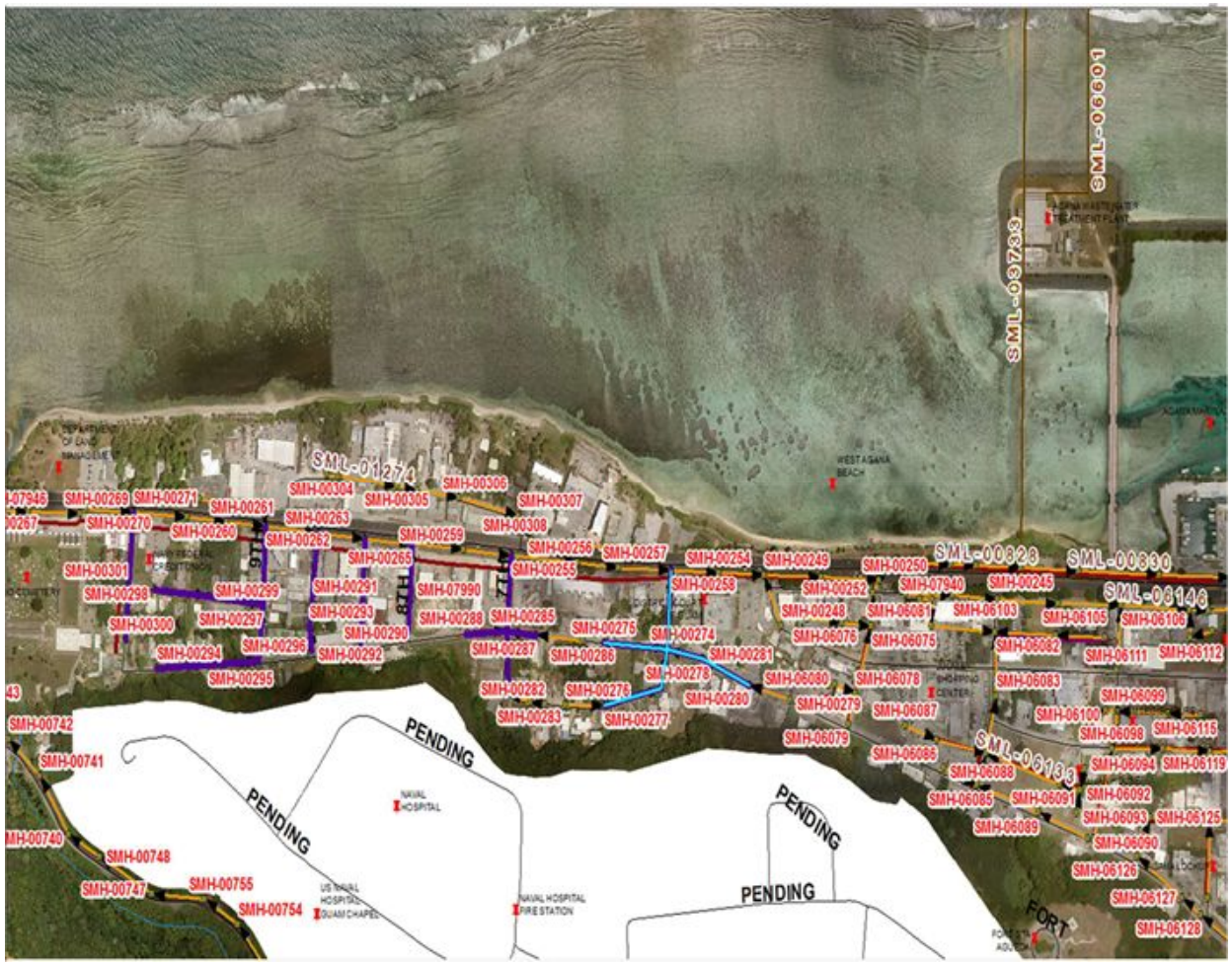
Wastewater Collections –Cleaning/Jetting (November 2019)

Sinajana



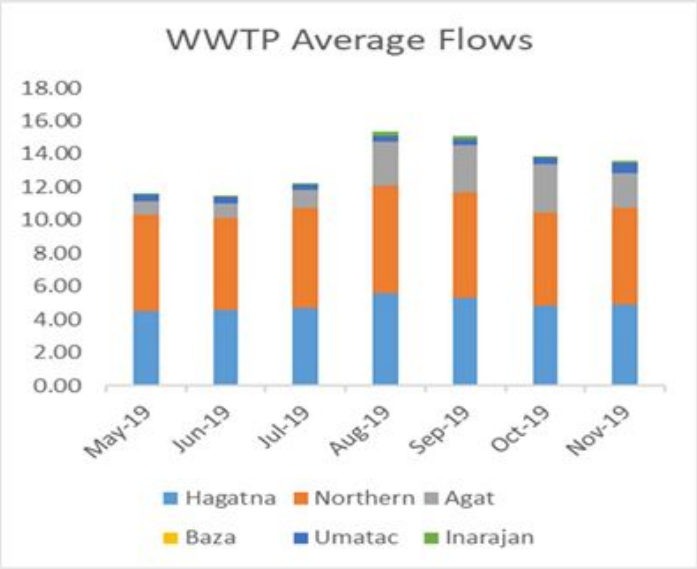
Wastewater Collections –Cleaning/Jetting (December 2019)

Anigua / Agana - Cleaned Line Areas



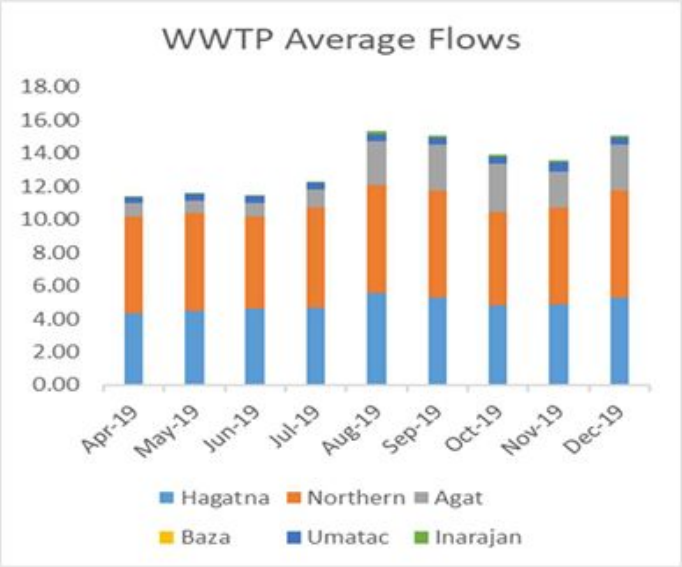
Wastewater Treatment (November 2019)

Monthly Wastewater Treatment Summary - November 2019				
WW Treatment Plants - Flows				
	Facility	**Avg. Daily Flows**	**Sludge (lbs)**	**Sludge Disp. ($)**
	Hagatna	4.88	471,840	$ 42,466
	Northern	5.86	803,500	$ 72,315
	Agat	2.13	112,440	$ 10,120
	Baza	0		
	Umatac	0.59		
	Inarajan	0.13		
		13.59	1,387,780	$ 124,901



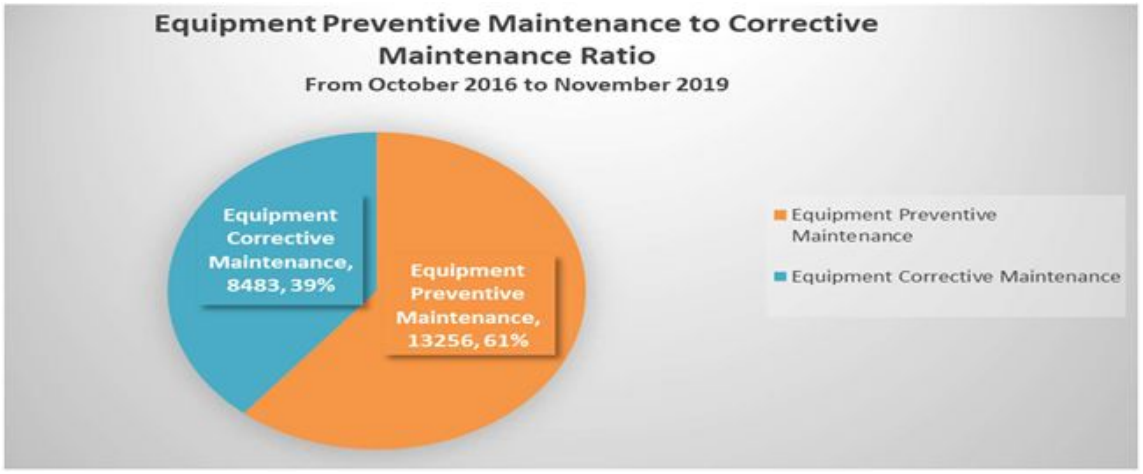
Wastewater Treatment (December 2019)

Monthly Wastewater Treatment Summary - December 2019				
WW Treatment Plants - Flows				
	Facility	**Avg. Daily Flows**	**Sludge (lbs)**	**Sludge Disp. ($)**
	Hagatna	5.30	501,020	$ 45,092
	Northern	6.41	911,480	$ 82,033
	Agat	2.8	86,360	$ 7,772
	Baza	0		
	Umatac	0.39		
	Inarajan	0.15		
		15.05	1,498,860	$ 134,897

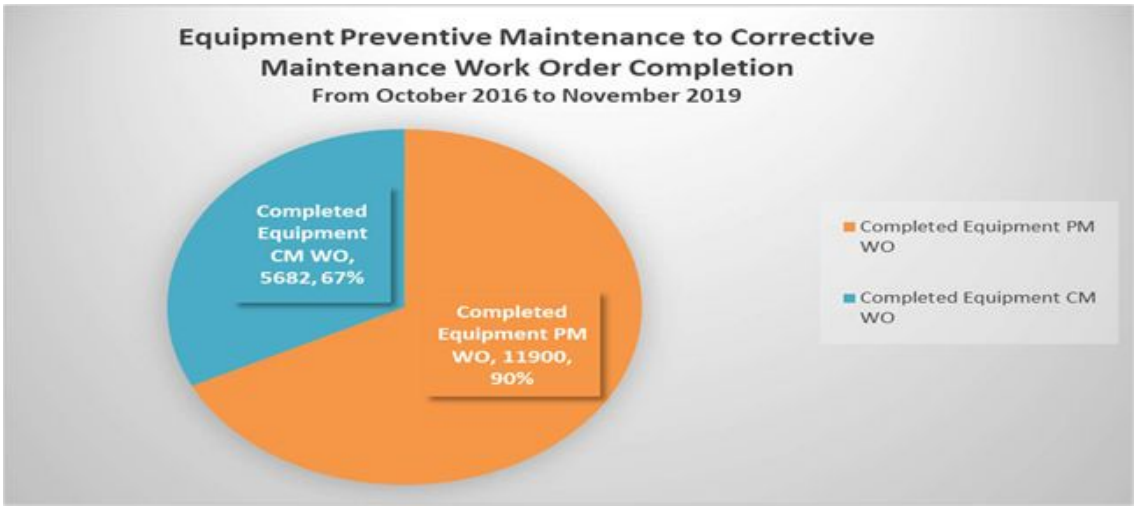


Asset Management (November 2019)

I. Equipment Preventive Maintenance to Corrective Maintenance ***Ratio***

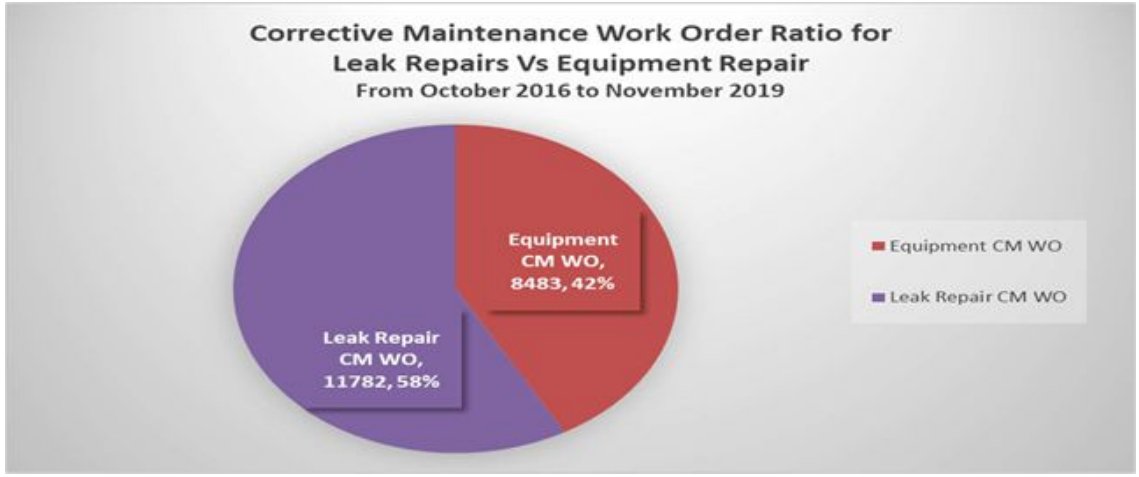


II. Equipment Preventive Maintenance to Corrective Maintenance ***Work Order Completion***

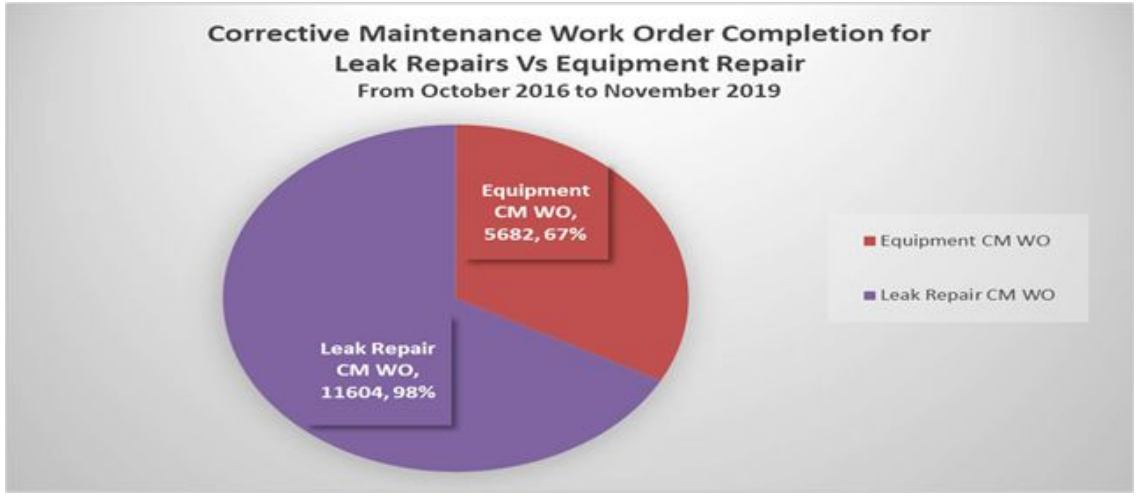


Asset Management (November 2019)

III. Corrective Maintenance Work Order ***Ratio*** for Leak Repairs vs. Equipment Repair

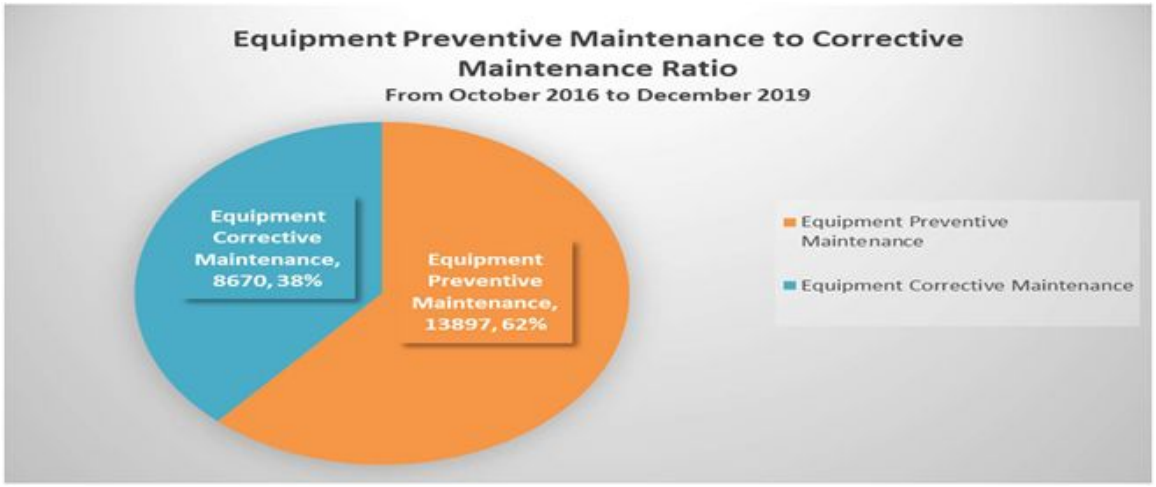


IV. Corrective Maintenance Work Order ***Completion*** for Leak Repairs vs. Equipment Repair

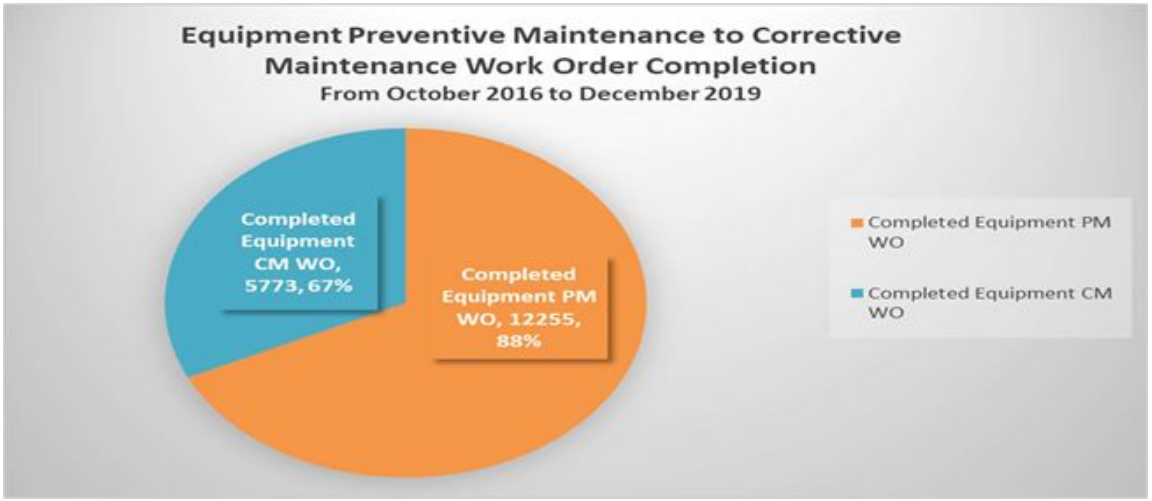


Asset Management (December 2019)

I. Equipment Preventive Maintenance to Corrective Maintenance ***Ratio***

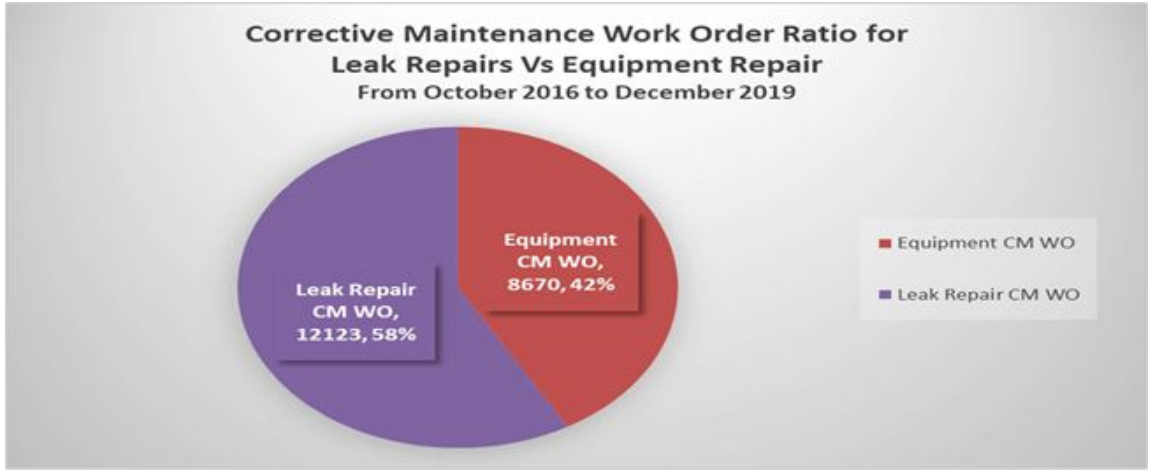


II. Equipment Preventive Maintenance to Corrective Maintenance ***Work Order Completion***

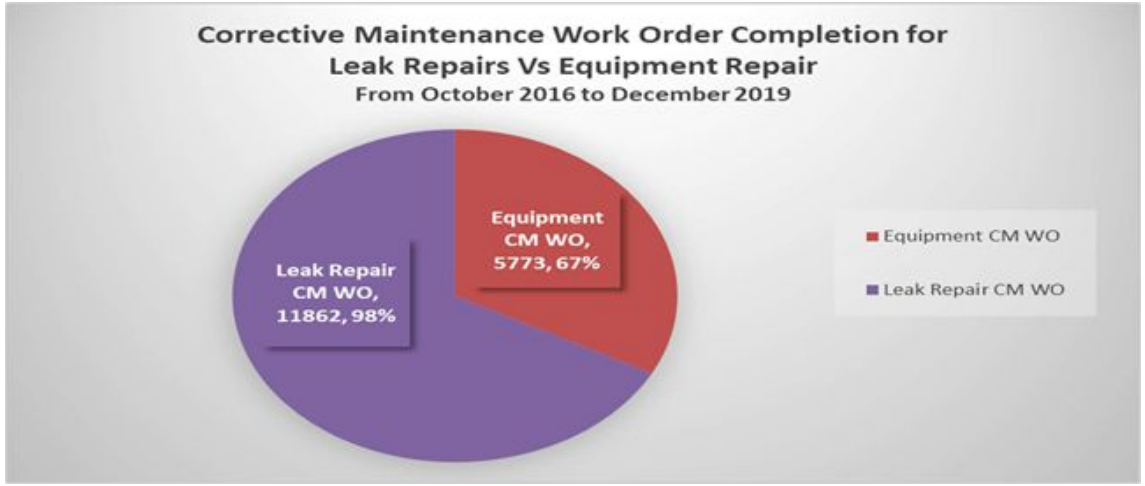


Asset Management (December 2019)

III. Corrective Maintenance Work Order ***Ratio*** for Leak Repairs vs. Equipment Repair



IV. Corrective Maintenance Work Order ***Completion*** for Leak Repairs vs. Equipment Repair



Operational Issues

Production & Distribution

- Managed major break in Yigo near Simon Sanchez H.S. on an undocumented main line across school grounds; five (5) wells secured to control flows for repairs; reservoirs were maintained despite problem isolating this unknown line.
- Tropical Storm Kammuri:
    - Ugum was secured during heavy rains;
    - Power outages affected several pump stations and deep wells; rovers responded throughout the storm to address re-sets.
    - Santa Rosa BPS had generator issues, no water in that area for a short period (5-6 hrs)
- Problems with line breaks on older ACP lines in
    - Casimiru (Nov)
    - Tai, Mangilao (Dec)
    - Pago Bay 2x (Dec)

Wastewater Collection & Treatment

- Tropical Storm Kammuri:
    - Baza Gardens pump station had power issues during storm, EQ tank filled
    - Southern ejector stations (no permanent generators) were affected by power outages; no issues reported
    - FEMA PS had electrical issues; trucks used to control flows
    - Barrigada SMH SSO (Wendy's) due to heavy rains
- Collection System:
    - Route 2 project final lateral connections being made
    - Route 1 and Route 4 projects still in progress; traffic impacts are on-going
    - Route 3 and Route 9 interceptor work is about 56% complete
- Hagatna WWTP
    - Two clarifiers awaiting parts for repairs; plant operating satisfactorily on one clarifier
- Umatac-Merizo
    - Project completed, pending minor scope items delayed due to presence of Moorehen
    - Ribbon cutting being held in January
- NDWWTP
    - Major excavation work for clarifiers and ditches on-going
    - Water supply issues continue until lines in the area are upgraded

Meters from January 2017 through December 2019

COMPLETED FIELD ACTIVITY JAN 2017 THRU DEC 2019 (POSTED IN CIS)	2017	2018	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	TOTAL:	COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Meter Exchange	6487	13353	158	140	444	1583	1212	922	862	455	1516	682	1794	1082	30690	242

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	6079	12259	937	730	518	1231	1135	621	643	470	731	1158	619	485	27616
# OF FIELD CREW PERFORMING CHANGE OUTS (MON THRU FRI):	19.4	16.1	1	1	10	8	7	7	7	7	9	7	7	8	
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CI	10	6.3	0	0	4	9	6	6	7	6	6	6	5	5	
TOTAL:	**29**	**22**	**1**	**1**	**14**	**17**	**13**	**13**	**14**	**13**	**15**	**13**	**12**	**13**	

REMAINING ACTIVE BADGER LP MODELS TO BE REPLACED AS OF Dec 31 2019: ***2716***

3/4" BADGER METERS IN STOCK AS OF JAN 13 2020:

Size	Meter Description	New Meters Passed	New Meters Untested	Passed Field Meters	MMP	Meters Available
3/4"	METER, Badger AMR 5/8" X 3/4" RCDL Model M25 Disc Meter	1122	570	76	0	1768
3/4"	METER, Badger AMR 5/8" x 3/4" **WARRANTY** RCDL Model M25	0	0	0	0	0
3/4"	METER,Badger 5/8"x3/4" NSF61-G RCDL M25LL Disc Meter Integral	293	0	7	0	300
3/4"	METER, Badger AMR 5/8" x 3/4" RCDL Model M25 ***RMI***	0	0	0	0	0
3/4"	METER, Badger E-SERIES 5/8"X3/4" ULTRASONIC	975	0	0	0	975

Backbilling through November 2019

Guam Waterworks Authority

Collections Report[1] on Accounts Backbilled thru November 30, 2019

For fiscal years 2015, 2016, 2017, 2018, 2019 and 2020

Accounts Billed			Collection Status											
			Amounts Collected[1]			Amounts Adjusted			Total Uncollected (Active)			Total Uncollected (Inactive)		
FY Billed	No. of Accounts	Amount	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%
FY2015														
FY2016	17	$ 882	17	$ 882	100%	0	$ -		0	$ -		0	$ -	
FY2017	537	$ 397,450	472	322,762	81%	14	20,967	5%	24	29,833	8%	27	23,887	6%
FY2018	1,374	$ 742,109	1,220	574,467	77%	45	59,378	8%	62	68,495	9%	47	39,768	5%
FY2019	8,327	$ 3,064,384	7,430	1,704,218	56%	106	94,740	3%	614	1,170,346	38%	177	95,080	3%
FY2020	176	$ 33,368	40	6,097	18%	0	-	0%	136	27,271	82%			0%
Total	**10,431**	**$ 4,238,194**	**9,179**	**$ 2,608,427**	**62%**	**165**	**$ 175,085**	**4%**	**836**	**$ 1,295,946**	**31%**	**251**	**$ 158,735**	**4%**

[1] Collections thru December 13, 2019

Backbilling through December 2019

Guam Waterworks Authority

Collections Report[1] on Accounts Backbilled thru December 31, 2019

For fiscal years 2015, 2016, 2017, 2018, 2019 and 2020

Accounts Billed			Collection Status											
			Amounts Collected[1]			Amounts Adjusted			Total Uncollected (Active)			Total Uncollected (Inactive)		
FY Billed	No. of Accounts	Amount	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%
FY2015														
FY2016	17	$ 882	17	$ 882	100%	0	$ -		0	$ -		0	$ -	
FY2017	537	$ 397,450	472	322,762	81%	14	20,967	5%	24	29,833	8%	27	23,887	6%
FY2018	1,374	$ 742,109	1,220	574,467	77%	45	59,378	8%	62	68,495	9%	47	39,768	5%
FY2019	8,327	$ 3,064,384	7,535	2,416,858	79%	107	95,121	3%	509	385,794	13%	176	166,611	5%
FY2020	575	$ 159,039	212	25,530	16%	6	1,631	1%	350	129,921	82%	7	1,957	0%
Total	**10,830**	**$ 4,363,864**	**9,456**	**$ 3,340,500**	**77%**	**172**	**$ 177,098**	**4%**	**945**	**$ 614,043**	**14%**	**257**	**$ 232,223**	**5%**

[1] Collections thru January 10, 2020

One Guam Update

- Santa Rosa Tank
  - No update on AAFB response to request for data substantiating operational improvements.

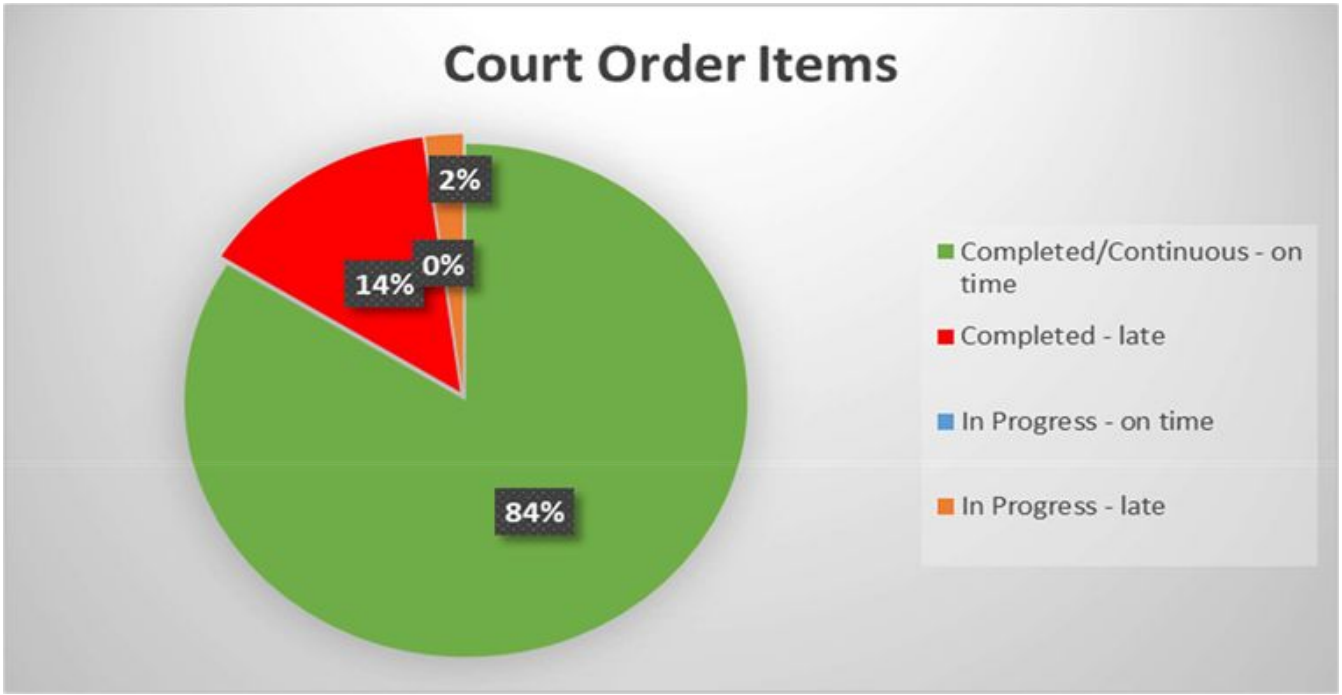
- OEA Projects
  - Coordination on-going for remaining Rt 3 / RT 9 Interceptor work, access to South Finegayan areas
  - Close to resolving issues with two new monitoring wells sites being affected by MILCON projects;
    - Yigo well – Issues resolved with regard to access.
    - Marbo well – adjustment of well location does not affect clearances for site; Navy assisting with possible protective measure for nearby traffic

- Property Transfers:
  - BPM-1 Monitoring Well: Property was transferred twice; waiting on Navy determination on course of action
  - Cabras waterline: pending completion of Navy CIP replacement
  - Murray Road Sewer Infrastructure: with installation for approval prior to D.C. approval
  - ACEORP water tunnel: Inspections conducted; process for transfer is underway

- Marine Cantonment
  - MOU for Tumon-Maui reserved 210 GPM for Camp Blaz
  - Navy/Marine Corps considering additional supply; will advise GWA if needed

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	**93**	**78**	**2**	**13**	**0**	**97.8%**



Court Order

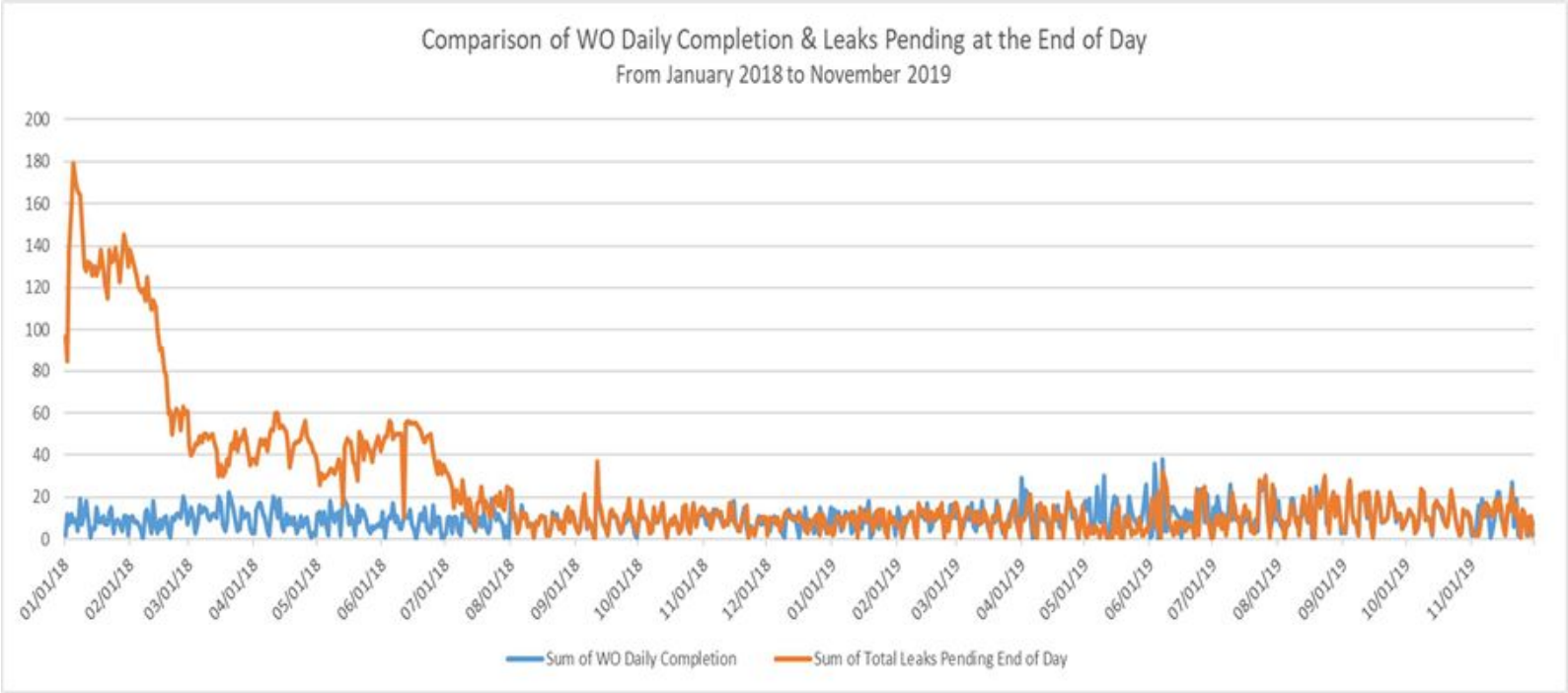
Status Information (for November and December 2019)

- 2 items delayed
  - Water Reservoir Repair. Replacement or Relocation program, CO II C 29(b)(6)(ii)–(all remaining tanks). (Affects final date of the Court Order.)
  - Umatac-Merizo Wastewater Treatment Plant – completed in December; ribbon cutting held in January**.**
- Final Date to complete all Court Order items may be delayed past December 31, 2020. [CO 29(b) has been expanded by 31% beyond the original Court Order Requirements (General Counsel is reviewing filing requirements and content).]
- Overflow or Bypass events reported to USEPA:
  - 11-07-2019 Mangilao Mayor's office MH overflow; SSO (FOG)
  - 11-21-2019 Tai Mangilao PS Wet Well overflow. (airlocked pump)
  - 11-25-2019 Pas Street, Tamuning; MH overflow. (FOG)
  - 11-27-2019 Vietnam Veterans Memorial, (Rt. 10) Barrigada; SSO (Rain)
  - 11-27-2019 Serenu Ave, Tamuning; SSO (Rain)
  - 11-27-2019 New Chaot pipeline, Sinajana; SSO. (Rain)
  - 11-27-2019 station-13 Umatac-Merizo Influent Pumps; SSO. (Warranty Issue - control malfunction)
  - 11-27-2019, RR Cruz St. Santa Rita WO# 19-11-1394 Hyundai (Tropical Storm Kammuri)
  - 11-27-2019, #199 Aga St. Hyundai (Tropical Storm Kammuri.)
  - 11-27-2019, Chalan Canton Tasi Station PS #17 WO# 19-11-1398 (Tropical Storm Kammuri)
  - 11-27-2019, Chalan Canton Tasi Station by Merizo Church (Tropical Storm Kammuri)
  - 11-27-2019, Baza Garden Pump Station EQ Tank (Tropical Storm Kammuri) (Warranty Issue).
  - 11-29-2019, Jesus Lujan St# 19-11-1397 (Tropical Storm Kammuri)
  - 12-02-2019 Pas Street Tamuning MH overflow
  - 12-14-2019 124 Tun Jesus Crisostomo St, Tamuning SSO – FOG
  - 12-14-2019, Station 12 Force Main Break WO# 19-12-0556 – Aged infrastructure

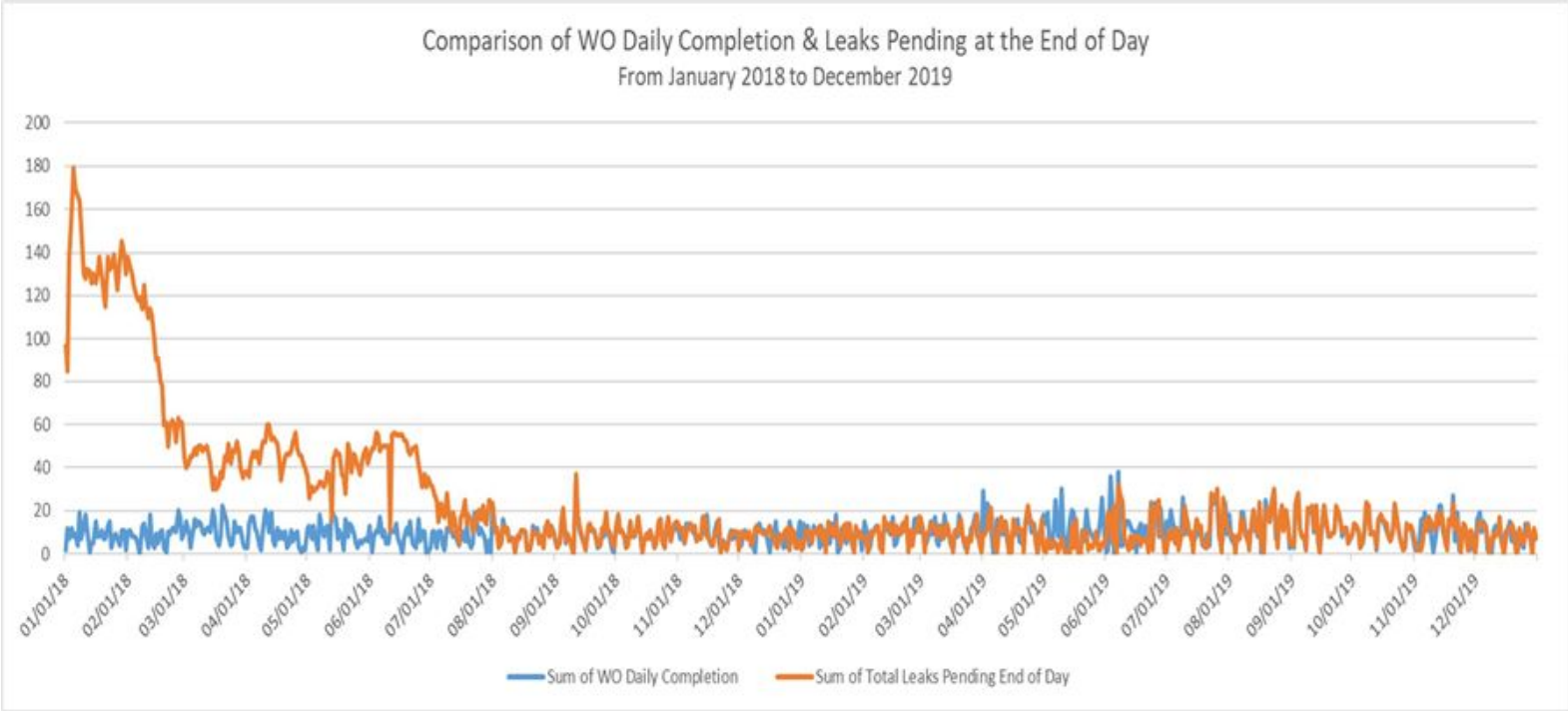
Land Acquisition Summary (as of November/December2019)

GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
Tanks	Astumbo	Gov't. - CLTC	Petition of Land Registration package forwarded to Attorney General by DLM 11/04/19.
	Piti	Private	Pending comments from Federal and GovGuam agencies on Section 106 documents 11/07/19.
Deep Wells	AG-12	Dept. of Agriculture/Manhita Farms	Right of Entry Agreement sent to Dept of AG for signature 05/24/18. 2nd follow up sent on 09/12/18. 3rd follow up sent on 04/10/19. Retracement Survey Property Map filed and recorded at DLM 7/10/19.
Booster Pump Station	Agfayan	Private	TGE working on structural design for pump station area for L28, B19, T3734, Inarajan 11/07/19.
Asan Springs	Asan	Federal	Pending comments from Federal and GovGuam agencies on Section 106 documents 11/07/19.

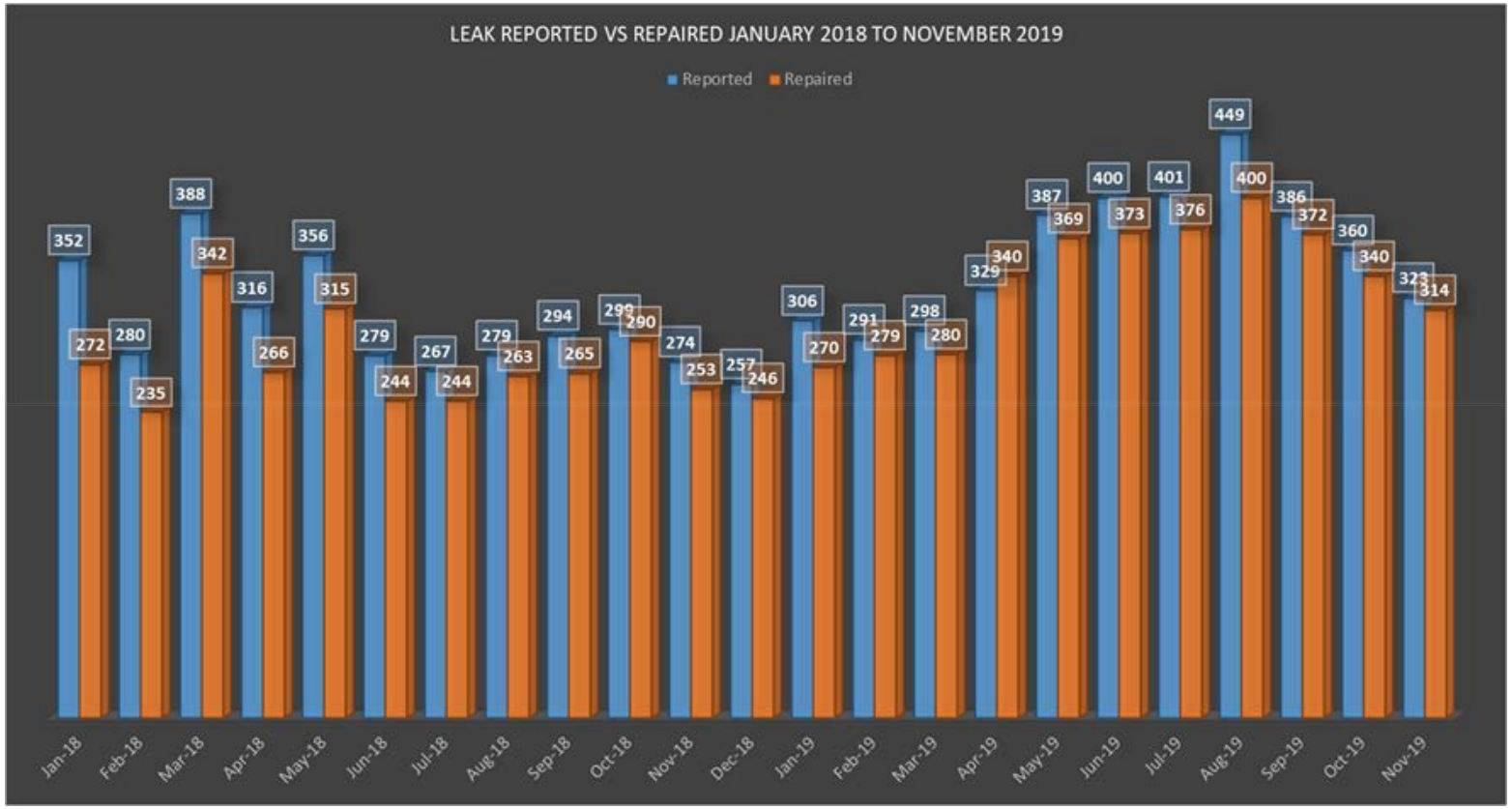
Leak Repair Summary (November 2019)



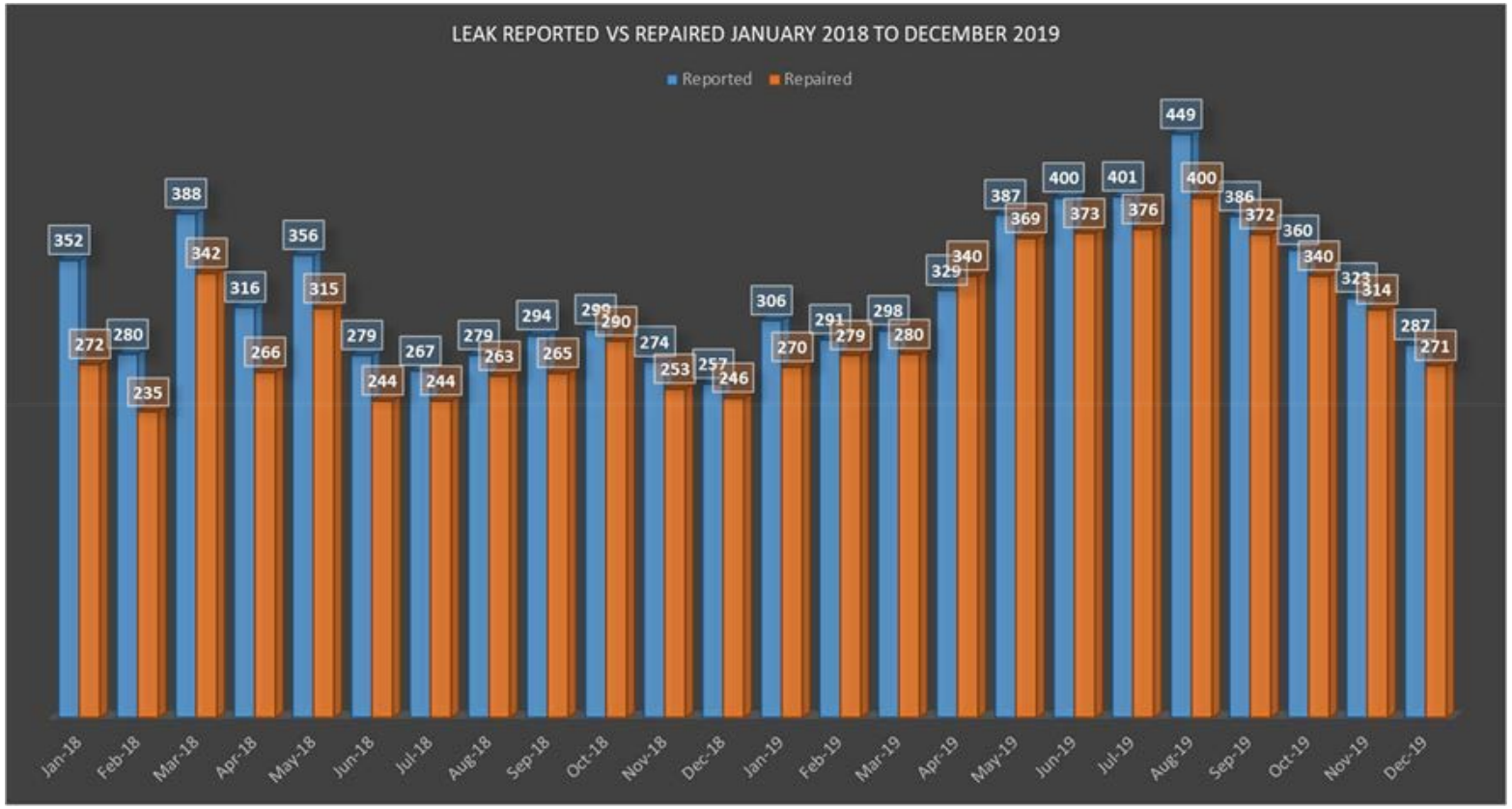
Leak Repair Summary (December 2019)



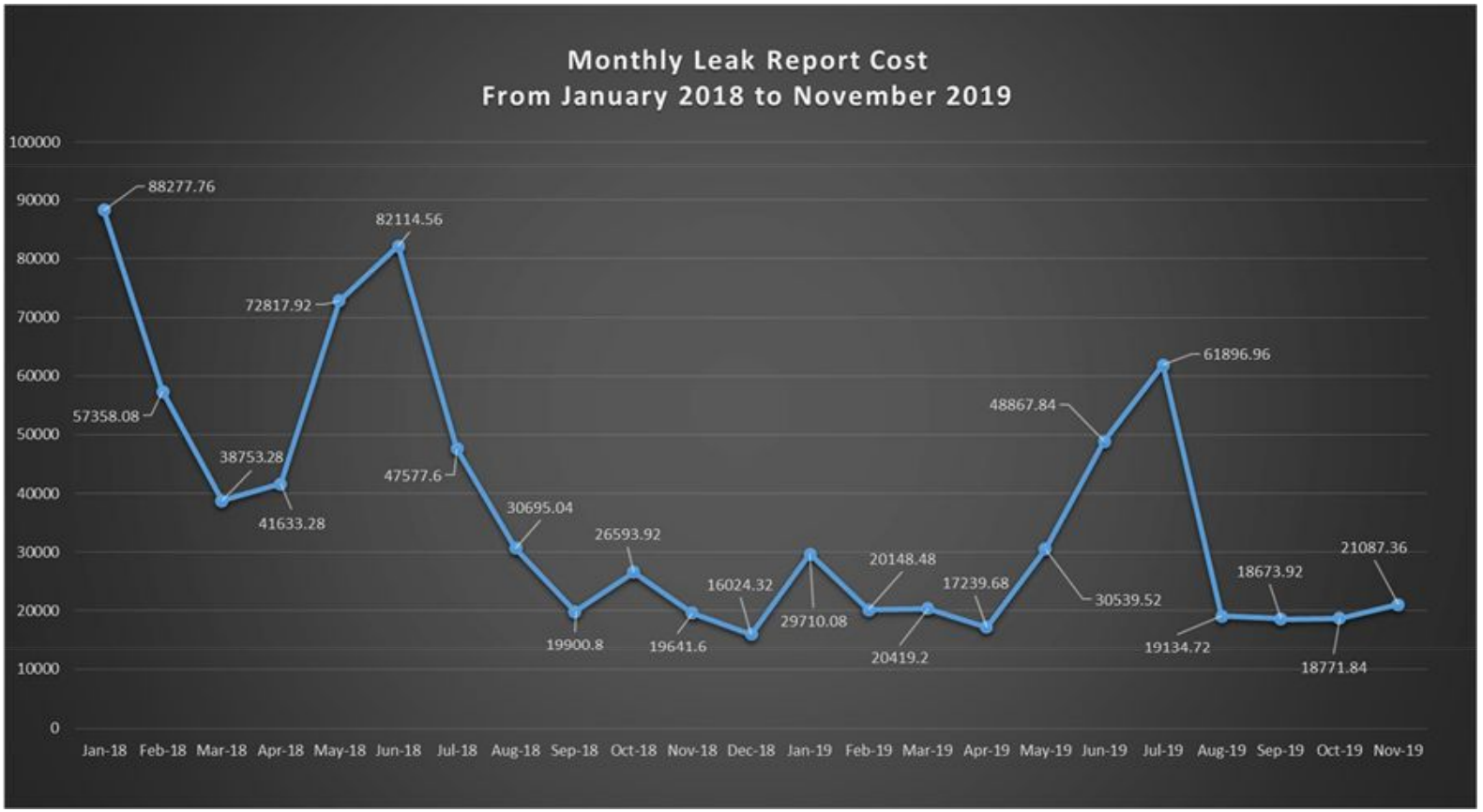
Comparison of Leaks Reported vs. Leaks Repaired (November 2019)



Comparison of Leaks Reported vs. Leaks Repaired (December 2019)



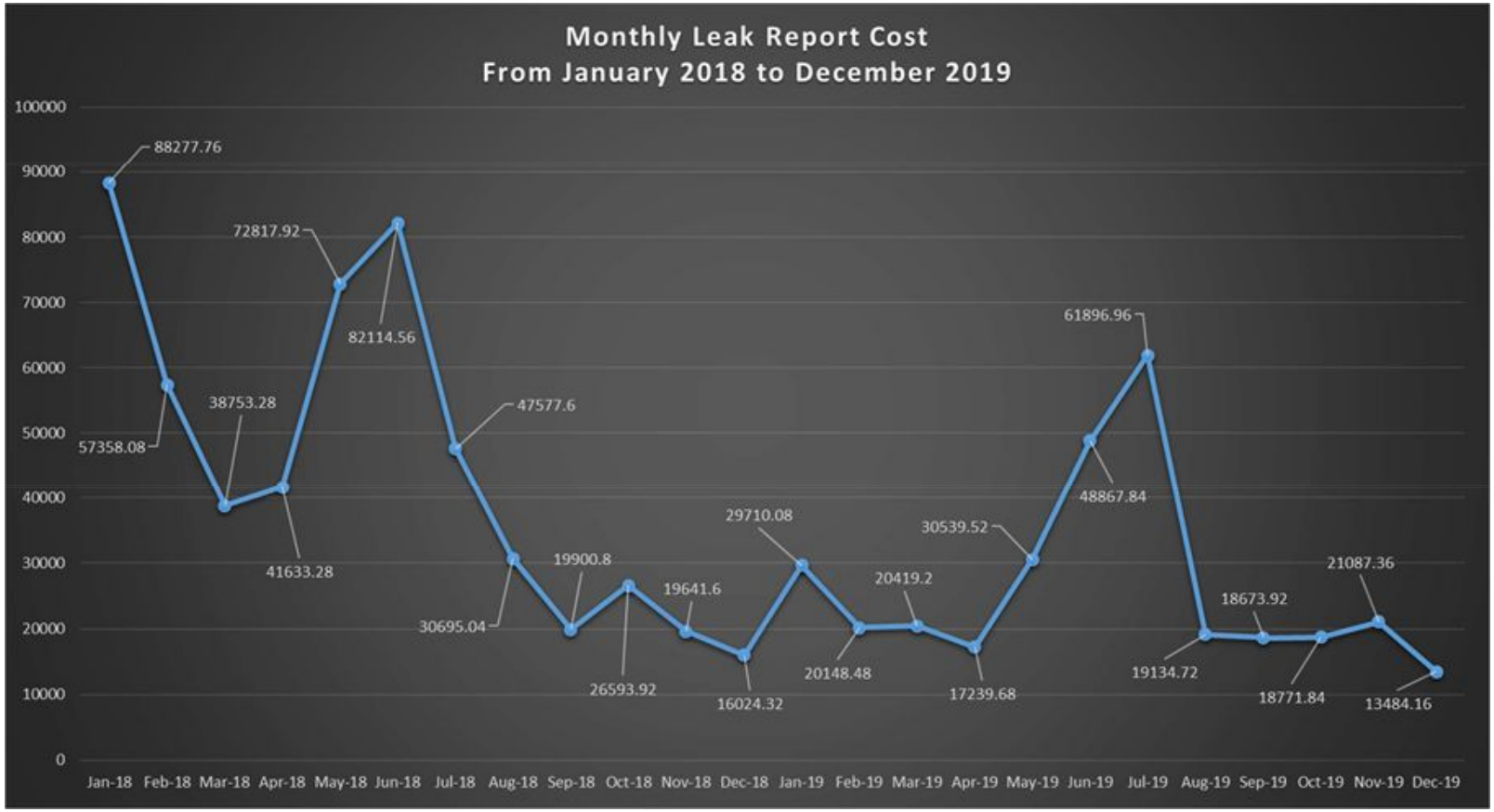
Monthly Leak Report Cost (November 2019)



Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00

Monthly Leak Report Cost (December 2019)



Assumptions:

1. Leak rate = 4 gpm
2. Cost per kgal = $4.00

GUAM WATERWORKS AUTHORITY
DECEMBER 31, 2019
FINANCIAL AND RELATED REPORTS
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GUAM WATERWORKS AUTHORITY
Balance Sheet
December 31, 2019

SCHEDULE A

ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	Unaudited December 31, 2019	Unaudited September 30, 2019	Increase (Decrease)
Current Assets			
Cash			
Unrestricted (Schedule F)	5,883,096	4,962,036	921,060
Restricted Funds (Schedule F)	84,481,034	86,491,728	(2,010,694)
Accounts Receivable Trade, Net of Allowance for Doubtful Receivables of $8,349,313 at Dec 31, 2019 and $7,789,943 at Sep 30, 2019	15,190,419	14,346,247	844,172
Federal Receivable	1,708,904	3,711,435	(2,002,531)
Other Receivable	1,722,695	1,794,082	(71,386)
Materials & Supplies Inventory, Net of Allowance for Obsolescence of $64,131 at Dec 31, 2019 and $64,131 at Sep 30, 2019	4,000,523	3,897,352	103,171
Total Current Assets	112,986,671	115,202,881	(2,216,208)
Property, Plant and Equipment			
Utility plant in service			
Water system	382,299,274	381,484,623	814,651
Wastewater system	429,925,836	429,896,579	29,256
Non-utility property	23,261,242	23,200,625	60,617
Total property	835,486,352	834,581,827	904,525
Less: Accumulated Depreciation	(327,553,857)	(321,561,403)	(5,992,454)
Land	3,914,815	3,914,815	-
Construction Work in Progress	114,239,082	100,162,613	14,076,469
Property, Plant and Equipment, net	626,086,392	617,097,852	8,988,540
Other noncurrent assets			
Restricted cash (Schedule F)	99,728,298	109,937,511	(10,209,213)
Investments (Schedule F)	52,505,823	43,808,664	8,697,159
Other Prepaid Expenses	2,385,711	1,667,816	717,895
Total other noncurrent assets	154,619,832	155,413,991	(794,160)
Total Assets	893,692,895	887,714,724	5,978,172
Deferred outflows of resources			
Debt defeasance due to bond refunding	11,769,453	11,976,380	(206,927)
Deferred outflows from pension	4,233,025	4,233,025	-
Deferred outflows from OPEB	9,070,814	9,070,814	-
Total Assets and Deferred Outflows of Resources	**918,766,187**	**912,994,943**	**5,771,245**
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET ASSETS			
Current Liabilities			
Current maturities of long-term debt			
Series 2010 Revenue Bond	1,895,000	1,895,000	-
Series 2013 Revenue Bond	2,695,000	2,695,000	-
Series 2014 Refunding Bond	3,760,000	3,760,000	-
Series 2016 Revenue Bond	420,000	420,000	-
Notes Payable	1,490,810	2,319,108	(828,298)
Accounts Payable -Trade	3,131,985	4,121,364	(989,378)
Accrued and Other Liabilities	1,046,123	1,374,650	(328,528)
Interest Payable	12,702,594	6,359,303	6,343,291
Accrued Payroll and Employee Benefits	1,161,357	1,685,235	(523,877)
Accrued Annual Leave	1,054,545	1,054,545	-
Current portion of employee annual leave	584,204	584,204	-
Contractors' Payable	16,316,597	22,094,820	(5,778,223)
Customer and Other Deposits	2,223,658	2,349,490	(125,832)
Total Current Liabilities	48,481,873	50,712,718	(2,230,845)
Long Term Debt, less current maturities			
Series 2013 Revenue Bond	169,935,000	169,935,000	-
Series 2014 Refunding Bond	65,140,000	65,140,000	-
Series 2016 Revenue Bond	142,890,000	142,890,000	-
Series 2017 Refunding Bond	107,365,000	107,365,000	-
Unamortized Bond Premium/Discount	31,503,681	31,863,590	(359,909)
Net pension liability	45,451,352	45,451,352	-
Net OPEB obligation	88,950,661	88,950,661	-
Employee Annual Leave, Less Current Portion	838,545	838,545	-
Total Liabilities	700,556,112	703,146,866	(2,590,754)
Deferred inflows of resources:			
Deferred inflows from pension	1,870,115	1,870,115	-
Deferred inflows from OPEB	8,741,900	8,741,900	-
Total Liabilities and Deferred Inflows of Resources	711,168,126	713,758,880	(2,590,754)
Net Assets	**207,598,061**	**199,236,062**	**8,361,999**
Total Liabilities, Deferred Inflows of Resources and Net Assets	**918,766,187**	**912,994,943**	**5,771,244**

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings
Comparative Budget vs. Actual for the period ending December 31, 2019

SCHEDULE B

	Month to Date		Variance
	Budget December-19	Actual (Unaudited) December-19	Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	5,887,215	5,461,985	(425,230)
Wastewater Revenues	3,401,093	3,497,682	96,590
Legislative Surcharge	304,243	291,329	(12,914)
Other Revenues	38,254	24,508	(13,746)
System Development Charge	97,773	41,203	(56,569)
Total Operating Revenues	9,728,578	9,316,708	(411,870)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	537,577	531,933	5,644
Power Purchases	1,381,315	1,432,471	(51,156)
Total Utility Costs	1,918,892	1,964,404	(45,512)
Salaries and Wages	1,782,365	1,626,563	155,802
Pension and Benefits	562,238	529,411	32,827
Total Salaries and Benefits	2,344,603	2,155,974	188,629
Capitalized Labor and Benefits	(308,333)	(287,231)	(21,103)
Net Salaries and Benefits	2,036,269	1,868,743	167,527
Administrative and General Expenses			
Sludge removal	118,771	118,005	767
Chemicals	210,801	210,324	478
Materials & Supplies	150,606	149,718	888
Transportation	48,648	47,127	1,521
Communications	13,054	10,186	2,868
Claims	9,417	9,052	365
Insurance	79,461	77,860	1,601
Training & Travel	30,417	26,215	4,202
Advertising	12,500	3,080	9,420
Miscellaneous	92,632	85,883	6,749
Regulatory Expense	64,029	63,587	442
Bad Debts Provision	185,148	184,910	238
Total Administrative and General Expense	1,015,483	985,946	29,537
Depreciation Expense	1,759,065	2,002,032	(242,967)
Contractual Expense			
Audit & Computer Maintenance	28,783	28,657	127
Building rental	38,361	34,819	3,542
Equipment rental	52,980	52,122	857
Legal	512	-	512
Laboratory	15,862	15,680	182
Other	248,458	248,122	336
Total Contractual Expense	384,956	379,399	5,556
Retiree Supp. Annuities and health care costs	249,871	189,075	60,796
Contribution to Government of Guam	51,975	50,334	1,641
Total Retiree Benefits	301,846	239,409	62,437
Total Operating Expenses	7,416,512	7,439,933	(23,422)
Earnings (Loss) from Operations	2,312,066	1,876,774	(435,292)
Interest Income - 2010/13/14/16/17 Series Bond	84,943	155,726	70,783
Interest Income - Other Funds	13,856	40,926	27,070
Interest Income - SDC	2,072	12,001	9,930
Interest Expense - 2010/13/14/16/17 Series Bond	(2,387,785)	(2,117,099)	270,686
Interest Expense - ST BOG	(19,762)	(7,123)	12,639
Loss on Asset Disposal	-	(42,267)	(42,267)
AFUDC	1,157,306	-	(1,157,306)
Amortization of Discount, Premium and Issuance Costs	(17,798)	119,970	137,768
Defeasance due to bond refunding	(16,201)	(68,976)	(52,775)
Prior Year Adjustment	-	-	-
Total non-operating revenues (expenses)	(1,183,369)	(1,906,842)	(723,473)
Net Income (Loss) before capital contributions	1,128,697	(30,067)	(1,158,764)
Capital Contributions			
Grants from US Government	5,533,205	6,090,821	557,616
Grants from GovGuam & Others	-	-	-
Total Capital Contributions	5,533,205	6,090,821	557,616
Change in Net Assets	6,661,902	6,060,754	(601,148)
Debt Service Calculation			
Earnings From Operations	2,312,066	1,876,774	
System Development Charge	(97,773)	(41,203)	
Retiree COLA	51,975	50,334	
Interest/Investment Income	13,856	40,926	
Depreciation	1,759,065	2,002,032	
Balance Available for Debt Service per Section 6.12	4,039,190	3,928,863	
Working Capital Reserve Available for Debt Service	934,811	967,350	
Transfer to Working Capital - Debt Service Reserve	-	-	
Transfer to Working Capital - O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	4,974,001	4,896,212	
Debt Service			
Principal	730,833	730,833	
Interest	2,117,099	2,117,099	
Total	2,847,932	2,847,932	
Debt Service Coverage (1.25X) - per Section 6.12 (Indenture)	1.42	1.38	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	1.72	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings
Comparative for the period ending December 31, 2019 and 2018

SCHEDULE C

	Month to Date Actual (Unaudited) December-19	Month to Date Actual (Unaudited) December-18	Variance Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	5,461,985	5,665,230	(203,245)
Wastewater Revenues	3,497,682	3,303,889	193,793
Legislative Surcharge	291,329	296,919	(5,590)
Other Revenues	24,508	56,585	(32,078)
System Development Charge	41,203	73,793	(32,589)
Total Operating Revenues	9,316,708	9,396,417	(79,709)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	531,933	523,155	8,778
Power Purchases	1,432,471	1,345,898	86,573
Total Utility Costs	1,964,404	1,869,054	95,350
Salaries and Wages	1,626,563	1,611,401	15,162
Pension and Benefits	529,411	511,965	17,446
Total Salaries and Benefits	2,155,974	2,123,366	32,607
Capitalized Labor and Benefits	(287,231)	(278,501)	(8,730)
Net Salaries and Benefits	1,868,743	1,844,866	23,877
Administrative and General Expenses			
Sludge removal	118,005	111,157	6,847
Chemicals	210,324	204,317	6,007
Materials & Supplies	149,718	186,769	(37,051)
Transportation	47,127	65,297	(18,170)
Communications	10,186	13,486	(3,301)
Claims	9,052	16,361	(7,309)
Insurance	77,860	76,373	1,488
Training & Travel	26,215	27,631	(1,416)
Advertising	3,080	10,336	(7,256)
Miscellaneous	85,883	86,247	(364)
Regulatory Expense	63,587	22,383	41,204
Bad Debts Provision	184,910	184,760	150
Total Administrative and General Expense	985,946	1,005,117	(19,171)
Depreciation Expense	2,002,032	1,764,518	237,513
Contractual Expense			
Audit & Computer Maintenance	28,657	77,990	(49,334)
Building rental	34,819	35,302	(483)
Equipment rental	52,122	117,716	(65,594)
Legal	-	996	(996)
Laboratory	15,680	14,158	1,522
Other	248,122	249,294	(1,172)
Total Contractual Expense	379,399	495,457	(116,057)
Retiree Supp. Annuities and health care costs	189,075	238,096	(49,021)
Contribution to Government of Guam	50,334	50,000	334
Total Retiree Benefits	239,409	288,096	(48,687)
Total Operating Expenses	7,439,933	7,267,108	172,826
Earnings (Loss) from Operations	1,876,774	2,129,309	(252,535)
Interest Income - 2010/13/14/16/17 Series Bond	155,726	328,695	(172,969)
Interest Income - Other Funds	40,926	69,158	(28,232)
Interest Income - SDC	12,001	14,941	(2,940)
Interest Expense - 2010/13/14/16/17 Series Bond	(2,117,099)	(2,132,613)	15,514
Interest Expense - ST BOG	(7,123)	(16,981)	9,858
Loss on Asset Disposal	(42,267)	(224,838)	182,570
AFUDC	-	942,266	(942,266)
Amortization of Discount, Premium and Issuance Costs	119,970	119,752	217
Defeasance due to bond refunding	(68,976)	(69,534)	558
Prior Year Adjustment	-	(60,182)	60,182
Total non-operating revenues (expenses)	(1,906,842)	(1,029,336)	(877,505)
Net Income (Loss) before capital contributions	(30,067)	1,099,973	(1,130,040)
Capital Contributions			
Grants from US Government	6,090,821	1,800,850	4,289,971
Grants from GovGuam & Others	-	15,937	(15,937)
Total Capital Contributions	6,090,821	1,816,787	4,274,035
Change in Net Assets	6,060,754	2,916,759	3,143,995
Debt Service Calculation			
Earnings From Operations	1,876,774	2,129,309	
System Development Charge	(41,203)	(73,793)	
Retiree COLA	50,334	50,000	
Interest/Investment Income	40,926	69,158	
Depreciation	2,002,032	1,764,518	
Balance Available for Debt Service per Section 6.12	3,928,863	3,939,193	
Working Capital Reserve Available for Debt Service	967,350	963,645	
Transfer to Working Capital - Debt Service Reserve	-	-	
Transfer to Working Capital - O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	4,896,212	4,902,837	
Debt Service			
Principal	730,833	476,250	
Interest	2,117,099	2,137,785	
Total	2,847,932	2,614,035	
Debt Service Coverage (1.25X) - per Section 6.12 (Indenture)	1.38	1.51	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.72	1.88	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings **SCHEDULE D**
Comparative Budget vs. Actual for the period ending December 31, 2019

	Year to Date Budget December-19	Year to Date Actual (Unaudited) December-19	Variance Favorable / (Unfavorable)
OPERATING REVENUES			
Water Revenues	17,661,646	17,042,245	(619,400)
Wastewater Revenues	10,203,278	10,037,605	(165,673)
Legislative Surcharge	912,730	886,978	(25,752)
Other Revenues	114,762	95,115	(19,647)
System Development Charge	293,318	131,141	(162,176)
Total Operating Revenues	29,185,733	28,193,084	(992,648)
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	1,712,732	1,709,769	2,963
Power Purchases	4,043,945	4,045,875	(1,929)
Total Utility Costs	5,756,677	5,755,643	1,033
Salaries and Wages	5,347,095	4,874,196	472,899
Pension and Benefits	1,686,713	1,580,806	105,907
Total Salaries and Benefits	7,033,808	6,455,002	578,806
Capitalized Labor and Benefits	(925,000)	(838,663)	(86,337)
Net Salaries and Benefits	6,108,808	5,616,339	492,469
Administrative and General Expenses			
Sludge removal	376,314	359,173	17,141
Chemicals	557,404	545,200	12,205
Materials & Supplies	435,817	417,277	18,539
Transportation	140,943	140,267	675
Communications	45,162	27,871	17,291
Claims	25,250	9,052	16,198
Insurance	238,383	233,806	4,577
Training & Travel	91,250	36,270	54,980
Advertising	37,500	5,271	32,229
Miscellaneous	277,895	219,300	58,595
Regulatory Expense	135,087	133,259	1,828
Bad Debts Provision	562,445	559,297	3,148
Total Administrative and General Expense	2,923,449	2,686,043	237,406
Depreciation Expense	5,277,195	5,999,865	(722,670)
Contractual Expense			
Audit & Computer Maintenance	126,350	107,638	18,712
Building rental	115,083	105,422	9,661
Equipment rental	289,939	288,715	1,224
Legal	1,536	-	1,536
Laboratory	104,587	77,053	27,534
Other	640,373	506,600	133,773
Total Contractual Expense	1,277,868	1,085,428	192,440
Retiree Supp. Annuities and health care costs	749,613	570,065	179,548
Contribution to Government of Guam	155,925	151,002	4,923
Total Retiree Benefits	905,538	721,067	184,471
Total Operating Expenses	22,249,535	21,864,386	385,149
Earnings (Loss) from Operations	6,936,198	6,328,699	(607,499)
Interest Income - 2010/13/14/16/17 Series Bond	254,829	587,509	332,680
Interest Income - Other Funds	41,569	157,487	115,918
Interest Income - SDC	6,215	37,447	31,232
Interest Expense - 2010/13/14/16/17 Series Bond	(7,163,354)	(6,351,297)	812,057
Interest Expense - ST BOG	(59,286)	(18,697)	40,589
Loss on Asset Disposal	-	(42,267)	(42,267)
AFUDC	3,471,917	-	(3,471,917)
Amortization of Discount, Premium and Issuance Costs	(53,394)	359,909	413,303
Defeasance due to bond refunding	(48,603)	(206,927)	(158,324)
Prior Year Adjustment	-	(36,592)	(36,592)
Total non-operating revenues (expenses)	(3,550,107)	(5,513,427)	(1,963,320)
Net Income (Loss) before capital contributions	3,386,091	815,272	(2,570,819)
Capital Contributions			
Grants from US Government	16,599,615	7,546,727	(9,052,888)
Grants from GovGuam & Others	-	-	-
Total Capital Contributions	16,599,615	7,546,727	(9,052,888)
Change in Net Assets	19,985,706	8,361,999	(11,623,708)
Debt Service Calculation			
Earnings From Operations	6,936,198	6,328,699	
System Development Charge	(293,318)	(131,141)	
Retiree COLA	155,925	151,002	
Interest/Investment Income	41,569	157,487	
Depreciation	5,277,195	5,999,865	
Balance Available for Debt Service per Section 6.12	12,117,569	12,505,912	
Working Capital Reserve Available for Debt Service	2,804,433	2,902,049	
Transfer to Working Capital - Debt Service Reserve	-	-	
Transfer to Working Capital - O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	14,922,002	15,407,961	
Debt Service			
Principal	2,192,500	2,192,500	
Interest	6,351,297	6,351,297	
Total	8,543,797	8,543,797	
Debt Service Coverage (1.25X) - per Section 6.12 (Indenture)	1.42	1.46	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.75	1.80	

GUAM WATERWORKS AUTHORITY
Statement of Operations and Retained Earnings
Comparative for the period ending December 31, 2019 and 2018

SCHEDULE E

	Year to Date Actual (Unaudited) December-19	Year to Date Actual (Unaudited) December-18	Variance Increase / (Decrease)
OPERATING REVENUES			
Water Revenues	17,042,245	16,995,690	46,555
Wastewater Revenues	10,037,605	9,911,668	125,937
Legislative Surcharge	886,978	890,758	(3,780)
Other Revenues	95,115	169,755	(74,641)
System Development Charge	131,141	221,378	(90,237)
Total Operating Revenues	28,193,084	28,189,250	3,834
OPERATING AND MAINTENANCE EXPENSES			
Water Purchases	1,709,769	1,569,466	140,303
Power Purchases	4,045,875	4,037,695	8,179
Total Utility Costs	5,755,643	5,607,161	148,482
Salaries and Wages	4,874,196	4,834,204	39,992
Pension and Benefits	1,580,806	1,535,895	44,911
Total Salaries and Benefits	6,455,002	6,370,099	84,903
Capitalized Labor and Benefits	(838,663)	(835,502)	(3,161)
Net Salaries and Benefits	5,616,339	5,534,597	81,742
Administrative and General Expenses			
Sludge removal	359,173	333,472	25,702
Chemicals	545,200	612,950	(67,751)
Materials & Supplies	417,277	560,306	(143,029)
Transportation	140,267	195,890	(55,623)
Communications	27,871	40,459	(12,588)
Claims	9,052	49,083	(40,031)
Insurance	233,806	229,118	4,688
Training & Travel	36,270	82,894	(46,625)
Advertising	5,271	31,007	(25,736)
Miscellaneous	219,300	258,741	(39,441)
Regulatory Expense	133,259	67,149	66,110
Bad Debts Provision	559,297	554,280	5,016
Total Administrative and General Expense	2,686,043	3,015,351	(329,308)
Depreciation Expense	5,999,865	5,293,555	706,310
Contractual Expense			
Audit & Computer Maintenance	107,638	233,971	(126,333)
Building rental	105,422	105,905	(483)
Equipment rental	288,715	353,148	(64,433)
Legal	-	2,989	(2,989)
Laboratory	77,053	42,475	34,578
Other	506,600	747,882	(241,282)
Total Contractual Expense	1,085,428	1,486,370	(400,942)
Retiree Supp. Annuities and health care costs	570,065	714,289	(144,224)
Contribution to Government of Guam	151,002	150,000	1,002
Total Retiree Benefits	721,067	864,289	(143,222)
Total Operating Expenses	21,864,386	21,801,323	63,063
Earnings (Loss) from Operations	6,328,699	6,387,928	(59,229)
Interest Income - 2010/13/14/16/17 Series Bond	587,509	986,085	(398,576)
Interest Income - Other Funds	157,487	207,473	(49,986)
Interest Income - SDC	37,447	44,823	(7,376)
Interest Expense - 2010/13/14/16/17 Series Bond	(6,351,297)	(6,397,839)	46,543
Interest Expense - ST BOG	(18,697)	(50,944)	32,247
Loss on Asset Disposal	(42,267)	(674,513)	632,246
AFUDC	-	2,826,798	(2,826,798)
Amortization of Discount, Premium and Issuance Costs	359,909	359,257	652
Defeasance due to bond refunding	(206,927)	(208,602)	1,675
Prior Year Adjustment	(36,592)	(180,547)	143,955
Total non-operating revenues (expenses)	(5,513,427)	(3,088,009)	(2,425,417)
Net Income (Loss) before capital contributions	815,272	3,299,918	(2,484,646)
Capital Contributions			
Grants from US Government	7,546,727	5,402,549	2,144,177
Grants from GovGuam & Others	-	47,810	(47,810)
Total Capital Contributions	7,546,727	5,450,360	2,096,367
Change in Net Assets	8,361,999	8,750,278	(388,279)
Debt Service Calculation			
Earnings From Operations	6,328,699	6,387,928	
System Development Charge	(131,141)	(221,378)	
Retiree COLA	151,002	150,000	
Interest/Investment Income	157,487	207,473	
Depreciation	5,999,865	5,293,555	
Balance Available for Debt Service per Section 6.12	12,505,912	11,817,578	
Working Capital Reserve Available for Debt Service	2,902,049	2,890,934	
Transfer to Working Capital - Debt Service Reserve	-	-	
Transfer to Working Capital - O&M Reserve	-	-	
Balance Available for Debt Service inclusive of reserves	15,407,961	14,708,512	
Debt Service			
Principal	2,192,500	1,428,750	
Interest	6,351,297	6,413,354	
Total	8,543,797	7,842,104	
Debt Service Coverage (1.25X) - per Section 6.12 (Indenture)	1.46	1.51	
Debt Service Coverage (1.75X) inclusive of reserves (PUC)	1.80	1.88	

GUAM WATERWORKS AUTHORITY
Restricted and Unrestricted Cash Summary
FY2020

SCHEDULE F

Description	Unaudited December 31, 2019	Unaudited September 30, 2019	Increase (Decrease)
UNRESTRICTED			
Change Fund	2,000	2,000	-
Petty Cash	4,450	4,450	-
BOG Deposit Accounts	5,876,647	4,955,587	921,060
Sub-total Unrestricted	**5,883,096**	**4,962,036**	**921,060**
RESTRICTED			
ANZ Bank	51	19	32.63
Bank Pacific	12,777	12,321	456
Bank of Hawaii	119,909	220,158	(100,249)
Community First FCU	3,625	2,530	1,095
First Hawaiian Bank	5,689	11,761	(6,073)
Bank Pacific Surcharge	1,208,534	302,837	905,698
Bank Pacific Escrow Deposit	841,787	836,528	5,259
BOG Customer Refunds	1,838,213	1,871,553	(33,339)
BOG Emergency Reserve Fund	6,238	6,237	2
BOG Sewer Hookup Revolving Fund	67,173	67,094	79
BOG Subordinate Security Fund	859,233	859,233	-
BOG Operation and Maintenance Fund	3,083,482	3,083,482	-
BOG OMRRRF Fund	17,423,213	17,423,213	-
BOG Revenue Trust	438,702	1,164,224	(725,521)
BOG Revenue Trust Fund	7,125,544	7,613,000	(487,456)
BOG Capital Improvement Revenue Fund	2,392,741	1,001,292	1,391,449
BOG O & M Reserve	13,986,892	13,933,323	53,568
BOG Debt Service Reserve	11,608,195	11,563,736	44,458
BOG CapEx Fund	14,148,352	17,244,823	(3,096,471)
	75,170,351	**77,217,363**	**(2,047,012)**
BOG - SDC Deposit	3,310,683	2,024,365	1,286,318
BOG - SDC CDs	6,000,000	7,250,000	(1,250,000)
Total SDC	**9,310,683**	**9,274,365**	**36,318**
Total Restricted	**84,481,034**	**86,491,728**	**(2,010,694)**
Reserve Funds			
BOG Series 2013 Construction Fund	13,005,648	14,170,759	(1,165,111)
BOG Series 2014 Refunding Construction Fund	218,295	217,448	846
BOG Series 2016 Construction Fund	80,206,394	89,235,554	(9,029,160)
BOG Series 2017 Refunding Construction Fund	6,297,961	6,313,750	(15,789)
Total Restricted - Held by Trustee	**99,728,298**	**109,937,511**	**(10,209,213)**
USB Series 2013 Debt Service Fund	6,101,749	3,082,212	3,019,537
USB Series 2013 Debt Service Reserve Fund	12,031,688	12,031,688	-
USB Series 2014 Refunding Debt Service Fund	3,694,725	1,885,637	1,809,088
USB Series 2014 Refunding Debt Service Reserve Fund	7,914,811	7,798,212	116,599
USB Series 2016 Debt Service Fund	3,851,273	1,946,774	1,904,498
USB Series 2016 Debt Service Reserve Fund	7,591,999	7,591,999	-
USB Series 2010 Debt Service Fund	1,022,963	523,353	499,611
USB Series 2017 Refunding Debt Service Reserve Fund	7,566,460	7,566,460	-
USB Series 2017 Debt Service Fund	2,730,156	1,382,329	1,347,827
Total Investments	**52,505,823**	**43,808,664**	**8,697,159**
Total Restricted and Unrestricted Cash	**242,598,251**	**245,199,940**	**(2,601,689)**

GUAM WATERWORKS AUTHORITY
Accounts Receivable - Government (Active)
As of December 31, 2019

SCHEDULE G

Customer Name	No. of Accounts	AGING Current	31 - 60 days	61 - 90 days	91 - 120 days	Over 120 days	Total
Autonomous Agencies (Active)							
Guam Int'l Airport Authority	8	$ 61,297	$ 70,197	$ 49,747	$ 18,078	$ 240,276	$ 439,594
Guam Power Authority	25	180,051	-	-	-	-	180,051
Port Authority of Guam	5	4,785	-	-	-	-	4,785
Guam Memorial Hospital Authority	3	2,230	2,054	-	-	-	4,285
Guam Housing & Urban Renewal Authority	9	1,619	597	-	-	-	2,217
Guam Housing Corporation	1	30	-	-	-	-	30
Total Autonomous Agencies	**51**	**$ 250,013**	**$ 72,848**	**$ 49,747**	**$ 18,078**	**$ 240,276**	**$ 630,962**
Line Agencies (Active)							
Department of Education	53	$ 317,030	$ 222,278	$ 221,165	$ 110,280	$ 14,127	$ 884,881
Mayors Council of Guam	61	15,651	17,719	16,043	10,352	46,046	105,810
Department of Parks & Recreation	17	40,880	26,289	26,120	5,548	-	98,838
Department of Public Health & Social Services	8	2,689	79,060	1,811	592	316	84,469
Department of Corrections	8	61,661	45	-	-	-	61,705
Department of Public Works	11	13,971	1,682	54	7,197	-	22,904
Department of Agriculture	6	5,971	7,545	1,340	-	-	14,856
Department of Military Affairs/Guarng	1	2,330	2,066	-	-	-	4,395
University of Guam	44	3,915	-	-	-	-	3,915
Guam Fire Department	11	3,670	-	-	-	-	3,670
Division of Senior Citizens, DPHS&S	2	337	777	544	337	-	1,994
Department of Chamorro Affairs	7	847	920	46	-	-	1,813
Office of Civil Defense	2	467	499	501	-	-	1,468
Department of Youth Affairs	3	1,263	-	-	-	-	1,263
Guam Veterans Affairs Office	2	303	798	137	-	-	1,239
Department of Administration	2	676	487	-	-	-	1,163
Guam Police Department	7	1,140	-	-	-	-	1,140
The Office of the Dededo Mayor	1	157	201	122	133	-	613
Guam Enviromental Protection Agency	2	249	303	-	-	-	551
Department of Customs & Quarantine	1	389	-	-	-	-	389
Department of Mental Health	2	356	-	-	-	-	356
Guam Energy Office	1	62	95	-	-	-	156
Guam Public Library	6	123	-	-	-	-	123
Department of Agriculture-Fisheries	1	23	24	-	-	-	47
Merizo Mayor	1	33	-	-	-	-	33
Department of Mental Health And Substance	1	23	-	-	-	-	23
Guam Solid Waste Authority	2	19	-	-	-	-	19
Total Line Agencies	**263**	**$ 474,235**	**$ 360,788**	**$ 267,883**	**$ 134,438**	**$ 60,488**	**$ 1,297,832**
Total as of December 31, 2019 (Active)	**314**	**$ 724,248**	**$ 433,636**	**$ 317,629**	**$ 152,516**	**$ 300,764**	**$ 1,928,795**

GUAM WATERWORKS AUTHORITY
Accounts Receivable Aging Summary by Rate Class **SCHEDULE H**
As of December 31, 2019

		AGING					
Rate Class	**No. of Accounts**	**Current**	**31 - 60 days**	**61 - 90 days**	**91 - 120 days**	**Over 120 days**	**Total**
Agriculture	381	36,252	3,906	1,942	3,144	65,332	110,576
Commercial I	2,683	1,207,270	104,645	26,481	25,067	358,388	1,721,852
Commercial II	25	350,241	30,816	4,429	5,279	257,032	647,796
Commercial III	302	732,617	102,595	22,175	26,315	197,590	1,081,293
Golf Course	16	6,390	1,402	754	784	3,779	13,110
Government	447	3,062,300	435,039	321,915	152,516	923,355	4,895,125
Hotel	57	3,247,074	518,913	134,225	1,736	124,420	4,026,368
Irrigation	29	3,938	262	270	258	3,326	8,054
Residential	50,292	4,369,810	779,031	399,933	364,261	5,122,524	11,035,559
Total	**54,232**	**13,015,891**	**1,976,610**	**912,125**	**579,360**	**7,055,745**	**23,539,732**

Less Allowance for Doubtful Accounts: (8,349,313)
Net Accounts Receivable: **15,190,419**

Days Receivables Outstanding 49

GUAM WATERWORKS AUTHORITY
Accounts Payable Aging
As of December 31, 2019

SCHEDULE I

AGING					
Current	31 - 60 Days	61 - 90 Days	91 - 120 Days	> 120 Days	**Total**
$ 2,088,500.39	$ 389,719.74	$ 184,840.74	$ 85,935.42	$ 382,988.95	**$ 3,131,985.24**

Days Payable Outstanding	35

GUAM WATERWORKS AUTHORITY **SCHEDULE J**
System Development Charges Project Status
As of December 31, 2019

Funding Summary

Total available project funds	$	12,471,846
Total project expenditures and encumbrances		10,491,604
Total unobligated project funds	**$**	**1,980,241**

Projects Funded

Project Description	Expenditures	Outstanding Encumbrances	Expenditures and Encumbrances
Agat-Santa Rita Wastewater Treatment Plant Replacement	1,016,576	603,466	1,620,043
Baza Gardens Wastewater Cross Island Pumping & Conveyance	944,549	209,422	1,153,971
Central Guam Reservoirs		280,040	280,040
Line Replacement Phase IV		256,937	256,937
Northern DWWTP		5,422,599	5,422,599
Northern DWWTP (Land Purchase)	1,000,000		1,000,000
Route 4 Relief Sewerline Rehab & Replacement		399,869	399,869
South Paulino Heights Waterline Upgrade	71,986	5,031	77,016
Talofofo Sewer Improvement		241,142	241,142
Umatac Merizo WWTP		39,988	39,988
	$ 3,033,111	**$ 7,458,493**	**$ 10,491,604**

Future planned projects	FY2020
Water Wells	540,000
Water Dist Sys Pipe Replacement & Upgrades	540,000
WWTP Priority 1 Upgrades	300,000
Umatac Merizo STP Replacement	300,000
Wastewater Sewer System Expansion	300,000
	$ 1,980,000

GUAM WATERWORKS AUTHORITY
WATER DEMAND BY RATE CLASS BY METER SIZE
FY2015 - FY2020

SCHEDULE K

CLASS		AUDITED FY2015 TOTAL CONSUMPTION (kGal)	AUDITED FY2016 TOTAL CONSUMPTION (kGal)	% Inc / (Dec.)	AUDITED FY2017 TOTAL CONSUMPTION (kGal)	% Inc / (Dec.)	AUDITED FY2018 TOTAL CONSUMPTION (kGal)	% Inc / (Dec.)	UNAUDITED FY2019 TOTAL CONSUMPTION (kGal)	% Inc / (Dec.)	UNAUDITED FY2020 (3 Mos Annualized) TOTAL CONSUMPTION (kGal)	% Inc / (Dec.)
R	Residential	3,415,662	3,429,689	0%	3,206,811	-6%	3,313,613	3%	3,359,905	1%	3,406,614	1%
C	Commercial	1,020,089	1,022,890	0%	964,639	-6%	910,905	-6%	906,192	-1%	889,203	-2%
F	Federal	1,168	1,180	1%	2,508	113%	1,813	-28%	1,602	-12%	1,250	-22%
G	Government	515,974	475,366	-8%	448,430	-6%	450,165	0%	405,980	-10%	480,025	18%
H	Hotel	999,116	1,008,087	1%	1,004,525	0%	989,723	-1%	1,079,919	9%	1,052,918	-3%
G	Golf	6,850	6,770	-1%	5,252	-22%	2,741	-48%	2,793	2%	4,972	78%
A	Agriculture	67,376	78,628	17%	69,482	-12%	81,127	17%	90,803	12%	61,080	-33%
I	Irrigation	10,385	11,351	9%	10,143	-11%	8,504	-16%	7,896	-7%	6,410	-19%
	GRAND TOTAL	6,036,620	6,033,960	0%	5,711,790	-5%	5,758,590	1%	5,855,091	2%	5,902,471	1%

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913
Telephone No.: (671) 300-6846

Issues for Decision

Resolution 10-FY2020
Relative to Approval of the Construction Contract for the Tank Repair and Bypass Project

What is the project's objective and is it necessary and urgent?
The project's objective is the repair/rehabilitation of eight (8) reservoir locations as mandated by the Order for Preliminary Relief Re: Deadlines for Outstanding Projects Under the Amended Stipulated Order, Paragraph 29. The reservoirs are:

1. Santa Ana,
2. Agat-Umatac,
3. Umatac Subdivision,
4. Pigua Merizo,
5. Malojloj,
6. Windward Hills,
7. Kaiser, and
8. Astumbo No. 2 tanks.

The reservoirs are under the 2011 Court Order deadline requirements established, and therefore this project is necessary and urgent.

GWA is seeking approval to enter into contract with AIC International, Inc. for the Base Bid work for the bypass and minor repair work on the tanks listed above, and Additive Bid No. 1 (Yigo No. 3 Major Repair). A summary of work for each site under this authorization is presented below.

Santa Ana
The existing booster pump station onsite will be modified with two new pumps and one new pressure reducing and sustaining valve (PRSV). The modifications are needed to bypass the tank for the inspection and repair. After inspection, the actual repairs will be determined. Minor repairs are covered under the Base Bid. Major repairs are covered under the Additive Bid. If major repairs are required as determined by the inspections, a change order will be negotiated with the Contractor.

Agat-Umatac
There is an existing bypass system in place. The tank will be taken offline and inspected. After inspection, the actual repairs will be determined. Minor repairs are covered under the Base Bid. Major repairs are covered under the Additive Bid. If major repairs are required as determined by the inspections, a change order will be negotiated with the Contractor.

Umatac Subdivision
The existing booster pump station (Toguan BPS) will be modified with a new pump skid and a new hydro-pneumatic tank. The modifications are needed to bypass the tank for inspection and repair. Minor repairs are covered under the Base Bid. Major repairs are covered under the Additive Bid. If major repairs are required as determined by the inspections, a change order will be negotiated with the Contractor

Pigua Merizo
The existing booster pump station (Geus BPS) will be modified with a new pump skid and a new hydro-pneumatic tank. The modifications are needed to bypass the tank inspection and repair. The work will also include a new pressure reducing and sustaining valve (PRSV). Minor repairs are covered under the Base Bid. Major repairs are covered under the Additive Bid. If major repairs are required as determined by the inspections, a change order will be negotiated with the Contractor

Malojloj
The existing reservoir inlet and outlet pipping will be modified to bypass the tank for inspection and repair. The work will also include installing a pressure reducing and sustaining valve (PRSV). Minor repairs are covered under the Base Bid. Major repairs are covered under the Additive Bid. If major repairs are required as determined by the inspection, a change order will be negotiated with the Contractor.

Windward Hills
GWA operations and engineering is currently working on a bypass for the tank site. Cleaning and preparation of the tank for inspection is included in this contract. The condition of tank appears to need major repairs. Under the Additive Bid, major repair items are listed. A change order will be negotiated with the Contactor once the repairs are determined by the inspection.

Kaiser
Under the Pressure Zone Realignment Phase I construction project, a bypass for the Kaiser tank will be completed. Cleaning and preparation of the tank for inspection is included in this contract. Under the Additive Bid, major repair items are listed. A change order will be negotiated with the Contactor once the repairs are determined by the inspection.

Astumbo No. 2
The major tank repair work involves installing a double bottom tank floor, drip rings to floor chimes, replacing tank shell manway nozzle, replacing tank exterior fill gauge and interior float system, new tank hatch cover, tank vent and screen, roof guardrails, exterior tank ladder with cage, interior ladder with fall arrest assembly, complete exterior and interior coating, cathodic protection, and miscellaneous repairs.

Additive Bid Work - Included in this Authorization

- Additive Bid No. 1: Yigo No. 3 (formerly named Yigo No. 2 – 2.5 MG) Major Repair

GWA will seek additional approval from the CCU at a later time for additional Additive Bid Work for major repairs shown below. Major repair work includes new double bottom floor, complete

exterior and interior coating, cathodic protection, vent, hatch, ladder, column and base plate repair, and miscellaneous repair items. The items below may be added to the Contract, depending on the findings during bypass and inspection work in the base bid as described above.

Additive Bid Work – Not Included in this Authorization

- Additive Bid No. 2: Santa Ana Major Repair
- Additive Bid No. 3: Umatac Subdivision Major Repair
- Additive Bid No. 4: Pigua Merizo Major Repair
- Additive Bid No. 5: Malojloj Major Repair
- Additive Bid No. 6: Agat-Umatac Major Repair
- Additive Bid No. 7: Windward Hills Major Repair
- Additive Bid No. 8: Kaiser Major Repair

Where is the project located?

Santa Ana - The tank located off Highway 2 in Agat heading South just before the Agat Residential Transfer Station.

Agat-Umatac - The tank is located off Highway 2 in Umatac heading South before Para I Lalahi Ta Park.

Umatac Subdivision - The tank is located off Jesus A. Quidachay Street in Umatac heading South uphill from the Umatac bridge.

Toguan Booster Pump Station is located off San Dionisio Drive in Umatac heading South downhill.

Pigua, Merizo - The tank is located off Chalan Joseph A. Cruz Street, Highway 4 in Merizo heading South uphill after the Merizo Elementary School.

Geus Booster Pump Station is located off Espinosa Avenue, Highway 4 in Merizo heading South at the 3 way-intersection in front of Merizo Shell Gas Station.

Malojloj Reservoir - The tank is located off Highway 4 in Malojloj heading South after the Malojloj Residential Transfer Station.

Windward Hills - The tank is located off Camacho Street, Highway 4A in Talofofo heading South after Onward Talofofo Golf Club.

Kaiser - The tank is located off Marine Corps Drive in Dededo, heading North before Lucky Supplies.

Astumbo No.2 - The tank is located off Chalan Palauan street, Y-Sengsong Road in Dededo.

How much will it cost?

The Base Bid and Additive Bid No. 1 proposal submitted by AIC International, Inc. is $4,208,197.00 and $1,194,129.00, respectively. The total requested funding amount is $5,942,559.00. The total requested amount includes a 10% contingency.

When will it be completed?

Site(s)	Completion / Substantial Completion
• Santa Ana • Umatac Subdivision • Pigua Merizo • Malojloj	NTP + 390 calendar days
Agat-Umatac	NTP + 180 calendar days
Astumbo No.2	NTP +270 calendar days
• Windward Hills • Kaiser	Inspection preparation only
Yigo No. 3 Major Repair (Additive Bid No.1)	To Be Determined at C/O Issuance

What is the funding source?

1. CIP PW 09-09: Water Reservoir Internal/External Corrosion Assessment Program
2. CIP PW 09-11: Water System Reservoirs 2005 Improvements

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 10-FY2020

RELATIVE TO APPROVAL OF THE CONSTRUCTION CONTRACT FOR THE TANK REPAIR AND BYPASS PROJECT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA currently has critical Court Order ("CO") Projects that include the Santa Ana, Agat-Umatac, Umatac Subdivision, Pigua Merizo, Malojloj, Windwards Hills, Kaiser, Yigo and Astumbo No. 2 Tanks, as stated in Paragraph 29.b of the Order for Preliminary Relief Re: Deadlines for Outstanding Projects Under the Amended Stipulated Order; and

WHEREAS, GWA has advertised an Invitation for Bid (IFB-06-ENG-2019) soliciting bid proposals from experienced, responsible, and responsive bidders to construct tank bypass systems to allow for inspection and repair of the tanks; and

WHEREAS, under the Base Bid Work, the Santa Ana, Agat-Umatac, Umatac Subdivsion, Pigua Merizo, Malojloj, Windward Hills, and Kaiser tank shall undergo inspection and minor repair work;

WHEREAS, should the tank inspections warrant the above tanks to undergo major repair as detailed in the Additive Bid Work, a change order shall be negotiated with the Contractor;

//

WHEREAS, under Base Bid Work, the Astumbo No. 2 tank shall undergo major repair which includes complete exterior and interior tank painting, new tank floor, weld repairs, cathodic protection, and miscellaneous repairs;

WHEREAS, under Additive Bid No. 1, the Yigo No. 3 tank shall undergo major repair which includes complete exterior and interior tank painting, weld repairs, cathodic protection, and miscellaneous repairs;

WHEREAS, IFB packages were picked up by 8 interested bidders, from which GWA received bid proposals from 2 of the 8 parties before the IFB submittal deadline (See Exhibit A – Abstracts of Bid); and

WHEREAS, GWA engineering team analyzed all bid proposals received on November 21, 2019 and determined AIC International, Inc. as being the lowest responsive and responsible bidder and met all the bid requirements set forth by GWA; and

WHEREAS, GWA management finds that AIC International, Inc.'s Base Bid proposal of Four Million Two Hundred Eight Thousand One Hundred Ninety-Seven Dollars ($4,208,197.00) to be acceptable (See Exhibit B – Bid Form).

WHEREAS, GWA Management will assess any additional funding availability from the latest Capital Improvements Plan to ascertain if any or all the Additive bid items as part of this IFB can be awarded later through a change order or via a subsequent CCU approval as a means of maximizing system improvements efficiently; and

WHEREAS, GWA Management is seeking approval to enter in contract for the Base Bid work with AIC International, Inc. (IFB-06-ENG-2019) in the amount of Four Million Two Hundred Eight Thousand One Hundred Ninety-Seven Dollars ($4,208,197.00), along with a ten percent (10%) contingency of Four Hundred Twenty Thousand Eight Hundred Twenty Dollars ($420,820.00), bringing the total Base Bid requested funding amount to Four Million Six Hundred Twenty Nine Thousand Seventeen Dollars ($4,629,017.00); and

//

WHEREAS, GWA Management is seeking approval to include in such contract Additive Bid No. 1 – Yigo No. 3 Major Repair Work in the amount of One Million One Hundred Ninety-Four Thousand One Hundred Twenty-Nine Dollars ($1,194,129.00) after entering into contract with AIC International, Inc., along with a ten percent (10%) contingency of One Hundred Nineteen Thousand Four Hundred Thirteen Dollars ($119,413.00), bringing the total additive bid item funding amount to One Million Three Hundred Thirteen Thousand Five Hundred Forty-Two Dollars ($1,313,542.00).

WHEREAS, the funding source for the construction project will be from bond funds as detailed in the following CIP line items:

- CIP PW 09-09: Water Reservoir Internal/External Corrosion Assessment Program
- CIP PW 09-11: Water System Reservoirs 2005 Improvements

NOW, BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by AIC International, Inc. are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept bid from AIC International, Inc. attached hereto as Exhibit B, and which is also incorporated into this Resolution in its entirety.
4. The CCU hereby authorizes the management of GWA to enter into a contract with AIC International, Inc. in the amount of Four Million Two Hundred Eight Thousand One Hundred Ninety-Seven Dollars ($4,208,197.00) for base bid work plus the amount of One Million One Hundred Ninety-Four Thousand One Hundred Twenty-Nine Dollars ($1,194,129.00) for additive bid item work.
5. The CCU hereby approves the funding total of Five Million Four Hundred Two Thousand Three Hundred Twenty Six Dollars ($5,402,326.00), along with a ten percent (10%) contingency of Five Hundred Forty Thousand Two

Hundred Thirty Three Dollars ($540,233.00), bringing the total authorized funding amount to Five Million Nine Hundred Forty Two Thousand Five Hundred Fifty Nine Dollars ($5,942,559.00).

6. The CCU hereby approves the use of funding sources from the following CIP line items:
    a. CIP PW 09-09: Water Reservoir Internal/External Corrosion Assessment Program
    b. CIP PW 09-11: Water System Reservoirs 2005 Improvements

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY and REGULARLY ADOPTED, this 28th day of January 2020.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**MICHAEL T. LIMTIACO**
Chairperson	Secretary

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

EXHIBIT A

ORIGINAL

GUAM WATERWORKS AUTHORITY
ABSTRACT OF BIDS

Project Name: **TANK REPAIR AND BYPASS**
Project Number: W19-003-BND IFB No.: IFB-06-ENG-2019

Bid Opening Date: November. 21, 2019
Time: 3:00 PM

	Bidders Name	Section A-5 Bid Bond	CERTIFICATIONS								Addendum			BID AMOUNT		
			Qualification Statement	Non Collusion Affidavit	EEO Certification	Non Segregated Facilities	Sex Offender Certification	Wage and Benefit Determination	Major Shareholder Affidavit	Special Instructions to Bidders	1	2	3	BASE BID	ADDITIVE BID NO. 1	BASE + ADDITIVE
1.	MURPHY ENTERPRISES	—														
2.	VG GOZUM CONSTRUCTION	—														
3.	IAN CORPORATION	—														
4.	AYM INTERNATIONAL INC.	—														
5.	SUMITOMO-MITSUI CONSTRUCTION CO.	Federal Insurance Company 15% of bid	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$7,079,883	$7,797,117	$14,877,000
6.	GENERAL + PLUMBING	—														
7.	AIC INTERNATIONAL INC.	Fidelity and deposit company of maryland, 15% of bid	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$4,208,215	$8,602,200	$12,810,415
8.	FRONTIER SUPPLY	—														
	GWA Estimate													$4,039,625.01	$10,139,655.50	$14,179,280.51

Bids Opened and Read by:
GLORIA P. BENSAN
(Name and Signature)

Tabulated By:
Ryan Diaz
(Name and Signature)

GWA Procurement Representative:
ROLAND F. LUMONGSOD
(Name and Signature)

Witnesses:

EXHIBIT B

BID PRICE EVALUATION:

- GWA's evaluation showed discrepancies in both the total base bid and additive bid prices. The total amount for the base bid and additive bid appears to be incorrect and does not correlate with the actual sum of bid prices upon review. Discrepancies were found on Table Mand N, total base bid and additive bid amounts. GWA obtained total amounts of **$4,208,197.00** and **$8,602,199.00**, but the Bid Form Revision 1 indicated total amounts of **$4,208,215.00** and **$8,602,200.00**, respectively. Please verify the correct subtotal and total amounts in each of the tables on the Bid Form Revision 1 and submit a letter to confirm the bid price with the correct corresponding values to GWA Engineering Division.

AIC Response:
Please see attached corrected Bid Form. Note that the above discrepancies were due to the rounding of numbers.

EXHIBIT B

BID FORM

Tank Repair and Bypass GWA Project No. W19-003-BND

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Article 9 – Bid Submittal 36

EXHIBIT B

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
Miguel C. Bordallo, PE, General Manager
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date
01	October 09, 2019
02	October 25, 2019
03	November 13, 2019

B. Bidder has visited the Sites, conducted a thorough, alert visual examination of the Sites and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

EXHIBIT B

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Sites; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

EXHIBIT B

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following items and be measured and paid for at the contract unit prices as follows:

Base Bid items No. 1 – No. 2: Overall Project Mobilization and Demobilization and Bypass Works

Payment shall be made on a lump sum basis. Payment shall be full compensation for all costs and work required to mobilize to the site, demobilize from the site and provide bypass works including but not limited to, shipping, transportation, associated labor, bond fees, permitting and associated fees, transporting tools, equipment and supplies from site to site throughout the project area, and all related items to provide for mobilizing and demobilizing to complete the work under this contract.

Base Bid items No. 3 – No. 10: Tank Repair

Payment for each Bid item 3 through 10, inclusive, shall be made on a lump sum basis per Tank Bypass and Tank Repair bid item. Payment shall be fully compensated for all costs for work described in Section 001 11 00 "Summary", the bid schedule, the specifications, and drawings.

Additive Bid items No. 1 – No. 8: Major Tank Repair

Payment shall be made on a lump sum basis. Payment shall be full compensation for all costs and work required to complete all listed bid items to include but not limited to testing, disinfection procedures, commissioning and close-out.

EXHIBIT B

TABLE A - BASE BID - GENERAL WORK TANK BYPASS AND REPAIR BID SCHEDULE				
Item No.	**Description**	**Quantity**	**Unit**	**Amount**
1.00	General Work			
1.01	Mobilization and Demobilization (5%)	1	LS	$ 167,547.00
1.02	Insurance and Bond (1%)	1	LS	$ 34,665.00
1.03	Permits	1	LS	$ 96,873.00
1.04	Documentation	1	LS	$ 16,005.00
1.05	Project Management	1	LS	$ 459,386.00
	Subtotal	1	LS	$ 774,476.00

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TABLE B - BASE BID - TANK BYPASS WORK

TANK BYPASS AND REPAIR BID SCHEDULE

Item No.	Description	Quantity	Unit	Amount
2.00	**Bypass Works**			
2.10	Santa Ana Tank Bypass			
2.11	Civil Works	1	LS	$ 96,148.00
2.12	Electrical Works	1	LS	$ 213,359.00
2.13	Instrumentation and Control Works	1	LS	$ 18,442.00
	Subtotal	1	LS	$ 327,949.00
2.20	Umatac Subdivision Tank Bypass			
2.21	Civil Works	1	LS	$ 96,148.00
2.22	Electrical Works	1	LS	$ 151,709.00
2.23	Instrumentation and Control Works	1	LS	$ 18,442.00
	Subtotal	1	LS	$ 266,299.00
2.30	Pigua Merizo Tank Bypass			
2.31	Civil Works	1	LS	$ 96,148.00

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2.32	Electrical Works	1	LS	$	158,533.00
2.33	Instrumentation and Control Works	1	LS	$	18,422.00
	Subtotal	1	LS	$	273,103.00
2.40	Malojloj Tank Bypass				
2.41	Civil Works	1	LS	$	96,148.00
	Subtotal	1	LS	$	96,148.00
			Subtotal	$	963,499.00

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TABLE C - BASE BID - MINOR TANK REPAIR WORK

TANK BYPASS AND REPAIR BID SCHEDULE

Item No.	Description	Quantity	Unit	Unit Cost	Amount
3.00	Santa Ana Tank - 1.0 MG (Diameter = 66', Height = 41')				
3.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 24,184.00	$ 24,184.00
3.02	Complete pressure wash of tank exterior	1	LS	$ 17,820.00	$ 17,820.00
3.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00
3.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
3.05	Repair corrosion spots on tank interior floor, wall, roof, purlins, piping, and columns by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 128.00	$ 25,600.00
3.06	Repair corrosion spots on tank exterior wall, wind girders, roof knuckle, roof, roof platform, and platform by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 115.00	$ 23,000.00
3.07	Repair roof vent and flange connection, to include metal repair, abrasive grinding, coating, and screen replacement (316 stainless steel mesh)	1	EA	$ 6,110.00	$ 6,110.00

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3.08	Repair roof access hatch, to include metal repair, abrasive grinding and coating	1	EA	$ 5,728.00	$ 5,728.00
3.09	Repair side access manway, to include metal repair, abrasive grinding, coating, and new gasket	2	EA	$ 5,728.00	$ 11,456.00
3.10	Exterior and interior weld repair, including preparation, welding, testing, and coating	100	LF	$ 319.00	$ 31,900.00
3.11	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 26,729.00	$ 26,729.00
				Subtotal:	$ 183,474.00
4.00	Umatac Subdivision Tank - 0.5 MG (Diameter = 54', Height = 41')				
4.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 17,820.00	$ 17,820.00
4.02	Complete pressure wash of tank exterior	1	LS	$ 14,001.00	$ 14,001.00
4.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00
4.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
4.05	Repair corrosion spots on tank interior floor, wall, roof, purlins, piping, and columns by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 128.00	$ 25,600.00

4.06	Repair corrosion spots on tank exterior wall, wind girders, roof knuckle, roof, roof platform, and platform by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 115.00	$ 23,000.00
4.07	Repair roof vent and flange connection, to include metal repair, abrasive grinding, coating, and screen replacement (316 stainless steel mesh)	1	EA	$ 6,110.00	$ 6,110.00
4.08	Repair roof access hatch, to include metal repair, abrasive grinding and coating	1	EA	$ 5,728.00	$ 5,728.00
4.09	Repair side access manway, to include metal repair, abrasive grinding, coating, and new gasket	2	EA	$ 5,728.00	$ 11,456.00
4.10	Exterior and interior weld repair, including preparation, welding, testing, and coating	100	LF	$ 319.00	$ 31,900.00
4.11	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 23,547.00	$ 23,547.00
				Subtotal:	$ 170,109.00
5.00	Pigua Merizo Tank - 0.5 MG (Diameter = 54', Height = 41')				
5.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 17,820.00	$ 17,820.00
5.02	Complete pressure wash of tank exterior	1	LS	$ 14,001.00	$ 14,001.00
5.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00

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5.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
5.05	Repair corrosion spots on tank interior floor, wall, roof, purlins, piping, and columns by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 128.00	$ 25,600.00
5.06	Repair corrosion spots on tank exterior wall, wind girders, roof knuckle, roof, roof platform, and platform by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 115.00	$ 23,000.00
5.07	Repair roof vent and flange connection, to include metal repair, abrasive grinding, coating, and screen replacement (316 stainless steel mesh)	1	EA	$ 6,110.00	$ 6,110.00
5.08	Repair roof access hatch, to include metal repair, abrasive grinding and coating	1	EA	$ 5,728.00	$ 5,728.00
5.09	Repair side access manway, to include metal repair, abrasive grinding, coating, and new gasket	2	EA	$ 5,728.00	$ 11,456.00
5.10	Exterior and interior weld repair, including preparation, welding, testing, and coating	100	LF	$ 319.00	$ 31,900.00
5.11	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 23,547.00	$ 23,547.00
				Subtotal:	$ 170,109.00

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6.00	Malojloj - 1.0 MG (Diameter = 66', Height = 41')				
6.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 24,184.00	$ 24,184.00
6.02	Complete pressure wash of tank exterior	1	LS	$ 17,820.00	$ 17,820.00
6.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00
6.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
6.05	Repair corrosion spots on tank interior floor, wall, roof, purlins, piping, and columns by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 128.00	$ 25,600.00
6.06	Repair corrosion spots on tank exterior wall, wind girders, roof knuckle, roof, roof platform, and platform by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 115.00	$ 23,000.00
6.07	Repair roof vent and flange connection, to include metal repair, abrasive grinding, coating, and screen replacement (316 stainless steel mesh)	1	EA	$ 6,110.00	$ 6,110.00
6.08	Repair roof access hatch, to include metal repair, abrasive grinding and coating	1	EA	$ 5,728.00	$ 5,728.00
6.09	Repair side access manway, to include metal repair, abrasive grinding, coating, and new gasket	2	EA	$ 5,728.00	$ 11,456.00
6.10	Exterior and interior weld repair, including preparation, welding, testing, and coating	100	LF	$ 319.00	$ 31,900.00

6.11	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 26,729.00	$ 26,729.00
				Subtotal:	$ 183,474.00
7.00	Agat-Umatac - 0.2 MG (Diameter = 37', Height = 25')				
7.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 7,764.00	$ 7,764.00
7.02	Complete pressure wash of tank exterior	1	LS	$ 6,046.00	$ 6,046.00
7.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	2	DAYS	$ 2,183.00	$ 4,366.00
7.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
7.05	Repair corrosion spots on tank interior floor, wall, roof, purlins, piping, and columns by abrasive grinding areas to remove corrosion and recoating	100	SF	$ 128.00	$ 12,800.00
7.06	Repair corrosion spots on tank exterior wall, wind girders, roof knuckle, roof, roof platform, and platform by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 115.00	$ 23,000.00
7.07	Repair roof vent and flange connection, to include metal repair, abrasive grinding, coating, and screen replacement (316 stainless steel mesh)	1	EA	$ 6,110.00	$ 6,110.00

7.08	Repair roof access hatch, to include metal repair, abrasive grinding and coating	1	EA	$ 5,728.00	$ 5,728.00
7.09	Repair side access manway, to include metal repair, abrasive grinding, coating, and new gasket	2	EA	$ 5,473.00	$ 10,946.00
7.10	Exterior and interior weld repair, including preparation, welding, testing, and coating	100	LF	$ 319.00	$ 31,900.00
7.11	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 15,910.00	$ 15,910.00
7.12	Install new fence with barb wire and vehicle gate around tank property	850	LF	$ 54.00	$ 45,900.00
				Subtotal:	$ 177,052.00
8.00	Windward Hills - 1.0 MG (Diameter = 66', Height = 41')				
8.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 24,184.00	$ 24,184.00
8.02	Complete pressure wash of tank exterior	1	LS	$ 17,820.00	$ 17,820.00
8.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00
8.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00

8.05	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 26,729.00	$ 26,729.00
				Subtotal:	$ 79,680.00
9.00	Kaiser - 2.5 MG (Diameter = 103', Height = 41')				
9.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 45,822.00	$ 45,822.00
9.02	Complete pressure wash of tank exterior	1	LS	$ 30,548.00	$ 30,548.00
9.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00
9.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
9.05	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 42,640.00	$ 42,640.00
				Subtotal:	$ 129,957.00

EXHIBIT B

TABLE D - BASE BID - ASTUMBO NO. 2 MAJOR REPAIR WORK

TANK BYPASS AND REPAIR BID SCHEDULE

Item No.	Description	Quantity	Unit	Amount
10.00	Astumbo No. 1 Tank Repair - 2.0 MG (Diameter = 90', Height = 41')			
10.01	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 74,398.00
10.02	Install new double bottom tank floor, complete in place	113,200	LB	$ 272,750.00
10.03	Install drip ring to new tank floor chimes	2,250	LB	$ 14,478.00
10.04	Replace tank shell manway nozzle assemblies affected by new floor	2	EA	$ 45,822.00
10.05	Complete exterior coating, including sandblasting, epoxy coating	20,000	SF	$ 229,109.00
10.06	Complete interior coating, including sandblasting and epoxy coating	32,000	SF	$ 330,935.00
10.07	Dehumidification equipment for coating	1	LS	$ 101,826.00
10.08	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 10,046.00
10.09	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 29,530.00
10.10	Install new tank cathodic protection system, including new conduits	1	LS	$ 10,183.00

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10.11	Install new tank hatch cover	2	EA	$	22,579.00
10.12	Install new tank vent and screen	1	EA	$	22,708.00
10.13	Install new guardrail and roof platform	1	LS	$	76,267.00
10.14	Install new interior tank ladder and fall arrest assembly	1	Ls	$	40,902.00
10.15	Install new exterior tank ladder and cage assembly	1	LS	$	57,140.00
10.16	Columns, walls, girder, roof, purlins, piping, and all other necessary steel repair as specified in the Contract documents	200	LB	$	3,628.00
10.17	All other repair and appurtenant work as shown on plans and specifications	1	LS	$	25,457.00
10.18	Provide 30 padlock and key set. Padlock shall be keyed to matched existing GWA locks.	1	LS	$	8,609.00
			Sub Total:	$	1,376,367.00

EXHIBIT B

TABLE E - ADDITIVE BID NO. 1 - YIGO NO. 3 MAJOR REPAIR WORK

TANK BYPASS AND REPAIR BID SCHEDULE

Item No.	Description	Quantity	Unit	Amount
1.00	Yigo No. 3 Tank Repair - 2.5 MG (Diameter = 103', Height = 41')			
1.01	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 48,471.00
1.02	Complete exterior coating, including sandblasting, epoxy coating	24,000	SF	$ 296,613.00
1.03	Complete interior coating, including sandblasting and epoxy coating	36,000	SF	$ 405,130.00
1.04	Dehumidification equipment for coating	1	LS	$ 115,752.00
1.05	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
1.06	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00
1.07	Install new tank cathodic protection system, including new conduits	1	LS	$ 11,575.00
1.08	Install new tank hatch cover	1	EA	$ 25,667.00
1.09	Install new tank vent and screen	1	EA	$ 25,814.00
1.10	Install new guardrail and roof platform	1	LS	$ 89,274.00

1.11	Install new interior tank ladder and fall arrest assembly	1	LS	$	45,015.00
1.12	Install new exterior tank ladder and cage assembly	1	LS	$	66,315.00
1.13	Columns, walls, girder, roof, purlins, piping, and all other necessary steel repair as specified in the Contract documents	200	LB	$	651.00
1.14	All other repair and appurtenant work as shown on plans and specifications	1	LS	$	15,192.00
1.15	Install connection from the site inlet to the existing incoming Santa Rosa line	1	LS	$	11,352.00
			Sub Total:	$	1,194,129.00

EXHIBIT B

TABLE F - ADDITIVE BID NO. 2 - SANTA ANA TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
2.00	Santa Ana Tank - 1.0 MG (Diameter = 66', Height = 41')			
2.01	Install new double bottom tank floor, complete in place	56,650	LB	$ 262,891.00
2.02	Install drip ring to new tank floor chimes	1,600	LB	$ 4,051.00
2.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27,132.00
2.04	Complete exterior coating, including sandblasting, epoxy coating	14,000	SF	$ 180,862.00
2.05	Complete interior coating, including sandblasting and epoxy coating	19,000	SF	$ 224.269.00
2.06	Dehumidification equipment for coating	1	LS	$ 65,110.00
2.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
2.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

2.09	Install new tank cathodic protection system, including new conduits	1	LS	$	11,575.00
2.10	Install new tank hatch cover	1	EA	$	25,667.00
2.11	Install new tank vent and screen	1	EA	$	25,814.00
2.12	Install new guardrail and roof platform	1	LS	$	68,659.00
2.13	Install new interior tank ladder and fall arrest assembly	1	LS	$	46,462.00
2.14	Install new exterior tank ladder and cage assembly	1	LS	$	64,868.00
2.15	Install anchor bolts and chair assemblies	35	EA	$	37,981.00
2.16	Center column and base repair	1	EA	$	15,916.00
			Sub Total:	$	1,098,565.00

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EXHIBIT B

TABLE G - ADDITIVE BID NO. 3 - UMATAC SUBDIVISION TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
3.00	Umatac Subdivision Tank - 0.5 MG (Diameter = 54', Height = 41')			
3.01	Install new double bottom tank floor, complete in place	30,500	LB	$ 158,005.00
3.02	Install drip ring to new tank floor chimes	1,200	LB	$ 3,038.00
3.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27,132.00
3.04	Complete exterior coating, including sandblasting, epoxy coating	11,000	SF	$ 144,689.00
3.05	Complete interior coating, including sandblasting and epoxy coating	14,000	SF	$ 173,627.00
3.06	Dehumidification equipment for coating	1	LS	$ 57,876.00
3.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
3.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

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3.09	Install new tank cathodic protection system, including new conduits	1	LS	$	11,575.00
3.10	Install new tank hatch cover	1	EA	$	25,667.00
3.11	Install new tank vent and screen	1	EA	$	25,814.00
3.12	Install new guardrail and roof platform	1	LS	$	58,771.00
3.13	Install new interior tank ladder and fall arrest assembly	1	LS	$	46,461.00
3.14	Install new exterior tank ladder and cage assembly	1	LS	$	64,868.00
3.15	Install anchor bolts and chair assemblies	25	EA	$	27,129.00
3.16	Center column and base repair	1	EA	$	15,916.00
			Sub Total:	$	877,876.00

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TABLE H - ADDITIVE BID NO. 4 - PIGUA MERIZO TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
4.00	Pigua Merizo Tank - 0.5 MG (Diameter = 54', Height = 41')			
4.01	Install new double bottom tank floor, complete in place	30,500	LB	$ 158,005.00
4.02	Install drip ring to new tank floor chimes	1,200	LB	$ 3,038.00
4.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27,132.00
4.04	Complete exterior coating, including sandblasting, epoxy coating	11,000	SF	$ 144,689.00
4.05	Complete interior coating, including sandblasting and epoxy coating	14,000	SF	$ 173,627.00
4.06	Dehumidification equipment for coating	1	LS	$ 57,876.00
4.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4.029.00
4.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33.279.00

4.09	Install new tank cathodic protection system, including new conduits	1	LS	$	11,575.00
4.10	Install new tank hatch cover	1	EA	$	25.667.00
4.11	Install new tank vent and screen	1	EA	$	25,814.00
4.12	Install new guardrail and roof platform	1	LS	$	58,771.00
4.13	Install new interior tank ladder and fall arrest assembly	1	LS	$	46,462.00
4.14	Install new exterior tank ladder and cage assembly	1	LS	$	64,868.00
4.15	Install anchor bolts and chair assemblies	25	EA	$	27.129.00
4.16	Center column and base repair	1	EA	$	15,916.00
			Sub Total:	$	877,877.00

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EXHIBIT B

TABLE I - ADDITIVE BID NO. 5 - MALOJLOJ TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
5.00	Malojloj - 1.0 MG (Diameter = 66', Height = 41')			
5.01	Install new double bottom tank floor, complete in place	57,650	LB	$ 262,891.00
5.02	Install drip ring to new tank floor chimes	1,600	LB	$ 4,051.00
5.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27,132.00
5.04	Complete exterior coating, including sandblasting, epoxy coating	14,000	SF	$ 180,862.00
5.05	Complete interior coating, including sandblasting and epoxy coating	19,000	SF	$ 224,269.00
5.06	Dehumidification equipment for coating	1	LS	$ 65,110.00
5.07	Replace tank exterior fill gauge and interior float system assemble	1	LS	$ 4,029.00
5.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

5.09	Install new tank cathodic protection system, including new conduits	1	LS	$	11,575.00
5.10	Install new tank hatch cover	1	EA	$	25,667.00
5.11	Install new tank vent and screen	1	EA	$	25,813.00
5.12	Install new guardrail and roof platform	1	LS	$	68,659.00
5.13	Install new interior tank ladder and fall arrest assembly	1	LS	$	46,461.00
5.14	Install new exterior tank ladder and cage assembly	1	LS	$	64,868.00
5.15	Install anchor bolts and chair assemblies	104	EA	$	67,715.00
5.16	Center column and base repair	1	EA	$	15,916.00
			Sub Total:	$	1,128,297.00

EXHIBIT B

TABLE J - ADDITIVE BID NO. 6 - AGAT-UMATAC TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
6.00	Agat-Umatac - 0.2 MG (Diameter = 37', Height = 25')			
6.01	Install new double bottom tank floor, complete in place	18,000	LB	$ 109,715.00
6.02	Install drip ring to new tank floor chimes	500	LB	$ 1,266.00
6.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27.132.00
6.04	Complete exterior coating, including sandblasting, epoxy c 0,000,000.00	4,750	SF	$ 72,345.00
6.05	Complete interior coating, including sandblasting and epoxy coating	6,100	SF	$ 83,920.00
6.06	Dehumidification equipment for coating	1	LS	$ 36,172.00
6.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
6.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

CCU Regular Meeting January 28, 2020 - GWA

6.09	Install new tank cathodic protection system, including new conduits	1	LS	$	11,575.00
6.10	Install new tank hatch cover	1	EA	$	25,667.00
6.11	Install new tank vent and screen	1	EA	$	25,814.00
6.12	Install new guardrail and roof platform	1	LS	$	46,052.00
6.13	Install new interior tank ladder and fall arrest assembly	1	LS	$	29,751.00
6.14	Install new exterior tank ladder and cage assembly	1	LS	$	40,438.00
6.15	Install anchor bolts and chair assemblies	20	EA	$	21,703.00
6.16	Center column and base repair	1	EA	$	15.916.00
			Sub Total:	$	584,774.00

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EXHIBIT B

TABLE K - ADDITIVE BID NO. 7 - WINDWARD HILLS TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
7.00	Windward Hills - 1.0 MG (Diameter = 66', Height = 41')			
7.01	Install new double bottom tank floor, complete in place	57,650	LB	$ 262,891.00
7.02	Install drip ring to new tank floor chimes	1,600	LB	$ 4.051.00
7.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27,132.00
7.04	Complete exterior coating, including sandblasting, epoxy coating	14,000	SF	$ 180,862.00
7.05	Complete interior coating, including sandblasting and epoxy coating	19,000	SF	$ 224,269.00
7.06	Dehumidification equipment for coating	1	LS	$ 65,110.00
7.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
7.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

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7.09	Install new tank cathodic protection system, including new conduits	1	LS	$	11,575.00
7.10	Install new tank hatch cover	1	EA	$	25,667.00
7.11	Install new tank vent and screen	1	EA	$	25,814.00
7.12	Install new guardrail and roof platform	1	LS	$	68,659.00
7.13	Install new interior tank ladder and fall arrest assembly	1	LS	$	46,461.00
7.14	Install new exterior tank ladder and cage assembly	1	LS	$	64,868.00
7.15	Install anchor bolts and chair assemblies	35	EA	$	37,981.00
7.16	Center column and base repair	1	LS	$	15,916.00
			Sub Total:	$	1,098,564.00

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TABLE L - ADDITIVE BID NO. 8 - KAISER TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
8.00	Kaiser - 2.5 MG (Diameter = 103', Height = 41')			
8.01	Install new double bottom tank floor, complete in place	129,600	LB	$ 540,849.00
8.02	Install drip ring to new tank floor chimes	2,600	LB	$ 6,583.00
8.03	Replace tank shell manway nozzle assemblies affected by new floor	2	EA	$ 54,264.00
8.04	Complete exterior coating, including sandblasting, epoxy coating	24,000	SF	$ 296,613.00
8.05	Complete interior coating, including sandblasting and epoxy coating	36,000	SF	$ 405,130.00
8.06	Dehumidification equipment for coating	1	LS	$ 115,752.00
8.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
8.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

EXHIBIT B

8.09	Install new tank cathodic protection system, including new conduits	1	LS	$	11,575.00
8.10	Install new tank hatch cover	1	EA	$	25,667.00
8.11	Install new tank vent and screen	1	EA	$	25,814.00
8.12	Install new guardrail and roof platform	1	LS	$	95,316.00
8.13	Install new interior tank ladder and fall arrest assembly	1	LS	$	46,462.00
8.14	Install new exterior tank ladder and cage assembly	1	LS	$	64,868.00
8.15	Center column and base repair	6	EA	$	15,916.00
			Sub Total:	$	1,742,117.00

EXHIBIT B

TABLE M - TOTAL BASE BID

TANK BYPASS AND REPAIR BID SCHEDULE

Item No.	Description		Amount
1.00	General Work	Subtotal	$ 774,476.00
2.00	Tank Bypass Work	Subtotal	$ 963,499.00
3.00	Santa Ana Tank - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 183,474.00
4.00	Umatac Subdivision Tank - 0.5 MG (Diameter = 54', Height =	Subtotal	$ 170,109.00
5.00	Pigua Merizo Tank - 0.5 MG (Diameter = 54', Height = 41')	Subtotal	$ 170,109.00
6.00	Malojloj - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 183,474.00
7.00	Agat-Umatac - 0.2 MG (Diameter = 37', Height = 25')	Subtotal	$ 177,052.00
8.00	Windward Hills - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 79,680.00
9.00	Kaiser - 2.5 MG (Diameter = 103', Height = 41')	Subtotal	$ 129,957.00
10.00	Astumbo No. 1 Tank Repair - 2.0 MG (Diameter = 90', Height	Subtotal	$ 1,376,367.00
		Total Base Bid	$ 4,208,197.00

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Doc. No. 35GL-20-1489.*

EXHIBIT B

TABLE N - TOTAL ADDITIVE BID

MAJOR REPAIR BID SCHEDULE

Item No.	Description		Amount
1.00	Yigo No. 3 Tank Repair - 2.5 MG (Diameter = 103', Height = 41')	Subtotal	$ 1,194,129.00
2.00	Santa Ana Tank - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 1,098,565.00
3.00	Umatac Subdivision Tank - 0.5 MG (Diameter = 54', Height = 41')	Subtotal	$ 877,876.00
4.00	Pigua Merizo Tank - 0.5 MG (Diameter = 54', Height = 41')	Subtotal	$ 877,877.00
5.00	Malojloj - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 1,128,297.00
6.00	Agat-Umatac - 0.2 MG (Diameter = 37', Height = 25')	Subtotal	$ 584,774.00
7.00	Windward Hills - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 1,098,564.00
8.00	Kaiser - 2.5 MG (Diameter = 103', Height = 41')	Subtotal	$ 1,742,117.00
		Total Additive Bid	$ 8,602,199.00

EXHIBIT B

Base Bid Price Total of All Items

In words: FOUR MILLION TWO HUNDRED EIGHT THOUSAND ONE HUNDRED NINETY SEVEN DOLLARS ONLY

Additive Price Total of All Items

In words: EIGHT MILLION SIX HUNDRED TWO THOUSAND ONE HUNDRED NINETY NINE DOLLARS ONLY

CCU Regular Meeting January 28, 2020 - GWA

EXHIBIT B

If the Total Base Bid is within the amount of funds available, then the award will be made to the responsive and responsible bidder submitting the lowest Bid Price Total of All Base Bid Items. In the event the lowest responsive and responsible Bid exceeds the available budget, GWA may reject individual Base Bid Items 1-10 until the revised Total Base Bid Amount fits within the available budget. If additional funding is obtained after the contract is executed, any or all deleted Bid items may be restored via Change Order.

A) Where lump sum prices are in the bidding schedule, they shall include all labor, materials and equipment necessary to produce a complete and finished job.

B) When no specific item is listed in the bidding schedule for work required, the cost of such work shall be included in the price bid for the item which most appropriately covers the work.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

D. List of Project References;

E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

F. Contractor's License No.: 1572

G. Required Bidder Qualification Statement with supporting data; and

H. Certificates, Affidavits and Forms listed in Section 00 90 00 as required by Laws and Regulations.

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

EXHIBIT B

AIC International, Inc.

By:
[Signature]

[Printed name] Anthony Stewart
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature]

[Printed name] Emmanuel Clariza

Title: Accountant

Submittal Date: 11/21/2019

Address for giving notices:

P.O. Box DR

Hagatna, Guam 96932

Telephone Number: (671) 565-9142

Fax Number: (671) 565-9145

Contact Name and e-mail address: Henry Stewart

henry@aicconstruction.com

Bidder's License No.: 1572
(where applicable)

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building | 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 11-FY2020
Relative to Approval of the Construction Contract for the Pressure Zone Realignment Construction Phase 1 Project

What is the project's objective and is it necessary and urgent?
The project is spread across seven (7) different sites in the Base Bid – Carnation PRV(s), Okkodo PRV, Ysengsong PRV, Clara PRV, Kaiser PRV(s), Yigo Reservoir, and Astumbo Reservoir

1. Carnation - The existing Carnation pressure reducing valve (PRV) will be replaced with a new PRV, and a new Marbo PRV will also be constructed. The work will also include the construction of a new control building and line upgrades in the surrounding service area. The work is listed in the Base Bid.

2. Okkodo - The work will include the construction of a new Okkodo PRV to replace the existing PRV, a new meter in vault, and new control pedestal. The work is listed in the Base Bid.

3. Ysengsong - The work will include the construction of a new Ysengsong PRV and line upgrades in the surrounding service area. The work is listed in the Base Bid.

4. Clara - The work will consist of constructing a new Clara PRV and line upgrades. The work is listed in the Base Bid.

5. Kaiser - The work will consist of constructing a new Kaiser Bypass PRV, Kaiser PRV, new inlet and outlet meter vaults for Kaiser reservoir, a new control building, and line upgrades. The work is listed in the Base Bid.

6. Yigo Reservoir - The work will consist of implementing the SCADA system for existing instrumentation. The work is listed in the Base Bid.

7. Astumbo Reservoir - The work will consist of implementing the SCADA system for existing instrumentation. The work is listed in the Base Bid.

This project is necessary in order for GWA to provide the appropriate pressures within the various service areas within its water distribution system. The work is also urgent, being critical to reducing background leaks through pressure control as a means to reduce GWA's non-revenue water, and accomplishes Level-of-Service (LOS) goals as defined in the GWA Water Resource Master Plan.

Where is the project located?

- Carnation and Marbo work will be located near the Route 15 and Carnation Ave. intersection
- Okkodo work will be located along Route 3, up the road from Okkodo High School.
- Ysengsong work will take place at the intersection of Ysengsong Rd., Chalan Balako, and Chalan Koda.
- Clara site work will be constructed along Ysengsong Rd., in front of GWA well D-11.
- Kaiser PRV work will take place in front of GWA's Kaiser reservoir and at the intersection of Access Rd. and Route 1.
- Yigo and Astumbo reservoir work will take place at the GWA reservoirs for which the sites are named.

How much will it cost?

The bid proposal submitted by Sumitomo Mitsui Construction Co. LTD. is $4,120,000.00. With a 10% contingency of $412,000.00, the total project funding amount will be $4,532,000.00.

When will it be completed?

For all sites - Base Bid Substantial Completion: The Contractor shall begin work upon issuance of the Notice to Proceed (NTP) and base bid work shall be substantially complete as specified no later than 305 calendar days from NTP. Final Completion shall be no later than 60 calendar days following substantial completion.

What is the funding source?

1. CIP PW 12-01: Water Audit Program
2. CIP PW 05-16: Master Metering Program
3. Grant (USEPA)

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 11-FY2020

RELATIVE TO APPROVAL OF THE CONSTRUCTION CONTRACT FOR THE PRESSURE ZONE REALIGNMENT CONSTRUCTION PHASE 1 PROJECT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA currently has a number of critical projects as part of GWA's Capital Improvement Plan, including the installation (i.e. repair, rehabilitation, replacement, relocation, or development) of pressure regulating or sustaining valves and their appurtenances, as stated in GWA's Water Resources Master Plan (Master Plan); and

WHEREAS, the completion of these improvements will contribute to GWA's efforts to control and reduce water losses through the improvement in service area pressures, thereby reducing background leaks by providing appropriate system pressures; and

WHEREAS, in accordance with the Master Plan, GWA intends to execute a construction project to address the following:

1. The construction of the new control building and new Carnation PRVs to replace the existing PRVs; and
2. The construction of the new Marbo PRV; and
3. The construction of the new control pedestal and new Okkodo PRV to replace the existing PRV; and
4. The construction of the new Ysengsong PRV; and

5. The construction of the new Clara PRV; and
6. The construction of the new Kaiser Bypass PRV and new control building, and installation of new inlet and outlet meters for Kaiser Reservoir; and
7. The construction of the new Kaiser PRV; and

WHEREAS, GWA has advertised an Invitation for Bid (IFB-07-ENG-2019) soliciting bid proposals from experienced, responsible, and responsive bidders to rehabilitate existing and/or construct new pressure reducing valves (PRV), vaults, control buildings, install SCADA connections, and off-site work at seven (7) sites in the Base Bid and to construct the two (2) additional PRV sites in the Additive Bid; and

WHEREAS, the Base Bid work consists of the Contractor furnishing all labor, tools, equipment and materials necessary to complete the construction of the Pressure Zone Realignment Phase I work to include, but not be limited to earthwork, pipework, roadway repair, PRVs, concrete work, electrical work, fences and gates, SCADA, testing and start-up under the provisions of the bid documents and in accordance with applicable GWA standards; and

WHEREAS, IFB packages were picked up by seven (7) interested parties, from which GWA received bid proposals from two (2) of the seven (7) parties before the bid proposal deadline (See Exhibit A – Abstract of Bids); and

WHEREAS, GWA engineering team analyzed all bid proposals received on November 22, 2019 and determined Sumitomo Mitsui Construction Co., LTD. as being the lowest responsive and responsible bidder and met all the bid requirements set forth by GWA; and

WHEREAS, GWA Management finds that Sumitomo Mitsui Construction Co., LTD.'s Base Bid proposal of Four Million One Hundred Twenty Thousand Dollars ($4,120,000.00) to be acceptable (See Exhibit B – Bid Form); and

WHEREAS, GWA Management will assess any additional funding availability from the latest Capital Improvements Plan to ascertain if any or all the Additive bid items as part of this

IFB can be awarded later through a change order or via a subsequent CCU approval as a means of maximizing system improvements efficiently; and

WHEREAS, GWA Management is seeking approval to enter into contract for the Base Bid work with Sumitomo Mitsui Construction Co., LTD (IFB-07-ENG-2019) in the amount of Four Million One Hundred Twenty Thousand Dollars ($4,120,000.00), along with a ten percent (10%) contingency of Four Hundred Twelve Thousand Dollars ($412,000.00), bringing the total requested funding amount to Four Million Five Hundred Thirty-Two Thousand Dollars ($4,532,000.00); and

WHEREAS, the funding sourced for the construction project will be from bond and grant funds as detailed in the following CIP line items:

- CIP PW 12-01: Water Audit Program
- CIP PW 05-16: Master Metering Program
- Grant (USEPA)

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by Sumitomo Mitsui Construction Co., LTD. are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept the bid from Sumitomo Mitsui Construction Co., LTD. attached hereto as Exhibit B, and which is also incorporated into this Resolution in its entirety.
4. The CCU hereby authorizes the management of GWA to enter into a contract with Sumitomo Mitsui Construction Co., LTD. in the amount of Four Million One Hundred Twenty Thousand Dollars ($4,120,000.00).
5. The CCU hereby approves the funding total of Four Million One Hundred Twenty Thousand Dollars ($4,120,000.00), along with a ten percent (10%) contingency of Four Hundred Twelve Thousand Dollars ($412,000.00), bringing the total authorized funding amount to Four Million Five Hundred Thirty-Two Thousand Dollars ($4,532,000.00).

6. The CCU hereby approves the use of funding sources from the following CIP line items:
    a. CIP PW 12-01: Water Audit Program
    b. CIP PW 05-16: Master Metering Program
    c. Grant (USEPA)

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY and REGULARLY ADOPTED, this 28th day of January 2020.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**MICHAEL T. LIMTIACO**
Chairperson	Secretary

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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GUAM WATERWORKS AUTHORITY
ABSTRACT OF BIDS

EXHIBIT A

Project Name: **PRESSURE ZONE REALIGNMENT CONSTRUCTION PHASE I**
Project Number: W18-001-BND

Bid Opening Date: November 22, 2019
Time: 3:00 PM

	Bidders Name	Section A-5 Bid Bond	CERTIFICATIONS												BID AMOUNT		
			Qualification Statement	Non Collusion Affidavit	EEO Certification	Non Segregated Facilities	Sex Offender Certification	Wage and Benefit Determination	Major Shareholder Affidavit	Special Instructions to Bidders	Addendum 1	Addendum 2	Addendum 3	Addendum 4	TABLE A BASE BID	TABLE A ADDITIVE BID	TABLE A BASE + ADDITIVE
1.	KORANDO CORPORATION	—															
2.	IAN CORPORATION	—															
3.	SUMITOMO-MITSUI CONSTRUCTION CO.	FEDERAL INSURANCE COMPANY 15% OF ACCOMPANYING BID	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$4,120,000	$ 962,000	$ 5,082,000
4.	GENERAL + PLUMBING	—															
5.	AIC INTERNATIONAL INC.	FIDELITY & DEPOSIT COMPANY OF MARYLAND 15% OF ACCOMPANYING BID	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$5,494,376.50	$1,711,160.94	$ 7,205,537.44
6.	FRONTIER SUPPLY	—															
7.	AMERICAN INTNERNATIONAL SUPPLY, INC.	—															
	GWA Estimate														$4,148,360	$845,640	$ 4,994,000

Bids Opened and Read by:
GLORIA P. BENSAN
(Name and Signature)

Tabulated By:
JESSEY MENDIOLA
(Name and Signature)

GWA Procurement Representative:
ROLAND F. LUMONGSOD
(Name and Signature)

Witnesses:

William J Estevez

EXHIBIT B

BID FORM

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
ADDENDUM NO. 01	OCTOBER 25, 2019
ADDENDUM NO. 02	NOVEMBER 8, 2019
ADDENDUM NO. 03	NOVEMBER 12, 2019
ADDENDUM NO. 04	NOVEMBER 15, 2019

B. Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

EXHIBIT B

D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

E. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.

F. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATIONS

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Buyer, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

EXHIBIT B

ARTICLE 5 - BASIS OF BID

5.01 Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the following price(s):

EXHIBIT B

GUAM WATERWORKS AUTHORITY
PRESSURE ZONE REALIGNMENT CONSTRUCTION PHASE 1
GWA Project No. W18-001-BND

BID SCHEDULE

Interested Bidders must complete Table A. All blanks in the tables must be filled out.

Definitions:

LS = lump sum

TABLE A
BID SCHEDULE

(BASE BID ITEMS NO. 1 - 9)
(ADDITIVE BID ITEMS NO 10-11)

Item No.	Description	Quantity	Unit	Extended Amount
1.	Mobilization, as specified in the Contract Documents.	1	LS	$ 95,487.00
2.	Bonds and insurance.	1	LS	$ 178,861.00
3.	Permits.	1	LS	$ 56,544.00
4.	Training.	1	LS	$ 3,554.00
5.	Carnation PRVs:			
	5.1 Potholing	1	LS	$ 3,661.00
	5.2 Traffic control	1	LS	$ 43,781.00
	5.3 Marbo vault	1	LS	$ 38,935.00
	5.4 Marbo 6" PRV	1	LS	$ 39,105.00
	5.5 Marbo 6" meter	1	LS	$ 7,033.00
	5.6 Marbo piping and connections	1	LS	$ 17,429.00
	5.7 PRV 11 12" PRV	1	LS	$ 12,444.00
	5.8 PRV 11 12" check valves	2	LS	$ 15,546.00
	5.9 PRV 11 piping and connections	1	LS	$ 53,559.00
	5.10 PRV 15 4" PRV	1	LS	$ 3,200.00
	5.11 PRV 15 10" PRV	1	LS	$ 8,230.00
	5.12 PRV 15 12" check valve	1	LS	$ 14,161.00
	5.13 PRV 15 piping and connections	1	LS	$ 41,083.00
	5.14 Replace meters	3	LS	$ 60,173.00
	5.15 Carnation piping and connections	1	LS	$ 40,626.00
	5.16 Control building	1	LS	$ 29,372.00
	5.17 Fencing	1	LS	$ 8,705.00
	5.18 Electrical system	1	LS	$ 188,904.00

EXHIBIT B

Item No.	Description	Quantity	Unit	Extended Amount
5.	Item 5 (Cont.)			
	5.19 SCADA, instrumentation and controls	1	LS	$ 104,879.00
	5.20 Commissioning	1	LS	$ 11,654.00
	5.21 Site and pavement restoration	1	LS	$ 53,504.00
	Subtotal	1	LS	$ 795,984.00
6.	Okkodo PRV:			
	6.1 Traffic control	1	LS	$ 19,724.00
	6.2 Meter vault	1	LS	$ 49,997.00
	6.3 20" meter	1	LS	$ 16,090.00
	6.4 Meter piping and connections	1	LS	$ 155,708.00
	6.5 8" PRV	1	LS	$ 5,134.00
	6.6 10" PRV	1	LS	$ 7,924.00
	6.7 12" PRV	1	LS	$ 10,654.00
	6.8 PRV piping and connections	1	LS	$ 61,920.00
	6.9 PRV vault cover and hatch	1	LS	$ 28,690.00
	6.10 Electrical system	1	LS	$ 55,355.00
	6.11 SCADA, instrumentation and controls	1	LS	$ 70,885.00
	6.12 Commissioning	1	LS	$ 11,733.00
	6.13 Site and pavement restoration	1	LS	$ 7,388.00
	Subtotal	1	LS	$ 501,202.00
7.	Ysengsong PRV:			
	7.1 Potholing	1	LS	$ 84,048.00
	7.2 Traffic control	1	LS	$ 33,283.00
	7.3 Abandonment of pipe	1	LS	$ 3,314.00
	7.4 Vault	1	LS	$ 75,716.00
	7.5 6" PRV	1	LS	$ 9,221.00
	7.6 10" PRV	1	LS	$ 16,466.00
	7.7 10" meter	1	LS	$ 10,857.00
	7.8 Piping and connections	1	LS	$ 149,000.00
	7.9 Electrical system	1	LS	$ 47,927.00
	7.10 SCADA, instrumentation and controls	1	LS	$ 77,859.00
	7.11 Commissioning	1	LS	$ 8,651.00
	7.12 Site and pavement restoration	1	LS	$ 93,265.00
	Subtotal	1	LS	$ 609,607.00

EXHIBIT B

Item No.	Description	Quantity	Unit	Extended Amount
8.	Clara PRV:			
	8.1 Potholing	1	LS	$ 121,682.00
	8.2 Traffic control	1	LS	$ 21,457.00
	8.3 Abandonment of pipe	1	LS	$ 2,870.00
	8.4 Vault	1	LS	$ 38,807.00
	8.5 6" PRV	1	LS	$ 18,000.00
	8.6 10" PRV	1	LS	$ 48,615.00
	8.7 10" meter	1	LS	$ 10,857.00
	8.8 Piping and connections	1	LS	$ 53,347.00
	8.9 Electrical system	1	LS	$ 55,663.00
	8.10 SCADA, instrumentation and controls	1	LS	$ 76,201.00
	8.11 Commissioning	1	LS	$ 8,467.00
	8.12 Site and pavement restoration	1	LS	$ 35,865.00
	Subtotal	1	LS	$ 491,831.00
9.	Kaiser:			
	9.1 Potholing	1	LS	$ 9,254.00
	9.2 Traffic control	1	LS	$ 40,851.00
	9.3 Meter vaults	2	LS	$ 33,941.00
	9.4 12" meter	2	LS	$ 33,681.00
	9.5 Bypass PRV vault	1	LS	$ 36,238.00
	9.6 Bypass 12" PRV	1	LS	$ 76,327.00
	9.7 Kaiser PRV vault	1	LS	$ 63,718.00
	9.8 Kaiser 6" PRV	1	LS	$ 18,378.00
	9.9 Kaiser 10" PRV	1	LS	$ 72,498.00
	9.10 Kaiser 10" meter	1	LS	$ 21,611.00
	9.11 Piping and connections	1	LS	$ 335,576.00
	9.12 Replace meters	3	LS	$ 43,022.00
	9.13 Control building	1	LS	$ 23,537.00
	9.14 Fencing	1	LS	$ 6,838.00
	9.15 Electrical system	1	LS	$ 127,120.00
	9.16 SCADA, instrumentation and controls	1	LS	$ 92,623.00
	9.17 Commissioning	1	LS	$ 10,365.00
	9.18 Site and pavement restoration	1	LS	$ 157,146.00
	9.19 Property boundary survey sketch	1	LS	$ 5,687.00
	Subtotal	1	LS	$ 1,208,411.00
10.	Astumbo Reservoirs SCADA system for existing instrumentation	1	LS	$ 85,990.00
11.	Yigo Reservoirs SCADA system for existing instrumentation	1	LS	$ 92,529.00

EXHIBIT B

Item No.	Description	Quantity	Unit	Extended Amount
12.	Terao PRV (Additive Bid Item):			
	10.1 Traffic control	1	LS	$ 28,097.00
	10.2 Meter vault	1	LS	$ 33,820.00
	10.3 20" Meter	1	LS	$ 37,949.00
	10.4 PRV vault	1	LS	$ 61,228.00
	10.5 6" PRV	1	LS	$ 18,527.00
	10.6 12" PRV	1	LS	$ 31,942.00
	10.7 Piping and connections	1	LS	$ 129,532.00
	10.8 Demolish vault and piping	1	LS	$ 15,599.00
	10.9 Electrical system	1	LS	$ 113,789.00
	10.10 SCADA, instrumentation and controls	1	LS	$ 80,877.00
	10.11 Commissioning	1	LS	$ 12,843.00
	10.12 Site and pavement restoration	1	LS	$ 95,113.00
	Subtotal	1	LS	$ 659,316.00
13.	Maimai PRV (Additive Bid Item):			
	11.1 Traffic control	1	LS	$ 15,387.00
	11.2 Meter vault	1	LS	$ 42,033.00
	11.3 10" Meter	1	LS	$ 36,043.00
	11.4 Meter piping and connections	1	LS	$ 14,101.00
	11.5 4" PRV	1	LS	$ 4,867.00
	11.6 10" PRV	1	LS	$ 11,742.00
	11.7 PRV piping and connections	1	LS	$ 22,915.00
	11.8 Electrical system	1	LS	$ 64,070.00
	11.9 SCADA, instrumentation and controls	1	LS	$ 78,620.00
	11.10 Commissioning	1	LS	$ 12,592.00
	11.11 Site and pavement restoration	1	LS	$ 314.00
	Subtotal	1	LS	$ 302,684.00

Table A Base Bid Subtotal	$ 4,120,000.00
Table A Additive Bid Subtotal	$ 962,000.00
Table A Base Bid and Additive Bid Total	$ 5,082,000.00

EXHIBIT B

TOTAL BASE BID PRICE FOR THE BID SCHEDULE

For the lump sum of

$ 4,120,000.00

(Price in Figures)

FOUR MILLION, ONE HUNDRED TWENTY THOUSAND DOLLARS ONLY

(Price in Words)

This Contract will be awarded to the lowest responsive and responsible bidder based on the total Base Bid Schedule. Determination of the lowest responsive and responsible bidder will be in accordance with the provisions of the Bid Documents.

EXHIBIT B

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of BID BOND.

B. List of Proposed Major Suppliers;

C. Required Bidder Qualification Statement with Supporting Data; and

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): N/A

By: N/A

(Individual's signature)

Doing business as: N/A

Business address: N/A

Phone: N/A Facsimile: N/A

E-mail address: N/A

EXHIBIT B

A Partnership

Partnership Name: N/A (SEAL)

By: N/A
(Signature of general partner - attach evidence of authority to sign)

Name (typed or printed): N/A

Business address: N/A

Phone: N/A Facsimile: N/A

E-mail address: N/A

A Corporation

Corporation Name: SUMITOMO MITSUI CONSTRUCTION CO., LTD

State of Incorporation: JAPAN

Type (General Business, Professional, Service, other): GENERAL CONTRACTOR/ CONSTRUCTION

By: _____
(Signature - attach evidence of authority to sign)

Name (typed or printed): TAKEYUKI SHIINO

Title: GENERAL MANAGER

Attest _____ (CORPORATE SEAL) Admin. Manager
(Signature of Corporate Secretary)

Business address: PO BOX 9670 TAMUNING, GUAM 96931

PHYSICAL ADD: STE 105-107 IBC BLDG, J.L. BAKER ST. HARMON INDUSTRIAL, HARMON, GUAM, 96913

Phone: (671) 649-7521 to 24 Facsimile: (671) 649-7550

E-mail address: tkshiino@smcon.co.jp

A Limited Liability Company (LLC)

LLC Name: N/A

State in which organized: N/A

By: N/A
(Signature - attach evidence of authority to sign)

Name (typed or printed): N/A

Title: N/A

Business address: N/A

Phone: N/A Facsimile: N/A

E-mail address: N/A

EXHIBIT B

A Joint Venture

First Joint Venturer Name: N/A (SEAL)

By: N/A

(Signature - attach evidence of authority to sign)

Name (typed or printed): N/A

Title: N/A

Business address: N/A

Phone: N/A Facsimile: N/A

E-mail address: N/A

Second Joint Venturer Name: N/A (SEAL)

By: N/A

(Signature - attach evidence of authority to sign)

Name (typed or printed): N/A

Title: N/A

Business address: N/A

Phone: N/A Facsimile: N/A

E-mail address: N/A

Phone and Facsimile Number, and Address for receipt of official communications to Joint Venture:

N/A

(Each joint venturer must sign. The manner of signing for each individual, partnership, corporation, and limited liability company that is a party to the joint venture should be in the manner indicated above.)

GUAM WATERWORKS AUTHORITY

"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 12-FY2020
Relative to Approval of Change Oder No. 1 for the Pressure Zone Realignment and Tank Repair/Replacement Design Project

What is the project's objective and is it necessary and urgent?
The objective of this change order is to develop a water loss control program based on the island-wide implementation of the District Metered Area (DMA). The design services will include the development of a plan to implement Phase 3 of the DMA island-wide and the construction documents to execute four tested sites that resulted from the DMA conversion reports prepared during Phase 1 and 2. The pressure zone realignment and district metered areas work are complementary.

The following are part of this proposed change order:
1. Task 1: Review of Existing Plans and Models
2. Task 2: Identification of Potential DMAs
3. Task 3: Customer Identification per DMA
4. Task 4: Identification of DMA Infrastructure Requirements
5. Task 5: Prioritization of Proposed DMAs
6. Task 6: Develop DMA Implementation Plan
7. Task 7: Develop Draft Scopes for Implementation Project Contracting Elements

This project is necessary for GWA to improve it control of water losses by establishing proper pressure zones, zone metering, and a comprehensive water loss control program plan to guide GWA towards a properly functioning water system.

Where is the location?
Island-wide

How much will it cost?
The cost for the change order is $373,670.00.

When will it be completed?
This phase of work will be completed within 6 months of Change Order No. 1 approval; however, the date may be adjusted depending on field investigations for the zoning.

What is the funding source?
- PW 09-04: Pressure Zone Realignment/ Development 2005 Improvements
- PW 09-10: Water Reservoir Internal/External Corrosion Rehabilitation Program
- PW 09-11: Water System Reservoir 2005 Improvements
- PW 12-01: Water Audit Program and Water Loss Control Plan

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 12-FY2020

RELATIVE TO APPROVAL OF CHANGE ORDER NO. 1 FOR THE PRESSURE ZONE REALIGNMENT AND TANK REPAIR/REPLACEMENT DESIGN PROJECT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA's PMO Brown and Caldwell has developed a pressure zone realignment plan as part of the Water Resources Master Plan; and

WHEREAS, CCU Resolution No. 36-FY2018 (Exhibit A-Resolution 36-FY2018) authorized a design contract with GHD with total funding of Two Million Five Hundred Thirty-Nine Thousand Nine Hundred Ninety-One Dollars ($2,539,991.00) along with a ten percent (10%) contingency of Two Hundred Fifty-Three Thousand Nine Hundred Ninety-Nine Dollars and Ten Cents ($253,999.10) for the design services of the Pressure Zone Realignment and Tank Repair/ Replacement project; and

WHEREAS, GWA seeks to continue the design services of GHD and their subconsultant, Water Systems Optimization, Inc. (WSO) for the further development of an island-wide water loss control program and construction plans for program execution; and

WHEREAS, GWA and GHD have negotiated a price of Three Hundred Seventy-Three Thousand Six Hundred Seventy Dollars ($373,670.00) for the design services described above (Exhibit B-Scope of Work and Fee); and

WHEREAS, GWA management is requesting authorization to increase the funding amount for the GHD contract by Ninety Thousand Seven Hundred Seventy Six Dollars and Ninety Cents ($90,776.90) plus an additional Two Hundred Fifty Four Thousand Dollars ($254,000.00) to replenish the original contract's contingency, bringing the total authorized funding to Three Million One Hundred Thirty-Eight Thousand Seven Hundred Sixty-Seven Dollars ($3,138,767.00); and

WHEREAS, the funding source for the construction project will be from bond funds as detailed in the following CIP line items:

- PW 09-04: Pressure Zone Realignment/ Development 2005 Improvements
- PW 09-10: Water Reservoir Internal/External Corrosion Rehabilitation Program
- PW 09-11: Water System Reservoir 2005 Improvements
- PW 12-01: Water Audit Program and Water Loss Control Plan

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by GHD are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept the fee proposal of Three Hundred Seventy-Three Thousand Six Hundred Seventy Dollars ($373,670.00) from GHD, attached hereto as Exhibit B, and execute a Change Order.
4. The CCU hereby approves the total funding amount to Three Million One Hundred Thirty-Eight Thousand Seven Hundred Sixty-Seven Dollars ($3,138,767.00).
5. The CCU approves the funding sources from the following bond funds:
    - PW 09-04: Pressure Zone Realignment/ Development 2005 Improvements
    - PW 09-10: Water Reservoir Internal/External Corrosion Rehabilitation Program

- PW 09-11: Water System Reservoir 2005 Improvements
- PW 12-01: Water Audit Program and Water Loss Control Plan

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of January 2020.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**MICHAEL T. LIMTIACO**
Chairperson	Secretary

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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EXHIBIT A

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 36–FY2018

RELATIVE TO APPROVAL OF THE DESIGN SERVICES FOR THE PRESSURE ZONE REALIGNMENT AND TANK REPAIR/REPLACEMENT CONTRACT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA is working on critical reservoir projects under the 2011 Court Order ("CO") Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program; and

WHEREAS, GWA's PMO Brown and Caldwell has developed a pressure zone realignment plan as part of the Water Resource Master Plan (2017 Draft WRMP); and

WHEREAS, engineering and design services are required to integrate the improvements needed for realigning pressure zones within the distribution system, and the on-going 2011 CO storage tank/reservoir program; and

WHEREAS, GWA has advertised the Request for Proposals (RFP-03-ENG-2018) soliciting statement of qualifications from experienced and qualified engineering firms to provide tank repair/replacement/modification design, pressure zone realignment and zone metering design, and limited construction management services for the implementation of the pressure zone realignment construction; and

EXHIBIT A

WHEREAS, RFP packages were picked up by twenty (20) interested parties, from which GWA received proposal submittals from five (5) firms before the RFP submittal deadline; and

WHEREAS, the GWA A-E Selection committee reviewed and evaluated the five (5) proposals (See Exhibit A – Score Summary) and generated a short list of the top 3 firms with a recommendation to award a contract to the firm GHD (See Exhibit B – GM's Determination); and

WHEREAS, GWA and GHD negotiated the price and scope of work for tank repair/replacement/modification design, the pressure zone realignment design (22 pressure zones), including zone metering, as recommended by the 2017 Draft WRMP, limited construction management services (estimated time & materials budget) for the implementation of the pressure zone realignment construction and an AWWA water audit, including three trial district metering areas (See Exhibit C – Scope of Work and Fee); and

WHEREAS, GWA management seeks approval of the estimated fee proposal amount of Two Million Five Hundred Thirty-Nine Thousand Nine Hundred Ninety-One Dollars ($2,539,991.00), along with a ten percent (10%) contingency of Two Hundred Fifty-Three Thousand Nine Hundred Ninety-Nine Dollars and Ten Cents ($253,999.10), to bring the total authorized funding amount to a maximum of Two Million Seven Hundred Ninety-Three Thousand Nine Hundred Ninety Dollars and Ten Cents ($2,793,990.10); and

WHEREAS, funding for this project will be from the Bond Funds under the line items PW 09-04 Pressure Zone Realignment/Development 2005 Improvements, PW 09-10 Water Reservoir Internal/External Corrosion Rehabilitation Program, PW 09-11 Water System Reservoirs 2005 Improvements, and PW 12-01 Water Audit Program and Water Loss Control Plan; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.

EXHIBIT A

2. The CCU finds that the terms of the fee proposal submitted by GHD are fair and reasonable.
3. The CCU hereby authorizes the management to accept the fee proposal from GHD (Exhibit C) inclusive of estimated time and material budget for limited CM services, which is also incorporated into this Resolution in its entirety.
4. The CCU hereby authorizes the management of GWA to enter into a contract with GHD, in the amount of Two Million Five Hundred Thirty-Nine Thousand Nine Hundred Ninety-One Dollars and Zero Cents ($2,539,991.00).
5. The CCU hereby approves the total funding amount for this project of Two Million Five Hundred Thirty-Nine Thousand Nine Hundred Ninety-One Dollars ($2,539,991.00), with a ten percent (10%) contingency of Two Hundred Fifty-Three Thousand Nine Hundred Ninety-Nine Dollars and Ten Cents ($253,999.10), to bring the total authorized funding amount to Two Million Seven Hundred Ninety-Three Thousand Nine Hundred Ninety Dollars and Ten Cents ($2,793,990.10).
6. The CCU hereby further approved the funding source shall be the following:
   - PW 09-04: Pressure Zone Realignment/Development 2005 Improvements
   - PW 09-10: Water Reservoir Internal/External Corrosion Rehabilitation Program
   - PW 09-11: Water System Reservoirs 2005 Improvements
   - PW 12-01: Water Audit Program and Water Loss Control Plan

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 5th day of June 2018.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

EXHIBIT A

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

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Exhibit B

December 24, 2019

Mauryn McDonald, PE
Chief Engineer
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

Attention: Garrett Yeoh

RE: Change Proposal 02 for Design Services for GWA's Pressure Zone Realignment and Tank Repair/Replacement, GWA Project W18-001-BND
Water Loss Control Program Development

Dear Ms. McDonald:

GHD is pleased to submit this change proposal to amend our Scope of Work and Fee for the Pressure Zone Realignment and Tank Repair/Replacement (Pressure Zone Realignment) project. This scope of work defines the additional design services GHD and our subconsultant, Water Systems Optimization, Inc. (WSO), will provide for Phase 3 of the Water Loss Control Program. More specifically, the design services will include the development of a plan to implement District Metered Areas (DMA) island-wide and the construction documents to execute four sites that resulted from the DMA Conversion report prepared by WSO and delivered to GWA November 2019. The original project scope will be amended on a lump sum basis per the fees in the table below.

SCOPE OF WORK

The first step will be the Phase 3 Water Loss Control Program Development to be prepared by WSO. The detailed scope of work, dated October 2019, is attached. The plan will include identification of DMA infrastructure requirements to implement the DMAs in Task 4 of the attached scope of work. GHD will provide project oversight and coordination between the original Pressure Zone Realignment scope of work. Efforts will be coordinated with the design and construction documents of the Pressure Zone Realignment in the determination of DMAs. GHD will review the infrastructure requirements identified under Task 4 of the WSO scope of work for suitability with GWA's water system and the climate on Guam.

Secondly, GHD will prepare construction documents to execute the infrastructure requirements to convert four temporary DMAs under Phase 2 of the WSO original scope to permanent DMAs. The design will follow the recommendations in the report "DMA Conversion – Recommendations for Conversion of the

Exhibit B

Temporary DMAs to Permanent DMAs." The four DMAs are Asan-Piti, Mataguac, Nimitz Estates, and Windward-Talafofo. These recommendations included battery-powered flow meters, data loggers and M2M data transmission that do not communicate with GWA's SCADA system. No electrical or SCADA design will be provided under this scope of work. The documents will include specifications, plans, cost estimates, and bid forms necessary for bidding and permit submittal to DPW. The documents will be integrated with construction documents for a phase of the Pressure Zone Realignment. GHD will prepare and submit the following:

- Multidiscipline plans at 30%, 60%, 90%, and Final completion levels per the requirements for Pressure Zone Realignment.
- Construction cost estimate based on the 60% and 100% design plans and specifications. These estimates will be Class 3 and 2 respectively in accordance with the AACE International Cost Estimate Classification System.

GHD shall coordinate with Guam Environmental Protection Agency and Department of Public Works at the 90% submittal. This includes submitting 11x17 plans, one meeting with each, and incorporating any relevant regulation requirements in the design.

ASSUMPTIONS AND EXCEPTIONS

- This change proposal only applies to the scope of work and contract amount. The terms of the original executed agreement still apply.
- The scope to prepare construction documents for the execution of the infrastructure improvements for permanent DMAs is limited to the specific sites listed above. If infrastructure requirements are needed for more sites, GHD will negotiate a fee adjustment.
- GHD's scope of work assumes that existing conditions are accurately defined by WSO and SCADA and electrical design are excluded. The fee will be renegotiated for design changes based on differing conditions from those defined by WSO.
- Property and right-of-way research and acquisition will be provided by GWA.
- Survey services are excluded. It is assumed that the existing site conditions can be prepared based on field hand measurements, utility locations from aboveground utility appurtenances, and as-built drawings.
- Construction Bid Support Services are excluded.
- Construction Management Services are excluded.

The fee will be adjusted accordingly if designs are needed at less than 30 sites or less than four different sets of contract documents are prepared for bidding. The fees for specifications and bid plans apply if the documents are combined into a set with improvements from the original Pressure Zone Realignment scope of work.

FEE SCHEDULE FOR ADDITIONAL DESIGN SERVICES

TASKS	TOTALS
Original Contract Amount	$2,511,097
WSO fee and GHD markup	$287,500

Exhibit B

GHD Project Management and Coordination	$14,800
GHD Construction Documents • 4 sites at $11,000 each • Enclosure Detailing $4,000 • Specifications Additions $2,500 • Cost Estimates $2,400	$52,900
Subtotal Cost	**$355,200**
Guam GRT (at 5.2%)	$18,470
TOTAL CHANGE PROPOSAL COST	**$373,670**
AMENDED CONTRACT AMOUNT	**$2,884,767**

Work that exceeds the scope of this proposal will be brought to your attention for review, approval and fee adjustment. Work performed will be billed monthly based on the estimated percent complete. We stand ready to provide the professional services necessary to assist GWA in this endeavor.

Sincerely,

Aaron Sutton, PE, ENV SP
Project Manager

Attachments: WSO Phase 3 Water Loss Control Program Development Proposal, October, 2019

Cc: file

Exhibit B

GUAM WATERWORKS AUTHORITY

Phase 3

Water Loss Control Program Development

WATER SYSTEMS OPTIMIZATION, INC.

WSO

PROPOSAL SUBMISSION

OCTOBER, 2019

ELECTRONICALLY SUBMITTED

Exhibit B

COVER LETTER

October 18, 2019

TO: GHD - Guam
Attn: Mr. Aaron Sutton, P. E.
GHD Guam Office Manager

FROM: Water Systems Optimization, Inc.
131 Kissling Street
San Francisco, CA 94103
Tel: 415-533-0419

Dear Mr. Sutton,

After successful completion of Phase 1 and 2 of the Guam Waterworks Authority (GWA) Water Loss Control Program we are pleased to submit this scope for Phase 3 as requested during recent meetings with GWA stakeholders.

Phases 1 and 2 have confirmed that there is a strong case for substantial cost recovery through the implementation of a comprehensive water loss reduction project in GWAs distribution network.

In Phase 3, WSO will develop a water loss control program for GWA based on the island-wide implementation of District Metered Areas, an approach proven successful during Phase 2. The aim is to provide a long-term, sustainable and holistic approach to monitoring and managing water losses within the GWA water supply and distribution network.

Our project team wholeheartedly believes that we are uniquely positioned to provide the best service to GWA and its customers. Water Systems Optimization (WSO) respectfully submits the enclosed scope with the intention that all of the required information is supplied. WSO will happily provide any further clarification if needed.

If you have any questions, please do not hesitate to contact me at (786) 877-5752 or by email at reinhard.sturm@wsoglobal.com.

Sincerely,

Reinhard Sturm

CEO/President – WSO

Exhibit B

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Exhibit B

1 PHASE 3: WATER LOSS CONTROL PROGRAM DEVELOPMENT

Project Approach & Understanding

During the Phase 2 Pilot Project, the direct measurement of water losses in three pilot temporary District Metered Areas (DMAs) supported and confirmed the results from the Phase 1 top-down water audit - that physical water loss from leaking pipes is the major component of water loss for GWA.

In Phase 3 WSO will develop a water loss control program for GWA based on the island-wide implementation of DMAs. The aim is to provide a long-term, sustainable and holistic approach to monitoring and managing water losses within the GWA water supply and distribution network.

DMAs allow the direct measurement of water losses within the water network and can be used to set targets for water loss reduction at the DMA, supply zone and system-wide level. Within each DMA, leak detection and repair will be carried out to reduce water losses from detectable leaks and, where necessary, pressure within the DMA will be managed downwards to further reduce losses from background leaks. A DMA monitoring system will provide for the automated calculation of monthly water loss volume within each DMA. This allows DMAs to be ranked in priority order according to their volume of water loss. The long-term aim will be to reduce the water loss volume in each DMA to the optimum economic level and to focus water loss control activity in those DMAs where water loss increases above the economic level. This approach will ensure that GWA reduces the current markedly high water-loss level and has in place a system to manage future water loss levels at the most economic level.

The requested services include the development of a DMA implementation program that takes into account the ongoing pressure zone realignment program and other relevant CIP and operational programs.

WSO proposes the following steps to develop a DMA-based water loss water management program for GWA.

1. Review existing zone realignment and CIP plans and hydraulic models.
2. Identify potential DMAs to provide maximum coverage of the water supply and distribution network.
3. Identify the GWA customers inside each potential DMA to assess for DMA size and water demand.
4. Identify DMA infrastructure requirements and costs including requirements for DMA meter points, chambers, boundary valves, telemetry/SCADA and pressure management.
5. Produce a prioritized ranking of potential DMAs by ease / least cost implementation.
6. Develop a phased DMA implementation plan (3 to 5-year plan).
7. Produce draft scopes for the various project implementation elements (design, construction and management).

Exhibit B

2 PHASE 3: SCOPE OF WORK

Task 1: Review of Existing Plans and Models

Task 1A: Zone Realignment Plan and Phasing

Review Zone Realignment Plan

WSO will review the ongoing zone realignment plan to understand the current and proposed network configuration, as well as the associated realignment tasks (new PRVs etc.). WSO will also review the phasing of the zone realignment work in order to understand the sequence in which the zones are being realigned. This will feed into the later task where the DMA Implementation Plan is developed.

Task 1A outcomes:

- *Understanding of the current and proposed network configuration*
- *Understanding of the order in which the pressure zones are being realigned*

Task 1B: Hydraulic Model

Review Hydraulic Model Output

WSO will review the current hydraulic model of the GWA network, including the future scenarios that cover the pressure zone realignment. This will improve the understanding of how the current network configuration is performing and what effects the proposed pressure zone realignment work will have. The model can also be used to test the proposed DMAs that are identified in Task 2.

Task 1B outcomes:

- *Utilization of the hydraulic model to assist in understanding the performance of the current network configuration*
- *Utilization of the hydraulic model to assist in understanding the performance improvements being brought about by the proposed pressure zone realignment work*
- *Prepare for utilization of the hydraulic model to test potential DMAs*

Task 1C: GIS

Review current GIS records

Obtain latest GIS records for the pipe network and customer locations for DMA design.

Task 1C outcomes:

- *Utilization of GIS records for DMA design*

Task 1D: Pressure Reducing Valve (PRV) Rehabilitation / Replacement Plans and any other relevant CIP projects

Review the PRV Rehabilitation / Replacement Plans

WSO will review GWAs plans for rehabilitation and/or replacement of PRVs and all other relevant CIP projects (pump station upgrades, new wells, etc.) to ensure these are taken into account in the DMA identification phase.

Exhibit B

Task 1D outcomes:

- *Understanding of GWAs PRV rehabilitation / replacement plans*
- *Understanding of relevant CIP projects*

Task 2: Identification of Potential DMAs

Task 2A: Desk Study

WSO will carry out a desk study utilizing the data and understanding gained in Task 1 to identify all the potential DMAs, including the potential DMA inlet points and boundaries. Each potential DMA will be tested using the hydraulic model to ensure that it can be implemented without impacting on service levels.

Task 2A outcomes:

- *Draft list of potential DMAs with inlet points and boundaries*

Task 2B: Site Visit to Potential DMA Inlet Locations

WSO will carry out a site visit to all potential DMA inlet locations to identify the optimal DMA inlet meter point location.

Task 2B outcomes:

- *DMA Inlet meter Location Point Plans.*

Task 2C: Site Visit to Potential DMA Boundary Locations

The extent of each DMA boundary will be determined by inspection of the pressure zone details and the distribution network records. The location of any boundary valve will be identified. All boundary valves will be located and tested for operation including whether it can provide a water-tight shut when closed off and tested for operation. Should a boundary valve be found to be inoperable or passing, it will need to be replaced with a new boundary valve. Any boundary valve that cannot be located will need excavating to enable testing.

Task 2C outcomes:

- *DMA boundary valve plans, including list of valves that need to be replaced and new valves that need to be installed*

Task 2D: Site Visit all above-ground infrastructure in each potential DMA

The above-ground infrastructure (water tanks and pumping stations) in each DMA will be inspected to determine what additional measurement devices (water level, inlet and outlet flow) are required to ensure that the DMA water balance can be correctly calculated. This is particularly relevant for water tanks within a DMA where water storage increases / decreases must be recognized to correctly calculate water losses.

Task 2D outcomes:

- *Identification of additional measurement requirements at above-ground infrastructure in each DMA*

Exhibit B

Task 2E: Non-intrusive DMA Inflow Measurement and Preliminary Water Loss Assessment

Where possible, the DMA inflow will be measured using non-intrusive techniques (logging of existing meters and/or use of clamp-on ultrasonic flow meters). This will enable a preliminary water loss assessment for the potential DMA to be carried out.

Task 2E outcomes:

- *DMA Inlet flow measurement (where possible)*
- *DMA Water Loss Assessment where inflow measurement is possible*

Task 2F: DMA Pressure Data Collection

Pressure data will be collected in each potential DMA using both normal and high-frequency data loggers to assess the pressure profile and determine the scope for pressure management in the DMA.

Task 2E outcomes:

- *DMA pressure data*
- *Identification of scope for pressure management in the DMA*

Task 2G: Zero Pressure Tests

Where possible, a Zero Pressure Test (ZPT) will be carried out in the potential DMA. This entails closing the main inlet supply valve for the zone and recording the pressure at selected locations within the zone. All boundary valves will be manually sounded during the ZPT to make sure they close tightly and are not allowing water to pass into the zone. Should the zone fail the ZPT (positive pressure remains within the zone) then extensive investigations will be needed to locate the zone breach. Additional boundary valves may be required if zone breaches are identified.

Task 2E outcomes:

- *Confirmed DMA boundary*
- *Need for additional boundary valves*

Task 3: Customer Identification per DMA

WSO will utilize the existing GWA customer billing data to identify the number of customers and the current customer demand within each potential DMA. This will be used in the assessment of DMA water losses for those DMAs where temporary inflow measurement has been possible.

Task 3 outcomes:

- *Number of customers in each potential DMA*
- *Current customer demand in each potential DMA*

Exhibit B

Task 4: Identification of DMA Infrastructure Requirements

For each potential DMA, the infrastructure requirements needed to implement the DMA will be identified, catalogued and provisionally costed. These will include:

- Preliminary DMA meter point pipework design and costing
- Preliminary DMA meter point chamber design and costing
- DMA boundary valve locations, including preliminary design for additional vales, where necessary.
- Preliminary DMA telemetry / SCADA requirements
- Additional pressure management requirements

Task 4 outcomes:

- *Complete list of all DMA infrastructure requirements with preliminary design and costings*

Task 5: Prioritization of Proposed DMAs

WSO will produce a priority ranking of the potential DMAs by ease of implementation and capital investment needed (least cost first). This will drive the DMA Implementation Plan with the DMAs that are easiest to implement and have lowest capital cost requirement being done first.

Task 5 outcomes:

- *Prioritized list of potential DMAs ranked by ease of implementation*

Task 6: Develop DMA Implementation Plan

The prioritized list of potential DMAs will be used to develop a 3-year to 5-year DMA implementation plan. The plan will take into account the pressure zone realignment work. The plan will set out in detail the requirements for each DMA in terms of construction requirements, boundary valve operation, telemetry and SCADA requirements, and additional pressure management requirements.

Task 6 outcomes:

- *DMA implementation Plan*

Task 7: Develop Draft Scopes for Implementation Project Contracting Elements

WSO will develop draft scope of works for the Implementation Project contracting elements.

Task 7 outcomes:

- *Draft Scope for Construction Design and Specifications*
- *Draft Scope for Water Loss Control Management including DMA boundary implementation, leak detection, pressure management and ongoing monitoring of DMA water loss levels*
- *Draft Scope for Leak Repair works*

Exhibit B

3 PROJECT MANAGEMENT AND REPORTING

In order to ensure that the project meets GWA WSD's expectations and timeline, the project team will schedule appropriate milestone meetings to discuss project findings and scheduling. In addition to the project milestone meetings, the project team will schedule individual meetings with various departments and stakeholders as necessary. Monthly progress reports will accompany the monthly invoice that WSO will prepare.

After completing all tasks, the project team will develop a final report that includes an executive summary, a description of the study process, all analyses conducted, and findings and recommendations for implementing GWA's water loss control program. Prior to submittal of the final report, WSO will prepare a draft report for GWA staff review and incorporate comments received from GWA in preparing the final report.

- *Monthly invoicing and progress update*
- *Brief program report on water loss program recommendations*
- *Slide deck for presenting water loss program*

Exhibit B

4 PROJECT SCHEDULE AND COST

Project Schedule

WSO understands that time is of the essence for GWA, and we can guarantee that the project will be completed in the expected timeframe with all deliverables by June 30, 2020 assuming a project start date no later than January 1, 2020.

WSO will update GWA staff regularly with project findings and the status of each task underway. WSO will conduct milestone meetings to present and discuss project findings and adjust task schedules where necessary. WSO prides itself on being accessible and responsive – we will be in close communication to ensure the on-time and complete delivery of the project's objectives.

Additionally, WSO will schedule an in-person results presentation to discuss findings and recommendations.

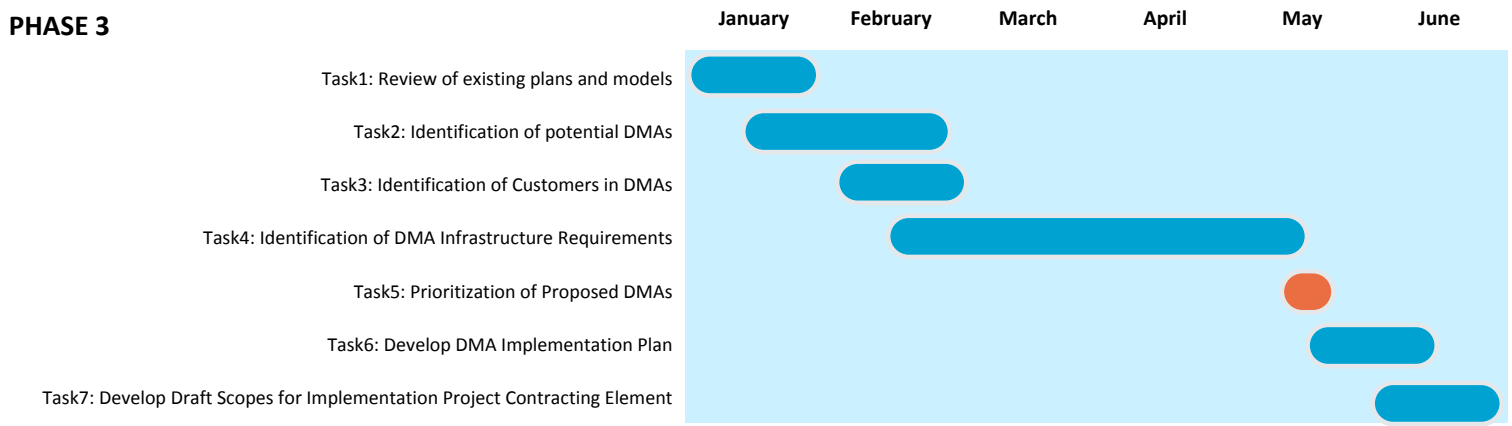


Table 1: Proposed Project Schedule, Organized by Task

Exhibit B

Project Cost

Phase 3 lump sum cost is $250,000.

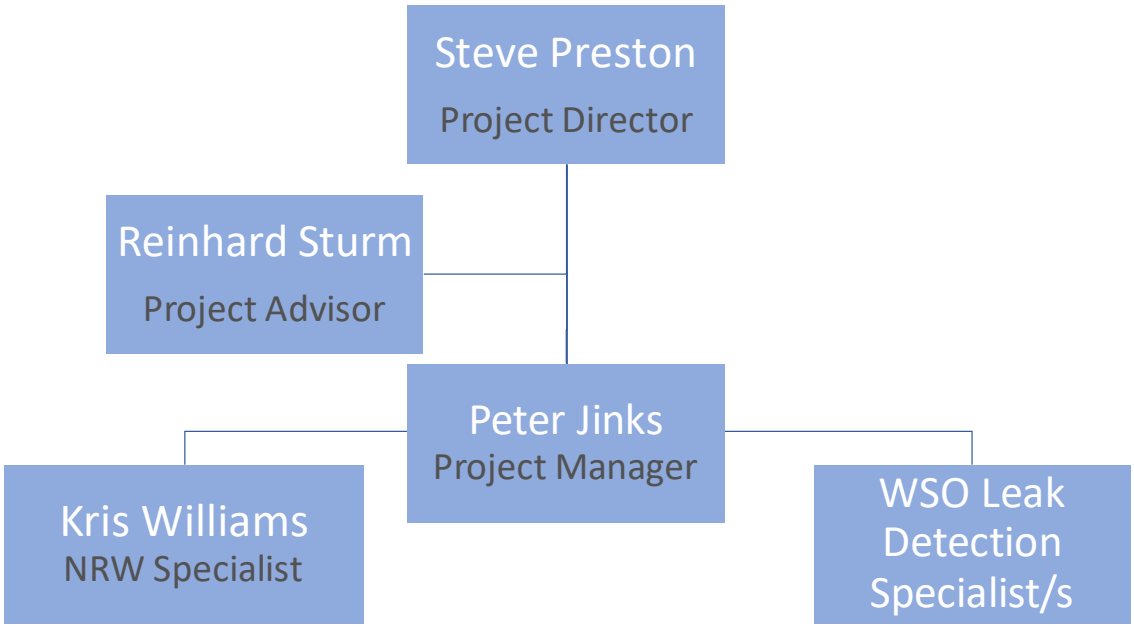
WSO will submit monthly invoices based on task percentage completion.

Exhibit B

APPENDIX A – PROJECT ORGANIZATIONAL CHART

PHASE 3:

This phase of the project will be led by Steve Preston. Reinhard Sturm will assist in a project advisory role. Peter Jinks of WSO will serve as the project manager for this phase of the project. Peter will be based in Guam for the duration of the project. Peter will be assisted by Kris Williams on data intake and management. Kris Williams will mostly work remotely but it is planned for Kris or one of WSOs Leak Detection Specialists to be on site to assist Peter Jinks during the DMA pressure data collection task.



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Issues for Decision

Resolution No. 13-FY2020
Relative to Authorizing the Modernizations of the Guam Waterworks Authority Enterprise Resource Planning System

What is the project's objective and is it necessary and urgent?
GWA first implemented JD Edwards (JDE) Enterprise Resource Planning system (ERP) in 1998 to manage day-to-day accounting, procurement and human resources business activities. The JDE World ERP will no longer be supported or enhanced by the vendor in April 2022. Over the years, GWA employees have developed manual workarounds using stand-alone software applications to perform tasks and create reports because of JDE World's limitations and its complicated and inefficient legacy green screen "command line interface. GWA requires a transformational ERP upgrade to automate and integrate business systems and processes that will improve employee productivity, more efficiently streamline operations and provide timely decision support information in order to achieve the objectives in the 2018 Water Resource Master Plan. GWA has evaluated JDE EnterpriseOne (E1) and determined it is a state-of-the-art ERP that provides all the tools necessary to transform to paperless digital business processes and integrate with other GWA business systems.

Where is the location?
The project will have two JD Edwards E1 database environments. One environment will reside in the Oracle Cloud in an Arizona data center and the second environment will reside in the Fadian data center. Toward the end of the project implementation, GWA will determine whether the production environment will reside in the Cloud or on-premise at Fadian. The disaster recovery environment will be located at the other location. The disaster recovery design will guarantee a Recovery Point Objective of 1 hour or less. The data replication between the production and backup environment is estimated to be a 15-minute delay.

How much will it cost?
The proposal to modernize the GWA Enterprise Resource Planning system is _____.

When will it be completed?
The estimated project length is approximately seven months after PUC approval. If the contract is approved as part of the February 27, 2020 docket then the completion date would be January 2021.

What is the funding source?
GWA received a $_____ grant and will apply for an additional $_____ grant in April 2020 from the Office of Insular Affairs Technical Assistance Program. The terms of the

grant require GWA contribute not less than a 50% cost share toward the project. The source for the grant matching requirement is bond funds.

The RFP/BID responses (if applicable):
GWA was directed by Oracle to work with DXC Redrock, the only Platinum Partner contractor in the Western Pacific with a proprietary pre-built JDE E1 configuration and implementation plan for engineering and construction firms, to upgrade to E1. In December 2018, a sole source procurement was awarded for first phase of the E1 upgrade implementation labeled the "Discovery Phase." The Discovery Phase included defining scope for both a technical and transformational upgrade and provided several key project planning deliverables including pricing. In October 2019, DXC Red Rock provided pricing for their proprietary product Red Projects to implement a transformational upgrade that could be completed within (7) seven months.

CONSOLIDATED COMMISSION ON UTILITIES
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GWA RESOLUTION NO. 13-FY2020

RELATIVE TO AUTHORIZING THE MODERNIZATIONS OF THE GUAM WATERWORKS AUTHORITY ENTERPRISE RESOURCE PLANNING SYSTEM

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual, and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA first implemented JD Edwards (JDE) Enterprise Resource Planning system (ERP) in 1998 and continues to use the JDE World ERP which will no longer be supported or enhanced by the vendor in April 2022; and

WHEREAS, over the years, GWA employees have developed manual workarounds using stand-alone software applications to perform tasks because of JDE World's limitations and its complicated and inefficient legacy green screen "command line interface;" and

WHEREAS, GWA requires a transformational ERP upgrade to automate and integrate business systems and processes that will improve employee productivity, more efficiently streamline operations and provide timely decision support information in order to achieve the objectives in the 2018 Water Resource Master Plan; and

WHEREAS, Oracle Corporation purchased JDE and agreed to allow GWA to migrate JDE World licenses to its new, modern, browser-based digital platform, JDE EnterpriseOne, with

enhanced features and functions including mobility, robotics processing and user defined customization; and

WHEREAS, GWA has evaluated JDE EnterpriseOne and determined it is a state-of-the-art ERP that provides all the tools necessary to transform to paperless digital business processes and integrate with other GWA business systems; and

WHEREAS, independent 3rd party research estimates the typical cost for a mid-size business transformational ERP upgrade is between 3% and 6% of annual revenue. For GWA, this is $3.3 to $7.4 million; and

WHEREAS, GWA is requesting authorization for expenditure to purchase additional licenses, support, infrastructure and professional services from Oracle Corporation and Red Rock; and

WHEREAS, GWA is anticipating the cost of the implementation of the upgrade and licenses at a total cost of $_____; and

WHEREAS, GWA received a $_____ grant and will apply for an additional $_____ grant in April 2020 from the Office of Insular Affairs Technical Assistance Program for the JDE EnterpriseOne upgrade; and

WHEREAS, the terms of the grant require GWA contribute not less than a 50% cost share toward the project. The source of the grant matching requirement is bond funds; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the proposal submitted by Red Rock Consulting Pty Ltd are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept the bid from Red Rock Consulting Pty Ltd.

4. The CCU hereby further authorizes the management of GWA to enter into a contract with Red Rock Consulting Pty Ltd.
5. The CCU hereby further authorizes the management of GWA to enter into a contract with Red Rock Consulting Pty Ltd. In the amount of _____.
6. The CCU hereby approves the funding total of _____.
7. The CCU hereby approves the use of funding sources from the following CIP line items and Office of Insular Affairs Grants:
    - CIP PW XX-XX:
    - CDFA Number 15.875, Technical Assistance Program

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of January, 2020.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS Chairperson	**MICHAEL T. LIMTIACO** Secretary

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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Issues for Decision

Resolution No. 14-FY2020
Relative to Approval of fund increase to the Construction Management Contract for the Route 4 Relief Sewerline Rehabilitation and Replacement Construction Contract with EMPSCO Engineering Consultants.

What is the project's objective and is it necessary and urgent?
The objective of this project is to improve the sewer collection system, which included repairing and/or replacing sewer manholes and over 4,200 linear feet of gravity sewer line along Route 4 and Route 1 in the village of Agana. These sewer infrastructure elements have been identified by GWA, through an SSES investigation, to be subjected to either inactivity due to incomplete construction work or excessive infiltration and inflow (I&I). Successful completion of this project will result in proper maintenance and operation of the sewer collection system and USEPA agree that efforts to rehabilitate, repair or replace the sewer line are necessary. The construction management services are required for the duration of the project which is expected to be completed in June 2020.

Where is the project located?
This project is located along Route 4 and Route 1, from the base of the hill near well A-23 in Agana to the Agana Main Pump Station. Construction activities will be limited to the government easements of the sewer infrastructure elements.

How much will it cost?
GWA management is seeking funding increase for the construction management services contract with EMPSCO for an additional not-to-exceed amount of Two Hundred Thirty Thousand Seven Hundred Fifty-Nine Dollars and Sixty-Two Cents ($230,759.62), which brings the total authorized funding to a maximum not-to-exceed amount of Nine Hundred Thirty-Three Thousand Four Hundred Thirty-Seven Dollars and Seventy-Five Cents ($933,437.75).

When will it be completed?
The construction is estimated to be completed by June 2020.

What is the funding source?
The funding for this project will be from USEPA SRF Grant Funds and, if necessary, GWA Bond Funds with a maximum project budget of Nine Hundred Thirty-Three Thousand Four Hundred Thirty-Seven Dollars and Seventy-Five Cents ($933,437.75).

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GWA RESOLUTION NO. 14–FY2020

RELATIVE TO APPROVAL OF FUND INCREASE TO THE CONSTRUCTION MANAGEMENT CONTRACT FOR THE ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT PROJECT S15-006-EPA

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA has received a grant from USEPA under the State Revolving Fund program to improve the sewer collection system, which included over 4,200 linear feet of gravity sewer line along Route 4 and Route 1, from the base of the hill near well A-23 in Agana to the Agana Main Pump Station; and

WHEREAS, the gravity sewer line noted above has a section that has been inactive since its original installation due to incomplete construction work, and sections that need repair due to high infiltration and inflow (I/I), and the intent of this project is to rehabilitate, repair or replace these sections; and

WHEREAS, in September 2018 GWA management executed two (2) separate construction contracts (Exhibit A and Exhibit B) to rehabilitate the Route 4 Relief Sewerline, the first (Exhibit A) with ProPacific Builder Corporation (PPBC), and the second (Exhibit B) with Insituform Technologies LLC (Insituform); and

WHEREAS, to provide construction management (CM) services on both construction contracts, in June 2018 GWA management entered into a contract with EMPSCO Engineering Consultants (EMPSCO) (Exhibit C) in the amount of Seven Hundred Two Thousand Six Hundred Seventy-Eight Dollars and Thirteen Cents ($702,678.13); and

WHEREAS, while both construction contractors received the Notice to Proceed by September 2018 (Exhibit D), the start of construction was delayed due to complications with obtaining approvals during the permitting process; and

WHEREAS, due to permitting delays, time restrictions enforced on construction work hours, and coordination between contractors, the estimated time to construction completion has extended to June 2020, and as such the CM services are anticipated to be required through June 2020; and

WHEREAS, GWA has negotiated with EPMSCO for a fee proposal to provide continued construction management services on both construction contracts through June 2020 on a Time and Materials basis; and

WHEREAS, GWA Management seeks CCU approval of EMPSCO's bid proposal for additional construction management services funding with a not-to-exceed amount of Two Hundred Thirty Thousand Seven Hundred Fifty-Nine Dollars and Sixty-Two Cents ($230,759.62), to bring the total authorized funding amount to Nine Hundred Thirty-Three Thousand Four Hundred Thirty-Seven Dollars and Seventy-Five Cents ($933,437.75) (Exhibit E); and

WHEREAS, funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds with an estimated project budget Nine Hundred Thirty-Three Thousand Four Hundred Thirty-Seven Dollars and Seventy-Five Cents ($933,437.75); and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.

2. The CCU hereby approves the funding increase for construction management services of an additional not-to-exceed amount of Two Hundred Thirty Thousand Seven Hundred Fifty-Nine Dollars and Sixty-Two Cents ($230,759.62). Exhibit E.
3. The CCU hereby further approves the total funding authorization for the contract with EMPSCO to an amount not-to-exceed Nine Hundred Thirty-Three Thousand Four Hundred Thirty-Seven Dollars and Seventy-Five Cents ($933,437.75).

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY and REGULARLY ADOPTED, this 28th day of January 2020.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**MICHAEL T. LIMTIACO**
Chairperson	Secretary

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

EXHIBIT A

AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

THIS AGREEMENT is by and between the Guam Waterworks Authority ("Owner") and ProPacific Builder Corporation ("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Work under Schedule A consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid); GWA Project No. S15-006-EPA.

ARTICLE 3 – ENGINEER

3.01 The part of the Project that pertains to the Work has been designed by AECOM.

3.02 The Owner has retained EMPSCO Engineering Consultants ("Engineer") to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Days*

A. The Work for the Base Bid contains two schedules, Schedule A and Schedule B. Contract Times will be awarded separately as indicated below under Schedule A and Schedule B. One contract will be awarded to the lowest responsive and responsible bidder for Schedule A and one contract will be awarded to the lowest responsive and responsible bidder for Schedule B. If the same contractor is the lowest responsive and responsible bidder for both Schedules A and B, one contract will be awarded for all the work under Schedules A and B.

1. For a separate contract for Schedule A, the Work for the Schedule A Base Bid will be substantially completed within __450__ days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within __480__ days after the date when the Contract Times commence to run.

B. Parts of the Work shall be substantially completed on or before the following Milestone(s):

1. Milestone 1 [event & date/days] NA
2. Milestone 2 [event & date/days] NA
3. Milestone 3 [event & date/days] NA

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner **$3,000.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **$3,000.00** for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages shall be assessed against the Contractor(s) separately for the work performed under Schedule A and the work performed under Schedule B.
4. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.
5. Milestones: Contractor shall pay Owner $__NA__ for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved.

4.04 *Special Damages*

A. In addition to the amount provided for liquidated damages, Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.

B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

A. For all Work under Schedule A - Base Bid other than Unit Price Work, a lump sum of: $Three Million Four Hundred Seven Thousand Eight Hundred Forty Eight US Dollars ($3,407,848.00).

All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

B. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item):

Unit Price Work					
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Unit Price**	**Extended Price**
Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities)					$

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

C. Total of Schedule A Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment) $3,407,848.00.

D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 15th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract

a. 90 percent of Work completed (with the balance being retainage). And

b. 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

7.01 All amounts not paid when due shall bear interest at the rate of 6 percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.

B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the

Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 8, inclusive).
2. Performance bond (pages 1 to 3, inclusive).
3. Payment bond (pages 1 to 3, inclusive).
4. Other bonds.
   a. ___ (pages ___ to ___, inclusive).
5. General Conditions (pages 1 to 65, inclusive).
6. Supplementary Conditions (pages 1 to 18, inclusive).
7. Specifications as listed in the table of contents of the Project Manual.
8. The Drawings listed on the attached sheet index.
9. Addenda (numbers 1 to 4, inclusive).
10. Exhibits to this Agreement (enumerated as follows):

a. Contractor's Bid (pages _1__ to _10__, inclusive).

NOTE(S) TO USER:

11. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:

    a. Notice to Proceed.

    b. Work Change Directives.

    c. Change Orders.

    d. Field Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on 9-13-18 (which is the Effective Date of the Contract).

OWNER:	CONTRACTOR:
Guam Waterworks Authority	**ProPacific Builder Corporation**
By: MIGUEL C. BORDALLO, P.E.	By: JEAN YEON YU
Title: General Manager	Title: President
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest:	Attest: Kate Yusi
Title: Legal secretary III	Title: Office Manager
Address for giving notices:	Address for giving notices:
Gloria B Nelson Public Service Building	750 Route 8
688 Route 15	Suite 202, Hanam Plaza
Mangilao Guam 96913	Barrigada, Guam 96913
	License No.: 5135
	Certificate No.: C-0518-0147
	(where applicable)

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

CERTIFIED FUNDS AVAILABLE:	APPROVED AS TO FORM:
By:	By:
GREG P. CRUZ	KELLY O. CLARK
GWA Chief Financial Officer	GWA General Counsel
09/13/18	
Date: 9.13.18	Date: 9/5/18

Contract Amount: $3,407,848.00

Contingency: $ 340,784.80

Amount Certified: $3,748,632.80

Funding Source: $3,407,848.00 USEPA State Revolving Fund – Grant No. M96902617

$ 340,784.80 2016 GWA Bond WW 09-06 Wastewater Collection System/Rehabilitation Program

EXHIBIT A

BID FORM

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
Addendum No. 1	April 19, 2018
Addendum No. 2	April 26, 2018
Addendum No. 3	May 15, 2018
Addendum No. 4	May 18, 2018

B. Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

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C. Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

E. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.

F. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATIONS

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Buyer, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

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4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

ARTICLE 5 - BASIS OF BID AND AWARD OF CONTRACTS

5.01 This contract is a multi-award contract through which more than one contract may be awarded through this solicitation. The Bid Schedule contains two schedules, Schedule A and Schedule B. Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the prices indicated under this article. The Bidder can elect to provide prices under Schedule A or Schedule B or both schedules. Bids must include all items under Schedule A or Schedule B, or both Schedule A and B. Each of Schedules A and B comprise Base Bid items and Additive Bid items. The Bidder shall provide base bid and additive bid(s) prices under each elected schedule.

Bids shall be evaluated by Schedule. Each of Schedules A and B shall be evaluated separately. The lowest responsive and responsible bidder shall be determined for each of Schedule A and Schedule B. Separate contracts will be awarded under Schedule A and Schedule B. One contract will be awarded to the lowest responsive and responsible bidder for Schedule A and one contract will be awarded to the lowest responsive and responsible bidder for Schedule B. If the same contractor is the lowest responsive and responsible bidder for both Schedules A and B, one contract for all the work under Schedules A and B will be awarded.

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	LS	$293,780.00	1	$ 293,780.00
2	Insurance and Bonds	LS	$132,201.00	1	$ 132,201.00
3	Permits	LS	$44,067.00	1	$ 44,067.00
4	12" PVC pipe, installed by open trench, including PVC pipe, fittings, warning/identification tape, cleaning, connections to manholes, adjustment existing channel and bench, testing, and all incidentals, in place complete.	LF	$1,500.00	22	$ 33,000.00
5	18" PVC pipe, installed by open trench, including PVC pipe, fittings, warning/identification tape, cleaning, connections to existing manholes, adjustment existing channel and bench, testing, and all incidentals, in place complete.	LF	$1,800.00	12	$ 21,600.00
6	30" PVC pipe, installed by open trench, including existing pipe removal, pipe, fittings, warning/identification tape, cleaning, manhole connections, testing, and all incidentals, in place complete.	LF	$2,000.00	461	$ 922,000.00
7	Unclassified Trench Excavation and Backfill, including protection of existing utilities if necessary, excavation, installation of sheet piles, cutting and removal of sheet piles, shoring, groundwater cutoff wall, dewatering and dewatering effluent disposal, muck handling and disposal, backfill, pipe bedding, CLSM, temporary erosion control measures, traffic control work, miscellaneous restoration work, and all incidentals required to complete the work.	CY	$600.00	913	$ 547,800.00
8	Precast Sewer Manhole, SMH-6901A and 493A, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment ring(s), frame and cover, epoxy-coating, channelized inverts, testing, CLSM, temporary erosion control measures, traffic control work, incidentals, and all necessary labor, materials and equipment, in place complete.	EA	$30,000.00	2	$ 60,000.00

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
9	Drop Precast Sewer Manhole, SMH-6908B, including demolition of existing SMH-10312, reinforced concrete base, precast concrete riser and cone, chimney, flexible pipe seals and connectors, grade adjustment ring(s), frame and cover, epoxy-coating, channelized inverts, testing, CLSM, temporary erosion control measures, traffic control work, incidentals, and all necessary labor, materials and equipment, in place complete.	EA	$ 30,000.00	1	$ 30,000.00
10	Rehabilitation of sewer manhole with epoxy coating, including cleaning, surface preparation, cementitious underlayment, concrete channel and bench construction, existing pipe cut & connection, plugging existing pipe, epoxy topcoat, grout injection for leak repair, traffic control work, and all incidentals, in place complete.	EA	$ 22,500.00	14	$ 315,000.00
11	Abandon existing sewer pipes including plugging and filling with CLSM, all incidentals, in place complete.	LF	$ 250.00	280	$ 70,000.00
12	Unplug 21" existing pipe, plug 15" existing SL-9650 and channel & bench reconstruction at SMH-6897	LS	$ 30,000.00	1	$ 30,000.00
13	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent asphalt concrete (AC) pavement, muck handling and disposal), electrical and standby power/pumps, monitoring, spill containment/mitigation, traffic control work, temporary erosion control measures, all related restoration work, in place complete.	LS	$ 300,000.00	1	$ 300,000.00
14	Removal of existing pavement including all necessary labor, materials and equipment, in place complete	SY	$ 50.00	2,867	$ 143,350.00

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
15	AC Pavement Resurfacing, including asphalt concrete base, cold planing, pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete	SY	$ 150.00	2,867	$ 430,050.00
16	Pavement marking including all necessary labor, materials and equipment, in place complete	LS	$25,000.00	1	$ 25,000.00
17	As-Built drawings	LS	$10,000.00	1	$ 10,000.00
				SCHEDULE A – Base Bid (TOTAL Items 1 through 17, inclusive)	$ 3,407,848.00

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Additive Bid No. 1

Description of Work: Archaeological monitoring.

				SCHEDULE A – Additive Bid No. 1	
1	Archaeological and cultural resource services to add new laydown staging areas outside of the suggested areas or outside of the area of potential effect as defined the Archaeological Monitoring and Data Recovery Plan for the project and resubmit to the Department of Parks and Recreation, Guam Historic Resources Division/State Historic Preservation Office for approval and acceptance.	LS	$ 150,000.00	1	$ 150,000.00
				SCHEDULE A - Additive Bid No. 1 (TOTAL Items 1, inclusive)	$ 150,000.00

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B - Additive Bid No. 2
Description of Work: Archaeological monitoring.

				SCHEDULE B – Additive Bid No. 2	
1	Archaeological and cultural resource services to add new laydown staging areas outside of the suggested areas or outside of the area of potential effect as defined the Archaeological Monitoring and Data Recovery Plan for the project and resubmit to the Department of Parks and Recreation, Guam Historic Resources Division/State Historic Preservation Office for approval and acceptance.	LS	$_____	1	$_____
SCHEDULE B - Additive Bid No. 2 (TOTAL Items 1, inclusive)					$_____

Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of Bid Bond.

B. List of Proposed Major Suppliers;

C. Required Bidder Qualification Statement with Supporting Data.

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

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EXHIBIT B

AGREEMENT
BETWEEN GUAM WATERWORKS AUTHORITY AND INSITUFORM TECHNOLOGIES, LLC FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

THIS AGREEMENT is by and between the Guam Waterworks Authority ("Owner") and Insituform Technologies, LLC ("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Work under Schedule B consists of CIPP lining 21", 24", 30" and 36" existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation work.

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid); GWA Project No. S15-006-EPA.

ARTICLE 3 – ENGINEER

3.01 The part of the Project that pertains to the Work has been designed by AECOM.

3.02 The Owner has retained EMPSCO Engineering Consultants ("Engineer") to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Days*

A. The Work for the Base Bid contains two schedules, Schedule A and Schedule B. Contract Times will be awarded separately as indicated below under Schedule A and Schedule B. One contract will be awarded to the lowest responsive and responsible bidder for Schedule A and one contract will be awarded to the lowest responsive and responsible bidder for Schedule B. If the same contractor is the lowest responsive and responsible bidder for both Schedules A and B, one contract will be awarded for all the work under Schedules A and B.

1. For a separate contract for Schedule B, the Work for the Schedule B Base Bid will be substantially completed within 450 days after the date when the Contract Times

commence to run as provided in Paragraph 4.01 of the General Conditions and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 480 days after the date when the Contract Times commence to run.

B. Parts of the Work shall be substantially completed on or before the following Milestone(s):

1. Milestone 1 [event & date/days] NA
2. Milestone 2 [event & date/days] NA
3. Milestone 3 [event & date/days] NA

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner **$3,000.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **$3,000.00** for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages shall be assessed against the Contractor(s) separately for the work performed under Schedule A and the work performed under Schedule B.
4. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.
5. Milestones: Contractor shall pay Owner $ NA for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved.

4.04 *Special Damages*

A. In addition to the amount provided for liquidated damages, Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.

B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

A. For all Work under Schedule B - Base Bid other than Unit Price Work, a lump sum of: $Three Million Nine Hundred Ninety Eight Thousand Si Hundred Eighty Eight US Dollars ($3,998,688.00).

All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

B. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item):

Unit Price Work					
Item No.	Description	Unit	Estimated Quantity	Unit Price	Extended Price
Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities)					$

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

C. Total of Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment) $$3,998,688.00..

D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 15th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract

a. 90 percent of Work completed (with the balance being retainage). And

b. 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

7.01 All amounts not paid when due shall bear interest at the rate of 6 percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.

B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the

Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 8, inclusive).
2. Performance bond (pages 1 to 3, inclusive).
3. Payment bond (pages 1 to 3, inclusive).
4. Other bonds.
   a. ___ (pages ___ to ___, inclusive).
5. General Conditions (pages 1 to 65, inclusive).
6. Supplementary Conditions (pages 1 to 18, inclusive).
7. Specifications as listed in the table of contents of the Project Manual.
8. The Drawings listed on the attached sheet index.
9. Addenda (numbers 1 to 4, inclusive).
10. Exhibits to this Agreement (enumerated as follows):

a. Contractor's Bid (pages 1 to 13, inclusive).

NOTE(S) TO USER:

11. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:

    a. Notice to Proceed.

    b. Work Change Directives.

    c. Change Orders.

    d. Field Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on 8.29.18 (which is the Effective Date of the Contract).

OWNER:	CONTRACTOR:
Guam Waterworks Authority	Insituform Technologies, LLC
By: MIGUEL C. BORDALLO, P.E.	By: WHITTNEY SCHULTE
Title: General Manager	Title: Contracting & Attesting Officer
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest:	Attest:
Title: Kelly Clark	Title: Laura M. Andreaki Contracting & Attesting Officer
Address for giving notices:	Address for giving notices:
Gloria B Nelson Public Service Building	17988 Edison Avenue
688 Route 15	Chesterfield, MO 63005
Mangilao Guam 96913	
	License No.: CLB18-1402
	Certificate No.: C-0318-0016
	(where applicable)

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

CERTIFIED FUNDS AVAILABLE:	APPROVED AS TO FORM:
By:	By:
GREG P. CRUZ	KELLY O. CLARK
GWA Chief Financial Officer	GWA General Counsel
Date: 8.28.18	Date: 8/28/18

Contract Amount: $3,998,688.00 08/28/18

Contingency: $ 399,868.80

Amount Certified: $4,398,556.80

Funding Source: USEPA State Revolving Fund

$1,963,124.11 - M96902615 $399,868.80 - System Development Charge

$2,035,563.89- M96902617

Insituform Technologies, LLC

Insituform Technologies, LLC is a subsidiary of Aegion Corporation

INSITUFORM TECHNOLOGIES, LLC
BOARD OF MANAGERS AND OFFICERS
(Current as of May 18, 2018)

BOARD OF MANAGERS
Charles R. Gordon Member, Board of Managers
David F. Morris Member, Board of Managers

OFFICERS	
Name	Office
Frank R. Firsching	– President
David F. Morris	– Executive Vice President
Stephen Callahan	– Senior Vice President
Kenneth L. Young	– Senior Vice President and Treasurer
Mark A. Menghini	– Senior Vice President and Secretary
Dawn Landmann	– Senior Vice President – Tax
Ralph Western	– Senior Vice President – Manufacturing
Chuck Delaney	– Vice President – Operations
Daniel P. Schoenekase	– Vice President, General Counsel and Assistant Secretary
Dennis Pivin	– Vice President – Safety
Larry Mangels	– Vice President and Chief Financial Officer
April A. Greer	– Vice President and Assistant Secretary

CONTRACTING AND ATTESTING OFFICERS
Christlanda Adkins
Laura M. Andreski
Janet Hass
Jana Lause
Diane Partridge
Whittney Schulte
Ursula Youngblood

Business Address for Officers and Board of Managers:
17988 Edison Avenue
Chesterfield, MO 63005

pwc

Report of Independent Auditors

To the Management of Instituform Technologies, LLC:

We have audited the accompanying balance sheet of Instituform Technologies LLC as of December 31, 2017.

Management's Responsibility for the Balance Sheet

Management is responsible for the preparation and fair presentation of the balance sheet in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of balance sheet that is free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the balance sheet based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the balance sheet is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the balance sheet. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the balance sheet, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the balance sheet in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the balance sheet. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the accompanying balance sheet presents fairly, in all material respects, the financial position of Instituform Technologies, LLC as of December 31, 2017 in accordance with accounting principles generally accepted in the United States of America.

PricewaterhouseCoopers LLP

Saint Louis, Missouri
March 1, 2018

PricewaterhouseCoopers LLP, 800 Market Street, Suite 1900, St. Louis, MO 63101-2695
T: (314) 206 8500, F: (314) 206 8514, www.pwc.com/us

Insituform Technologies, LLC
Balance Sheet
(in thousands)

		December 31, 2017
Assets		
Current assets		
Cash and cash equivalents	$	2,265
Receivables, net		31,385
Retainage		11,530
Costs and estimated earnings in excess of billings		20,185
Inventories		10,507
Prepaid expenses and other		2,704
Assets held for sale		-
Total current assets		78,576
Property, plant and equipment, net		40,390
Non-current assets		
Goodwill		88,527
Intangibles		2,200
Deferrred income taxes		3,358
Other long-term assets		8,824
Total non-current assets		102,909
Total assets	$	221,875
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable and accrued expenses	$	38,341
Billings in excess of costs and estimated earnings		8,900
Current maturities of long-term debt		-
Liabilities held for sale		-
Total current liabilities		47,241
Non-current liabilities		
Deferred income taxes		6,425
Other long-term liabilities		58
Total non-current liabilities		6,483
Stockholders' equity		
Common stock		-
Additional paid-in capital		154,594
Currency translation adjustment		-
Retained earnings		13,557
Non-controlling interest		-
Total stockholders' equity		168,151
Total liabilities and stockholders' equity	$	221,875

Insituform
Global Pipeline Protection

17988 Edison
Chesterfield, MO 63005

Tel: 636-530-8000
Fax: 636-530-8744
www.insituform.com

CERTIFICATE OF COMPLIANCE

March 8, 2018

To Whom It May Concern:

This letter certifies that Insituform tubes are manufactured in Batesville, Mississippi, USA, by Insituform Technologies, LLC and meet all relevant specifications for a cured-in-place pipe product: ASTM D 5813, ASTM F 1216, and ASTM F 1743. Insituform tubes have been manufactured in the USA since 1981.

The finished tube is manufactured using multiple layers of polyester felt, with one layer coated with Polypropylene plastic. The layers are cut/slit to the desired width and sewn concentrically to form the final tube. The coated layer is also sealed at the seam, using an extrusion or taping process. The extrusion process is used on the standard (inverted) tubes, and the taping process is used on the pull-in tubes (also known as ILS or iPlus Infusion). The standard (inverted) tubes are manufactured with the coated layer on the outside, and the pull-in tubes are manufactured with the coated layer on the inside. After wet out, the pull-in tubes are placed in a plastic wrap to contain the resin.

Felt production is achieved by a non-woven needle punch process using Polyester fiber. The finished product is tested for thickness under a specified load and for tensile strength in accordance with ASTM D 5813. The fabric tube has a minimum tensile strength of 750 psi (5 MPa) in both the longitudinal and the transverse direction. The seam strength of the tube is also tested on a regular basis and also meets or exceeds the minimum tensile strength of 750 psi (5 MPa) in both longitudinal and transverse direction. For Quality Assurance purposes, the material is also tested for weight and thickness.

All standard (inverted) tubes are run through a dye bath prior to shipment to ensure there are no leaks. Following the inspection process all tubes (except InsituMain, which are used in water lines) are printed with yard marks.

All tubes with tapers, transitions, or any change in tube diameter or thickness are produced under the same specifications, with the same materials, and meet the same material testing requirements as the standard tube.

The quality system used by Insituform Technologies, LLC is ISO 9001:2015 certified.

The end use of the Insituform tube is to rehabilitate sewer and drainage pipes to increase the life of the pipe and prevent a dig and replacement of a pipe.

Please contact us directly with any questions you may have.

Sincerely,

INSITUFORM TECHNOLOGIES, LLC

Eugene Zaltsman
Sr. Applications Engineer

Insituform
Global Pipeline Protection®

17988 Edison
Chesterfield, MO 63005

Tel: 636-530-8000
Fax: 636-530-8744
www.insituform.com

INSTALLER CERTIFICATION

Date: March 8, 2018

To Whom It May Concern:

Insituform Technologies, LLC is a vertically integrated pipeline rehabilitation company. As such, Insituform is not only the manufacturer of the cured-in-place pipeline rehabilitation system of the same name, but also offers the benefits of a full research and development department, licensed engineers on staff for design of products to suit each individual situation, and regional contracting offices that perform all field services including installation.

This letter shall serve to certify that Insituform Technologies, LLC is authorized to install Insituform products supplied by Insituform Technologies, LLC.

Sincerely,

INSITUFORM TECHNOLOGIES, LLC

Eugene Zaltsman
Sr. Applications Engineer

EXHIBIT "A"

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	LS	$800,000	1	$800,000
2	Insurance and Bonds	LS	$100,000	1	$100,000
3	Permits	LS	$34,300	1	$34,300
4	Installation of cured in place pipe (CIPP) lining in existing 21" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$310.00	674	$208,940
5	Installation of cured in place pipe (CIPP) lining in existing 24" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$412.00	723	$297 876

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
6	Installation of cured in place pipe (CIPP) lining in existing 30" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$667.00	1,590	$1,060,530
7	Installation of cured in place pipe (CIPP) lining in existing 36" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$929.00	798	$741,342
8	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement, muck handling and disposal), electrical and standby power/pumps, monitoring, spill containment/mitigation, traffic control work, temporary erosion control measures, all related restoration work, in place complete.	LS	$755,700	1	$755,700

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
	Schedule B – BASE BID (TOTAL Items 1 through 8, inclusive)				$3,998,688

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B – Additive Bid No. 1

Description of Work: CIPP part-liner or chemical grouting to control infiltration/inflow prior to CIPP lining.

				Schedule B – Additive Bid No. 1	
1	CIPP part-liner or grouting to control infiltration on the existing 21" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2330.00	70	$163,100.00
2	CIPP part-liner or grouting to control infiltration on the existing 24" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2330.00	80	$186,400.00
3	CIPP part-liner or grouting to control infiltration on the existing 30" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2960.00	160	$473,600.00
4	CIPP part-liner or grouting to control infiltration on the existing 36" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2960	160	$473,600.00
	SCHEDULE B – Additive Bid No. 1 (TOTAL Items 1 through 4, inclusive)				$5,295,388.00

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B - Additive Bid No. 2
Description of Work: Archaeological monitoring.

				SCHEDULE B – Additive Bid No. 2	
1	Archaeological and cultural resource services to add new laydown staging areas outside of the suggested areas or outside of the area of potential effect as defined the Archaeological Monitoring and Data Recovery Plan for the project and resubmit to the Department of Parks and Recreation, Guam Historic Resources Division/State Historic Preservation Office for approval and acceptance.	LS	$35,000	1	$35,000
			SCHEDULE B - Additive Bid No. 2 (TOTAL Items 1, inclusive)		$5,330,388.00

Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of bidder's bond.

B. List of Proposed Major Suppliers;

C. Required Bidder Qualification Statement with Supporting Data.

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

EJCDC P-400, Suggested Bid Form for Procurement Contracts.
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Insituform® Technologies, LLC

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Littleton CO 80125 Fax: 303-791-7399

GWA Route 4 Releif Sewer Line Rehabilitation and Replacement, Project No. S15-006-EPA

LIST OF SUBCONTRACTORS Selection for Insituform

1. CCTV/CLEARING - MOCON
2. BYPASS - MOCON
3. _____
4. _____
5. _____
6. _____

EXHIBIT C

CONSTRUCTION MANAGEMENT SERVICES
CONTRACT BETWEEN THE GUAM WATERWORKS AUTHORITY
AND EMPSCO ENGINEERING CONSULTANTS

THIS AGREEMENT is made this 1st day of June, 2018, by and between the Guam Waterworks Authority ("GWA"), whose business address is Gloria B. Nelson Public Service Building, 688 Route 15, Mangilao, Guam, 96913, and EMPSCO Engineering Consultants ("Consultant") whose business address is 2/F EMPSCO Building, 1998 Route 16, Army Drive, Dededo, Guam 96929 and whose Guam business license number (PEALS No.) is 108 for Construction Management Services.

WHEREAS, GWA intends to engage the professional services of the Consultant to provide Construction Management Services to GWA for the following project: Route 4 Relief Sewerline Rehabilitation and Replacement; GWA Project No. S15-006-EPA.

WHEREAS, the services to be rendered are of a special and temporary nature which has been determined to be in the best public interest to be performed under contract by professional personnel other than employee in the service of GWA; and

WHEREAS, the Procurement Officer has provided adequate public announcement of the need for such services through a Request for Proposals describing the type of services required and specifying the type of information and data required of each offeror and the relative importance of particular qualifications; and

WHEREAS, the Consultant has submitted a statement of qualifications and an interest in providing such services; and

WHEREAS, the award of this contract to the Consultant has been made pursuant to a written finding by the purchasing agent that the Consultant is the best qualified based upon evaluation factors set forth in the request for proposals, and the negotiations of compensation has been determined to be fair and reasonable;

WITNESSETH, GWA and the Consultant, in consideration of mutual covenants hereinafter set

forth, agree as follows:

SECTION I. PURPOSE:

To engage the professional services of the Consultant to provide Construction Management Services to GWA for the following project: Route 4 Relief Sewerline Rehabilitation and Replacement; GWA Project No. S15-006-EPA.

SECTION II. SCOPE OF SERVICES:

The Consultant agrees to accept appointment as a Consultant to the Guam Waterworks Authority providing his best efforts to the performance of duties and responsibilities as outlined in the GWA Request for Proposals No. RFP-06-ENG-2017, and the Consultant's Scope of Work and fee proposal dated March 23, 2018 (attached hereto as Exhibit A) all of which are incorporated herein by reference in their entirety and in accordance with all local and federal laws, rules, regulations and policies applicable hereto. For the purposes of this Contract, the Consultant shall be an independent Contracting Consultant.

SECTION III. CONTRACT TERM:

Subject to Section IV, the Consultant shall perform work provided in the Scope of Work after Consultant's receipt of Notice to Proceed from the Guam Waterworks Authority. The Consultant shall provide the services called for in the Scope of Work in accordance with a schedule acceptable to GWA. No extension of services will be granted, unless there will be additional work added to the Scope of Work dated March 23, 2018.

SECTION IV. CONSULTANT'S COMPENSATION FOR SERVICES:

The Guam Waterworks Authority will compensate the Consultant for all services performed pursuant to Section II, supra, in the maximum amount of Seven Hundred Two Thousand Six Hundred Seventy-Eight U.S. Dollars and Thirteen Cents ($702,678.13). This figure may be increased or decreased only after the scope of work has been substantially increased or decreased. GWA shall compensate the Consultant upon the receipt and approval of a monthly invoice for work completed. GWA reserves the right to withhold payment of part or the entire amount due to if the Consultant's performance is not in accordance with the Scope of Work or is otherwise deemed unsatisfactory by GWA. GWA will make payments within 30 days from the date GWA received the invoice and has approved the work provided

therein. GWA's Approval for work performed shall be prompt and shall not be unreasonably withheld or detained. GWA further agrees to pay 6% interest on invoices more than 60 days late under the timeframes set forth in this Section.

Final payment shall be made upon satisfactory delivery and acceptance of all services as herein specified and performed under this agreement. Prior to making the final payment, and as a condition precedent thereto, the Consultant shall execute and deliver to GWA a release, in a form approved by GWA, of claims against GWA arising under and by virtue of this Agreement.

SECTION V. CONSULTANT AGREES:

That Consultant agrees that he/she is an independent contractor and that there shall be no employee status or benefits arising from this Contract, which includes but is not limited to:

a. GWA providing any type of insurance for Consultant, Consultant's employees, Consultant's Equipment, Buildings and Vehicles, or any other type of insurance required by this contract or by law, policy or rule.

b. Participation in the Government of Guam retirement system;

c. Accumulation of vacation leave, or sick leave;

d. GWA paying any tax owed by Consultant for any reason, nor shall GWA be responsible for withholding of any taxes for Consultant or its employees.

e. Payment by GWA for travel or any other benefit afforded to GWA employees.

f. GWA making any payment to Consultant for any reason not explicitly provided for herein.

That he/she will, within thirty (30) days after any claim accrues arising out of or in connection with the contract as provided herein, give written notice to GWA and the Attorney General of Guam of such claim, and that he will not institute any suit of action against GWA in any court or tribunal in any jurisdiction based on any such claim later than one (1) year after such filing. Any action or suit on any claim shall not include any item or matter not specifically mentioned in the proof of claim above specified. It is agreed that if such action or suit is instituted proof by the Consultant of his compliance with the provisions of this paragraph shall a condition precedent to any recovery; and that this paragraph does not constitute a waiver of any applicable statutes of limitations.

SECTION VI. GOVERNMENT PROVIDED SERVICES OR EQUIPMENT:

GWA shall place at the disposal of the Consultant all available information pertinent to the

project upon which the Consultant can rely, including previous reports, survey information and any other data relative to the project. GWA will provide access to and make all provisions for the Consultant to enter upon public lands as required by the Consultant to perform his work.

SECTION VII. SCOPE OF AGREEMENT:

This agreement supersedes any and all other agreements, either oral or in writing, between the parties hereto with respect to retaining the services of the Consultant by GWA and contains all of the covenants and agreements between the parties with respect to such retainment in any manner whatsoever. Each party to this agreement acknowledges that no representation, inducements, promises or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party which are not embodied herein, and that no other agreement, statement, or promise not contained in this agreement and addenda will be effective only if it is in writing signed by the party to be charged. For the purposes of this paragraph and of the entire agreement, the signature of the General Manager (or his/her authorized designee) is the only signature that will bind GWA.

SECTION VIII. RESPONSIBILITY OF CONSULTANT:

The Consultant shall be responsible for the professional and technical accuracy of all work and materials furnished under this contract. The Consultant shall, without additional cost to GWA, correct or revise all errors or deficiencies in his/her work.

GWA review, approval, acceptance of, and payment of fees for services required under this contract, shall not be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of the Consultant's failure in performance of this contract and the Consultant shall be and remain liable to GWA for all costs of any kind which may be incurred by GWA as a result of the Consultant's negligent performance of any of the services performed under this contract, or for any intentional act which contravenes the terms and conditions of this agreement and the spirit and intent of such. Consultant also agrees that it shall secure GWA's written approval before engaging the services of any subcontractor.

SECTION IX. ASSIGNMENT OF AGREEMENT:

The Consultant may not assign this agreement, or any sum becoming due the Consultant under the provisions of this agreement, without the prior written consent of GWA.

SECTION X. GENERAL COMPLIANCE WITH LAWS:

The Consultant is required to comply with all Federal and territorial laws and ordinances applicable to the work and it is the responsibility of the Consultant to examine all necessary laws, rules, regulations and guidelines to determine its duties thereunder. Consultant shall attach a copy of their business license or an affidavit executed under penalty of perjury that indicates that Consultant is exempt under Guam law (must include legal citations proving exemption).

SECTION XI. ACCESS TO RECORDS AND OTHER REVIEW:

The Consultant, including his subcontractors, if any, shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred and to make such materials available at their respective offices at all reasonable times during the contract period and for three (3) years from the date of the final payment under the contract, for inspection by the Government of Guam. Each subcontract by Consultant pursuant to this agreement shall include a provision containing the conditions of this Section.

SECTION XII. OWNERSHIP OF DOCUMENTS:

All briefs, memoranda and other incidental Consultant work or materials furnished hereunder shall be and remain the property of GWA including all publication rights and copyright interests and may be used by GWA without any additional cost to GWA.

SECTION XIII. INDEMNITY:

Consultant agrees to save and hold harmless the CCU, GWA, its officers, agents, representatives, successors and assigns and other governmental agencies from any and all suits or actions of every nature and kind, which may be brought for or on account of any injury, death, or damage to the extent arising or growing out of the negligent acts or omissions of the Consultant, Consultant's officers, agents (including subcontractors), servants or employees under this agreement.

SECTION XIV. CHANGES:

GWA may at any time, by written order make any change in the services to be performed hereunder. If such changes cause a material increase or decrease in the costs of doing the work under this agreement, or in the time required for this performance, an equitable adjustment shall be made and the agreement shall be modified in writing accordingly to the provisions of Section XX below pertaining

to price adjustments.

SECTION XV. TERMINATION:

Section 15.1 TERMINATION FOR DEFAULT:

(1). Default. If the Consultant refuses or fails to perform any of the provisions of this contract with such diligence as will ensure its completion within the time specified in this contract, or any extension thereof, otherwise fails to timely satisfy the contract provisions, or commits any other substantial breach of this contract as determined by GWA, then GWA may notify the Consultant in writing of the delay or non-performance and if not cured in ten days or any longer time specified in writing by GWA. GWA may terminate the Consultant's right to proceed with the contract or such part of the contract as to which there has been delay or a failure to properly perform. In the event of termination in whole or in part GWA may procure similar services in a manner and upon terms deemed appropriate by GWA. The Consultant shall continue performance of the contract to the extent it is not terminated and shall be liable for excess costs incurred in procuring similar services.

(2) Consultant's Duties. Notwithstanding termination of the contract and subject to any directions from GWA, the Consultant shall take timely, reasonable, and necessary action to protect and preserve property in the possession of the Consultant in which GWA has an interest.

(3) Compensation. Payment for completed services delivered and accepted by GWA shall be at the contract price. Payment for the protection and preservation of property shall be in an amount agreed upon by the Consultant and GWA; if the parties fail to agree, GWA shall set an amount subject to the Consultant's rights under Chapter 9 (Legal and Contractual Remedies) of the Guam Procurement Regulations. GWA may withhold from amounts due the Consultant such sums as GWA deems to be necessary to protect GWA against loss because of outstanding liens or claims of former lien holders and to reimburse GWA for the excess costs incurred in procuring similar goods and services.

(4) Excuse for Nonperformance or Delayed Performance. Except with respect to defaults of sub-contractor(s) of Consultant, the Consultant shall not be in default by reason of any failure in performance of this contract in accordance with its terms (including any failure by the Consultant to make progress in the prosecution of the work hereunder which endangers such performance) if the Consultant has notified GWA within 15 days after the cause of the delay and the failure arises out of causes such as: acts of God; acts of the public enemy; acts of the government of Guam and any other governmental entity in its sovereign or contractual capacity; fires; floods; epidemics; quarantine restrictions; strikes or other labor disputes; freight embargoes; or unusually severe weather. If the

failure to perform or to make progress due to such causes similar to those set forth above, the Consultant shall not be deemed to be in default, unless the services to be furnished by the sub-contractor were reasonably obtainable from other sources in sufficient time to permit the Consultant to meet the contract requirements. Failure of the sub-contractor to perform for reasons other than cited above shall constitute a default of the Consultant unless cured by Consultant with a reasonable time. Upon request of the Consultant, GWA shall ascertain the facts and extent of such failure, and, if GWA determines that any failure to perform was occasioned by any one or more of the excusable causes, and that, but for the excusable cause, the Consultant's progress and performance would have met the terms of the contract, the delivery schedule shall be revised accordingly, subject to the rights of GWA and the government of Guam under the laws of Guam.

(5) Erroneous Termination for Default. If, after notice of termination of the Consultant's right to proceed under the provisions of this clause, it is determined for any reason that the Consultant was not in default under the provisions of this clause, or that the delay was excusable under the provisions of Paragraph (4) (Excuse for Nonperformance or Delayed Performance) of this clause, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to Subsection C, below.

(6) Additional Rights and Remedies. The rights and remedies provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

15.2 TERMINATION FOR CONVENIENCE:

(1) Termination. GWA may, when the interest of GWA so requires, terminate this contract in whole or in part, for the convenience of GWA. GWA shall give written notice of the termination to the Consultant specifying the part of the contract terminated and when termination becomes effective.

(2) Consultant's Obligations. The Consultant shall incur no further obligations in connection with the terminated work and on the dated set in the notice of termination the Consultant will stop work to the extent specified. The Consultant shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The Consultant shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work. GWA may direct the Consultant to assign the Consultant's right, title, and interest under terminated orders or subcontracts to GWA. The Consultant must still complete the work not terminated by the notice of termination and may incur obligations as are necessary to do so.

(3) Right to Work Product. Upon termination of the contract for the convenience of GWA or

for any other reason, Consultant shall transfer title and deliver to GWA all documents and reports, plans, drawings, information and other material produced by Consultant or any of its sub-contractors in connection with the performance of this contract. The Consultant shall protect and preserve property in its possession or in the possession of any of its sub-contractors in which GWA has an interest.

(4) Compensation.

(a) The Consultant shall submit a termination claim specifying the amount due because of the termination for convenience together with cost or pricing data to the extent required by 2 G.A.R. § 3118 (Cost or Pricing Data) of the Guam Procurement Regulations bearing on such claim. If the Consultant fails to file a termination claim within one year from the effective date of termination, GWA may pay the Consultant, if at all, an amount set in accordance with Subparagraph (c) of this Paragraph.

(b) GWA and the Consultant may agree to a settlement provided the Consultant has filed a termination claim supported by cost or pricing data to the extent required by 2 G.A.R. § 3118 (Cost or Pricing Data) of the Guam Procurement Regulations and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by GWA and the contract price of the work not terminated.

(c) Absent complete agreement under Subparagraph (2) of this Paragraph, GWA shall pay the Consultant the following amounts, provided payments agreed to under Subparagraph (2) shall not duplicate payments under this Subparagraph:

(i) contract prices for services accepted under the contract;

(ii) costs incurred in preparing to perform and performing the terminated portion of the work plus a fair and reasonable profit on such portion of the work (such profit shall not include anticipatory profit or consequential damages) less amounts paid or to be paid for accepted supplies or services; provided, however, that if it appears that the Consultant would have sustained a loss if the entire contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss;

(iii) costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to Subparagraph (b) of this clause;

(iv) the reasonable settlement costs of the Consultant including accounting, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the contract for the termination and settlement of subcontracts hereunder, together with reasonable

storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to the terminated portion of this contract. Attorney's fees if for any reason it files suit against the government must be paid by the Consultant. The total sum to be paid the Consultant under this Subparagraph shall not exceed the total contract price plus the reasonable settlement costs of the Consultant reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under Subparagraph (b) of this Paragraph, and the contract price of work not terminated.

(d) Cost claimed, agreed to, or established under Subparagraph (b) and (c) of this Paragraph shall be in accordance with Chapter 7 (Cost Principles) of the Guam Procurement Regulations.

SECTION XVI. SEVERABLE PROVISIONS:

If any provision of this agreement shall be deemed by a court of competent jurisdiction to be invalid, then such provision shall be deemed stricken from the agreement and the agreement shall be enforced according to its valid and subsisting terms and provisions.

SECTION XVII. GOVERNING LAW AND VENUE:

The validity of this agreement and any of its terms or provisions, as well as the rights and duties of the parties to this agreement, shall be governed by the laws of Guam.

A. All claims or controversies subject to final resolution under this Article will be submitted to mediation in accordance with the rules of the American Arbitration Association, subject to the conditions and limitations of this paragraph. This agreement to mediate is authorized under 5 GCA 5427 (b) and 2 GAR 9103 (a)(1). The parties shall each pay one-half of the mediation expenses.

B. In the event the matter or controversy is not resolved through mediation, the GWA General Manager shall, after written request by the Contractor for a final decision, issue a written decision within 30 days. A copy of the decision shall be immediately transmitted to the Contractor by a method that provides evidence of receipt.

C. Any such decision shall be final and conclusive unless the Contractor files an appeal with the Guam Office of Public Accountability within sixty (60) days of the receipt of the decision. In the event the dispute is not resolved by the OPA, the Contractor may seek redress through the Guam Government Claims Act and/or the Superior Court of Guam.

SECTION XVIII. EFFECTIVE DATE OF AGREEMENT:

This agreement shall take effect upon the date it is signed by the General Manger and the Consultant and the date of this agreement shall be the date upon which the GWA General Manager affixes his signature.

SECTION XIX. GOVERNMENT NOT LIABLE:

A. GWA assumes no liability for any accident or injury that may occur to the Consultant, his or her agents, dependents, or personal property while en route to or from Guam or during any travel mandated by the terms of this agreement.

B. GWA shall not be liable to Consultant for any work performed by the Consultant prior to the written and signed approval of this Agreement by the General Manager for GWA and the Consultant hereby expressly waives any and all claims for service performed in expectation of this agreement prior to its signature of the General Manager.

SECTION XX. PRICE ADJUSTMENTS:

Any adjustment in contract price pursuant to clauses in this contract shall be made in one or more of the following ways:

(a) by agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;

(b) by unit prices specified in the contract or subsequently agreed upon;

(c) by the costs attributable to the event or situation covered by the clause, plus appropriate profit or fee, all as specified in the contract or subsequently agreed upon;

(d) in such other manner as the parties may mutually agree; or

(e) in the absence of an agreement between the parties, by a unilateral determination by the GWA General Manager of costs attributable to the event or situation covered by the clause, plus appropriate profit or fee, all as computed by the GWA General Manager in accordance with generally accepted accounting principles and applicable sections under Chapter 7 (Cost Principles) of the Guam Procurement Regulations and subject to the provisions under Title 5, Chapter 5 of the Guam Code Annotated (Legal and Contractual Remedies).

For any request for a price adjustment, the contractor shall submit cost or pricing data for any price adjustments subject to the provisions of 2 G.A.R. § 3118 of the Guam Procurement Regulations.

SECTION XXI. WARRANTIES UNDER GUAM PROCUREMENT LAW:

A. Contractor hereby warrants that it will abide by 5 GCA Section 5630 prohibiting gratuities kickbacks and favors in relation to the solicitation and execution of this Contract;

B. Contractor hereby warrants that it has not retained any person or entity to solicit or secure this Contract, or paid a contingent fee, commission or brokerage fee as proscribed in 5 GCA Section 5631(a).

C. Contractor hereby warrants that it has not knowingly influenced a government employee to breach any of the ethical standards set forth in 5 GCA Chapter 5 Article 11 and in Chapter 11 of the Guam Procurement Regulations.

D. Contractor hereby warrants that no person, providing services on behalf of the Contractor has been convicted of a sex offense under the provisions of Chapter of Title 9 GCA or any offense as defined in Article 2 of Chapter 28, Title 9 GCA; and should any person providing services on behalf of the Contractor be convicted during the course of this Contract, such person shall be immediately removed from GWA projects and GWA will be informed of the conviction within twenty-four (24) hours.

SECTION XXII. INSURANCE:

A. Engineer shall procure and maintain insurance as set forth in Exhibit A. Engineer shall cause Owner to be listed as an additional insured on any applicable general liability insurance policy carried by Engineer.

B. Owner shall require Contractor to purchase and maintain policies of insurance covering workers' compensation, general liability, motor vehicle damage and injuries, and other insurance necessary to protect Owner's and Engineer's interests in the Project. Owner shall require Contractor to cause Engineer and its Consultants to be listed as additional insureds with respect to such liability insurance purchased and maintained by Contractor for the Project.

C. Engineer shall each deliver to Owner certificates of insurance evidencing the coverages indicated in Exhibit A. Such certificates shall be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.

D. All policies of property insurance relating to the Project, including but not limited to any builder's risk policy, shall allow for waiver of subrogation rights and contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insured thereunder or against Engineer or its Consultants. Owner and Engineer waive all rights against each other, Contractor, the Consultants, and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by any builder's risk policy and any other

property insurance relating to the Project. Owner and Engineer shall take appropriate measures in other Project-related contracts to secure waivers of rights consistent with those set forth in this paragraph.

E. All policies of insurance shall contain a provision or endorsement that the coverage afforded will not be canceled or reduced in limits by endorsement, and that renewal will not be refused, until at least 10 days prior written notice has been given to the primary insured. Upon receipt of such notice, the receiving party shall promptly forward a copy of the notice to the other party to this Agreement.

F. At any time, Owner may request that Engineer or its Consultants, at Owner's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective than those specified in Exhibit A. If so requested by Owner, and if commercially available, Engineer shall obtain and shall require its Consultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by Owner, and Exhibit A will be supplemented to incorporate these requirements.

IN WITNESS WHEREOF, the parties have entered into this agreement on the dates indicated by their respective names.

EMPSCO Engineering Consultants

By: _____
PETRONILO Q. VILLALUZ, P.E.
President

Date: 04 May 2018

Guam Waterworks Authority:

By: _____
MIGUEL C. BORDALLO, P.E.
General Manager

Date: 6.1.18

Certified Funds Available:

By: _____
for GREG P. CRUZ
GWA Chief Financial Officer

Date: 06/01/18

Approved as to Form

By: _____
KELLY O. CLARK
GWA General Counsel

Date: 5/21/18

Contract Amount: $702,678.13
Amount Certified: $702,678.13
Source of Funding USEPA SRF – Grant No. M96902617

CORPORATE OR PARTNERSHIP CERTIFICATION

AS TO AUTHORIZATION TO BIND

I, REYNALDO M.C. ARCE certify that I am the Secretary of the corporation or managing partner named as Contractor herein; that PETRONILO Q. VILLALUZ who signed this contract on behalf of the Contractor, was then President of said corporation/partnership by authority of said corporation of its governing body, and is within the scope of its corporate/partnership powers to bind said corporation/partnership to the terms and conditions of this Contract.

Signed: _____
Corporate Secretary

Date: May 17, 2018

(CORPORATE/PARTNERSHIP SEAL)

******* END OF CONTRACT ****** *

EXHIBIT A

ENGINEERING MANAGEMENT & PLANNING SERVICES CORPORATION
1998 ARMY DRIVE, ROUTE 16, 2/F EMPSCO BLDG., DEDEDO, GUAM 96929 ■ PO BOX 21794 GMF, BARRIGADA, GU 96921
TEL (671) 6384716 /6385716 ■ FAX (671) 6382136

March 23, 2018

Miguel C. Bordallo, P.E.
General Manager
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

Attention: **Thomas F. Cruz, P.E.**
Chief Engineer

Subject: **Construction Management Services for**
Route 4 Relief Sewerline Rehabilitation and Replacement
GWA Project No. S15-006-EPA

Gentlemen,

We are pleased to submit our estimated fee proposal as follows for the subject based on the proposed scope of work and as specified or indicated in the RFP documents:

I. **One Contractor for Schedule A and Schedule B**
Note: No change in our negotiated fee

1) Preconstruction.....$ -0-
2) Construction Phase..... $ 605,683.40
3) Post-Construction Phase..... $ 23,693.82
4) Misc. Expense Items.....$ 17,513.00

Total Estimated fees for Item I $646,890.22

II. **Additive fees, two different Contractors for Schedule A and Schedule B.**
Note: Schedule A & Schedule B notice to proceed (NTP) start date shall be commenced at the same time.

1) Preconstruction.....$ -0-
2) Construction Phase..... $ 55,787.91
3) Post-Construction Phase..... $ -0-
4) Misc. Expense Items.....$ -0-

Total Additive fees for Item II ..... $ 55,787.91

Summary and Details of these fee estimates are attached herewith.
Estimates are based on the following:

1) Rehabilitation of sewer system in the villages of Hagatna, Along Route 4 and Route 1, from McDonald's on Route 4, to the Agana Main Sewer Pump Station on Route 1.

ENGINEERING MANAGEMENT & PLANNING SERVICES CORPORATION
1998 ARMY DRIVE, ROUTE 16, 2/F EMPSCO BLDG., DEDEDO, GUAM 96929 ■ PO BOX 21794 GMF, BARRIGADA, GU 96921
TEL (671) 6384716 /6385716 ■ FAX (671) 6382136

2) Work under "Schedule A" consist of replacing of 24" Spirolite pipe with 30" PVC pipe, install new 18" PVC intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

3) Work under "Schedule B" consist of CIPP lining 21", 24", 30" and 36" existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation work.

4) Construction phase: 450 consecutive calendar days.

5) Scope of Work (See attached SOW from RFP document) including paragraph E.3, Testing

6) Contract will be on a time and material (T&M) basis.

7) Project meetings included for this project based on 15 monthly meetings and 60 weekly meetings.

Please give us a call or contact us via email if you have questions regarding this proposal.
Thank you very much.

Sincerely,

Al Tyrone A. de Guzman, P.E.
Project Manager
EMPSCO Engineering Consultants

Attachments:
1) GWA CM Fee Summary – One Contractor for Schedule A&B
2) GWA CM Fee Breakdown cost – One Contractor for Schedule A&B
3) GWA CM Man-hour Breakdown – One Contractor for Schedule A&B
4) GWA CM Fee Summary_Additive – Two Contractor under Schedule A&B
5) GWA CM Fee Breakdown cost_Additive – Two Contractor under Schedule A&B
6) GWA CM Man-hour Breakdown_Additive – Two Contractor under Schedule A&B
7) Scope of work for RFP-09-ENG-2017

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE REHABILITATION & REPLACEMENT
GWA PROJECT NO. S15-006-EPA

I. ONE CONTRACTOR FOR SCHED. A & SCHED. B

	PAYMENT	Lump sum	T&M	Total
A	**PRECONSTRUCTION**			
1	Selection of Design Team	$ -		$ -
2	Cost Estimating	$ -		$ -
3	Constructability Review	$ -		$ -
4	Document Review	$ -		$ -
5	Value Engineering	$ -		$ -
6	Contract Bidding	$ -		$ -
	SUBTOTAL A PRECONSTRUCTION	**$ -**	**$ -**	**$ -**
B	**CONSTRUCTION PHASE**			
	Project Controls			
1	Project Correspondence		27,158.28	$ 27,158.28
2	Submittals		25,078.88	$ 25,078.88
3	Payment Requests		31,477.28	$ 31,477.28
4	Project Meetings		38,972.00	$ 38,972.00
5	Requests for Information		25,078.88	$ 25,078.88
6	Claims and Disputes		25,078.88	$ 25,078.88
7	Project Records		26,898.08	$ 26,898.08
	subtotal	**$ -**	**$ 199,742.28**	**$ 199,742.28**
	Construction Inspection			$ -
8	Onsite Inspector		291,834.88	$ 291,834.88
9	Acceptance of Work		11,569.28	$ 11,569.28
10	Stop Work Orders			$ -
	subtotal	**$ -**	**$ 303,404.16**	**$ 303,404.16**
	Change Orders			
11	Change Order Review		13,717.12	$ 13,717.12
12	Design Change		12,539.44	$ 12,539.44
13	DCVR		12,539.44	$ 12,539.44
14	Negotiations		12,539.44	$ 12,539.44
15	Change Order Documents		14,358.64	$ 14,358.64
	subtotal	**$ -**	**$ 65,694.08**	**$ 65,694.08**
	Construction Survey			
16	Pipeline Alignments		4,842.92	$ 4,842.92
17	Elevations		4,842.92	$ 4,842.92
	subtotal	**$ -**	**$ 9,685.84**	**$ 9,685.84**
	Project Closeout			
18	Timely Completion		12,002.58	$ 12,002.58
19	Punchlist Development		6,529.38	$ 6,529.38
20	Inspections		8,625.08	$ 8,625.08
21	Training and Warranty		0.00	$ -
	subtotal	**$ -**	**$ 27,157.04**	**$ 27,157.04**
	SUBTOTAL B CONSTRUCTION PHASE	**$ -**	**$ 605,683.40**	**$ 605,683.40**
C	**POST CONSTRUCTION**			
1	Final Report		7,620.90	$ 7,620.90
2	Project Records		7,257.06	$ 7,257.06
3	Record Drawings		8,815.86	$ 8,815.86
	SUBTOTAL C POST CONSTRUCTION	**$ -**	**$ 23,693.82**	**$ 23,693.82**
D	**EXPENSE ITEM**			
1	Mailing & expediting	0.00		$ -
2	Report Reproduction		2,800.00	$ 2,800.00
3	Drawing and Construction docs Reproduction	1,000.00		$ 1,000.00
4	Photo film & development	0.00		$ -
5	Fuel		4,000.00	$ 4,000.00
6	Office Supplies	600.00		$ 600.00
7	Digital Cameras	0.00		$ -
8	Testing		8,363.00	$ 8,363.00
	POST CONSTRUCTION			
1	Mailing & expediting	0.00		$ -
2	Report Reproduction	250.00		$ 250.00
3	Record Drawing Reproduction	500.00		$ 500.00
	SUBTOTAL D EXPENSE ITEMS	**$ 2,350.00**	**$ 15,163.00**	**$ 17,513.00**
	TOTAL FEE (A+B+C+D)			**$ 646,890.22**

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT
GWA PROJECT NO. S15-006-EPA

I. ONE CONTRACTOR FOR SCHED. A & SCHED. B

Phase Letter and Task Number	Task Description	Principal Engineer	Project Manager	Project Engineer	Project Inspector	Secretary/Clerk	CADD Operator	3- Man Survey Crew	Geo. Subcontract	Amount
	HOURLY LABOR RATES	$ 147.21	$ 147.21	$ 112.58	$ 95.27	$ 45.48	$ 57.42	$ 1,210.73		
A	**PRECONSTRUCTION**									
1	Selection of Contractor									0.00
2	Cost Estimating									0.00
3	Constructability Review									0.00
4	Document Review									0.00
5	Value Engineering									0.00
6	Contract Bidding									0.00
	SUBTOTAL A. PRECONSTRUCTION									$ -
B	**CONSTRUCTION PHASE**									
	Project Controls									
1	Project Correspondence	8	60	120		80				27,158.28
2	Submittals	8	40	160						25,078.88
3	Payment Requests	8	40	160	60	15				31,477.28
4	Project Meetings		40	160	120	80				38,972.00
5	Requests for Information	8	40	160						25,078.88
6	Claims and Disputes	8	40	160						25,078.88
7	Project Records	8	40	160		40				26,898.08
	Construction Inspection									
8	Onsite Inspector	8	40	160	2800					291,834.88
9	Acceptance of Work	8	40	40	0					11,569.28
10	Stop Work Orders									0.00
	Change Orders Managements									
11	Change Order Review	8	24	80						13,717.12
12	Design Change		24	80						12,539.44
13	DCVR		24	80						12,539.44
14	Negotiations		24	80						12,539.44
15	Change Order Documents		24	80		40				14,358.64
	Construction Survey									
16	Pipeline Alignments							4		4,842.92
17	Elevations							4		4,842.92
	Project Closeout / Completion									
18	Timely/Substantial Completion	8	30	40	20					12,002.58
19	Punchlist Development	8	18	24						6,529.38
20	Inspections	8	20	40						8,625.08
21	Training and Warranty									
	SUBTOTAL B. CONSTRUCTION PHASE									**605,683.40**
C	**POST CONSTRUCTION**									
22	Final Report	2	24	24		24				7,620.90
23	Project Records	2	24	24		16				7,257.06
24	Record Drawings	2	24	24	24					8,815.86
	SUBTOTAL C. POST CONSTRUCTION									**23,693.82**
D	**EXPENSE ITEMS**									
1	Mailing & expediting									0.00
2	Report Reproduction									2,800.00
3	Dwg & construction docs Reproduction									1,000.00
4	Photo film & development									
5	Fuel									4,000.00
6	Office Supplies									600.00
7	Digital Cameras									
8	Testing									8,363.00
	POST CONSTRUCTION									
1	Mailing & expediting									0.00
2	Report Reproduction									250.00
3	Record Drawing Reproduction									500.00
	SUBTOTAL D. EXPENSE ITEMS									**17,513.00**
	TOTAL FEE (A+B+C+D)									**646,890.22**

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT
GWA PROJECT NO. S15-006-EPA

MAN-HOURS CALCULATION

I. ONE CONTRACTOR FOR SCHED. A & SCHED. B

450 CD per 30 CD = 15 months X 4 weeks\ months = 60 weeks

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours
B. CONSTRUCTION PHASE					
Project Control					
1. Project Correspondence					
Project Engineer	60.0	wks	2	hr/wks	120.0
60.0 wks					
Project Manager	60	wks	1	hr/wks	60
60.0 wks					
Principal Engineer	1.0	ls	8	hr	8
1.0 lpsm					
Secretary/Clerk	60.0	wks	1.333	hr/wks	80.0
60.0 wks					
2. Submittals					
Project Engineer	54.0	sub	3	ave.hr/sub	162.0
54.0 submittals					
Project Manager	54.0	sub	0.75	hr/sub	41
54.0 submittals					
Principal Engineer	1.0	ls	8	hr	8
1.0 lpsm					
3. Payment Request					
Project Inspector	15.0	months	4	ave.hr/mo	60.0
15.0 months					
Project Engineer	15.0	months	10.667	hr/mo	160.0
15.0 months					
8 hrs plus review time with PM					
Project Manager	15.0	months	2.667	hr/mo	40.0
15.0 months					
Principal Engineer	1.0	ls	8	hr	8.0
1.0 lpsm					
Secretary/Clerk	15.0	months	1	hr/mo	15.0
15.0 months					
4. Project Meeting					
Project Inspector	60.0	wks	2	hr/wks	120.0
60.0 wks					

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours
Project Engineer	60.0	wks	2	hr/wks	120.0
60.0 wks	60	wks	0.6667	hr/wks	40.0
plus, 40mins prep of meeting minutes					
total manhours					160.0
Project Manager	15	months	2.6667	hr/mo	40.0
15.0 months					
Secretary/Clerk	60.0	wks	1.3333	hr/wks	80.0
60.0 wks					
prep docs related to the progress meetings					
5. Request for Information					
Project Engineer	60.0	wks	2.667	hr/wk	160.0
60.0 wks					
Project Manager	15	months	2.6667	hr/wks	40.0
15.0 months					
Principal Engineer	1.0	ls	8	hr/wks	8.0
1.0 lpsm					
6. Claims and Disputes					
Project Engineer	60.0	wks	2.667	hr/wks	160.0
60.0 wks					
Project Manager	15	months	2.6667	hr/mo	40.0
15.0 months					
Principal Engineer	1.0	ls	8	hr	8.0
1.0 lpsm					
7. Project Records					
Project Engineer	60.0	wks	2.667	hr/wks	160.0
60.0 wks					
Project Manager	15	months	2.6667	hr/mo	40.0
15.0 months					
Principal Engineer	1.0	ls	8	hr	8.0
1.0 lpsm					
Secretary/Clerk	15.0	wks	2.667	hr/mo	40.0
15.0 months					
Construction Inspection					
8. Onsite Inspector					
Project Inspector 60 wks x 6 wrkdays	360	wrkdays	8	hr/days	2880
minus holiday, 10 days holiday a yr	10	days	8	hr/days	-80
total manhours					2800
Project Engineer	40.0	visit	4	hr/visit	160.0
40.0 visit on a 15 months proj sched					
Project Manager	15	visit	2.667	hr/visit	40
15.0 visit on a 15 months proj sched					

ITEM DESCRIPTION			Qty	Unit	Multiplier	Unit	Manhours
	Principal Engineer						
	1.0	lpsm, case basis	1	ls	8	hr	8
9. Acceptance of Work							
	Project Inspector						
	0		0				0
	Project Engineer		15.0	visit	2.667	hr/visit	40
	15.0	visit on a 15 months proj sched					
	Project Manager		15.0	visit	2.667	hr/visit	40
	15.0	visit on a 15 months proj sched					
	Principal Engineer						
	1.0	lpsm, case basis	1	ls	8	hr	8
10. Stop Work Order							
Change Order Managements							
11. Change Order Review							
	Project Engineer		4.0	ch order	20	hr/co	80
	4.0	change order					
		incl, evaluation, negotiation and recom.					
	Project Manager		4.0	ch order	6	hr/co	24
	4.0	change order					
	Principal Engineer						
	1.0	lpsm	1	ls	8	hr	8
12. Design Change							
	Project Engineer		1.0	ls	80	hr	80
	1.0	lpsm					
		prep changes to the Contract docs					
	Project Manager		1.0	ls	24	hr	24
	1.0	lpsm					
13. DCVR							
	Project Engineer		1.0	ls	80	hr/co	80
	1.0	lpsm					
		coor. w/ doR, ammendments & solicit fee					
	Project Manager		1.0	ls	24	hr/co	24
	1.0	lpsm					
14. Negotiations							
	Project Engineer		4.0	ch order	20	hr/co	80
	4.0	prep independent cost estimate					
	Project Manager		4.0	ch order	6	hr/co	24
	4.0	review prep independent cost estimate					
15. Change Order Documents							
	Project Engineer		4.0	ch order	20	hr/co	80
	4.0	change order docs					

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours
Project Manager	4.0	ch order	6	hr/co	24
4.0 change order docs					
Secretary / Clerk	4.0	ch order	10	hr/co	40
4.0 prep change order docs					
Project Closeout/ Completion within 30 CD					
18. Substantial/ Timely Completion					
Project Inspector	10.0	wrkdays	2	hr/days	20
10.0 wrkdays					
Project Engineer	10.0	wrkdays	4	hr/days	40
10.0 wrkdays					
Project Manager	10.0	wrkdays	3	hr/days	30
10.0 wrkdays					
Principal Engineer					
1.0 lpsm	1	ls	8	hr	8
19. Punchlist Documents					
Project Inspector	0.0				0
0.0					
Project Engineer	6.0	wrkdays	4	hr/days	24
6.0 wrkdays					
Project Manager	6.0	wrkdays	3	hr/days	18
6.0 wrkdays					
Principal Engineer					
1.0 lpsm	1	ls	8	hr	8
20. Inspection - Pre-Final, & Final					
Project Inspector	0.0				0
0.0					
Project Engineers	10.0	wrkdays	4	hr/days	40
10.0 wrkdays					
Project Manager	10.0	wrkdays	2	hr/days	20
10.0 wrkdays					
Principal Engineer					
1.0 lpsm	1	ls	8	hr	8
21. Training and Warranty					
C. POST CONSTRUCTION					
22. Final Report					
Project Engineers	1.0	report	24	hr/report	24
1.0 final report					
Project Manager	1.0	report	24	hr/report	24
1.0 final report					

ITEM DESCRIPTION		Qty	Unit	Multiplier	Unit	Manhours
Principal Engineer		1.0	report	2	hr/report	2
1.0	Final report					
Secretary / Clerk		1.0	report	24	hr/report	24
1.0	Final report					
23. Project Records						
Project Engineers		1.0	report	24	hr/report	24
1.0	final report					
Project Manager		1.0	report	24	hr/report	24
1.0	final report					
Principal Engineer		1.0	report	2	hr/report	2
1.0	Final report					
Secretary / Clerk		1.0	report	16	hr/report	16
1.0	Final report					
24. Record Drawings						
Project Engineers		1.0	lot	24	hr	24
1.0	As-built review and coordination w/ KTR					
Project Manager		1.0	lot	24	hr	24
1.0	As-built review and coordination w/ KTR					
Principal Engineer		1.0	lot	2	hr	2
1.0	As-built review					
Project Inspector		1.0	lot	24	hr	24
1.0	As-built review					

Fuel Consumption Summary:

No. of trips to Proj Site	2 trip per day	
Miles per trip	16.2 miles	from Route 16 (office) to the project site (2 vechicle)
Total no. of Miles	32.4 miles	
Miles per gallon of vehicle	12	
Total gallon	2.700	
U/C	4.12	
Calendar days	360 workdays	

Total Fuel Cost $ 4,004.64

Report Reproduction

colored sheets	40 sheets	$ 1.00	per sheet	.=	$ 40.00
B/W sheets	210 sheets	$ 0.70	per sheet	.=	$ 147.00
Total sheet per report	250 sheets				$ 187.00
$ 187.00	x	15 months		.=	$ 2,805.00

Office Supply

Tabs, Com Bind spine, CD/DVD, index card CD sleeves, etc.	1 Lpsm	x	$ 600	$ 600.00

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours
Drawing and Construction docs reproduction print of additional copy of drawings, specs, and other related docs on the project	1 Lpsm	x	$ 1,000		$ 1,000
Post Construction **Report Reproduction** print final report and addtl document related to the proj	1 Lpsm	x	$ 250		$ 250.00
Record Drawing Reproduction print As-built drawings and related documents related to the proj	1 Lpsm	x	$ 500		$ 500.00

Testing

i. concrete cylinder testing

a. Concrete collar for paved area

3 MH x $100 per cylinder sample (laboratory test) x 3 sample =	$900
3 MH x $ 60/hr (stand by time) x 1 hour =	$180
Laboratory technician = 3MH x $52/hr x 1hr =	$156

b. Controlled Low Strength material (CLSM) @ every 100 ft

5 test x $100 per cylinder sample (laboratory test) x 3 sample =	$1,500
5 test x $60 hr (stand by time) x 1 hr =	$300
Laboratory technician = 5 test x $52/hr x 1 hr =	$260

i. Total concrete cylinder testing = $3,296

iii. Grout testing

a. Rehabilitation of sewer manhole

7 MH x $50/test MH =	$350
7 MH x $60/hr (stand by time) x 1hr =	$420
Laboratory technician = 7 MH x $52/hr x 1 hr =	$364

iii. Total grout testing = $1,134

iv. Field density for compaction control

15 test x $115/test = $1,725

Field technician, per hour = 15 test x $52/hr = $780

iv. Total field density for compaction control = $2,505

v. Soil Density test and reports

a. Particle size distribution - Sieve analysis

2 test x $65 = $130

b. Maximum Dry Density - Proctor Analysis

4 test x $135 = $540

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours

c. LL, PL PI - Plasticity Limits
1 test x $205 = $205

d. Field technician= 4 test x $52/hr x 1 hr = $208
e. Senior Engineer =3 test x $115/hr x 1 hr = $345

v. Total soil density test and reports $1,428

Total Testing cost = $8,363

Notes:
All testing unit cost includes;
a. 10% - Profit, Admin Fee
b. 4.17% - Gross Receipt Tax (GRT)

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT
GWA PROJECT NO. S15-006-EPA

II. ADDITIVE - TWO CONTRACTORS FOR SCHED. A & SCHED. B

	PAYMENT	Lump sum	T&M	Total
A	**PRECONSTRUCTION**			
1	Selection of Design Team	$ -		$ -
2	Cost Estimating	$ -		$ -
3	Constructability Review	$ -		$ -
4	Document Review	$ -		$ -
5	Value Engineering	$ -		$ -
6	Contract Bidding	$ -		$ -
	SUBTOTAL A PRECONSTRUCTION	**$ -**	**$ -**	**$ -**
B	**CONSTRUCTION PHASE**			
	Project Controls			
1	Project Correspondence		0.00	$ -
2	Submittals		9,551.79	$ 9,551.79
3	Payment Requests		0.00	$ -
4	Project Meetings		19,486.00	$ 19,486.00
5	Requests for Information		0.00	$ -
6	Claims and Disputes		0.00	$ -
7	Project Records		0.00	$ -
	subtotal	**$ -**	**$ 29,037.79**	**$ 29,037.79**
	Construction Inspection			$ -
8	Onsite Inspector		0.00	$ -
9	Acceptance of Work		0.00	$ -
10	Stop Work Orders			$ -
	subtotal	**$ -**	**$ -**	**$ -**
	Change Orders			
11	Change Order Review		3,576.49	$ 3,576.49
12	Design Change		1,195.06	$ 1,195.06
13	DCVR		1,342.27	$ 1,342.27
14	Negotiations		2,078.32	$ 2,078.32
15	Change Order Documents		1,671.40	$ 1,671.40
	subtotal	**$ -**	**$ 9,863.54**	**$ 9,863.54**
	Construction Survey			
16	Pipeline Alignments		0.00	$ -
17	Elevations		0.00	$ -
	subtotal	**$ -**	**$ -**	**$ -**
	Project Closeout			
18	Timely Completion		7,690.04	$ 7,690.04
19	Punchlist Development		3,411.90	$ 3,411.90
20	Inspections		5,784.64	$ 5,784.64
21	Training and Warranty		0.00	$ -
	subtotal	**$ -**	**$ 16,886.58**	**$ 16,886.58**
	SUBTOTAL B CONSTRUCTION PHASE	**$ -**	**$ 55,787.91**	**$ 55,787.91**
C	**POST CONSTRUCTION**			
1	Final Report		0.00	$ -
2	Project Records		0.00	$ -
3	Record Drawings		0.00	$ -
	SUBTOTAL C POST CONSTRUCTION	**$ -**	**$ -**	**$ -**
D	**EXPENSE ITEM**			
1	Mailing & expediting	0.00		$ -
2	Report Reproduction		0.00	$ -
3	Drawing and Construction docs Reproduction	0.00		$ -
4	Photo film & development	0.00		$ -
5	Fuel		0.00	$ -
6	Office Supplies	0.00		$ -
7	Digital Cameras	0.00		$ -
8	Testing		0.00	$ -
	POST CONSTRUCTION			
1	Mailing & expediting	0.00		$ -
2	Report Reproduction	0.00		$ -
3	Record Drawing Reproduction	0.00		$ -
	SUBTOTAL D EXPENSE ITEMS	**$ -**	**$ -**	**$ -**
	TOTAL FEE (A+B+C+D)			**$ 55,787.91**

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT
GWA PROJECT NO. S15-006-EPA

II. ADDITIVE - TWO CONTRACTORS FOR SCHED. A & SCHED. B

	Phase Letter and Task Number	Task Description	Principal Engineer	Project Manager	Project Engineer	Project Inspector	Secretary/Clerk	CADD Operator	3- Man Survey Crew	Geo. Subcontract	Amount
		HOURLY LABOR RATES	$ 147.21	$ 147.21	$ 112.58	$ 95.27	$ 45.48	$ 57.42	$ 1,210.73		
	A	PRECONSTRUCTION									
	1	Selection of Contractor									0.00
	2	Cost Estimating									0.00
	3	Constructability Review									0.00
	4	Document Review									0.00
	5	Value Engineering									0.00
	6	Contract Bidding									0.00
		SUBTOTAL A. PRECONSTRUCTION									$ -
	B	CONSTRUCTION PHASE									
		Project Controls									
	1	Project Correspondence									0.00
	2	Submittals	4	15	60						9,551.79
	3	Payment Requests									0.00
	4	Project Meetings		20	80	60	40				19,486.00
	5	Requests for Information									0.00
	6	Claims and Disputes									0.00
	7	Project Records									0.00
		Construction Inspection									
	8	Onsite Inspector									0.00
	9	Acceptance of Work									0.00
	10	Stop Work Orders									0.00
		Change Orders Managements									
	11	Change Order Review	3	6	20						3,576.49
	12	Design Change		2	8						1,195.06
	13	DCVR		3	8						1,342.27
	14	Negotiations		8	8						2,078.32
	15	Change Order Documents		4	8		4				1,671.40
		Construction Survey									
	16	Pipeline Alignments									0.00
	17	Elevations									0.00
		Project Closeout / Completion									
	18	Timely/Substantial Completion	4	20	20	20					7,690.04
	19	Punchlist Development	2	12	12						3,411.90
	20	Inspections	4	20	20						5,784.64
	21	Training and Warranty									
		SUBTOTAL B. CONSTRUCTION PHASE									55,787.91
	C	POST CONSTRUCTION									
	22	Final Report									0.00
	23	Project Records									0.00
	24	Record Drawings									0.00
		SUBTOTAL C. POST CONSTRUCTION									0.00
	D	EXPENSE ITEMS									
	1	Mailing & expediting									0.00
	2	Report Reproduction									0.00
	3	Dwg & construction docs Reproduction									0.00
	4	Photo film & development									
	5	Fuel									0.00
	6	Office Supplies									0.00
	7	Digital Cameras									
	8	Testing									0.00
		POST CONSTRUCTION									0.00
	1	Mailing & expediting									0.00
	2	Report Reproduction									0.00
	3	Record Drawing Reproduction									0.00
		SUBTOTAL D. EXPENSE ITEMS									0.00
		TOTAL FEE (A+B+C+D)									55,787.91

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT
GWA PROJECT NO. S15-006-EPA

MAN-HOURS CALCULATION

II. ADDITIVE - TWO CONTRACTORS FOR SCHED. A & SCHED. B

450 CD per 30 CD = 15 months X 4 weeks\ months = 60 weeks

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours
B. CONSTRUCTION PHASE					
Project Control					
1. Submittals					
Project Engineer	20.0	sub	3	ave.hr/sub	60.0
54.0 submittals					
Project Manager	20.0	sub	0.75	hr/sub	15
54.0 submittals					
Principal Engineer	1.0	ls	4	hr	4
1.0 lpsm					
2. Project Meeting					
Project Inspector	30.0	wks	2	hr/wks	60.0
60.0 wks					
Project Engineer	30.0	wks	2	hr/wks	60.0
60.0 wks	30	wks	0.6667	hr/wks	20.0
plus, 40mins prep of meeting minutes					
total manhours					80.0
Project Manager	7.2	months	2.6667	hr/mo	19.2
15.0 months					
Secretary/Clerk	30.0	wks	1.3333	hr/wks	40.0
60.0 wks					
prep docs related to the progress meetings					
Change Order Managements					
3. Change Order Review					
Project Engineer	1.0	ch order	20	hr/co	20
4.0 change order					
incl, evaluation, negotiation and recom.					
Project Manager	1.0	ch order	6	hr/co	6
4.0 change order					
Principal Engineer					
1.0 lpsm	1	ls	3	hr	3
4. Design Change					
Project Engineer	1.0	ls	8	hr	8
1.0 lpsm					
prep changes to the Contract docs					
Project Manager	1.0	ls	2.4	hr	2
1.0 lpsm					

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours
5. DCVR					
Project Engineer	1.0	ls	8	hr/co	8
1.0 lpsm					
coor. w/ doR, ammendments & solicit fee					
Project Manager	1.0	ls	3	hr/co	3
1.0 lpsm					
6. Negotiations					
Project Engineer	1.0	ch order	8	hr/co	8
4.0 prep independent cost estimate					
Project Manager	1.0	ch order	8	hr/co	8
4.0 review prep independent cost estimate					
7. Change Order Documents					
Project Engineer	1.0	ch order	8	hr/co	8
4.0 change order docs					
Project Manager	1.0	ch order	4	hr/co	4
4.0 change order docs					
Secretary / Clerk	1.0	ch order	4	hr/co	4
4.0 prep change order docs					
Project Closeout/ Completion within 30 CD					
8. Substantial/ Timely Completion					
Project Inspector	10.0	wrkdays	2	hr/days	20
10.0 wrkdays					
Project Engineer	10.0	wrkdays	2	hr/days	20
10.0 wrkdays					
Project Manager	10.0	wrkdays	2	hr/days	20
10.0 wrkdays					
Principal Engineer					
1.0 lpsm	1	ls	4	hr	4
9. Punchlist Documents					
Project Inspector					
0.0					
Project Engineer	6.0	wrkdays	2	hr/days	12
6.0 wrkdays					
Project Manager	6.0	wrkdays	2	hr/days	12
6.0 wrkdays					
Principal Engineer					
1.0 lpsm	1	ls	2	hr	2
10. Inspection - Pre-Final, & Final					
Project Inspector					
0.0					
Project Engineers	10.0	wrkdays	2	hr/days	20

ITEM DESCRIPTION		Qty	Unit	Multiplier	Unit	Manhours
10.0	wrkdays					
Project Manager		10.0	wrkdays	2	hr/days	20
10.0	wrkdays					
Principal Engineer						
1.0	lpsm	1	ls	4	hr	4

EXHIBIT D

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building • 688 Route 15, Mangilao, Guam 96913 • Tel. (647) 300-6036

September 20, 2018

Jean Yeon Yu
President
Propacific Builder Corporation
750 Route 8
Suite 202, Hanam Plaza
Barrigada, Guam 96913

Re: Formal Contract between GWA and Propacific Builder Corporation

Project: Route 4 Relief Sewerline Rehabilitation and Replacement (Re-Bid), Schedule A
GWA Project No. S15-006-EPA

Subject: Notice To Proceed

Hafa Adai Ms. Yu,

You are hereby notified to commence work in accordance with the enclosed approved contract dated September 13, 2018 on or before September 25, 2018 and you are to fully complete the project within 450 calendar days thereafter.

The date of completion of all work is, therefore, not later than December 19, 2019.

Sincerely,

THOMAS F. CRUZ, P.E.
Chief Engineer

Enclosure: Approved Original Contract

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged this 21st ~~September~~ day of September, 2018.

Contractor: Propacific Builder

Print Name & Title: Jean Yu, Owner

Signature:

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building • 688 Route 15, Mangilao, Guam 96913 • Tel. (647) 300-6036

August 29, 2018

Whittney Schulte
Contracting & Attesting Officer
Insituform Technologies, LLC
17988 Edison Avenue
Chesterfield, MO 63005

Re: Formal Contract between GWA and Insituform Technologies, LLC

Project: Route 4 Relief Sewerline Rehabilitation and Replacement (Re-Bid), Schedule B
GWA Project No. S15-006-EPA

Subject: Notice To Proceed

Hafa Adai Mr. Schulte,

You are hereby notified to commence work in accordance with the enclosed approved contract dated August 29, 2018 on or before September 3, 2018 and you are to fully complete the project within 480 calendar days thereafter.

The date of completion of all work is, therefore, not later than December 26, 2019.

Sincerely,

THOMAS F. CRUZ, P.E.
Chief Engineer

Enclosure: Approved Original Contract

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged this 3 day of September, 2018.

Contractor: Insituform Technologies, LLC
Print Name & Title: Whittney Schulte, Contracting & Attesting Officer
Signature: Whittney Schulte

EXHIBIT E

ENGINEERING MANAGEMENT & PLANNING SERVICES CORPORATION
1998 ARMY DRIVE, 2/F EMPSCO, DEDEDO, GU 96929 ■ PO BOX 21794 GMF, BARRIGADA GU 96921 ■ TEL (671)638-4716/5716 ■ FAX (671)638-2136

LETTER OF TRANSMITTAL

TO: **GUAM WATERWORKS AUTHORITY**
Engineering Division
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

DATE: **November 13, 2019**

ATTN: **JOHN RIEGEL, P.E.**
Project Manager

RE: **Construction Management Services for Route 4 Relief Sewer Line Rehabilitation and Replacement**
GWA Project No. S15-006-EPA

WE ARE SENDING YOU

- [ ] Attachments
- [X] Under a Separate Cover via *HAND DELIVERY*

PURPOSE OF TRANSMITTAL

- [X] For Approval
- [ ] For Information Use Only
- [ ] For Review and Comment
- [ ] As Requested

QTY	UNIT	REF NO	DESCRIPTION
1	set	Hard Copy	Signed Change Order No. 1 (Original)

REMARKS:

RECEIVED BY:

RECEIVED BY: Print: HIGALDA HERAMIL
SIGNED: Signature:
DATE: Date and Time: 11/13/19 10AM

Brown AND Caldwell

ISSUED BY: NILO O. VILLALUZ
SIGNED:
DATE: 11/13/2019

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913
Engineering Division
Phone: (671) 300-6058 Fax: (671) 647-2621

CHANGE ORDER NO. 1

Project No. & Title: Route 4 Relief Sewerline Rehabilitation and Replacement
GWA Project No. S15-006-EPA

Contractor's Name: EMPSCO Engineering Consultants Original Contract Date: June 1, 2018

TO: EMPSCO Engineering Consultants

You are directed to make changes noted below in the subject contract. The changes are accepted by:

12 Nov 2019
Contractor Representative (Print Name & Title)
Petronilo Q. Villaluz, P.E.

Signature Date

PREPARED BY:
for **George Watson** 11/13/19
Project Engineer

John Riegel P.E. 11/13/19
Managing Engineer

RECOMMEND APPROVAL:

Thomas Cruz, P.E. Date
Chief Engineer

G.L. NO.	**S203.105321.520000**
Contract No.:	**793 OM**
Vendor No.:	**15587**
Amount:	**$230,759.62**

Nature of Changes:

This Change Order serves to extend the contract time by 216 days and provides for an additional cost of $230,759.62. These changes are necessary to continue providing CM services for the construction of sewer improvement facilities under two GWA construction contracts - one with PPBC, one with InsituForm. The extension of 216 days is required to extend the Construction Management (CM) Services to the end of June 2020 due to severe delays throughout the project mainly from permit requirements.
The total cost of the additional time is estimated to cost approximately $230,759.62 to cover CM services as described in Enclosure 1.

Enclosures:

1) Proposed Change Order #1 - Time Extension for Construction Management Services - Rt.4 Sewer Rehabilitation and Replacement

The changes result in the following adjustment of contract price and time:

Contract price prior to this change order			**$702,678.13**
Net increase from this Change Order (subject to approved terms & conditions)			**$230,759.62**
Current contract price including this Change Order			**$933,437.75**
Contract time prior to this Change Order 545 calendar days	Completion date -	11/27/2019	
Net increase resulting this Change Order 216 calendar days	Additional	216	
Current contract time including this Change Order 768 calendar days	New Completion Date -	6/30/2020	

CERTIFIED FUNDS AVAILABLE:

Taling M. Taitano
Chief Financial Officer, GWA

Date:

APPROVED:

Miguel C. Bordallo, PE
General Manager

Date:

(Name & Title)
Finance/Accounting
Date:

ENGINEERING MANAGEMENT & PLANNING SERVICES CORPORATION
1998 Army Drive Route 16, 2/F EMPSCO Bldg., Dededo, Guam 96929 • P.O. Box 21794 GMF, Barrigada, Guam 96921 • Tel No. 1.671.638.4716/5716 • Fax No. 1.671. 638.2136 • Email:empsco@guam.net

September 27, 2019

Thomas F. Cruz, P.E.
Chief Engineer
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15 Mangilao, Guam 96913

Attention: **George Watson, P.E.**
Project Manager
Brown & Caldwell

Project: **GWA Project no. S15-006-EPA, Route 4 Relief Sewer line Rehabilitation and Replacement**

Subject: **Proposed Change Order No.1 – Time Extension for Construction Management Services**

Gentlemen,

We would like to submit our fee proposal of **Two Hundred Thirty Thousand Seven Hundred Fifty-nine and 62/100 U.S. Dollars ($230,759.62)** to cover the additional time extension of 216 calendar days based on PBBC's time extension end date to June 30, 2020.
The extended CM efforts will involve to the following Project Management, Project Engineering/Inspection and Administration tasks during the additional time period:

1. Prepare and continue project correspondence, reports and inspection documentation as required to monitor project activities and foresee issues during construction.
2. Continue conduct project meetings as required for clear communication of contract requirements and adherence to schedules.
3. Track all requests for information and continue to assist GWA with the development of a response to RFIs regarding any aspect of the contract documents.
4. Notify GWA regarding any issues that arise during construction of the project that could result in claims and/or disputes.
5. Provide and ensure that the project is efficiently managed and constructed according to the terms of the contract.
6. Provide a full time competent on-site inspector to observe all activities of other Contractor on-site to ensure that the work is accomplished by the Contract documents and applicable permits.

Please give us a call or contact us via email if you have questions regarding this proposal.
Thank you very much.

Very Truly,

Al Tyrone A. de Guzman, P.E.
Project Manager
EMPSCO Engineering Consultants

Attached: Fee Proposal Breakdown

EMPSCO ENGINEERING CONSULTANTS

GUAM WATERWORKS AUTHORITY

Construction Management Services for GWA Route 4 Sewerline Rehabilitation and Replacement Project
CM Proposed Change No. 1 - 216 CD Time Extension (from Nov 27, 2019 to June 30, 2020)
October 2019

SUMMARY

ORIGINAL CONTRACT AMOUNT	$	702,678.13
PROPOSED CHANGE ORDER (CO No.1)	**$**	**230,759.62**
REVISED CONTRACT AMOUNT		

Item	Task Description	ORIGINAL CONTRACT AMOUNT	PROPOSED CHANGE ORDER (CO No. 1		
	CONSTRUCTION PHASE				
	Project Controls				
1	Project Correspondences	$ 27,158.28	$ 13,514.20		
2	Submittals	$ 34,630.67	$ -		
3	Payment requests	$ 31,477.28	$ -		
4	Project Meetings	$ 58,458.00	$ 27,280.40		
5	Request for Information	$ 25,078.88	$ 13,180.16		
6	Claims and Disputes	$ 25,078.88	$ 14,453.60		
7	Project Records	$ 26,898.08	$ 14,453.60		
	subtotal	**$ 228,780.07**	**$ 82,881.96**		
	Construction Inspection				
8	Onsite Inspections/Site Issues	$ 291,834.88	$ 137,325.86		
9	Acceptance of Work	$ 11,569.28	$ 8,451.80		
10	Stop Work Order	$ -	$ -		
	subtotal	**$ 303,404.16**	**$ 145,777.66**		
	Change Orders				
11	Change Order Review	$ 17,293.61	$ -		
12	Design Change	$ 13,734.50	$ -		
13	DCVR	$ 13,881.71	$ -		
14	Negotiations	$ 14,617.76	$ -		
15	Change Order Documents	$ 16,030.04	$ -		
	subtotal	**$ 75,557.62**	**$ -**		
	Construction Survey				
16	Pipeline Alignments	$ 4,842.92	$ -		
17	Elevations	$ 4,842.92	$ -		
	subtotal	**$ 9,685.84**	**$ -**		
	Project Close-out				
18	Timely/Substantial Completion	$ 19,692.62	$ -		
19	Punch List Development	$ 9,941.28	$ -		
20	Inspections	$ 14,409.72	$ -		
21	Training & Warranty	$ -	$ -		
	subtotal	**$ 44,043.62**	**$ -**		
	SUBTOTAL - CONSTRUCTION PHASE	**$ 661,471.31**	**$ 228,659.62**		

EMPSCO ENGINEERING CONSULTANTS

GUAM WATERWORKS AUTHORITY

Construction Management Services for GWA Route 4 Sewerline Rehabilitation and Replacement Project
CM Proposed Change No. 1 - 216 CD Time Extension (from Nov 27, 2019 to June 30, 2020)
October 2019

SUMMARY

ORIGINAL CONTRACT AMOUNT	$	702,678.13
PROPOSED CHANGE ORDER (CO No.1)	**$**	**230,759.62**
REVISED CONTRACT AMOUNT		

Item	Task Description	ORIGINAL CONTRACT AMOUNT	PROPOSED CHANGE ORDER (CO No. 1		
	POST CONSTRUCTION				
1	Final Report	$ 7,620.90	$ -		
2	Project Records	$ 7,257.06	$ -		
3	Record Drawings	$ 8,815.86	$ -		
	subtotal	**$ 23,693.82**	**$ -**		
	EXPENSE ITEMS				
	CONSTRUCTION PHASE				
1	Mailing & Expediting				
2	Report Reproduction	$ 2,800.00	$ -		
3	Drawing Reproduction	$ 1,000.00	$ -		
4	Photo film dev	$ -	$ -		
5	Fuel	$ 4,000.00	$ 2,100.00		
6	Office Supplies	$ 600.00	$ -		
7	Digital Cameras	$ -	$ -		
8	Testing	$ 8,363.00	$ -		
	POST CONSTRUCTION				
1	Mailing & Expediting	$ -	$ -		
2	Report Reproduction	$ 250.00	$ -		
3	Record Drawing Reproduction	$ 500.00	$ -		
	subtotal	**$ 17,513.00**	**$ 2,100.00**		
	Grand Total	**$ 702,678.13**	**$ 230,759.62**		

Construction Management Services for GWA Route 4 Sewerline Rehabilitation and Replacement Project
CM Proposed Change No. 1 - 216 CD Time Extension

Item	Task Description	Principal Engineer	Project Manager	Project Engineer	Project Inspector	Secretary/Clerk	CADD Operator	3-man survey crew	PROPOSED CHANGE ORDER NO. 1 (From Nov. 27, 2019 up to June 30, 2020)
		$ 147.21	$ 147.21	$ 112.58	$ 95.27	$ 45.48	$ 57.42	$ 1,210.73	
	CONSTRUCTION PHASE								
	Project Controls								
1	Project Correspondences	8.00	28.00	56.00		42.00			$ 13,514.20
2	Submittals								$ -
3	Payment requests								$ -
4	Project Meetings		28.00	112.00	84.00	56.00			$ 27,280.40
5	Request for Information	8.00	28.00	70.00					$ 13,180.16
6	Claims and Disputes	8.00	28.00	70.00		28.00			$ 14,453.60
7	Project Records	8.00	28.00	70.00		28.00			$ 14,453.60
	subtotal								**$ 82,881.96**
	Construction Inspection								
8	Onsite Inspection	8.00	32.00	42.00	1,330.0				$ 137,325.86
9	Acceptance of Work	8.00	28.00	28.00					$ 8,451.80
10	Stop Work Order								$ -
	subtotal								**$ 145,777.66**
	Change Orders								
11	Change Order Review								$ -
12	Design Change								$ -
13	DCVR								$ -
14	Negotiations								$ -
15	Change Order Documents								$ -
	subtotal								**$ -**
	Construction Survey								
16	Pipeline Alignments								$ -
17	Elevations								$ -
	subtotal								**$ -**
	Project Close-out								
18	Timely Completion								$ -
19	PunchList Review & Verification								$ -
20	Inspections								$ -
21	Training & Warranty								$ -
	subtotal								**$ -**
	SUBTOTAL - CONSTRUCTION PHASE								**$ 228,659.62**
	POST CONSTRUCTION								

Item	Task Description	Principal Engineer	Project Manager	Project Engineer	Project Inspector	Secretary/Clerk	CADD Operator	3-man survey crew	PROPOSED CHANGE ORDER NO. 1 (From Nov. 27, 2019 up to June 30, 2020)
		$ 147.21	$ 147.21	$ 112.58	$ 95.27	$ 45.48	$ 57.42	$ 1,210.73	
1	Final Report								$ -
2	Project Records								$ -
3	Record Drawings								$ -
	subtotal								**$ -**
	EXPENSE ITEMS								
	CONSTRUCTION PHASE								
1	Mailing & Expediting								
2	Report Reproduction								$ -
3	Drawing Reproduction								$ -
4	Photo film dev								$ -
5	Fuel								$ 2,100.00
6	Office Supplies								$ -
7	Digital Cameras								$ -
8	Testing								$ -
	subtotal								**$ 2,100.00**
	Grand Total								**$ 230,759.62**

GUAM WATERWORKS AUTHORITY
"Better Water, Better Lives."
Gloria B. Nelson Public Service Building| 688 Route 15 | Mangilao, Guam 96913
Tel: (671) 300-6846

Issues for Decision

Resolution No. 15 - FY2020

Relative to Authorizing the Issuance and Sale of Guam Waterworks Authority Water and Wastewater System Revenue Bonds and/or Refunding Bonds

What is the project's objective and is it necessary and urgent?
In accordance with the CCU-adopted *GWA Five Year Financial Plan and Capital Improvements Program (FY20-FY24)*, GWA requires the issuance of additional bonds to fund needed capital improvement projects which include:

- Projects to complete the 2011 Court Order: $39,550,000
- Projects to address upcoming regulatory priorities which are the subject of on-going enforcement negotiations with US EPA: $38,625,000
- Projects to address reduction of non-revenue water in GWA's water distribution system: $11,637,000
- Other projects needed to address environmental safety and compliance, system capacity, operational efficiency and other requirements: $13,860,000

GWA had intended to obtain all necessary approvals for this bond issuance at the beginning of FY20 in order to meet the schedule requirements of the 2011 Court Order. There have been undue delays in the approval process, and therefore, the need for issuance of the bonds to obtain funding necessary to complete Court Order related projects is very urgent and necessary.

GWA is also seeking authorization to evaluate/confirm the feasibility of refunding bonds to redeem or otherwise retire outstanding GWA revenue bonds (Series 2013) and, if deemed feasible, subsequently reissue for potential cost savings concurrent with the issuance of new revenue bonds.

Where is the location?
The issuance of the bonds will provide needed funding outlined in the 5-Year Capital Improvement Program for projects island-wide.

How much will it cost?
The *GWA Five Year Financial Plan and Capital Improvements Program (FY20-FY24)* calls for the 2020 Series Bonds to be issued at a par value equal to GWA's remaining legal authorization for financing at One Hundred Thirty-Four Million dollars ($134,000,000).

GWA may realize cost savings on debt service for existing Series 2013 bonds should the evaluation of refunding bonds indicate so. Cost savings will be dependent on market conditions at the time of projected issuance.

When will it be completed?
The Series 2020 revenue bonds, and any refunding bonds, are anticipated to be issued in mid-May of 2020. The CIP projects to be funded with the Series 2020 bonds are scheduled over the 5-year period covered by the *GWA Five Year Financial Plan and Capital Improvements Program (FY20-FY24).*

What is the funding source?
The Series 2020 Bonds will be funded through the purchase of the bonds as investments through the financial markets.

The RFP/BID responses (if applicable): N/A

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 15-FY2020

RESOLUTION AUTHORIZING THE ISSUANCE AND SALE OF GUAM WATERWORKS AUTHORITY WATER AND WASTEWATER SYSTEM REVENUE BONDS AND/OR REFUNDING BONDS, APPROVING FORMS OF RELATED DOCUMENTS, AGREEMENTS AND ACTIONS, AND AUTHORIZING THE EXECUTION AND DELIVERY THEREOF

WHEREAS, Article 2, Chapter 14, Title 12 of the Guam Code Annotated (the "Act") authorizes Guam Waterworks Authority (the "Authority") to issue revenue bonds to raise funds for the purpose of acquiring, constructing, improving, equipping, maintaining, repairing, renewing, replacing, reconstructing or insuring the System (as that term is defined in the Act), or any part thereof, or for the purpose of redeeming or retiring any such bonds or any other prior obligations of the Authority, or for any combination of such purposes, in accordance with and subject to the requirements and limitations set forth in the Act; and

WHEREAS, this Consolidated Commission on Utilities (the "Commission") has determined that there exists a need for certain additions and improvements to the System, including certain water production, treatment and distribution projects, certain wastewater collection and treatment projects, and certain electrical projects, contained in the Authority's Capital Improvement Plan (collectively, the "Projects"), that a certain number of the Projects requiring immediate financing are for Court Order (approximately forty million dollars), potential Consent Decree (approximately thirty nine million dollars), and water loss control (approximately twelve million dollars), and has determined that it is in the public interest for the Authority to issue bonds pursuant to the Act for such purposes; and

WHEREAS, the Authority has informed this Commission that the opportunity has arisen to issue refunding bonds to redeem or otherwise retire a portion of the outstanding Guam

Waterworks Authority Water and Wastewater System Revenue Bonds, Series 2013 (the "Prior Bonds") for debt service savings; and

WHEREAS, the Authority has determined it is necessary and desirable to issue one or more series of Guam Waterworks Authority Water and Wastewater System Revenue Bonds to finance the Projects (as more particularly defined in Section 2, "New Bonds") and to redeem or otherwise retire a portion of the Prior Bonds (as more particularly defined in Section 2, "Refunding Bonds" and collectively with the New Bonds, the "Bonds"); and

WHEREAS, the Authority has previously made and entered into an Indenture dated as of December 1, 2005 (as previously supplemented and amended, the "General Indenture"), by and among the Authority, Bank of Guam, as trustee (the "Trustee") and U.S. Bank National Association, as co-trustee (the "Co-Trustee"), which authorized one or more series of Guam Waterworks Authority Water and Wastewater System Revenue Bonds; and

WHEREAS, there has been presented to this meeting the form of a seventh supplemental indenture (Exhibit A), by and among the Authority, the Trustee and the Co-Trustee (the "Supplemental Indenture" and, together with the General Indenture, the "Indenture"), pursuant to which the Authority proposes to issue the Bonds in one or more series; and

WHEREAS, the Authority previously has executed a Master Continuing Disclosure Agreement with Digital Assurance Certification, L.L.C., as dissemination agent (the "Dissemination Agent"), dated as of December 1, 2005, which authorized one or more supplemental continuing disclosure agreements to be entered into in connection with the issuance of one or more series of bonds; and

WHEREAS, there has been presented to this meeting the form of a supplemental continuing disclosure agreement (the "Continuing Disclosure Agreement") (Exhibit B), by and between the Authority and the Dissemination Agent, in connection with the Bonds; and

WHEREAS, there has been presented to this meeting the form of a bond purchase agreement (the "Bond Purchase Agreement") (Exhibit C), between the Authority and Citigroup

Global Markets Inc., as representative (the "Representative") of itself and Barclays Capital, Inc., as underwriters (together, the "Underwriters"), relating to the sale of the Bonds; and

WHEREAS, the Supplemental Indenture, the Continuing Disclosure Agreement and the Bond Purchase Agreement are collectively referred to herein as the "Bond Documents"; and

WHEREAS, there has been presented to this meeting the form of preliminary official statement of the Authority (the "Preliminary Official Statement") (Exhibit D) relating to the Bonds;

WHEREAS, the Authority has commissioned and presented to this meeting a draft of the Consulting Engineers Report (Exhibit E), pursuant to the Indenture, to support the issuance and sale of the Bonds; and"

WHEREAS, the Authority has requested or will request the Guam Economic Development Authority ("GEDA") to approve the issuance and sale of the Bonds pursuant to the Act and Section 50103(k) of Title 12, Guam Code Annotated;

WHEREAS, the Authority is authorized to request that the Public Utilities Commission of Guam (the "PUC") approve the issuance of the Bonds pursuant to the Act;

WHEREAS, in accordance with the Act, the authorization provided by this resolution to sell and issue the Bonds has been approved by *I Liheslaturan Guahan* (the "Legislature") pursuant to the terms and conditions set forth in Public Law No. 28-71, as amended by Public Law Nos. 30-145 and 32-069 (collectively, the "Legislation");

NOW, THEREFORE, BE IT RESOLVED, by Consolidated Commission on Utilities as follows:

Section 1. The foregoing recitals are true and correct.

Section 2. Issuance of one or more series of additional Bonds from time to time pursuant to the Act and the General Indenture as supplemented by the Supplemental

Indenture to be designated as “Revenue Bonds” or “Revenue Refunding Bonds” as appropriate (or as otherwise designated by the Supplemental Indenture, as finally executed) is hereby authorized (i) in an aggregate principal amount not to exceed $134,000,000 to finance the Projects, to pay costs of issuance, to pay for credit enhancement, if any, to pay for capitalized interest, and to fund a deposit to a debt service reserve fund, if any (the additional bonds authorized to be issued for such purposes, the “New Bonds”), plus (ii) with respect to the Prior Bonds, in a principal amount not to exceed a principal amount sufficient to provide funds for the redemption or retirement of such Prior Bonds, plus the related costs of issuance and of such redemption or retirement (the additional bonds authorized to be issued for such purposes, the “Refunding Bonds”). Such Bonds shall be issued in such series and amounts and at such times as the Chair of the Commission, the Vice-Chair of the Commission or the General Manager of the Authority (the “Designated Officers”) deem appropriate, provided that such Bonds have a final maturity not later than 30 years from their date of issuance with respect to the New Bonds, and not later than the final maturity of the Prior Bonds with respect to the Refunding Bonds, bear interest at such rate or rates and are sold for such price or prices not exceeding any limitation established by the Legislation, and are issued and sold pursuant to the Indenture and otherwise in compliance with the provisions of the Act.

The Bonds shall be limited obligations of the Authority payable solely from revenues and other assets of the Authority pledged for such purpose and shall not be a debt or liability of the Government of Guam.

The Chair of the Commission and the appropriate officials of the Authority are hereby authorized and directed, subject to the approval of the PUC, to execute and countersign, for and on behalf and in the name of the Authority and under its seal, the Bonds, in an aggregate principal amount not to exceed the amount authorized hereby, in accordance with the Indenture.

Section 3. The form of Preliminary Official Statement presented to this meeting is hereby approved, with such additions, changes and modifications as the Designated Officers may approve upon consultation with legal counsel, such approval to be conclusively evidenced by the execution thereof or of a certificate deeming final the Preliminary Official Statement for purposes of Rule 15c2-12 of the Securities and Exchange Commission by one or more of the Designated Officers, who are each hereby authorized and directed, subject to the approval of the PUC, to execute the same and to authorize the Underwriters to distribute such Preliminary Official Statement to potential purchasers of the Bonds and other interested parties. The Designated Officers are also hereby authorized to execute and cause to be delivered a final Official Statement to purchasers of the Bonds and other interested parties, with such additions, changes and modifications from the Preliminary Official Statement as the Designated Officers may approve upon consultation with staff and legal counsel, such approval to be conclusively evidenced by the execution and delivery of the final Official Statement by one or more of the Designated Officers. The Underwriters are hereby authorized to cause the Official Statement to be delivered to the purchasers of the Bonds and to be distributed in preliminary form in connection with the marketing and sale of the Bonds.

Section 4. The Bond Documents presented to this meeting are hereby approved, with such additions, changes and modifications as the Designated Officers may approve upon consultation with legal counsel, such approval to be conclusively evidenced by the Bond Documents executed by such Designated Officers, who are each hereby severally authorized and directed, subject to the approval of the PUC, to execute the same.

Section 5. The Designated Officers are hereby authorized to approve such bond insurance, surety bond (including a surety bond which may substitute for a deposit in a bond reserve fund under the Indenture) or other supplemental security arrangements for the Bonds as are approved by the Designated Officers, and to approve any other similar agreements deemed by the Designated Officers to be necessary or appropriate in connection therewith.

Section 6. The appropriate officials of the Authority are hereby authorized and directed to do any and all things and to execute and deliver any and all documents, certificates, notices, directions, consents and agreements which they may deem necessary or advisable in order to effectuate the purposes of this resolution, including, without limitation, closing documents and certificates, including a tax certificate, an escrow agreement, amendments to any existing agreements and any documents or agreements necessary in order to obtain credit enhancement for the Bonds or the obligations of the Authority with respect thereto.

Section 7. All actions heretofore taken by the officers, representatives or agents of the Authority in connection with the issuance and sale of the Bonds are hereby ratified, confirmed and approved.

Section 8. The Bonds shall not be issued without the approval of the Guam Public Utilities Commission in accordance with the Act and Chapter 12 of Title 12, Guam Code Annotated, and shall be in all respects subject to such approval and to the terms and conditions of the approval of GEDA, and to the terms and conditions of the Legislation.

Section 9. This resolution shall take effect from and after its adoption.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of January 2020.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	**MICHAEL T. LIMTIACO**
Chairperson	Secretary

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: _____

NAYS: _____

ABSTENTIONS: _____

ABSENT: _____

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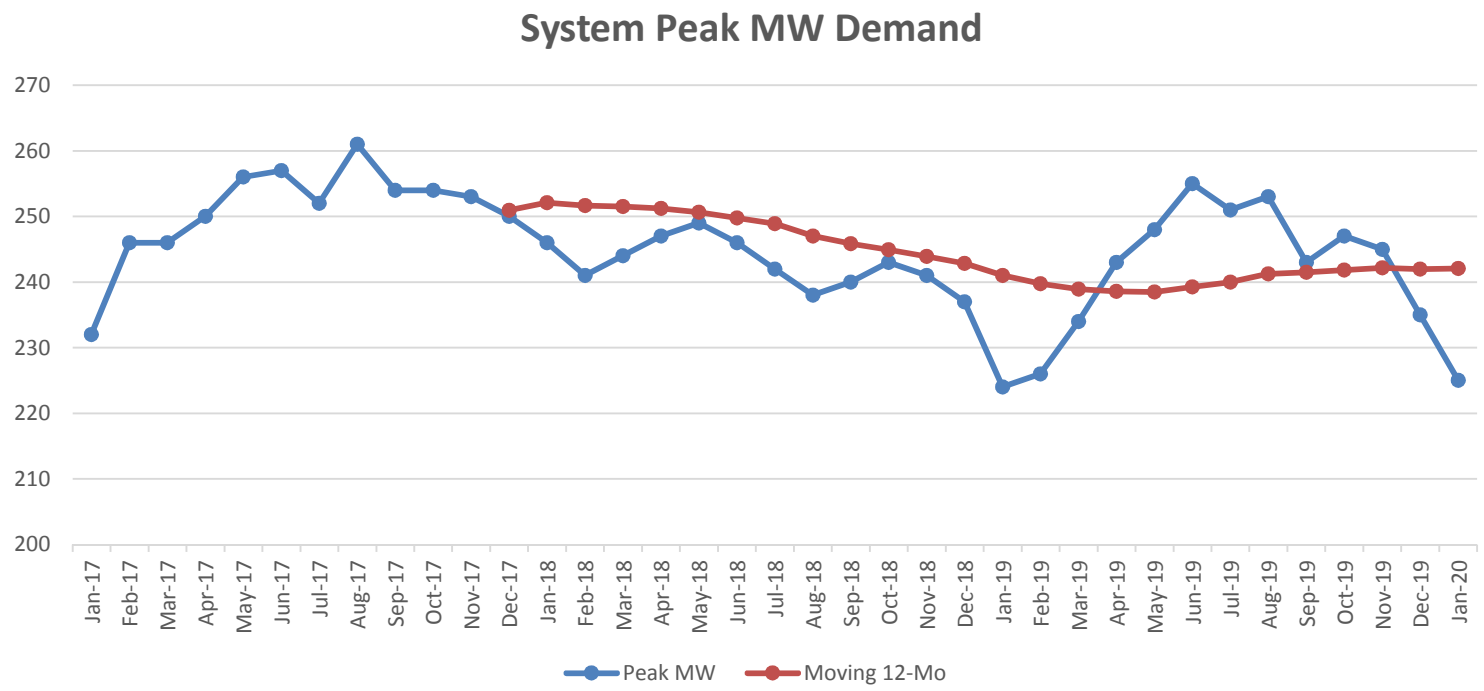
GENERAL MANAGER'S REPORT

JANUARY 2020

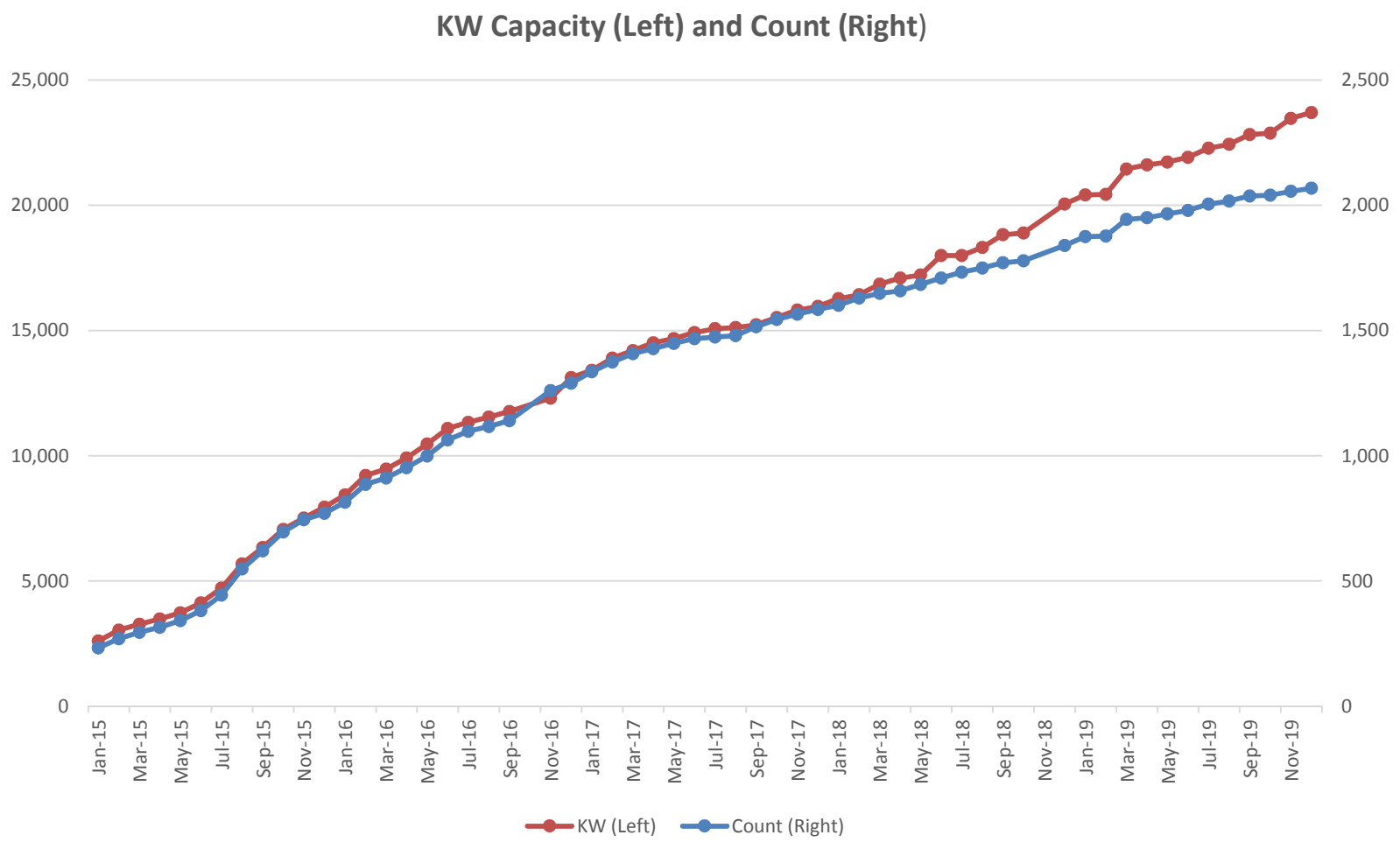
1. **Generation System:** The following is the generation forecast for February 2020:

   Projected Available Capacity: 352 MW
   Projected Demand: 228 MW
   Anticipated Reserve Margin: 124 MW

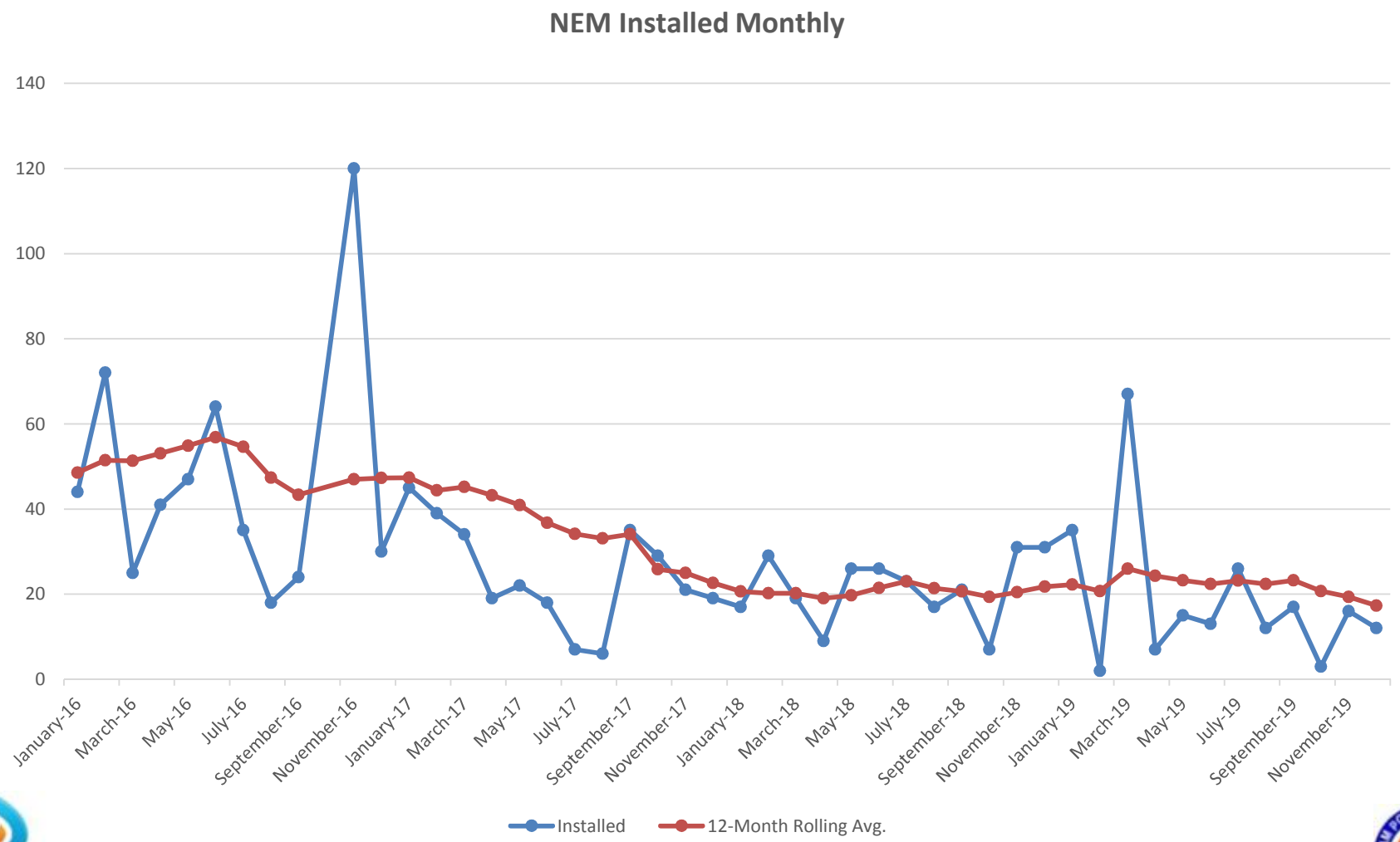
- The following updates monthly peak MW demand ending January 14, 2020:



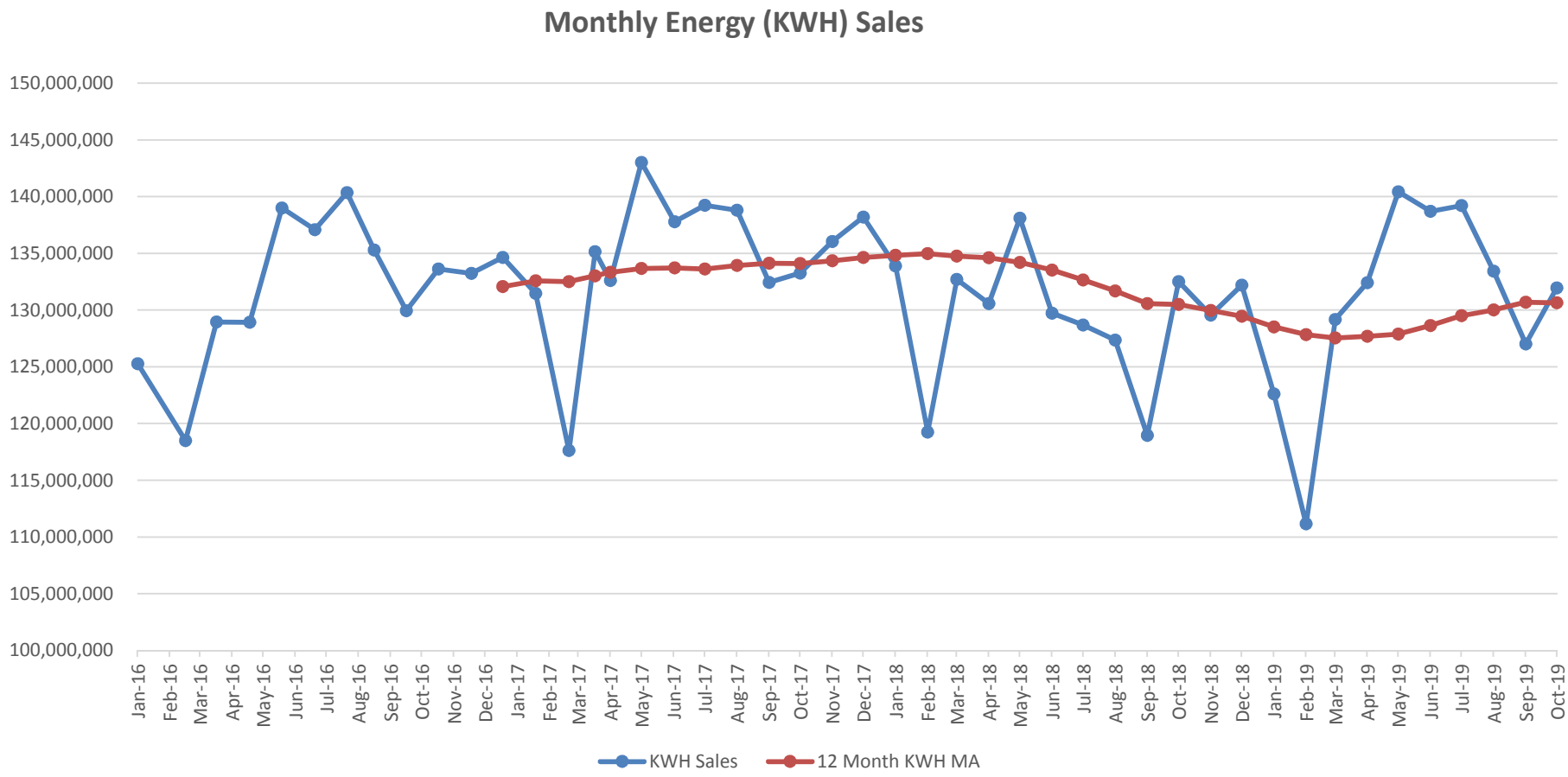
2. Net Metering (NEM) Growth Thru December 2019:



2. Net Metering (NEM) Growth Thru December 2019 (Cont'd):



3. Energy Sales Thru October 2019:



Demand Side Management (DSM)

4. Program directly reduces energy cost to customer at a one time fixed rebate. These expenses funded from base rate. I have added $500K from FY 2020 budget to cover expenses thru March 2020 in order to provide time for PUC to approve placing DSM under LEAC.

DSM PROGRAM SUMMARY

Description	FY16	FY17	FY18	FY19	FY20 Thru December 31, 2019	Total to Date
Regular/OT Pay	$11,348.80	$22,256.00	$26,121.83	$50,715.19	$6,059.80	$116,501.62
Other Contractual	$28,278.50	$85,550.05	$116,977.50	$3,025.00	$0.00	$233,831.05
Ads & Radio Announcements	-	-	-	$7,500.00	$1,500.00	$9,000.00
Paid Rebates-Split AC	$154,700.00	$557,275.00	$1,349,825.00	$1,374,650.00	$237,925.00	$3,674,375.00
Paid Rebates-Central AC	$3,400.00	$8,200.00	$4,400.00	$6,500.00	$1,000.00	$23,500.00
Paid Rebates-Washer/Dryer	$2,800.00	$7,425.00	$57,200.00	$110,800.00	$21,200.00	$199,425.00
Total Expenses	**$200,527.30**	**$680,706.05**	**$1,554,524.33**	**$1,553,190.19**	**$267,684.80**	**$4,256,632.67**
Bank Interest (+)	$1,676.42	$1,722.74	$1,222.29	$730.05	$127.57	$5,479.07
Bank Fees	$155.00	$1,032.06	$1,085.08	$1,247.54	$145.00	$3,664.68

5. PUC DOCKETS:
   - GPA Docket 20-01: The PUC approved the proposed Consent Decree with USEPA at their meeting on December 5, 2019. Both MEC and myself have signed the approved Consent Decrees.

6. Award of Phase III:
   - Notice of Intent to Award, subject to CCU and PUC approvals to Engie Solar was made on October 4, 2019. A protest was filed by GlidePath on October 9, 2019. GPA denied the protest and the procurement is currently before the OPA for hearings and decision.

7. Informational Briefings Conducted:
   - Powering the Future to Members, Guam Association of Government Accountants (AGA) was conducted on Wednesday January 22, 2020.

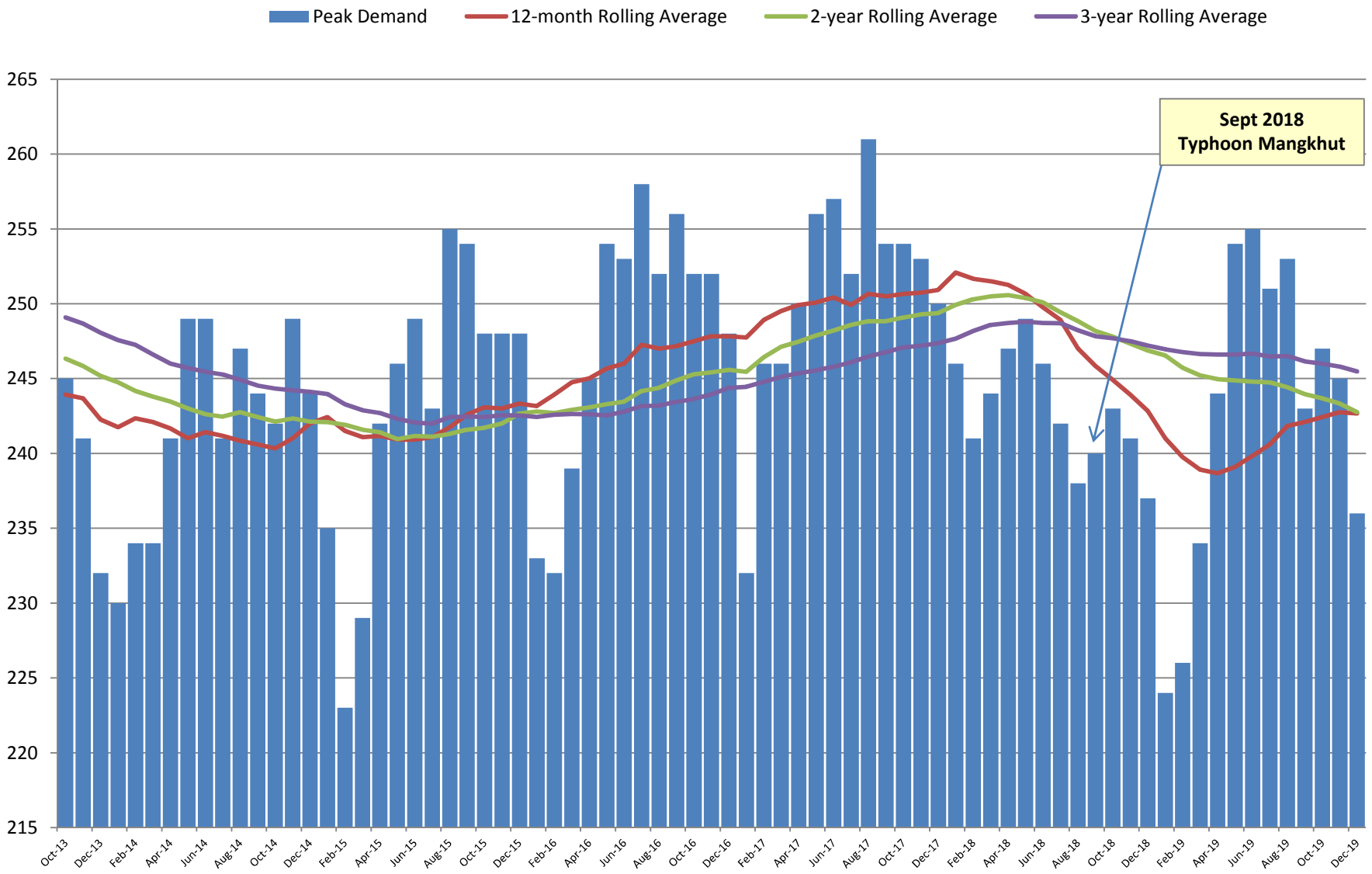
8. Integrated Resource Plan:
   - GPA has begun the process of updating the IRP considering that almost all the significant task within the current IRP have been achieved or contracted for. The AGMET has begun the process which would include stakeholder participation. We hope to complete a draft for the CCU consideration this summer. The key features of the updated IRP include an updated load forecast, fuel forecast, conventional generation mix, renewable generation mix, diversified fuel source, reliability amongst other factors including investments required to support the updated IRP.

9. Bond Ratings:
   - **GPA bond rating was upgraded by Fitch from BBB- to BBB Stable this week.** This is a significant upgrade which will save ratepayers borrowing cost when in the near future we look at refinancing our 2012 bonds or if we had to issue bonds for upgrades in the transmission system to accommodate more renewables.

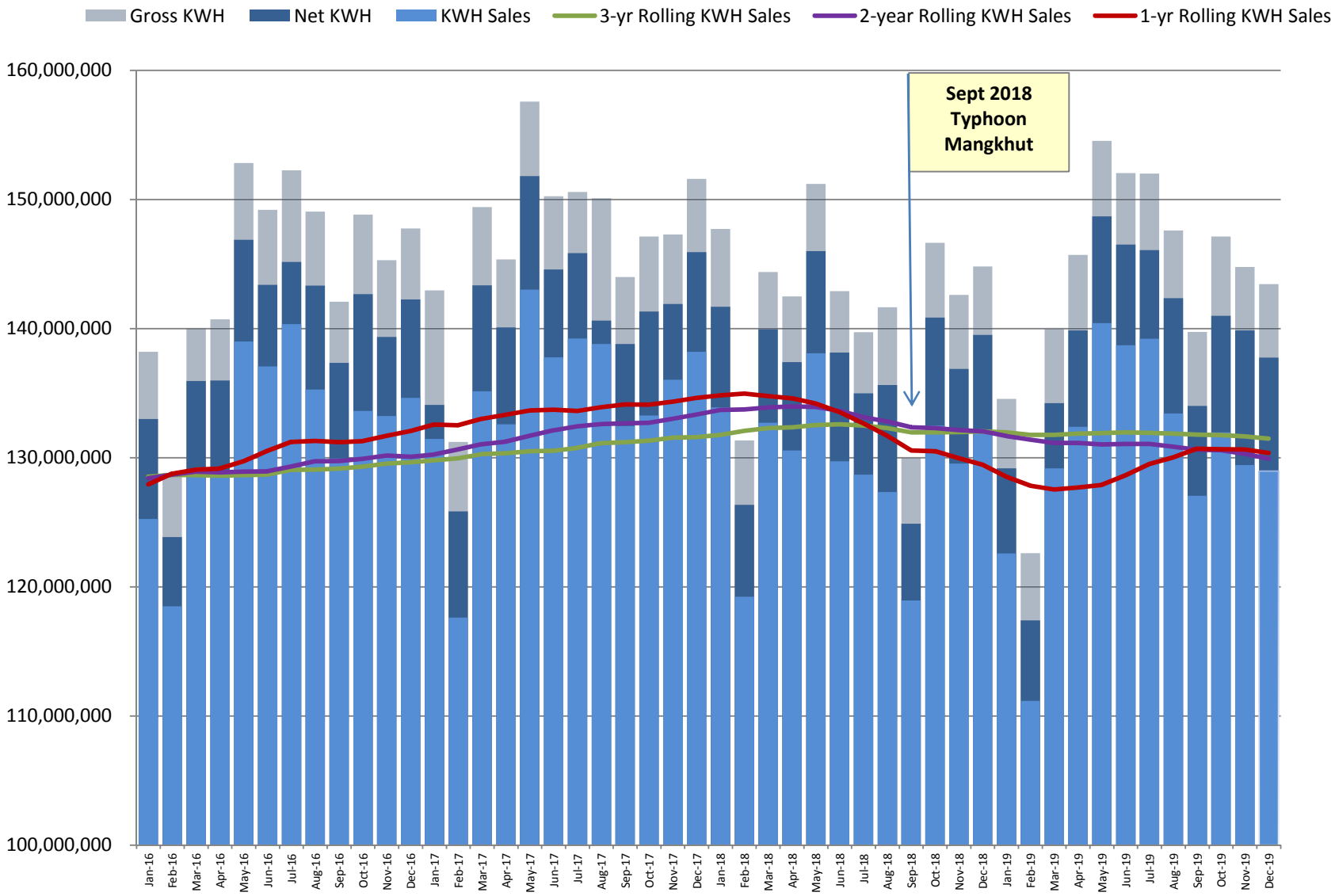
   - We also recently had a conference call with Moody's updating them on the latest accomplishments similar to the presentation we did for Fitch. However, because one of Moody's criteria is that GPA bond ratings will not be rated more than two notches above the GovGuam ratings, we don't anticipate any upgrades from Moody's because this is currently the situation.

10. **The following graphs show the updated system information:**

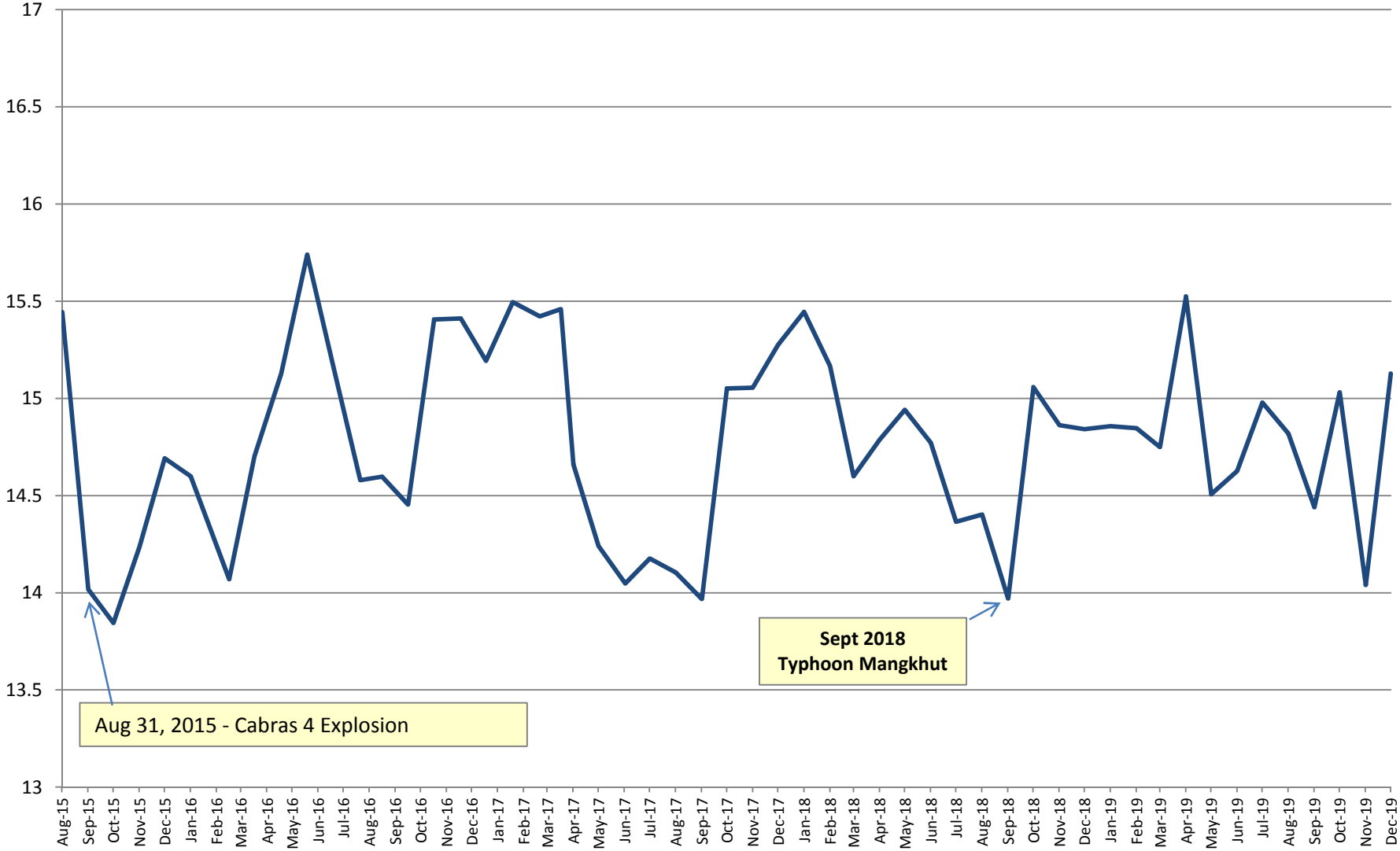
Historical Monthly Peak Demand
October 2013 - Dec 2019



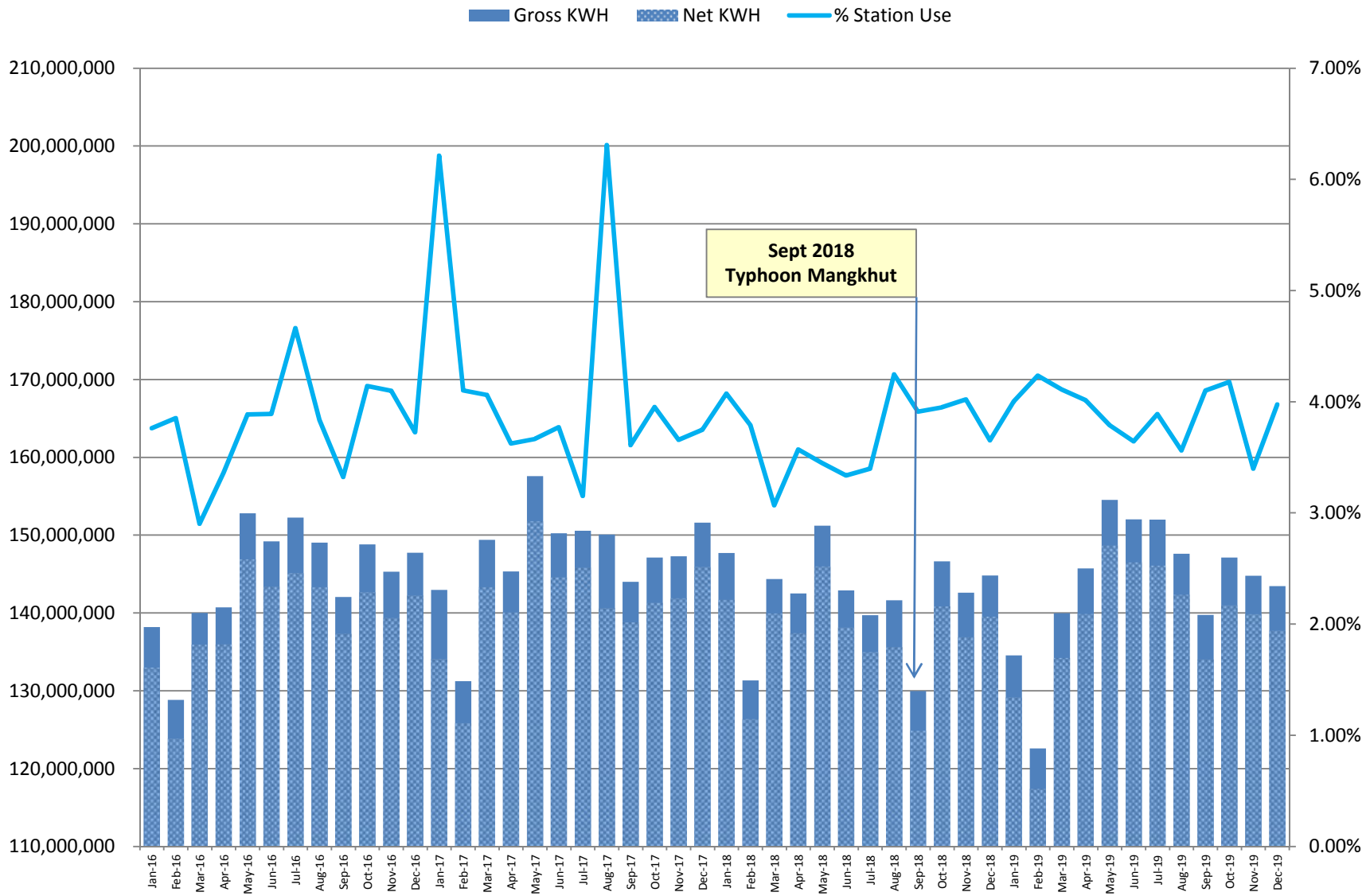
Historical KWH Sales
Jan 2016 - Dec 2019



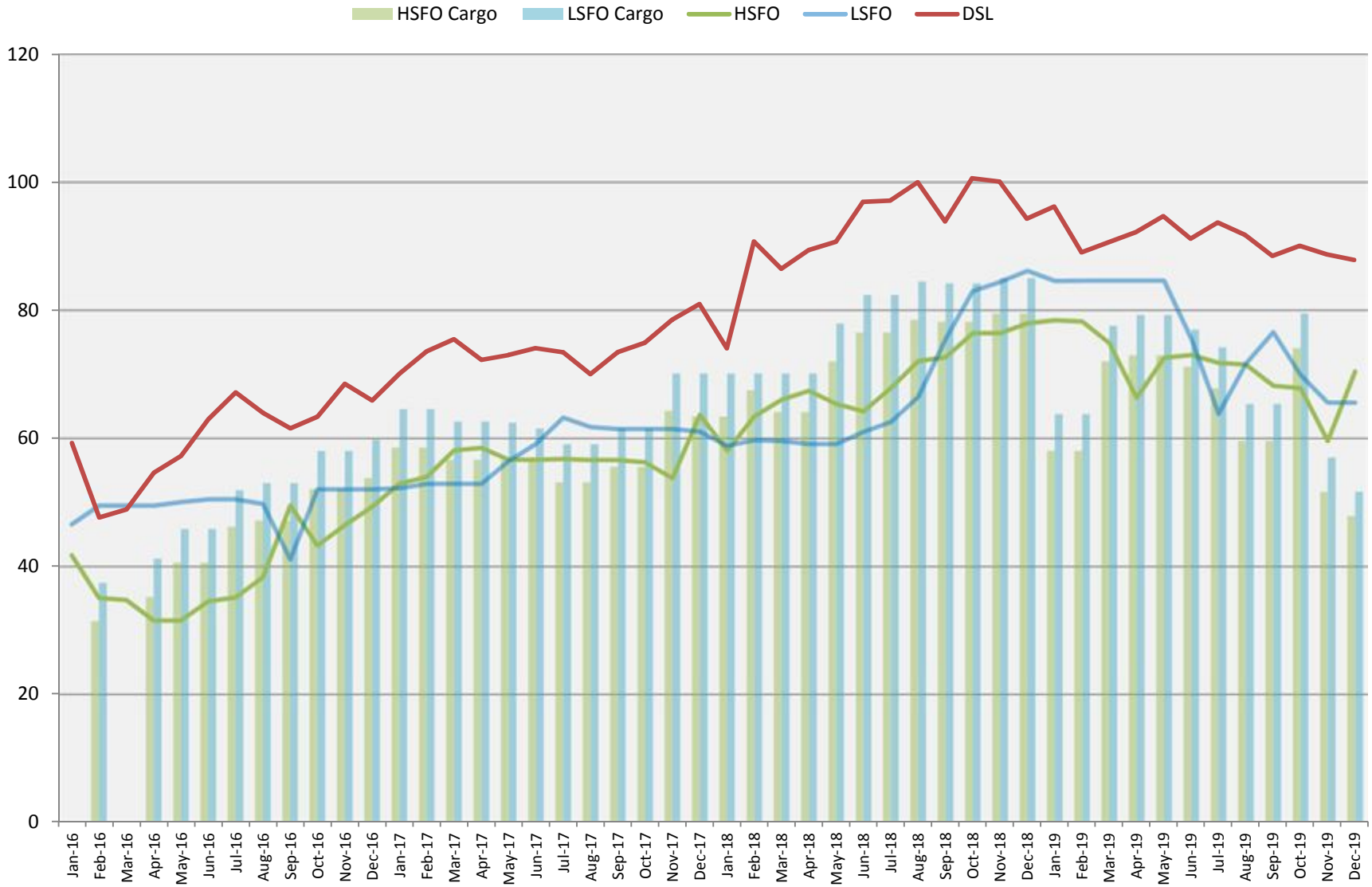
SYSTEM GROSS HEAT RATE
(KWH/Gal)
Aug 2015 - Dec 2019



Gross and Net Generation (KWH)
Jan 2016 - Dec 2019



Fuel Cargo and Fuel Consumption Costs ($/bbl)
Jan 2016 - Dec 2019



Guam Power Authority
Electric Rate Preliminary Study Results

Mark Beauchamp, CPA, CMA, MBA
President
Utility Financial Solutions
616-393-9722

Metering Today

- In 2017 - 52% of residential customers have AMI metering:

Residential Meters in US (EIA 2017 Data)	
Total Meters	133,151,163
Meters with AMI	69,474,626
Percent AMI	52%

- Utilities have ability to charge accurate rate structures, but change can be difficult
  - Education staff, education management, education governing body, education intervenors, education customers

Industry Challenges

- Intervenors
  - Solar Customers
  - Solar Installers
  - Environmental groups
  - Customers
  - Low income impacts
  - Often valid arguments - Not always based on utility costs
- Need to maintain bond ratings - evaluation criteria

Industry Challenges

- Average residential electric usage declining

Change in Residential Consumption	
Average Residential Consumption - 2010	952
Average Residential Consumption - 2017	856
Reduction	10.0%

- Installation of Roof Top Solar – EIA 2017

	Capacity MW	Customers	Customers - Storage	mWh Sold Back
Residential Customers on Net Metering	9,487	1,626,283	2,316	430,481
Residential Customers in California	4,129	785,215	1,729	98,134
California as Percent of Total	44%	48%	75%	23%

Market Share - Electric Vehicles

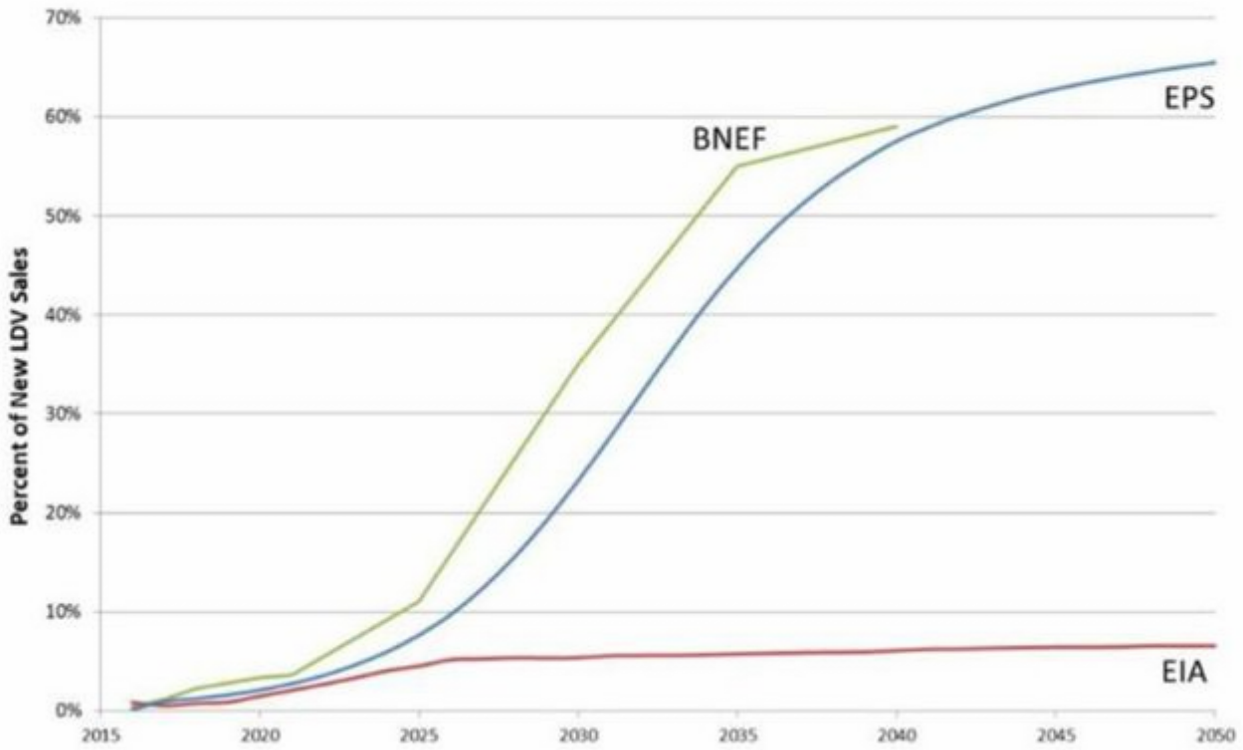


Figure 1. Projections of U.S. market share of EVs from three sources: the Energy Policy Simulator (EPS) 1.3.1 BAU case, the Energy Information Administration (EIA) Annual Energy Outlook 2017 "No Clean Power Plan" side case, and the Bloomberg New Energy Finance (BNEF) Electric Vehicle Outlook 2017.

U.S. electric vehicle deployment forecast to 2050 ENERGY INNOVATION

How is the Industry Addressing the Challenges

- Development of rates reflective of our costs
  - Fixed costs to service a meter recovered in the customer charge (controversial)
  - Fixed costs of distribution infrastructure recovered in demand charges (education)(Marginal or Embedded)
  - Energy rates reflective of costs during on-peak, off peak (critical peak) time periods (Tends to include Power Supply and Transmission Costs)

In other words; identifying fixed costs and variable costs of providing service and offering rate structures reflective of our costs

Ideal Cost Based Residential Rate Structure

Cost Based Rate Design	Option One	Option Two	Billing Unit
Production Demand Coincident with System Peak		$14.12	kW
Distribution Demand Based on Customers Maximum Demand	$ 2.19	2.19	kW
Energy Charge - Critical Peak	0.165	0.061	kWh
Energy Charge - On-Peak	0.112	0.061	kWh
Energy Charge - Off-Peak	0.048	0.048	kWh
Customer Charge	$ 21.44	$ 21.44	Monthly

If this is ideal, how do we get there?

Industry Rate Trends & Rate Transition Plans

- Demand Charges – AMI required
- Time of Use Rates – AMI required
- Cost Based Customer charges
- Grid access fees
- Inverted block rate structure differentials are being minimized
- Customer Charges based on size of service
- Low Income assistance programs
- Movement away from net metering for customer installed renewables

PGE Rate Transition Plan

https://www.pge.com/en_US/residential/rate-plans/how-rates-work/rate-changes/residential-rate-changes/residential-rate-changes.page

2015	2016	2017	2018	2019-2020
Tier Price Adjustment Minimum Bill Increase	New Time-of-Use Rate Options FERA Monthly Fixed Discount Tiers Consolidated from 4 to 3 Tier Price Adjustment Minimum Bill Methodology Change	Tiers Consolidated from 3 to 2 High Usage Surcharge Tier Price Adjustment	Tier Price Adjustment	Transition Most Residential Customers to Time-of-Use Rates

- FERA Family Electric Rate Assistance – Qualified low income program

GPA Financial Projection and Cost of Service Study

Discussion

- Review Financial Projections & Targets
  - Debt Coverage Ratio
  - Minimum Cash
  - Target Operating Income
- Review Cost of Service Results
  - Cost to service each class of customers
  - Monthly Customer Charges
- Condo/Apartment Alternatives

Assumptions

- Annual Inflation 2.5%
- Annual Civilian Growth:
  - 2020 – 0.5%
  - 2021 – -0.1%
  - 2022 – -0.2%
  - 2023 – 1.1%
  - 2024 – 0.6%
- Navy Growth:
  - 2021 – 4.4%
  - 2022 – 1.3%
  - 2023 – 5.1%
  - 2024 – 2%
- Fuel Supply Change
  - 2020 – 2.7%
  - 2021 – 17.4%
  - 2022 – 5.2%
  - 2023 – -12.3%
  - 2024 – 0.5%
- Capital Improvements
  - 2020 – $71.5M
  - 2021 – $25.5M
  - 2022 – $26.25M
  - 2023 – $22M
  - 2024 – $22.75M

Coverage Ratios (Current Rates)

Description	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Debt Coverage Ratio					
Earnings from Operations	$ 34,058,490	$ 38,457,749	$ 36,379,702	$ 36,183,938	$ 44,279,572
Add Depreciation/Amortization Expense	42,518,005	43,025,516	41,589,086	40,135,509	40,614,583
Add Interest Income (Net of Const. Fund Interest)	1,414,897	1,429,153	1,440,000	1,340,000	1,360,000
Cash Generated from Operations	$ 77,991,391	$ 82,912,418	$ 79,408,788	$ 77,659,447	$ 86,254,155
Debt Service after IPP Debt Service and Aggreko Lease	$ 47,205,713	$ 47,708,036	$ 48,821,833	$ 28,511,500	$ 28,506,500
Projected Debt Coverage Ratio (Covenants)	**1.65**	**1.74**	**1.63**	**2.72**	**3.03**
Minimum Debt Coverage Ratio	**1.40**	**1.40**	**1.40**	**1.40**	**1.40**

Description	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Fixed Cost Coverage Ratio					
Cash Available for Debt Service	$ 77,991,391	$ 82,912,418	$ 79,408,788	$ 77,659,447	$ 86,254,155
Off System Debt	-	-	-	-	-
Total Available	$ 77,991,391	$ 82,912,418	$ 79,408,788	$ 77,659,447	$ 86,254,155
Debt Service Including Off System Debt	$ 56,135,105	$ 49,952,884	$ 48,821,833	$ 65,003,952	$ 68,316,448
Fixed Costs Coverage Ratio	**1.39**	**1.66**	**1.63**	**1.19**	**1.26**
Minimum Fixed Costs Coverage Ratio	**1.30**	**1.30**	**1.30**	**1.30**	**1.30**

Minimum Cash Recommendation

Description	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Minimum Cash Reserve Allocation					
Operation & Maintenance Less Depreciation Expense	12.3%	12.3%	12.3%	12.3%	12.3%
Historical Rate Base	1%	1%	1%	1%	1%
Current Portion of Debt Service Payment Paid Monthly	8.33%	8.33%	8.33%	8.33%	8.33%
Five Year Capital Improvements - Net of bond proceeds	20%	20%	20%	20%	20%
Calculated Minimum Cash Level					
Operation & Maintenance Less Depreciation Expense	$ 41,826,426	$ 46,961,509	$ 49,279,582	$ 45,735,082	$ 45,302,830
Historical Rate Base	12,024,385	12,279,697	12,542,667	12,763,527	12,991,012
Current Portion of Debt Service Payment	4,162,740	4,068,486	5,416,996	5,693,037	5,699,016
Five Year Capital Improvements - Net of bond proceeds	24,290,027	24,290,027	24,290,027	24,290,027	24,290,027
Minimum Cash Reserve Levels	**$ 82,303,579**	**$ 87,599,718**	**$ 91,529,272**	**$ 88,481,673**	**$ 88,282,885**
Projected Cash Reserves	**$ 70,442,695**	**$ 74,370,471**	**$ 74,866,152**	**$ 61,640,706**	**$ 55,543,461**

Summary Projection without Rate Change

Fiscal Year	Base Rate Adjustment	Debt Coverage Ratio	Fixed Coverage Ratio	Adjusted Operating Income	Projected Cash Balances	Recommended Minimum Cash
2020	0.0%	1.65	1.39	$ 34,058,490	$ 70,442,695	$ 82,303,579
2021	0.0%	1.74	1.66	$ 38,457,749	$ 74,370,471	87,599,718
2022	0.0%	1.63	1.63	$ 36,379,702	$ 74,866,152	91,529,272
2023	0.0%	2.72	1.19	$ 36,183,938	$ 61,640,706	88,481,673
2024	0.0%	3.03	1.26	$ 44,279,572	$ 55,543,461	88,282,885

Summary Projection with Rate Change

Fiscal Year	Base Rate Adjustment	Debt Coverage Ratio	Fixed Coverage Ratio	Adjusted Operating Income	Projected Cash Balances	Recommended Minimum Cash
2020	0.0%	1.65	1.39	$ 34,058,490	$ 70,442,695	$ 82,303,579
2021	0.0%	1.74	1.66	$ 38,457,749	$ 74,370,471	87,599,718
2022	0.0%	1.63	1.63	$ 36,379,702	$ 74,866,152	91,529,272
2023	8.4%	3.70	1.62	$ 64,015,256	$ 89,472,024	88,481,673
2024	0.0%	4.01	1.67	$ 72,275,136	$ 111,370,342	88,282,885

Electric Cost of Service Results

Customer Class	Cost of Service	Projected Rate Revenue	Projected LEAC Revenue	Projected Revenues	% Change
Residential (R)	$ 148,939,030	$ 48,257,671	$ 77,953,487	$ 126,211,158	18.0%
Small General (G 1ϕ)	11,339,693	6,028,481	6,460,535	12,489,016	-9.2%
Small General (G 3ϕ)	12,457,385	6,142,248	7,348,304	13,490,552	-7.7%
Small Govt. (S 1ϕ)	1,643,672	959,180	866,744	1,825,923	-10.0%
Small Govt. (S 3ϕ)	2,066,786	1,114,738	1,242,041	2,356,779	-12.3%
General Service (J 1ϕ)	2,359,078	1,132,261	1,373,753	2,506,014	-5.9%
General Service (J 3ϕ)	41,580,441	20,056,660	26,102,741	46,159,401	-9.9%
Large Power (P)	71,804,117	31,131,633	47,077,759	78,209,392	-8.2%
Small Govt. (K 1ϕ)	584,731	347,143	320,950	668,092	-12.5%
Small Govt. (K 3ϕ)	22,386,975	12,626,883	14,486,586	27,113,468	-17.4%
Large Govt. (L)	17,503,306	9,297,553	11,361,256	20,658,809	-15.3%
Navy (N)	70,040,361	19,905,605	50,544,393	70,449,997	-0.6%
IPP (I)	194,910	48,891	65,077	113,968	71.0%
Condos	5,777,881	2,654,392	3,676,318	6,330,710	-8.7%
Total	$ 414,743,525	$ 164,340,467	$ 250,403,058	$ 414,743,525	0.0%

Customer Charges (Base Charges) Cost Component Recovery

Recovers cost for connection to Grid at zero kWh consumption

- Meter operation, maintenance and replacement costs
- Meter reading costs or AMR installation costs
- Billing Costs
- Customer Service Department
- Service into customers facilities
- Portion of Distribution System based on minimum system

Customer Charges Cost Component Recovery

- Increasing customer charges helps stabilize revenue recovery for utility
- Reduces subsidy between year-round customers and seasonal customers
- Will impact low use customers
- Low income compared with low use
- ***Low income customers are not always low use customers***

Monthly Charge

Customer Class	COS Customer Charge	Current Average Customer Charge
Residential (R)	$ 32.36	$ 15.00
Small General (G 1ϕ)	32.36	14.16
Small General (G 3ϕ)	63.28	14.16
Small Govt. (S 1ϕ)	32.36	14.16
Small Govt. (S 3ϕ)	63.28	14.16
General Service (J 1ϕ)	157.18	38.33
General Service (J 3ϕ)	157.64	38.33
Large Power (P)	310.62	59.25
Small Govt. (K 1ϕ)	157.18	38.33
Small Govt. (K 3ϕ)	157.64	38.33
Large Govt. (L)	310.62	59.25
Navy (N)	714.70	610.56
IPP (I)	145.64	59.25
Condos	214.54	45.61

Distribution Charges

Customer Class	Monthly Customer Charge	Distribution Rate	Billing Basis
Residential (R)	$ 32.36	$ 0.0354	kWh
Small General (G 1ϕ)	32.36	0.0320	kWh
Small General (G 3ϕ)	63.28	0.0270	kWh
Small Govt. (S 1ϕ)	32.36	0.0348	kWh
Small Govt. (S 3ϕ)	63.28	0.0290	kWh
Private Outdoor Lighting (H)	39.61	0.0274	kWh
Public Street Lights (F)	237.65	0.2586	kWh
General Service (J 1ϕ)	157.18	8.62	kW
General Service (J 3ϕ)	157.64	8.40	kW
Large Power (P)	310.62	10.08	kW
Small Govt. (K 1ϕ)	157.18	8.99	kW
Small Govt. (K 3ϕ)	157.64	8.96	kW
Large Govt. (L)	310.62	10.65	kW
Navy (N)	714.70	8.36	kW
IPP (I)	145.64	9.79	kW
Condos	214.54	12.00	kW

Power Supply Charges

Customer Class	Demand	Billing Basis	Energy	Billing Basis
Residential (R)	$ 0.0653	kWh	$ 0.1626	kWh
Small General (G 1ϕ)	0.0503	kWh	0.1626	kWh
Small General (G 3ϕ)	0.0477	kWh	0.1626	kWh
Small Govt. (S 1ϕ)	0.0575	kWh	0.1626	kWh
Small Govt. (S 3ϕ)	0.0485	kWh	0.1626	kWh
Private Outdoor Lighting (H)	0.0016	kWh	0.1626	kWh
Public Street Lights (F)	0.0016	kWh	0.1626	kWh
General Service (J 1ϕ)	18.19	KW	0.1626	kWh
General Service (J 3ϕ)	16.61	KW	0.1626	kWh
Large Power (P)	22.58	KW	0.1626	kWh
Small Govt. (K 1ϕ)	11.18	KW	0.1626	kWh
Small Govt. (K 3ϕ)	16.91	KW	0.1626	kWh
Large Govt. (L)	16.64	KW	0.1626	kWh
Navy (N)	28.85	KW	0.1552	kWh
IPP (I)	8.55	KW	0.1552	kWh
Condos	25.34	KW	0.1626	kWh

Cost of Service Charges

Customer Class	COS Customer Charge	Demand	Energy
Residential (R)	$ 32.36	$ -	$ 0.2633
Small General (G 1ϕ)	32.36	-	0.2448
Small General (G 3ϕ)	63.28	-	0.2372
Small Govt. (S 1ϕ)	32.36	-	0.2548
Small Govt. (S 3ϕ)	63.28	-	0.2401
Private Outdoor Lighting (H)	39.61	-	0.1915
Public Street Lights (F)	237.65	-	0.4228
General Service (J 1ϕ)	157.18	26.81	0.1626
General Service (J 3ϕ)	157.64	25.01	0.1626
Large Power (P)	310.62	32.66	0.1626
Small Govt. (K 1ϕ)	157.18	20.17	0.1626
Small Govt. (K 3ϕ)	157.64	25.88	0.1626
Large Govt. (L)	310.62	27.29	0.1626
Navy (N)	714.70	37.21	0.1552
IPP (I)	145.64	18.34	0.1552
Condos	214.54	37.34	0.1626

Load Research Data

	Load Factors for NCP				System Coincidence Factors			
Customer Class Type	Summer	Winter	Inter-2	Inter-4	Summer	Winter	Inter-2	Inter-4
Residential (R)	64%	69%	63%	70%	100%	95%	95%	99%
Small General (G 1ϕ)	61%	64%	61%	66%	70%	69%	69%	72%
Small General (G 3ϕ)	73%	75%	73%	76%	76%	79%	75%	77%
Small Govt. (S 1ϕ)	62%	70%	64%	72%	85%	87%	86%	86%
Small Govt. (S 3ϕ)	71%	76%	74%	77%	78%	82%	85%	76%
Private Outdoor Lighting (H)	45%	45%	45%	45%	0%	0%	0%	0%
Public Street Lights (F)	45%	45%	45%	45%	0%	0%	0%	0%
General Service (J 1ϕ)	50%	46%	47%	47%	87%	85%	86%	88%
General Service (J 3ϕ)	47%	45%	46%	47%	77%	77%	75%	79%
Large Power (P)	62%	60%	63%	61%	86%	88%	88%	88%
Small Govt. (K 1ϕ)	29%	29%	32%	31%	70%	58%	75%	55%
Small Govt. (K 3ϕ)	50%	48%	52%	52%	81%	76%	81%	77%
Large Govt. (L)	50%	49%	52%	50%	66%	62%	66%	62%
Navy (N)	86%	85%	83%	85%	92%	89%	88%	90%
IPP (I)	3%	8%	7%	17%	0%	0%	0%	0%
Condos	66%	65%	56%	67%	97%	99%	98%	95%

Condo/Apartments

- Current billed in three rate classes:

	Units J3	Units P	Units G1
Customers	14	10	1
Energy Usage	5,725,954	16,642,461	1,244,529
Demand - kW	13,343	33,661	3,186

- Option: Movement to Cost of Service Based Rates would lower the charges by 8.7% and reduce GPA's revenue recovery by $553,000

Revenue Recovery Options:

- Increase all rate classes (Except Navy) by 0.4%
  - Residential Impact $0.35/Month
- Apply increase only to residential class:
  - Residential Impact $1.05/Month
- Postpone adjustment until 2023:
  - Base rate adjustment of 8.4% is anticipated
  - Fuel costs are projected to decline 13.1%
  - Anticipated overall residential rate reduction of 8.1%

Questions



GUAM POWER AUTHORITY
ATURIDAT ILEKTRESEDAT GUAHAN
P O BOX 2977, AGANA, GUAM 96932-2977
Telephone: (671) 648-3066 Fax: (671) 648-3168

GUAM POWER AUTHORITY
FINANCIAL STATEMENT OVERVIEW
November 2019

Attached are the financial statements and supporting schedules for the month and fiscal year ended November 30, 2019.

Summary
The increase in net assets for the month ended was $1.9 million as compared to the anticipated net increase of $1.0 million projected at the beginning of the year. The total kWh sales for the year were 2.49% less than projected and non-fuel revenues were $0.3 million less than the estimated amount. O & M expenses for the month were $5.9 million which was $0.4 million less than our projections for this year. Other expenses for the month such as interest expense, IPP costs, (net of interest income and other income) totaled to $3.0 million, which was right in line with the projected amounts. There were no other significant departures from the budget during the period.

Analysis

Description	Previous Month	Current Month	Target
Quick Ratio	2.62	2.31	2
Days in Receivables	43	43	52
Days in Payables	32	42	30
LEAC (Over)/Under Recovery Balance -YTD	$8,209,522	$7,887,109	$10,505,912
T&D Losses	5.33%	5.33%	<7.00%
Debt Service Coverage	1.64	1.62	1.75
Long-term equity ratio	0.90%	1.24%	30 – 40%
Days in Cash	221	230	60

The Quick Ratio has been a challenge for GPA historically. However, the influx of cash from insurance proceeds continued to improve this ratio. GPA has current obligations of approximately $90 million and approximately $208 million in cash and current receivables. The LEAC over-recovery for the month was $0.3 million. Debt Service Coverage ratio is calculated using the methodology in use before the Fiscal Year 2002 change in accounting practice.

Financial Statements
November 2019

Significant Assumptions

The significant assumptions in the financial statements are as follows:

- Accrual cutoff procedures were performed at month end
- An inventory valuation is performed at year-end only
- Accounts Receivable includes accruals based on prior months' usage.

Prepared by:	Reviewed by:	Approved by:
Lenora M. Sanz Controller	John J.E. Kim Chief Financial Officer	John M. Benavente, P.E. General Manager

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Net Position
November 30, 2019 and September 30, 2019

	Unaudited November 2019	Unaudited September 2019	Change from Sept 30 2019
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES			
Current assets:			
Cash and cash equivalents:			
Held by trustee for restricted purposes:			
Interest and principal funds	$ 10,867,344	$ 33,053,886	$ (22,186,542)
Bond indenture funds	28,031,153	29,168,116	(1,136,963)
Held by Guam Power Authority:			
Bond indenture funds	161,360,021	154,027,791	7,332,230
Self insurance fund-restricted	19,378,387	19,378,387	0
Energy sense fund	354,574	333,528	21,046
Total cash and cash equivalents	219,991,479	235,961,708	(15,970,229)
Accounts receivable, net	45,487,951	41,867,589	3,620,362
Total current receivables	45,487,951	41,867,589	3,620,362
Materials and supplies inventory	12,412,199	12,521,306	(109,107)
Fuel inventory	47,891,893	41,214,022	6,677,871
Prepaid expenses	9,407,917	2,066,278	7,341,639
Total current assets	335,191,439	333,630,903	1,560,536
Utility plant, at cost:			
Electric plant in service	1,084,697,436	1,084,434,067	263,369
Construction work in progress	39,714,799	37,592,719	2,122,080
Total	1,124,412,235	1,122,026,786	2,385,449
Less: Accumulated depreciation	(638,738,292)	(633,190,295)	(5,547,997)
Total utility plant	485,673,943	488,836,491	(3,162,548)
Other non-current assets:			
Investment - bond reserve funds held by trustee	48,522,940	48,599,853	(76,913)
Unamortized debt issuance costs	2,176,436	2,221,160	(44,724)
Total other non-current assets	50,699,376	50,821,013	(121,637)
Total assets	871,564,758	873,288,407	(1,723,649)
Deferred outflow of resources:			
Deferred fuel revenue	7,887,109	9,943,732	(2,056,623)
Unamortized loss on debt refunding	24,353,044	24,733,104	(380,060)
Pension	8,932,987	8,932,987	0
Other post employment benefits	13,798,017	13,798,017	0
Unamortized forward delivery contract costs	292,078	318,638	(26,560)
Total deferred outflows of resources	55,263,235	57,726,478	(2,463,243)
	$ 926,827,993	$ 931,014,885	$ (4,186,892)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statement of Net Position, Continued
November 30, 2019 and September 30, 2019

	Unaudited November 2019	Unaudited September 2019	Change from Sept 30 2019
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION			
Current liabilities:			
Current maturities of long-term debt	$ 20,515,000	$ 16,130,000	$ 4,385,000
Current obligations under capital leases	3,304,531	3,304,531	0
Accounts payable			
Operations	48,347,756	27,385,427	20,962,328
Others	414,057	23,036	391,022
Accrued payroll and employees' benefits	1,435,336	2,348,815	(913,479)
Current portion of employees' annual leave	2,227,911	2,153,583	74,328
Interest payable	5,063,376	14,733,265	(9,669,889)
Customer deposits	8,721,851	8,912,096	(190,245)
Total current liabilities	90,029,818	74,990,753	15,039,065
Regulatory liabilities:			
Provision for self insurance	19,345,291	19,345,291	0
Total regulatory liabilities	19,345,291	19,345,291	0
Long term debt, net of current maturities	563,748,190	584,892,990	(21,144,800)
Obligations under capital leases, net of current portion	6,288,678	7,664,664	(1,375,986)
Net Pension liability	72,328,180	72,866,989	(538,809)
Other post employment benefits liability	145,955,861	145,955,861	0
DCRS sick leave liability	1,331,151	1,331,151	0
Employees' annual leave net of current portion	1,204,085	1,204,085	0
Customer advances for construction	389,808	394,540	(4,732)
Total liabilities	900,621,062	908,646,324	(8,025,262)
Deferred inflows of resources:			
Unearned forward delivery contract revenue	1,070,699	1,168,036	(97,337)
Pension	3,532,642	3,532,642	0
Other post employment benefits	14,804,043	14,804,043	0
Total deferred inflows of resources	19,407,384	19,504,721	(97,337)
Commitments and contigencies			
Net Position:			
Net investment in capital assets	(32,018,170)	(45,782,266)	13,764,095
Restricted	28,971,280	51,357,358	(22,386,078)
Unrestricted	9,846,436	(2,711,253)	12,557,690
Total net position	6,799,546	2,863,840	3,935,708
	$ 926,827,993	$ 931,014,885	$ (4,186,892)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM
Statement of Revenues, Expenses and Changes in Net Assets

	November 30 Unaudited 2019	November 30 Unaudited 2018	% of change Inc (dec)	Two Months Ended November 30 Unaudited 2019	Two Months Ended November 30 Unaudited 2018	% of change Inc (dec)
Revenues						
Sales of electricity	$ 32,446,278	$ 33,913,666	(4)	$ 66,051,140	$ 68,028,632	(3)
Miscellaneous	158,017	284,230	(44)	282,435	640,424	(56)
Total	32,604,295	34,197,896	(5)	66,333,575	68,669,056	(3)
Bad debt expense	(90,917)	(91,500)	(1)	(181,834)	(183,000)	(1)
Total revenues	32,513,378	34,106,396	(5)	66,151,741	68,486,056	(3)
Operating and maintenance expenses						
Production fuel	19,088,151	20,710,545	(8)	39,253,360	41,261,031	(5)
Other production	1,426,919	1,132,655	26	2,705,672	2,410,077	12
	20,515,070	21,843,200	(6)	41,959,032	43,671,108	(4)
Depreciation	3,103,969	3,708,915	(16)	6,202,636	7,335,101	(15)
Energy conversion cost	1,020,920	1,404,104	(27)	2,028,012	2,748,851	(26)
Transmission & distribution	1,005,152	765,841	31	2,060,742	1,715,698	20
Customer accounting	374,740	370,981	1	876,089	787,962	11
Administrative & general	2,674,685	2,514,421	6	5,159,467	5,329,922	(3)
Total operating and maintenance expenses	28,694,536	30,607,462	(6)	58,285,978	61,588,642	(5)
Operating income	3,818,842	3,498,934	9	7,865,763	6,897,414	14
Other income (expenses)						
Interest income	314,663	390,379	(19)	530,088	517,043	3
Interest expense and amortization	(2,320,981)	(2,383,971)	(3)	(4,630,019)	(4,783,304)	(3)
Bond issuance costs	89,228	87,022	3	178,456	175,044	2
Bid bond forfeiture	0	0	0	0	0	
Allowance for funds used during construction	0	0		0	0	
Losses due to typhoon	0	(215,691)	0	0	(215,691)	0
Other expense	(4,294)	(4,291)	0	(8,582)	(8,582)	0
		0				
Total other income (expenses)	(1,921,384)	(2,126,552)	(10)	(3,930,057)	(4,315,490)	(9)
Income (loss) before capital contributions	1,897,458	1,372,382	38	3,935,706	2,581,924	52
Capital contributions	0	0	0	0	0	0
Increase (decrease) in net assets	1,897,458	1,372,382	38	3,935,706	2,581,924	52
Total net assets at beginning of period (restated)	4,902,088	(17,099,108)	0	2,863,840	(18,308,650)	(116)
Total net assets at end of period	$ 6,799,546	$ (15,726,726)	(143)	$ 6,799,546	$ (15,726,726)	(143)

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows
Period Ended November 30, 2019

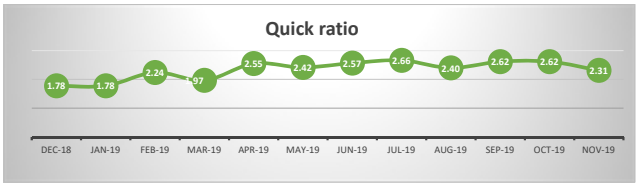
	Month Ended 11/30/2019	YTD Ended 11/30/2019
Increase(decrease) in cash and cash equivalents		
Cash flows from operating activities:		
Cash received from customers	$33,063,976	$ 62,501,615
Cash payments to suppliers and employees for goods and services	20,830,382	43,624,110
Net cash provided by operating activities	$12,233,594	18,877,505
Cash flows from investing activities:		
Interest and dividends on investments and bank accounts	314,663	530,088
Net cash provided by investing activities	314,663	530,088
Cash flows from non-capital financing activities		
Interest paid on short term debt	(8,863)	(198,694)
Provision for self insurance funds	-	-
Net cash provided by noncapital financing activities	(8,863)	(198,694)
Cash flows from capital and related financing activities		
Acquisition of utility plant	(768,536)	(3,040,088)
Principal paid on bonds and other long-term debt	-	(16,130,000)
Interest paid on bonds(net of capitalized interest)	-	(14,014,000)
Interest paid on capital lease obligations	(55,498)	(87,214)
Interest & principal funds held by trustee	(3,978,226)	22,186,542
Reserve funds held by trustee	(25,805)	76,913
Bond funds held by trustee	803,627	1,136,963
Principal payment on capital lease obligations	(676,102)	(1,375,986)
Grant from DOI/FEMA	-	-
Debt issuance costs/loss on defeasance	(314,900)	(629,800)
Net cash provided by (used in) capital and related financing activities	(5,015,440)	(11,876,670)
Net (decrease) increase in cash and cash equivalents	7,523,954	7,332,229
Cash and cash equivalents, beginning	153,836,065	154,027,791
Cash and cash equivalents-Funds held by GPA, November 30, 2019	**$ 161,360,020**	**$ 161,360,020**

GUAM POWER AUTHORITY
(A COMPONENT UNIT OF THE GOVERNMENT OF GUAM)
Statements of Cash Flows, continued
Period Ended November 30, 2019

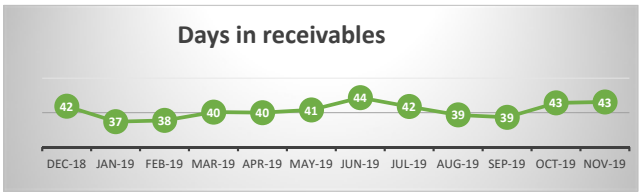
	Month Ended 11/30/2019	YTD Ended 11/30/2019
Reconciliation of operating earnings to net cash provided by operating activities:		
Operating earnings net of depreciation expense and excluding interest income	$3,818,842	$7,865,763
Adjustments to reconcile operating earnings to net cash provided by operating activities:		
Depreciation and amortization	3,103,969	6,202,636
Other expense	84,934	169,874
(Increase) decrease in assets:		
Accounts receivable	601,953	(3,620,362)
Materials and inventory	93,783	109,107
Fuel inventory	(1,462,891)	(6,677,871)
Prepaid expenses	(5,307,205)	(7,341,639)
Unamortized debt issuance cost	22,362	44,724
Deferred fuel revenue	322,413	2,056,623
Unamortized loss on debt refunding	190,030	380,060
Unamortized forward delivery contract costs	13,280	26,560
Increase (decrease) in liabilities:		
Accounts payable-operations	10,845,299	20,962,328
Accounts payable-others	(61,419)	369,976
Accrued payroll and employees' benefits	234,922	(913,479)
Net pension liability	(268,655)	(538,809)
Employees' annual leave	3,640	74,328
Customers deposits	47,005	(190,245)
Customer advances for construction	-	(4,732)
Unearned forward delivery contract revenue	(48,668)	(97,337)
Net cash provided by operating activities	**$12,233,594**	**$ 18,877,505**

Guam Power Authority
Financial Analysis
11/30/2019

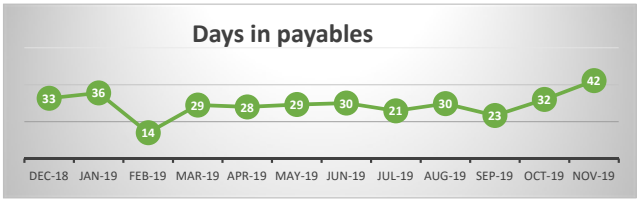
	Quick Ratio		
A	Reserve Funds Held by GPA		161,360,021
B	Current Accounts Receivable		46,971,340
C	Total Cash and A/R (A+B)		208,331,361
D	Total Current Liabilities		90,029,818
E	**Quick Ratio (F/G)**		**2.31**



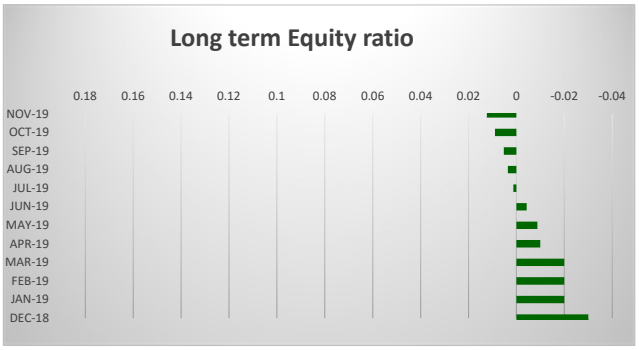
	Days in Receivables		
A	FY 19 Moving 12 Mos.-Actual		397,755,320
B	No. of Days		365
C	Average Revenues per day (A/B)		1,089,741
D	Current Accounts Receivable		46,971,340
E	**Days in Receivables (D/C)**		**43**



	Days in Payables		
A	FY 19 Moving 12 Months-Actual		421,800,333
B	No. of Days		365
C	Average Payables per day (A/B)		1,155,617
D	Current Accounts Payables		48,761,813
E	**Days in Payables (D/C)**		**42**

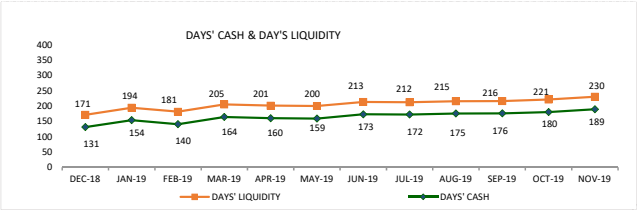


	Long term equity ratio		
A	Equity	$	6,799,546.00
B	Total Long term Liability	$	539,529,491.00
C	Total Equity and liability	$	546,329,037.00
D	**Long term equity ratio (A/C)**		**1.24%**



	Days cash on hand		
A	Unresctricted cash & cash equivalents		161,360
B	No. of Days -YTD		61
C	A x B		9,842,961
D	Total Operating expenses excluding depreciation		52,083
E	**Days cash on hand**		**189**

	Days' Liquidity		
A	Unresctricted cash , cash equivalents & revolving Credit		196,360
B	No. of Days -YTD		61
C	A x B		11,977,961
D	Total Operating expenses excluding depreciation		52,083
E	**Days liquidity**		**230**



GPA 302

GUAM POWER AUTHORITY
ACCRUED REVENUE
NOVEMBER 2019

	FOR THE MONTH ENDED NOVEMBER		TWO MONTHS ENDED NOVEMBER	
	2019	2018	2019	2018
KWH SALES:				
Residential	41,832,586	41,148,899	83,840,140	83,343,168
Small Gen. Non Demand	5,409,659	6,712,433	10,960,215	13,500,035
Small Gen. Demand	16,236,716	15,054,686	32,741,025	30,686,997
Large General	24,973,240	26,074,017	50,254,075	51,012,819
Independent Power Producer	33,926	35,867	63,077	66,393
Private St. Lights	33,968	33,984	67,628	67,515
Sub-total	88,520,094	89,059,886	177,926,160	178,676,927
Government Service:				
Small Non Demand	739,934	1,096,422	1,518,528	2,315,232
Small Demand	8,287,162	7,758,614	17,218,001	15,743,374
Large	6,140,795	5,989,384	12,504,877	12,252,791
Street Lighting	652,963	744,605	1,517,238	1,564,949
Sub-total	15,820,854	15,589,026	32,758,644	31,876,346
Total	104,340,948	104,648,912	210,684,805	210,553,273
U. S. Navy	25,080,100	24,888,490	50,689,087	51,472,863
GRAND TOTAL	129,421,048	129,537,402	261,373,892	262,026,136
REVENUE:				
Residential	10,464,359	10,286,420	20,985,599	20,884,233
Small Gen. Non Demand	1,595,257	1,938,660	3,243,516	3,934,653
Small Gen. Demand	4,449,885	4,091,967	8,984,357	8,393,284
Large General	6,456,820	6,715,109	12,954,099	13,082,381
Independent Power Producer	8,849	10,699	16,477	19,206
Private St. Lights	25,875	26,021	51,742	52,222
Sub-total	23,001,043	23,068,875	46,235,789	46,365,978
Government Service:				
Small Non Demand	236,107	335,403	482,346	703,582
Small Demand	2,407,924	2,230,742	4,961,225	4,500,085
Large	1,709,248	1,646,650	3,463,746	3,380,935
Street Lighting	459,553	479,197	962,781	974,218
Sub-total	4,812,832	4,691,993	9,870,098	9,558,820
Total	27,813,875	27,760,868	56,105,888	55,924,798
U. S. Navy	4,632,403	6,152,798	9,945,252	12,103,834
GRAND TOTAL	32,446,278	33,913,666	66,051,140	68,028,632
NUMBER OF CUSTOMERS:				
Residential	44,602	43,996	44,593	43,994
Small Gen. Non Demand	4,092	4,131	4,092	4,180
Small Gen. Demand	1,085	982	1,084	983
Large General	120	117	121	118
Independent Power Producer	2	3	2	3
Private St. Lights	515	527	516	526
Sub-total	50,416	49,756	50,407	49,802
Government Service:				
Small Non Demand	644	678	645	677
Small Demand	383	354	383	340
Large	44	47	44	43
Street Lighting	618	378	618	504
Sub-total	1,689	1,457	1,690	1,562
Total	52,105	51,213	52,096	51,364
US Navy	1	1	1	1
	52,106	51,214	52,097	51,365

GPA403

GUAM POWER AUTHORITY
ACCRUED REVENUE

	TWELVE MONTHS ENDED	NOVEMBER 2019	OCTOBER 2019	SEPTEMBER 2019	AUGUST 2019	JULY 2019	JUNE 2019	MAY 2019	APRIL 2019	MARCH 2019	FEBRUARY 2019	JANUARY 2019	DECEMBER 2018
KWH SALES:													
Residential	497,269,599	41,832,586	42,007,555	39,850,588	41,847,978	45,512,584	46,454,816	45,901,332	42,026,049	40,399,698	33,484,048	36,661,215	41,291,151
Small General Non Demand	73,561,130	5,409,659	5,550,556	5,281,337	5,043,909	6,192,199	7,135,817	6,785,836	7,066,118	6,549,399	5,421,847	6,252,665	6,871,789
Small General Demand	189,694,102	16,236,716	16,504,309	16,034,273	16,546,802	17,132,421	16,196,923	16,473,837	15,551,604	15,250,813	13,414,678	14,926,054	15,425,672
Large General	300,520,184	24,973,240	25,280,835	24,400,150	25,901,704	25,960,590	25,905,882	25,831,230	24,717,184	24,793,966	22,118,423	24,846,497	25,790,483
Private Outdoor Lighting	396,572	33,968	33,660	32,707	34,326	31,882	34,779	33,473	30,560	32,171	32,766	32,878	33,401
Independent Power Producer	394,941	33,926	29,151	47,591	31,920	34,342	33,644	31,329	28,130	34,407	25,891	36,117	28,494
Sub-Total	1,061,836,528	88,520,094	89,406,066	85,646,645	89,406,638	94,864,018	95,761,862	95,057,036	89,419,645	87,060,454	74,497,653	82,755,426	89,440,990
Government Service:													
Small Non Demand	11,973,650	739,934	778,594	733,348	792,642	745,870	1,225,034	1,265,906	1,195,401	1,192,582	1,019,279	1,066,520	1,218,540
Small Demand	99,375,688	8,287,162	8,930,840	8,706,945	8,790,473	8,806,768	7,970,826	8,650,402	8,019,578	8,144,760	7,207,579	7,752,635	8,107,721
Large	72,239,465	6,140,795	6,364,082	6,031,079	6,328,596	6,026,050	5,952,146	6,344,614	5,914,002	5,983,823	5,273,740	5,782,397	6,098,140
Street Lighting (Agencies)	9,193,886	652,963	864,275	711,804	864,386	763,574	710,958	838,818	763,841	710,856	791,792	714,935	805,684
Sub-Total	192,782,689	15,820,854	16,937,791	16,183,177	16,776,096	16,342,261	15,858,964	17,099,740	15,892,823	16,032,021	14,292,390	15,316,487	16,230,084
Total	1,254,619,217	104,340,948	106,343,856	101,829,822	106,182,735	111,206,280	111,620,826	112,156,776	105,312,468	103,092,475	88,790,044	98,071,914	105,671,074
U.S. Navy	313,014,290	25,080,100	25,608,987	25,184,246	27,239,150	27,997,548	27,082,742	28,255,054	27,083,234	26,077,843	22,368,909	24,517,651	26,518,827
Grand Total	1,567,633,508	129,421,048	131,952,844	127,014,068	133,421,884	139,203,828	138,703,568	140,411,830	132,395,702	129,170,318	111,158,952	122,589,564	132,189,902
REVENUE:													
Residential	124,567,484	10,464,359	10,521,241	10,007,200	10,470,951	11,397,991	11,569,285	11,457,009	10,559,992	10,171,326	8,491,117	9,109,499	10,347,514
Small General Non Demand	21,614,327	1,595,257	1,648,259	1,579,415	1,492,266	1,835,976	2,060,263	1,943,284	2,086,044	1,927,366	1,599,494	1,844,100	2,002,603
Small General Demand	52,058,983	4,449,885	4,534,471	4,422,371	4,572,505	4,665,289	4,374,426	4,442,708	4,275,919	4,237,399	3,714,204	4,135,462	4,234,344
Large General	77,415,031	6,456,820	6,497,279	6,283,768	6,671,085	6,607,718	6,673,278	6,615,844	6,321,363	6,456,767	5,778,637	6,433,966	6,618,506
Private Outdoor Lighting	309,228	25,875	25,867	25,616	26,038	25,412	26,200	25,670	25,155	25,651	25,784	26,100	25,860
Independent Power Producer	107,459	8,849	7,628	13,738	9,248	8,337	8,701	8,600	7,310	9,896	7,681	10,117	7,355
Sub-Total	276,072,512	23,001,043	23,234,746	22,332,107	23,242,093	24,540,723	24,712,154	24,493,115	23,275,783	22,828,405	19,616,918	21,559,243	23,236,182
Government Service:													
Small Non Demand	3,697,533	236,107	246,239	232,567	250,901	235,628	373,461	383,585	361,853	364,404	311,171	328,284	373,332
Small Demand	28,592,829	2,407,924	2,553,302	2,491,735	2,527,222	2,494,451	2,319,401	2,465,281	2,284,016	2,363,416	2,065,940	2,248,023	2,372,119
Large	20,046,110	1,709,248	1,754,498	1,671,314	1,754,837	1,655,430	1,659,702	1,743,611	1,632,794	1,668,683	1,492,275	1,614,932	1,688,786
Street Lighting (Agencies)	5,798,106	459,553	503,228	471,713	503,316	482,461	471,543	497,965	482,529	472,435	488,836	465,560	498,967
Sub-Total	58,134,578	4,812,832	5,057,267	4,867,330	5,036,276	4,867,971	4,824,107	5,090,441	4,761,191	4,868,938	4,358,222	4,656,799	4,933,204
Total	334,207,089	27,813,875	28,292,013	27,199,437	28,278,369	29,408,694	29,536,261	29,583,556	28,036,974	27,697,343	23,975,139	26,216,042	28,169,387
U.S. Navy	63,548,231	4,632,403	5,312,849	4,808,157	5,647,382	5,623,735	6,373,008	5,183,974	4,925,354	5,245,421	5,307,473	5,221,857	5,266,617
Grand Total	397,755,320	32,446,278	33,604,862	32,007,594	33,925,751	35,032,429	35,909,269	34,767,531	32,962,328	32,942,764	29,282,613	31,437,899	33,436,004
NUMBER OF CUSTOMERS:													
Residential	44,326	44,602	44,584	44,479	44,497	44,408	44,329	44,640	44,200	44,144	44,018	44,091	43,920
Small General Non Demand	4,158	4,092	4,091	4,087	4,122	4,197	4,211	4,213	4,185	4,183	4,173	4,180	4,166
Small General Demand	1,019	1,085	1,082	1,080	1,086	1,014	971	983	985	985	984	986	987
Large General	120	120	121	120	121	120	119	119	118	121	119	119	118
Private Outdoor Lighting	520	515	517	520	518	519	520	520	522	523	521	522	523
Independent Power Producer	2	2	2	2	2	2	2	2	2	2	2	2	2
Sub-Total	50,145	50,416	50,397	50,288	50,346	50,260	50,152	50,477	50,012	49,958	49,817	49,900	49,716
Government Service:													
Small Non Demand	666	644	645	644	648	671	676	676	672	675	678	679	683
Small Demand	367	383	383	382	382	381	356	355	356	357	357	356	360
Large	43	44	44	44	44	43	43	42	42	42	42	42	47
Street Lighting (Agencies)	622	618	618	618	618	619	618	618	621	629	628	628	628
Sub-Total	1,698	1,689	1,690	1,688	1,692	1,714	1,693	1,691	1,691	1,703	1,705	1,705	1,718
Total	51,843	52,105	52,087	51,976	52,038	51,974	51,845	52,168	51,703	51,661	51,522	51,605	51,434
U.S. Navy	1	1	1	1	1	1	1	1	1	1	1	1	1
Grand Total	51,844	52,106	52,088	51,977	52,039	51,975	51,846	52,169	51,704	51,662	51,523	51,606	51,435

GPA 303

GUAM POWER AUTHORITY
ACCRUED REVENUE
NOVEMBER 2019

RATE	NUMBER OF CUSTOMERS	KWH SALES	TOTAL REVENUE AMOUNT	TOTAL REVENUE C/KWH	BASE RATE REVENUE C/KWH	BASE RATE REVENUE AMOUNT	AVERAGE PER CUSTOMER KWH	AVERAGE PER CUSTOMER REVENUE	NON-FUEL C/KWH	NON-FUEL AMOUNT	0.154242 OIL C/KWH	0.154242 OIL AMOUNT
Month												
R Residential	44,602	41,832,586	$ 10,464,359	$ 25.01	$ 25.01	$ 10,464,359	938	$ 235	$ 9.59	$ 4,012,017	$ 15.42	$ 6,452,342
G Small Gen. Non Demand	4,092	5,409,659	$ 1,595,257	$ 29.49	$ 29.49	$ 1,595,257	1,322	$ 390	$ 14.06	$ 760,860	$ 15.42	$ 834,397
J Small Gen. Demand	1,085	16,236,716	$ 4,449,885	$ 27.41	$ 27.41	$ 4,449,885	14,965	$ 4,101	$ 11.99	$ 1,946,604	$ 15.42	$ 2,503,281
P Large General	120	24,973,240	$ 6,456,820	$ 25.85	$ 25.85	$ 6,456,820	208,110	$ 53,807	$ 10.50	$ 2,622,393	$ 15.35	$ 3,834,426
I Independent Power Producer	2	33,926	$ 8,849	$ 26.08	$ 26.08	$ 8,849	16,963	$ 4,424	$ 11.19	$ 3,795	$ 14.90	$ 5,054
H Private St. Lights	515	33,968	$ 25,875	$ 76.17	$ 76.17	$ 25,875	66	$ 50	$ 60.75	$ 20,635	$ 15.42	$ 5,239
Sub-Total	50,416	88,520,094	$ 23,001,043	$ 25.98	$ 25.98	$ 23,001,043	1,756	$ 456	$ 10.58	$ 9,366,305	$ 15.40	$ 13,634,739
Government Service:												
S Small Non Demand	644	739,934	$ 236,107	$ 31.91	$ 31.91	$ 236,107	1,149	$ 367	$ 16.48	$ 121,978	$ 15.42	$ 114,129
K Small Demand	383	8,287,162	$ 2,407,924	$ 29.06	$ 29.06	$ 2,407,924	21,637	$ 6,287	$ 13.63	$ 1,129,695	$ 15.42	$ 1,278,228
L Large	44	6,140,795	$ 1,709,248	$ 27.83	$ 27.83	$ 1,709,248	139,564	$ 38,847	$ 12.60	$ 773,651	$ 15.24	$ 935,597
F Street Lighting (Agencies)	618	652,963	$ 459,553	$ 70.38	$ 70.38	$ 459,553	1,057	$ 744	$ 54.96	$ 358,838	$ 15.42	$ 100,714
Sub-Total	1,689	15,820,854	$ 4,812,832	$ 30.42	$ 30.42	$ 4,812,832	9,367	$ 2,850	$ 15.07	$ 2,384,163	$ 15.35	$ 2,428,669
												$ 16,063,408
U.S. Navy	1	25,080,100	$ 4,632,403	$ 18.47	$ 18.47	$ 4,632,403			$ 6.41	$ 1,607,660	$ 12.06	$ 3,024,743
TOTAL	**52,106**	**129,421,048**	**$ 32,446,278**	**$ 25.07**	**$ 25.07**	**$ 32,446,278**	**2,484**	**$ 623**	**$ 10.32**	**$ 13,358,127**	**$ 14.75**	**$ 19,088,151**
Two Months Ended November 2019												
R Residential	44,593	83,840,140	$ 20,985,599	$ 25.03	$ 25.03	$ 20,985,599	1,880	$ 471	$ 9.61	$ 8,053,928	$ 15.42	$ 12,931,671
G Small Gen. Non Demand	4,092	10,960,215	$ 3,243,516	$ 29.59	$ 29.59	$ 3,243,516	2,679	$ 793	$ 14.17	$ 1,552,991	$ 15.42	$ 1,690,525
J Small Gen. Demand	1,084	32,741,025	$ 8,984,357	$ 27.44	$ 27.44	$ 8,984,357	30,218	$ 8,292	$ 12.02	$ 3,936,571	$ 15.42	$ 5,047,785
P Large General	121	50,254,075	$ 12,954,099	$ 25.78	$ 25.78	$ 12,954,099	417,046	$ 107,503	$ 10.42	$ 5,238,596	$ 15.35	$ 7,715,503
I Independent Power Producer	2	63,077	$ 16,477	$ 26.12	$ 26.12	$ 16,477	31,538	$ 8,238	$ 11.23	$ 7,081	$ 14.90	$ 9,396
H Private St. Lights	516	67,628	$ 51,742	$ 76.51	$ 76.51	$ 51,742	131	$ 100	$ 61.08	$ 41,311	$ 15.42	$ 10,431
Sub-Total	50,407	177,926,160	$ 46,235,789	$ 25.99	$ 25.99	$ 46,235,789	3,530	$ 917	$ 10.58	$ 18,830,478	$ 15.40	$ 27,405,311
Government Service:												
S Small Non Demand	645	1,518,528	$ 482,346	$ 31.76	$ 31.76	$ 482,346	2,356	$ 748	$ 16.34	$ 248,125	$ 15.42	$ 234,221
K Small Demand	383	17,218,001	$ 4,961,225	$ 28.81	$ 28.81	$ 4,961,225	44,956	$ 12,954	$ 13.39	$ 2,305,486	$ 15.42	$ 2,655,739
L Large	44	12,504,877	$ 3,463,746	$ 27.70	$ 27.70	$ 3,463,746	284,202	$ 78,722	$ 12.46	$ 1,558,292	$ 15.24	$ 1,905,454
F Street Lighting (Agencies)	618	1,517,238	$ 962,781	$ 63.46	$ 63.46	$ 962,781	2,455	$ 1,558	$ 48.03	$ 728,759	$ 15.42	$ 234,022
Sub-Total	1,690	32,758,644	$ 9,870,098	$ 30.13	$ 30.13	$ 9,870,098	19,390	$ 5,842	$ 14.78	$ 4,840,662	$ 15.35	$ 5,029,436
U.S. Navy	1	50,689,087	$ 9,945,252	$ 19.62	$ 19.62	$ 9,945,252			$ 6.17	$ 3,126,639	$ 13.45	$ 6,818,613
TOTAL	**52,097**	**261,373,892**	**$ 66,051,140**	**$ 25.27**	**$ 25.27**	**$ 66,051,140**	**5,017**	**$ 1,268**	**$ 10.25**	**$ 26,797,779**	**$ 15.02**	**$ 39,253,360**
Twelve Months Ended November 2019												
R Residential	44,326	497,269,599	$ 124,567,484	$ 25.05	$ 25.05	$ 124,567,484	11,218	$ 2,810	$ 9.63	$ 47,867,626	$ 15.42	$ 76,699,857
G Small Gen. Non Demand	4,158	73,561,130	$ 21,614,327	$ 29.38	$ 29.38	$ 21,614,327	17,690	$ 5,198	$ 13.96	$ 10,268,111	$ 15.42	$ 11,346,216
J Small Gen. Demand	1,019	189,694,102	$ 52,058,983	$ 27.44	$ 27.44	$ 52,058,983	186,157	$ 51,088	$ 12.03	$ 22,813,170	$ 15.42	$ 29,245,813
P Large General	120	300,520,184	$ 77,415,031	$ 25.76	$ 25.76	$ 77,415,031	2,513,061	$ 647,373	$ 10.41	$ 31,279,741	$ 15.35	$ 46,135,291
I Independent Power Producer	2	394,941	$ 107,459	$ 27.21	$ 27.21	$ 107,459	197,471	$ 53,730	$ 12.33	$ 48,681	$ 14.88	$ 58,778
H Private St. Lights	520	396,572	$ 309,228	$ 77.98	$ 77.98	$ 309,228	763	$ 595	$ 62.55	$ 248,060	$ 15.42	$ 61,168
Sub-Total	50,145	1,061,836,528	$ 276,072,512	$ 26.00	$ 26.00	$ 276,072,512	21,175	$ 5,505	$ 10.60	$ 112,525,389	$ 15.40	$ 163,547,123
Government Service:												
S Small Non Demand	666	11,973,650	$ 3,697,533	$ 30.88	$ 30.88	$ 3,697,533	17,981	$ 5,553	$ 15.46	$ 1,850,693	$ 15.42	$ 1,846,840
K Small Demand	367	99,375,688	$ 28,592,829	$ 28.77	$ 28.77	$ 28,592,829	270,533	$ 77,839	$ 13.35	$ 13,264,924	$ 15.42	$ 15,327,905
L Large	43	72,239,465	$ 20,046,110	$ 27.75	$ 27.75	$ 20,046,110	1,670,277	$ 463,494	$ 12.51	$ 9,039,033	$ 15.24	$ 11,007,077
F Street Lighting (Agencies)	622	9,193,886	$ 5,798,106	$ 63.06	$ 63.06	$ 5,798,106	14,787	$ 9,325	$ 47.64	$ 4,380,022	$ 15.42	$ 1,418,083
Sub-Total	1,698	192,782,689	$ 58,134,578	$ 30.16	$ 30.16	$ 58,134,578	113,518	$ 34,232	$ 14.80	$ 28,534,672	$ 15.35	$ 29,599,905
	51,843	1,254,619,217	$ 334,207,089	$ 26.64	$ 26.64	$ 334,207,089	24,200	$ 6,447	$ 11.24	$ 141,060,061	$ 15.39	$ 193,147,029
U.S. Navy	1	313,014,290	$ 63,548,231	$ 20.30	$ 20.30	$ 63,548,231			$ 6.34	$ 19,834,780	$ 13.97	$ 43,713,450
TOTAL	**51,844**	**1,567,633,508**	**$ 397,755,320**	**$ 25.37**	**$ 25.37**	**$ 397,755,320**	**30,237**	**$ 7,672**	**$ 10.26**	**$ 160,894,841**	**$ 15.11**	**$ 236,860,479**

GPA-318 **ENERGY ACCOUNT** **FOR INTERNAL USE ONLY**

318Nov19 **FY 2020 Versus FY 2019**

	November 2019		November 2018		Y T D 2020		Y T D 2019		MOVING TWELVE MONTHS	
Gross Generation										
Number of days in Period	**30**		**30**		**61**		**61**		**365**	
Peak demand	**245**		**241**		**247**		**245**		**255**	
Date	**11/04/19**		**11/07/18**		**10/23/19**		**11/04/19**		**06/06/19**	
	KWH	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**	**KWH**	**% change**
Energy Account:										
Kilowatt hours GPA:										
Cabras 1 & 2	38,684,000		63,680,000		103,284,000		125,956,000		735,144,000	
Cabras No. 3	0		0		0		0		0	
Cabras No. 4	0		0		0		0		0	
MEC (ENRON) Piti 8 (IPP)	26,303,200		28,204,400		56,594,000		43,167,600		291,874,600	
MEC (ENRON) Piti 9 (IPP)	26,440,100		24,992,800		57,095,100		47,445,400		300,731,070	
TEMES Piti 7 (IPP)	11,037,475		4,627,988		15,711,956		17,721,578		47,347,573	
Tanguisson 2	0		0		0		0		0	
Tanguisson 1	0		0		0		0		0	
Diesels/CT's & Others:							0			
MDI 10MW	101,736		26,777		101,736		68,932		735,494	
NRG Solar Dandan	3,640,517		3,995,716		7,698,685		8,111,488		47,557,721	
Dededo CT #1	1,300,700		86,370		1,376,910		2,485,880		3,782,840	
Dededo CT #2	1,968,030		15,000		2,243,650		3,090,250		6,831,640	
Macheche CT	7,601,788		3,581,690		12,178,768		10,205,948		55,847,005	
Yigo CT (Leased)	6,788,998		3,651,575		9,017,749		10,516,538		47,771,636	
Tenjo	6,151,880		1,650,480		9,941,300		7,764,420		30,420,250	
Talofofo 10 MW	352,680		0		1,051,400		0		9,867,290	
Aggreko	11,298,451		8,116,353		12,467,825		13,275,604		148,611,867	
Wind Turbine*	0		0		12,221		10,431		146,588	
Orote	0		0		0		0		0	
Marbo	0		0		0		0		0	
	141,669,555		**142,629,149**		**288,775,301**		**289,820,069**		**1,726,669,574**	
Ratio to last year		99.33		96.11		99.64		**98.23**		**100.78**
Station use	4,854,260		5,619,537		10,820,496		11,310,332		66,400,627	
Ratio to Gross generation		3.43		3.94		3.75		3.90		**3.85**
Net send out	136,815,295		137,009,613		277,954,805		278,509,737		1,660,268,947	
Ratio to last year		99.86		95.79		99.80		**98.11**		**100.60**
KWH deliveries:										
Sales to Navy (@34.5kv)	**25,080,100**		**24,888,490**		**50,689,087**		**51,472,863**		**313,014,291**	
Ratio to last year		100.77		92.74		98.48		**98.83**		**102.34**
GPA-metered	**111,735,195**		**112,121,123**		**227,265,718**		**227,036,874**		**1,347,254,656**	
Ratio to last year		99.66		96.49		100.10		**97.95**		**100.20**
Power factor adj.	0		0		0		0		0	
Adjusted	111,735,195		112,121,123		227,265,718		227,036,874		1,347,254,656	
GPA KWH Accountability:										
Sales to civilian customers-										
accrual basis	**104,340,948**		**104,648,912**		**210,684,804**		**210,553,273**		**1,254,619,218**	
Ratio to last year		99.71		95.83		100.06		**96.93**		**100.06**
GPA use-KWH	330,917		335,814		685,631		673,861		4,151,562	
Unaccounted For	7,063,330		7,136,396		15,895,283		15,809,740		88,483,876	
Ratio to deliveries		6.32		6.36		6.99		6.96		6.57
Ratio to Gross Generation		4.99		5.00		5.50		5.46		5.12
Ratio to Net Send Out		5.16		5.21		5.72		5.68		5.33

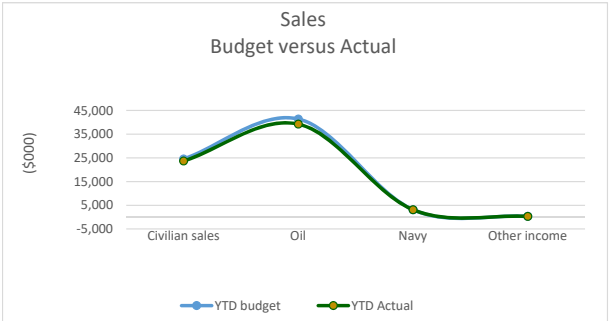
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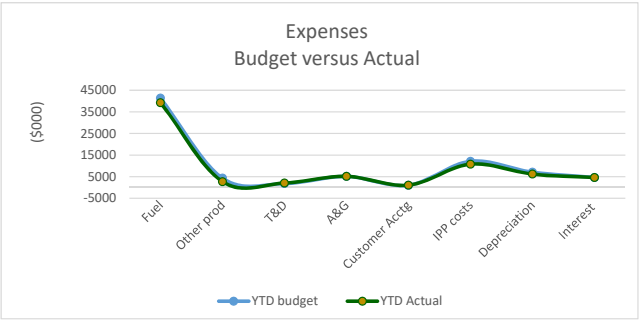
Guam Power Authority
Fuel Consumption
FY 2020

Description	November 2019 BARRELS	November 2019 AMOUNT	YEAR-TO-DATE BARRELS	YEAR-TO-DATE AMOUNT	MOVING 12 MONTHS BARREL S	MOVING 12 MONTHS AMOUNT
FUEL FURNISHED:						
NAVY:						
Diesel	0	0	0	0	0	0
Low Sulfur	0	0	0	0	0	0
	0	**0**	**0**	**0**	**0**	**0**
GPA:						
RFO	97,613	$5,815,568	214,807	$ 13,763,865	1,433,172	$ 102,686,140
Diesel	100,266	$8,894,795	138,711	$ 12,358,023	732,126	$ 67,166,000
Low Sulfur	39,142	$2,566,107	118,313	$ 8,100,627	602,915	$ 45,656,915
Deferred Fuel Costs	0	$322,414	0	$ 2,056,623	0	$ 3,480,833
Fuel Adjustments	0	$0		$ -	0	$ 230,610
Fuel Handling Costs	0	$1,489,266	0	$ 2,974,223	0	$ 17,639,982
	237,021	**$19,088,151**	**471,831**	**$ 39,253,360**	**2,768,213**	**$ 236,860,479**
IWPS:						
GPA RFO	97,613	$5,815,568	214,807	$ 13,763,865	1,433,172	$ 102,686,140
Diesel	100,266	$8,894,795	138,711	$ 12,358,023	732,126	$ 67,166,000
Low Sulfur	39,142	$2,566,107	118,313	$ 8,100,627	602,915	$ 45,656,915
Deferred Fuel Costs	0	$322,414	0	$ 2,056,623	0	$ 3,480,833
Fuel Variance	0	$0	0	$ -		$ 230,610
Fuel Handling Costs	0	$1,489,266	0	$ 2,974,223	0	$ 17,639,982
	237,021	**$19,088,151**	**471,831**	**$ 39,253,360**	**2,768,213**	**$ 236,860,479**
AVERAGE COST/Bbl.						
GPA RFO		**$59.58**		**$64.08**		**$71.65**
Diesel		**$88.71**		**$89.09**		**$91.74**
Low Sulfur		**$65.56**		**$68.47**		**$75.73**
AS BURNED						
Cabras 1 & 2						
RFO	43,894	$ 2,626,499	108,046	$ 6,985,422	900,162	$ 65,136,372
Low Sulfur	21,995	$ 1,441,950	71,466	$ 4,885,946	341,178	$ 25,328,641
Diesel	106	$ 9,660	106	$ 9,660	1,880	$ 175,843
	65,995	$ 4,078,109	179,618	$ 11,881,028	1,243,220	$ 90,640,855
Cabras 3 & 4						
RFO	0	$ -	0	$ -	0	$ -
Low Sulfur	0	$ -	0	$ -	0	$ -
Diesel	0	$ -	0	$ -	0	$ -
	0	$ -	0	$ -	0	$ -
MEC (Piti Units 8&9)						
RFO	53,719	$ 3,189,070	106,760	$ 6,778,443	533,010	$ 37,549,768
Low Sulfur	17,147	$ 1,124,158	46,847	$ 3,214,680	261,737	$ 20,328,274
Diesel	0	$ -	2	$ 159	36	$ 2,570
	70,866	$ 4,313,227	153,610	$ 9,993,282	794,784	$ 57,880,612
Diesel & CT's - GPA:						
MDI Dsl	164	$ 15,509	164	$ 15,509	1,128	$ 96,637
Macheche CT	16,164	$ 1,422,205	26,509	$ 2,322,582	121,837	$ 11,041,138
Yigo CT	14,747	$ 1,295,280	19,479	$ 1,709,261	104,315	$ 9,438,055
Talofofo 10 MW	593	$ 52,462	1,843	$ 160,886	17,407	$ 1,580,845
Aggreko	20,699	$ 1,818,799	22,743	$ 1,995,173	274,739	$ 24,918,253
Tenjo	10,472	$ 965,175	16,903	$ 1,605,017	52,675	$ 5,414,500
TEMES (IPP)	27,364	$ 2,418,072	39,819	$ 3,519,233	124,604	$ 11,337,968
GWA Generators	103	$ 13,879	204	$ 27,225	1,005	$ 130,482
	100,160	$ 8,885,135	138,603	$ 12,348,204	730,209	$ 66,987,587
Deferred Fuel Costs	0	$ 322,414		$ 2,056,623		$ 3,480,833
Adjustment		$ -		$ -		$ 230,610
Fuel Handling Costs	0	$ 1,489,266		$ 2,974,223		$ 17,639,982
TOTAL	**237,021**	**$ 19,088,151**	**471,831**	**$ 39,253,360**	**2,768,213**	**$ 236,860,479**

Statement of operations
Comparison-Budget versus Actual
For the month and year to date ended November 30, 2019

	Budget	Actual November-19	Variance	YTD Budget	YTD Actual	Variance
KwH Sales-Civilian	108,588	106,344	2,244	218,461	212,688	5,773
Non-fuel yield	$ 0.112119	$ 0.110490	$ 0.001628	$ 0.112332	$ 0.111294	$ 0.001037
KwH Sales-Navy	24,133	25,609	-1,476	46,592	51,218	-4,626
Non-fuel yield	$ 0.062452	$ 0.062790	$ (0.000339)	$ 0.066900	$ 0.061053	$ 0.005847
Operating revenue						
Civilian sales	$ 12,175	$ 11,750	$ 425	$ 24,533	$ 23,671	$ 862
Oil	20,471	19,088	1,383	41,394	39,253	2,141
Navy	1,507	1,608	(101)	3,117	3,127	(10)
Other income	180	158	22	360	282	78
	$ 34,333	$ 32,604	$ 1,729	$ 69,404	$ 66,333	$ 3,070
Bad debts expense	91	91	(0)	182	182	(0)
Total operating revenues	$ 34,242	$ 32,513	$ 1,729	$ 69,222	$ 66,152	$ 3,070
Operating expenses:						
Production fuel	$ 20,471	$ 19,088	$ 1,383	$ 41,394	$ 39,253	$ 2,141
O & M expenses:						
Other production	2,192	1,427	765	4,332	2,706	1,626
Transmission distribution	887	1,005	(118)	1,819	2,061	(242)
Administrative expense	2,453	2,675	(222)	5,127	5,159	(33)
Customer accounting	394	375	19	846	876	(30)
	5,925	5,481	444	12,124	10,802	1,322
IPP costs	1,246	1,021	225	2,492	2,028	464
Depreciation	3,543	3,104	439	7,086	6,203	884
	$ 31,186	$ 28,695	$ 2,491	$ 63,097	$ 58,286	$ 4,811
Operating income	$ 3,056	$ 3,819	$ (762)	$ 6,125	$ 7,866	$ (1,741)
Other revenue (expenses):						
Investment income	167	315	(148)	334	530	(196)
Interest expense	(2,315)	(2,321)	6	(4,630)	(4,630)	(0)
Bond issuance costs/Other expenses	139	85	54	278	170	108
Net income before capital contribution	1,047	1,897	(851)	2,107	3,936	(1,830)
Grants from the U.S. Government	-	-	-	-	-	-
Increase (decrease) in net assets	$ 1,047	$ 1,897	$ (851)	$ 2,107	$ 3,936	$ (1,830)





Guam Power Authority
Debt service coverage
November 30, 2019

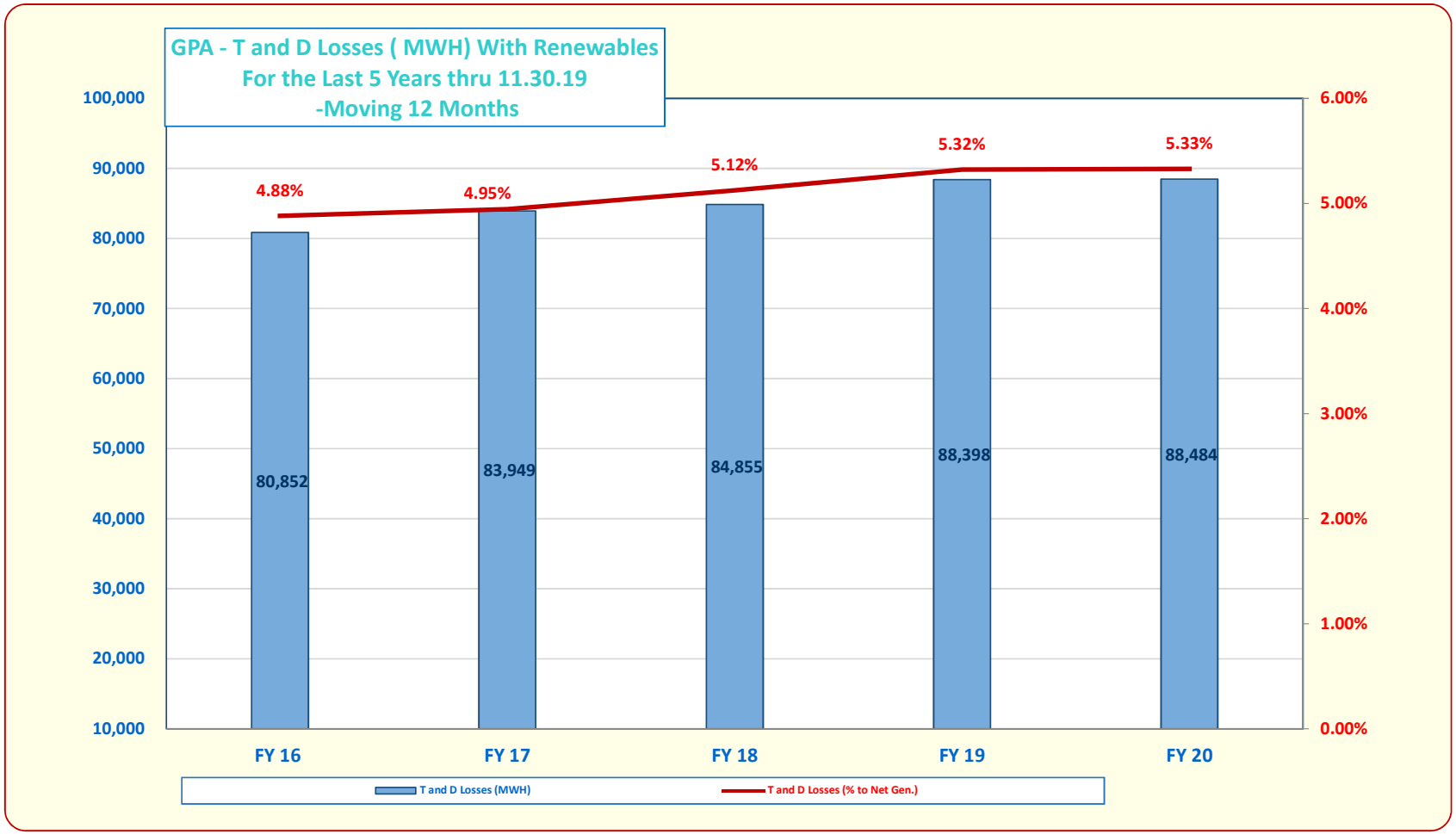
	2016	Restated 2017	Audited 2018	Unaudited 2019	YTD Unaudited 2020
Funds Available for Debt Service					
Earnings from Operations	$ 37,981	$ 36,522	$ 38,164	$ 44,818	$ 7,866
Interest Income	57	122	620	5,008	344
Depreciation Expense	44,240	44,292	37,184	37,344	6,203
Balance Available for Debt Service	$ 82,278	$ 80,936	$ 75,968	$ 87,170	$ 14,412
IPP - Capital Costs					
Principal	$ 14,819	$ 20,796	$ 23,210	$ 13,470	$ 1,400
Interest	5,970	5,609	3,159	1,068	89
Total IPP Payments	$ 20,789	$ 26,405	$ 26,369	$ 14,538	$ 1,488
Bond Debt Service					
Principal (1993 & 1999 Revenue Bond)	$ -	$ -	$ -	$ -	$ -
Interest (1993 & 1999 Revenue Bond)	-	-	-	-	-
Principal and Interest (2010 Subordinate Bond)	-	-	-	-	-
Principal and Interest (2010 Senior TE Bond)	7,999	7,999	2,000	-	-
Principal and Interest (2012 Senior TE Bond)	17,098	17,449	17,086	31,467	5,872
Principal and Interest (2014 Senior TE Bond)	10	5,084	5,083	5,084	848
Principal and Interest (2017 Senior TE Bond)			5,916	7,607	1,236
Total	$ 25,107	$ 30,532	$ 30,086	$ 44,158	$ 7,956
Debt Service Coverage (DSC) Calculation					
Existing DSC Methodology (Senior)	2.45 x	1.79 x	1.65 x	1.64 x	1.62 x
Existing DSC Methodology (Senior+Subordinate)	2.45 x	1.79 x	1.65 x	1.64 x	1.62 x
Bond Covenant DSC	3.28 x	2.65 x	2.53 x	1.97 x	1.81 x
Debt Service Coverage Requirements					
Existing Ratemaking DSC Target	1.75 x	1.75 x	1.75 x	1.75 x	1.75 x
Minimum Bond Covenant Requirement (Senior Bond)	1.30 x	1.30 x	1.30 x	1.30 x	1.30 x
Minimum Bond Covenant Requirement (Subordinate Bonc	1.20 x	1.20 x	1.20 x	1.20 x	1.20 x

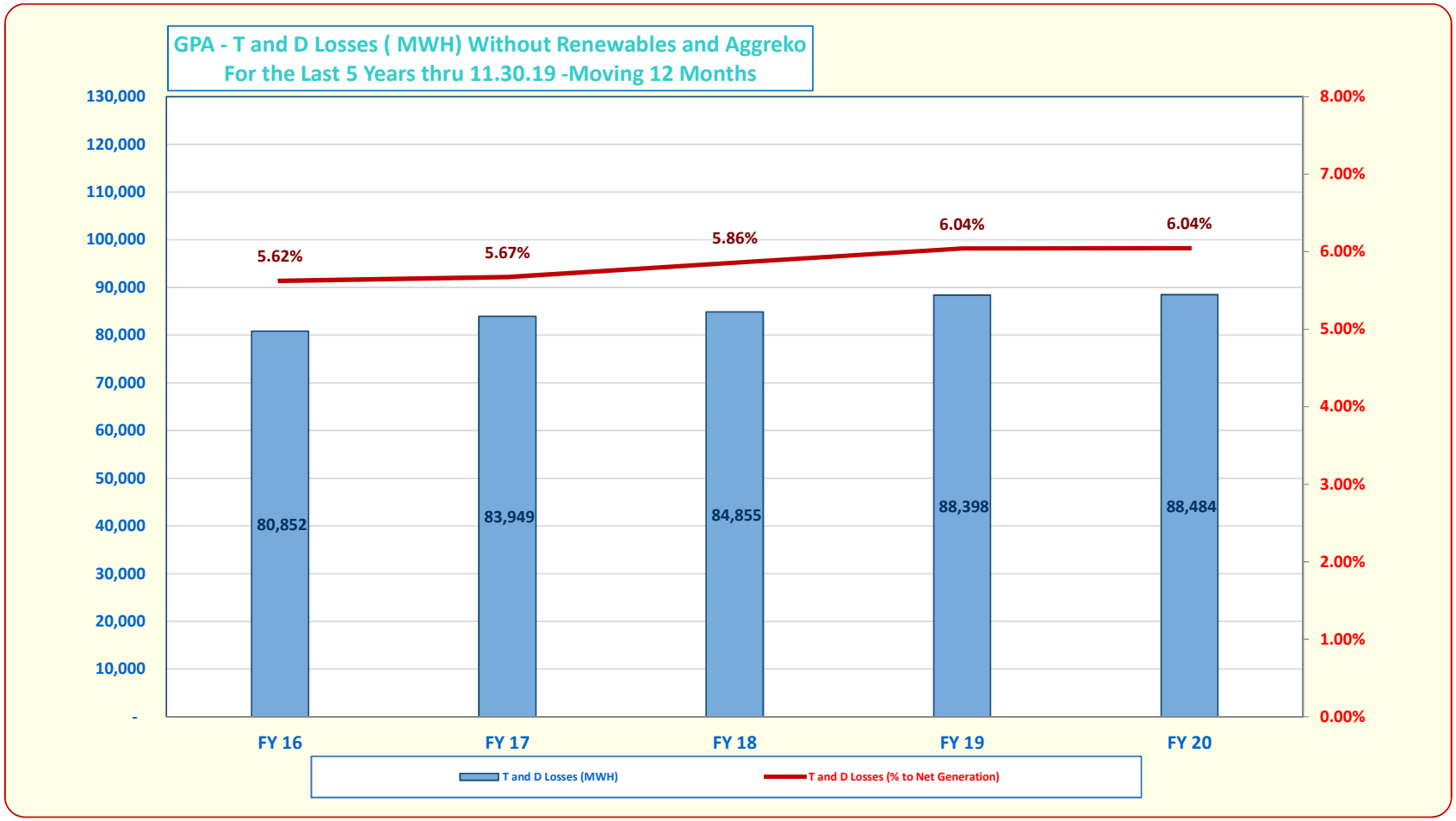
Notes:
(1) Source: Guam Power Authority, 2014 - 2018 Audited Financial Statements
(2) Interest income is net of interest earnings in the Construction Fund and the amortization of deferred credit.
(3) Existing DSC Methodology (Rating Agency Method):
(Operating Earnings + Depreciation Expense - IPP Principal & Interest Payments)/
(Senior and Subordinate Bond Principal & Interest Payments)
(4) Bond Covenant DSC Methodology: (Operating Earnings + Depreciation Expense)/
(Senior and Subordinate Bond Principal & Interest Payments)

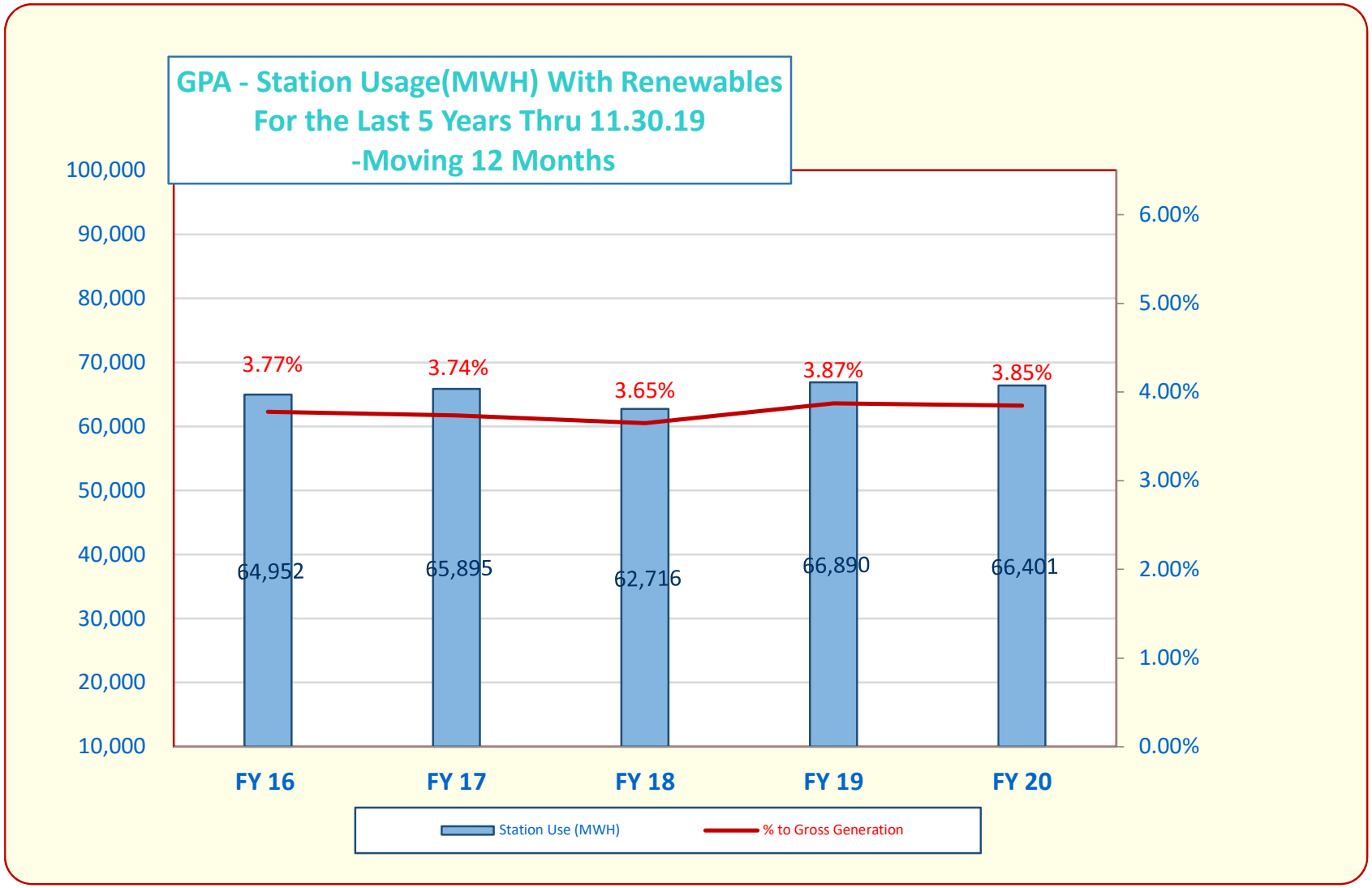
REVENUES-ACTUAL VS PROJECTIONS

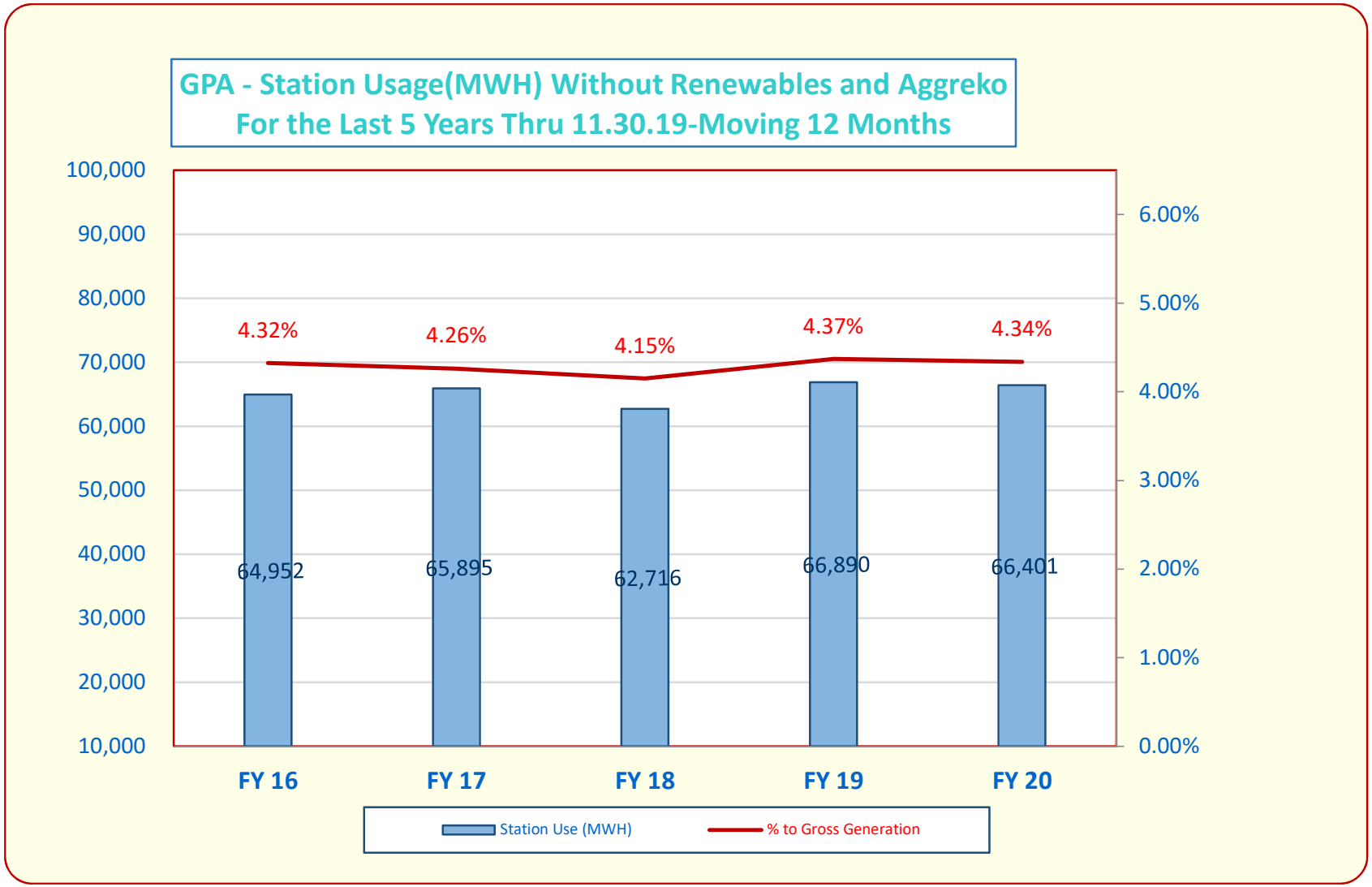
	MONTHLY - NOVEMBER 2019				YTD THRU 11/30/19			
	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE	PROJECTIONS	ACTUAL	VARIANCE	% VARIANCE
KWH								
Residential	43,091,031	41,832,586	(1,258,446)	-2.92%	87,276,773	83,840,140	(3,436,632)	-3.94%
Small General-Non-Demand	7,325,406	5,409,659	(1,915,747)	-26.15%	14,732,845	10,960,215	(3,772,630)	-25.61%
Small General-Demand	14,927,037	16,236,716	1,309,679	8.77%	30,426,802	32,741,025	2,314,224	7.61%
Large	27,229,077	24,973,240	(2,255,837)	-8.28%	53,272,651	50,254,075	(3,018,576)	-5.67%
Independent Power Producers	34,387	33,926	(462)	-1.34%	67,278	63,077	(4,201)	-6.24%
Private St. Lites	5,239	33,968	28,729	548.38%	10,408	67,628	57,220	549.78%
Sub-total	**92,612,178**	**88,520,094**	**(4,092,084)**	**-4.42%**	**185,786,756**	**177,926,160**	**(7,860,596)**	**-4.23%**
Government								
Small_Non Demand	1,163,764	739,934	(423,830)	-36.42%	2,457,432	1,518,528	(938,904)	-38.21%
Small-Demand	7,536,514	8,287,162	750,648	9.96%	15,292,700	17,218,001	1,925,301	12.59%
Large	6,554,640	6,140,795	(413,845)	-6.31%	13,409,165	12,504,877	(904,288)	-6.74%
Public St. Lites	720,693	652,963	(67,730)	-9.40%	1,514,692	1,517,238	2,546	0.17%
Sub-total	**15,975,612**	**15,820,854**	**(154,758)**	**-0.97%**	**32,673,990**	**32,758,644**	**84,655**	**0.26%**
Total-Civilian	**108,587,790**	**104,340,948**	**(4,246,842)**	**-3.91%**	**218,460,745**	**210,684,805**	**(7,775,941)**	**-3.56%**
USN	24,132,860	25,080,100	947,240	3.93%	49,910,115	50,689,087	778,972	1.56%
Grand Total	**132,720,650**	**129,421,048**	**(3,299,602)**	**-2.49%**	**268,370,861**	**261,373,892**	**(6,996,969)**	**-2.61%**
					-	-		
Non-Oil Yield								
Residential	0.096264	0.095906	(0.000358)	-0.37%	0.096264	0.096063	(0.000202)	-0.21%
Small General-Non-Demand	0.136877	0.140648	0.003772	2.76%	0.136877	0.141693	0.004817	3.52%
Small General-Demand	0.120054	0.119889	(0.000165)	-0.14%	0.120054	0.120234	0.000180	0.15%
Large	0.104208	0.105008	0.000800	0.77%	0.104208	0.104242	0.000034	0.03%
Independent Power Producers	0.626461	0.111854	(0.514607)	0.00%	0.626461	0.112260	(0.514201)	0.00%
Private St. Lites	0.114929	0.607490	0.492561	428.58%	0.114929	0.610848	0.495920	431.50%
Sub-total	**0.105844**	**0.105810**	**(0.000035)**	**-0.03%**	**0.105852**	**0.105833**	**(0.000019)**	**-0.02%**
Government					-			
Small_Non Demand	0.150486	0.164850	0.014364	9.55%	0.150486	0.163399	0.012913	8.58%
Small-Demand	0.135060	0.136319	0.001259	0.93%	0.135060	0.133900	(0.001160)	-0.86%
Large	0.127855	0.125986	(0.001869)	-1.46%	0.127855	0.124615	(0.003240)	-2.53%
Public St. Lites	0.473421	0.549554	0.076133	16.08%	0.473421	0.480320	0.006899	1.46%
Sub-total	**0.148492**	**0.150697**	**0.002206**	**1.49%**	**0.148949**	**0.147767**	**(0.001181)**	**-0.79%**
Total-Civilian	**0.112119**	**0.112616**	**0.000497**	**0.44%**	**0.154242**	**0.112353**	**(0.041889)**	**-27.16%**
USN	0.062452	0.064101	0.001649	2.64%	0.062452	0.061683	(0.000769)	-1.23%
Grand Total	**0.103088**	**0.103214**	**0.000127**	**0.12%**	**0.103027**	**0.102527**	**(0.000501)**	**-0.49%**
Non-Oil Revenues								
Residential	4,148,136	4,012,017	(136,119)	-3.28%	8,401,654	8,053,928	(347,726)	-4.14%
Small General-Non-Demand	1,002,677	760,860	(241,817)	-24.12%	2,016,582	1,552,991	(463,592)	-22.99%
Small General-Demand	1,792,044	1,946,604	154,560	8.62%	3,652,846	3,936,571	283,726	7.77%
Large	2,837,485	2,622,393	(215,091)	-7.58%	5,551,430	5,238,596	(312,834)	-5.64%
Independent Power Producers	21,542	3,795	(17,748)	-82.38%	42,147	7,081	(35,066)	-83.20%
Private St. Lites	602	20,635	20,033	3327.21%	1,196	41,311	40,114	3353.60%
Sub-total	**9,802,486**	**9,366,305**	**(436,181)**	**-4.45%**	**19,665,855**	**18,830,478**	**(835,377)**	**-4.25%**
Government								
Small_Non Demand	175,130	121,978	(53,152)	-30.35%	369,808	248,125	(121,683)	-32.90%
Small-Demand	1,017,880	1,129,695	111,815	10.99%	2,065,430	2,305,486	240,057	11.62%
Large	838,043	773,651	(64,392)	-7.68%	1,714,429	1,558,292	(156,137)	-9.11%
Public St. Lites	341,191	358,838	17,647	5.17%	717,087	728,759	11,673	1.63%
Sub-total	**2,372,245**	**2,384,163**	**11,918**	**0.50%**	**4,866,753**	**4,840,662**	**(26,091)**	**-0.54%**
Total-Civilian	**12,174,730**	**11,750,467**	**(424,263)**	**-3.48%**	**24,532,608**	**23,671,141**	**(861,467)**	**-3.51%**
USN	1,507,136	1,607,660	100,523	6.67%	3,116,968	3,126,639	9,671	0.31%
Grand Total	**13,681,867**	**13,358,127**	**(323,740)**	**-2.37%**	**27,649,576**	**26,797,779**	**(851,796)**	**-3.08%**
% of Total Revenues	40.06%	41.17%			40.05%	40.57%		
Oil Revenues								
Residential	6,646,447	6,452,342	(194,105)	-2.92%	13,461,744	12,931,671	(530,073)	-3.94%
Small General-Non-Demand	1,129,885	834,397	(295,489)	-26.15%	2,272,423	1,690,525	(581,898)	-25.61%
Small General-Demand	2,302,376	2,503,281	200,905	8.73%	4,693,091	5,047,785	354,694	7.56%
Large	4,199,867	3,834,426	(365,441)	-8.70%	8,216,880	7,715,503	(501,378)	-6.10%
Independent Power Producers	5,304	5,054	(250)	-4.72%	10,377	9,396	(981)	-9.46%
Private St. Lites	808	5,239	4,431	548.38%	1,605	10,431	8,826	549.78%
Sub-total	**14,284,688**	**13,634,739**	**(649,949)**	**-4.55%**	**28,656,121**	**27,405,311**	**(1,250,810)**	**-4.36%**
Government								
Small_Non Demand	179,501	114,129	(65,372)	-36.42%	379,039	234,221	(144,818)	-38.21%
Small-Demand	1,162,447	1,278,228	115,781	9.96%	2,358,777	2,655,739	296,962	12.59%
Large	1,011,001	935,597	(75,404)	-7.46%	2,068,256	1,905,454	(162,802)	-7.87%
Public St. Lites	111,161	100,714	(10,447)	-9.40%	233,629	234,022	393	0.17%
Sub-total	**2,464,110**	**2,428,669**	**(35,442)**	**-1.44%**	**5,039,701**	**5,029,436**	**(10,266)**	**-0.20%**
Total-Civilian	**16,748,798**	**16,063,408**	**(685,390)**	**-4.09%**	**33,695,822**	**32,434,747**	**(1,261,075)**	**-3.74%**
USN	3,722,301	3,024,743	(697,558)	-18.74%	7,698,236	6,818,613	(879,623)	-11.43%
Grand Total	**20,471,098**	**19,088,151**	**(1,382,948)**	**-6.76%**	**41,394,058**	**39,253,360**	**(2,140,698)**	**-5.17%**
% of Total Revenues	59.94%	58.83%			59.95%	59.43%		
Grand Total								
Residential	10,794,583	10,464,359	(330,224)	-3.06%	21,863,398	20,985,599	(877,799)	-4.01%
Small General-Non-Demand	2,132,562	1,595,257	(537,305)	-25.20%	4,289,006	3,243,516	(1,045,490)	-24.38%
Small General-Demand	4,094,420	4,449,885	355,465	8.68%	8,345,936	8,984,357	638,420	7.65%
Large	7,037,352	6,456,820	(580,532)	-8.25%	13,768,310	12,954,099	(814,211)	-5.91%
Independent Power Producers	26,846	8,849	(17,998)	-67.04%	52,524	16,477	(36,047)	-68.63%
Private St. Lites	1,410	25,875	24,464	1734.87%	2,801	51,742	48,940	1746.94%
Sub-total	**24,087,173**	**23,001,043**	**(1,086,130)**	**-4.51%**	**48,321,976**	**46,235,789**	**(2,086,186)**	**-4.32%**
Government					-			
Small_Non Demand	354,631	236,107	(118,524)	-33.42%	748,848	482,346	(266,502)	-35.59%
Small-Demand	2,180,327	2,407,924	227,596	10.44%	4,424,206	4,961,225	537,019	12.14%
Large	1,849,044	1,709,248	(139,796)	-7.56%	3,782,685	3,463,746	(318,939)	-8.43%
Public St. Lites	452,352	459,553	7,201	1.59%	950,716	962,781	12,065	1.27%
Sub-total	**4,836,355**	**4,812,832**	**(23,523)**	**-0.49%**	**9,906,455**	**9,870,098**	**(36,356)**	**-0.37%**
Total-Civilian	**28,923,528**	**27,813,875**	**(1,109,653)**	**-3.84%**	**58,228,430**	**56,105,888**	**(2,122,543)**	**-3.65%**
USN	5,229,437	4,632,403	(597,034)	-11.42%	10,815,204	9,945,252	(869,952)	-8.04%
Grand Total	**34,152,965**	**32,446,278**	**(1,706,688)**	**-5.00%**	**69,043,634**	**66,051,140**	**(2,992,494)**	**-4.33%**
	-	-	-					

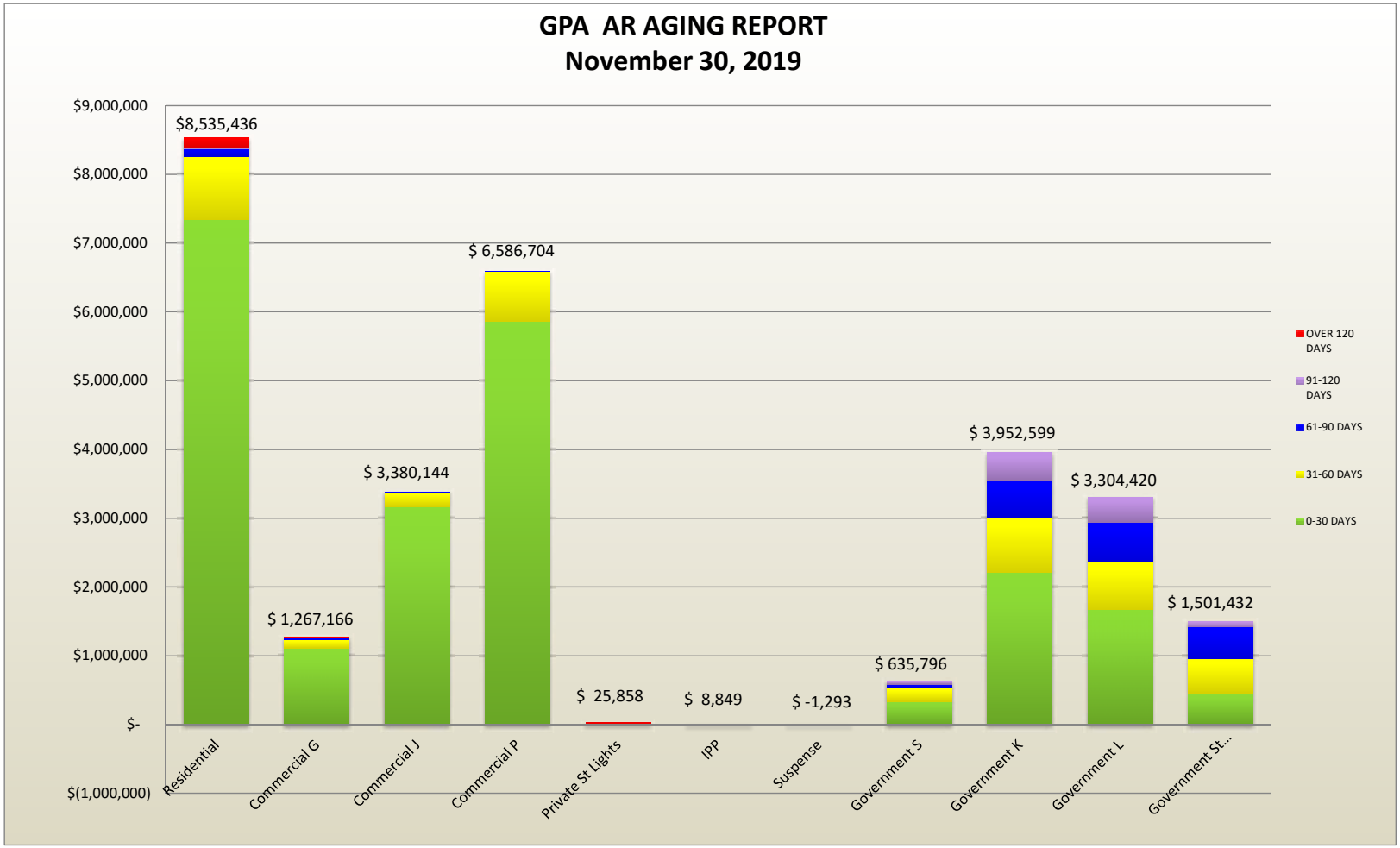
	YTD REVENUES - CURRENT YEAR VS PRIOR YEAR				MTD REVENUES - CURRENT YEAR VS PRIOR YEAR			
	ACTUALS - 2 MONTHS ENDED NOVEMBER 30				ACTUALS - MONTH ENDED NOVEMBER 30			
	2019	2018	VARIANCE	% VARIANCE	2019	2018	VARIANCE	% VARIANCE
KWH								
Residential	83,840,140	83,343,168	496,972	0.60%	41,832,586	41,148,899	683,687	1.66%
Small General-Non-Demand	10,960,215	13,500,035	(2,539,820)	-18.81%	5,409,659	6,712,433	(1,302,774)	-19.41%
Small General-Demand	32,741,025	30,686,997	2,054,028	6.69%	16,236,716	15,054,686	1,182,030	7.85%
Large	50,254,075	51,012,819	(758,745)	-1.49%	24,973,240	26,074,017	(1,100,777)	-4.22%
Independent Power Producers	63,077	66,393	(3,316)	-4.99%	33,926	35,867	(1,941)	-5.41%
Private St. Lites	67,628	67,515	113	0.17%	33,968	33,984	(16)	-0.05%
Sub-total	**177,926,160**	**178,676,927**	**(750,767)**	**-0.42%**	**88,520,094**	**89,059,886**	**(539,791)**	**-0.61%**
Government								
Small_Non Demand	1,518,528	2,315,232	(796,704)	-34.41%	739,934	1,096,422	(356,489)	-32.51%
Small-Demand	17,218,001	15,743,374	1,474,627	9.37%	8,287,162	7,758,614	528,548	6.81%
Large	12,504,877	12,252,791	252,086	2.06%	6,140,795	5,989,384	151,411	2.53%
Public St. Lites	1,517,238	1,564,949	(47,711)	-3.05%	652,963	744,605	(91,642)	-12.31%
Sub-total	**32,758,644**	**31,876,346**	**882,298**	**2.77%**	**15,820,854**	**15,589,026**	**231,828**	**1.49%**
Total-Civilian	**210,684,805**	**210,553,273**	**131,531**	**0.06%**	**104,340,948**	**104,648,912**	**(307,964)**	**-0.29%**
USN	50,689,087	51,472,863	(783,776)	-1.52%	25,080,100	24,888,490	191,610	0.77%
Grand Total	**261,373,892**	**262,026,136**	**(652,244)**	**-0.25%**	**129,421,048**	**129,537,402**	**(116,353)**	**-0.09%**
Non-Oil Yield								
Residential	0.096063	0.096339	-0.000276	-0.29%	0.095906	0.095738	0.000168	0.18%
Small General-Non-Demand	0.141693	0.137213	0.004480	3.27%	0.140648	0.134574	0.006074	4.51%
Small General-Demand	0.120234	0.119336	0.000898	0.75%	0.119889	0.117629	0.002260	1.92%
Large	0.104242	0.102939	0.001303	1.27%	0.105008	0.104055	0.000953	0.92%
Independent Power Producers	0.112260	0.140619	-0.028359	-20.17%	0.111854	0.149520	-0.037666	-25.19%
Private St. Lites	0.610848	0.619240	-0.008392	-1.36%	0.607490	0.611419	-0.003929	-0.64%
Sub-total	**0.105833**	**0.105475**	**0.000358**	**0.34%**	**0.105810**	**0.105019**	**0.000791**	**0.75%**
Government								
Small_Non Demand	0.163399	0.149651	0.013748	9.19%	0.164850	0.151665	0.013185	8.69%
Small-Demand	0.133900	0.131598	0.002302	1.75%	0.136319	0.133276	0.003043	2.28%
Large	0.124615	0.123534	0.001081	0.88%	0.125986	0.122560	0.003426	2.79%
Public St. Lites	0.480320	0.468282	0.012037	2.57%	0.549554	0.489317	0.060237	12.31%
Sub-total	**0.147767**	**0.146339**	**0.001429**	**0.98%**	**0.150697**	**0.147458**	**0.003239**	**2.20%**
Total-Civilian	**0.112353**	**0.111662**	**0.000691**	**0.62%**	**0.112616**	**0.111341**	**0.001275**	**1.15%**
USN	0.061683	0.063273	-0.001590	-2.51%	0.064101	0.062334	0.001767	2.83%
Grand Total	**0.102527**	**0.102156**	**0.000370**	**0.36%**	**0.103214**	**0.101925**	**0.001289**	**1.26%**
Non-Oil Revenues								
Residential	8,053,928	8,029,216	24,712	0.31%	4,012,017	3,939,532	72,485	1.84%
Small General-Non-Demand	1,552,991	1,852,380	(299,390)	-16.16%	760,860	903,321	(142,461)	-15.77%
Small General-Demand	3,936,571	3,662,053	274,518	7.50%	1,946,604	1,770,861	175,743	9.92%
Large	5,238,596	5,251,232	(12,636)	-0.24%	2,622,393	2,713,131	(90,737)	-3.34%
Independent Power Producers	7,081	9,336	(2,255)	-24.15%	3,795	5,363	(1,568)	-29.24%
Private St. Lites	41,311	41,808	(497)	-1.19%	20,635	20,779	(144)	-0.69%
Sub-total	**18,830,478**	**18,846,026**	**(15,548)**	**-0.08%**	**9,366,305**	**9,352,986**	**13,318**	**0.14%**
Government								
Small_Non Demand	248,125	346,476	(98,351)	-28.39%	121,978	166,289	(44,311)	-26.65%
Small-Demand	2,305,486	2,071,795	233,691	11.28%	1,129,695	1,034,038	95,657	9.25%
Large	1,558,292	1,513,633	44,659	2.95%	773,651	734,059	39,592	5.39%
Public St. Lites	728,759	732,838	(4,079)	-0.56%	358,838	364,348	(5,510)	-1.51%
Sub-total	**4,840,662**	**4,664,742**	**175,921**	**3.77%**	**2,384,163**	**2,298,734**	**85,429**	**3.72%**
Total-Civilian	**23,671,141**	**23,510,768**	**160,372**	**0.68%**	**11,750,467**	**11,651,720**	**98,747**	**0.85%**
USN	3,126,639	3,256,832	(130,193)	-4.00%	1,607,660	1,551,401	56,259	3.63%
Grand Total	**26,797,779**	**26,767,600**	**30,179**	**0.11%**	**13,358,127**	**13,203,120**	**155,007**	**1.17%**
% of Total Revenues								
Oil Revenues								
Residential	12,931,671	12,855,017	76,654	0.60%	6,452,342	6,346,888	105,453	1.66%
Small General-Non-Demand	1,690,525	2,082,272	(391,747)	-18.81%	834,397	1,035,339	(200,942)	-19.41%
Small General-Demand	5,047,785	4,731,231	316,555	6.69%	2,503,281	2,321,105	182,175	7.85%
Large	7,715,503	7,831,148	(115,645)	-1.48%	3,834,426	4,001,978	(167,552)	-4.19%
Independent Power Producers	9,396	9,870	(474)	-4.80%	5,054	5,336	(283)	-5.29%
Private St. Lites	10,431	10,414	17	0.17%	5,239	5,242	(3)	-0.05%
Sub-total	**27,405,311**	**27,519,952**	**(114,640)**	**-0.42%**	**13,634,739**	**13,715,889**	**(81,150)**	**-0.59%**
Government								
Small_Non Demand	234,221	357,106	(122,885)	-34.41%	114,129	169,114	(54,986)	-32.51%
Small-Demand	2,655,739	2,428,290	227,449	9.37%	1,278,228	1,196,704	81,524	6.81%
Large	1,905,454	1,867,302	38,152	2.04%	935,597	912,591	23,006	2.52%
Public St. Lites	234,022	241,381	(7,359)	-3.05%	100,714	114,849	(14,135)	-12.31%
Sub-total	**5,029,436**	**4,894,078**	**135,358**	**2.77%**	**2,428,669**	**2,393,259**	**35,410**	**1.48%**
Total-Civilian	**32,434,747**	**32,414,030**	**20,717**	**0.06%**	**16,063,408**	**16,109,148**	**(45,741)**	**-0.28%**
USN	6,818,613	8,847,001	(2,028,388)	-22.93%	3,024,743	4,601,397	(1,576,654)	-34.26%
Grand Total	**39,253,360**	**41,261,031**	**(2,007,671)**	**-4.87%**	**19,088,151**	**20,710,545**	**(1,622,395)**	**-7.83%**
% of Total Revenues								
Grand Total								
Residential	20,985,599	20,884,233	101,366	0.49%	10,464,359	10,286,420	177,938	1.73%
Small General-Non-Demand	3,243,516	3,934,653	(691,137)	-17.57%	1,595,257	1,938,660	(343,403)	-17.71%
Small General-Demand	8,984,357	8,393,284	591,073	7.04%	4,449,885	4,091,967	357,919	8.75%
Large	12,954,099	13,082,381	(128,281)	-0.98%	6,456,820	6,715,109	(258,289)	-3.85%
Independent Power Producers	16,477	19,206	(2,729)	-14.21%	8,849	10,699	(1,851)	-17.30%
Private St. Lites	51,742	52,222	(480)	-0.92%	25,875	26,021	(146)	-0.56%
Sub-total	**46,235,789**	**46,365,978**	**(130,189)**	**-0.28%**	**23,001,043**	**23,068,875**	**(67,832)**	**-0.29%**
Government								
Small_Non Demand	482,346	703,582	(221,236)	-31.44%	236,107	335,403	(99,297)	-29.61%
Small-Demand	4,961,225	4,500,085	461,140	10.25%	2,407,924	2,230,742	177,182	7.94%
Large	3,463,746	3,380,935	82,812	2.45%	1,709,248	1,646,650	62,598	3.80%
Public St. Lites	962,781	974,218	(11,438)	-1.17%	459,553	479,197	(19,645)	-4.10%
Sub-total	**9,870,098**	**9,558,820**	**311,278**	**3.26%**	**4,812,832**	**4,691,993**	**120,839**	**2.58%**
Total-Civilian	**56,105,888**	**55,924,798**	**181,090**	**0.32%**	**27,813,875**	**27,760,868**	**53,007**	**0.19%**
USN	9,945,252	12,103,834	(2,158,581)	-17.83%	4,632,403	6,152,798	(1,520,395)	-24.71%
Grand Total	**66,051,140**	**68,028,632**	**(1,977,492)**	**-2.91%**	**32,446,278**	**33,913,666**	**(1,467,388)**	**-4.33%**


GPA - T and D Losses (MWH) With Renewables
For the Last 5 Years thru 11.30.19
-Moving 12 Months
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
4.88%
4.95%
5.12%
5.32%
5.33%
80,852
83,949
84,855
88,398
88,484
FY 16
FY 17
FY 18
FY 19
FY 20
T and D Losses (MWH)
T and D Losses (% to Net Gen.)


GPA - T and D Losses (MWH) Without Renewables and Aggreko
For the Last 5 Years thru 11.30.19 -Moving 12 Months
130,000
120,000
110,000
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
5.62%
5.67%
5.86%
6.04%
6.04%
80,852
83,949
84,855
88,398
88,484
FY 16
FY 17
FY 18
FY 19
FY 20
T and D Losses (MWH)
T and D Losses (% to Net Generation)


GPA - Station Usage(MWH) With Renewables
For the Last 5 Years Thru 11.30.19
-Moving 12 Months
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
3.77%
3.74%
3.65%
3.87%
3.85%
64,952
65,895
62,716
66,890
66,401
FY 16
FY 17
FY 18
FY 19
FY 20
Station Use (MWH)
% to Gross Generation


GPA - Station Usage(MWH) Without Renewables and Aggreko
For the Last 5 Years Thru 11.30.19-Moving 12 Months
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
4.32%
4.26%
4.15%
4.37%
4.34%
64,952
65,895
62,716
66,890
66,401
FY 16
FY 17
FY 18
FY 19
FY 20
Station Use (MWH)
% to Gross Generation


GPA AR AGING REPORT
November 30, 2019
$9,000,000
$8,000,000
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$-
$(1,000,000)
$8,535,436
$ 1,267,166
$ 3,380,144
$ 6,586,704
$ 25,858
$ 8,849
$ -1,293
$ 635,796
$ 3,952,599
$ 3,304,420
$ 1,501,432
Residential
Commercial G
Commercial J
Commercial P
Private St Lights
IPP
Suspense
Government S
Government K
Government L
Government St...
OVER 120 DAYS
91-120 DAYS
61-90 DAYS
31-60 DAYS
0-30 DAYS

GUAM POWER AUTHORITY
GOVERNMENT ACCOUNTS RECEIVABLE
Billing up to December 31, 2019 and payments as of 01/22/2020

Current (10/18 Billing due 11/30/18
30 days Arrears (09/18 due 10/15/18)
60 days and over Arrears (08/18 billing due 09/15/18)

CC&B ACCT NUMBER	CC&B New Acct Numer	DEPARTMENT	CC&B BALANCE 11/30/2019	CANCEL/REBILL/ SPEC CHARGE 12/31/2019	BILLING 12/31/2019	PAYMENT UP TO 01/6/2020	CC&B BALANCE 01/6/2020
		Line Agencies					
0237100000	1073430238	Dept. of Corrections	156,391.49	1,157.49	81,548.44	(79,513.74)	159,583.68
0437100000	0040515913	Dept. of Parks & Rec.	20,489.40	(1,332.37)	22,027.94	(20,489.40)	20,695.57
0537100000	0453170939	Guam Fire Department	34,415.69	257.13	17,407.39	(51,824.02)	256.19
6995000000	8564647941	DOA Supply Mgmt (NET METERED)	837.77		829.53	(1,667.30)	-
7895000000	4211873236	Dept. of Administration	6,648.34	0.74	2,946.97	(9,596.05)	-
1337100000	4554808900	Nieves Flores Library	11,240.93		11,612.52	(22,853.45)	-
2206200000	9541109130	General Services Agency	526.14		272.57	(798.71)	-
2237100000	1621790133	DOA-Data Processing	18,501.03		9,791.08	(28,292.11)	-
2337100000	1896187753	Dept. of PH&SS	140,301.15	(17,664.05)	70,220.15	(209,476.89)	(16,619.64)
3237100000	7252821074	Dept. of Education	4,268,003.70	32,749.03	1,059,220.33	(2,095,698.02)	3,264,275.04
3337100000	0266069082	Guam Police Department	49,238.74		50,747.74	(99,986.48)	-
3569100000	6069461950	Dept of Youth Affairs (Federal)	561.08		608.23	(1,169.31)	-
4437100000	2913461537	Dept. of Youth Affair* (Local)	12,943.30		13,574.09	(26,517.39)	-
4737100000	3404311949	Guam Environmental Protect	6,864.01	103.33	6,973.11	(13,837.12)	103.33
5437100000	3227759982	Mental Health/Subst.	92,595.44	1,394.14	47,449.23	(92,595.44)	48,843.37
	6841080463	Guam Behavioral Health & Wellness	3,585.60	53.98	1,980.33	(3,558.91)	2,061.00
7200300000	0070861777	Veteran Affairs	4,209.93	30.36	1,996.96	(2,194.02)	4,043.23
	6243861917	Guam Veterans Affairs Office	0.00				0.00
7437100000	8300435373	Civil Defense (Military Affairs)	25,201.68	379.44	12,416.16		37,997.28
7463300000	7813165805	Pacific Energy Resource Center	1,412.12	21.26	708.88		2,142.26
8137100000	1595188609	Dept. of Agriculture	19,444.23	145.58	9,825.56	(19,742.20)	9,673.17
8337100000	2535590089	DPW-FAC Adm Account	48,683.02	469.92	31,967.11	(46,903.78)	34,216.27
8437100000	7928924534	Guam Visitors Bureau	4,199.19		4,990.84	(9,190.03)	-
8446300000	7663706771	Yona Senior Citizen Center	2,112.56	31.80	899.85		3,044.21
9437100000	4129948191	Dept of Chamorro Affairs/Chamorro Village	3,225.02		3,842.40	(7,067.42)	-
	3558733700	Dept of Chamorro Affairs/Chamorro Village (NET METERED)	140.85		140.85	(281.70)	-
5247210000	5247210000	Mayors Council	13,480.42	202.94	6,424.61		20,107.97
6293410000	6293410000	Office of the Governor	25,362.46		27,293.13	(52,655.59)	-
8555858369	8555858369	Dept of Chamorro Affairs (Guam Museum)	44,271.11	666.55	23,575.24		68,512.90
	1099514147	Dept of Chamorro Affairs/Repository	847.98	12.77	427.17		1,287.92
		Sub Total	**5,015,734.38**	**18,680.04**	**1,521,718.41**	**(2,895,909.08)**	**3,660,223.75**
		MAYORS					
0637100000	3832327736	Santa Rita Mayor	7,302.57	587.94	3,825.40		11,715.91
0737100000	9351070242	Ordot/Chalan Pago Mayor	1,997.35	30.07	918.71		2,946.13
1537100000	6393530237	Hagatna Mayor	1,146.16	17.26	629.81		1,793.23
1637100000	3293808984	Piti Mayor	2,182.98	32.87	1,243.41		3,459.26
1737100000	8715052935	Mongmong/Toto/Maite Mayor	3,114.81	46.90	1,934.04		5,095.75
2637100000	0492244686	Asan/Maina/Adelup Mayor	1,363.78	20.54	857.15		2,241.47
2737100000	8433959204	Sinajana Mayor	7,705.73	116.00	3,954.24		11,775.97
3637100000	8041715847	Dededo Mayor	13,663.25	205.71	6,768.67		20,637.63
4637100000	7037924246	Yigo Mayor	8,628.31	129.90	4,327.99		13,086.20
5637100000	7202265287	Umatac Mayor	2,829.91	42.61	1,514.20		4,386.72
6537100000	8472200165	Agana Hts. Mayor	8,636.24	130.04	4,034.34		12,800.62
6637100000	4469579998	Merizo Mayor	2,843.54	42.82	1,491.36		4,377.72
6737100000	5763167341	Barrigada Mayors Office	5,520.44	83.09	2,610.15		8,213.68
7537100000	7247791682	Agat Mayor	7,075.76	165.24	3,238.32		10,479.32
7637100000	6078244037	Inarajan Mayor	4,863.11	185.11	2,665.68		7,713.90
8537100000	6957205325	Tamuning Mayor	13,381.88	201.49	6,398.44		19,981.81
8637100000	1880297633	Talofofo Mayor	4,134.78	62.26	2,313.22		6,510.26
9537100000	3631627996	Mangilao Mayor	8,736.65	131.53	4,435.08		13,303.26
9637100000	1837525565	Yona Mayor	2,811.70	42.35	1,286.86		4,140.91
		Sub Total	**$ 107,938.95**	**$ 2,273.73**	**$ 54,447.07**	**$ -**	**$ 164,659.75**
		DPW ACCOUNTS				-	
4337100000	3045433600	DPW-Village St. Lights	1,096,922.45	(47,063.67)	341,828.83		1,391,687.61
5337100000	0930959866	DPW- Primary St. Lights	349,155.63	(19,801.91)	75,901.07		405,254.79
6337100000	3088040552	DPW-Sec/Coll St. Lights	78,688.25	(11,494.24)	20,728.29		87,922.30
7337100000	0832698062	DPW-Signal Lights	20,656.98	400.32	12,122.75	(10,577.82)	22,602.23
		Sub Total	**$ 1,545,423.31**	**$ (77,959.50)**	**$ 450,580.94**	**$ (10,577.82)**	**$ 1,907,466.93**
		(B) AUTONOMOUS/PUBLIC CORP					
1437100000	1540692986	Retirement Fund	6,047.97		6,995.23	(13,043.20)	-
1915500000	0563872892	Guam Housing Corp Rental Division	1,348.98	77.19	1,423.27	(2,824.44)	25.00
2437100000	5434075703	University of Guam	178,834.34		186,242.51	(365,076.85)	-
4237100000	7736362694	Guam Airport Authority	538,458.81	(14,970.49)	543,719.83	(1,086,217.08)	(19,008.93)
5357510000	5357510000	University of Guam (NET METERED)	75,848.50		79,479.62	(155,328.12)	-
6237100000	1699407298	G H U R A	12,525.52	(240.32)	24,827.14	(24,069.78)	13,042.56
6437100000	6518220019	Guam Community College	52,936.76		51,291.47	(104,228.23)	-
7237100000	8302337726	Guam Memorial Hospital	38,500.63		41,691.17	(80,191.80)	-
8426836906	8426836906	Guam Memorial Hospital (NET METERED)	147,725.65		154,175.43	(301,901.08)	-
9137100000	4474308144	Port Authority of Guam	98,460.02	2,858.71	99,674.33	(198,134.35)	2,858.71
9157510000	9157510000	Guam Community College (NET METERED)	37,552.99		35,791.44	(73,344.43)	-
9173210000	9173210000	Guam Solid Waste Authority	14,243.31	0.11	7,386.64	(21,601.43)	28.63
9337100000	0838495949	Guam Waterworks Authority	1,227,819.02	(7,951.34)	1,432,471.06	(2,660,415.08)	(8,076.34)
8237100000	4075914809	GPA	-	(99,358.24)	99,358.24		-
		Sub Total	**$ 2,430,302.50**	**$ (119,584.38)**	**$ 2,764,527.38**	**$ (5,086,375.87)**	**$ (11,130.37)**
		(C) OTHERS					
0337100000	7541928173	Guam Legislature	448.31		458.43	(906.74)	-
9503154359	9503154359	Guam Legislature (NET METERED)	8,177.97		8,478.79	(16,656.76)	-
1237100000	8353274954	Superior Court of Guam	63,468.79		64,948.29	(63,468.79)	64,948.29
2537100000	8108458168	Guam Post Office (Agana)	6,547.03		7,176.73	(13,723.76)	-
2570200000	8972267005	Customs & Quarantine Agency	640.03		639.62	(1,279.65)	-
3537100000	4530787043	U.S. Post Office	38,561.86		40,039.57	(78,601.43)	-
5537100000	8607446812	Dept. of Military Affairs	160,809.44	616.91	74,769.61	(78,555.18)	157,640.78
3209463043	3209463043	Dept. of Military Affairs (NET METERED)	36,092.60	136.91	15,786.99	(17,837.36)	34,179.14
5737100000	6000770566	KGTF	13,337.12	100.03	7,041.93		20,479.08
7281000000	6602566745	Tamuning Post Office	4,894.22		5,506.20	(10,400.42)	-
		Sub Total	**$ 332,977.37**	**$ 853.85**	**$ 224,846.16**	**$ (281,430.09)**	**$ 277,247.29**
		GRAND TOTAL	**$ 9,432,376.51**	**$ (175,736.26)**	**$ 5,016,119.96**	**$ (8,274,292.86)**	**$ 5,998,467.35**

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2020-01

Relative to Authorizing Management to Require All Future Net Metering Solar PV and Wind Turbine Systems to also have Frequency Control Capability or Energy Storage System (ESS) in Order to be Tied in to GPA's Grid

What is the project's objective and is it necessary and urgent?
Guam Public Law 27-132 (December 2004) created Net Metering for Guam and assigned the Guam Public Utilities Commission (PUC) the responsibility for setting the Net Metering Rate for excess renewable energy fed into GPA's Distribution System. NEM customers receive services from the grid subsidized by non-NEM customers including but not limited to:

1) Use of the grid to sell power (get credit at full retail rate for excess production);
2) Use of the grid to energize their homes at night, but credited back from their production (uses GPA Grid as storage);
3) Frequency regulation absorbed by grid for intermittencies;
4) Reactive power supply;
5) Voltage regulation;
6) Stand-by power on overcast days when the sun does not shine.

Solar PV production is intermittent and requires an accompanying energy storage system such as a battery to provide a fairly smooth energy into the home or grid. GPA is purchasing energy from a 25 MW solar farm in Dandan. In addition, there are about 2,035 net metering customers with a total capacity of about 22 MW of net metering customers tied in to the grid without batteries. The result of all these intermittent productions has degraded the reliability of the system. Solar PV Production is inconsistent and requires substantial battery reserves. The number of under frequency automatic load shedding due to solar PV systems has increased substantially over the past few years.

As of October 31, 2019, there has been 27 caused feeder trips or outages due to solar PV systems without batteries. Although, the new 40 MW frequency control batteries GPA is installing would decrease these outages, we cannot continue to add intermittent energy production into the grid because uncontrolled solar PV energy will degrade system reliability again. GPA cannot continue to add intermittent energy production into the grid without requiring all future customer owned solar PV and wind turbine systems to also have Frequency Control Capability or Energy Storage System (ESS). The lack of ESS in the system substantially degrades the reliability of non-solar customers.

When will it be completed? Therefore, **effective June 01, 2020**, all new NET Metering Solar PV and Wind Turbine systems must also have Frequency Control Capability or Energy Storage System (ESS) in order to be tied in to GPA's grid. In the event that PUC sets a rate for energy storage per user, the new user may choose to pay the rate instead of providing Frequency Control Capability or Energy Storage System (ESS).

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2020-01

AUTHORIZING MANAGEMENT TO REQUIRE ALL FUTURE NET METERING SOLAR PHOTOVOLTAIC (PV) AND WIND TURBINE SYSTEMS TO ALSO HAVE FREQUENCY CONTROL CAPABLITY OR ENERGY STORAGE SYSTEM (ESS) IN ORDER TO BE TIED IN TO GPA'S GRID

WHEREAS, Guam Public Law 27-132 (December 2004) created Net Metering (NEM) for Guam and assigned the Guam Public Utilities Commission (PUC) the responsibility for setting the Net Metering Rate for excess renewable energy fed into GPA's Distribution System; and

WHEREAS, NEM customers receive services from the grid subsidized by non-NEM customers including but not limited to:

1) Use of the grid to sell power (get credit at full retail rate for excess production);
2) Use of the grid to energize their homes at night, but credited back from their production (uses GPA Grid as storage);
3) Frequency regulation absorbed by grid for intermittencies;
4) Reactive power supply;
5) Voltage regulation;
6) Stand-by power on overcast days when the sun does not shine; and

WHEREAS, as ordered by the Consolidated Commission on Utilities (CCU), GPA has conducted and completed several public meetings to:

1) Address net metering stakeholders' concerns and obtain feedback;
2) Evaluate stakeholder feedback;
3) Perform analysis regarding net metering impacts on GPA especially on non-net metering customers;
4) Propose recommendations on whether or not changing the current net metering program is in the best interests of customers while insofar as possible alleviating net metering customer concerns; and

WHEREAS, on its May 30, 2019 meeting, the PUC under Docket 19-04 ordered GPA to not make any change to the current NEM retail price. It also ordered for GPA and PUC to agree on an independent consultant to determine the cost and benefits of NEM including the benefits distributed generation may have in the distribution system. The PUC will entertain the report when completed and will address the matter further at that time or once the total NEM KW capacity reaches about 26MW; and

WHEREAS, Exhibit A is one illustration that show Solar Photovoltaic (PV) production is intermittent and require an accompanying energy storage system such as a battery to provide a fairly smooth energy into the home or grid; and

WHEREAS, GPA is purchasing energy from a 25 MW solar farm in Dandan. In addition, there are about 22 MW of net metering customers tied in to the grid without batteries. The result of all these intermittent productions has degraded the reliability of the system. GPA has shown graphs of the GlidePath solar PV farm in Dandan during several consecutive weeks of rain, as illustrated on **Exhibit B**; and

WHEREAS, Exhibit C illustrate the number of under frequency automatic load shedding due to solar PV systems has increased substantially over the past few years. As of October 31, 2019, there has been 27 caused feeder trips or outages due to solar PV systems without batteries. Although, the new 40 MW frequency control batteries GPA is installing would decrease these outages, we cannot continue to add intermittent energy production into the grid because uncontrolled solar PV energy will degrade system reliability again; and

WHEREAS, the customers paying for the system grid are non-solar PV customers who are experiencing substantial outages due to solar PV customers facility intermittency; and

WHEREAS, GPA completed its Joint Renewable Integration Study with the United States Navy in July 2018;

WHEREAS, this Study made the following observations:

- All PV added after Phase II is at risk of considerable curtailment without load-shifting ESS;
- NEM will exacerbate this curtailment resulting in curtailment of less expensive Phase II energy for much more expensive NEM produced energy at the retail rate;
- All PV added with and after Phase II require additional ESS support during transient events;
- All PV added with and after Phase II require additional Short-Circuit Ratio (SCR) support supplied by GPA;
- All ESS should have frequency droop control modes available;
- Phase III and beyond systems should have energy storage included as an integral component of the project, in order to optimize the economics of the projects;
- The PV systems and the energy storage should share the same DC bus configuration behind one inverter system to reduce the SCR burden on GPA and reduce the PV ramping effects due to intermittent solar irradiation.

WHEREAS, this study has recommended projects including the new flexible generation power plant that would ameliorate the above effects;

WHEREAS, many of these projects are slated for funding beyond 2023;

WHEREAS, GPA cannot continue to add intermittent energy production into the grid without requiring all future customer owned solar PV and wind turbine systems to have Frequency Control Capability or Energy Storage System (ESS). GPA recommends that all new customers must have Frequency Control Capability or Energy Storage System (ESS) by June 01, 2020.

NOW, THEREFORE, BE IT RESOLVED, by the CONSOLIDATED COMMISSION ON UTILITIES as follows:

1. The General Manager has determined that the number of under frequency automatic load shedding due to solar PV systems has increased substantially over the past few years and uncontrolled solar PV energy has significantly degraded system reliability. Those whose reliability is impacted substantially are the non-solar customers, which are expected to have improved reliability when the 40 MW ESS is completed.

2. GPA's existing policy is to have all future utility scale solar PV systems beginning with Phase II renewables equipped with ESS in order to improve reliability.

3. GPA cannot continue to add intermittent energy production into the grid without requiring all future customer owned solar PV and wind turbine systems to also have frequency control capability or Energy Storage System (ESS).

4. Therefore, effective **June 01, 2020**, all new NET Metering Solar PV and Wind Turbine systems must have Frequency Control Capability or Energy Storage System (ESS) in order to be tied in to GPA's grid. In the event that PUC sets a rate for energy storage per user, the new user may choose to pay the rate instead of providing Frequency Control Capability or Energy Storage System (ESS).

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARY ADOPTED and APPROVED THIS 28TH DAY OF JANUARY, 2020.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	MICHAEL T. LIMTIACO
Chairperson	Secretary
Consolidated Commission on Utilities	Consolidated Commission on Utilities

I, Michael T. Limtiaco, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

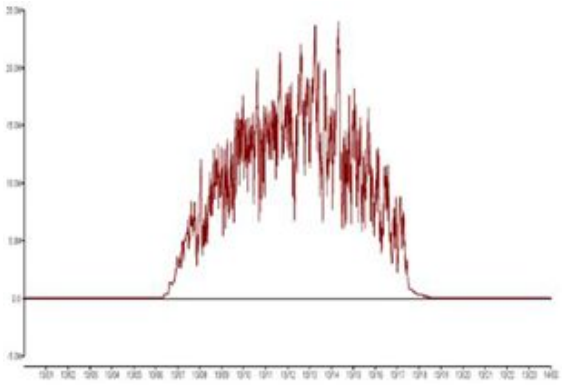
Exhibit A

NEM Customer Profile

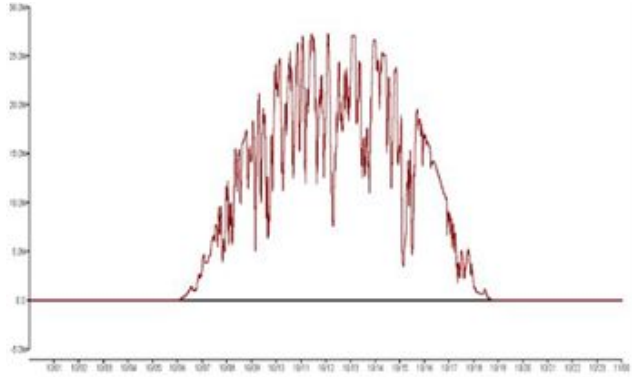
PV Output Looks Like This …

Solar PV Renewables Intermittency

Peak Output
26.5 MW



Peak Output
23 MW



Date:	**14-Jun-16**		
PV System KW Size	24.7		
GPA KWH 12am to 7am	22.56		
GPA KWH 7am to 6pm	7.44		
GPA KWH 6pm to 12am	**24.67**	**Evening Peak**	
NEM KWH 7am to 6pm	69.35		
Net GPA KWH	-14.68		

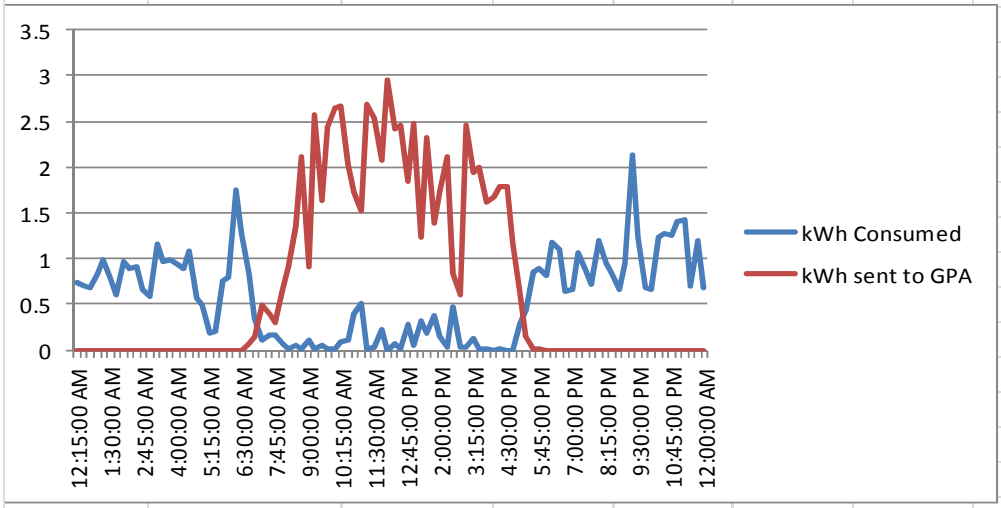


Exhibit B

Solar PV Production is Inconsistent and Requires Substantial Battery Reserves

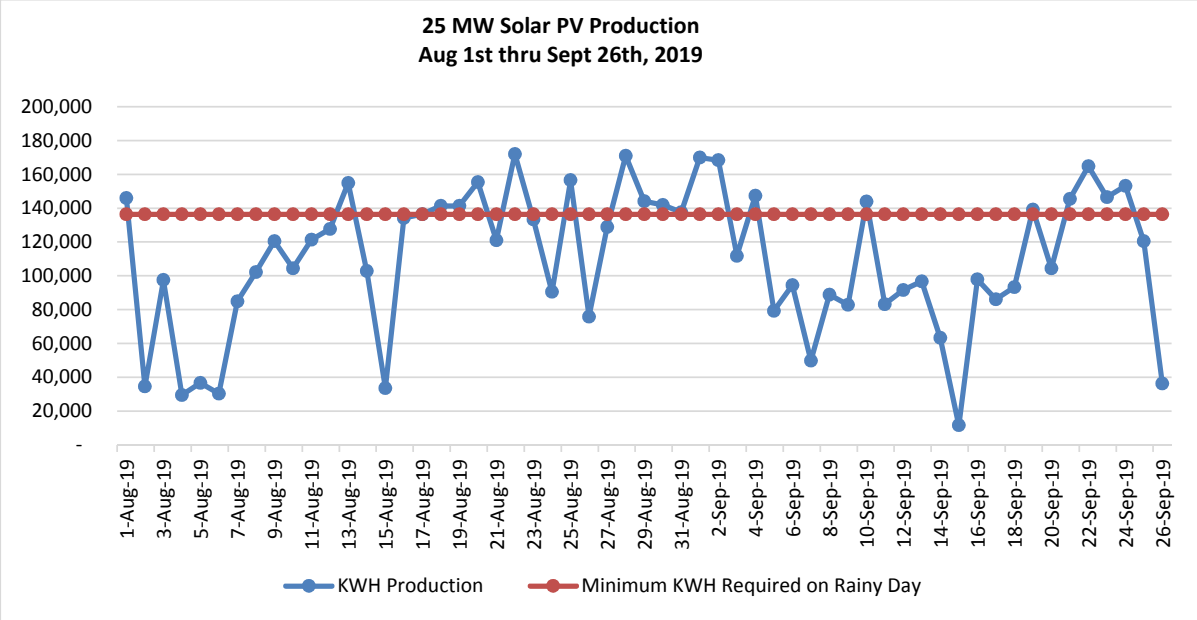
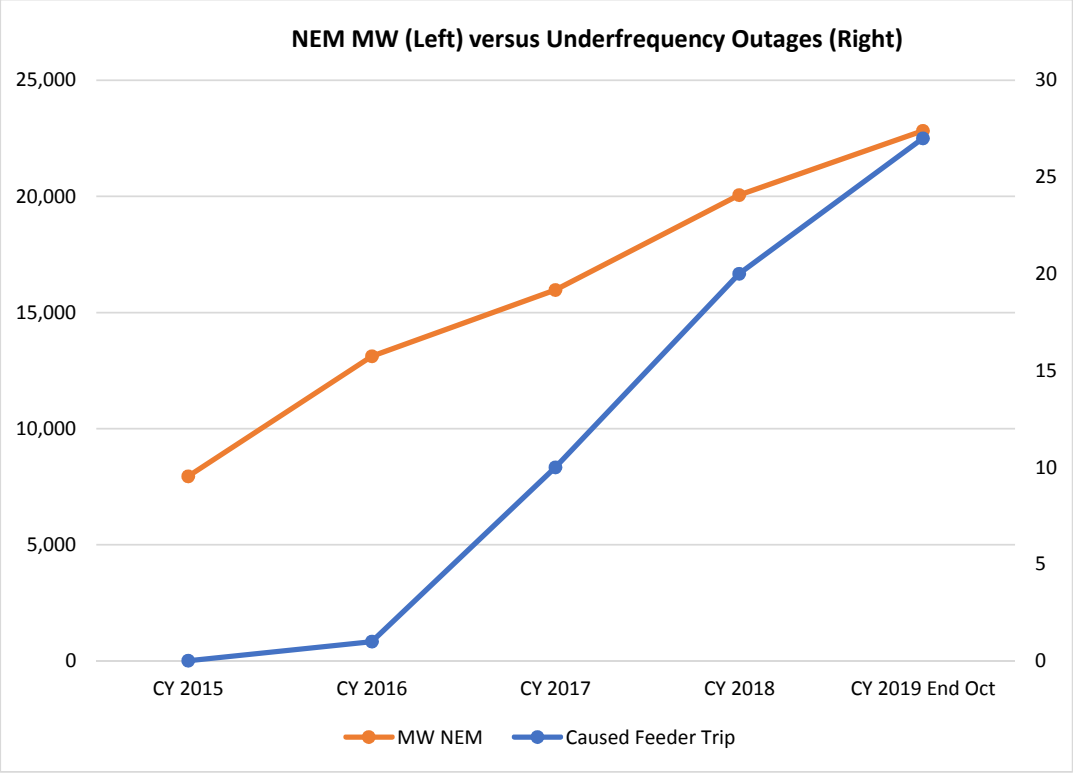


Exhibit C



STAKEHOLDER OUTREACH ON CCU NET METERING RESOLUTIONS

John M. Benavente, P.E.
General Manager

January 9, 2020
CCU Conference Room, 3rd Fl
Gloria B. Nelson Public Service Building
Fadian, Mangilao

OVERVIEW

GPA is proposing two (2) changes to the current Net Metering (NEM) program:

1. Require all future solar PV & wind turbine systems to have frequency control capability or energy storage systems (batteries) in order to be tied into GPA's grid; and

2. Remove the annual cash payment and credit roll-over options.

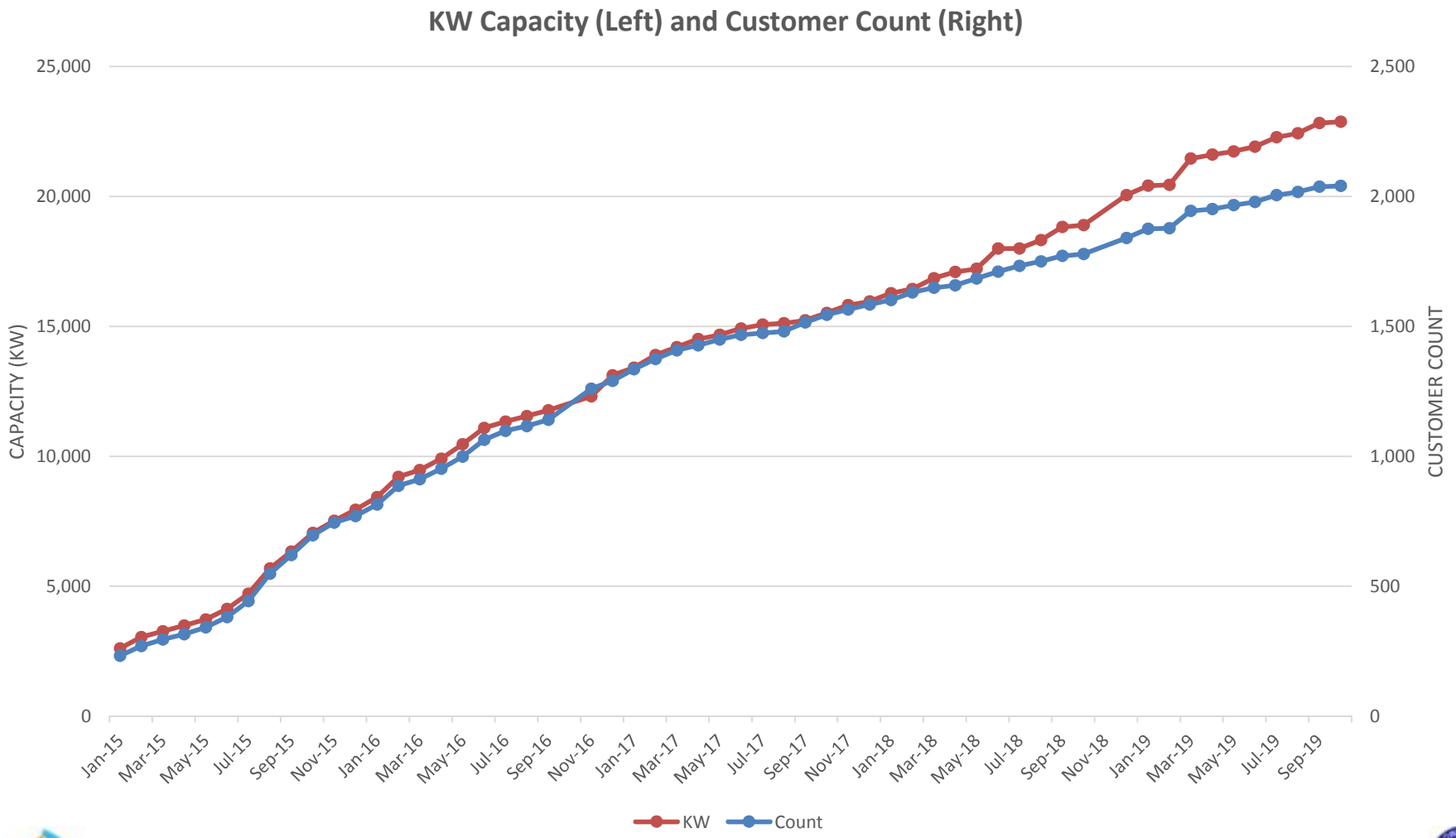
Brief summaries of the issues are provided in this presentation.

Resolution 2020-01

AUTHORIZING MANAGEMENT TO REQUIRE ALL FUTURE NET METERING SOLAR PV AND WIND TURBINE SYSTEMS TO ALSO HAVE FREQUENCY CONTROL CAPABLITY OR ENERGY STORAGE SYSTEM (ESS) IN ORDER TO BE TIED IN TO GPA'S GRID

NET METERING (NEM) GROWTH

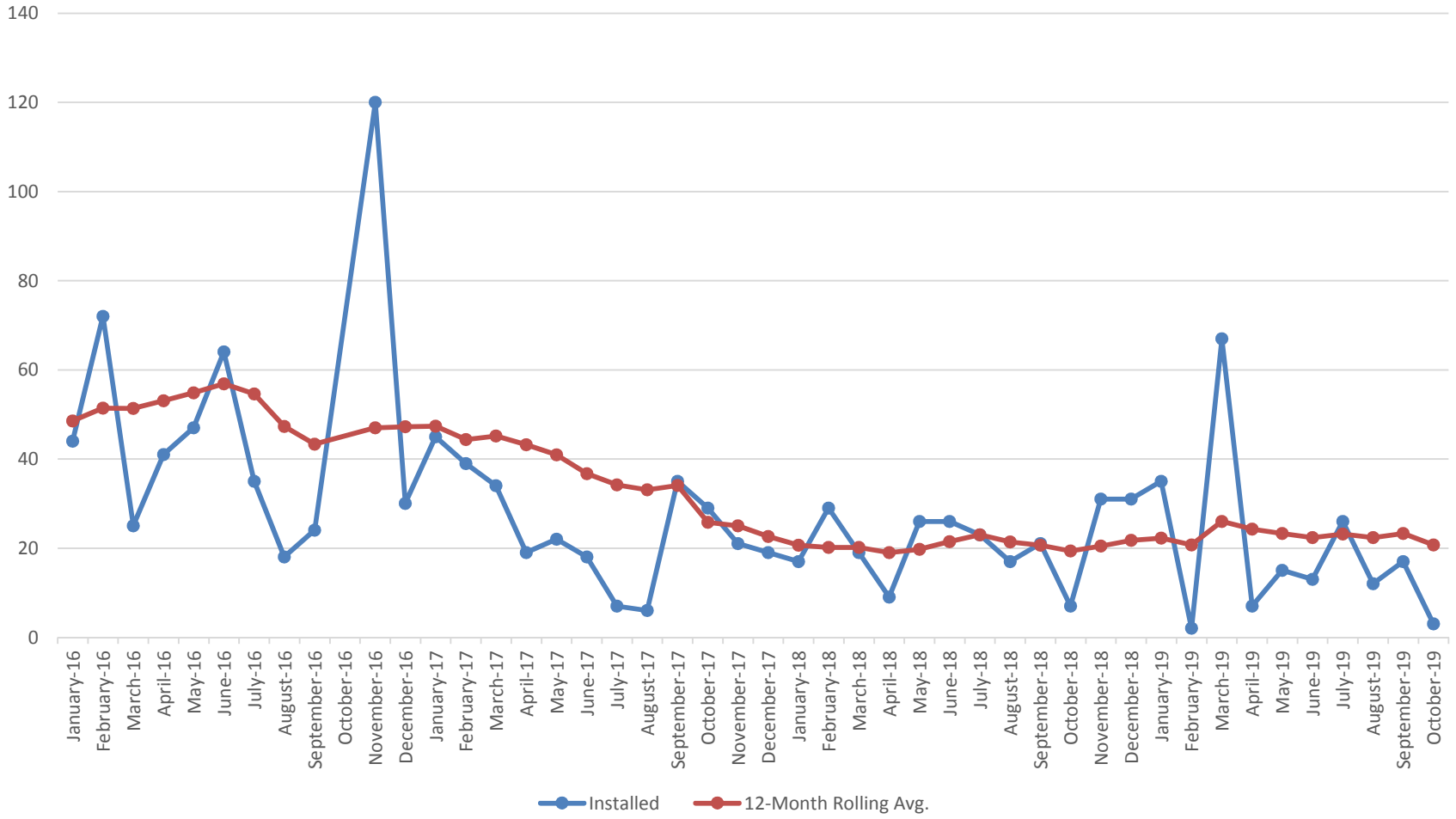
NEM Growth through October 2019



NET METERING (NEM) GROWTH

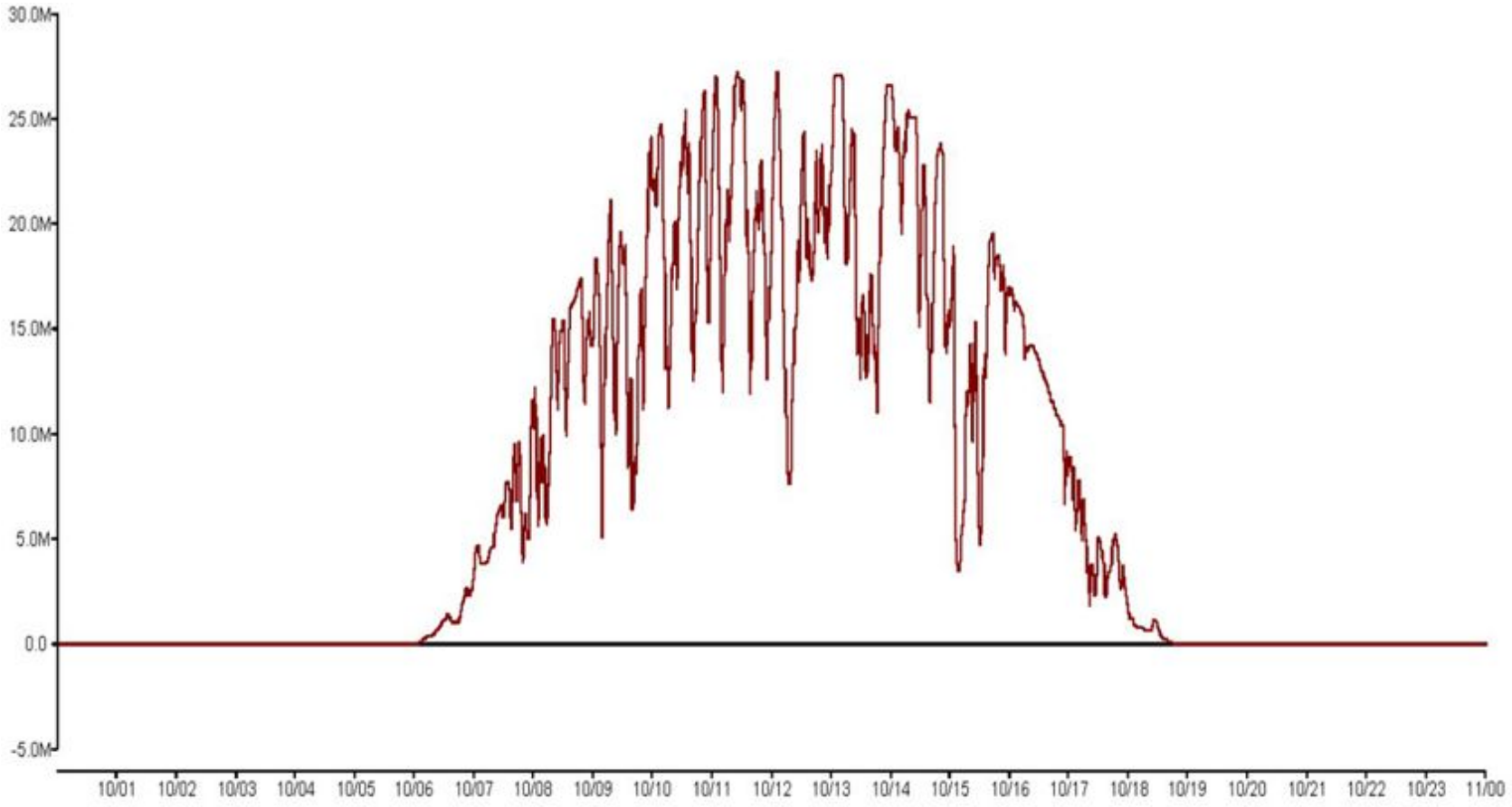
NEM Monthly Installations

Through October 2019



INTERMITTENCY DEGRADES RELIABILITY

GPA 25MW Solar PV Production Intermittent - Causing Reliability Issues

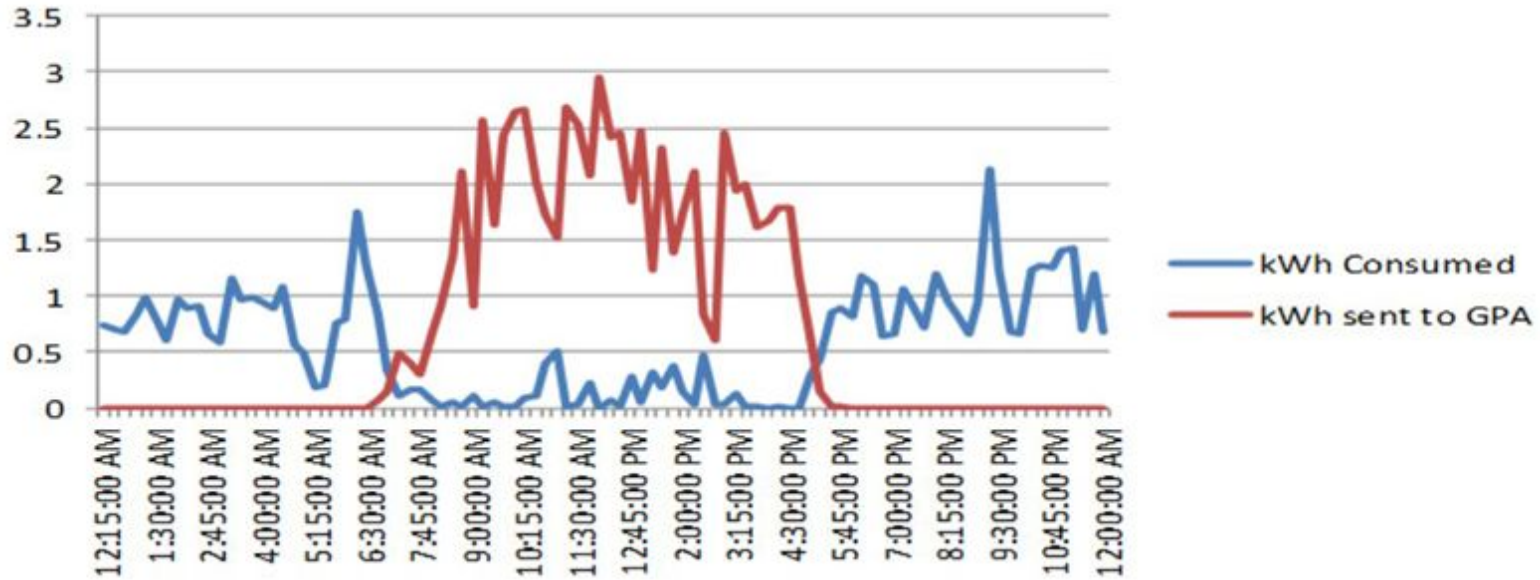


Solution: Installation of 16 MW Energy Storage Batteries in Talofofo

INTERMITTENCY DEGRADES RELIABILITY

NEM 22MW Solar PV Production Intermittent - Causing Reliability Issues

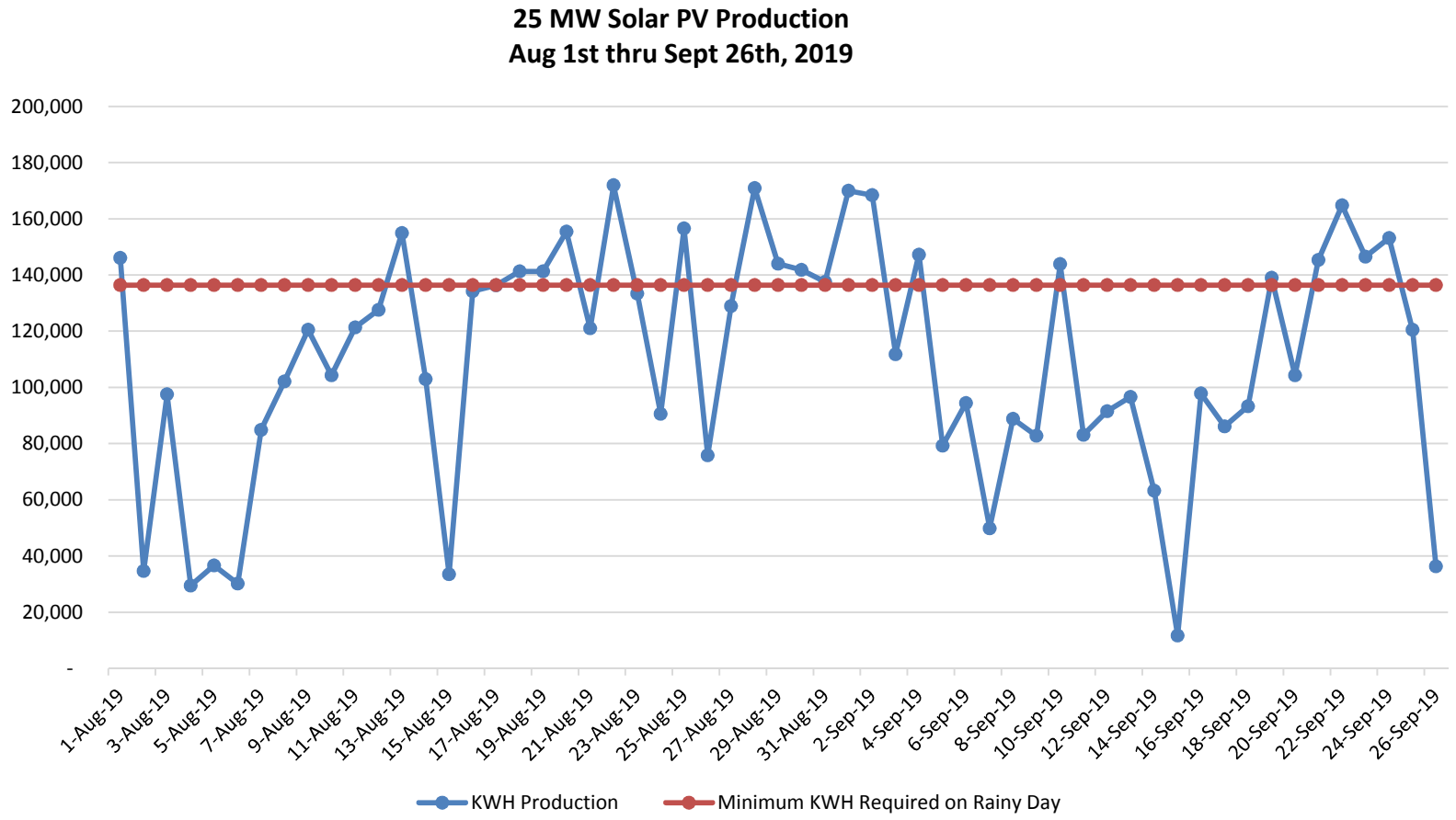
Date:	14-Jun-16		
PV System KW Size	24.7		
GPA KWH 12am to 7am	22.56		
GPA KWH 7am to 6pm	7.44		
GPA KWH 6pm to 12am	**24.67**	**Evening Peak**	
NEM KWH 7am to 6pm	69.35		
Net GPA KWH	-14.68		



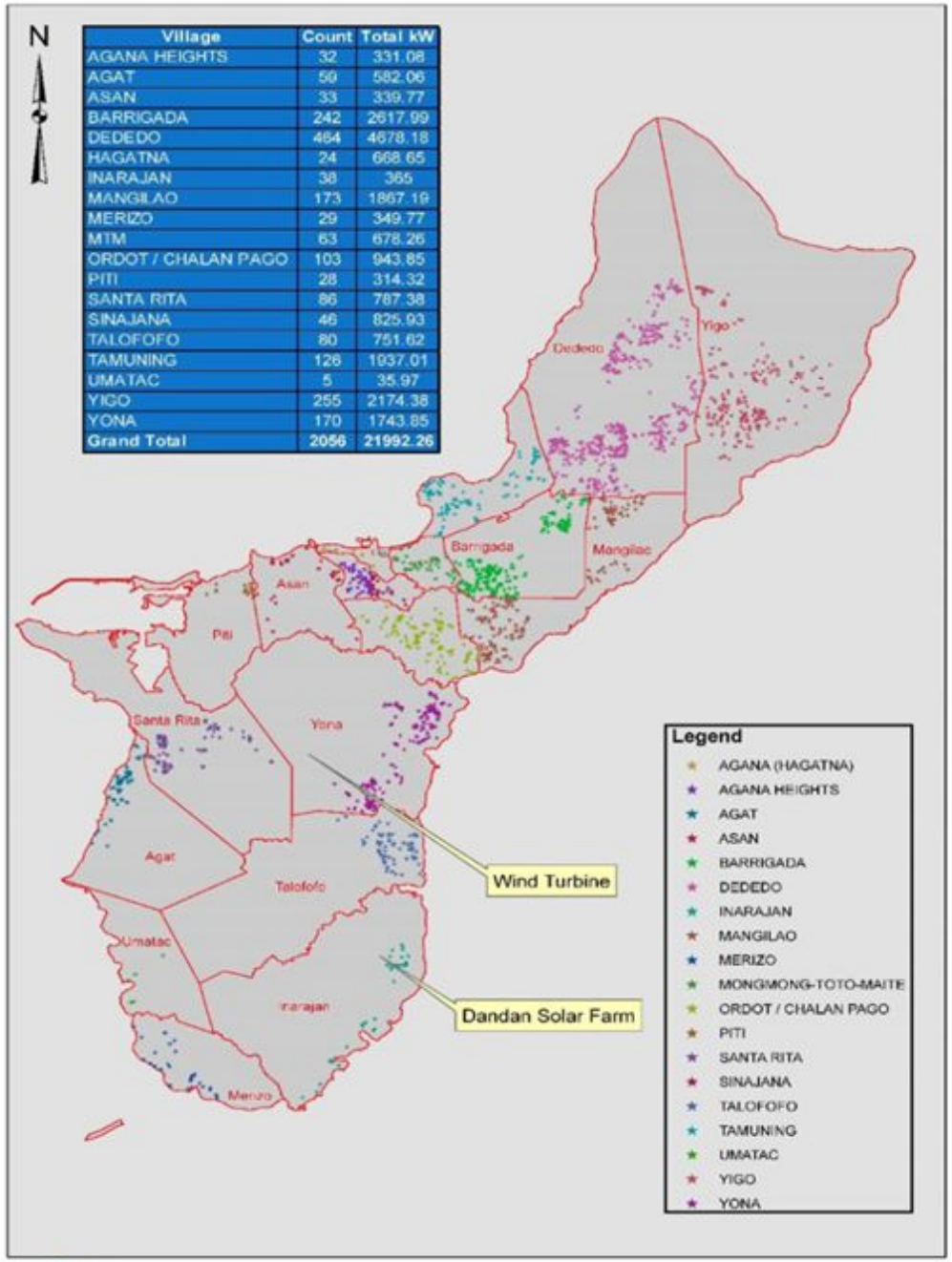
Solution: Installation of 24 MW Energy Storage Batteries in Hagåtña

SOLAR PV PRODUCTION INCONSISTENT

Solar PV Production Inconsistent & Depends on GPA System for Reliability



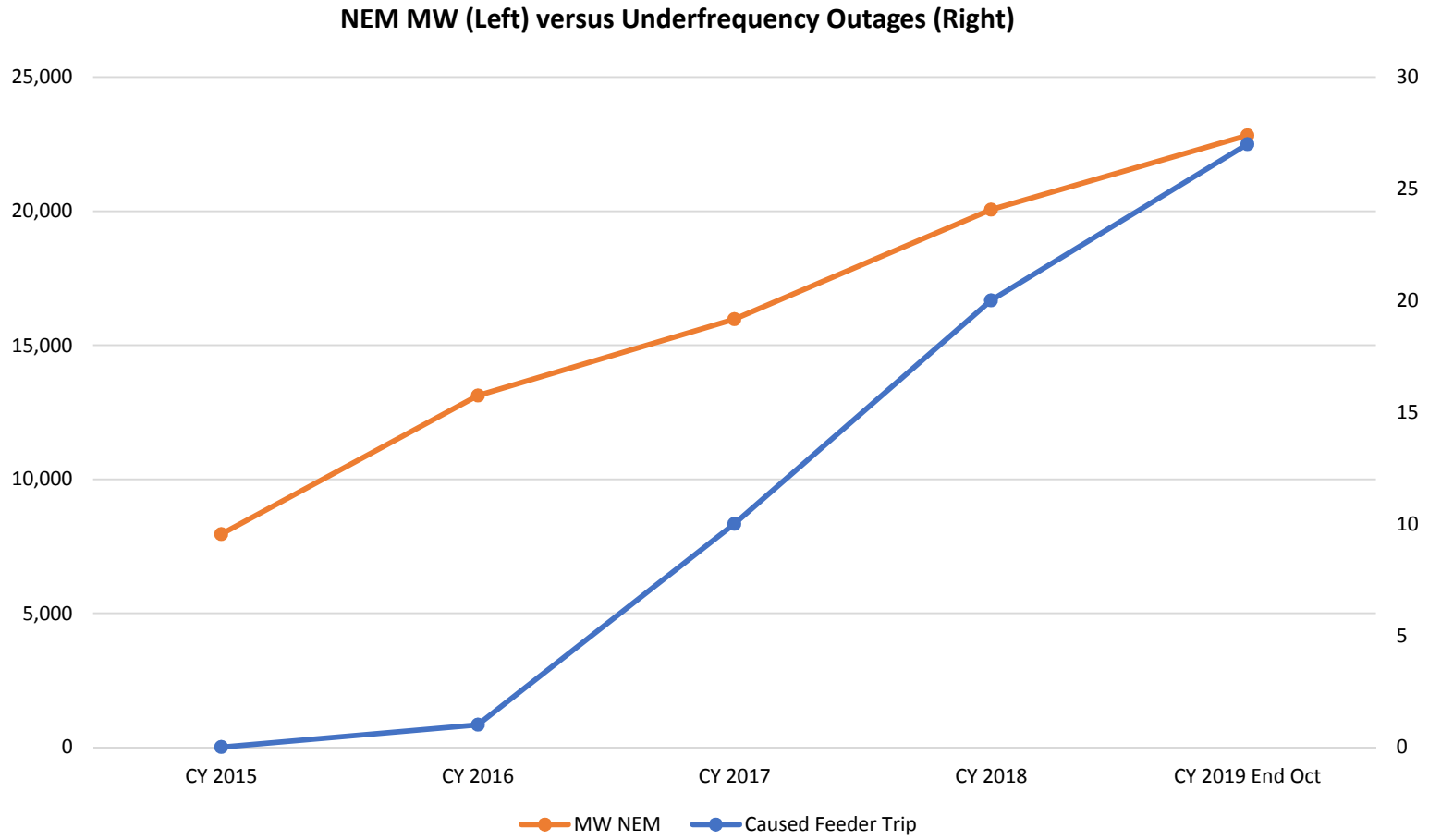
Solution: Inconsistency Mitigated by Availability of GPA Conventional Generators



Guam Power Authority
Net Metering Locations

ENSURING SYSTEM RELIABILITY

Continued NEM Growth Without Batteries Will Significantly Degrade Reliability



Solution: Future NEM Customers Install Batteries

SUMMARY – Resolution 2020-01

- GPA is installing two Energy Storage System (ESS) batteries totaling 40 MW of batteries to address reliability issues when conventional generators trip off line.
  - The 40 MW ESS commissioning is within next two months.

- The continued addition of Solar PV Systems without batteries would result in continued degrading of reliability despite ratepayers paying for new $35M ESS to decrease outages.

- GPA has previously issued policy that all future utility-scale solar PV systems must be installed with batteries. GPA's Phase II and III projects include batteries.

- Net Metering Capacity without Batteries has grown to 22 MW. The continued uncontrolled growth without Batteries increases outages and must be curbed.

- In the event that PUC sets a rate for energy storage per user, the new user may choose to pay the rate instead of providing Frequency Control Capability or Energy Storage System (ESS).

- CCU Resolution 2020–01, if passed, will require all future NEM customers to install batteries in order to connect to GPA grid.
  - GPA recommends the requirement be effective June 1, 2020.

Resolution 2019-20

AUTHORIZED MANAGEMENT OF THE GUAM POWER AUTHORITY (GPA) TO FILE A REVISON TO INTERIM NET METERING RIDER ADDRESSING THE GUAM PUBLIC UTILITIES COMMISSION (PUC) ORDER DOCKET NO. 08-10

NET METERING (NEM) PROGRAM

NEM customers currently receive services from the grid including:

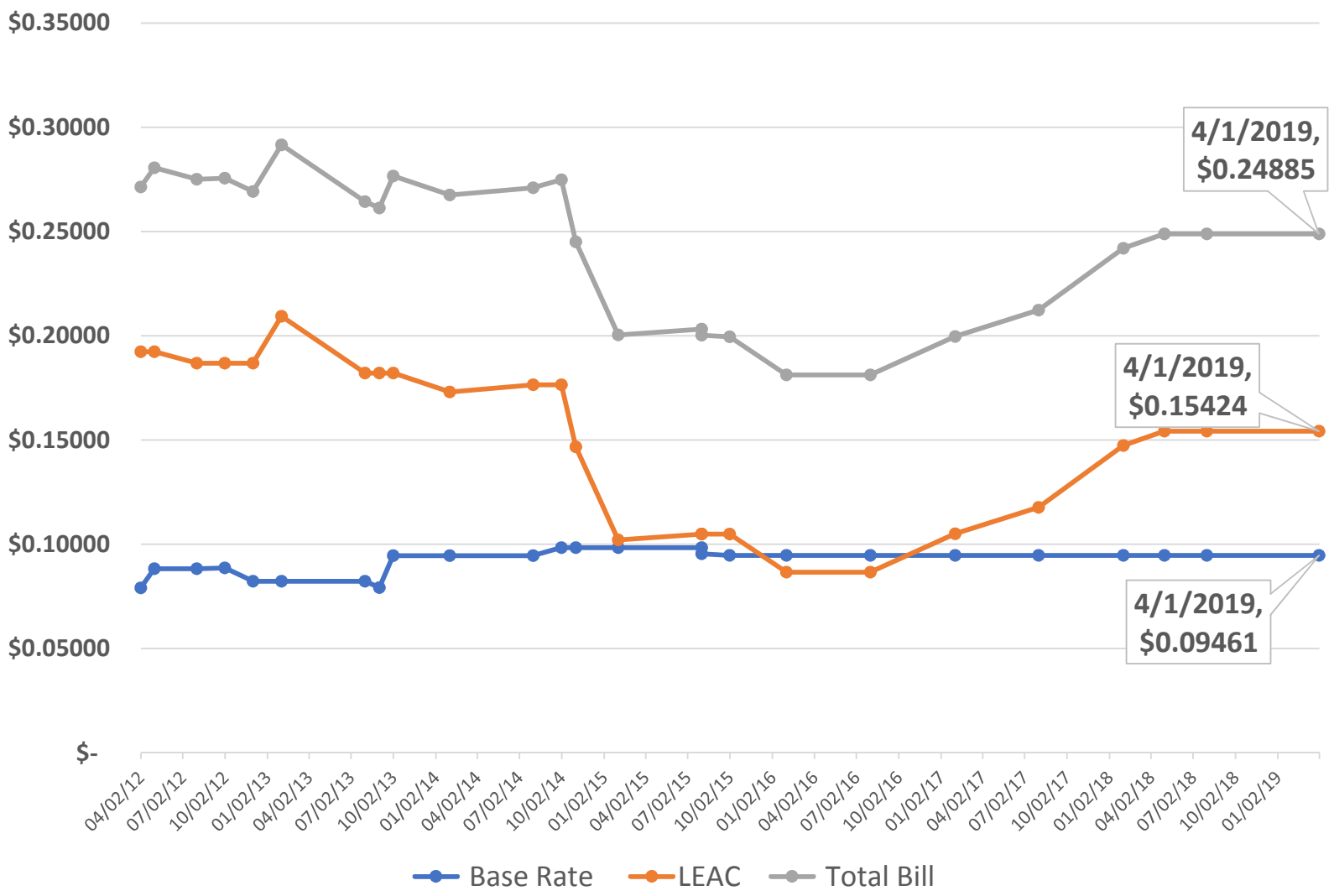
- Use the grid to sell power (get credit at full retail rate for excess production)
- Use the grid to energize their homes at night, but credited back from their production (uses GPA grid as storage)
- Using grid at night results in increased fuel cost to non-NEM Customers because costlier less efficient generation is used to generate their energy needs
- Frequency regulation absorbed by grid for intermittencies
- Reactive power supply
- Voltage regulation
- Stand-by power on overcast days when the sun does not shine

Monthly fixed charge of $15 does not recover cost to serve from grid

- Most of GPA fixed cost is recovered in the energy use (kWh) rate component which is typically zero for NEM customers

GPA continues to request PUC to set credit at avoided cost

HISTORIC RESIDENTIAL RATE



COST BURDEN ANALYSIS

System FY 2018 Cost
kWh Sales: 1,567,052,144

Description:	Amount	$/KWH
Debt	$ 30,167,800	$ 0.019
Capital Improvement	$ 16,599,038	$ 0.011
Transmission and Distribution Grid	$ 12,338,142	$ 0.008
Customer Accounting	$ 6,354,272	$ 0.004
Admin/General	$ 33,971,438	$ 0.022
Production - Non Fuel	$ 61,331,145	$ 0.039
Total Base Rate (Fixed Cost)-Non Fuel	**$ 160,761,835**	**$ 0.103**
Fuel Cost	$ 217,567,039	$ 0.139
Total Cost	$ 378,328,874	$ 0.241

Solar PV Production Does Not Avoid Base Rate of $0.103/kWh
Solar PV Production Does Avoid Fuel Cost

Full Burden of Fixed Cost Shifted to Non-NEM Ratepayer

Total GPA Ratepayers:	**52,000**	**$3,092**
Ratepayers Without Solar PV:	**50,000**	**$3,215**
Additional Cost Per Non-NEM Ratepayer:		**$123**

NEM Customers Not Paying for System
Non-Solar Customer Cost are Increased !!!

CONSEQUENCE OF NEM RIDER

GPA is requesting the PUC revert the current Net Metering Rider to the original language, which stated:

> "In no event shall the excess credit from a single month be carried forward beyond twelve (12) months as a credit against the current monthly billing. At the end of each calendar year, or in the event of termination of service under this rider, any excess kWh credits; if any will be granted by the customer to the GPA without compensation to the customer."

This rider was revised by the PUC on December 10, 2015 to allow solar PV (NEM) customers the option to receive cash payments for excess credit or to carry over credits into the following calendar year.

NEM customers are already being provided an annual subsidy of ~$3,527,745. NEM programs elsewhere do not provide carry over credits.

Additionally in 2018, GPA issued $86,283 in cash payments to NEM customers, and carried forward $241,217 in excess credits under the current NEM program. These credits are more that what it cost to produce the same amount of energy thru GPA. This tends to encourage higher capacity systems in order to receive higher returns. Bad for Non-NEM customers

SUMMARY – Resolution 2019-20

The amended rider negatively impacts non-NEM customers because:

- Non-NEM ratepayers are burdened with a cost for a benefit not received
- Excess credits are paid out at higher cost than what it takes to produce same energy.
  - Excess credit being paid out at ~$0.25/kWh while it cost GPA only $0.154/kWh to produce.
- The current rider encourages NEM customers to install excess capacity in order to maximize their credits

Other jurisdictions zero-out excess credit at no cost to the utility and its non-NEM customers

CCU Resolution 2019–20 authorized GPA to petition the PUC to amend Docket 08-10. **This resolution was passed by the CCU on November 26, 2019.**

Summary of Testimonies

Testimonies – Jan 9th Stakeholder's Outreach Meeting

Speaker	Discussion Summary
Stan Wilson *Current NEM Customer who produces excess.*	1) Battery storage for his system will cost him $4,500 for batteries alone and if the resolution passes then solar will no longer be a feasible investment. 2) Mentioned PG&E in California and state law passed that all new homes be equipped with solar and they do not require battery storage and that the utility agency provides the energy storage. 3) Suggested that GPA explore other solutions where GPA provides the solar batteries to flatten the load. He gives a theoretical example of having the power system run its baseload units all day even at off peak or low demand times to continually charge batteries and use batteries during peak times. 4) He is okay with paying the $15/month fee or even doubling it. He is okay adjusting the price of solar from $0.24 to $0.10.
Brook Powers *Chief Engineer of Adventist World Radio (AWR), Interested in installing solar technology on facilities.*	1) Wanted information on what percentage of storage is required per production of solar? 2) What inverter technology will GPA be requiring to stabilize the frequency? 3) Is there any option where customer takes on the cost using batteries during peak times and gets additional compensation during those times? He is talking about Time-Of-Use modeling (TOU).
Paulette Coulter *Customer who owns a 9 year old system with a battery backup system.*	1) Wants to know what protections would GPA provide for customers who provide their own PV and battery storage systems? 2) What support or information will GPA provide to assist customers with the technical aspects and requirements of PV and energy storage.
Moneka De Oro **"***Policy and Curriculum Fellow" Micronesia Climate Change Alliance*	1) Concerned about the utilities impacts towards climate change and de-incentivizing renewables. 2) Requesting GPA and CCU to be more aggressive towards renewables. 3) Against the justification of the cost of the $640M new plant versus supporting of costs towards renewable energy.
Henry Simpson *Solar customer for 6 years and has an EV*	1) Feels solar customers will be an asset to GPA. 2) Recommends having solar distributed and not clustered throughout the island. 3) Suggests a phased in type of approach where customer gets 5 years to amortize their investment in their system then chose to do a battery or avoided fuel cost vs. upfront requirements. 4) Suggest for GPA to work with nonprofits to provide and advocate solar power with a long term 15 year deal at full retail rate, so he can get investors to invest in his race track for solar panels.
Rob Frohne *Adventist World Radio (AWR)*	1) Requesting more information for studies and specs on our requirements for inverters and other technologies. 2) Looking to work with GPA for ways AWR can connect to the grid with renewables and inverters and other requirements. 3) Doing a feasibility study for their company solar PV system.

Testimonies – Jan 9th Stakeholder's Outreach Meeting (Cont'd)

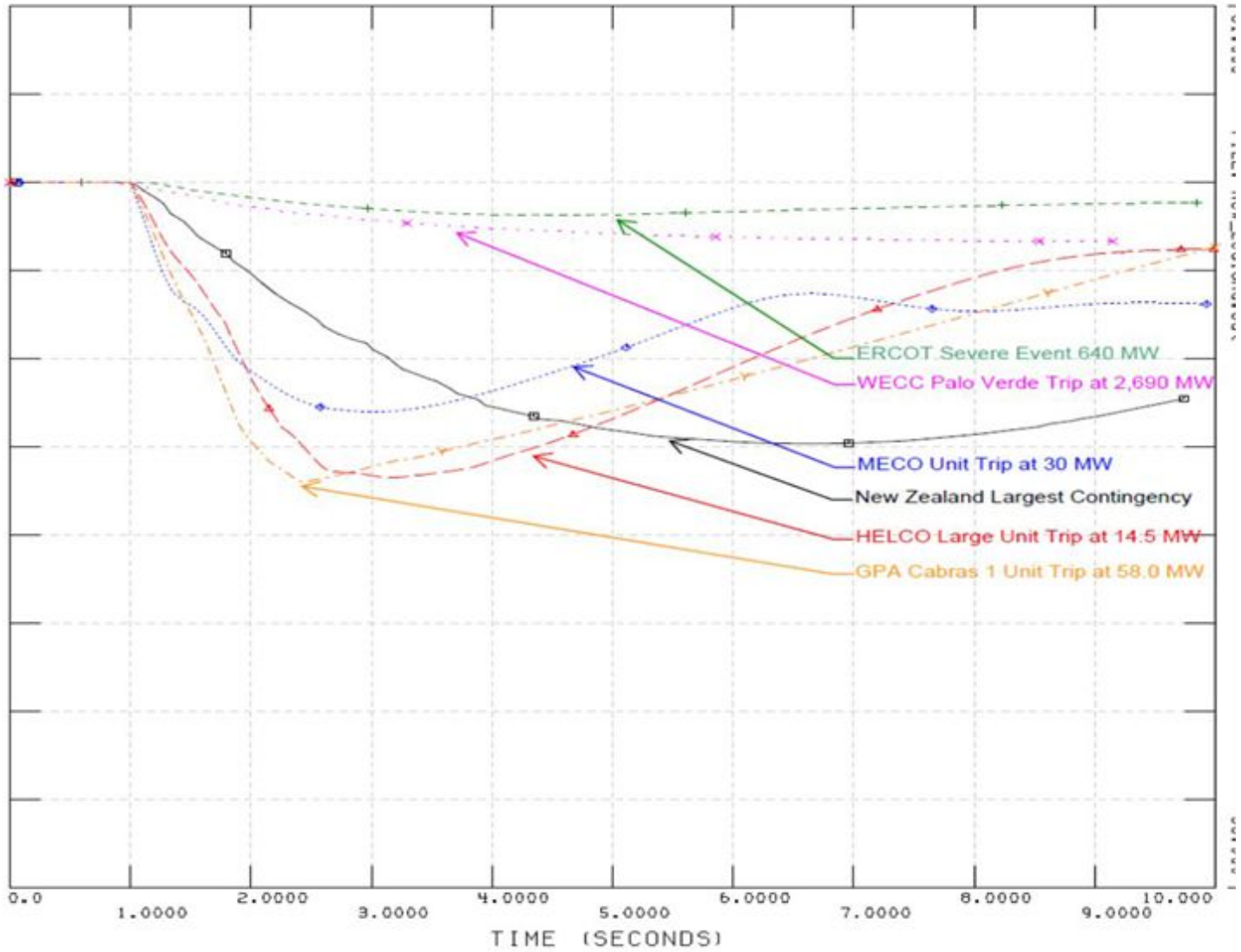
Speaker	Discussion Summary
Jeff Voacolo *COO of MRE*	1) Agrees with the issue on "Over-build" of PV systems. He uses New Jersey as a recommendation of how GPA should proceed to handle excess payments of NEM customers who over-build their PV systems. 2) Worried that resolution 2020-01 "de-incentivize" any business, home, or government entity from installing solar and feels that it will be counter-productive towards GPA's 50% renewable portfolio goal and other renewable aspects. 3) Concerned about it hindering solar in the schools. 4) Believes the widespread dysfunction caused by NEM customers on the GPA grid is true for the Dandan solar farm due to its concentration of solar arrays. 5) Concerned how the 25MW of Solar is having such a large impact on our grid and saying our Grid might be what is the issue instead of NEM customers. 6) Mentioned they have inverts that meet California rule 21 and the IEEE 1547-2018 requirements. States that the resolution is lacking requirements or parameters for frequency control and storage. 7) Feels there are disconnects between GPA and the Solar Industry and mentions FW Star Frequency ramp down rates. 8) Wants the industry and the utility to work together and provides three recommendations: a) Acquire a 3rd party independent engineering study be conducted on the grid to propose transformation grid changes and a root cause analysis for the issues and fit the support of PV. b) GPA work with the industry to establish timelines for introductions of PV and NEM. c) Battery rebate program should be established.

Previous Testimony of MRE

Date	Legislative Hearing	Witness	Summary of Testimony/Information
10/10/ 2019	Round Table Hearing with Industry Professionals about the type of renewable energy available on Guam	Jeffrey Voacolo, Chief Operations Officer Micronesia Renewable Energy, Inc. (MRE)	- Information provided on Battery Storage, MRE has been installing batteries for 2 years. In the last 2-3 years technology has come so far. Tesla & LG CAM Batteries, 2 batteries needed for average home (around 13.5 kWh for Tesla & 10 kWh for LG CAM) to fully power it through the night. - At wholesale level, cost is estimated around $5K to $6K per battery with 10-year warranty. Two batteries in a solar is cheaper than the utilities right now. - Utilities scale batteries been experiencing explosion, ongoing issue.
10/14/2019	Written Testimony on Bill 80-35, AN ACT TO AMEND § 8311 OF ARTICLE 3, CHAPTER 8, TITLE 12, GUAM CODE ANNOTATED, RELATIVE TO RAISING THE RENEWABLE PORTFOLIO STANDARDS OF THE GUAM POWER AUTHORITY	Jeffrey Voacolo, Chief Operations Officer Micronesia Renewable Energy, Inc. (MRE)	- Testimony provided regarding Sustainability as one of the three main parameters to reaching the bill's goal of reaching 50% renewable by 2015. - Advocating for greater Distributed Energy (DG) solar utilization on Guam and in favor to add a component of DG onto Bill 80-35. - In 2017, MRE invited CPS Energy's Executive team to Guam. CPS Energy is the nation's largest municipal/publicly owned energy company. - They met with GPA's Executive team & CCU members and spoke about Distributed Energy and Solar Farms. - There model is using existing commercial buildings and residential customers adding solar energy and now energy storage at the point of consumptions make more sense.
10/14/2019	Written Testimony on Bill 80-35, AN ACT TO AMEND § 8311 OF ARTICLE 3, CHAPTER 8, TITLE 12, GUAM CODE ANNOTATED, RELATIVE TO RAISING THE RENEWABLE PORTFOLIO STANDARDS OF THE GUAM POWER AUTHORITY	Joe Rosario, Business Dev Director Micronesia Renewable Energy, Inc. (MRE)	- Testimony provided advocating for greater DG solar utilization on Guam - He stated to imagine "40MW's of distributed generation developed by a local company in the solar industry and constructed by local companies in the solar industry. I can imagine a KWH rate of 13 cents (with storage)."

GPA Supplemental Data

Shows GPA System Most Affected by Loss of Generation



Comparison of Island Communities

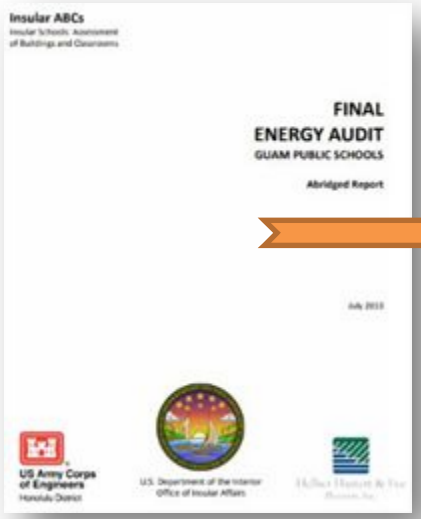
	Guam	Oahu	Maui	Hawaii	Kauai
Land Area (sq mi) *(includes lakes and rivers)*	210	598	772	4,028	552
Population	167,930	953,207	144,444	200,983	66,921
Peak System Demand (kW)	256,000	1,206,000	202,000	192,000	78,000
Electric Customers	51,400	304,948	71,352	85,925	37,705
NEM Customers	2,068		71,000		4,300
NEM kW	23,702	524,000	112,000	95,000	31,300
EV Count	20	7,989	1,136	562	316
Type Utility (IOU, Public, COOP)	Public	IOU	IOU	IOU	COOP
Annual Revenue	$378,300,000	$1,801,439,279	$368,184,936	$374,734,337	$162,659,638
Residential Average Rate ($/kWh) *Oct 2018*	$ 0.249	$ 0.310	$ 0.340	$ 0.370	$ 0.370
Latitude/Longitude	13.4443° N 144.7937° E	21.4389° N 158.0001° W	20.7984° N 156.3319° W	19.5429° N 155.6659° W	22.0964° N 159.5261° W
Income per capita	$ 16,549	$ 32,194	$ 30,599	$ 25,827	$ 28,791
Average kW/Customer	5.0	4.0	2.8	2.2	2.1
Average kW/Person	1.5	1.3	1.4	1.0	1.2
Average NEM kW/NEM Customer	11.5		10.3		7.3
Average kWh Usage	940	493	533	471	503
Average Monthly Bill	$234	$153	$181	$174	$186

ESS Cost Sharing Analysis:

Frequency Control Energy Storage System:			
Benefits:		**Non-NEM**	**NEM/Non-NEM**
Location:		**Talofofo GlidePath**	**Hagatna NEM / System**
Battery KW Size	**40,000**	**16,000**	**24,000**
Investment	**$35,000,000**	**$14,000,000.00**	**$21,000,000.00**
Annual Debt Service 5%, 20 years	**$2,006,065**	**$802,426.00**	**$1,203,639.00**
Annual O&M	**$300,000**	**$120,000.00**	**$180,000.00**
Total Annual Cost	**$2,306,065**	**$922,426.00**	**$1,383,639.00**
Total NEM Customers - Dec, 2019			**2,068**
Total NEM KW			**23,702**
Annual Cost NEM/Non-NEM			**$1,383,639**
NEM 50% Share			**$691,820**
Cost/NEM Customer/Month			**$27.88**
NEM Annual Energy			**37,373,314**
$/Kwh ESS for NEM Customers			**$0.019**
Cost/KW/Month			**$2.43**
Average NEM KW			**11.46**
$/Month/NEM Avg. KW			**$27.88**

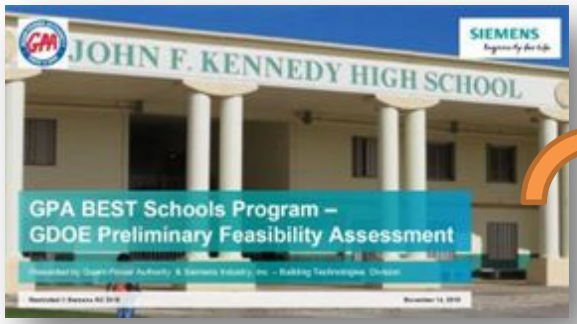
Guam Department of Education

Energy Assessment/Audit → Energy Conservation → Energy Efficiency → Preventative Maintenance



RECOMMENDED ENERGY CONSERVATION MEASURES

- Programmable thermostats
- LED fixtures & lamps
- Solar hot water heaters
- Heat recovery/ desuperheater systems



RECOMMENDED ENERGY & WATER REDUCTION MEASURES

$ 41,499,900 Investment = **$ 4,261,531 Annual Savings**

GDOE DATA (FY2019)

Annual Energy Usage	43,411,121
Annual kW Demand	68,260
Annual Cost	$ 13,049,536.84
$/kWh	$ 0.301
GDOE Load Factor	7.3%

80% SOLAR PV REQUIREMENTS

kWh Required	34,728,896
Capacity Factor	18.0%
kW Required	22,025

80% ANNUAL ENERGY $

Rate	$/kWh	$/year
LEAC	$ 0.154	$ 5,348,250
Base	$ 0.147	$ 5,091,379

GDOE Savings is a Ratepayer Subsidy!

GDOE SOLAR PV COST ESTIMATION

	WITHOUT ESS *(per kWh)*	WITH FREQUENCY ESS *(per kWh)*
Installation $/Watt	$ 3.00	$ 4.50
Total Watts	22,024,922	22,024,922
Annual kWh	34,728,896	34,728,896
Investment Required	**$ 66,074,765**	**$99,112,147**
Life (years)	20	20
Interest Rate	5.0%	5.0%
Debt Service	$ 5,302,029	$ 7,953,043
O&M @ 5% DS	$ 265,101	$ 397,652
Annual Cost	**$ 5,567,130**	**$8,350,695**
Cost/kWh	$ 0.160	$ 0.240
FY2020 without Solar PV	$ 0.285	$ 0.285
Solar PV $/kWh	$ 0.160	$ 0.160
ESS $/kWh	$ -	$ 0.080
Savings $/kWh	$ 0.124	$ 0.044
Cost Reduction	**$ 4,316,837**	**$ 1,538,525**

RESULT

GPA System Cost Avoided

$5,091,379 Burden Shifted to Non-NEM Customers

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O. BOX 2977, HÅGATÑA, GUAM 96932-2977

Issues for Decision

Resolution No. 2020-02:

Relative to: Authorizing the Management of Guam Power Authority to Solicit Bids (IFB) for the Supply of Diesel Fuel Oil No. 2 to the TENJO VISTA Power Plant.

What is the project's objective? Is it necessary and urgent?

The fuel supply contract is necessary to provide uninterrupted supply of fuel for TENJO VISTA Power Plant.

Where is the location?

TENJO VISTA Power Plant.

How much will it cost?

The 3-year contract is estimated to exceed $1.5M requiring prior approval from the PUC.

When will it be completed?

The contract is planned for an initial period of two years to commence on or about June 01, 2020 and to expire on May 31, 2023, with the option to extend for two (2) additional one-year terms.

What is its funding source?

Fuel revenue funds

The RFP/BID responses:

The IFB solicitation will commence after CCU & PUC approval.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2020-02

AUTHORIZING THE MANAGEMENT OF THE GUAM POWER AUTHORITY TO PETITION THE PUBLIC UTILITIES COMMISSION FOR THE PROCUREMENT OF A CONTRACTOR FOR THE SUPPLY OF DIESEL FUEL OIL NO.2 FOR THE TENJO VISTA POWER PLANT

WHEREAS, GPA intends to issue an Invitation for Bid (IFB) for the procurement of a contractor for the Supply of Diesel Fuel Oil No.2 for the TENJO VISTA Power Plant; and

WHEREAS, the contract for the Supply of Diesel Fuel Oil No.2 for the TENJO VISTA Power Plant shall be for a base period of three (3) years, to commence on or about June 01, 2020 through May 31, 2023, with two (2) additional one-year extension options; and

WHEREAS, the draft bid solicitation documents for the procurement of a new Diesel Fuel Oil No.2 supply contract is hereby attached as **Exhibit A**; and

WHEREAS, the total cost for the new contract is anticipated to exceed $1.5M requiring GPA to seek authorization for this procurement from the PUC; and

WHEREAS, GPA is requesting the approval of the CCU to petition the PUC for the issuance of an Invitation for Bid for the Supply of Diesel Fuel Oil No.2 for the TENJO VISTA Power Plant.

NOW THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, subject to the review and approval of the Public Utilities Commission, as follows:

1. GPA's request to solicit competitive bids for the Supply of Diesel Fuel Oil No.2 Supply for the TENJO VISTA Power Plant through a Multi-Step Bid process is reasonable, prudent and beneficial to its customers.

2. GPA is authorized to petition the Public Utilities Commission for approval to issue bids to procure a Contractor for the Supply of Diesel Fuel Oil No.2 for the TENJO VISTA Power Plant.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 28th DAY OF JANUARY 2020.

Certified by:

JOSEPH T. DUENAS
Chairperson
Consolidated Commission on Utilities

Attested by:

MICHAEL T. LIMTIACO
Secretary
Consolidated Commission on Utilities

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows: The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

Invitation For Multi-Step Bid

No. GPA- -20

SUPPLY OF DIESEL FUEL OIL NO.2

TENJO VISTA POWER PLANT

Volume II

CONTRACT

(CONTRACTOR)

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CONTRACT

(CONTRACTOR)

GUAM POWER AUTHORITY

2020

IFB No. GPA- -20

SUPPLY OF DIESEL FUEL OIL NO.2

TENJO VISTA POWER PLANT

FORMAL CONTRACT

This Agreement and Formal Contract ("Contract"), is made and entered into on the _____ day of _____, 2020 by and between:

_____, hereinafter referred to as CONTRACTOR, duly organized, licensed, registered and qualified to do business in Guam with its principal address at

_____;

- And -

GUAM POWER AUTHORITY, hereinafter referred to as the **"Authority"** or **"GPA"**, a Public Corporation with its office located at the Gloria Nelson Public Service Complex, Fadian, Mangilao Guam;

R E C I T A L S

WHEREAS, **GPA** desires to maintain uninterrupted supply of Diesel Fuel Oil No.2 to the **TENJO VISTA** Power Plant; and

WHEREAS, **GPA** seeks to procure a new Diesel Fuel Oil No.2 Supply Contractor; and

WHEREAS, the Consolidated Commission on Utilities has determined that the (CONTRACTOR) is a preferred option for **GPA** to supply the Diesel Fuel Oil No.2 requirements for the Authority;

WHEREAS, the Guam Public Utilities Commission has ordered **GPA** to proceed with the procurement of a CONTRACTOR for the Supply of Diesel Fuel Oil No.2 to the **TENJO VISTA** Power Plant;

WHEREAS, **GPA** has issued an Invitation For a Multi-Step Bid under IFB GPA- -20 for the Supply of Diesel Fuel Oil No.2 for the **TENJO VISTA** Power Plant; and

WHEREAS, **CONTRACTOR** submitted a bid in response to the Invitation for Bid for the Supply of Diesel Fuel Oil No.2;

WHEREAS, **GPA**, upon evaluation of the submitted bid proposals, determined that **CONTRACTOR** is the lowest responsive and responsible bidder; and

WHEREAS, the Guam Consolidated Commission on Utilities (CCU) and the Guam Public Utilities Commission (PUC) has determined that the **CONTRACTOR** is the preferred option for **GPA** to supply the Fuel oil requirements for the Authority.

NOW, THEREFORE, in consideration of the above premises and the mutual promises set forth herein and the terms and conditions hereinafter set forth and for other good and valuable consideration, receipt of which is hereby acknowledged; **CONTRACTOR** and **GPA** hereby agree as follows:

SECTION 1. DEFINITIONS

"Fuel oil" means a liquid hydrocarbon product satisfying the specifications in **Schedule A**

"$" shall refer to currency in U.S. dollars.

"ASTM" shall mean the American Society for Testing and Materials.

"API" shall mean the American Petroleum Institute.

"Gallon" shall mean a U.S. standard gallon of 231 cubic inches at sixty degrees Fahrenheit.

"Barrel" shall mean a volume equivalent to 42 U.S. gallons.

"Contract" shall mean the Diesel Fuel Oil No.2 Supply Contract executed as a result of this IFB.

"Contract Agreement (Agreement)" shall mean the written agreement between **GPA** and **CONTRACTOR** covering the Supply of Diesel Fuel Oil No.2 any other Contract Documents either attached to the Agreement or made a part thereof by reference therein.

"Contract Documents" shall mean the Contract Agreement, Bonds (where required), these General Conditions, any Supplementary Conditions, the Specifications, and any other documents specifically identified in the Contract Agreement, together with all Modifications issued after execution of the Contract Agreement.

"Contracting Officer" shall mean the General Manager of the Guam Power Authority and shall include his authorized representatives.

"CONTRACTOR" shall mean the party or parties who or which shall have duly entered into a contract with the Guam Power Authority to perform the work herein contemplated or his or their authorized assignee.

"**Day"** shall mean a calendar day of twenty-four (24) hours measured from midnight to the next midnight.

"Delivery Time" shall mean the total number of days or the dates stated in the Agreement for furnishing the product.

"General Manager" shall mean the General Manager is the Chief Executive Officer of the Guam Power Authority. The office and title of General Manager shall apply to any person acting in a regular or in an acting capacity as the Chief Executive Officer of the Guam Power Authority.

"Notice" shall mean and include all written notice demands, instructions, claims, approvals and disapprovals required to obtain compliance with contract requirements. Any written notice by either party to the contract shall be sufficiently given if delivered to or at the last known business address of the person, firm, or corporation constituting the other party to the contract, or to his, their, or its duly authorized agent, representative, or officers, or when enclosed in a postage prepaid envelope addressed to such last known business address and deposited in a United States mail box. The CONTRACTOR must provide and maintain a post office address within Guam and file the same with the Contracting Officer.

"Procurement Officer" shall mean the General Manager of the Guam Power Authority or the General Manager's designee.

"PURCHASER" shall mean the Guam Power Authority with whom CONTRACTOR has entered into the Contract Agreement.

"Seller" shall mean the CONTRACTOR.

"Territory" shall mean the Territory of Guam.

"OPA'90" shall mean the Oil Pollution Act of 1990 by the U.S. Congress.

"Platt's Asia-Pacific/ Arab Gulf Marketscan" shall mean the reference source document for the fuel Contract pricing.

"Receiving facility" shall mean the **TENJO VISTA** Power Plant.

SECTION 2. FUEL OIL TO BE SUPPLIED

CONTRACTOR agrees to furnish and **GPA** agrees to accept and pay for all of **GPA**'s diesel fuel oil requirements for the **TENJO VISTA** Power Plant for the term of the Contract. The estimated annual consumption is approximately 2,000,000 to 3,000,000 gallons.

Fuel Oil to be supplied to **GPA** shall conform to the product quality requirements specified in **Schedule A** and shall come from reputable sources not sanctioned by the United States government.

Fuel Oil must be delivered from the **CONTRACTOR's** Guam storage facility to the GPA plant site covered in this Contract. The **CONTRACTOR** shall be available to deliver the Fuel Oil to the point of delivery as designated by **GPA** within twelve (12) hours of receiving a request. **CONTRACTOR** must be available to receive and accept delivery requests daily, including weekends and holidays.

The **CONTRACTOR** shall provide transfer pumps and/or whatever else may be necessary to deliver Fuel Oil to **GPA** plant storage tanks to the height of 45 feet. Fuel Oil deliveries shall be on an "on call" basis. **CONTRACTOR** must closely coordinate with the plants and shall exercise its best efforts to deliver Fuel Oil to **GPA** to meet operational requirements regardless of the estimates provided by **GPA.**

CONTRACTOR must also be able to provide sufficient fleet to deliver the quantities as required by GPA.

SECTION 3. CONTRACT TERM

The Contract Term shall be for THREE (3) years and shall commence on or about June 01, 2020. GPA has the option to extend the contract for TWO (2) years renewable annually with mutual consent of parties.

SECTION 4. CONTRACT PRICE

The **CONTRACT PRICE** in U.S. dollars per Gallon ($/gal) for all Fuel Oil delivered to **GPA** shall be

inclusive of all costs and liabilities required to fulfill the contract.

The **CONTRACT PRICE** is the sum of the **REFERENCE PRICE** plus the **FIXED SERVICE FEE**.

The **CONTRACT PRICE** shall increase or decrease on a cent-for-cent basis with the **REFERENCE PRICE**.

The **REFERENCE PRICE** for the Fuel Oil supplied and delivered by CONTRACTOR from the **CONTRACTOR**'s Guam storage facility into the GPA's designated plant site location shall be the mean average of the previous month's daily Mid-of-Platts (MOPS) price postings. MOPS is the average of high and low price assessments reported in the Platt's Asia-Pacific/Arab Gulf Marketscan FOB Singapore Price Assessment for Gasoil 10 ppm.

The **FIXED SERVICE FEE** for all Fuel Oil supplied and delivered by **CONTRACTOR** to the **TENJO VISTA** Power Plant hereto shall be as follows:

CONTRACT FIXED SERVICE FEE	THREE (3) YEAR BASE PERIOD			TWO (2) YEAR EXTENSION OPTION	
	1st year $/gal (in 3 decimals)	2nd year $/gal (in 3 decimals)	3rd year $/gal (in 3 decimals)	1st yr Extn $/gal (in 3 decimals)	2nd yr Extn $/gal (in 3 decimals)
SITE LOCATION: TENJO VISTA POWER PLANT					

SECTION 5. INVOICE PRICE DETERMINATION

Sample Delivery Month: **January 2020**

(1) Sample Calculation of **REFERENCE PRICE**:

REFERENCE PRICE= Average of Previous Month's Daily MOPS

Previous Month: December 2019

Average of the Daily MOPS for December 2019: $79.206 per Barrel

Average Price: $1.886 per Gallon (rounded to three decimal places)

REFERENCE PRICE for **January 2020**: $1.886 per Gallon

(2) Sample **FIXED SERVICE FEE**:

FIXED SERVICE FEE= $0.200 per Gallon (sample price)

(3) CONTRACT PRICE

CONTRACT PRICE = Reference Price + Fixed Service Fee

CONTRACT PRICE = ($1.886 + $0.200) per gallon

CONTRACT PRICE = $2.086 per gallon

This is the **CONTRACT PRICE** for fuel supplied and delivered by **CONTRACTOR** to GPA for the sample month.

For invoice calculation purposes, quantity shall be reported in barrels and gallons at standard sixty degrees Fahrenheit (60^{o}F) as declared in the Bill of Lading.

SECTION 6. TITLE, CUSTODY AND RISK OF LOSS

Title and custody to the Fuel Oil supplied by **CONTRACTOR** and delivered to the **GPA** plants thereof shall pass from the **CONTRACTOR** to **GPA** when:

a. The Fuel Oil has passed the GPA pipeline flange at the GPA plant storage tanks connecting the **CONTRACTOR**'s hose if delivered by tanker truck.
b. The Fuel Oil has passed the **GPA** meter flange or pipeline flange at the **GPA** plant storage tanks connecting the **CONTRACTOR**'s pipeline flange if delivered by pipeline.

All risk of loss, cost and liabilities prior to the time of passage of title of the fuel oil shall be on the **CONTRACTOR**.

SECTION 7. TERMS OF PAYMENT

Invoices for Fuel Oil delivered pursuant to quantity (Fuel Oil receipts) and quality prescribed under the terms of this contract shall be submitted no more frequently than weekly, based on the number of Gallons of Fuel Oil delivered to **GPA** during the preceding period. The invoices must be supported by Fuel Oil receipts or receiving tickets including a receipt acknowledgement from a **GPA** representative. The payment terms are 30 days (net) beginning on the date the invoice is received by the **GPA** accounts payable section. All payments shall be based on the delivered quantity,

corrected to volume (net) at 60 °F.

SECTION 8. PAYMENT OF TAXES AND OTHER GOVERNMENT CHARGES

All fuels under the terms of this Contract are exempt from the Government of Guam Liquid Fuel Tax and the Government of Guam Gross Receipts Tax as provided by 12 G.C.A., Section 8115.
In the event that any cargoes shall be liable to the payment of Import Duty, such Import Duty shall be to the CONTRACTOR's account.

CONTRACTOR shall be responsible for filing appropriate tax returns or other filings and requesting rebates, credits, drawbacks or exemptions.
CONTRACTOR shall be solely responsible for filings and payment of income tax or taxes measured on net income.

CONTRACTOR shall be solely responsible for filings and payment of income tax or taxes measured on net income.

SECTION 9. WARRANTY AND CLAIMS

CONTRACTOR warrants that it has the facilities and resources sufficient to meet CONTRACTOR's obligations under this Contract. Cost for the use of such resources shall be borne by the CONTRACTOR.

CONTRACTOR agrees, represents and warrants as follows:

a. **Ability to Supply.**

   CONTRACTOR warrants that the fuel oil shall meet the specification prescribed herein under Schedule A, and other pertinent sections. If the fuel oil fails to meet the specifications herein, CONTRACTOR shall be liable for any direct damages resulting therefrom.

b. **Ability to Deliver to the GPA Plants**

   CONTRACTOR shall own, lease, sub-lease, or have the right to use tanker trucks, storage tanks, loading racks and gantries and other facilities sufficient to meet CONTRACTOR's obligations for delivering the fuel oil to the GPA plants under this Contract.

CONTRACTOR shall be solely responsible for any damages caused by the CONTRACTOR or its agents during the process of oil shipment and delivery.

Claims against the CONTRACTOR for direct costs incurred on account of their non-performance or negligent actions shall be given in writing together with all supporting documents, invoices and correspondence by GPA within thirty days (30) from date of delivery of fuel oil as specified in Section 4.

SECTION 10. PRODUCT AND QUALITY

The fuel oil delivered hereunder shall have the physical and chemical characteristics as described in **Schedule A**.

The Authority reserves the right to require the supplier to add and to conduct additional tests as may be required.

SECTION 11. QUANTITY AND QUALITY ASSURANCE

a. **Delivery by Tanker Truck.**

CONTRACTOR, at its sole expense, shall utilize its terminal truck loading rack and metering system to determine the quantity of Diesel Fuel Oil No.2 delivered by tanker truck to GPA. Quantity of product delivered by CONTRACTOR at CONTRACTOR's nominated tanker truck(s) to the GPA plants shall be determined at the time of each delivery by CONTRACTOR, converted in each instance to volume at 60 degrees Fahrenheit by the automated rack control system and shall be the basis for the Bill of Lading (BOL).

Contractor at it sole expense, shall provide a pump and unload the product from the tanker truck into the GPA fuel receiving facility.

CONTRACTOR shall have such meters calibrated no less than annually and shall furnish GPA a copy of the certificate of newly calibrated meter(s) within 10 days after the calibration date.

In the event of a dispute over the accuracy of the CONTRACTOR's meters, an independent third party mutually agreeable to both parties will be brought in to perform a recalibration. In the event of a miscalibration, the costs shall be borne by the CONTRACTOR. Any loss incurred by GPA as a result of miscalibration of meters shall be negotiated and returned to the AUTHORITY.

CONTRACTOR is required to install security seals on valves and compartments of the delivery tanker trucks after Fuel Oil loading is completed. Seals shall remain intact upon inspection by the GPA receiving facility. Seal numbers shall be recorded in the delivery receipt and initialed by an authorized terminal representative. GPA reserves the right to reject deliveries with tampered or missing seals.

b. Delivery By Pipeline Transfer

Quantity of product delivered by the **CONTRACTOR** by pipeline transfer to **GPA** shall be determined utilizing the meter installed at the pipeline into the **GPA** plant storage tank.

i. In the event that a meter is not installed or is defective, quantity of the product delivered by the **CONTRACTOR** shall be determined by the **CONTRACTOR** meter. **CONTRACTOR** shall have such meters calibrated no less than annually and shall furnish **GPA** a copy of the certificate of newly calibrated meter(s) within 10 days after the calibration date. In the event of a dispute over the accuracy of the meter, an independent third party mutually agreeable to both parties will be brought in to perform a recalibration. In the event of a miscalibration, the costs shall be borne by the **CONTRACTOR**. Any loss incurred by **GPA** as a result of miscalibration of meters shall be negotiated and returned to **GPA**.

ii. In the event that the **CONTRACTOR** meter is defective or is not installed, quantity of the product delivered by the **CONTRACTOR** shall be determined by an Independent Third Party Inspector by gauging the receiving tanks before and after delivery. Cost shall be borne by the **CONTRACTOR.**

Quantity shall be corrected to the volume at sixty degrees Fahrenheit. Conversion shall be made in accordance with the ASTM-IP Petroleum Measurement Tables (IP-200), Table 6B (latest edition).

Appropriate Certificate of Quality (COQ) reports shall also accompany each delivery and must be presented to the **GPA** receiving facility. Quality must conform with the requirements specified in **Schedule A** as a condition for acceptance of delivery.

In the event of a dispute over the quality of Fuel Oil received by **GPA**, an inspection of Fuel Oil will be conducted by an appointed third party inspector mutually acceptable to **GPA** and the **CONTRACTOR**.

CONTRACTOR shall provide a comprehensive summary of the Fuel Oil delivery reports. **CONTRACTOR** shall tailor its reports to **GPA's** needs. **CONTRACTOR** shall submit copy(ies) of all Certificates of Quality (COQ) for the delivery month. Reports shall be submitted to the **GPA** weekly and monthly, within five (5) working days after each report month. **CONTRACTOR** shall also submit other reports and/or documentations that is relevant to the contract as may be required by the Authority.

SECTION 12. QUANTITY DETERMNATION

GPA reserves the right to require the intervention of a third party independent inspector for quantity determination. Such inspector shall be mutually acceptable to **GPA** and the **CONTRACTOR.** Cost shall be borne by the **CONTRACTOR.** All quantities shall be corrected to volume at sixty degrees Fahrenheit (60 ^{o}F) in accordance with the ASTM-IP Petroleum Measurement Table, Table 6B, the latest edition published shall be applicable.
Quantity certification prepared by independent inspector shall be final and binding upon both parties. Inspection report shall be submitted by **CONTRACTOR** to **GPA** no later than two (2) calendar days after completion of inspection and shall provide **GPA** unrestricted access to records or reports as may be required.

In the event of the variances between the B/L quantity and the discharge port (shore tanks) receipts, The AUTHORITY shall pay (absorb) a quantity shortfall up to ONE-FOURTH PERCENT (0.25 %) of the barrel established quantity; shortages beyond the 0.25% shall be covered by the CONTRACTOR.

SECTION 13. SECURITY OF SUPPLY

CONTRACTOR reserves the right to supply fuel oil meeting **GPA** quality requirements specified in Schedule A and may come from any sources not sanctioned by the United States government. In the

event that supplies are taken from such other places, then the price to Guam will remain the same as established in **Section 4** above.

CONTRACTOR is required to maintain a minimum of thirty (30) days inventory at the **CONTRACTOR**'s storage facility.

For security of supply in the event of unexpected, unplanned or forced baseload outages, severe typhoon or other calamities. **CONTRACTOR** shall prioritize delivery to the **GPA** plants and guarantee uninterrupted supply and delivery of Fuel Oil during the recovery period. **CONTRACTOR** must also be able to provide sufficient fleet to deliver the quantities as may be required by **GPA**.

CONTRACTOR must submit weekly and monthly fuel inventory and delivery report to **GPA**.

GPA reserves the right to audit the **CONTRACTOR** for safety fuel inventory stock compliance. Such audit shall be in accordance with generally accepted accounting practices.

SECTION 14. GOVERNMENT LAWS AND REGULATIONS

(a) If at any time during the term of the Contract the Government of the United States or the Territory of Guam enacts laws or issues regulations which would prevent **GPA** from burning the type of fuel oil to be supplied hereunder, **GPA** shall use its best efforts to obtain an exemption. In the event **GPA** cannot obtain an exemption from such laws and regulations, **CONTRACTOR** shall use his best efforts to furnish **GPA** substitute fuel oil which complies with such governmental laws and regulations at the same price set out herein, or if unreasonable, at a price to be renegotiated by the parties. If the substitute fuel oil causes an increase or decrease in **CONTRACTOR** 's cost of performance of the Contract, an equitable adjustment shall be made and the Contract modified in writing accordingly. Any claim of **CONTRACTOR** for adjustment under this section must be asserted in writing within thirty (30) days from date of receipt by **CONTRACTOR** of the notification of substitute fuel oil in compliance with Government laws, rules and regulations. Failure to agree to any adjustment shall be a dispute concerning a question of fact within the meaning of the clause of this Contract entitled "Governing Law and Disputes" (Section 21). However, nothing in this clause shall excuse the **CONTRACTOR** from proceeding with the Contract fuel oil specifications as changed in order to comply with Government laws, rules and regulations. Only in the event that the parties

cannot mutually agree upon the price at which **CONTRACTOR** is to furnish such substitute fuel oil, and **CONTRACTOR** refuses to provide such substitute fuel oil at the Contract price set out herein shall **GPA** then have the option of purchasing from other sources fuel oil at a lower price than that offered by **CONTRACTOR** in such negotiations which complies with such laws and regulations, but in any event, the **CONTRACTOR** shall have no recourse, other than those specified herein.

(b) **CONTRACTOR** shall at all times comply with all applicable laws and regulations of the Territory of Guam and the Federal Government and their respective agencies.

SECTION 15. PERMITS AND RESPONSIBILITIES

The **CONTRACTOR** shall, without additional expense to **GPA**, be responsible for obtaining any necessary licenses and permits, and for complying with any applicable Federal and Territorial laws, codes and regulations necessary for performance of the Contract by **CONTRACTOR**.

SECTION 16. FORCE MAJEURE

No failure or omission by either party to carry out or to observe any of the terms, provisions or conditions of the Contract shall, except in relation to obligations to make payments under the Contract, give rise to any claim by one party against the party in question or be deemed to be a breach of the Contract if such failure or omission arises from any cause reasonably beyond the control of the party, including but without prejudice to the generality of the foregoing:

(a) War, etc. War, hostilities, acts of public enemy or belligerents, sabotage, blockade, revolution, insurrection, riot or disorder;

(b) Restraints. Arrest or restraint of princes, rulers or peoples;

(c) Confiscation. Expropriation, requisition, confiscation or nationalization;

(d) Rationing. Embargoes, export or import restrictions or rationing or allocation, whether imposed by law, decree or regulation or by voluntary cooperation of industry at the insistence or request of any governmental authority or person purporting to act therefore;

(e) Regulations. Interference by restriction or onerous regulations imposed by civil or military authorities, whether legal or de facto and whether purporting to act under some constitution, decree, law or otherwise;

(f) Acts of God. Acts of God, fire, frost or ice, earthquake, storm, lightning, tide, tidal wave, or peril of the sea, accident of navigation or breakdown or injury of vessels;

(g) Loss for Tankers. Loss of tanker tonnage due to sinking by belligerents or to governmental taking whether or not by formal requisition;

(h) Accidents. Accidents to or adjuncts of shipping navigation;

(i) Strikes. Epidemics, quarantine, strikes or combination of workmen, lockouts, or other labor disturbances;

(j) Explosions. Explosion, accidents by fire or otherwise to wells, pipes, storage facilities, refineries, installations, machinery;

(k) Taking by Government. Unavailability of fuel because of the election of the government of the country of its origin to take royalty product in kind;

(l) Other Events. Any event, matter or thing wherever occurring and whether or not of the same class or kind as those set forth, which shall not be reasonably within the control and without the fault or negligence of the party affected thereby.

No failure or omissions to carry out or to observe any of the terms, provisions or conditions of the Contract shall give rise to any claim by one party against the other, or be deemed to be a breach of the Contract from the time of and to the extent occasioned by the Force Majeure, not from the date of notice of the Force Majeure is received.

SECTION 17. NOTICE TO OTHER PARTY

Either party whose obligations may be affected by any of the forces or causes set out in **Section 16**, supra, shall promptly notify the other party in writing, giving full particulars thereof as soon as possible after the occurrence of such force or cause. Such party shall exercise due diligence

to remove such cause with all reasonable dispatch and to resume performance at the earliest practicable time.

SECTION 18. PAYMENT REQUIRED

Notwithstanding the provisions of **Section 16**, supra, **GPA** shall not be relieved of any obligation to make payments for any fuel delivered to Guam dock/**GPA** tanks hereunder; however, during the force majeure condition the obligation shall be suspended, except for fuel oil deliveries made prior to the force majeure condition.

SECTION 19. PRORATION OR EQUITABLE ALLOATION

If any of the events enumerated in **Section 16**, supra, have occurred, **CONTRACTOR** shall prorate or otherwise allocate in a fair and equitable manner among its customers, including **GPA**, the supplies of fuel oil **CONTRACTOR** has available for delivery at the time of the occurrence or for the duration of such event taking into account **GPA**'s unique situation as Guam's total dependence on fuel oil. **CONTRACTOR** shall also seek an alternative source of fuel oil to fulfill its contractual obligations.

SECTION 20. RESUMPTION OF PERFORMANCE

If **CONTRACTOR** is prevented from delivering or **GPA** is prevented from receiving all or any fuel to be sold under the Contract for the reasons which fall within the provisions of **Section 16**, supra, then the party so prevented shall, as to the remainder of the fuel not affected thereby, promptly resume performance of the Contract. No curtailment or suspension of deliveries or payment under the causes listed in **Section 16**, supra, shall operate to extend the term of or terminate the Contract unless the occurrence of force majeure will materially impair, for an indefinite period of time, the parties' ability to perform the Contract.

SECTION 21. GOVERNING LAW AND DISPUTES

This CONTRACT shall in all respects be governed by the Laws of Guam. The provisions of the United Nations Convention on Contracts for the International Sale of Goods are expressly excluded.

This CONTRACT shall not be construed to confer any benefit on any person not being a party to this Contract not shall it provide any rights to such person to enforce any of its provisions. The provisions of the English Contracts (Rights of Third Parties) Act 1999 are expressly excluded.

In the event of any controversies, dispute or difference of any nature (a "Dispute") between the parties arising from or in connection with this Contract, either party may give notice to the other in writing of the existence of such dispute specifying its nature and the points at issue. If the dispute shall not have been amicably resolved within thirty (30) days from the date of the said notice, then the same shall be exclusively and definitely resolved through final and binding arbitration in Guam, by the AMERICAN ARBITRATION ASSOCIATION ('AAA'), in accordance with the rules of arbitration of such institution in effect as of the date the existence of the controversy is notified by one of the parties. The arbitration shall be conducted by three arbitrators, unless all parties to the dispute agree to a sole arbitrator within thirty (30) days after the filing of the arbitration. Each party to the dispute shall appoint one arbitrator within thirty (30) days of the filing of the arbitration, and the two arbitrators so appointed shall select the presiding arbitrator within thirty (30) days after the latter of the two arbitrators have been appointed by the parties to the dispute. If a party to the dispute fails to appoint its party-appointed arbitrators or if the two party-appointed arbitrators cannot reach an agreement on the presiding arbitrator within the applicable time period, then LCIA shall appoint the remainder of the three arbitrators. The arbitration proceedings shall be conducted in English and the arbitrator(s) shall be fluent in the English language. The award of the arbitral tribunal shall be final and binding. Judgment on the award of the arbitral tribunal may be entered and enforced in any court having jurisdiction thereof. The cost of the arbitration proceedings, including attorneys' fees, shall be borne in the manner determined by the arbitral tribunal. Any right to appeal or challenge any arbitral decision or award is hereby waived. The parties may seek a preliminary injunction or other preliminary judicial relief, if in its judgment such action is necessary to avoid irreparable damage. It is expressly agreed that indirect, special, punitive and consequential damages shall not be awarded.

SECTION 22. CONTRACTOR'S INSURANCE

CONTRACTOR shall not commence work under this Contract until he has obtained all insurance required under this section and such insurance has been approved by **GPA**, nor shall the

CONTRACTOR allow any Subcontractor to commence work on his subcontract until all similar insurance required of the Subcontractor has been so obtained and approved.

The **CONTRACTOR** shall provide a copy of their Insurance Policy to **GPA** within the period prescribed by **GPA**. All updates or revisions after contract commencement shall also be forwarded to **GPA**. Failure on the part of the **CONTRACTOR** to provide the required documents and/or to enter into a contract with **GPA** shall be sufficient grounds for the annulment of the award. **GPA** may determine the bidder to be non-responsive to the bid, and may proceed with sending a Notice of Intent to Award to the next most qualified BIDDER.

A. WORKMEN'S STATUTORY COMPENSATION INSURANCE AND EMPLOYER'S LIABILITY INSURANCE: The **CONTRACTOR** shall take out and maintain during the life of this Contract the applicable statutory Workmen's Compensation Insurance with an insurance company authorized to write such insurance and in the applicable State or Territory including the Territory of Guam covering all his employees, and in the case of any work sublet, the **CONTRACTOR** shall require the Subcontractor similarly to provide statutory Workmen's Compensation Insurance for the latter's employees. The **CONTRACTOR** shall secure and maintain, during the life of this Contract, Employer's Liability Insurance with a limit of $1,000,000 with an insurance company authorized to write such insurance in all states or territories including the Territory of Guam where the Contractor will have employees located in the performance of this Contract. **CONTRACTOR** shall provide a Waiver of Subrogation in favor of **GPA** via endorsement to the Workers Compensation policy. This coverage shall be on a primary and non-contributory basis.

B. COMMERCIAL GENERAL LIABILTY:

1. The **CONTRACTOR** shall maintain, during the life of this Contract, such Commercial General Liability as shall protect him against claims for damages resulting from (a) bodily injury, including wrongful death, and (b) property damage, which may arise from operations under this Contract whether such operations be by himself or by any Subcontractor or anyone directly or indirectly employed by either of them. The minimum acceptable limits of liability to be provided Liability Insurance shall be as follows:

Bodily Injury Limits:	$ 1,000,000 Each Person
Property Damage Limits:	$ 1,000,000 Each Occurrence

$ 2,000,000 Aggregate

2. The Commercial General Liability required by the preceding Subparagraph 1 shall include the following extensions of coverage:

i. The property damage coverage shall include a Broad Form Property Damage Endorsement.

ii. Contractual Liability coverage shall be included.

iii. Protective Liability coverage shall be included to protect the **CONTRACTOR** against claims arising out of operations performed by his Subcontractors.

iv. Products Liability and/or Completed Operations coverage shall be included.

v. **GPA** shall be an additional insured on the Commercial General Liability policy.

vi. This coverage shall be on a primary and non-contributory basis.

vii. **CONTRACTOR** shall grant Waiver of Subrogation in favor of **GPA**.

C. AUTOMOBILE LIABILITY INSURANCE:

The **CONTRACTOR** shall take out and maintain during the life of the Contract, such Automobile Liability insurance as shall protect him against claims for damages resulting from (a) bodily injury, including wrongful death, and (b) property damage, which may arise from the operations of any owned, hired or non-owned automobiles used by or for him in any capacity in connection with the carrying out of this Contract. **GPA** shall be an additional insured on Auto Liability policy. **CONTRACTOR** will grant Waiver of Subrogation in favor of **GPA**. The minimum acceptable limits of liability to be provided by such Automobile Liability Insurance shall be as follows:

Bodily Injury Limits:	$ 1,000,000 Each Person
	$ 1,000,000 Each Occurrence
Property Damage Limits:	$ 1,000,000 Each occurrence

This coverage shall be on a primary and non-contributory basis.

D. POLLUTION LIABILITY INSURANCE:

The **CONTRACTOR** shall take out and maintain during the life of the Contract, Pollution Liability Insurance with minimum limits of $5,000,000 that provides coverage for third party bodily injury, third party property damage, and clean-up cost whether ordered by a government entity or not ordered by a government entity. Grant waiver of subrogation in favor of **GPA**. **GPA** is to be an additional insured.

This coverage shall be on a primary and non-contributory basis.

E. EXCESS LIABILITY

Excess Liability with limits of $5,000,000 over the General Liability, Auto Liability, and workers compensation policies. **GPA** shall be named as an additional insured. **CONTRACTOR** shall grant Waiver of Subrogation in favor of **GPA**. This coverage shall be on a primary and non-contributory basis.

Cancellation Clause:

All policies above shall contain the following Cancellation clause:

The insurance company shall notify in writing the Guam Power Authority (insured) a minimum of 60 days prior to any material changes or cancellation of coverage.

F. CERTIFICATE OF INSURANCE:

The **CONTRACTOR** shall furnish **GPA** with two (2) copies of a Certificate of Insurance evidencing policies required in Paragraphs A, B, C, D, and E above. Such certificates shall specifically indicate that the Commercial General Liability Insurance includes all extensions of coverage required in Paragraph B., Subparagraph 2. above. Such certificate shall specifically state that the insurance company or companies issuing such insurance policies shall give **GPA** at least sixty (60) days written notice in the event of cancellation of or material change in any of the policies. If coverage on said certificate(s) is shown to expire prior to completion of all terms of this Contract, the **CONTRACTOR** shall furnish a Certificates of Insurance evidencing renewal of such coverage to **GPA**. The Certificates of Insurance shall clearly show this Contract number.

The **CONTRACTOR** shall provide a copy of their Insurance Policy to **GPA** as part of the bid requirements. All updates or revisions after contract commencement shall also be forwarded to **GPA**.

G. SUBCONTRACTOR'S INSURANCE:

The **CONTRACTOR** shall require each of his Subcontractors to take out and maintain during the life of his Subcontract, the same insurance coverage required of the **CONTRACTOR** under Paragraphs A, B, C, D, and E above, including the extensions of coverage required under Paragraph B., Subparagraph 2, above. Each Subcontractor shall furnish to the **CONTRACTOR** two (2) copies of a Certificate of Insurance and such certificate shall contain the same information

required in Paragraph B. above. The **CONTRACTOR** shall furnish one (1) copy of the certificate to **GPA**.

H. INSURANCE COMPANY AND AGENT:

All insurance policies herein required of the **CONTRACTOR** shall be written by a company duly authorized to do business in the Territory of Guam and where supply under this Contract is being performed and be executed by some agent thereof duly licensed as an agent in said State or Territory.

SECTION 23. INDEMNITY

CONTRACTOR shall indemnify and hold **GPA** harmless from all damages to persons or property or to receiving facilities and delivery facilities, regardless of ownership, including the cost of enforcement of the indemnity, actually and proximately caused by **CONTRACTOR** or its agents in making deliveries hereunder. **CONTRACTOR** shall be responsible for cleaning up any oil spillage caused by it or its agent or **CONTRACTOR**s during the process of oil delivery. **CONTRACTOR** shall carry at all times appropriate levels of insurance as determined by **GPA** to cover any such damage. The **CONTRACTOR** shall ensure that any vessel owned or chartered by the Contractor for deliveries under this agreement shall meet the requirements of the U.S. Oil Pollution Act of 1990 (OPA 90).

SECTION 24. TRANSPORTATION

CONTRACTOR shall arrange for the transportation of the Fuel Oil to the **GPA** storage facilities. All risk of loss, cost and liabilities prior to the time of passage of title of the Fuel Oil shall be on the **CONTRACTOR**.

CONTRACTOR 's and **GPA**'s rights and duties under **Section 24** and **Section 25** do not supersede or control the provisions of **Section 16** Force Majeure.

SECTION 25. FAILURE TO SUPPLY

If the CONTRACTOR refuses or fails to perform any of the provisions of this Contract with such diligence as will ensure the timely delivery of fuel oil supply or commits any other substantial breach or non-performance of this Contract, CONTRACTOR must provide GPA at least five (5) days prior

notice of its inability to supply and/or deliver fuel to GPA. GPA reserves the right to procure fuel oil supply from another source immediately upon issuance of such notification or whenever it deems appropriate for a period to be determined solely by GPA. If the cost of fuel supply and/or delivery during such period shall exceed the Contract price as provided in Section 4, the CONTRACTOR shall reimburse GPA for the difference and other damages, which may be taken from the Performance Bond or applied as a deduction to payments due from current and future invoices.

If not cured within THIRTY (30) days of the date of notification, GPA may terminate the Contract in whole or such part of the Contract as to which there has been a delay or a failure to properly perform. In the event of termination in whole or in part, GPA reserves the right to procure fuel oil supply from another source.

SECTION 26. FAILUE TO PAY

Failure to pay an invoice and any late penalties, if any, within a period of THIRTY (30) days from the due date of such invoice, shall be a default and should such a default not be cured within THIRTY (30) days of default, **CONTRACTOR** may, at its option, do either of the following:

(a) Terminate the Contract forthwith or forthwith suspend delivery under the contract until further notice, on notifying **GPA** orally or by notice in writing; or

(b) Continue to supply fuel oil and bring suit in the Superior Court of Guam for amounts past due and as they become due.

SECTION 27. FAILURE TO COMPLY WITH LAWS

In the event the **CONTRACTOR** or any person or entity identified as principals in the offer submitted in connection with the bid shall be found by any court or administrative agency having jurisdiction over the subject matter of the violation, to have violated any law, rule or regulation in connection with **CONTRACTOR** 's performance of the obligations under the Contract in any manner whatsoever directly or indirectly which violation shall constitute a breach of the peace, or an act involving moral turpitude or otherwise constitute endangerment of the health, safety and welfare of the citizens of the Territory of Guam, **GPA** may at its sole discretion terminate this Contract upon THRITY (30) days written notice.

SECTION 28. PENALTY CLAUSES

(a) Quality Outside Contractual Specifications

In the event that any fuel, according to the analysis results has one or more quality characteristics outside the contractual specifications set in Schedule A, then in addition to any other rights or remedies available to the GPA under this contract a penalty will be imposed according to the following:

(1) If the bottom sediment and water exceeds the specification limit, then a price reduction shall be made for all water and non-petroleum sediment in excess of maximums specified in Schedule A multiplied by the Bill of Lading Quantity.

(2) If the heating value is less than the specification limit, then there will be a price reduction calculated as the ratio of the Out-of-Specification heating value and the Guaranteed Heating Value specified in Schedule A, multiplied by the Bill of Lading Quantity. If any other quality parameter (besides the ones stated in) exceeds the specifications' limits, then a penalty will be agreed between GPA and CONTRACTOR.

It is expressly agreed that the present penalty clauses shall be imposed regardless of whether damages were or not suffered by the GPA due to the delay in delivering the fuel and fuel quality outside contractual specifications, and that the GPA reserves the right to claim cumulatively both the amount of the penalty clauses and indemnification for every direct damage suffered by him due to CONTRACTOR non-contractual actions or omissions.

If during the period of this contract the GPA is forced to purchase fuel oil in order to maintain the GPA's Power Stations on full commercial load as a result of failure on the part of the CONTRACTOR to supply and/or deliver fuel oil in accordance with the terms of this contract (save for events of Force Majeure) any additional cost borne by the GPA over and above the price provided for in this Contract, CONTRACTOR will be liable to refund GPA either by payment of the CONTRACTOR or by way of reduction from GPA debts to the CONTRACTOR or deduction from the CONTRACTOR's Good Performance Bond of the Contract, or partially from both.

GPA reserves the right to retain the amount of the penalty clauses from his debts to the

CONTRACTOR or from the Good Performance Bond of the Contract, or partially from both.

(b) **Quality Outside Contractual Specifications**

In the event that any fuel, according to the analysis results has one or more quality characteristics outside the contractual specifications set in **Schedule A**, then in addition to any other rights or remedies available to the **GPA** under this contract a penalty will be imposed according to the following:

(1) If the bottom sediment and water exceed the specification limit, then a price reduction shall be made for all water and non-petroleum sediment in excess of maximums specified in **Schedule A** multiplied by the Bill of Lading Quantity.

(2) If the heating value is less than the specification limit, then there will be a price reduction calculated as the ratio of the Out-of- Specification heating value and the Guaranteed Heating Value specified in **Schedule A**, multiplied by the Bill of Lading Quantity.

If any other quality parameter (besides the ones stated in) exceeds the specifications' limits, then a penalty will be agreed between **GPA** and **CONTRACTOR**.

It is expressly agreed that the present penalty clauses shall be imposed regardless of whether damages were or not suffered by the **GPA** due to the delay in delivering the fuel and fuel quality outside contractual specifications, and that the **GPA** reserves the right to claim cumulatively both the amount of the penalty clauses and indemnification for every direct damage suffered by him due to **CONTRACTOR** non-contractual actions or omissions. If during the period of this contract the **GPA** is forced to purchase fuel oil in order to maintain the **GPA**'s Power Stations on full commercial load as a result of failure on the part of the **CONTRACTOR** to supply and/or deliver fuel oil in accordance with the terms of this contract (save for events of Force Majeure) any additional cost borne by the **GPA** over and above the price provided for in this Contract, **CONTRACTOR** will be liable to refund **GPA** either by payment of the **CONTRACTOR** or by way of reduction from **GPA** debts to the **CONTRACTOR** or deduction from the **CONTRACTOR's** Good Performance Bond of the Contract, or partially from both.

GPA reserves the right to retain the amount of the penalty clauses from his debts to the **CONTRACTOR** or from the Good Performance Bond of the Contract, or partially from both.

SECTION 29. DEFAULT

If the PARTY refuses or fails to perform any of their obligations under this agreement, non-breaching PARTY shall notify the PARTY either by e-mail or in writing within thirty (30) days of the breach. If the PARTY does not remedy the breach within thirty (30) days after the date of notification, non-breaching PARTY may by giving notice to the other PARTY terminate the Agreement in whole or suspend taking of delivery under the Contract.

In the event of partial termination or suspension under this provision, **GPA** reserves the right to procure fuel supply from another source upon notification to CONTRACTOR either by e-mail or in writing. Fuel to be procured shall be at the prevailing market price at the time of partial termination or suspension.

The CONTRACTOR shall be liable for the difference between the contract price and the prevailing market price at the time of termination.

SECTION 30. ATTORNEYS FEES

Should a default by either party result in litigation, the successful party shall be entitled to recover its reasonable attorney's fees from the defaulting party.

SECTION 31. TERMINATION FOR CONVENIENCE

(a) **Termination**.

The delivery of fuel oil supply under this Contract may be terminated by **GPA** in accordance with this clause in whole, or from time to time in part.

Any such termination shall be effected by delivery to the **CONTRACTOR** of a written Notice of Termination specifying the extent to which supply of fuel oil under the Contract is terminated.

In the case of termination of this Contract, **GPA** shall reimburse the CONTRACTOR of all the expenses related to the period of the Performance Bond that were not used.

(b) **CONTRACTOR's Obligations.**

The **CONTRACTOR** shall incur no further obligations in connection with the terminated fuel oil supply delivery and on the date set in the Notice of Termination the **CONTRACTOR** will stop delivery of fuel oil to the extent specified. The **CONTRACTOR** shall also terminate outstanding orders and Contracts, if any, as they relate to the terminated Contract for fuel oil supply. The **CONTRACTOR** shall settle the liabilities and claims arising out of the termination of orders and Contracts, if any, connected with the terminated fuel oil supply delivery. **GPA** may direct the **CONTRACTOR** to assign the Contractor's right, title and interest under the terminated orders or Contracts to **GPA**. The **CONTRACTOR** must still deliver fuel oil supply not terminated by the Notice of Termination and may incur obligations as are necessary to do so.

(c) **Right to Supplies.**

GPA may require the **CONTRACTOR** to transfer title of fuel oil cargo in transit to Guam at the time of receipt by Contractor of **GPA**'s Notice of Termination.

(d) **Compensation.**

(1) The **CONTRACTOR** shall submit a termination claim specifying the amounts due because of the termination for convenience. If the **CONTRACTOR** fails to file a termination claim within ONE (1) year from effective date of termination, **GPA** may pay the **CONTRACTOR**, if at all, an amount set in accordance with subparagraph (3) of this paragraph.

(2) **GPA** and the **CONTRACTOR** may agree to a settlement provided the **CONTRACTOR** has filed a termination claim supported by cost or pricing data to the extent required by Section 3-403 (Cost or Pricing Data) of the Guam Procurement Regulations and that the settlement does not exceed the total Contract price plus settlement costs reduced by payments previously made by **GPA**, the proceeds of any sales of supplies and manufacturing materials under the Guam Uniform Commercial Code, and the Contract price of the fuel supply not terminated.

(3) Absent complete agreement under subparagraph (1) of this paragraph, **GPA** may pay the **CONTRACTOR** the following amounts, provided payments agreed to under subparagraph (2) shall not duplicate payments under this subparagraph:

(i) Fuel oil Contract prices for supplies or services accepted under the Contract by **GPA**;

(ii) Costs incurred in preparing to perform and performing the terminated portion of the delivery of fuel oil plus a fair and reasonable profit on such portion of the delivery (such profit shall not include anticipatory profit or consequential damages) less amounts paid or to be paid for accepted fuel oil supplies or services; provided, however, that if it appears that the **CONTRACTOR** would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss;

(iii) Costs of settling and paying claims arising out of the termination of Contracts or orders pursuant to paragraph (2) of this clause. These costs must not include costs paid in accordance with subparagraph (3)(ii) of this paragraph;

(iv) The reasonable settlement costs of the **CONTRACTOR** including accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the Contract for the termination and settlement of Contracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to the terminated portion of this Contract. The total sum to be paid the **CONTRACTOR** under this subparagraph shall not exceed the total Contract price plus the reasonable settlement costs of the **CONTRACTOR** reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under the Uniform Commercial Code.

SECTION 32. REMEDIES CUMMULATIVE

Each and all remedies available to a party in the event of the other party's failure to comply timely with any or all the terms and conditions of the Contract may be exercised independently or in combination (such rights being nonexclusive one with the other). The remedies set forth in the Contract are in addition to, and not in lieu of, all of the remedies available at law or in equity.

SECTION 33. COVENANT AGAINST CONTIGENT FEES

The **CONTRACTOR** warrants no person or selling agency has been employed or retained to solicit or secure the Contract upon agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agency maintained by the **CONTRACTOR** for the purpose of securing business. For breach or violation of this warranty, **GPA** shall have the right to annul the Contract without liability or, in its discretion, to deduct from the Contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

SECTION 34. NOTICE

Except as otherwise expressly specified herein, any notice to be given hereunder by either party to the other shall be deemed sufficiently given if in writing and enclosed in an envelope properly stamped and addressed to the party at the address set forth in this section, and deposited in the United States mail. Either party may change its address by giving FIFTEEN (15) days prior written notice to the other party. Such address until further notice shall be:

GPA: General Manager
Guam Power Authority
Post Office Box 2977
Hagatna, Guam 96932-2977
TELEFAX: (671) 648-9225

CONTRACTOR: _____
_____
_____
_____

SECTION 35. INTEREST OF OTHER PARTIES

CONTRACTOR warrants that no member of the governing body of **GPA**, and no other officer, employee, or agent of **GPA** who exercises any functions or responsibilities in connection with the work to which the Contract pertains, and no employee, agent or member of the Guam Legislature or other public official of the Government of Guam, has or shall have any personal economic or financial interest, direct or indirect, in the Contract.

SECTION 36. ASSIGNMENT

CONTRACTOR declares that the only persons or parties interested in the Contract as principals are named herein and that the Contract is made without participation by or benefit to any other person, firm or corporation, except as specified herein.

CONTRACTOR agrees that it will not assign to nor permit Contract participation in whole or in part by any other person, firm or corporation not specified as a principal without the prior written consent of **GPA**. If such assignment is permitted, **CONTRACTOR** will guarantee the performance of all terms and obligations of the Contract, and such assignment shall not alter **CONTRACTOR**'s obligations hereunder. No assignee of **CONTRACTOR** shall have the right to assign the Contract without **GPA**'s consent which may be given or refused at **GPA**'s absolute discretion.

SECTION 37. TIME

Time is of the essence in the Contract and in every part hereof.

SECTION 38. AMENDMENT AND WAIVER

Neither the Contract nor any provision hereof may be changed, waived, altered, amended, discharged or terminated orally, but only by an instrument in writing signed by the party against whom enforcement of the change, waiver, alteration, amendment, discharge or termination is sought. For purposes of this Contract, the signature of the Chairman or his designee, of the Consolidated Commission on Utilities is required to bind the **AUTHORITY**.

Failure by either party to object to any failure of performance by the other party of any provision of the Contract shall not constitute a waiver of, or estoppel against, the right of such party to require such performance by the other. Nor shall any such failure to object constitute a waiver or estoppel with respect to any succeeding failure of performance.

SECTION 39. DESCRIPTIVE HEADINGS

The descriptive headings of the several Sections and Subsections in this Invitation are inserted for convenience only and shall not be deemed to affect the meaning or construction of any provision hereof.

SECTION 40. RELATIONSHIP OF PARTIES

Nothing contained in the Contract shall be deemed or construed by the parties or by any third person to create the relationship of principal and agent or of partnership or of joint venture or of any association between **CONTRACTOR** and **GPA**, and no provisions contained in the Contract nor any acts of the parties shall be deemed to create any relationship between **GPA** and **CONTRACTOR**, other than the relationship of buyer and seller.

SECTION 41. NUMBER AND GENDER

In the Contract the masculine gender includes the feminine and neuter, the singular number includes the plural, and the word "person" includes corporation, partnership, firm or association wherever the context so requires.

SECTION 42. SUCCESSORS IN INTEREST

Each and all of the covenants, conditions, and restrictions in the Contract shall inure to the benefit of and shall be binding upon the permitted assignees and successors in interest of either party.

SECTION 43. PARTIAL INVALIDITY

Should any part of the Contract for any reason be declared to be invalid, such decision shall not affect the validity of any remaining portion thereof, which remaining portion shall remain in force

and effect as if the Contract had been executed with the invalid portion thereof eliminated, and it is hereby declared the intention of the parties that they would have executed the remaining portion of the Contract without including any such part, parts, or portions which may, for any reason, be hereafter declared invalid.

SECTION 44. EQUAL OPPORTUNITY CLAUSE

During the performance of the Contract the **CONTRACTOR** agrees as follows:

(a) The **CONTRACTOR** will not discriminate against any employee or applicant for employment because of race, color, religion, sex, political opinion or affiliation, or national origin. The **CONTRACTOR** will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, political opinion or affiliation, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demoting, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The **CONTRACTOR** agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the **GPA** setting forth the provisions of this equal opportunity clause.

(b) The **CONTRACTOR** will, in all solicitations or advertisements for employees placed by or on behalf of the **CONTRACTOR**, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, political opinion or affiliation, or national origin.

SECTION 45. PROHIBITION AGAINST GRATUITIES, KICKBACKS, AND FAVORS TO THE TERRITORY

GCA 5 §5630(c) prohibits the CONSULTANT against gratuities, kickbacks, and favors to the Territory.

SECTION 46. RESTRICTION AGAINST CONTRACTOR EMPLOYING CONVICTED SEX OFFENDERS FROM WORKING AT GOVERNMENT OF GUAM VENUES

GCA 5 §5253(b) restricts the CONTRACTOR against employing convicted sex offenders from working at Government of Guam venues. It states:

> (b) All contracts for services to agencies listed herein shall include the following provisions: (1) warranties that no person providing services

on behalf of the CONTRACTOR has been convicted of a sex offense under the provisions of Chapter 25 of Title 9 GCA or an offense as defined in Article 2 of Chapter 28, Title 9 GCA, or an offense in another jurisdiction with, at a minimum, the same elements as such offenses, or who is listed on the Sex Offender Registry; and (2) that if any person providing services on behalf of the CONTRACTOR is convicted of a sex offense under the provisions of Chapter 25 of Title 9 GCA or an offense as defined in Article 2 of Chapter 28, Title 9 GCA or an offense in another jurisdiction with, at a minimum, the same elements as such offenses, or who is listed on the Sex Offender Registry, that such person will be immediately removed from working at said agency and that the administrator of said agency be informed of such within twenty-four (24) hours of such conviction.

SECTION 47. CONTRACT BINDING EFFECT

All EXHIBITS attached hereto are incorporated herein by reference in its entirety.

This Contract is binding upon the **CONTRACTOR** only if **CONTRACTOR** has been awarded the Contract in response to the **IFB-GPA- -20**. This Contract is subject to the approval of **GPA** and the Public Utilities Commission and it shall not be binding on part of **GPA** until such approval is made as evidenced by the signatories below.

For the **Guam Power Authority** (**GPA**):

_____ _____

John M. Benavente, P.E. **DATE**
General Manager

For **CONTRACTOR** :

(Company Name and Seal)

_____ _____

DATE

APPROVED AS TO FORM:

_____ _____

Graham Botha, General Counsel **DATE**
GUAM POWER AUTHORITY

PERFORMANCE AND PAYMENT BONDS

KNOW ALL MEN BY THESE PRESENTS that _____

_____

(Name of CONTRACTOR)

herein after called the CONTRACTOR and _____

_____

_____

(Name of Surety)

a corporation duly organized under the laws of the State of _____

_____

(hereafter referred to as: "Surety") authorized to transact business in Guam as Surety, are held and firmly bound unto the Guam Power Authority, as obligee, for use and benefit of claimants as herein below defined, in the amount of _____

_____Dollars (US$_____) for the payment whereof the CONTRACTOR and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the CONTRACTOR has by written agreement dated _____, 20____, entered into a Contract with the Guam Power Authority for the **Supply of Diesel Fuel Oil No.2** in accordance with the Specifications prepared by the Guam Power Authority, which Contract is by reference made a part hereof, and is hereafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the CONTRACTOR shall promptly and faithfully perform said Contract, and shall promptly make payment to all claimants as hereinafter defined for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

A. The Surety hereby waives notice of any alteration or extension of the time made by the Guam Power Authority provided the same is within the scope of the Contract.

B. Whenever CONTRACTOR shall be and is declared to be in default under the Contract by the Guam Power Authority, and the Guam Power Authority has performed its Contract obligations, the Surety may promptly remedy the default or shall promptly:

1. Complete the Contract in accordance with its terms and conditions; or
2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by the Guam Power Authority and the Surety of the lowest responsive, responsible bidder, arrange for a Contract between such bidder and the Authority, and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less than balance of the Contract price, but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price", as used in this paragraph shall mean the total amount payable by the Guam Power

Authority to CONTRACTOR under the Contract and any amendments thereto, less the amount properly paid by the Guam Power Authority to CONTRACTOR. No right of action shall accrue on this bond to or for the use of any person or corporation other than the Guam Power Authority or successors of the Authority.

C. A claimant is defined as one having a direct contract with the CONTRACTOR, or with a sub-CONTRACTOR of the CONTRACTOR for labor, material, or both, used or reasonably required for use in the performance of the Contract labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

D. The above-named CONTRACTOR and Surety hereby jointly and severally agree with the Guam Power Authority that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) calendar days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Guam Power Authority shall not be liable for the payment of any costs or expenses of any such suit.

E. No suit or action shall be commenced hereunder by a claimant:

1. Unless claimant, other than one having a direct contract with the CONTRACTOR, shall have given written notice to any two of the following:

   The CONTRACTOR, the Guam Power Authority, or the Surety above named, within ninety (90) calendar days after such claimant did or performed that last of the work

or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be personally served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the CONTRACTOR at any place the principal maintains an office or conducts its business.

2. After the expiration of one (1) year following the date on which the last of the labor was performed or material was supplied by the party bringing suit.

3. Other than in a court of competent jurisdiction in and for Guam.

F. The amount of the payment bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens, which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

SIGNED AND SEALED THIS _____ day of _____ 20___ .

IN THE PRESENCE OF:

(Note: If the Principles are Partners, each must execute the Bond)

_____ _____

(WITNESS) (CONTRACTOR) (SEAL)

(TITLE)	
(MAJOR OFFICER OF SURETY)	(MAJOR OFFICER OF SURETY)
(TITLE)	(TITLE)

SCHEDULE A: PRODUCT QUALITY SPECIFICATION

DIESEL FUEL Oil No. 2

Property	ASTM Test Method [B]	Alternate Method ASTM	Unit of Measure	Limits
Flash Point	D93		°C	60 Min
Water & Sediment	D2709		% vol	0.05 Max
Distillation Temp, °C 90%, recovered	D86		°C	282 Min 360 Max
Kinematic Viscosity	D-445		mm^2 at 40°C	1.9 Min 4.1 Max
Total Aromatic Hydrocarbons	IP 391		% mass	15 Min 35 Max
Polycyclic Aromatic Hydrocarbons	IP 391		% mass	11 Max
Ash	D482		% mass	0.01 Max
Sulfur	D5453	D-7039	ppm (µg/g)	14 Max
Sulfur Mercaptan	D3227		ppm (µg/g)	3 Max
Copper Strip Corrosion Rating (3hrs min at 50°C)	D130			No.1 Max
Cetane Index	D 613	D976-80 D 4737		46 Min
Micro Carbon Residue on 10% distillation residue	D524	D4530 D6371	% mass	0.20 Max
Lubricity, HFRR @ 60°C	D6079		Micron	400 Max
Conductivity	D2624	D4308	pS/m	100 Min 600 Max
Density @ 15°C	D1298	D4052	Kg/m^3	820 Min 850 Max
Gravity, API @ 60°F	D1295	D4052		35 Min 41 Max
Color	D1500		ASTM	2.0 Max
Hydrogen Sulfide in Liquid	IP 570A		Mg/kg	2.0 Max
Strong Acid No.	D974		mg KOH/g	NIL
Total Acid No.	D974		mg KOH/g	0.20 Max
Stability (Oxidation), 16Hrs	D2274		mg/L	25 Max
Appearance @ ambient temp	Visual			Report
Haze Rating	D4176		Haze Rating	1 Max
Particulate Matter	D6217		mg/L	10 Max
Filter Blocking Tendency (FBT)	D2068	IP 387		1.35 Max
Fatty Acid Methyl Ester (FAME)	D 7371-14	EN 14078	% vol	0.1 Max
Guaranteed Heating Value (HHV)	D240		MMBTU/bbl	5.70 Min
Static Dissipation Additives (Stadis 450)	Declared		Mg/L	Report
Lubricity Additive	Declared		Mg/kg	Report

The Authority may require the supplier to conduct additional test as necessary for plant's performance/efficiency evaluation.

Exhibit B- Historical Consumption

Tenjo Vista	(Actual) FY 2016	(Actual) FY 2017	(Actual) FY 2018	(Actual) FY 2019
Gallons	3,474,324	3,328,458	2,990,526	2,086,644

Range	
Min	Max
2,000,000	3,000,000

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2020-03:

Relative to Authorizing the Management of Guam Power Authority for the second (2nd) and third (3rd) year extension the Contract for the Management, Operation and Maintenance of GPA's Fuel Bulk Storage Facility with IP&E.

What is the project's objective? Is it necessary and urgent?
The first (1st) year extension of the contract with IP&E for the Management, Operation, and Maintenance of the GPA Fuel Bulk Storage Facility under GPA-014-17 is set to expire on September 30, 2020. This contract includes up to three optional one-year extensions.

The objective is to continue and exercise the second (2nd) and third (3rd) year extension of the contract to ensure uninterrupted, reliable operation of the facility for the supply of fuel to the GPA plants.

Where is the location?
GPA Bulk Fuel Storage Facility.

How much will it cost?
The second (2nd) year contract extension is estimated to cost about $885,108.88 and the third (3rd) year contract extension is estimated to cost about $911,662.13 for the required services under the contract (Exhibit A).

When will it be completed?
The contract extension shall be for a period of two (2) consecutive years, commencing in October 1, 2020 and will expire in September 30, 2022.

What is its funding source?
The contract fees for the Management, Operation, and Maintenance of the facility will be funded under the fuel budget. Other services will be funded through O&M, and some through CIP if it involves procurement of equipment, construction, modification and others.

The RFP/BID responses:
IP&E Guam LLC has been awarded the contract through a multi-step IFB process.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2020-03

AUTHORIZING THE MANAGEMENT OF THE GUAM POWER AUTHORITY TO PETITION THE PUBLIC UTILITIES COMMISSION FOR THE EXTENSION OF THE EXISTING CONTRACT FOR THE MANAGEMENT, OPERATION AND MAINTENANCE OF THE GUAM POWER AUTHORITY'S FUEL BULK STORAGE FACILITY WITH ISLA PETROLEUM & ENERGY, LLC. (IP&E)

WHEREAS, the first (1st) year extension of the contract with IP&E for the Management, Operation, and Maintenance of the GPA Fuel Bulk Storage Facility under GPA-014-17 will expire on September 30, 2020;

WHEREAS, the contract does include up to three optional one-year extensions; and

WHEREAS, it would be in GPA's best interest to have a continuity of this contract to avoid complications that could occur as GPA converts the facility to ULSD for use with the new power plant and for compliance with USEPA requirements; and

WHEREAS, GPA negotiated and mutually agreed for the remaining 2 years extension of the existing contract with IP&E commencing in October 1, 2020; and

WHEREAS, the total requirement for the second (2nd) year contract extension is estimated to cost $885,108.88 and the total requirement for the third (3rd) year contract extension is estimated to cost $911,662.13 **(Exhibit A)**; and

WHEREAS, GPA has determined that the 3% annual increase in the contract fee is reasonable; and

WHEREAS, the aggregate total cost for the 2-Year base period thru the 3-Year extension period of the contract is about $4,300,400.01; and

WHEREAS, GPA is requesting for the approval of the second (2nd) and third (3rd) year extension of the contract with IP&E.

NOW THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, subject to the review and approval of the Guam Public Utilities Commission, as follows:

1. The Guam Power Authority is hereby authorized to execute an agreement with IP&E for the second (2nd) and third (3rd) year extension of the contract for the Management, Operation, and Maintenance of the GPA Fuel Bulk Storage Facility commencing in October 01, 2020 and terminating in September 30, 2022.

2. The General Manager of the Guam Power Authority is hereby authorized an increase in obligating authority to the annual value of the contract over $750,000.00 and execute such agreements and documents necessary for a contract extension with IP&E.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 28th DAY OF JANUARY 2020.

Certified by:

JOSEPH T. DUENAS
Chairperson
Consolidated Commission on Utilities

Attested by:

MICHAEL T. LIMTIACO
Secretary
Consolidated Commission on Utilities

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows: The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

EXHIBIT A

GPA-014-17: GPA BULK FUEL FARM MANAGEMENT, OPERATION, AND MAINTENANCE CONTRACT

IP &E Contract Price	2 YEAR BASE PERIOD (MANDATORY)			3-YEAR EXTENSION OPTION				2 YEAR BASE + 3 YEAR EXTENSION OPTION
	1st Year Oct2017-Sep2018	2nd Year Oct2018-Sep2019	Total	1st Yr Extn Oct2019-Sep2020	2nd Yr Extn Oct2020-Sep2021	3rd Yr Extn Oct2021-Sep2022	Total	Over-all
Item 1	$ 516,560.00	$ 532,056.80	$ 1,048,616.80	$ 548,018.50	$ 564,459.06	$ 581,392.83	$ 1,693,870.39	$ 2,742,487.19
Item 2	$ 144,540.00	$ 148,876.20	$ 293,416.20	$ 153,342.49	$ 157,942.76	$ 162,681.04	$ 473,966.29	$ 767,382.49
Item 3	$ 35,000.00	$ 36,050.00	$ 71,050.00	$ 37,131.50	$ 38,245.45	$ 39,392.81	$ 114,769.76	$ 185,819.76
Item 4	$ 20,400.00	$ 21,012.00	$ 41,412.00	$ 21,642.36	$ 22,291.63	$ 22,960.38	$ 66,894.37	$ 108,306.37
Item 5	$ 2,500.00	$ 2,575.00	$ 5,075.00	$ 2,652.25	$ 2,731.82	$ 2,813.77	$ 8,197.84	$ 13,272.84
Item 6	$ 91,000.00	$ 93,730.00	$ 184,730.00	$ 96,541.90	$ 99,438.16	$ 102,421.30	$ 298,401.36	$ 483,131.36
TOTAL (Items 1 thru 6)	**$ 810,000.00**	**$ 834,300.00**	**$ 1,644,300.00**	**$ 859,329.00**	**$ 885,108.88**	**$ 911,662.13**	**$ 2,656,100.01**	**$ 4,300,400.01**
Variance vs. Previous year		3%		3%	3%	3%		
Contract Status	Completed	Completed		In Progress	For Approval	For Approval		
Aggregate Total Cost	**$ 810,000.00**	**$ 1,644,300.00**		**$ 2,503,629.00**	**$ 3,388,737.88**	**$ 4,300,400.01**		

Legend: Bid Price Proposal Parameters for Mandatory Items		Remarks:
Item 1	Management and Administration Fees (Include all expenses for staffing, office maintenance, expenses for utilities and communications, management fees and administration fees)	Fixed Cost
Item 2	Security Contractor	Fixed Cost
Item 3	Spill Response Company Membership Fees	Fixed Cost
Item 4	Insurance Fees (Volume I - 5.41A)	Fixed Cost
Item 5	Inventory - Environmental / Oil Spill Equipment *Oil Spill Response & Environmental Compliance (OPA 90, SPCC and FRP, etc.)	Fixed Cost
Item 6	Operation and Maintenance Budget	Reimbursible Cost

3

GUAM POWER AUTHORITY
ATURIDÅT ILEKTRESEDÅT GUAHAN
P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

Issues for Decision

Resolution No. 2020-04

Relative to Recognizing and Congratulating GPA's Recent Professional Engineers (PE); and Un Dångkulu Na Si Yu'os Ma'åse' to the Professional Engineers (PE) Who Continue to Mentor and Guide Other Prospective Engineers to Attain Professional Licensure

What is the project's objective and is it necessary and urgent?

GPA requires highly skilled professionals especially in the area of Engineering. GPA Engineers provide professional and technical engineering expertise in planning, designing and managing projects required for the upgrade and maintenance of transmission and distribution lines, substation and generation facilities and for renewable energy production. Engineers communicate effectively, oversee special projects, develop economical solutions to technical problems and improve the reliability of electricity and power grids.

GPA currently has a total of 45 Engineers throughout the organization performing electrical, civil, mechanical, and environmental/regulatory work. Of the 45 Engineers in GPA, 14 Engineers are licensed Professional Engineer (PE). According to the National Society of Professional Engineers, a Professional Engineer is an individual, who has fulfilled education and experience requirements and passed a rigorous exam that, under State licensure laws, permits them to offer engineering services directly to the public.

A Professional Engineer (PE) license matters if you work in the electric power and renewable energy industry. Only a licensed Professional Engineer, may prepare, sign, seal and submit engineering plans and drawings to any public authority for approval, or to seal engineering work for public and private clients. The National Society of Professional Engineers best summarizes the power of the PE designation stating: "Licensure is the mark of a professional. It's a standard recognized by employers and their clients, by governments and by the public as an assurance of dedication, skill and quality." It tells the public that you have mastered the critical elements of your profession.

Within the last 5 years, **3 GPA Engineer employees have achieved the distinct designation of Professional Engineer (P.E.), they include Mr. Louis C. Camacho, P.E., Engineer III with the Distribution Section of Engineering, Mrs. Kristy C. Cuenca, Engineer III with the Substation/Transmission section of Engineering, and Special Projects Engineer, Mrs. Paz A. Tison with SPORD.**

There is an additional team of 11 other current professional engineers on staff at GPA who continue to mentor and guide other prospective engineers to attain professional licensure. All of GPA's professional engineers' level of expertise contribute to the progress GPA has made and will continue to make to provide outstanding energy solutions to benefit our ratepayers and island community.

The number of GPA professional engineers is the largest concentration within the Government of Guam and is comparable with the concentration of registered professional engineers employed by the federal government and engineering firms on Guam.

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2020-04

Recognizing and Congratulating GPA's Recent Professional Engineers (PE); and
Un Dångkulu Na Si Yu'os Ma'åse' to the Professional Engineers (PE) Who Continue to Mentor and Guide Other Prospective Engineers to Attain Professional Licensure

WHEREAS, GPA requires highly skilled professionals especially in the area of Engineering. GPA Engineers provide professional and technical engineering expertise in planning, designing and managing projects required for the upgrade and maintenance of transmission and distribution lines, substation and generation facilities and for renewable energy production. Engineers communicate effectively, oversee special projects, develop economical solutions to technical problems and improve the reliability of electricity and power grids; and

WHEREAS, GPA currently has a total of **45** Engineers throughout the organization performing electrical, civil, mechanical, and environmental/regulatory work; and

WHEREAS, of the **45** Engineers in GPA, **14** Engineers are licensed Professional Engineer (PE). According to the National Society of Professional Engineers, a Professional Engineer is an individual, who has fulfilled education and experience requirements and passed a rigorous exam that, under State licensure laws, permits them to offer engineering services directly to the public; and

WHEREAS, a Professional Engineer (PE) license matters if you work in the electric power and renewable energy industry; and

WHEREAS, only a licensed Professional Engineer, may prepare, sign, seal and submit engineering plans and drawings to any public authority for approval, or to seal engineering work for public and private clients; and

WHEREAS, the National Society of Professional Engineers best summarizes the power of the PE designation stating: "Licensure is the mark of a professional. It's a standard recognized by employers and their clients, by governments and by the public as an assurance of dedication, skill and quality." It tells the public that you have mastered the critical elements of your profession; and

WHEREAS, more and more with each passing day, government agencies, educational institutions and private industries are requiring that they hire and contract only with licensed professional engineers; and

WHEREAS, within the last 5 years, 3 GPA Engineer employees have achieved the distinct designation of Professional Engineer (P.E.), they include **Mr. Louis C. Camacho, P.E., Engineer III** with the Distribution Section of Engineering, **Mrs. Kristy C. Cuenca, Engineer III** with the Substation/Transmission section of Engineering, and **Special Projects Engineer, Mrs. Paz A. Tison** with SPORD; and

WHEREAS, there is an additional team of **11** other current professional engineers on staff at GPA who continue to mentor and guide other prospective engineers to attain professional licensure; and

WHEREAS, all of GPA's professional engineers' level of expertise contribute to the progress GPA has made and will continue to make to provide outstanding energy solutions to benefit our ratepayers and island community; and

WHEREAS, the number of GPA professional engineers is the largest concentration within the Government of Guam and is comparable with the concentration of registered professional engineers employed by the federal government and engineering firms on Guam.

NOW, THEREFORE BE IT RESOLVED BY THE CCU, AS THE GOVERNING BODY OF GPA, AS FOLLOWS:

1. Recognizes and extends a sincere **CONGRATULATIONS** to the most recent Engineers at GPA, **Mr. Louis C. Camacho, P.E., Engineer III**, **Mrs. Kristy C. Cuenca, P.E., Engineer III** and **Mrs. Paz A. Tison, P.E., Special Projects Engineer** for becoming a licensed Professional Engineer (PE).

2. Recognizes and extends Un Dångkulu Na Si Yu'os Ma'åse' to the licensed Professional Engineers (PE) of GPA (list attached) who continue to mentor and guide other prospective Engineers to attain Professional Licensure in service to the people of Guam.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARY ADOPTED and APPROVED THIS 28TH DAY OF JANUARY, 2020.

Certified by:	Attested by:
_____	_____
JOSEPH T. DUENAS	MICHAEL T. LIMTIACO
Chairperson	Secretary
Consolidated Commission on Utilities	Consolidated Commission on Utilities

I, Michael T. Limtiaco, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: _____

Nays: _____

Absent: _____

Abstain: _____

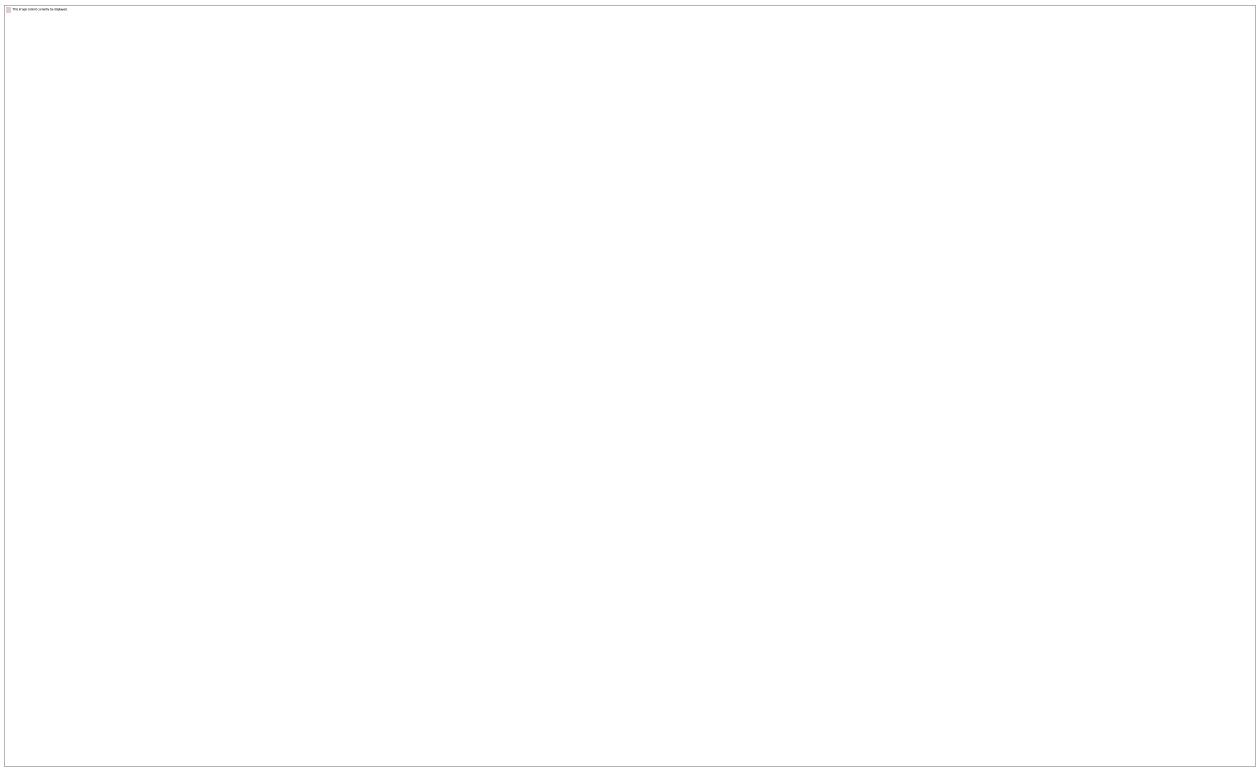
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CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatña, Guam 96932 | (671) 648-3002 | guamccu.org

Regular Board Meeting
GUAM WATERWORKS AUTHORITY
CCU Conference Room, Gloria B. Nelson Public Service Building
5:30 p.m., August 27, 2019

MINUTES

1. CALL TO ORDER

The CCU Chairman called the CCU regular monthly meeting for Guam Waterworks Authority for August 27, 2019 to order at 5:38 p.m. He said all five (5) Commissioners were present for a quorum. Others in attendance include:

Commissioners:

Joseph T. Duenas	CCU Chairman
Francis E. Santos	CCU Vice Chairman
Michael T. Limtiaco	CCU Secretary
Judith P. Guthertz	CCU Treasurer
Simon A. Sanchez	Commissioner

Executive Mgmt.:

Miguel Bordallo	GM / GWA
John Benavente	GM / GPA
Melinda Mafnas	AGMO / GPA
John Cruz	AGMET / GPA
Tricee Limtiaco	AGMA / GPA
Chris Budasi	AGMA / GWA
John Kim	CFO / GPA
Gilda Mafnas	CFO (A) / GWA
Kelly Clark	Legal Counsel / GWA
Graham Botha	Legal Counsel / GPA

Management & Staff:

Karen Grape	GWA
Vangie Lujan	Compliance & Safety / GWA
Heidi Ballendorf	Communications / GWA
Zina Pangelinan-Charfaurros	Personnel Administrator / GWA
Jason Tudela	GWA
Dave Fletcher	GWA
Ron Topasna	O&M Mgr., Water Treatment / GWA
Joyce Sayama	Mgmt. Analyst / GPA Ex.Office
Ann Borja-Gallarde	Mgmt. Analyst / GWA Ex.Office

Lou Sablan Board Secretary / CCU

Guest:
Kurt Bilz B&C
Ann Marie Muna; AM Insurance

2. APPROVAL OF MINUTES

The Minutes of June 5, 2019 and July 23, 2019 were presented for approval.

Comm. Guthertz motioned to approve the Minutes subject to verification and written correction, second by Comm. Santos. There was no further discussion or objection and the motion passed.

3. COMMUNICATIONS

3.1 Public Comments - None

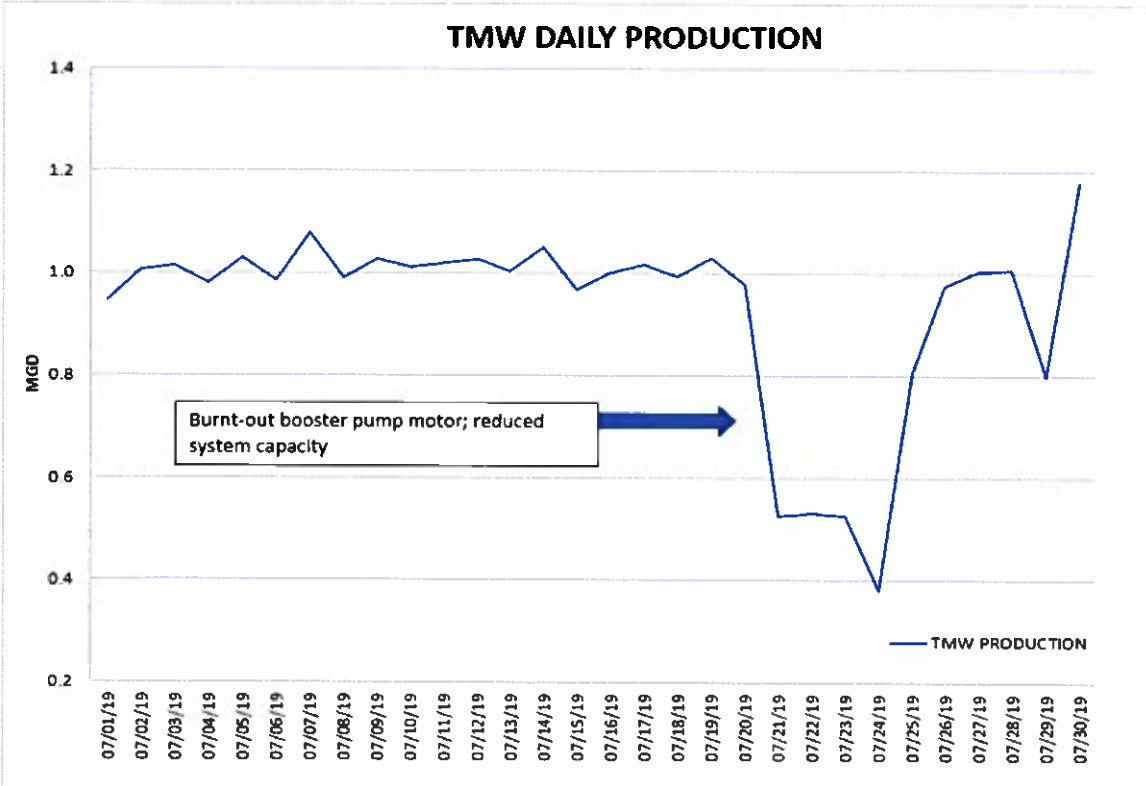
4. GWA

4.1 New Business

4.1.1 GM Report

GM Miguel provided his usual General Manager's Report.

Tumon Maui Well Production (July 2019)



Distribution (July 2019)

Monthly Distribution Summary - July 2019

Water Booster Pump Stations

District	No. of Stations	Total Pumps	Pumps Operating	% Operational
Northern	11	20	18	90.0%
Central	7	15	15	100.0%
Southern	7	15	15	100.0%
	25	50	48	96.0%



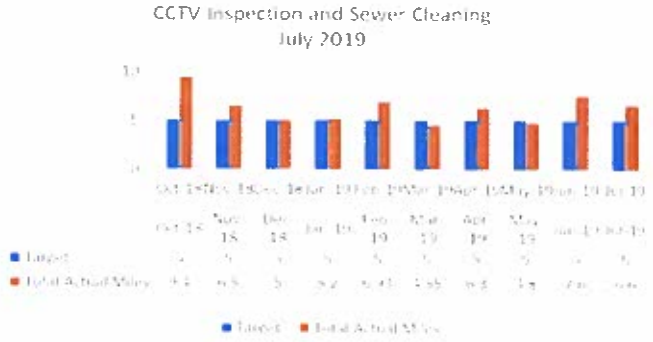
Wastewater Collections (July 2019)

Monthly Collections Summary - July 2019

Wastewater Pump Stations

District	No. of Stations	Total Pumps	Pumps Operating	% Operational
Northern	22	52	42	80.8%
Central	29	63	52	82.5%
Southern	27	58	49	84.5%
	78	173	143	82.7%





Wastewater Collections –Cleaning/Jetting (July 2019)

Astumbo, Dededo (by Fire Station)



Astumbo Gardens, Dededo



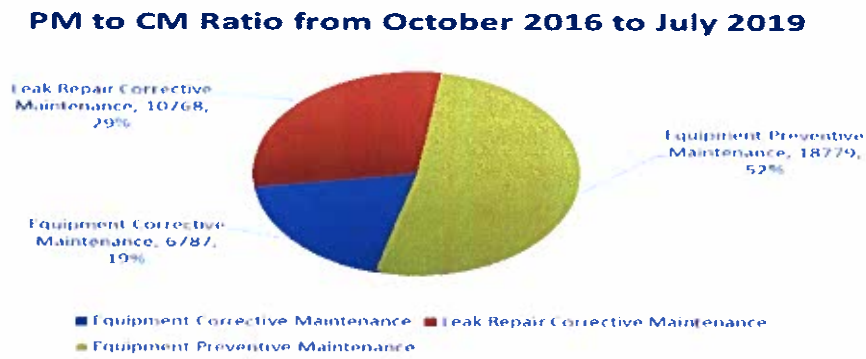
Carlos Heights, Tamuning



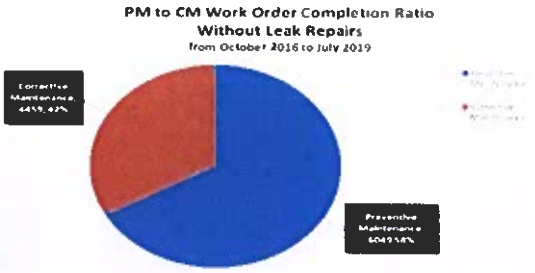
Harmon Industrial Park



Asset Management (July 2019)







Operational Issues

Production & Distribution

- Issues with Yigo production were resolved end of June and reservoir level improvements seen in early July. No major production issues.
- Continuing with increased security monitoring after hours due to attempted wire thefts
- Ugum WTP:
  - Membrane changeouts on-going
  - CIP in planning stages

Wastewater Collection & Treatment

- Pump stations
  - Route 1 pump stations and bypasses continue to be an on-going challenge
  - Asan by-pass pumps were changed out in early July to larger pumps; GPA assisted with change to 3-phase service
  - Piti pump station being operated manually to manage flows and in coordination with contractor's work in Asan
  - WW Hills pump station required warranty repairs on two of three pumps; repairs completed.
- Collection System:
  - Piti Sewer / Storm Water Interconnection
  - DPW, GEPA and GWA Working to resolve interconnection which has resulted in impacts to private property
  - Wet-weather complicating efforts to maintain flows
  - Piti pump station manual operation and bypass pumping also make this issue challenging
- NDWWTP
  - Oil & Grease discharged into plant from neighboring lot (CoreTech)
  - Temporarily impacted treatment process at the plant
  - Investigation by GWA staff with cooperation from CoreTech identified their on-site lift station as source of oil & grease
- Hagatna WWTP
  - Corrective maintenance on process equipment is on-going (mixers, aerators and gates for effluent pumps)
  - Working to get resolved before any major storm events
- EPA Inspections: inspections were conducted at
  - Several pump stations,
  - Umatac-Merizo WWTP
  - Agat-Santa Rita WWTP: inspector commented that WWTP was best he has seen anywhere in U.S.

Meters from January 2017 through July 2019

COMPLETED FIELD ACTIVITY JAN 2017 THRU JULY 2019 (POSTED IN CIS)	2017	2018	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	TOTAL:	COMPLETED FIELD ACTIVITIES (IN PROCESS) TO BE POSTED IN CIS
GWA - Test Meter	5206	12191	1330	759	717	1317	664	703	326	23213	203
GWA - Meter Exchange	6487	13353	158	140	444	1583	1212	922	862	25161	5
TOTAL:	11693	25544	1488	899	1161	2900	1876	1625	1188	48374	208

# OF METERS TESTED AS PER METER TEST FACILITY REPORTS:	6070	12239	937	750	518	1231	1133	621	643	24153
# OF FIELD CREW PERFORMING CHANGE OUTS:	194	16.1	1	1	10	8	7	7	7	
# OF ADMIN STAFF TO CREATE AND POST FIELD ACTIVITIES IN CIS	10	6.3	0	0	4	9	6	6	7	
# OF SUPPLY STAFF TO ISSUE MATERIALS AND PROGRAM NEW METERS	2	2	0	0	2	2	2	2	1	
# OF TEST FACILITY PERSONNEL TESTING METERS:	3	2	2	2	2	2	3	3	3	
TOTAL:	36.4	29.4	8	8	21	23	19	21	22	

REMAINING ACTIVE BADGER LP MODELS AS OF July 31, 2019: 7165

Stock #	Size	Meter Description	New Meters	Passed Field Meters	MMP	Meters Available	Meters at MTF	Total Count
60484	3/4"	METER, Badger AMR 5/8" x 3/4" RCDL Model M25 Disc Meter	37	0	0	37	18	55
74131	3/4"	METER, Badger AMR 5/8" x 3/4" **WARRANTY** RCDL Model M25	0	0		0	0	0
65293	3/4"	METER,Badger 5/8"x3/4" NSF61-G RCDL M25LL Disc Meter Integral	52	2	0	54	0	54
74131	3/4"	METER, Badger AMR 5/8" x 3/4" RCDL Model M25 ***RMU***	0			0	13	13
84769	3/4"	METER, Badger E-SERIES 5/8"X3/4" ULTRASONIC	975			975	5	980

Backbilling through July 31, 2019

Guam Waterworks Authority
Collections Report* on Accounts Backbilled thru July 31, 2019
For fiscal years 2015, 2016, 2017 and 2019 (Jul 31)

	Meter Changeout Period									
	FY2016		FY2017		FY2018		FY2019		TOTAL	
	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
FY2015										
FY2016	17	$ 882	0	$ -	0	$ -	0	$ -	17	$ 882
FY2017	0	$ -	535	$ 396,667	2	$ 578	0	$ -	537	$ 397,245
FY2018	0	$ -	1,335	$ 732,446	39	$ 9,664	0	$ -	1,374	$ 742,109
FY2019	0	$ -	492	$ 226,547	3,663	$ 1,721,944	3,183	$ 747,367	7,338	$ 2,695,857
Total Billed	17	$ 882	2,362	$ 1,355,659	3,704	$ 1,732,186	3,183	$ 747,367	9,266	$ 3,836,094

	Account Status														
	Total Collected			Current - Not Yet Due			Total Adjusted			Total Uncollected (Active)			Total Uncollected		
	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%	No. of Accounts	Amount	%
FY2015															
FY2016	17	$ 882	100%												
FY2017	486	310,431	78%	0	-	-	14	16,257	4%	16	50,244	13%	22	20,517	5%
FY2018	1,262	576,876	78%	0	-	-	41	50,543	7%	28	79,318	11%	43	35,373	5%
FY2019	6,346	1,380,171	51%	355	773,351	29%	69	61,273	2%	435	410,390	15%	134	70,745	3%
Total Collected	8,111	$2,268,360		355	$773,351		124	$128,074		479	$ 539,952		199	$126,635	
Collection Ratio		59%			20%			3%			14%			3%	

* Collections thru August 14, 2019

One Guam Update

- Santa Rosa Tank
  - No update on AAFB response to request for data substantiating operational improvements.
  - GWA to proceed with Santa Rosa Tank project with intertie up to AF property – no delay to the GWA project
- GAC Changeout
  - Scheduled after completion of GIAA; should be completed in August
- Navy Water Billing
  - Change in DoD funding: eliminated 'working capital fund' for FY20 to 'General Fund'
  - No more annual stabilized commodity rates
  - Funding must be received in advance of service; on quarterly basis for recurring products/services

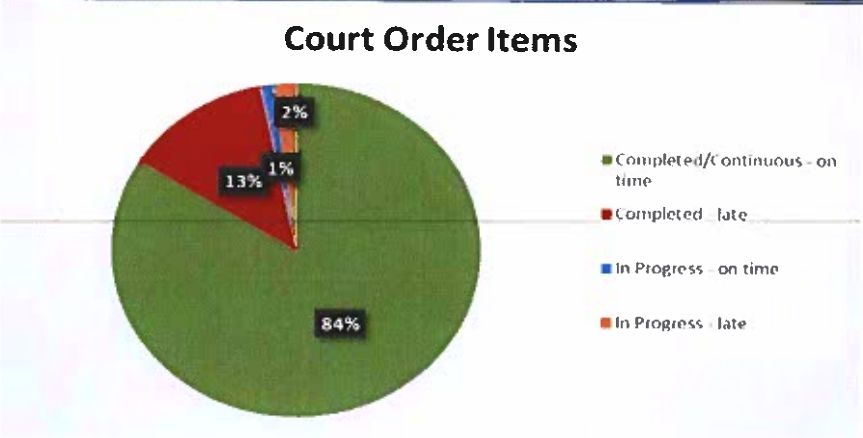
UTILITIES	FY19 Rate	FY20 WCF [1]	FY20 GF [2]	FY20 WCF to GF Delta
Electricity ($/MWH)	$203.53	$317.61	$397.52	$79.91
Potable Water ($/KGAL)	$10.18	$10.66	$9.13	($1.53)
Steam ($/MBTU)	$82.40	$117.37	$158.51	$41.14
Sewage NBG ($/KGAL)	$18.09	$22.75	$33.57	$10.82
Sewage AAFB ($/KGAL)	$18.09	$22.75	$21.19	($1.56)
Demin/Pure Water ($/GAL)	$0.47	-	$0.38	

$3.01/kgal GWA lifeline cost
$10.73/kgal above 5k

- PUC Rate Case Intervention
  - Navy Consultant engaged to review the matter
  - GWA provided presentation on August 22nd
  - Still waiting on Navy's decision

Court Order

	Items	On-time Items Completed/Continuous	Items Delayed	Completed Late	Items on Schedule	Performance %
Court order total	93	78	2	12	1	97.8%



Status Information

- 2 items delayed
  - Water Reservoir Repair. Replacement or Relocation program, CO II C 29(b)(6)(i) – (10 additional tanks by 7th CO anniversary). (Affects final date of the Court Order.)
  - Umatac-Merizo Wastewater Treatment Plant – July/August 2019
- Final Date to complete all Court Order items may be delayed past December 31, 2020. [CO 29(b) has been expanded by 31% beyond the original Court Order Requirements [redacted]
- Overflow or Bypass events reported to USEPA:
  - 08-03-2019, Umatac TP (Bypass) continues
  - 08-04-2019 Vietnam Veterans Memorial Highway, Barrigada [manhole across from Wendy's] (rain)
  - (Note: GWA has contracted security services that continue to prevent well-site break-ins.)

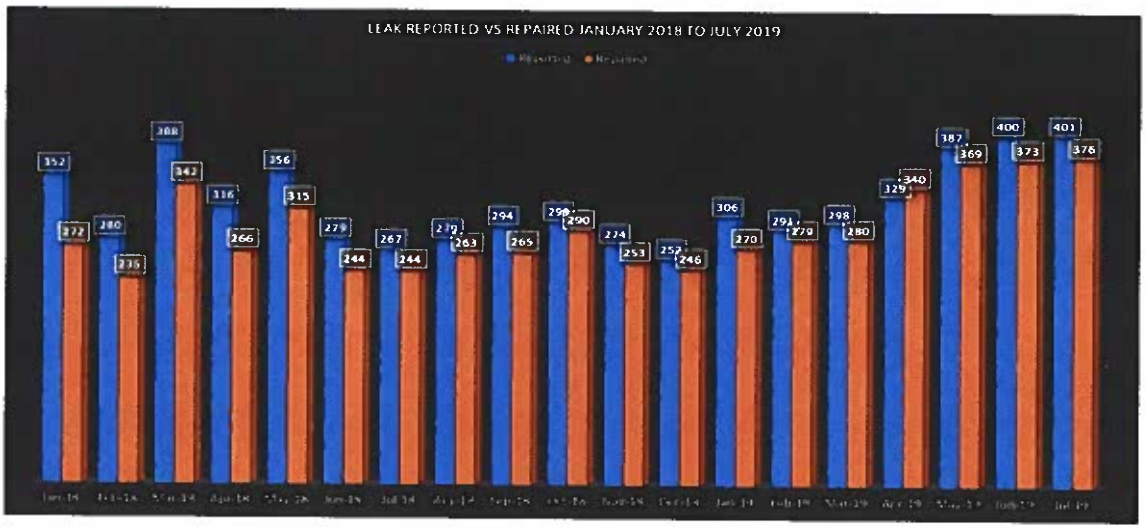
Land Acquisition Summary (as of July 2019)

GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
Tanks	Astumbo	Gov't. - CLTC	GWA and DLM working together on Land Registration process. Pending Notification of surrounding lot owner information from DLM.
	Piti	Private	License Agreement for Piti Tank that fall on Dept. of Park Services property currently under DOI review 07/17/19.
Deep Wells	AG-12	Dept. of Agriculture/Manhita Farms	Right of Entry Agreement sent to Dept of AG for signature 05/24/18. 2nd follow up sent on 09/12/18. 3rd follow up sent on 04/10/19. Retracement Survey Property Map with DLM for review 03/06/19. Retracement Survey Property Map with DLM for final approval 06/05/19.
Booster Pump Station	Agfayan	Private	Authorization Form to perform appraisal and investigative services for L28, B19, T3734, Inarajan signed by CLTC 10/29/2018.
Sewer Pump Stations	2nd Adjacent Property to Southern Link	Private	Escrow & Title Land Purchase Accepted 06/03/19. Change Order 4 for Parceling Property Survey Map approved 06/26/19.
Asan Springs	Asan	Federal	License Agreement for Asan Springs facility that fall on Dept. of Park Services property currently under DOI review.

Leak Repair Summary (July 2019)



Comparison of Leaks Reported vs. Leaks Repaired (July 2019)



Monthly Leak Report Cost (July 2019)



Assumptions:

1. **Leak rate = 4 gpm**
2. **Cost per kgal = $4.00**

There was discussion on purchase of Navy Water the CCU was surprised to learn that GWA has 20-30 Navy master meter connections around the island. It was mentioned that they purchase from GWA a total of $6.4M annually

Relative to the rate case, it was mentioned that November is the current timeframe for Navy's input on the rate case and that this may hamper bond borrowing for this year due to tight timelines

ACTION: CCU wants list of all the Navy Master Meters around the island (Assignee(s): GM/Karen Grape; Due Date: 09/24/2019).

4.1.2 Financials

The Commission reviewed the finances during the work session last week. There was some discussion on collections for GovGuam - CCU told management to stay on top of this issue and collect aggressively.

Discussion on GIAA - AGMA explained status to date on the 193k; credit adjustment will be given $25k with balance of $30k; 3rd account 100k in arrears - still in discussion; DPHSS has been settled and a credit was applied. There was suspicion of theft of water but cannot be proven. There is a credit applied to this account and this account has been settled. All gov accounts have been contacted and management is working with then to resolve their arrears

Comm. Guthertz said perhaps the senators are not budgeting / allocating enough funds for the agencies.

4.1.3 Resolution No. 40-FY2019 Relative to Approval of the Contract with JMI-Edison for the Purchase of Splicing Gels and Submersible Cables for Islandwide Deepwell Water Production

If approved, this resolution will authorize the purchase splicing gels and submersible cables of various sizes utilized for pump and motor maintenance activities at the over 100 existing water wells at various locations island wide. The purchases under this authorization will be used to replenish stock levels of these gels and submersible cables at the warehouse to ensure adequate quantities are available at all times to repair production wells and insure consistent and stable water supply. The project is necessary and urgent to maintain critical inventory levels. The materials to be procured under this authorization will be utilized at GWA Deep-well Production Facilities Island-wide.

Ten (10) entities registered for the bid procurement and there was one (1) responsive and responsible bidder who qualified – JMI Edison. Their bid was for three (3) years at an estimated amount of $754,371.00. The source of funding for this purchase is the FY2019/FY2020 GWA Water Production and Treatment Operations and Maintenance Budget.

Chairman Duenas said that this matter was discussed in depth at GWA's work session and if there were no other questions or discussion, he called for the question.

Comm. Sanchez motioned to approve Resolution 40-FY2019, second by Comm. Santos. There was no further discussion or objection and the motion passed unanimously.

4.1.4 Resolution No. 41-FY2019 Relative to Approval of the Construction Contract for the Santa Rosa, Santa Rita and Sinifa Reservoir Replacement with AIC International Inc.

The project is spread across three different water reservoir sites, including a new booster pump station and various control valve and line upgrades. The reservoirs are listed under the U.S. District Court Order. The following are project locations and general scope of work.

Santa Rosa Reservoir

Base Bid Items 1 to 6:

- A new Santa Rosa Reservoir (1.0 MG) will be constructed adjacent to the existing steel tank. Work will include the new reservoir, new booster pump station, off-site improvements and various site upgrades.
- The existing booster pump station will be demolished and replaced with a new building structure, piping, pump system, instrumentation, controls, and a SCADA system.
- Once the new reservoir has been constructed, the existing steel reservoir will be taken offline for inspection. After the API and structural inspection, the steel tank will be either repaired or demolished.
- Work will also occur at several off-site locations (6 locations). The work consists of line interconnections and installation of new valves. The work is in line with the Pressure Zone Realignment plan.

Additive Bid Items 7 and 8:

- The work includes the construction of the Department of Defense inter-tie on GWA and possibly DoD property. Work is separated into two bid items. Additive Bid Item 7 is for work within GWA property, while Additive Bid Item 8 is for work within DoD property.

Additive Bid Item 9:

- The work includes the construction of 4,042 L.F. of 12" waterline on Route No. 1.

Additive Bid Item 10 and 11:

- The work includes the demolition of the existing steel tank and disposal of the oiled sand foundation in accordance with applicable regulations.
- The inclusion of the additive work will be determined after the API and structural inspections have been conducted.

Eighteen (18) bid packets were picked up and three (3) proponents submitted bids. All bid proposals were reviewed and the engineering and construction management team determined that AIC International was the most responsive and responsible bidder and met all the bid requirements. The total cost for the construction is $26,417,650 and GWA management is

seeking CCU approval to enter into a contract for this amount. He funding source for this project will be from bond, grant, SDC and internally funded CIP funds.

Comm. Sanchez motioned to approve Resolution 41-FY2019, second by Comm. Santos.

In discussion, Comm. Sanchez asked when the tanks will be completed; GM Miguel said they have to wait for the $40M bond borrowing in order to complete the tank projects which would be determined by the rate case.

On motion the motion, the vote was unanimous and the resolution was approved.

5. ANNOUNCEMENTS

6.1 Next CCU Meetings:

The Chairman announced that the next meeting would be for GPA on August 29th at 5:30 p.m.

In addition, he called for a special meeting at 10 a.m. on Sept. 4th to discuss the request from the Attorney General's request for GWA to join the lawsuit on PFAS because we may have damages as well and GPA's budget review.

6. ADJOURNMENT

There being no other business to bring before the Commission,

Comm. Guthertz motioned to adjourn the meeting; second by comm. Santos. It was unanimous and the meeting adjourned at 6:43 p.m.

\\s\\
Bls

Attested

JOSEPH T. DUENAS, Chairman

MICHAEL T. LIMTIACO Secretary

Special Board Meeting
CCU Conference Room, Gloria B. Nelson Public Service Building
10:00 a.m., September 4, 2019

MINUTES

1. CALL TO ORDER

The CCU Chairman called the CCU SPECIAL MEETING to order at 10:07 a.m. He said four (4) Commissioners were present for a quorum. Comm. Guthertz was excused. Others in attendance include:

Commissioners:

Joseph T. Duenas	CCU Chairman
Francis E. Santos	CCU Vice Chairman
Michael T. Limtiaco	CCU Secretary
Simon A. Sanchez	Commissioner

Executive Mgmt.:

Miguel Bordallo	GM / GWA
John Benavente	GM / GPA
Melinda Mafnas	AGMO / GPA
John Cruz	AGMET / GPA
Tricee Limtiaco	AGMA / GPA
Cora Montellano	CFO (A) / GPA
Kelly Clark	Legal Counsel / GWA
Graham Botha	Legal Counsel / GPA

Management & Staff:

Art Perez	Communications / GPA
Lorraine Guerrero	Budget/ GPA
Monica Calvo	Budget / GPA
Roman Cruz-Sablan	Budget / GPA
Vien Wong	IT / GPA
Joyce Sayama	Mgmt. Analyst / GPA Ex.Office
Ann Borja-Gallarde	Mgmt. Analyst / GWA Ex.Office
Lou Sablan	Board Secretary / CCU

2. COMMUNICATIONS

2.1 Public Comments – None

The Chairman said he would like to modify the Agenda and begin the meeting with executive session discussion first and then the budget resolution matter. There was no objection and the meeting agenda was modified accordingly.

Comm. Santos motioned to move the meeting to Executive Session; second by Comm. Sanchez.

Executive session was called to order immediately; it was 10:15 a.m. After Executive Session, the meeting recessed for 10 minutes. It was 10:45 a.m.

The Chairman called the meeting back to order at 11:01 a.m., for discussions in regular session beginning with the GPA Budget.

3. GPA

3.1 Resolution 2019-12 Approval of FY2010 Budget

Section 6.11 of the GPA Bond Indenture Agreement requires the Authority to provide a copy of an approved budget to the Bond Trustee prior to the beginning of each fiscal year. The General Manager has carefully reviewed and proposes the budget for Fiscal Year 2020 totaling $435,250,000 provision for bad debt of $1,091,000. The GM has reviewed and proposes a Revenue Funded Capital Improvement Project budget totaling $27,620,571. The Fiscal Year 2020 Budget is based on a Non-Fuel Revenue forecast of $163,763,000 and miscellaneous revenues of $2,160,000 and a Fuel Revenue forecast of $270,418,000 and less $1,091,000 provision for bad debt for *total revenues of $435,250,000.* Total Operations and Maintenance budget includes Labor and Retiree's benefit costs of $48,221,673; Non-Labor cost of $35,250,324; less Capitalized O&M of $6,484,303 for total O&M Budget of $76,987,694; Bad Debt Expense of $1,091,000, Independent Power Producers costs plus Aggreko of $27,648,000; Debt Service of $47,737,000; Production Fuel of $270,418,000 and revenue Funded Capital Improvement Projects of $27,620,571. Funds pledged for the Bond Reserves are not included in the overall budget amounts.

The General Manager of the Guam Power Authority has created and thoroughly reviewed the budget for *Fiscal Year 2020 totaling $436,431,000.* The CCU Commissioners noted that the budget provides funding of Revenue Funded Capital Improvement Projects totaling $27,620,571.

GPA CFO John Kim presented the Budget for FY2020.

Proposed 2020 Budget

Pro-Forma Statement of Operations ('000)	2019 Adopted Budget	2019 Projected Budget	2020 Proposed Budget
Revenue			
Sale of Electricity			
Base Revenue	$ 165,002	163,103	$ 163,763
Fuel Revenue	272,011	243,783	270,418
Miscellaneous	2,020	3,020	2,160
Provision for Bad Debt	(1,098)	(1,098)	(1,091)
Total Revenue	**437,935**	**408,808**	**435,250**
Production Cost			
Production Fuel	272,011	243,783	270,418
IPP Cost	16,168	16,152	14,953
Total Production Cost	**288,179**	**259,935**	**285,372**
Operating Expenditures	**76,865**	**69,374**	**76,988**
Earnings Before Depreciation & Amortization	**72,891**	**79,499**	**72,890**
Depreciation & Amortization	**42,016**	**37,749**	**42,518**
Earnings from Operations	**30,875**	**41,750**	**30,372**
Non-Operating Revenues (Expense)			
Interest/Other Income (Expense	(22,872)	(24,984)	(24,110)
Change in Net Position	$ 8,003	$ 16,766	$ 6,262

Proposed 2020 Budget (continued)

Operating Expenses Budget - Highlight

High System Reliability

- Reduce outage due to vegetation
  - Vegetation Management- $497k
  - Village Management Program - $230k
- Provide wider coverage of security - $1.3 million
- Improve Business Risk
  - Fire Alarm/ Gas Suppression Maintenance - $250k
  - USDA Snake Controls - $219k
- Improve Environmental Concerns
  - EPA Emission Testing - $200k
  - Used Oil Disposal - $250k
  - Oxidation Catalyst - $200k
  - Batteries & Waste - $100k
- Monotube Refurbishment (T&D) - $100k
- New generation
  - LNG Feasibility Study - $250k

Proposed 2020 Budget (continued)

Operating Expenses Budget - Highlight

Commitment to Workforce

- Train new generation of employees – 20 new apprentice - $1.2 million
- Move employees to 20th market percentile - $500k

Superior Customer Service

- Improve process efficiency
  - Process improvement
    - Update SOP and remove unnecessary steps and documents
- One utility – GPWA
- Customer Bill Printing Services and newsletters - $375k
- DSM Program - $300k

Optimize the use of Technology

- Data Circuit Lines (PSCC) - $230k
- Robotics Process Automation (RPA) - $87k

Doc. No. 35GL-20-1489.*

Proposed 2020 Budget (continued)

Debt Service (Interest & Principal Combined) '000	2018	2019	2020 Proposed
2010 Senior Lien	$ 2,000	$ -	$ -
2012 Revenue Bond	17,086	31,467	35,232
2014 Revenue Bond	5,083	5,084	5,087
2017 Revenue Bond	5,915	7,607	7,418
	$ 30,084	$ 44,158	$ 47,737

Debt Service Coverage Ratio	2019 Projected	2020 Proposed
Debt Service Coverage Ratio (Bond Method)	1.90	1.56
Debt Service Coverage Ratio (S&P Method) (Bond DSCR - 1.3)	1.57	1.37

Proposed 2020 Budget (continued)

Capital Projects	2018 Adopted	2019 Adopted	2020 Proposed
Carry Over	$ 3,500,000	$ 6,176,661	$ 7,686,882
General Plant	13,280,813	13,437,426	13,515,696
Line Extensions	4,270,187	4,451,434	3,840,293
Engineering Projects	4,179,000	2,407,924	2,577,700
	$ 25,230,000	$ 26,473,445	$ 27,620,571

Proposed 2020 Budget (continued)

Capital Expenditures Budget - Highlight

High System Reliability

Improve generation reliability

- Cabras 1 & 2 - $5.2 million
  - Replacement of Burner Front System
  - Overhaul and Upgrades to Feedwater Heaters and Service Water Coolers
  - Boiler Tube Replacements, Parts, Fire Pumps, etc.
- Gas CT - $1.2 million
  - Overhauls and Upgrades at Macheche CT and Dededo CT
- Diesel Plants - $1.7 million
  - Continued Overhaul and upgrades
- T&D Substations - $1.1 million
  - Upgrades of Circuit Breakers

Optimize the use of Technology

- Disaster recovery
  SCADA - $1.4 million
- E1 Upgrade - $1.4 million

Doc. No. 35GL-20-1489.*

	Guam Power Authority	
	FY 20 PROPOSED Revenue Requirement ($000)	
	as of August 22,2019	
1	**Proforma Income Statement**	**FY2020**
2		
3	Existing Base Rate Revenues	$ 163,763
4	Fuel Revenues	270,418
5	Miscellaneous Revenues	2,160
6	**Total Revenues**	$ 436,341
7	Bad Debt Expense	$ (1,091)
8	**Net Operating Revenues**	**$ 435,250**
9		
10	Production Fuel	270,418
11	IPP Costs	11,586
12	Aggreko Lease Payment	3,368
13		
14	Production Non-fuel	23,040
15	Transmission and Distribution	13,288
16	Administrative and General	34,727
17	Customer Accounting	5,933
18	**Total O&M Expenses**	76,988
19	Depreciation	42,518
20		
21	**Total Operating Expenses**	$ 404,878
22		
23	**Earnings From Operations**	**30,372**
24		
25	Other Revenues (Expenses):	
26	Investment Income	2,004
27	Interest expense (ST Debt)	(29)
28	Interest expense (2010 Senior Lien TE Bond)	-
29	Interest Expense (Aggreko Lease Payment)	(531)
30	Interest expense (2012 Revenue Bond)	(16,237)
31	Interest expense (2014 Revenue Bond)	(3,567)
32	Interest expense (2017 Refunding Bond)	(7,418)
33	Interest expense (IPP's)	-
34	AFUDC	-
35	Other Expense/Income	
36	Amortization of Issuance Costs	1,667
37		
38	**Net Earnings(Loss) Before Capital Contribution**	**6,261**
39	Capital Contributions	-
40		
41	**Increase (Decrease) in Net Assets**	**$ 6,261**

	Guam Power Authority	
	FY 20 PROPOSED Revenue Requirement ($000)	
42		
43	**Debt Service Coverage Calculation**	
44	Earnings From Operations	$ 30,372
45	Add Interest Income (Net of Const. Fund Interest)	1,415
46	Add: Depreciation	42,518
47	Balance Available for Debt Service	74,305
48	IPP Debt Service + Aggreko lease	8,929
49	Balance After IPP Debt Service	65,376
50	**Debt Service**	
51	Bond Interest Expense	27,222
52	Bond Principal	20,515
53	Total Debt Service	47,737
54		
55	Debt Service Coverage (Bond Method)	**1.56**
56	Debt Service Coverage (S&P Method)	**1.37**
57		
58	**Internal Cashflow Statement**	
59	Total Cash Generated	$ 47,113
60	CIP's-Internally Funded	(27,621)
61	Principal Payment (2010 Senior Lien TE Bond)	-
62	Principal Payment (Aggreko Lease Payment)	(8,399)
63	Principal Payment (2012 Revenue Bond)	(18,995)
64	Principal Payment (2014 Revenue Bond)	(1,520)
65	Principal Payment (2017 Refunding Bond)	-
66	MEC Recapitalization	(3,764)
67	Decrease (Increase) in WC Requirements:	-
68	Materials Inventory	(1,000)
69	Other WC Requirement	1,174
70	Construction Fund Interest Income	(589)
70	Cash carry over- surplus (deficit)	(113)
71	Surplus Fund Shortfall/(Excess)	13,714

There was discussion on CC&B. Comm, Santos said this project is going on 5 years since its inception. He asked about a timeline – when it will be completed. AGMA Limtiaco said that the processes are in place but what she is finding is that there is a lot of preliminary work that needs to get done before the program is fully operational. The AGMA said it requires a lot of cleanup and it affects human processes and it affects not only customer service but IT, finance etc. A lot of work is being done and she said she will detail this in her next report to update ongoing work and the work ahead. Comm. Duenas recommended that when making the report that she ask GWA AGMA Budasi to also be present and do a joint update.

The CCU encouraged GPA and GWA to meet and discuss this issue. GM Benavente said they would plan for an October work session.

ACTION: CC&B combined meeting GPA/GWA to update status of project (Assignee(s): John Benavente, John Kim; Due Date: Oct 2019)

Comm Sanchez asked about LEAC does this budget anticipate any recovery of the $9-10M for LEAC or does the cash flow for this budget takes no position of whether the LEAC money is recovered. The CFO confirmed that the under-recovery is included in the $27M proposed budget.

There was discussion on SCADA and the renovation of upper Tumon for remote operations. Comm. Santos was concerned that we continue to budget and spend money out side of our house and that GPA/GWA should be looking at investing in-house.

It was discussed to develop a periodic / ongoing progress report for projects like CC&B, Oracle, E One upgrade and SCADA so that everyone is on the same page and invite the Commission. GM Benavente said perhaps we can begin at the October work session to initiate this progress report and perhaps a schedule / timeline.

Comm. Limtiaco asked about the 20th market percentile matter – it was confirmed that this is being funded by base rates; there is no impact on rates. It was mentioned that the pay for performance is currently at 2-4% for those that are below the 20th market percentile.

Comm. Sanchez asked about the summary of the payroll budget – FY20 asks for $48.2M how does this compare to the total actual payroll. CFO said that the projections for FY2019 is $46.3M for 456 FTE's, not including apprentices. The projected overtime for FY19 is $3.2M due to Saipan; with Saipan netted out the $1.2-1.4M.

Comm Santos asked management to give the Commission a list of all transfers that was affected in FY2019 soon after the end of the fiscal year.

Comm. Sanchez asked confirmation if the Commission is being asked to approve the budget for FY2020 – everything on page 4, 5 and 6 of the FY20 Budget Presentation Booklet. The CFO confirmed yes.

I was mentioned that relative to transfer authority, the GM is authorized to transfer 10% of the non-labor budget.

Comm. Sanchez motion to approve Resolution 2019-12 relative to FY 2020 budget, second by Comm. Santos.

In discussion Comm. Sanchez said we will be approving the expenditures as detailed on Page 4-5-6 of the FY Budget Presentation Booklet.

Relative to bond reserves, Comm. Sanchez motioned to delete Subsection E, page 2, lines 46-48, second by Comm. Santos. There was no further discussion or objection and the motion passed.

Comm. Sanchez motioned to add verbiage "no more than 10% of" and delete the word "within", second by Comm. Santos. There was - no objection and the motion passed.

Comm. Sanchez motioned to approve increasing the GM's obligating authority to $1M and add verbiage " which the GM shall advise the Commission of all expenditures authorized in excess of $1M", second by Comm. Santos. There was no further discussion or objection and the motion passed.

The vote on the main motion with all the amendments; - 4ayes / 1 absent – the motion passed.

The chairman called for a 5-minute recess; it was 12:15

4. ANNOUNCEMENTS

4.1 Next CCU Meetings:

The Chairman announced that the next CCU meeting would be a work session for GWA on Sept. 17; a work session for GPA on Sept. 19 and the regular monthly CCU meeting on Sept. 24.

5. EXECUTIVE SESSION

5.1 GWA Litigation / Atty. Kelly Clark: Northern Wastewater Treatment Plant Litigation

5.2 GWA Litigation / Atty. Kelly Clark: Litigation Filed by GovGuam for PFAS Damages

After the 5-minute recess the Chairman called the meeting back to open session.

GWA Legal Counsel Clark presented a resolution relative to the GovGuam PFAS damages litigation.

Comm. Sanchez motioned to approve Resolution 42-FY2019 relative to joining the Government of Guam litigation against the manufacturers PFAS chemicals that have entered into the ground water of Guam, second by Comm. Limtiaco. The vote was 4 yes / 1 absent.

In discussion Comm. Sanchez said he met with the Attorney General this morning in executive session and he briefed the commission on the perspective litigation being developed. There seems to be an advantage for GWA ratepayers to participate and agree with management that we should adopt this resolution.

6. ADJOURNMENT

There being no other business to bring before the Commission,

Comm. Santos motioned to adjourn the meeting; second by Comm. Sanchez. It was unanimous and the meeting adjourned at 1:43 p.m.

\\s\\
Bls

Attested

JOSEPH T. DUENAS, Chairman

MICHAEL T. LIMTIACO Secretary

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 10-FY2020

RELATIVE TO APPROVAL OF THE CONSTRUCTION CONTRACT FOR THE TANK REPAIR AND BYPASS PROJECT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA currently has critical Court Order ("CO") Projects that include the Santa Ana, Agat-Umatac, Umatac Subdivision, Pigua Merizo, Malojloj, Windwards Hills, Kaiser, Yigo and Astumbo No. 2 Tanks, as stated in Paragraph 29.b of the Order for Preliminary Relief Re: Deadlines for Outstanding Projects Under the Amended Stipulated Order; and

WHEREAS, GWA has advertised an Invitation for Bid (IFB-06-ENG-2019) soliciting bid proposals from experienced, responsible, and responsive bidders to construct tank bypass systems to allow for inspection and repair of the tanks; and

WHEREAS, under the Base Bid Work, the Santa Ana, Agat-Umatac, Umatac Subdivsion, Pigua Merizo, Malojloj, Windward Hills, and Kaiser tank shall undergo inspection and minor repair work;

WHEREAS, should the tank inspections warrant the above tanks to undergo major repair as detailed in the Additive Bid Work, a change order shall be negotiated with the Contractor;

//

WHEREAS, under Base Bid Work, the Astumbo No. 2 tank shall undergo major repair which includes complete exterior and interior tank painting, new tank floor, weld repairs, cathodic protection, and miscellaneous repairs;

WHEREAS, under Additive Bid No. 1, the Yigo No. 3 tank shall undergo major repair which includes complete exterior and interior tank painting, weld repairs, cathodic protection, and miscellaneous repairs;

WHEREAS, IFB packages were picked up by 8 interested bidders, from which GWA received bid proposals from 2 of the 8 parties before the IFB submittal deadline (See Exhibit A – Abstracts of Bid); and

WHEREAS, GWA engineering team analyzed all bid proposals received on November 21, 2019 and determined AIC International, Inc. as being the lowest responsive and responsible bidder and met all the bid requirements set forth by GWA; and

WHEREAS, GWA management finds that AIC International, Inc.'s Base Bid proposal of Four Million Two Hundred Eight Thousand One Hundred Ninety-Seven Dollars ($4,208,197.00) to be acceptable (See Exhibit B – Bid Form).

WHEREAS, GWA Management will assess any additional funding availability from the latest Capital Improvements Plan to ascertain if any or all the Additive bid items as part of this IFB can be awarded later through a change order or via a subsequent CCU approval as a means of maximizing system improvements efficiently; and

WHEREAS, GWA Management is seeking approval to enter in contract for the Base Bid work with AIC International, Inc. (IFB-06-ENG-2019) in the amount of Four Million Two Hundred Eight Thousand One Hundred Ninety-Seven Dollars ($4,208,197.00), along with a ten percent (10%) contingency of Four Hundred Twenty Thousand Eight Hundred Twenty Dollars ($420,820.00), bringing the total Base Bid requested funding amount to Four Million Six Hundred Twenty Nine Thousand Seventeen Dollars ($4,629,017.00); and

//

WHEREAS, GWA Management is seeking approval to include in such contract Additive Bid No. 1 – Yigo No. 3 Major Repair Work in the amount of One Million One Hundred Ninety-Four Thousand One Hundred Twenty-Nine Dollars ($1,194,129.00) after entering into contract with AIC International, Inc., along with a ten percent (10%) contingency of One Hundred Nineteen Thousand Four Hundred Thirteen Dollars ($119,413.00), bringing the total additive bid item funding amount to One Million Three Hundred Thirteen Thousand Five Hundred Forty-Two Dollars ($1,313,542.00).

WHEREAS, the funding source for the construction project will be from bond funds as detailed in the following CIP line items:

- CIP PW 09-09: Water Reservoir Internal/External Corrosion Assessment Program
- CIP PW 09-11: Water System Reservoirs 2005 Improvements

NOW, BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by AIC International, Inc. are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept bid from AIC International, Inc. attached hereto as Exhibit B, and which is also incorporated into this Resolution in its entirety.
4. The CCU hereby authorizes the management of GWA to enter into a contract with AIC International, Inc. in the amount of Four Million Two Hundred Eight Thousand One Hundred Ninety-Seven Dollars ($4,208,197.00) for base bid work plus the amount of One Million One Hundred Ninety-Four Thousand One Hundred Twenty-Nine Dollars ($1,194,129.00) for additive bid item work.
5. The CCU hereby approves the funding total of Five Million Four Hundred Two Thousand Three Hundred Twenty Six Dollars ($5,402,326.00), along with a ten percent (10%) contingency of Five Hundred Forty Thousand Two

Hundred Thirty Three Dollars ($540,233.00), bringing the total authorized funding amount to Five Million Nine Hundred Forty Two Thousand Five Hundred Fifty Nine Dollars ($5,942,559.00).

6. The CCU hereby approves the use of funding sources from the following CIP line items:
   a. CIP PW 09-09: Water Reservoir Internal/External Corrosion Assessment Program
   b. CIP PW 09-11: Water System Reservoirs 2005 Improvements

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY and REGULARLY ADOPTED, this 28th day of January 2020.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

MICHAEL T. LIMTIACO
Secretary

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

EXHIBIT A

ORIGINAL

GUAM WATERWORKS AUTHORITY
ABSTRACT OF BIDS

Project Name: **TANK REPAIR AND BYPASS**
Project Number: W19-003-BND IFB No.: IFB-06-ENG-2019

Bid Opening Date: November. 21, 2019
Time: 3:00 PM

	Bidders Name	Section A-5 Bid Bond	CERTIFICATIONS								Addendum			BID AMOUNT		
			Qualification Statement	Non Collusion Affidavit	EEO Certification	Non Segregated Facilities	Sex Offender Certification	Wage and Benefit Determination	Major Shareholder Affidavit	Special Instructions to Bidders	1	2	3	BASE BID	ADDITIVE BID NO. 1	BASE + ADDITIVE
1.	MURPHY ENTERPRISES	—														
2.	VG GOZUM CONSTRUCTION	—														
3.	IAN CORPORATION	—														
4.	AYM INTERNATIONAL INC.	—														
5.	SUMITOMO-MITSUI CONSTRUCTION CO.	Federal Insurance Company 15% of bid	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$7,079,883	$7,797,117	$14,877,000
6.	GENERAL + PLUMBING	—														
7.	AIC INTERNATIONAL INC.	Fidelity and deposit company of Maryland, 15% of bid	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$4,208,215	$8,602,200	$12,810,415
8.	FRONTIER SUPPLY	—														
	GWA Estimate													$4,039,625.01	$10,139,655.50	$14,179,280.51

Bids Opened and Read by:
GLORIA P. BENSAN
(Name and Signature)

Tabulated By:
Ryan Diaz
(Name and Signature)

GWA Procurement Representative:
ROLAND F. LUMONGSUD
(Name and Signature)

Witnesses:

EXHIBIT B

BID PRICE EVALUATION:

- GWA's evaluation showed discrepancies in both the total base bid and additive bid prices. The total amount for the base bid and additive bid appears to be incorrect and does not correlate with the actual sum of bid prices upon review. Discrepancies were found on Table Mand N, total base bid and additive bid amounts. GWA obtained total amounts of **$4,208,197.00** and **$8,602,199.00**, but the Bid Form Revision 1 indicated total amounts of **$4,208,215.00** and **$8,602,200.00**, respectively. Please verify the correct subtotal and total amounts in each of the tables on the Bid Form Revision 1 and submit a letter to confirm the bid price with the correct corresponding values to GWA Engineering Division.

AIC Response:
Please see attached corrected Bid Form. Note that the above discrepancies were due to the rounding of numbers.

EXHIBIT B

BID FORM

Tank Repair and Bypass GWA Project No. W19-003-BND

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EXHIBIT B

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
Miguel C. Bordallo, PE, General Manager
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date
01	October 09, 2019
02	October 25, 2019
03	November 13, 2019

B. Bidder has visited the Sites, conducted a thorough, alert visual examination of the Sites and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Sites; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following items and be measured and paid for at the contract unit prices as follows:

Base Bid items No. 1 – No. 2: Overall Project Mobilization and Demobilization and Bypass Works

Payment shall be made on a lump sum basis. Payment shall be full compensation for all costs and work required to mobilize to the site, demobilize from the site and provide bypass works including but not limited to, shipping, transportation, associated labor, bond fees, permitting and associated fees, transporting tools, equipment and supplies from site to site throughout the project area, and all related items to provide for mobilizing and demobilizing to complete the work under this contract.

Base Bid items No. 3 – No. 10: Tank Repair

Payment for each Bid item 3 through 10, inclusive, shall be made on a lump sum basis per Tank Bypass and Tank Repair bid item. Payment shall be fully compensated for all costs for work described in Section 001 11 00 "Summary", the bid schedule, the specifications, and drawings.

Additive Bid items No. 1 – No. 8: Major Tank Repair

Payment shall be made on a lump sum basis. Payment shall be full compensation for all costs and work required to complete all listed bid items to include but not limited to testing, disinfection procedures, commissioning and close-out.

EXHIBIT B

TABLE A - BASE BID - GENERAL WORK

TANK BYPASS AND REPAIR BID SCHEDULE

Item No.	Description	Quantity	Unit	Amount
1.00	General Work			
1.01	Mobilization and Demobilization (5%)	1	LS	$ 167,547.00
1.02	Insurance and Bond (1%)	1	LS	$ 34,665.00
1.03	Permits	1	LS	$ 96,873.00
1.04	Documentation	1	LS	$ 16,005.00
1.05	Project Management	1	LS	$ 459,386.00
	Subtotal	1	LS	$ 774,476.00

Doc. No. 35GL-20-1489.*

EXHIBIT B

TABLE B - BASE BID - TANK BYPASS WORK

TANK BYPASS AND REPAIR BID SCHEDULE

Item No.	Description	Quantity	Unit	Amount
2.00	**Bypass Works**			
2.10	Santa Ana Tank Bypass			
2.11	Civil Works	1	LS	$ 96,148.00
2.12	Electrical Works	1	LS	$ 213,359.00
2.13	Instrumentation and Control Works	1	LS	$ 18,442.00
	Subtotal	1	LS	$ 327,949.00
2.20	Umatac Subdivision Tank Bypass			
2.21	Civil Works	1	LS	$ 96,148.00
2.22	Electrical Works	1	LS	$ 151,709.00
2.23	Instrumentation and Control Works	1	LS	$ 18,442.00
	Subtotal	1	LS	$ 266,299.00
2.30	Pigua Merizo Tank Bypass			
2.31	Civil Works	1	LS	$ 96,148.00

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2.32	Electrical Works	1	LS	$ 158,533.00
2.33	Instrumentation and Control Works	1	LS	$ 18,422.00
	Subtotal	1	LS	$ 273,103.00
2.40	Malojloj Tank Bypass			
2.41	Civil Works	1	LS	$ 96,148.00
	Subtotal	1	LS	$ 96,148.00
			Subtotal	$ 963,499.00

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TABLE C - BASE BID - MINOR TANK REPAIR WORK

TANK BYPASS AND REPAIR BID SCHEDULE

Item No.	Description	Quantity	Unit	Unit Cost	Amount
3.00	Santa Ana Tank - 1.0 MG (Diameter = 66', Height = 41')				
3.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 24,184.00	$ 24,184.00
3.02	Complete pressure wash of tank exterior	1	LS	$ 17,820.00	$ 17,820.00
3.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00
3.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
3.05	Repair corrosion spots on tank interior floor, wall, roof, purlins, piping, and columns by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 128.00	$ 25,600.00
3.06	Repair corrosion spots on tank exterior wall, wind girders, roof knuckle, roof, roof platform, and platform by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 115.00	$ 23,000.00
3.07	Repair roof vent and flange connection, to include metal repair, abrasive grinding, coating, and screen replacement (316 stainless steel mesh)	1	EA	$ 6,110.00	$ 6,110.00

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3.08	Repair roof access hatch, to include metal repair, abrasive grinding and coating	1	EA	$ 5,728.00	$ 5,728.00
3.09	Repair side access manway, to include metal repair, abrasive grinding, coating, and new gasket	2	EA	$ 5,728.00	$ 11,456.00
3.10	Exterior and interior weld repair, including preparation, welding, testing, and coating	100	LF	$ 319.00	$ 31,900.00
3.11	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 26,729.00	$ 26,729.00
				Subtotal:	$ 183,474.00
4.00	Umatac Subdivision Tank - 0.5 MG (Diameter = 54', Height = 41')				
4.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 17,820.00	$ 17,820.00
4.02	Complete pressure wash of tank exterior	1	LS	$ 14,001.00	$ 14,001.00
4.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00
4.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
4.05	Repair corrosion spots on tank interior floor, wall, roof, purlins, piping, and columns by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 128.00	$ 25,600.00

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4.06	Repair corrosion spots on tank exterior wall, wind girders, roof knuckle, roof, roof platform, and platform by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 115.00	$ 23,000.00
4.07	Repair roof vent and flange connection, to include metal repair, abrasive grinding, coating, and screen replacement (316 stainless steel mesh)	1	EA	$ 6,110.00	$ 6,110.00
4.08	Repair roof access hatch, to include metal repair, abrasive grinding and coating	1	EA	$ 5,728.00	$ 5,728.00
4.09	Repair side access manway, to include metal repair, abrasive grinding, coating, and new gasket	2	EA	$ 5,728.00	$ 11,456.00
4.10	Exterior and interior weld repair, including preparation, welding, testing, and coating	100	LF	$ 319.00	$ 31,900.00
4.11	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 23,547.00	$ 23,547.00
				Subtotal:	$ 170,109.00
5.00	Pigua Merizo Tank - 0.5 MG (Diameter = 54', Height = 41')				
5.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 17,820.00	$ 17,820.00
5.02	Complete pressure wash of tank exterior	1	LS	$ 14,001.00	$ 14,001.00
5.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00

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5.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
5.05	Repair corrosion spots on tank interior floor, wall, roof, purlins, piping, and columns by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 128.00	$ 25,600.00
5.06	Repair corrosion spots on tank exterior wall, wind girders, roof knuckle, roof, roof platform, and platform by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 115.00	$ 23,000.00
5.07	Repair roof vent and flange connection, to include metal repair, abrasive grinding, coating, and screen replacement (316 stainless steel mesh)	1	EA	$ 6,110.00	$ 6,110.00
5.08	Repair roof access hatch, to include metal repair, abrasive grinding and coating	1	EA	$ 5,728.00	$ 5,728.00
5.09	Repair side access manway, to include metal repair, abrasive grinding, coating, and new gasket	2	EA	$ 5,728.00	$ 11,456.00
5.10	Exterior and interior weld repair, including preparation, welding, testing, and coating	100	LF	$ 319.00	$ 31,900.00
5.11	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 23,547.00	$ 23,547.00
				Subtotal:	$ 170,109.00

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6.00	Malojloj - 1.0 MG (Diameter = 66', Height = 41')				
6.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 24,184.00	$ 24,184.00
6.02	Complete pressure wash of tank exterior	1	LS	$ 17,820.00	$ 17,820.00
6.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00
6.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
6.05	Repair corrosion spots on tank interior floor, wall, roof, purlins, piping, and columns by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 128.00	$ 25,600.00
6.06	Repair corrosion spots on tank exterior wall, wind girders, roof knuckle, roof, roof platform, and platform by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 115.00	$ 23,000.00
6.07	Repair roof vent and flange connection, to include metal repair, abrasive grinding, coating, and screen replacement (316 stainless steel mesh)	1	EA	$ 6,110.00	$ 6,110.00
6.08	Repair roof access hatch, to include metal repair, abrasive grinding and coating	1	EA	$ 5,728.00	$ 5,728.00
6.09	Repair side access manway, to include metal repair, abrasive grinding, coating, and new gasket	2	EA	$ 5,728.00	$ 11,456.00
6.10	Exterior and interior weld repair, including preparation, welding, testing, and coating	100	LF	$ 319.00	$ 31,900.00

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6.11	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 26,729.00	$ 26,729.00
				Subtotal:	$ 183,474.00
7.00	Agat-Umatac - 0.2 MG (Diameter = 37', Height = 25')				
7.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 7,764.00	$ 7,764.00
7.02	Complete pressure wash of tank exterior	1	LS	$ 6,046.00	$ 6,046.00
7.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	2	DAYS	$ 2,183.00	$ 4,366.00
7.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
7.05	Repair corrosion spots on tank interior floor, wall, roof, purlins, piping, and columns by abrasive grinding areas to remove corrosion and recoating	100	SF	$ 128.00	$ 12,800.00
7.06	Repair corrosion spots on tank exterior wall, wind girders, roof knuckle, roof, roof platform, and platform by abrasive grinding areas to remove corrosion and recoating	200	SF	$ 115.00	$ 23,000.00
7.07	Repair roof vent and flange connection, to include metal repair, abrasive grinding, coating, and screen replacement (316 stainless steel mesh)	1	EA	$ 6,110.00	$ 6,110.00

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7.08	Repair roof access hatch, to include metal repair, abrasive grinding and coating	1	EA	$ 5,728.00	$ 5,728.00
7.09	Repair side access manway, to include metal repair, abrasive grinding, coating, and new gasket	2	EA	$ 5,473.00	$ 10,946.00
7.10	Exterior and interior weld repair, including preparation, welding, testing, and coating	100	LF	$ 319.00	$ 31,900.00
7.11	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 15,910.00	$ 15,910.00
7.12	Install new fence with barb wire and vehicle gate around tank property	850	LF	$ 54.00	$ 45,900.00
				Subtotal:	$ 177,052.00
8.00	Windward Hills - 1.0 MG (Diameter = 66', Height = 41')				
8.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 24,184.00	$ 24,184.00
8.02	Complete pressure wash of tank exterior	1	LS	$ 17,820.00	$ 17,820.00
8.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00
8.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00

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8.05	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 26,729.00	$ 26,729.00
				Subtotal:	$ 79,680.00
9.00	Kaiser - 2.5 MG (Diameter = 103', Height = 41')				
9.01	Pressure wash interior tank wall (first 2 shell course) and complete tank floor, including removing and disposal of bottom sediment and debris	1	LS	$ 45,822.00	$ 45,822.00
9.02	Complete pressure wash of tank exterior	1	LS	$ 30,548.00	$ 30,548.00
9.03	Provide man-lift for GWA's API-653 inspector to inspect tank exterior	3	DAYS	$ 1,455.00	$ 4,365.00
9.04	Provide movable scaffolding reaching up to the tank interior roof for GWA's inspector to completely inspect tank interior	1	LS	$ 6,582.00	$ 6,582.00
9.05	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 42,640.00	$ 42,640.00
				Subtotal:	$ 129,957.00

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EXHIBIT B

TABLE D - BASE BID - ASTUMBO NO. 2 MAJOR REPAIR WORK

TANK BYPASS AND REPAIR BID SCHEDULE

Item No.	Description	Quantity	Unit	Amount
10.00	Astumbo No. 1 Tank Repair - 2.0 MG (Diameter = 90', Height = 41')			
10.01	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 74,398.00
10.02	Install new double bottom tank floor, complete in place	113,200	LB	$ 272,750.00
10.03	Install drip ring to new tank floor chimes	2,250	LB	$ 14,478.00
10.04	Replace tank shell manway nozzle assemblies affected by new floor	2	EA	$ 45,822.00
10.05	Complete exterior coating, including sandblasting, epoxy coating	20,000	SF	$ 229,109.00
10.06	Complete interior coating, including sandblasting and epoxy coating	32,000	SF	$ 330,935.00
10.07	Dehumidification equipment for coating	1	LS	$ 101,826.00
10.08	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 10,046.00
10.09	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 29,530.00
10.10	Install new tank cathodic protection system, including new conduits	1	LS	$ 10,183.00

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10.11	Install new tank hatch cover	2	EA	$	22,579.00
10.12	Install new tank vent and screen	1	EA	$	22,708.00
10.13	Install new guardrail and roof platform	1	LS	$	76,267.00
10.14	Install new interior tank ladder and fall arrest assembly	1	Ls	$	40,902.00
10.15	Install new exterior tank ladder and cage assembly	1	LS	$	57,140.00
10.16	Columns, walls, girder, roof, purlins, piping, and all other necessary steel repair as specified in the Contract documents	200	LB	$	3,628.00
10.17	All other repair and appurtenant work as shown on plans and specifications	1	LS	$	25,457.00
10.18	Provide 30 padlock and key set. Padlock shall be keyed to matched existing GWA locks.	1	LS	$	8,609.00
			Sub Total:	$	1,376,367.00

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EXHIBIT B

TABLE E - ADDITIVE BID NO. 1 - YIGO NO. 3 MAJOR REPAIR WORK

TANK BYPASS AND REPAIR BID SCHEDULE

Item No.	Description	Quantity	Unit	Amount
1.00	Yigo No. 3 Tank Repair - 2.5 MG (Diameter = 103', Height = 41')			
1.01	Furnish all materials, labor, equipment, and appurtenances to pressure wash entire interior after repairs and disinfect the tank per AWWA C652. Disinfection must be monitored by an AWWA Certified Water Distribution Operator.	1	LS	$ 48,471.00
1.02	Complete exterior coating, including sandblasting, epoxy coating	24,000	SF	$ 296,613.00
1.03	Complete interior coating, including sandblasting and epoxy coating	36,000	SF	$ 405,130.00
1.04	Dehumidification equipment for coating	1	LS	$ 115,752.00
1.05	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
1.06	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00
1.07	Install new tank cathodic protection system, including new conduits	1	LS	$ 11,575.00
1.08	Install new tank hatch cover	1	EA	$ 25,667.00
1.09	Install new tank vent and screen	1	EA	$ 25,814.00
1.10	Install new guardrail and roof platform	1	LS	$ 89,274.00

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1.11	Install new interior tank ladder and fall arrest assembly	1	LS	$ 45,015.00
1.12	Install new exterior tank ladder and cage assembly	1	LS	$ 66,315.00
1.13	Columns, walls, girder, roof, purlins, piping, and all other necessary steel repair as specified in the Contract documents	200	LB	$ 651.00
1.14	All other repair and appurtenant work as shown on plans and specifications	1	LS	$ 15,192.00
1.15	Install connection from the site inlet to the existing incoming Santa Rosa line	1	LS	$ 11,352.00
			Sub Total:	$ 1,194,129.00

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EXHIBIT B

TABLE F - ADDITIVE BID NO. 2 - SANTA ANA TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
2.00	Santa Ana Tank - 1.0 MG (Diameter = 66', Height = 41')			
2.01	Install new double bottom tank floor, complete in place	56,650	LB	$ 262,891.00
2.02	Install drip ring to new tank floor chimes	1,600	LB	$ 4,051.00
2.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27,132.00
2.04	Complete exterior coating, including sandblasting, epoxy coating	14,000	SF	$ 180,862.00
2.05	Complete interior coating, including sandblasting and epoxy coating	19,000	SF	$ 224.269.00
2.06	Dehumidification equipment for coating	1	LS	$ 65,110.00
2.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
2.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

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2.09	Install new tank cathodic protection system, including new conduits	1	LS	$ 11,575.00
2.10	Install new tank hatch cover	1	EA	$ 25,667.00
2.11	Install new tank vent and screen	1	EA	$ 25.814.00
2.12	Install new guardrail and roof platform	1	LS	$ 68,659.00
2.13	Install new interior tank ladder and fall arrest assembly	1	LS	$ 46,462.00
2.14	Install new exterior tank ladder and cage assembly	1	LS	$ 64,868.00
2.15	Install anchor bolts and chair assemblies	35	EA	$ 37,981.00
2.16	Center column and base repair	1	EA	$ 15,916.00
			Sub Total:	$ 1,098,565.00

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EXHIBIT B

TABLE G - ADDITIVE BID NO. 3 - UMATAC SUBDIVISION TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
3.00	Umatac Subdivision Tank - 0.5 MG (Diameter = 54', Height = 41')			
3.01	Install new double bottom tank floor, complete in place	30,500	LB	$ 158,005.00
3.02	Install drip ring to new tank floor chimes	1,200	LB	$ 3,038.00
3.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27,132.00
3.04	Complete exterior coating, including sandblasting, epoxy coating	11,000	SF	$ 144,689.00
3.05	Complete interior coating, including sandblasting and epoxy coating	14,000	SF	$ 173,627.00
3.06	Dehumidification equipment for coating	1	LS	$ 57,876.00
3.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
3.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

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3.09	Install new tank cathodic protection system, including new conduits	1	LS	$	11,575.00
3.10	Install new tank hatch cover	1	EA	$	25,667.00
3.11	Install new tank vent and screen	1	EA	$	25,814.00
3.12	Install new guardrail and roof platform	1	LS	$	58,771.00
3.13	Install new interior tank ladder and fall arrest assembly	1	LS	$	46,461.00
3.14	Install new exterior tank ladder and cage assembly	1	LS	$	64,868.00
3.15	Install anchor bolts and chair assemblies	25	EA	$	27,129.00
3.16	Center column and base repair	1	EA	$	15,916.00
			Sub Total:	$	877,876.00

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EXHIBIT B

TABLE H - ADDITIVE BID NO. 4 - PIGUA MERIZO TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
4.00	Pigua Merizo Tank - 0.5 MG (Diameter = 54', Height = 41')			
4.01	Install new double bottom tank floor, complete in place	30,500	LB	$ 158,005.00
4.02	Install drip ring to new tank floor chimes	1,200	LB	$ 3,038.00
4.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27,132.00
4.04	Complete exterior coating, including sandblasting, epoxy coating	11,000	SF	$ 144,689.00
4.05	Complete interior coating, including sandblasting and epoxy coating	14,000	SF	$ 173,627.00
4.06	Dehumidification equipment for coating	1	LS	$ 57,876.00
4.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4.029.00
4.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33.279.00

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4.09	Install new tank cathodic protection system, including new conduits	1	LS	$ 11,575.00
4.10	Install new tank hatch cover	1	EA	$ 25.667.00
4.11	Install new tank vent and screen	1	EA	$ 25,814.00
4.12	Install new guardrail and roof platform	1	LS	$ 58,771.00
4.13	Install new interior tank ladder and fall arrest assembly	1	LS	$ 46,462.00
4.14	Install new exterior tank ladder and cage assembly	1	LS	$ 64,868.00
4.15	Install anchor bolts and chair assemblies	25	EA	$ 27.129.00
4.16	Center column and base repair	1	EA	$ 15,916.00
			Sub Total:	$ 877,877.00

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EXHIBIT B

TABLE I - ADDITIVE BID NO. 5 - MALOJLOJ TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
5.00	Malojloj - 1.0 MG (Diameter = 66', Height = 41')			
5.01	Install new double bottom tank floor, complete in place	57,650	LB	$ 262,891.00
5.02	Install drip ring to new tank floor chimes	1,600	LB	$ 4,051.00
5.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27,132.00
5.04	Complete exterior coating, including sandblasting, epoxy coating	14,000	SF	$ 180,862.00
5.05	Complete interior coating, including sandblasting and epoxy coating	19,000	SF	$ 224,269.00
5.06	Dehumidification equipment for coating	1	LS	$ 65,110.00
5.07	Replace tank exterior fill gauge and interior float system assemble	1	LS	$ 4,029.00
5.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

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5.09	Install new tank cathodic protection system, including new conduits	1	LS	$	11,575.00
5.10	Install new tank hatch cover	1	EA	$	25,667.00
5.11	Install new tank vent and screen	1	EA	$	25,813.00
5.12	Install new guardrail and roof platform	1	LS	$	68,659.00
5.13	Install new interior tank ladder and fall arrest assembly	1	LS	$	46,461.00
5.14	Install new exterior tank ladder and cage assembly	1	LS	$	64,868.00
5.15	Install anchor bolts and chair assemblies	104	EA	$	67,715.00
5.16	Center column and base repair	1	EA	$	15,916.00
			Sub Total:	$	1,128,297.00

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EXHIBIT B

TABLE J - ADDITIVE BID NO. 6 - AGAT-UMATAC TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
6.00	Agat-Umatac - 0.2 MG (Diameter = 37', Height = 25')			
6.01	Install new double bottom tank floor, complete in place	18,000	LB	$ 109,715.00
6.02	Install drip ring to new tank floor chimes	500	LB	$ 1,266.00
6.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27.132.00
6.04	Complete exterior coating, including sandblasting, epoxy c 0,000,000.00	4,750	SF	$ 72,345.00
6.05	Complete interior coating, including sandblasting and epoxy coating	6,100	SF	$ 83,920.00
6.06	Dehumidification equipment for coating	1	LS	$ 36,172.00
6.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
6.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

Doc. No. 35GL-20-1489.*

EXHIBIT B

6.09	Install new tank cathodic protection system, including new conduits	1	LS	$ 11,575.00
6.10	Install new tank hatch cover	1	EA	$ 25,667.00
6.11	Install new tank vent and screen	1	EA	$ 25,814.00
6.12	Install new guardrail and roof platform	1	LS	$ 46,052.00
6.13	Install new interior tank ladder and fall arrest assembly	1	LS	$ 29,751.00
6.14	Install new exterior tank ladder and cage assembly	1	LS	$ 40,438.00
6.15	Install anchor bolts and chair assemblies	20	EA	$ 21,703.00
6.16	Center column and base repair	1	EA	$ 15.916.00
			Sub Total:	$ 584,774.00

Doc. No. 35GL-20-1489.*

EXHIBIT B

TABLE K - ADDITIVE BID NO. 7 - WINDWARD HILLS TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
7.00	Windward Hills - 1.0 MG (Diameter = 66', Height = 41')			
7.01	Install new double bottom tank floor, complete in place	57,650	LB	$ 262,891.00
7.02	Install drip ring to new tank floor chimes	1,600	LB	$ 4.051.00
7.03	Replace tank shell manway nozzle assemblies affected by new floor	1	EA	$ 27,132.00
7.04	Complete exterior coating, including sandblasting, epoxy coating	14,000	SF	$ 180,862.00
7.05	Complete interior coating, including sandblasting and epoxy coating	19,000	SF	$ 224,269.00
7.06	Dehumidification equipment for coating	1	LS	$ 65,110.00
7.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
7.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

Doc. No. 35GL-20-1489.*

7.09	Install new tank cathodic protection system, including new conduits	1	LS	$	11,575.00
7.10	Install new tank hatch cover	1	EA	$	25,667.00
7.11	Install new tank vent and screen	1	EA	$	25,814.00
7.12	Install new guardrail and roof platform	1	LS	$	68,659.00
7.13	Install new interior tank ladder and fall arrest assembly	1	LS	$	46,461.00
7.14	Install new exterior tank ladder and cage assembly	1	LS	$	64,868.00
7.15	Install anchor bolts and chair assemblies	35	EA	$	37,981.00
7.16	Center column and base repair	1	LS	$	15,916.00
			Sub Total:	$	1,098,564.00

Doc. No. 35GL-20-1489.*

EXHIBIT B

TABLE L - ADDITIVE BID NO. 8 - KAISER TANK MAJOR REPAIR

TANK BYPASS AND REPAIR BID SCHEDULE

Major repair work shall be determined after GWA's Inspector has performed a full API-653 inspection. After the API-653 inspection has been completed, GWA shall determine which Additive Bid Items should be included in the Contract through a Change Order. If GWA determines that the tank requires major repair, GWA shall have the right to issue a deductive Change Order for the minor repair work items listed in Table C.

Item No.	Description	Quantity	Unit	Amount
8.00	Kaiser - 2.5 MG (Diameter = 103', Height = 41')			
8.01	Install new double bottom tank floor, complete in place	129,600	LB	$ 540,849.00
8.02	Install drip ring to new tank floor chimes	2,600	LB	$ 6,583.00
8.03	Replace tank shell manway nozzle assemblies affected by new floor	2	EA	$ 54,264.00
8.04	Complete exterior coating, including sandblasting, epoxy coating	24,000	SF	$ 296,613.00
8.05	Complete interior coating, including sandblasting and epoxy coating	36,000	SF	$ 405,130.00
8.06	Dehumidification equipment for coating	1	LS	$ 115,752.00
8.07	Replace tank exterior fill gauge and interior float system assembly	1	LS	$ 4,029.00
8.08	Remove existing grounding cables and install new grounding cables, including testing	1	LS	$ 33,279.00

Doc. No. 35GL-20-1489.*

EXHIBIT B

8.09	Install new tank cathodic protection system, including new conduits	1	LS	$	11,575.00
8.10	Install new tank hatch cover	1	EA	$	25,667.00
8.11	Install new tank vent and screen	1	EA	$	25,814.00
8.12	Install new guardrail and roof platform	1	LS	$	95,316.00
8.13	Install new interior tank ladder and fall arrest assembly	1	LS	$	46,462.00
8.14	Install new exterior tank ladder and cage assembly	1	LS	$	64,868.00
8.15	Center column and base repair	6	EA	$	15,916.00
			Sub Total:	$	1,742,117.00

Doc. No. 35GL-20-1489.*

EXHIBIT B

TABLE M - TOTAL BASE BID

TANK BYPASS AND REPAIR BID SCHEDULE

Item No.	Description		Amount
1.00	General Work	Subtotal	$ 774,476.00
2.00	Tank Bypass Work	Subtotal	$ 963,499.00
3.00	Santa Ana Tank - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 183,474.00
4.00	Umatac Subdivision Tank - 0.5 MG (Diameter = 54', Height =	Subtotal	$ 170,109.00
5.00	Pigua Merizo Tank - 0.5 MG (Diameter = 54', Height = 41')	Subtotal	$ 170,109.00
6.00	Malojloj - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 183,474.00
7.00	Agat-Umatac - 0.2 MG (Diameter = 37', Height = 25')	Subtotal	$ 177,052.00
8.00	Windward Hills - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 79,680.00
9.00	Kaiser - 2.5 MG (Diameter = 103', Height = 41')	Subtotal	$ 129,957.00
10.00	Astumbo No. 1 Tank Repair - 2.0 MG (Diameter = 90', Height	Subtotal	$ 1,376,367.00
		Total Base Bid	$ 4,208,197.00

Doc. No. 35GL-20-1489.*

EXHIBIT B

TABLE N - TOTAL ADDITIVE BID

MAJOR REPAIR BID SCHEDULE

Item No.	Description		Amount
1.00	Yigo No. 3 Tank Repair - 2.5 MG (Diameter = 103', Height = 41')	Subtotal	$ 1,194,129.00
2.00	Santa Ana Tank - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 1,098,565.00
3.00	Umatac Subdivision Tank - 0.5 MG (Diameter = 54', Height = 41')	Subtotal	$ 877,876.00
4.00	Pigua Merizo Tank - 0.5 MG (Diameter = 54', Height = 41')	Subtotal	$ 877,877.00
5.00	Malojloj - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 1,128,297.00
6.00	Agat-Umatac - 0.2 MG (Diameter = 37', Height = 25')	Subtotal	$ 584,774.00
7.00	Windward Hills - 1.0 MG (Diameter = 66', Height = 41')	Subtotal	$ 1,098,564.00
8.00	Kaiser - 2.5 MG (Diameter = 103', Height = 41')	Subtotal	$ 1,742,117.00
		Total Additive Bid	$ 8,602,199.00

Doc. No. 35GL-20-1489.*

EXHIBIT B

Base Bid Price Total of All Items

In words: FOUR MILLION TWO HUNDRED EIGHT THOUSAND ONE HUNDRED NINETY SEVEN DOLLARS ONLY

Additive Price Total of All Items

In words: EIGHT MILLION SIX HUNDRED TWO THOUSAND ONE HUNDRED NINETY NINE DOLLARS ONLY

Doc. No. 35GL-20-1489.*

If the Total Base Bid is within the amount of funds available, then the award will be made to the responsive and responsible bidder submitting the lowest Bid Price Total of All Base Bid Items. In the event the lowest responsive and responsible Bid exceeds the available budget, GWA may reject individual Base Bid Items 1-10 until the revised Total Base Bid Amount fits within the available budget. If additional funding is obtained after the contract is executed, any or all deleted Bid items may be restored via Change Order.

A) Where lump sum prices are in the bidding schedule, they shall include all labor, materials and equipment necessary to produce a complete and finished job.

B) When no specific item is listed in the bidding schedule for work required, the cost of such work shall be included in the price bid for the item which most appropriately covers the work.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

D. List of Project References;

E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

F. Contractor's License No.: 1572

G. Required Bidder Qualification Statement with supporting data; and

H. Certificates, Affidavits and Forms listed in Section 00 90 00 as required by Laws and Regulations.

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

EXHIBIT B

AIC International, Inc.

By:
[Signature]

[Printed name] Anthony Stewart
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature]

[Printed name] Emmanuel Clariza

Title: Accountant

Submittal Date: 11/21/2019

Address for giving notices:

P.O. Box DR

Hagatna, Guam 96932

Telephone Number: (671) 565-9142

Fax Number: (671) 565-9145

Contact Name and e-mail address: Henry Stewart

henry@aicconstruction.com

Bidder's License No.: 1572
(where applicable)

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 11-FY2020

RELATIVE TO APPROVAL OF THE CONSTRUCTION CONTRACT FOR THE PRESSURE ZONE REALIGNMENT CONSTRUCTION PHASE 1 PROJECT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA currently has a number of critical projects as part of GWA's Capital Improvement Plan, including the installation (i.e. repair, rehabilitation, replacement, relocation, or development) of pressure regulating or sustaining valves and their appurtenances, as stated in GWA's Water Resources Master Plan (Master Plan); and

WHEREAS, the completion of these improvements will contribute to GWA's efforts to control and reduce water losses through the improvement in service area pressures, thereby reducing background leaks by providing appropriate system pressures; and

WHEREAS, in accordance with the Master Plan, GWA intends to execute a construction project to address the following:

1. The construction of the new control building and new Carnation PRVs to replace the existing PRVs; and
2. The construction of the new Marbo PRV; and
3. The construction of the new control pedestal and new Okkodo PRV to replace the existing PRV; and
4. The construction of the new Ysengsong PRV; and

5. The construction of the new Clara PRV; and
6. The construction of the new Kaiser Bypass PRV and new control building, and installation of new inlet and outlet meters for Kaiser Reservoir; and
7. The construction of the new Kaiser PRV; and

WHEREAS, GWA has advertised an Invitation for Bid (IFB-07-ENG-2019) soliciting bid proposals from experienced, responsible, and responsive bidders to rehabilitate existing and/or construct new pressure reducing valves (PRV), vaults, control buildings, install SCADA connections, and off-site work at seven (7) sites in the Base Bid and to construct the two (2) additional PRV sites in the Additive Bid; and

WHEREAS, the Base Bid work consists of the Contractor furnishing all labor, tools, equipment and materials necessary to complete the construction of the Pressure Zone Realignment Phase I work to include, but not be limited to earthwork, pipework, roadway repair, PRVs, concrete work, electrical work, fences and gates, SCADA, testing and start-up under the provisions of the bid documents and in accordance with applicable GWA standards; and

WHEREAS, IFB packages were picked up by seven (7) interested parties, from which GWA received bid proposals from two (2) of the seven (7) parties before the bid proposal deadline (See Exhibit A – Abstract of Bids); and

WHEREAS, GWA engineering team analyzed all bid proposals received on November 22, 2019 and determined Sumitomo Mitsui Construction Co., LTD. as being the lowest responsive and responsible bidder and met all the bid requirements set forth by GWA; and

WHEREAS, GWA Management finds that Sumitomo Mitsui Construction Co., LTD.'s Base Bid proposal of Four Million One Hundred Twenty Thousand Dollars ($4,120,000.00) to be acceptable (See Exhibit B – Bid Form); and

WHEREAS, GWA Management will assess any additional funding availability from the latest Capital Improvements Plan to ascertain if any or all the Additive bid items as part of this

IFB can be awarded later through a change order or via a subsequent CCU approval as a means of maximizing system improvements efficiently; and

WHEREAS, GWA Management is seeking approval to enter into contract for the Base Bid work with Sumitomo Mitsui Construction Co., LTD (IFB-07-ENG-2019) in the amount of Four Million One Hundred Twenty Thousand Dollars ($4,120,000.00), along with a ten percent (10%) contingency of Four Hundred Twelve Thousand Dollars ($412,000.00), bringing the total requested funding amount to Four Million Five Hundred Thirty-Two Thousand Dollars ($4,532,000.00); and

WHEREAS, the funding sourced for the construction project will be from bond and grant funds as detailed in the following CIP line items:

- CIP PW 12-01: Water Audit Program
- CIP PW 05-16: Master Metering Program
- Grant (USEPA)

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the bid proposal submitted by Sumitomo Mitsui Construction Co., LTD. are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept the bid from Sumitomo Mitsui Construction Co., LTD. attached hereto as Exhibit B, and which is also incorporated into this Resolution in its entirety.
4. The CCU hereby authorizes the management of GWA to enter into a contract with Sumitomo Mitsui Construction Co., LTD. in the amount of Four Million One Hundred Twenty Thousand Dollars ($4,120,000.00).
5. The CCU hereby approves the funding total of Four Million One Hundred Twenty Thousand Dollars ($4,120,000.00), along with a ten percent (10%) contingency of Four Hundred Twelve Thousand Dollars ($412,000.00), bringing the total authorized funding amount to Four Million Five Hundred Thirty-Two Thousand Dollars ($4,532,000.00).

6. The CCU hereby approves the use of funding sources from the following CIP line items:
    a. CIP PW 12-01: Water Audit Program
    b. CIP PW 05-16: Master Metering Program
    c. Grant (USEPA)

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY and REGULARLY ADOPTED, this 28th day of January 2020.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

MICHAEL T. LIMTIACO
Secretary

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

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EXHIBIT A

GUAM WATERWORKS AUTHORITY
ABSTRACT OF BIDS

Project Name: **PRESSURE ZONE REALIGNMENT CONSTRUCTION PHASE I**
Project Number: W18-001-BND

Bid Opening Date: November 22, 2019
Time: 3:00 PM

	Bidders Name	Section A-5 Bid Bond	CERTIFICATIONS												BID AMOUNT		
			Qualification Statement	Non Collusion Affidavit	EEO Certification	Non Segregated Facilities	Sex Offender Certification	Wage and Benefit Determination	Major Shareholder Affidavit	Special Instructions to Bidders	Addendum 1	Addendum 2	Addendum 3	Addendum 4	TABLE A BASE BID	TABLE A ADDITIVE BID	TABLE A BASE + ADDITIVE
1.	KORANDO CORPORATION	—															
2.	IAN CORPORATION	—															
3.	SUMITOMO-MITSUI CONSTRUCTION CO.	FEDERAL INSURANCE COMPANY 15% OF ACCOMPANYING BID	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$4,120,000	$ 962,000	$ 5,082,000
4.	GENERAL + PLUMBING	—															
5.	AIC INTERNATIONAL INC.	FIDELITY & DEPOSIT COMPANY OF MARYLAND 15% OF ACCOMPANIED BID	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	$5,494,376.50	$1,711,160.94	$ 7,205,537.44
6.	FRONTIER SUPPLY	—															
7.	AMERICAN INTNERNATIONAL SUPPLY, INC.	—															
	GWA Estimate														$4,148,360	$845,640	$ 4,994,000

Bids Opened and Read by:
GLORIA P. BENSAN
(Name and Signature)

Tabulated By:
JESSEY MENDIOLA
(Name and Signature)

GWA Procurement Representative:
ROLAND F. LUMONGSOD
(Name and Signature)

Witnesses:

William F. Estevez

EXHIBIT B

BID FORM

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
ADDENDUM NO. 01	OCTOBER 25, 2019
ADDENDUM NO. 02	NOVEMBER 8, 2019
ADDENDUM NO. 03	NOVEMBER 12, 2019
ADDENDUM NO. 04	NOVEMBER 15, 2019

B. Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

EXHIBIT B

D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

E. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.

F. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATIONS

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Buyer, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

EXHIBIT B

ARTICLE 5 - BASIS OF BID

5.01 Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the following price(s):

EXHIBIT B

GUAM WATERWORKS AUTHORITY
PRESSURE ZONE REALIGNMENT CONSTRUCTION PHASE 1
GWA Project No. W18-001-BND

BID SCHEDULE

Interested Bidders must complete Table A. All blanks in the tables must be filled out.

Definitions:

LS = lump sum

TABLE A
BID SCHEDULE

(BASE BID ITEMS NO. 1 - 9)
(ADDITIVE BID ITEMS NO 10-11)

Item No.	Description	Quantity	Unit	Extended Amount
1.	Mobilization, as specified in the Contract Documents.	1	LS	$ 95,487.00
2.	Bonds and insurance.	1	LS	$ 178,861.00
3.	Permits.	1	LS	$ 56,544.00
4.	Training.	1	LS	$ 3,554.00
5.	Carnation PRVs:			
	5.1 Potholing	1	LS	$ 3,661.00
	5.2 Traffic control	1	LS	$ 43,781.00
	5.3 Marbo vault	1	LS	$ 38,935.00
	5.4 Marbo 6" PRV	1	LS	$ 39,105.00
	5.5 Marbo 6" meter	1	LS	$ 7,033.00
	5.6 Marbo piping and connections	1	LS	$ 17,429.00
	5.7 PRV 11 12" PRV	1	LS	$ 12,444.00
	5.8 PRV 11 12" check valves	2	LS	$ 15,546.00
	5.9 PRV 11 piping and connections	1	LS	$ 53,559.00
	5.10 PRV 15 4" PRV	1	LS	$ 3,200.00
	5.11 PRV 15 10" PRV	1	LS	$ 8,230.00
	5.12 PRV 15 12" check valve	1	LS	$ 14,161.00
	5.13 PRV 15 piping and connections	1	LS	$ 41,083.00
	5.14 Replace meters	3	LS	$ 60,173.00
	5.15 Carnation piping and connections	1	LS	$ 40,626.00
	5.16 Control building	1	LS	$ 29,372.00
	5.17 Fencing	1	LS	$ 8,705.00
	5.18 Electrical system	1	LS	$ 188,904.00

EXHIBIT B

Item No.	Description	Quantity	Unit	Extended Amount
5.	Item 5 (Cont.)			
	5.19 SCADA, instrumentation and controls	1	LS	$ 104,879.00
	5.20 Commissioning	1	LS	$ 11,654.00
	5.21 Site and pavement restoration	1	LS	$ 53,504.00
	Subtotal	1	LS	$ 795,984.00
6.	Okkodo PRV:			
	6.1 Traffic control	1	LS	$ 19,724.00
	6.2 Meter vault	1	LS	$ 49,997.00
	6.3 20" meter	1	LS	$ 16,090.00
	6.4 Meter piping and connections	1	LS	$ 155,708.00
	6.5 8" PRV	1	LS	$ 5,134.00
	6.6 10" PRV	1	LS	$ 7,924.00
	6.7 12" PRV	1	LS	$ 10,654.00
	6.8 PRV piping and connections	1	LS	$ 61,920.00
	6.9 PRV vault cover and hatch	1	LS	$ 28,690.00
	6.10 Electrical system	1	LS	$ 55,355.00
	6.11 SCADA, instrumentation and controls	1	LS	$ 70,885.00
	6.12 Commissioning	1	LS	$ 11,733.00
	6.13 Site and pavement restoration	1	LS	$ 7,388.00
	Subtotal	1	LS	$ 501,202.00
7.	Ysengsong PRV:			
	7.1 Potholing	1	LS	$ 84,048.00
	7.2 Traffic control	1	LS	$ 33,283.00
	7.3 Abandonment of pipe	1	LS	$ 3,314.00
	7.4 Vault	1	LS	$ 75,716.00
	7.5 6" PRV	1	LS	$ 9,221.00
	7.6 10" PRV	1	LS	$ 16,466.00
	7.7 10" meter	1	LS	$ 10,857.00
	7.8 Piping and connections	1	LS	$ 149,000.00
	7.9 Electrical system	1	LS	$ 47,927.00
	7.10 SCADA, instrumentation and controls	1	LS	$ 77,859.00
	7.11 Commissioning	1	LS	$ 8,651.00
	7.12 Site and pavement restoration	1	LS	$ 93,265.00
	Subtotal	1	LS	$ 609,607.00

EXHIBIT B

Item No.	Description	Quantity	Unit	Extended Amount
8.	Clara PRV:			
	8.1 Potholing	1	LS	$ 121,682.00
	8.2 Traffic control	1	LS	$ 21,457.00
	8.3 Abandonment of pipe	1	LS	$ 2,870.00
	8.4 Vault	1	LS	$ 38,807.00
	8.5 6" PRV	1	LS	$ 18,000.00
	8.6 10" PRV	1	LS	$ 48,615.00
	8.7 10" meter	1	LS	$ 10,857.00
	8.8 Piping and connections	1	LS	$ 53,347.00
	8.9 Electrical system	1	LS	$ 55,663.00
	8.10 SCADA, instrumentation and controls	1	LS	$ 76,201.00
	8.11 Commissioning	1	LS	$ 8,467.00
	8.12 Site and pavement restoration	1	LS	$ 35,865.00
	Subtotal	1	LS	$ 491,831.00
9.	Kaiser:			
	9.1 Potholing	1	LS	$ 9,254.00
	9.2 Traffic control	1	LS	$ 40,851.00
	9.3 Meter vaults	2	LS	$ 33,941.00
	9.4 12" meter	2	LS	$ 33,681.00
	9.5 Bypass PRV vault	1	LS	$ 36,238.00
	9.6 Bypass 12" PRV	1	LS	$ 76,327.00
	9.7 Kaiser PRV vault	1	LS	$ 63,718.00
	9.8 Kaiser 6" PRV	1	LS	$ 18,378.00
	9.9 Kaiser 10" PRV	1	LS	$ 72,498.00
	9.10 Kaiser 10" meter	1	LS	$ 21,611.00
	9.11 Piping and connections	1	LS	$ 335,576.00
	9.12 Replace meters	3	LS	$ 43,022.00
	9.13 Control building	1	LS	$ 23,537.00
	9.14 Fencing	1	LS	$ 6,838.00
	9.15 Electrical system	1	LS	$ 127,120.00
	9.16 SCADA, instrumentation and controls	1	LS	$ 92,623.00
	9.17 Commissioning	1	LS	$ 10,365.00
	9.18 Site and pavement restoration	1	LS	$ 157,146.00
	9.19 Property boundary survey sketch	1	LS	$ 5,687.00
	Subtotal	1	LS	$ 1,208,411.00
10.	Astumbo Reservoirs SCADA system for existing instrumentation	1	LS	$ 85,990.00
11.	Yigo Reservoirs SCADA system for existing instrumentation	1	LS	$ 92,529.00

EXHIBIT B

Item No.	Description	Quantity	Unit	Extended Amount
12.	Terao PRV (Additive Bid Item):			
	10.1 Traffic control	1	LS	$ 28,097.00
	10.2 Meter vault	1	LS	$ 33,820.00
	10.3 20" Meter	1	LS	$ 37,949.00
	10.4 PRV vault	1	LS	$ 61,228.00
	10.5 6" PRV	1	LS	$ 18,527.00
	10.6 12" PRV	1	LS	$ 31,942.00
	10.7 Piping and connections	1	LS	$ 129,532.00
	10.8 Demolish vault and piping	1	LS	$ 15,599.00
	10.9 Electrical system	1	LS	$ 113,789.00
	10.10 SCADA, instrumentation and controls	1	LS	$ 80,877.00
	10.11 Commissioning	1	LS	$ 12,843.00
	10.12 Site and pavement restoration	1	LS	$ 95,113.00
	Subtotal	1	LS	$ 659,316.00
13.	Maimai PRV (Additive Bid Item):			
	11.1 Traffic control	1	LS	$ 15,387.00
	11.2 Meter vault	1	LS	$ 42,033.00
	11.3 10" Meter	1	LS	$ 36,043.00
	11.4 Meter piping and connections	1	LS	$ 14,101.00
	11.5 4" PRV	1	LS	$ 4,867.00
	11.6 10" PRV	1	LS	$ 11,742.00
	11.7 PRV piping and connections	1	LS	$ 22,915.00
	11.8 Electrical system	1	LS	$ 64,070.00
	11.9 SCADA, instrumentation and controls	1	LS	$ 78,620.00
	11.10 Commissioning	1	LS	$ 12,592.00
	11.11 Site and pavement restoration	1	LS	$ 314.00
	Subtotal	1	LS	$ 302,684.00

Table A Base Bid Subtotal	$ 4,120,000.00
Table A Additive Bid Subtotal	$ 962,000.00
Table A Base Bid and Additive Bid Total	$ 5,082,000.00

EXHIBIT B

TOTAL BASE BID PRICE FOR THE BID SCHEDULE

For the lump sum of

$ 4,120,000.00

(Price in Figures)

FOUR MILLION, ONE HUNDRED TWENTY THOUSAND DOLLARS ONLY

(Price in Words)

This Contract will be awarded to the lowest responsive and responsible bidder based on the total Base Bid Schedule. Determination of the lowest responsive and responsible bidder will be in accordance with the provisions of the Bid Documents.

EXHIBIT B

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of BID BOND.

B. List of Proposed Major Suppliers;

C. Required Bidder Qualification Statement with Supporting Data; and

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): N/A

By: N/A

(Individual's signature)

Doing business as: N/A

Business address: N/A

Phone: N/A Facsimile: N/A

E-mail address: N/A

EXHIBIT B

A Partnership

Partnership Name: N/A (SEAL)

By: N/A

(Signature of general partner - attach evidence of authority to sign)

Name (typed or printed): N/A

Business address: N/A

Phone: N/A Facsimile: N/A

E-mail address: N/A

A Corporation

Corporation Name: SUMITOMO MITSUI CONSTRUCTION CO., LTD

State of Incorporation: JAPAN

Type (General Business, Professional, Service, other): GENERAL CONTRACTOR/ CONSTRUCTION

By: _____

(Signature - attach evidence of authority to sign)

Name (typed or printed): TAKEYUKI SHIINO

Title: GENERAL MANAGER

Attest _____ (CORPORATE SEAL)
Admin. Manager

(Signature of Corporate Secretary)

Business address: PO BOX 9670 TAMUNING, GUAM 96931

PHYSICAL ADD: STE 105-107 IBC BLDG, J.L. BAKER ST. HARMON INDUSTRIAL, HARMON, GUAM, 96913

Phone: (671) 649-7521 to 24 Facsimile: (671) 649-7550

E-mail address: tkshiino@smcon.co.jp

A Limited Liability Company (LLC)

LLC Name: N/A

State in which organized: N/A

By: N/A

(Signature - attach evidence of authority to sign)

Name (typed or printed): N/A

Title: N/A

Business address: N/A

Phone: N/A Facsimile: N/A

E-mail address: N/A

EXHIBIT B

A Joint Venture

First Joint Venturer Name: N/A (SEAL)

By: N/A

(Signature - attach evidence of authority to sign)

Name (typed or printed): N/A

Title: N/A

Business address: N/A

Phone: N/A Facsimile: N/A

E-mail address: N/A

Second Joint Venturer Name: N/A (SEAL)

By: N/A

(Signature - attach evidence of authority to sign)

Name (typed or printed): N/A

Title: N/A

Business address: N/A

Phone: N/A Facsimile: N/A

E-mail address: N/A

Phone and Facsimile Number, and Address for receipt of official communications to Joint Venture:

N/A

(Each joint venturer must sign. The manner of signing for each individual, partnership, corporation, and limited liability company that is a party to the joint venture should be in the manner indicated above.)

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 12-FY2020

RELATIVE TO APPROVAL OF CHANGE ORDER NO. 1 FOR THE PRESSURE ZONE REALIGNMENT AND TANK REPAIR/REPLACEMENT DESIGN PROJECT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA's PMO Brown and Caldwell has developed a pressure zone realignment plan as part of the Water Resources Master Plan; and

WHEREAS, CCU Resolution No. 36-FY2018 (Exhibit A-Resolution 36-FY2018) authorized a design contract with GHD with total funding of Two Million Five Hundred Thirty-Nine Thousand Nine Hundred Ninety-One Dollars ($2,539,991.00) along with a ten percent (10%) contingency of Two Hundred Fifty-Three Thousand Nine Hundred Ninety-Nine Dollars and Ten Cents ($253,999.10) for the design services of the Pressure Zone Realignment and Tank Repair/Replacement project; and

WHEREAS, GWA seeks to continue the design services of GHD and their subconsultant, Water Systems Optimization, Inc. (WSO) for the further development of an island-wide water loss control program and construction plans for program execution; and

WHEREAS, GWA and GHD have negotiated a price of Three Hundred Seventy-Three Thousand Six Hundred Seventy Dollars ($373,670.00) for the design services described above (Exhibit B-Scope of Work and Fee); and

WHEREAS, GWA management is requesting authorization to increase the funding amount for the GHD contract by Ninety Thousand Seven Hundred Seventy Six Dollars and Ninety Cents ($90,776.90) plus an additional Two Hundred Fifty Four Thousand Dollars ($254,000.00) to replenish the original contract's contingency, bringing the total authorized funding to Three Million One Hundred Thirty-Eight Thousand Seven Hundred Sixty-Seven Dollars ($3,138,767.00); and

WHEREAS, the funding source for the construction project will be from bond funds as detailed in the following CIP line items:

- PW 09-04: Pressure Zone Realignment/ Development 2005 Improvements
- PW 09-10: Water Reservoir Internal/External Corrosion Rehabilitation Program
- PW 09-11: Water System Reservoir 2005 Improvements
- PW 12-01: Water Audit Program and Water Loss Control Plan

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve and authorize the following:

1. The recitals set forth above hereby constitute the findings of the CCU.
2. The CCU finds that the terms of the fee proposal submitted by GHD are fair and reasonable.
3. The CCU hereby authorizes the management of GWA to accept the fee proposal of Three Hundred Seventy-Three Thousand Six Hundred Seventy Dollars ($373,670.00) from GHD, attached hereto as Exhibit B, and execute a Change Order.
4. The CCU hereby approves the total funding amount to Three Million One Hundred Thirty-Eight Thousand Seven Hundred Sixty-Seven Dollars ($3,138,767.00).
5. The CCU approves the funding sources from the following bond funds:
    - PW 09-04: Pressure Zone Realignment/ Development 2005 Improvements
    - PW 09-10: Water Reservoir Internal/External Corrosion Rehabilitation Program

- PW 09-11: Water System Reservoir 2005 Improvements
- PW 12-01: Water Audit Program and Water Loss Control Plan

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of January 2020.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

MICHAEL T. LIMTIACO
Secretary

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

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EXHIBIT A

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 36–FY2018

RELATIVE TO APPROVAL OF THE DESIGN SERVICES FOR THE PRESSURE ZONE REALIGNMENT AND TANK REPAIR/REPLACEMENT CONTRACT

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority ("GWA") is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA is working on critical reservoir projects under the 2011 Court Order ("CO") Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program; and

WHEREAS, GWA's PMO Brown and Caldwell has developed a pressure zone realignment plan as part of the Water Resource Master Plan (2017 Draft WRMP); and

WHEREAS, engineering and design services are required to integrate the improvements needed for realigning pressure zones within the distribution system, and the on-going 2011 CO storage tank/reservoir program; and

WHEREAS, GWA has advertised the Request for Proposals (RFP-03-ENG-2018) soliciting statement of qualifications from experienced and qualified engineering firms to provide tank repair/replacement/modification design, pressure zone realignment and zone metering design, and limited construction management services for the implementation of the pressure zone realignment construction; and

EXHIBIT A

WHEREAS, RFP packages were picked up by twenty (20) interested parties, from which GWA received proposal submittals from five (5) firms before the RFP submittal deadline; and

WHEREAS, the GWA A-E Selection committee reviewed and evaluated the five (5) proposals (See Exhibit A – Score Summary) and generated a short list of the top 3 firms with a recommendation to award a contract to the firm GHD (See Exhibit B – GM's Determination); and

WHEREAS, GWA and GHD negotiated the price and scope of work for tank repair/replacement/modification design, the pressure zone realignment design (22 pressure zones), including zone metering, as recommended by the 2017 Draft WRMP, limited construction management services (estimated time & materials budget) for the implementation of the pressure zone realignment construction and an AWWA water audit, including three trial district metering areas (See Exhibit C – Scope of Work and Fee); and

WHEREAS, GWA management seeks approval of the estimated fee proposal amount of Two Million Five Hundred Thirty-Nine Thousand Nine Hundred Ninety-One Dollars ($2,539,991.00), along with a ten percent (10%) contingency of Two Hundred Fifty-Three Thousand Nine Hundred Ninety-Nine Dollars and Ten Cents ($253,999.10), to bring the total authorized funding amount to a maximum of Two Million Seven Hundred Ninety-Three Thousand Nine Hundred Ninety Dollars and Ten Cents ($2,793,990.10); and

WHEREAS, funding for this project will be from the Bond Funds under the line items PW 09-04 Pressure Zone Realignment/Development 2005 Improvements, PW 09-10 Water Reservoir Internal/External Corrosion Rehabilitation Program, PW 09-11 Water System Reservoirs 2005 Improvements, and PW 12-01 Water Audit Program and Water Loss Control Plan; and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.

EXHIBIT A

2. The CCU finds that the terms of the fee proposal submitted by GHD are fair and reasonable.
3. The CCU hereby authorizes the management to accept the fee proposal from GHD (Exhibit C) inclusive of estimated time and material budget for limited CM services, which is also incorporated into this Resolution in its entirety.
4. The CCU hereby authorizes the management of GWA to enter into a contract with GHD, in the amount of Two Million Five Hundred Thirty-Nine Thousand Nine Hundred Ninety-One Dollars and Zero Cents ($2,539,991.00).
5. The CCU hereby approves the total funding amount for this project of Two Million Five Hundred Thirty-Nine Thousand Nine Hundred Ninety-One Dollars ($2,539,991.00), with a ten percent (10%) contingency of Two Hundred Fifty-Three Thousand Nine Hundred Ninety-Nine Dollars and Ten Cents ($253,999.10), to bring the total authorized funding amount to Two Million Seven Hundred Ninety-Three Thousand Nine Hundred Ninety Dollars and Ten Cents ($2,793,990.10).
6. The CCU hereby further approved the funding source shall be the following:
   - PW 09-04: Pressure Zone Realignment/Development 2005 Improvements
   - PW 09-10: Water Reservoir Internal/External Corrosion Rehabilitation Program
   - PW 09-11: Water System Reservoirs 2005 Improvements
   - PW 12-01: Water Audit Program and Water Loss Control Plan

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 5th day of June 2018.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

J. GEORGE BAMBA
Secretary

EXHIBIT A

SECRETARY'S CERTIFICATE

I, J. George Bamba, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0



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Exhibit B

December 24, 2019

Mauryn McDonald, PE
Chief Engineer
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

Attention: Garrett Yeoh

RE: Change Proposal 02 for Design Services for GWA's Pressure Zone Realignment and Tank Repair/Replacement, GWA Project W18-001-BND
Water Loss Control Program Development

Dear Ms. McDonald:

GHD is pleased to submit this change proposal to amend our Scope of Work and Fee for the Pressure Zone Realignment and Tank Repair/Replacement (Pressure Zone Realignment) project. This scope of work defines the additional design services GHD and our subconsultant, Water Systems Optimization, Inc. (WSO), will provide for Phase 3 of the Water Loss Control Program. More specifically, the design services will include the development of a plan to implement District Metered Areas (DMA) island-wide and the construction documents to execute four sites that resulted from the DMA Conversion report prepared by WSO and delivered to GWA November 2019. The original project scope will be amended on a lump sum basis per the fees in the table below.

SCOPE OF WORK

The first step will be the Phase 3 Water Loss Control Program Development to be prepared by WSO. The detailed scope of work, dated October 2019, is attached. The plan will include identification of DMA infrastructure requirements to implement the DMAs in Task 4 of the attached scope of work. GHD will provide project oversight and coordination between the original Pressure Zone Realignment scope of work. Efforts will be coordinated with the design and construction documents of the Pressure Zone Realignment in the determination of DMAs. GHD will review the infrastructure requirements identified under Task 4 of the WSO scope of work for suitability with GWA's water system and the climate on Guam.

Secondly, GHD will prepare construction documents to execute the infrastructure requirements to convert four temporary DMAs under Phase 2 of the WSO original scope to permanent DMAs. The design will follow the recommendations in the report "DMA Conversion – Recommendations for Conversion of the

Temporary DMAs to Permanent DMAs." The four DMAs are Asan-Piti, Mataguac, Nimitz Estates, and Windward-Talafofo. These recommendations included battery-powered flow meters, data loggers and M2M data transmission that do not communicate with GWA's SCADA system. No electrical or SCADA design will be provided under this scope of work. The documents will include specifications, plans, cost estimates, and bid forms necessary for bidding and permit submittal to DPW. The documents will be integrated with construction documents for a phase of the Pressure Zone Realignment. GHD will prepare and submit the following:

- Multidiscipline plans at 30%, 60%, 90%, and Final completion levels per the requirements for Pressure Zone Realignment.
- Construction cost estimate based on the 60% and 100% design plans and specifications. These estimates will be Class 3 and 2 respectively in accordance with the AACE International Cost Estimate Classification System.

GHD shall coordinate with Guam Environmental Protection Agency and Department of Public Works at the 90% submittal. This includes submitting 11x17 plans, one meeting with each, and incorporating any relevant regulation requirements in the design.

ASSUMPTIONS AND EXCEPTIONS

- This change proposal only applies to the scope of work and contract amount. The terms of the original executed agreement still apply.
- The scope to prepare construction documents for the execution of the infrastructure improvements for permanent DMAs is limited to the specific sites listed above. If infrastructure requirements are needed for more sites, GHD will negotiate a fee adjustment.
- GHD's scope of work assumes that existing conditions are accurately defined by WSO and SCADA and electrical design are excluded. The fee will be renegotiated for design changes based on differing conditions from those defined by WSO.
- Property and right-of-way research and acquisition will be provided by GWA.
- Survey services are excluded. It is assumed that the existing site conditions can be prepared based on field hand measurements, utility locations from aboveground utility appurtenances, and as-built drawings.
- Construction Bid Support Services are excluded.
- Construction Management Services are excluded.

The fee will be adjusted accordingly if designs are needed at less than 30 sites or less than four different sets of contract documents are prepared for bidding. The fees for specifications and bid plans apply if the documents are combined into a set with improvements from the original Pressure Zone Realignment scope of work.

FEE SCHEDULE FOR ADDITIONAL DESIGN SERVICES

TASKS	TOTALS
Original Contract Amount	$2,511,097
WSO fee and GHD markup	$287,500

GHD Project Management and Coordination	$14,800
GHD Construction Documents • 4 sites at $11,000 each • Enclosure Detailing $4,000 • Specifications Additions $2,500 • Cost Estimates $2,400	$52,900
Subtotal Cost	**$355,200**
Guam GRT (at 5.2%)	$18,470
TOTAL CHANGE PROPOSAL COST	**$373,670**
AMENDED CONTRACT AMOUNT	**$2,884,767**

Work that exceeds the scope of this proposal will be brought to your attention for review, approval and fee adjustment. Work performed will be billed monthly based on the estimated percent complete. We stand ready to provide the professional services necessary to assist GWA in this endeavor.

Sincerely,

Aaron Sutton, PE, ENV SP
Project Manager

Attachments: WSO Phase 3 Water Loss Control Program Development Proposal, October, 2019

Cc: file

Exhibit B

GUAM WATERWORKS AUTHORITY

Phase 3

Water Loss Control Program Development

WATER SYSTEMS OPTIMIZATION, INC.

WSO

PROPOSAL SUBMISSION

OCTOBER, 2019

ELECTRONICALLY SUBMITTED

Exhibit B

COVER LETTER

October 18, 2019

TO: GHD - Guam
Attn: Mr. Aaron Sutton, P. E.
GHD Guam Office Manager

FROM: Water Systems Optimization, Inc.
131 Kissling Street
San Francisco, CA 94103
Tel: 415-533-0419

Dear Mr. Sutton,

After successful completion of Phase 1 and 2 of the Guam Waterworks Authority (GWA) Water Loss Control Program we are pleased to submit this scope for Phase 3 as requested during recent meetings with GWA stakeholders.

Phases 1 and 2 have confirmed that there is a strong case for substantial cost recovery through the implementation of a comprehensive water loss reduction project in GWAs distribution network.

In Phase 3, WSO will develop a water loss control program for GWA based on the island-wide implementation of District Metered Areas, an approach proven successful during Phase 2. The aim is to provide a long-term, sustainable and holistic approach to monitoring and managing water losses within the GWA water supply and distribution network.

Our project team wholeheartedly believes that we are uniquely positioned to provide the best service to GWA and its customers. Water Systems Optimization (WSO) respectfully submits the enclosed scope with the intention that all of the required information is supplied. WSO will happily provide any further clarification if needed.

If you have any questions, please do not hesitate to contact me at (786) 877-5752 or by email at reinhard.sturm@wsoglobal.com.

Sincerely,

Reinhard Sturm

CEO/President – WSO

Exhibit B

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Exhibit B

Exhibit B

1 PHASE 3: WATER LOSS CONTROL PROGRAM DEVELOPMENT

Project Approach & Understanding

During the Phase 2 Pilot Project, the direct measurement of water losses in three pilot temporary District Metered Areas (DMAs) supported and confirmed the results from the Phase 1 top-down water audit - that physical water loss from leaking pipes is the major component of water loss for GWA.

In Phase 3 WSO will develop a water loss control program for GWA based on the island-wide implementation of DMAs. The aim is to provide a long-term, sustainable and holistic approach to monitoring and managing water losses within the GWA water supply and distribution network.

DMAs allow the direct measurement of water losses within the water network and can be used to set targets for water loss reduction at the DMA, supply zone and system-wide level. Within each DMA, leak detection and repair will be carried out to reduce water losses from detectable leaks and, where necessary, pressure within the DMA will be managed downwards to further reduce losses from background leaks. A DMA monitoring system will provide for the automated calculation of monthly water loss volume within each DMA. This allows DMAs to be ranked in priority order according to their volume of water loss. The long-term aim will be to reduce the water loss volume in each DMA to the optimum economic level and to focus water loss control activity in those DMAs where water loss increases above the economic level. This approach will ensure that GWA reduces the current markedly high water-loss level and has in place a system to manage future water loss levels at the most economic level.

The requested services include the development of a DMA implementation program that takes into account the ongoing pressure zone realignment program and other relevant CIP and operational programs.

WSO proposes the following steps to develop a DMA-based water loss water management program for GWA.

1. Review existing zone realignment and CIP plans and hydraulic models.
2. Identify potential DMAs to provide maximum coverage of the water supply and distribution network.
3. Identify the GWA customers inside each potential DMA to assess for DMA size and water demand.
4. Identify DMA infrastructure requirements and costs including requirements for DMA meter points, chambers, boundary valves, telemetry/SCADA and pressure management.
5. Produce a prioritized ranking of potential DMAs by ease / least cost implementation.
6. Develop a phased DMA implementation plan (3 to 5-year plan).
7. Produce draft scopes for the various project implementation elements (design, construction and management).

Exhibit B

2 PHASE 3: SCOPE OF WORK

Task 1: Review of Existing Plans and Models

Task 1A: Zone Realignment Plan and Phasing

Review Zone Realignment Plan

WSO will review the ongoing zone realignment plan to understand the current and proposed network configuration, as well as the associated realignment tasks (new PRVs etc.). WSO will also review the phasing of the zone realignment work in order to understand the sequence in which the zones are being realigned. This will feed into the later task where the DMA Implementation Plan is developed.

Task 1A outcomes:

- *Understanding of the current and proposed network configuration*
- *Understanding of the order in which the pressure zones are being realigned*

Task 1B: Hydraulic Model

Review Hydraulic Model Output

WSO will review the current hydraulic model of the GWA network, including the future scenarios that cover the pressure zone realignment. This will improve the understanding of how the current network configuration is performing and what effects the proposed pressure zone realignment work will have. The model can also be used to test the proposed DMAs that are identified in Task 2.

Task 1B outcomes:

- *Utilization of the hydraulic model to assist in understanding the performance of the current network configuration*
- *Utilization of the hydraulic model to assist in understanding the performance improvements being brought about by the proposed pressure zone realignment work*
- *Prepare for utilization of the hydraulic model to test potential DMAs*

Task 1C: GIS

Review current GIS records

Obtain latest GIS records for the pipe network and customer locations for DMA design.

Task 1C outcomes:

- *Utilization of GIS records for DMA design*

Task 1D: Pressure Reducing Valve (PRV) Rehabilitation / Replacement Plans and any other relevant CIP projects

Review the PRV Rehabilitation / Replacement Plans

WSO will review GWAs plans for rehabilitation and/or replacement of PRVs and all other relevant CIP projects (pump station upgrades, new wells, etc.) to ensure these are taken into account in the DMA identification phase.

Exhibit B

Task 1D outcomes:

- *Understanding of GWAs PRV rehabilitation / replacement plans*
- *Understanding of relevant CIP projects*

Task 2: Identification of Potential DMAs

Task 2A: Desk Study

WSO will carry out a desk study utilizing the data and understanding gained in Task 1 to identify all the potential DMAs, including the potential DMA inlet points and boundaries. Each potential DMA will be tested using the hydraulic model to ensure that it can be implemented without impacting on service levels.

Task 2A outcomes:

- *Draft list of potential DMAs with inlet points and boundaries*

Task 2B: Site Visit to Potential DMA Inlet Locations

WSO will carry out a site visit to all potential DMA inlet locations to identify the optimal DMA inlet meter point location.

Task 2B outcomes:

- *DMA Inlet meter Location Point Plans.*

Task 2C: Site Visit to Potential DMA Boundary Locations

The extent of each DMA boundary will be determined by inspection of the pressure zone details and the distribution network records. The location of any boundary valve will be identified. All boundary valves will be located and tested for operation including whether it can provide a water-tight shut when closed off and tested for operation. Should a boundary valve be found to be inoperable or passing, it will need to be replaced with a new boundary valve. Any boundary valve that cannot be located will need excavating to enable testing.

Task 2C outcomes:

- *DMA boundary valve plans, including list of valves that need to be replaced and new valves that need to be installed*

Task 2D: Site Visit all above-ground infrastructure in each potential DMA

The above-ground infrastructure (water tanks and pumping stations) in each DMA will be inspected to determine what additional measurement devices (water level, inlet and outlet flow) are required to ensure that the DMA water balance can be correctly calculated. This is particularly relevant for water tanks within a DMA where water storage increases / decreases must be recognized to correctly calculate water losses.

Task 2D outcomes:

- *Identification of additional measurement requirements at above-ground infrastructure in each DMA*

Exhibit B

Task 2E: Non-intrusive DMA Inflow Measurement and Preliminary Water Loss Assessment

Where possible, the DMA inflow will be measured using non-intrusive techniques (logging of existing meters and/or use of clamp-on ultrasonic flow meters). This will enable a preliminary water loss assessment for the potential DMA to be carried out.

Task 2E outcomes:

- *DMA Inlet flow measurement (where possible)*
- *DMA Water Loss Assessment where inflow measurement is possible*

Task 2F: DMA Pressure Data Collection

Pressure data will be collected in each potential DMA using both normal and high-frequency data loggers to assess the pressure profile and determine the scope for pressure management in the DMA.

Task 2E outcomes:

- *DMA pressure data*
- *Identification of scope for pressure management in the DMA*

Task 2G: Zero Pressure Tests

Where possible, a Zero Pressure Test (ZPT) will be carried out in the potential DMA. This entails closing the main inlet supply valve for the zone and recording the pressure at selected locations within the zone. All boundary valves will be manually sounded during the ZPT to make sure they close tightly and are not allowing water to pass into the zone. Should the zone fail the ZPT (positive pressure remains within the zone) then extensive investigations will be needed to locate the zone breach. Additional boundary valves may be required if zone breaches are identified.

Task 2E outcomes:

- *Confirmed DMA boundary*
- *Need for additional boundary valves*

Task 3: Customer Identification per DMA

WSO will utilize the existing GWA customer billing data to identify the number of customers and the current customer demand within each potential DMA. This will be used in the assessment of DMA water losses for those DMAs where temporary inflow measurement has been possible.

Task 3 outcomes:

- *Number of customers in each potential DMA*
- *Current customer demand in each potential DMA*

Exhibit B

Task 4: Identification of DMA Infrastructure Requirements

For each potential DMA, the infrastructure requirements needed to implement the DMA will be identified, catalogued and provisionally costed. These will include:

- Preliminary DMA meter point pipework design and costing
- Preliminary DMA meter point chamber design and costing
- DMA boundary valve locations, including preliminary design for additional vales, where necessary.
- Preliminary DMA telemetry / SCADA requirements
- Additional pressure management requirements

Task 4 outcomes:

- *Complete list of all DMA infrastructure requirements with preliminary design and costings*

Task 5: Prioritization of Proposed DMAs

WSO will produce a priority ranking of the potential DMAs by ease of implementation and capital investment needed (least cost first). This will drive the DMA Implementation Plan with the DMAs that are easiest to implement and have lowest capital cost requirement being done first.

Task 5 outcomes:

- *Prioritized list of potential DMAs ranked by ease of implementation*

Task 6: Develop DMA Implementation Plan

The prioritized list of potential DMAs will be used to develop a 3-year to 5-year DMA implementation plan. The plan will take into account the pressure zone realignment work. The plan will set out in detail the requirements for each DMA in terms of construction requirements, boundary valve operation, telemetry and SCADA requirements, and additional pressure management requirements.

Task 6 outcomes:

- *DMA implementation Plan*

Task 7: Develop Draft Scopes for Implementation Project Contracting Elements

WSO will develop draft scope of works for the Implementation Project contracting elements.

Task 7 outcomes:

- *Draft Scope for Construction Design and Specifications*
- *Draft Scope for Water Loss Control Management including DMA boundary implementation, leak detection, pressure management and ongoing monitoring of DMA water loss levels*
- *Draft Scope for Leak Repair works*

Exhibit B

3 PROJECT MANAGEMENT AND REPORTING

In order to ensure that the project meets GWA WSD's expectations and timeline, the project team will schedule appropriate milestone meetings to discuss project findings and scheduling. In addition to the project milestone meetings, the project team will schedule individual meetings with various departments and stakeholders as necessary. Monthly progress reports will accompany the monthly invoice that WSO will prepare.

After completing all tasks, the project team will develop a final report that includes an executive summary, a description of the study process, all analyses conducted, and findings and recommendations for implementing GWA's water loss control program. Prior to submittal of the final report, WSO will prepare a draft report for GWA staff review and incorporate comments received from GWA in preparing the final report.

- *Monthly invoicing and progress update*
- *Brief program report on water loss program recommendations*
- *Slide deck for presenting water loss program*

Exhibit B

4 PROJECT SCHEDULE AND COST

Project Schedule

WSO understands that time is of the essence for GWA, and we can guarantee that the project will be completed in the expected timeframe with all deliverables by June 30, 2020 assuming a project start date no later than January 1, 2020.

WSO will update GWA staff regularly with project findings and the status of each task underway. WSO will conduct milestone meetings to present and discuss project findings and adjust task schedules where necessary. WSO prides itself on being accessible and responsive – we will be in close communication to ensure the on-time and complete delivery of the project's objectives.

Additionally, WSO will schedule an in-person results presentation to discuss findings and recommendations.

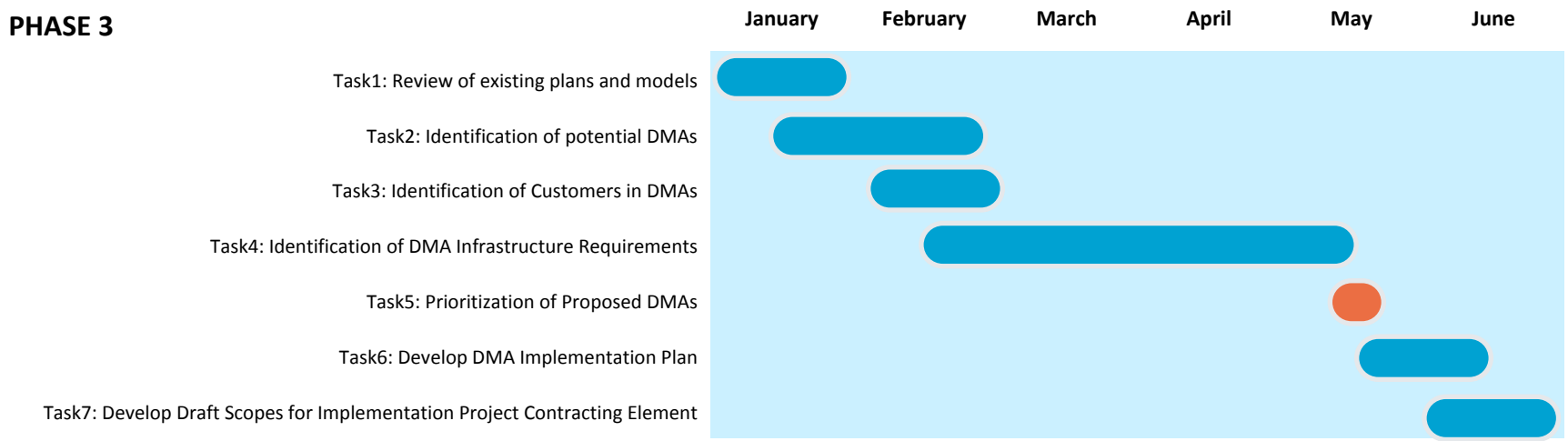


Table 1: Proposed Project Schedule, Organized by Task

Project Cost

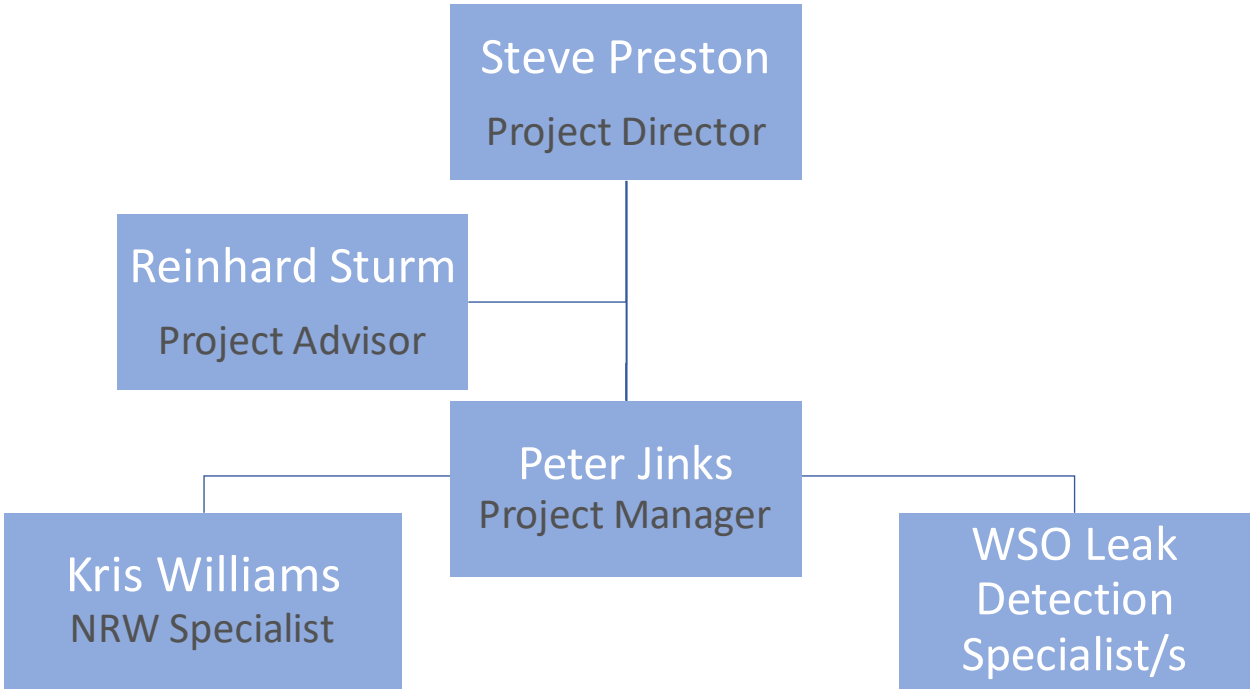
Phase 3 lump sum cost is $250,000.

WSO will submit monthly invoices based on task percentage completion.

APPENDIX A – PROJECT ORGANIZATIONAL CHART

PHASE 3:

This phase of the project will be led by Steve Preston. Reinhard Sturm will assist in a project advisory role. Peter Jinks of WSO will serve as the project manager for this phase of the project. Peter will be based in Guam for the duration of the project. Peter will be assisted by Kris Williams on data intake and management. Kris Williams will mostly work remotely but it is planned for Kris or one of WSOs Leak Detection Specialists to be on site to assist Peter Jinks during the DMA pressure data collection task.



CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

GWA RESOLUTION NO. 14–FY2020

RELATIVE TO APPROVAL OF FUND INCREASE TO THE CONSTRUCTION MANAGEMENT CONTRACT FOR THE ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT PROJECT S15-006-EPA

WHEREAS, under 12 G.C.A. § 14105, the Consolidated Commission on Utilities ("CCU") has plenary authority over financial, contractual and policy matters relative to the Guam Waterworks Authority ("GWA"); and

WHEREAS, the Guam Waterworks Authority is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA has received a grant from USEPA under the State Revolving Fund program to improve the sewer collection system, which included over 4,200 linear feet of gravity sewer line along Route 4 and Route 1, from the base of the hill near well A-23 in Agana to the Agana Main Pump Station; and

WHEREAS, the gravity sewer line noted above has a section that has been inactive since its original installation due to incomplete construction work, and sections that need repair due to high infiltration and inflow (I/I), and the intent of this project is to rehabilitate, repair or replace these sections; and

WHEREAS, in September 2018 GWA management executed two (2) separate construction contracts (Exhibit A and Exhibit B) to rehabilitate the Route 4 Relief Sewerline, the first (Exhibit A) with ProPacific Builder Corporation (PPBC), and the second (Exhibit B) with Insituform Technologies LLC (Insituform); and

WHEREAS, to provide construction management (CM) services on both construction contracts, in June 2018 GWA management entered into a contract with EMPSCO Engineering Consultants (EMPSCO) (Exhibit C) in the amount of Seven Hundred Two Thousand Six Hundred Seventy-Eight Dollars and Thirteen Cents ($702,678.13); and

WHEREAS, while both construction contractors received the Notice to Proceed by September 2018 (Exhibit D), the start of construction was delayed due to complications with obtaining approvals during the permitting process; and

WHEREAS, due to permitting delays, time restrictions enforced on construction work hours, and coordination between contractors, the estimated time to construction completion has extended to June 2020, and as such the CM services are anticipated to be required through June 2020; and

WHEREAS, GWA has negotiated with EPMSCO for a fee proposal to provide continued construction management services on both construction contracts through June 2020 on a Time and Materials basis; and

WHEREAS, GWA Management seeks CCU approval of EMPSCO's bid proposal for additional construction management services funding with a not-to-exceed amount of Two Hundred Thirty Thousand Seven Hundred Fifty-Nine Dollars and Sixty-Two Cents ($230,759.62), to bring the total authorized funding amount to Nine Hundred Thirty-Three Thousand Four Hundred Thirty-Seven Dollars and Seventy-Five Cents ($933,437.75) (Exhibit E); and

WHEREAS, funding for this project will be from the USEPA State Revolving Fund and, if necessary, GWA Bond funds with an estimated project budget Nine Hundred Thirty-Three Thousand Four Hundred Thirty-Seven Dollars and Seventy-Five Cents ($933,437.75); and

NOW BE IT THEREFORE RESOLVED, the Consolidated Commission on Utilities does hereby approve the following:

1. The recitals set forth above hereby constitute the findings of the CCU.

2. The CCU hereby approves the funding increase for construction management services of an additional not-to-exceed amount of Two Hundred Thirty Thousand Seven Hundred Fifty-Nine Dollars and Sixty-Two Cents ($230,759.62). Exhibit E.
3. The CCU hereby further approves the total funding authorization for the contract with EMPSCO to an amount not-to-exceed Nine Hundred Thirty-Three Thousand Four Hundred Thirty-Seven Dollars and Seventy-Five Cents ($933,437.75).

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY and REGULARLY ADOPTED, this 28th day of January 2020.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

MICHAEL T. LIMTIACO
Secretary

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

EXHIBIT A

AGREEMENT
BETWEEN OWNER AND CONTRACTOR
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

THIS AGREEMENT is by and between the Guam Waterworks Authority ("Owner") and ProPacific Builder Corporation ("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Work under Schedule A consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid); GWA Project No. S15-006-EPA.

ARTICLE 3 – ENGINEER

3.01 The part of the Project that pertains to the Work has been designed by AECOM.

3.02 The Owner has retained EMPSCO Engineering Consultants ("Engineer") to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Days*

A. The Work for the Base Bid contains two schedules, Schedule A and Schedule B. Contract Times will be awarded separately as indicated below under Schedule A and Schedule B. One contract will be awarded to the lowest responsive and responsible bidder for Schedule A and one contract will be awarded to the lowest responsive and responsible bidder for Schedule B. If the same contractor is the lowest responsive and responsible bidder for both Schedules A and B, one contract will be awarded for all the work under Schedules A and B.

1. For a separate contract for Schedule A, the Work for the Schedule A Base Bid will be substantially completed within __450__ days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within __480__ days after the date when the Contract Times commence to run.

B. Parts of the Work shall be substantially completed on or before the following Milestone(s):

1. Milestone 1 [event & date/days] NA
2. Milestone 2 [event & date/days] NA
3. Milestone 3 [event & date/days] NA

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner **$3,000.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **$3,000.00** for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages shall be assessed against the Contractor(s) separately for the work performed under Schedule A and the work performed under Schedule B.
4. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.
5. Milestones: Contractor shall pay Owner $___NA____ for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved.

4.04 *Special Damages*

A. In addition to the amount provided for liquidated damages, Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.

B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

A. For all Work under Schedule A - Base Bid other than Unit Price Work, a lump sum of: $Three Million Four Hundred Seven Thousand Eight Hundred Forty Eight US Dollars ($3,407,848.00).

All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

B. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item):

Unit Price Work					
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Unit Price**	**Extended Price**
Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities)					$

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

C. Total of Schedule A Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment) $3,407,848.00.

D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 15th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract

a. 90 percent of Work completed (with the balance being retainage). And

b. 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

7.01 All amounts not paid when due shall bear interest at the rate of 6 percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.

B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the

Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 8, inclusive).
2. Performance bond (pages 1 to 3, inclusive).
3. Payment bond (pages 1 to 3, inclusive).
4. Other bonds.
   a. ___ (pages ___ to ___, inclusive).
5. General Conditions (pages 1 to 65, inclusive).
6. Supplementary Conditions (pages 1 to 18, inclusive).
7. Specifications as listed in the table of contents of the Project Manual.
8. The Drawings listed on the attached sheet index.
9. Addenda (numbers 1 to 4, inclusive).
10. Exhibits to this Agreement (enumerated as follows):

a. Contractor's Bid (pages 1 to 10, inclusive).

NOTE(S) TO USER:

11. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:

    a. Notice to Proceed.

    b. Work Change Directives.

    c. Change Orders.

    d. Field Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on 9-13-18 (which is the Effective Date of the Contract).

OWNER:	CONTRACTOR:
Guam Waterworks Authority	**ProPacific Builder Corporation**
By: MIGUEL C. BORDALLO, P.E.	By: JEAN YEON YU
Title: General Manager	Title: President
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest:	Attest: Kate Tusi
Title: Legal secretary III	Title: Office Manager
Address for giving notices:	Address for giving notices:
Gloria B Nelson Public Service Building	750 Route 8
688 Route 15	Suite 202, Hanam Plaza
Mangilao Guam 96913	Barrigada, Guam 96913
	License No.: 5135
	Certificate No.: C-0518-0147
	(where applicable)

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

CERTIFIED FUNDS AVAILABLE:	APPROVED AS TO FORM:
By:	By:
GREG P. CRUZ	KELLY O. CLARK
GWA Chief Financial Officer 09/13/18	GWA General Counsel
Date: 9.13.18	Date: 9/5/18

Contract Amount: $3,407,848.00

Contingency: $ 340,784.80

Amount Certified: $3,748,632.80

Funding Source: $3,407,848.00 USEPA State Revolving Fund – Grant No. M96902617

$ 340,784.80 2016 GWA Bond WW 09-06 Wastewater Collection System/Rehabilitation Program

BID FORM

ARTICLE 1 - BID RECIPIENT

1.01 This Bid is submitted to:

Guam Waterworks Authority
Engineering Division, Room 202
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into a Contract with Buyer in the form included in the Bidding Documents to furnish the Goods and Special Services as specified or indicated in the Bidding Documents, for the prices and within the times indicated in this Bid, and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Buyer.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
Addendum No. 1	April 19, 2018
Addendum No. 2	April 26, 2018
Addendum No. 3	May 15, 2018
Addendum No. 4	May 18, 2018

B. Bidder has visited the Point of Destination and site where the Goods are to be installed or Special Services will be provided and become familiar with and is satisfied as to the observable local conditions that may affect cost, progress, or the furnishing of Goods and Special Services, if required to do so by the Bidding Documents, or if, in Bidder's judgment, any local condition may affect cost, progress, or the furnishing of Goods and Special Services.

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C. Bidder is familiar with and is satisfied as to all Laws and Regulations in effect as of the date of the Bid that may affect cost, progress, and the furnishing of Goods and Special Services.

D. Bidder has carefully studied, considered, and correlated the information known to Bidder; information commonly known to sellers of similar goods doing business in the locality of the Point of Destination and the site where the Goods will be installed or where Special Services will be provided; information and observations obtained from Bidder's visits, if any, to the Point of Destination and the site where the Goods will be installed or Special Services will be provided; and any reports and drawings identified in the Bidding Documents regarding the Point of Destination and the site where the Goods will be installed or where Special Services will be provided, with respect to the effect of such information, observations, and documents on the cost, progress, and performance of Seller's obligations under the Bidding Documents.

E. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution (if any) thereof by Engineer is acceptable to Bidder.

F. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing the Goods and Special Services for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATIONS

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Buyer, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Buyer of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Buyer, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

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4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process.

ARTICLE 5 - BASIS OF BID AND AWARD OF CONTRACTS

5.01 This contract is a multi-award contract through which more than one contract may be awarded through this solicitation. The Bid Schedule contains two schedules, Schedule A and Schedule B. Bidder will furnish the Goods and Special Services in accordance with the Contract Documents for the prices indicated under this article. The Bidder can elect to provide prices under Schedule A or Schedule B or both schedules. Bids must include all items under Schedule A or Schedule B, or both Schedule A and B. Each of Schedules A and B comprise Base Bid items and Additive Bid items. The Bidder shall provide base bid and additive bid(s) prices under each elected schedule.

Bids shall be evaluated by Schedule. Each of Schedules A and B shall be evaluated separately. The lowest responsive and responsible bidder shall be determined for each of Schedule A and Schedule B. Separate contracts will be awarded under Schedule A and Schedule B. One contract will be awarded to the lowest responsive and responsible bidder for Schedule A and one contract will be awarded to the lowest responsive and responsible bidder for Schedule B. If the same contractor is the lowest responsive and responsible bidder for both Schedules A and B, one contract for all the work under Schedules A and B will be awarded.

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	LS	$293,780.00	1	$ 293,780.00
2	Insurance and Bonds	LS	$132,201.00	1	$ 132,201.00
3	Permits	LS	$44,067.00	1	$ 44,067.00
4	12" PVC pipe, installed by open trench, including PVC pipe, fittings, warning/identification tape, cleaning, connections to manholes, adjustment existing channel and bench, testing, and all incidentals, in place complete.	LF	$1,500.00	22	$ 33,000.00
5	18" PVC pipe, installed by open trench, including PVC pipe, fittings, warning/identification tape, cleaning, connections to existing manholes, adjustment existing channel and bench, testing, and all incidentals, in place complete.	LF	$1,800.00	12	$ 21,600.00
6	30" PVC pipe, installed by open trench, including existing pipe removal, pipe, fittings, warning/identification tape, cleaning, manhole connections, testing, and all incidentals, in place complete.	LF	$2,000.00	461	$ 922,000.00
7	Unclassified Trench Excavation and Backfill, including protection of existing utilities if necessary, excavation, installation of sheet piles, cutting and removal of sheet piles, shoring, groundwater cutoff wall, dewatering and dewatering effluent disposal, muck handling and disposal, backfill, pipe bedding, CLSM, temporary erosion control measures, traffic control work, miscellaneous restoration work, and all incidentals required to complete the work.	CY	$600.00	913	$ 547,800.00
8	Precast Sewer Manhole, SMH-6901A and 493A, including reinforced concrete base, precast concrete riser and cone, flexible pipe seals and connectors, grade adjustment ring(s), frame and cover, epoxy-coating, channelized inverts, testing, CLSM, temporary erosion control measures, traffic control work, incidentals, and all necessary labor, materials and equipment, in place complete.	EA	$30,000.00	2	$ 60,000.00

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	**Description**	**Unit**	**Unit Price**	**Qty**	**Bid Amount**
9	Drop Precast Sewer Manhole, SMH-6908B, including demolition of existing SMH-10312, reinforced concrete base, precast concrete riser and cone, chimney, flexible pipe seals and connectors, grade adjustment ring(s), frame and cover, epoxy-coating, channelized inverts, testing, CLSM, temporary erosion control measures, traffic control work, incidentals, and all necessary labor, materials and equipment, in place complete.	EA	$ 30,000.00	1	$ 30,000.00
10	Rehabilitation of sewer manhole with epoxy coating, including cleaning, surface preparation, cementitious underlayment, concrete channel and bench construction, existing pipe cut & connection, plugging existing pipe, epoxy topcoat, grout injection for leak repair, traffic control work, and all incidentals, in place complete.	EA	$ 22,500.00	14	$ 315,000.00
11	Abandon existing sewer pipes including plugging and filling with CLSM, all incidentals, in place complete.	LF	$ 250.00	280	$ 70,000.00
12	Unplug 21" existing pipe, plug 15" existing SL-9650 and channel & bench reconstruction at SMH-6897	LS	$ 30,000.00	1	$ 30,000.00
13	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent asphalt concrete (AC) pavement, muck handling and disposal), electrical and standby power/pumps, monitoring, spill containment/mitigation, traffic control work, temporary erosion control measures, all related restoration work, in place complete.	LS	$ 300,000.00	1	$ 300,000.00
14	Removal of existing pavement including all necessary labor, materials and equipment, in place complete	SY	$ 50.00	2,867	$ 143,350.00

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Base Bid

Description of Work: Work consists of replacing 24" Spirolite pipe with 30" PVC pipe, installation of new 18" PVC pipe intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				SCHEDULE A – Base Bid	
Item No.	**Description**	**Unit**	**Unit Price**	**Qty**	**Bid Amount**
15	AC Pavement Resurfacing, including asphalt concrete base, cold planing, pavement transitions, prime coat, tack coat, traffic striping, miscellaneous restoration, and all necessary labor, materials and equipment, in place complete	SY	$ 150.00	2,867	$ 430,050.00
16	Pavement marking including all necessary labor, materials and equipment, in place complete	LS	$25,000.00	1	$ 25,000.00
17	As-Built drawings	LS	$10,000.00	1	$ 10,000.00
	SCHEDULE A – Base Bid (TOTAL Items 1 through 17, inclusive)				$ 3,407,848.00

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE A – Additive Bid No. 1

Description of Work: Archaeological monitoring.

				SCHEDULE A – Additive Bid No. 1	
1	Archaeological and cultural resource services to add new laydown staging areas outside of the suggested areas or outside of the area of potential effect as defined the Archaeological Monitoring and Data Recovery Plan for the project and resubmit to the Department of Parks and Recreation, Guam Historic Resources Division/State Historic Preservation Office for approval and acceptance.	LS	$ 150,000.00	1	$ 150,000.00
	SCHEDULE A - Additive Bid No. 1 (TOTAL Items 1, inclusive)				$ 150,000.00

EJCDC P-400, Suggested Bid Form for Procurement Contracts.
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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B - Additive Bid No. 2
Description of Work: Archaeological monitoring.

				SCHEDULE B – Additive Bid No. 2	
1	Archaeological and cultural resource services to add new laydown staging areas outside of the suggested areas or outside of the area of potential effect as defined the Archaeological Monitoring and Data Recovery Plan for the project and resubmit to the Department of Parks and Recreation, Guam Historic Resources Division/State Historic Preservation Office for approval and acceptance.	LS	$_____	1	$_____
			SCHEDULE B - Additive Bid No. 2 (TOTAL Items 1, inclusive)		$_____

Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of Bid Bond.

B. List of Proposed Major Suppliers;

C. Required Bidder Qualification Statement with Supporting Data.

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

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AGREEMENT
BETWEEN GUAM WATERWORKS AUTHORITY AND
INSITUFORM TECHNOLOGIES, LLC
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

THIS AGREEMENT is by and between the Guam Waterworks Authority ("Owner") and Insituform Technologies, LLC ("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Work under Schedule B consists of CIPP lining 21", 24", 30" and 36" existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation work.

ARTICLE 2 – THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid); GWA Project No. S15-006-EPA.

ARTICLE 3 – ENGINEER

3.01 The part of the Project that pertains to the Work has been designed by AECOM.

3.02 The Owner has retained EMPSCO Engineering Consultants ("Engineer") to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Days*

A. The Work for the Base Bid contains two schedules, Schedule A and Schedule B. Contract Times will be awarded separately as indicated below under Schedule A and Schedule B. One contract will be awarded to the lowest responsive and responsible bidder for Schedule A and one contract will be awarded to the lowest responsive and responsible bidder for Schedule B. If the same contractor is the lowest responsive and responsible bidder for both Schedules A and B, one contract will be awarded for all the work under Schedules A and B.

1. For a separate contract for Schedule B, the Work for the Schedule B Base Bid will be substantially completed within 450 days after the date when the Contract Times

commence to run as provided in Paragraph 4.01 of the General Conditions and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 480 days after the date when the Contract Times commence to run.

B. Parts of the Work shall be substantially completed on or before the following Milestone(s):

1. Milestone 1 [event & date/days] NA
2. Milestone 2 [event & date/days] NA
3. Milestone 3 [event & date/days] NA

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner **$3,000.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **$3,000.00** for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages shall be assessed against the Contractor(s) separately for the work performed under Schedule A and the work performed under Schedule B.
4. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.
5. Milestones: Contractor shall pay Owner $ NA for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved.

4.04 *Special Damages*

A. In addition to the amount provided for liquidated damages, Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.

B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

A. For all Work under Schedule B - Base Bid other than Unit Price Work, a lump sum of: $Three Million Nine Hundred Ninety Eight Thousand Si Hundred Eighty Eight US Dollars ($3,998,688.00).

All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

B. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item):

Unit Price Work					
Item No.	Description	Unit	Estimated Quantity	Unit Price	Extended Price
Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities)					$

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

C. Total of Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment) $$3,998,688.00..

D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 15th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract

a. 90 percent of Work completed (with the balance being retainage). And

b. 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

7.01 All amounts not paid when due shall bear interest at the rate of 6 percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.

B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the

Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 8, inclusive).
2. Performance bond (pages 1 to 3, inclusive).
3. Payment bond (pages 1 to 3, inclusive).
4. Other bonds.
   a. ___ (pages ___ to ___, inclusive).
5. General Conditions (pages 1 to 65, inclusive).
6. Supplementary Conditions (pages 1 to 18, inclusive).
7. Specifications as listed in the table of contents of the Project Manual.
8. The Drawings listed on the attached sheet index.
9. Addenda (numbers 1 to 4, inclusive).
10. Exhibits to this Agreement (enumerated as follows):

a. Contractor's Bid (pages 1 to 13, inclusive).

NOTE(S) TO USER:

11. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:

    a. Notice to Proceed.

    b. Work Change Directives.

    c. Change Orders.

    d. Field Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on 8.29.18 (which is the Effective Date of the Contract).

OWNER:	CONTRACTOR:
Guam Waterworks Authority	**Insituform Technologies, LLC**
By: MIGUEL C. BORDALLO, P.E.	By: WHITTNEY SCHULTE
Title: General Manager	Title: Contracting & Attesting Officer
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest:	Attest:
Title:	Title: Laura M. Andreaki Contracting & Attesting Officer
Address for giving notices:	Address for giving notices:
Gloria B Nelson Public Service Building	17988 Edison Avenue
688 Route 15	Chesterfield, MO 63005
Mangilao Guam 96913	
	License No.: CLB18-1402
	Certificate No.: C-0318-0016 (where applicable)

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

CERTIFIED FUNDS AVAILABLE:

By: _____

GREG P. CRUZ

GWA Chief Financial Officer

Date: 8.28.18

APPROVED AS TO FORM:

By: _____

KELLY O. CLARK

GWA General Counsel

Date: 8/2/18

Contract Amount: $3,998,688.00 08/28/18

Contingency: $ 399,868.80

Amount Certified: $4,398,556.80

Funding Source: USEPA State Revolving Fund

$1,963,124.11 - M96902615

$2,035,563.89 - M96902617

$399,868.80 - System Development Charge



INSITUFORM TECHNOLOGIES, LLC
BOARD OF MANAGERS AND OFFICERS
(Current as of May 18, 2018)

BOARD OF MANAGERS
Charles R. Gordon Member, Board of Managers
David F. Morris Member, Board of Managers

OFFICERS	
Name	Office
Frank R. Firsching	– President
David F. Morris	– Executive Vice President
Stephen Callahan	– Senior Vice President
Kenneth L. Young	– Senior Vice President and Treasurer
Mark A. Menghini	– Senior Vice President and Secretary
Dawn Landmann	– Senior Vice President – Tax
Ralph Western	– Senior Vice President – Manufacturing
Chuck Delaney	– Vice President – Operations
Daniel P. Schoenekase	– Vice President, General Counsel and Assistant Secretary
Dennis Pivin	– Vice President – Safety
Larry Mangels	– Vice President and Chief Financial Officer
April A. Greer	– Vice President and Assistant Secretary

CONTRACTING AND ATTESTING OFFICERS
Christlanda Adkins
Laura M. Andreski
Janet Hass
Jana Lause
Diane Partridge
Whittney Schulte
Ursula Youngblood

Business Address for Officers and Board of Managers:
17988 Edison Avenue
Chesterfield, MO 63005

pwc

Report of Independent Auditors

To the Management of Instituform Technologies, LLC:

We have audited the accompanying balance sheet of Instituform Technologies LLC as of December 31, 2017.

Management's Responsibility for the Balance Sheet

Management is responsible for the preparation and fair presentation of the balance sheet in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of balance sheet that is free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the balance sheet based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the balance sheet is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the balance sheet. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the balance sheet, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the balance sheet in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the balance sheet. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the accompanying balance sheet presents fairly, in all material respects, the financial position of Instituform Technologies, LLC as of December 31, 2017 in accordance with accounting principles generally accepted in the United States of America.

PricewaterhouseCoopers LLP

Saint Louis, Missouri
March 1, 2018

PricewaterhouseCoopers LLP, 800 Market Street, Suite 1900, St. Louis, MO 63101-2695
T: (314) 206 8500, F: (314) 206 8514, www.pwc.com/us

Insituform Technologies, LLC
Balance Sheet
(in thousands)

	December 31, 2017
Assets	
Current assets	
Cash and cash equivalents	$ 2,265
Receivables, net	31,385
Retainage	11,530
Costs and estimated earnings in excess of billings	20,185
Inventories	10,507
Prepaid expenses and other	2,704
Assets held for sale	-
Total current assets	78,576
Property, plant and equipment, net	40,390
Non-current assets	
Goodwill	88,527
Intangibles	2,200
Deferrred income taxes	3,358
Other long-term assets	8,824
Total non-current assets	102,909
Total assets	$ 221,875
Liabilities and stockholders' equity	
Current liabilities	
Accounts payable and accrued expenses	$ 38,341
Billings in excess of costs and estimated earnings	8,900
Current maturities of long-term debt	-
Liabilities held for sale	-
Total current liabilities	47,241
Non-current liabilities	
Deferred income taxes	6,425
Other long-term liabilities	58
Total non-current liabilities	6,483
Stockholders' equity	
Common stock	-
Additional paid-in capital	154,594
Currency translation adjustment	-
Retained earnings	13,557
Non-controlling interest	-
Total stockholders' equity	168,151
Total liabilities and stockholders' equity	$ 221,875

Insituform
Global Pipeline Protection

17988 Edison
Chesterfield, MO 63005

Tel: 636-530-8000
Fax: 636-530-8744
www.insituform.com

CERTIFICATE OF COMPLIANCE

March 8, 2018

To Whom It May Concern:

This letter certifies that Insituform tubes are manufactured in Batesville, Mississippi, USA, by Insituform Technologies, LLC and meet all relevant specifications for a cured-in-place pipe product: ASTM D 5813, ASTM F 1216, and ASTM F 1743. Insituform tubes have been manufactured in the USA since 1981.

The finished tube is manufactured using multiple layers of polyester felt, with one layer coated with Polypropylene plastic. The layers are cut/slit to the desired width and sewn concentrically to form the final tube. The coated layer is also sealed at the seam, using an extrusion or taping process. The extrusion process is used on the standard (inverted) tubes, and the taping process is used on the pull-in tubes (also known as ILS or iPlus Infusion). The standard (inverted) tubes are manufactured with the coated layer on the outside, and the pull-in tubes are manufactured with the coated layer on the inside. After wet out, the pull-in tubes are placed in a plastic wrap to contain the resin.

Felt production is achieved by a non-woven needle punch process using Polyester fiber. The finished product is tested for thickness under a specified load and for tensile strength in accordance with ASTM D 5813. The fabric tube has a minimum tensile strength of 750 psi (5 MPa) in both the longitudinal and the transverse direction. The seam strength of the tube is also tested on a regular basis and also meets or exceeds the minimum tensile strength of 750 psi (5 MPa) in both longitudinal and transverse direction. For Quality Assurance purposes, the material is also tested for weight and thickness.

All standard (inverted) tubes are run through a dye bath prior to shipment to ensure there are no leaks. Following the inspection process all tubes (except InsituMain, which are used in water lines) are printed with yard marks.

All tubes with tapers, transitions, or any change in tube diameter or thickness are produced under the same specifications, with the same materials, and meet the same material testing requirements as the standard tube.

The quality system used by Insituform Technologies, LLC is ISO 9001:2015 certified.

The end use of the Insituform tube is to rehabilitate sewer and drainage pipes to increase the life of the pipe and prevent a dig and replacement of a pipe.

Please contact us directly with any questions you may have.

Sincerely,

INSITUFORM TECHNOLOGIES, LLC

Eugene Zaltsman
Sr. Applications Engineer

Insituform
Global Pipeline Protection®

17988 Edison
Chesterfield, MO 63005

Tel: 636-530-8000
Fax: 636-530-8744
www.insituform.com

INSTALLER CERTIFICATION

Date: March 8, 2018

To Whom It May Concern:

Insituform Technologies, LLC is a vertically integrated pipeline rehabilitation company. As such, Insituform is not only the manufacturer of the cured-in-place pipeline rehabilitation system of the same name, but also offers the benefits of a full research and development department, licensed engineers on staff for design of products to suit each individual situation, and regional contracting offices that perform all field services including installation.

This letter shall serve to certify that Insituform Technologies, LLC is authorized to install Insituform products supplied by Insituform Technologies, LLC.

Sincerely,

INSITUFORM TECHNOLOGIES, LLC

Eugene Zaltsman
Sr. Applications Engineer

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
1	Mobilization and Demobilization	LS	$800,000	1	$800,000
2	Insurance and Bonds	LS	$100,000	1	$100,000
3	Permits	LS	$34,300	1	$34,300
4	Installation of cured in place pipe (CIPP) lining in existing 21" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$310.00	674	$208,940
5	Installation of cured in place pipe (CIPP) lining in existing 24" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$412.00	723	$297,876

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
6	Installation of cured in place pipe (CIPP) lining in existing 30" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$667.00	1,590	$1,060,530
7	Installation of cured in place pipe (CIPP) lining in existing 36" sewer line, including all labor, materials, supplies, equipment, tools, and incidentals for the complete installation of the liner, cleaning, wet out, preparation, leak repair, transition sections, removal and restoration of sewer manhole cone (if required for access), restoration of pavement and landscaping, removal of protruding laterals, liner termination at manholes, reworking manhole inverts and benches, testing of installed liner, Closed Circuit Television (CCTV) inspection for pre- and post- rehabilitation, traffic control work, and for all other related work.	LF	$929.00	798	$741,342
8	Sewer Flow Control, including diversion and bypass pumping plan, temporary bypass piping and pumps, pipe plugs, bypassing at sewer laterals (including locating and exposing cleanouts), temporary trenches (including pavement demolition, excavation, backfill, trench covers, temporary and permanent AC pavement, muck handling and disposal), electrical and standby power/pumps, monitoring, spill containment/mitigation, traffic control work, temporary erosion control measures, all related restoration work, in place complete.	LS	$755,700	1	$755,700

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B –Base Bid

Description of Work: CIPP lining 21", 24", 30" and 36" existing sewer pipes, providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

				Schedule B – Base Bid	
Item No.	Description	Unit	Unit Price	Qty	Bid Amount
	Schedule B – BASE BID (TOTAL Items 1 through 8, inclusive)				$3,998,688

Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)

SCHEDULE B – Additive Bid No. 1

Description of Work: CIPP part-liner or chemical grouting to control infiltration/inflow prior to CIPP lining.

				Schedule B – Additive Bid No. 1	
1	CIPP part-liner or grouting to control infiltration on the existing 21" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2330.00	70	$163,100.00
2	CIPP part-liner or grouting to control infiltration on the existing 24" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2330.00	80	$186,400.00
3	CIPP part-liner or grouting to control infiltration on the existing 30" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2960.00	160	$473,600.00
4	CIPP part-liner or grouting to control infiltration on the existing 36" sewer line, where approved by the Owner, including full compensation for all labor, materials, supplies, equipment, tools, and all incidentals for completed work.	LF	$2960	160	$473,600.00
	SCHEDULE B – Additive Bid No. 1 (TOTAL Items 1 through 4, inclusive)				$5,295,388.00

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Route 4 Relief Sewer Line Rehabilitation and Replacement (Re-Bid)					
SCHEDULE B - Additive Bid No. 2 **Description of Work:** Archaeological monitoring.					
				SCHEDULE B – Additive Bid No. 2	
1	Archaeological and cultural resource services to add new laydown staging areas outside of the suggested areas or outside of the area of potential effect as defined the Archaeological Monitoring and Data Recovery Plan for the project and resubmit to the Department of Parks and Recreation, Guam Historic Resources Division/State Historic Preservation Office for approval and acceptance.	LS	$35,000	1	$35,000
			SCHEDULE B - Additive Bid No. 2 (TOTAL Items 1, inclusive)		$5,330,388.00

Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents. Bidder also acknowledges that each unit price includes an amount considered by Bidder to be adequate to cover Bidder's overhead and profit for each separately identified item.

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the furnishing of Goods and Special Services will conform to the schedule set forth in Article 5 of the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of bidder's bond.

B. List of Proposed Major Suppliers;

C. Required Bidder Qualification Statement with Supporting Data.

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

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Insituform®
Technologies, LLC

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Chesterfield MO 63005 Fax: 636-530-8701

Local Off: 9654 Titan Court 303-791-7199
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GWA Route 4 Releif Sewer Line Rehabilitation and Replacement, Project No. S15-006-EPA

LIST OF SUBCONTRACTORS Selection for Insituform

1. CCTV/CLEARING - MOCON
2. BYPASS - MOCON
3. _____
4. _____
5. _____
6. _____

EXHIBIT C

CONSTRUCTION MANAGEMENT SERVICES
CONTRACT BETWEEN THE GUAM WATERWORKS AUTHORITY

AND EMPSCO ENGINEERING CONSULTANTS

THIS AGREEMENT is made this 1st day of June, 2018, by and between the Guam Waterworks Authority ("GWA"), whose business address is Gloria B. Nelson Public Service Building, 688 Route 15, Mangilao, Guam, 96913, and EMPSCO Engineering Consultants ("Consultant") whose business address is 2/F EMPSCO Building, 1998 Route 16, Army Drive, Dededo, Guam 96929 and whose Guam business license number (PEALS No.) is 108 for Construction Management Services.

WHEREAS, GWA intends to engage the professional services of the Consultant to provide Construction Management Services to GWA for the following project: Route 4 Relief Sewerline Rehabilitation and Replacement; GWA Project No. S15-006-EPA.

WHEREAS, the services to be rendered are of a special and temporary nature which has been determined to be in the best public interest to be performed under contract by professional personnel other than employee in the service of GWA; and

WHEREAS, the Procurement Officer has provided adequate public announcement of the need for such services through a Request for Proposals describing the type of services required and specifying the type of information and data required of each offeror and the relative importance of particular qualifications; and

WHEREAS, the Consultant has submitted a statement of qualifications and an interest in providing such services; and

WHEREAS, the award of this contract to the Consultant has been made pursuant to a written finding by the purchasing agent that the Consultant is the best qualified based upon evaluation factors set forth in the request for proposals, and the negotiations of compensation has been determined to be fair and reasonable;

WITNESSETH, GWA and the Consultant, in consideration of mutual covenants hereinafter set

forth, agree as follows:

SECTION I. PURPOSE:

To engage the professional services of the Consultant to provide Construction Management Services to GWA for the following project: Route 4 Relief Sewerline Rehabilitation and Replacement; GWA Project No. S15-006-EPA.

SECTION II. SCOPE OF SERVICES:

The Consultant agrees to accept appointment as a Consultant to the Guam Waterworks Authority providing his best efforts to the performance of duties and responsibilities as outlined in the GWA Request for Proposals No. RFP-06-ENG-2017, and the Consultant's Scope of Work and fee proposal dated March 23, 2018 (attached hereto as Exhibit A) all of which are incorporated herein by reference in their entirety and in accordance with all local and federal laws, rules, regulations and policies applicable hereto. For the purposes of this Contract, the Consultant shall be an independent Contracting Consultant.

SECTION III. CONTRACT TERM:

Subject to Section IV, the Consultant shall perform work provided in the Scope of Work after Consultant's receipt of Notice to Proceed from the Guam Waterworks Authority. The Consultant shall provide the services called for in the Scope of Work in accordance with a schedule acceptable to GWA. No extension of services will be granted, unless there will be additional work added to the Scope of Work dated March 23, 2018.

SECTION IV. CONSULTANT'S COMPENSATION FOR SERVICES:

The Guam Waterworks Authority will compensate the Consultant for all services performed pursuant to Section II, supra, in the maximum amount of Seven Hundred Two Thousand Six Hundred Seventy-Eight U.S. Dollars and Thirteen Cents ($702,678.13). This figure may be increased or decreased only after the scope of work has been substantially increased or decreased. GWA shall compensate the Consultant upon the receipt and approval of a monthly invoice for work completed. GWA reserves the right to withhold payment of part or the entire amount due to if the Consultant's performance is not in accordance with the Scope of Work or is otherwise deemed unsatisfactory by GWA. GWA will make payments within 30 days from the date GWA received the invoice and has approved the work provided

therein. GWA's Approval for work performed shall be prompt and shall not be unreasonably withheld or detained. GWA further agrees to pay 6% interest on invoices more than 60 days late under the timeframes set forth in this Section.

Final payment shall be made upon satisfactory delivery and acceptance of all services as herein specified and performed under this agreement. Prior to making the final payment, and as a condition precedent thereto, the Consultant shall execute and deliver to GWA a release, in a form approved by GWA, of claims against GWA arising under and by virtue of this Agreement.

SECTION V. CONSULTANT AGREES:

That Consultant agrees that he/she is an independent contractor and that there shall be no employee status or benefits arising from this Contract, which includes but is not limited to:

a. GWA providing any type of insurance for Consultant, Consultant's employees, Consultant's Equipment, Buildings and Vehicles, or any other type of insurance required by this contract or by law, policy or rule.

b. Participation in the Government of Guam retirement system;

c. Accumulation of vacation leave, or sick leave;

d. GWA paying any tax owed by Consultant for any reason, nor shall GWA be responsible for withholding of any taxes for Consultant or its employees.

e. Payment by GWA for travel or any other benefit afforded to GWA employees.

f. GWA making any payment to Consultant for any reason not explicitly provided for herein.

That he/she will, within thirty (30) days after any claim accrues arising out of or in connection with the contract as provided herein, give written notice to GWA and the Attorney General of Guam of such claim, and that he will not institute any suit of action against GWA in any court or tribunal in any jurisdiction based on any such claim later than one (1) year after such filing. Any action or suit on any claim shall not include any item or matter not specifically mentioned in the proof of claim above specified. It is agreed that if such action or suit is instituted proof by the Consultant of his compliance with the provisions of this paragraph shall a condition precedent to any recovery; and that this paragraph does not constitute a waiver of any applicable statutes of limitations.

SECTION VI. GOVERNMENT PROVIDED SERVICES OR EQUIPMENT:

GWA shall place at the disposal of the Consultant all available information pertinent to the

project upon which the Consultant can rely, including previous reports, survey information and any other data relative to the project. GWA will provide access to and make all provisions for the Consultant to enter upon public lands as required by the Consultant to perform his work.

SECTION VII. SCOPE OF AGREEMENT:

This agreement supersedes any and all other agreements, either oral or in writing, between the parties hereto with respect to retaining the services of the Consultant by GWA and contains all of the covenants and agreements between the parties with respect to such retainment in any manner whatsoever. Each party to this agreement acknowledges that no representation, inducements, promises or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party which are not embodied herein, and that no other agreement, statement, or promise not contained in this agreement and addenda will be effective only if it is in writing signed by the party to be charged. For the purposes of this paragraph and of the entire agreement, the signature of the General Manager (or his/her authorized designee) is the only signature that will bind GWA.

SECTION VIII. RESPONSIBILITY OF CONSULTANT:

The Consultant shall be responsible for the professional and technical accuracy of all work and materials furnished under this contract. The Consultant shall, without additional cost to GWA, correct or revise all errors or deficiencies in his/her work.

GWA review, approval, acceptance of, and payment of fees for services required under this contract, shall not be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of the Consultant's failure in performance of this contract and the Consultant shall be and remain liable to GWA for all costs of any kind which may be incurred by GWA as a result of the Consultant's negligent performance of any of the services performed under this contract, or for any intentional act which contravenes the terms and conditions of this agreement and the spirit and intent of such. Consultant also agrees that it shall secure GWA's written approval before engaging the services of any subcontractor.

SECTION IX. ASSIGNMENT OF AGREEMENT:

The Consultant may not assign this agreement, or any sum becoming due the Consultant under the provisions of this agreement, without the prior written consent of GWA.

SECTION X. GENERAL COMPLIANCE WITH LAWS:

The Consultant is required to comply with all Federal and territorial laws and ordinances applicable to the work and it is the responsibility of the Consultant to examine all necessary laws, rules, regulations and guidelines to determine its duties thereunder. Consultant shall attach a copy of their business license or an affidavit executed under penalty of perjury that indicates that Consultant is exempt under Guam law (must include legal citations proving exemption).

SECTION XI. ACCESS TO RECORDS AND OTHER REVIEW:

The Consultant, including his subcontractors, if any, shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred and to make such materials available at their respective offices at all reasonable times during the contract period and for three (3) years from the date of the final payment under the contract, for inspection by the Government of Guam. Each subcontract by Consultant pursuant to this agreement shall include a provision containing the conditions of this Section.

SECTION XII. OWNERSHIP OF DOCUMENTS:

All briefs, memoranda and other incidental Consultant work or materials furnished hereunder shall be and remain the property of GWA including all publication rights and copyright interests and may be used by GWA without any additional cost to GWA.

SECTION XIII. INDEMNITY:

Consultant agrees to save and hold harmless the CCU, GWA, its officers, agents, representatives, successors and assigns and other governmental agencies from any and all suits or actions of every nature and kind, which may be brought for or on account of any injury, death, or damage to the extent arising or growing out of the negligent acts or omissions of the Consultant, Consultant's officers, agents (including subcontractors), servants or employees under this agreement.

SECTION XIV. CHANGES:

GWA may at any time, by written order make any change in the services to be performed hereunder. If such changes cause a material increase or decrease in the costs of doing the work under this agreement, or in the time required for this performance, an equitable adjustment shall be made and the agreement shall be modified in writing accordingly to the provisions of Section XX below pertaining

to price adjustments.

SECTION XV. TERMINATION:

Section 15.1 TERMINATION FOR DEFAULT:

(1). Default. If the Consultant refuses or fails to perform any of the provisions of this contract with such diligence as will ensure its completion within the time specified in this contract, or any extension thereof, otherwise fails to timely satisfy the contract provisions, or commits any other substantial breach of this contract as determined by GWA, then GWA may notify the Consultant in writing of the delay or non-performance and if not cured in ten days or any longer time specified in writing by GWA. GWA may terminate the Consultant's right to proceed with the contract or such part of the contract as to which there has been delay or a failure to properly perform. In the event of termination in whole or in part GWA may procure similar services in a manner and upon terms deemed appropriate by GWA. The Consultant shall continue performance of the contract to the extent it is not terminated and shall be liable for excess costs incurred in procuring similar services.

(2) Consultant's Duties. Notwithstanding termination of the contract and subject to any directions from GWA, the Consultant shall take timely, reasonable, and necessary action to protect and preserve property in the possession of the Consultant in which GWA has an interest.

(3) Compensation. Payment for completed services delivered and accepted by GWA shall be at the contract price. Payment for the protection and preservation of property shall be in an amount agreed upon by the Consultant and GWA; if the parties fail to agree, GWA shall set an amount subject to the Consultant's rights under Chapter 9 (Legal and Contractual Remedies) of the Guam Procurement Regulations. GWA may withhold from amounts due the Consultant such sums as GWA deems to be necessary to protect GWA against loss because of outstanding liens or claims of former lien holders and to reimburse GWA for the excess costs incurred in procuring similar goods and services.

(4) Excuse for Nonperformance or Delayed Performance. Except with respect to defaults of sub-contractor(s) of Consultant, the Consultant shall not be in default by reason of any failure in performance of this contract in accordance with its terms (including any failure by the Consultant to make progress in the prosecution of the work hereunder which endangers such performance) if the Consultant has notified GWA within 15 days after the cause of the delay and the failure arises out of causes such as: acts of God; acts of the public enemy; acts of the government of Guam and any other governmental entity in its sovereign or contractual capacity; fires; floods; epidemics; quarantine restrictions; strikes or other labor disputes; freight embargoes; or unusually severe weather. If the

failure to perform or to make progress due to such causes similar to those set forth above, the Consultant shall not be deemed to be in default, unless the services to be furnished by the sub-contractor were reasonably obtainable from other sources in sufficient time to permit the Consultant to meet the contract requirements. Failure of the sub-contractor to perform for reasons other than cited above shall constitute a default of the Consultant unless cured by Consultant with a reasonable time. Upon request of the Consultant, GWA shall ascertain the facts and extent of such failure, and, if GWA determines that any failure to perform was occasioned by any one or more of the excusable causes, and that, but for the excusable cause, the Consultant's progress and performance would have met the terms of the contract, the delivery schedule shall be revised accordingly, subject to the rights of GWA and the government of Guam under the laws of Guam.

(5) Erroneous Termination for Default. If, after notice of termination of the Consultant's right to proceed under the provisions of this clause, it is determined for any reason that the Consultant was not in default under the provisions of this clause, or that the delay was excusable under the provisions of Paragraph (4) (Excuse for Nonperformance or Delayed Performance) of this clause, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to Subsection C, below.

(6) Additional Rights and Remedies. The rights and remedies provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

15.2 TERMINATION FOR CONVENIENCE:

(1) Termination. GWA may, when the interest of GWA so requires, terminate this contract in whole or in part, for the convenience of GWA. GWA shall give written notice of the termination to the Consultant specifying the part of the contract terminated and when termination becomes effective.

(2) Consultant's Obligations. The Consultant shall incur no further obligations in connection with the terminated work and on the dated set in the notice of termination the Consultant will stop work to the extent specified. The Consultant shall also terminate outstanding orders and subcontracts as they relate to the terminated work. The Consultant shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated work. GWA may direct the Consultant to assign the Consultant's right, title, and interest under terminated orders or subcontracts to GWA. The Consultant must still complete the work not terminated by the notice of termination and may incur obligations as are necessary to do so.

(3) Right to Work Product. Upon termination of the contract for the convenience of GWA or

for any other reason, Consultant shall transfer title and deliver to GWA all documents and reports, plans, drawings, information and other material produced by Consultant or any of its sub-contractors in connection with the performance of this contract. The Consultant shall protect and preserve property in its possession or in the possession of any of its sub-contractors in which GWA has an interest.

(4) Compensation.

(a) The Consultant shall submit a termination claim specifying the amount due because of the termination for convenience together with cost or pricing data to the extent required by 2 G.A.R. § 3118 (Cost or Pricing Data) of the Guam Procurement Regulations bearing on such claim. If the Consultant fails to file a termination claim within one year from the effective date of termination, GWA may pay the Consultant, if at all, an amount set in accordance with Subparagraph (c) of this Paragraph.

(b) GWA and the Consultant may agree to a settlement provided the Consultant has filed a termination claim supported by cost or pricing data to the extent required by 2 G.A.R. § 3118 (Cost or Pricing Data) of the Guam Procurement Regulations and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by GWA and the contract price of the work not terminated.

(c) Absent complete agreement under Subparagraph (2) of this Paragraph, GWA shall pay the Consultant the following amounts, provided payments agreed to under Subparagraph (2) shall not duplicate payments under this Subparagraph:

(i) contract prices for services accepted under the contract;

(ii) costs incurred in preparing to perform and performing the terminated portion of the work plus a fair and reasonable profit on such portion of the work (such profit shall not include anticipatory profit or consequential damages) less amounts paid or to be paid for accepted supplies or services; provided, however, that if it appears that the Consultant would have sustained a loss if the entire contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss;

(iii) costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to Subparagraph (b) of this clause;

(iv) the reasonable settlement costs of the Consultant including accounting, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the contract for the termination and settlement of subcontracts hereunder, together with reasonable

storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to the terminated portion of this contract. Attorney's fees if for any reason it files suit against the government must be paid by the Consultant. The total sum to be paid the Consultant under this Subparagraph shall not exceed the total contract price plus the reasonable settlement costs of the Consultant reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under Subparagraph (b) of this Paragraph, and the contract price of work not terminated.

(d) Cost claimed, agreed to, or established under Subparagraph (b) and (c) of this Paragraph shall be in accordance with Chapter 7 (Cost Principles) of the Guam Procurement Regulations.

SECTION XVI. SEVERABLE PROVISIONS:

If any provision of this agreement shall be deemed by a court of competent jurisdiction to be invalid, then such provision shall be deemed stricken from the agreement and the agreement shall be enforced according to its valid and subsisting terms and provisions.

SECTION XVII. GOVERNING LAW AND VENUE:

The validity of this agreement and any of its terms or provisions, as well as the rights and duties of the parties to this agreement, shall be governed by the laws of Guam.

A. All claims or controversies subject to final resolution under this Article will be submitted to mediation in accordance with the rules of the American Arbitration Association, subject to the conditions and limitations of this paragraph. This agreement to mediate is authorized under 5 GCA 5427 (b) and 2 GAR 9103 (a)(1). The parties shall each pay one-half of the mediation expenses.

B. In the event the matter or controversy is not resolved through mediation, the GWA General Manager shall, after written request by the Contractor for a final decision, issue a written decision within 30 days. A copy of the decision shall be immediately transmitted to the Contractor by a method that provides evidence of receipt.

C. Any such decision shall be final and conclusive unless the Contractor files an appeal with the Guam Office of Public Accountability within sixty (60) days of the receipt of the decision. In the event the dispute is not resolved by the OPA, the Contractor may seek redress through the Guam Government Claims Act and/or the Superior Court of Guam.

SECTION XVIII. EFFECTIVE DATE OF AGREEMENT:

This agreement shall take effect upon the date it is signed by the General Manger and the Consultant and the date of this agreement shall be the date upon which the GWA General Manager affixes his signature.

SECTION XIX. GOVERNMENT NOT LIABLE:

A. GWA assumes no liability for any accident or injury that may occur to the Consultant, his or her agents, dependents, or personal property while en route to or from Guam or during any travel mandated by the terms of this agreement.

B. GWA shall not be liable to Consultant for any work performed by the Consultant prior to the written and signed approval of this Agreement by the General Manager for GWA and the Consultant hereby expressly waives any and all claims for service performed in expectation of this agreement prior to its signature of the General Manager.

SECTION XX. PRICE ADJUSTMENTS:

Any adjustment in contract price pursuant to clauses in this contract shall be made in one or more of the following ways:

(a) by agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;

(b) by unit prices specified in the contract or subsequently agreed upon;

(c) by the costs attributable to the event or situation covered by the clause, plus appropriate profit or fee, all as specified in the contract or subsequently agreed upon;

(d) in such other manner as the parties may mutually agree; or

(e) in the absence of an agreement between the parties, by a unilateral determination by the GWA General Manager of costs attributable to the event or situation covered by the clause, plus appropriate profit or fee, all as computed by the GWA General Manager in accordance with generally accepted accounting principles and applicable sections under Chapter 7 (Cost Principles) of the Guam Procurement Regulations and subject to the provisions under Title 5, Chapter 5 of the Guam Code Annotated (Legal and Contractual Remedies).

For any request for a price adjustment, the contractor shall submit cost or pricing data for any price adjustments subject to the provisions of 2 G.A.R. § 3118 of the Guam Procurement Regulations.

SECTION XXI. WARRANTIES UNDER GUAM PROCUREMENT LAW:

A. Contractor hereby warrants that it will abide by 5 GCA Section 5630 prohibiting gratuities kickbacks and favors in relation to the solicitation and execution of this Contract;

B. Contractor hereby warrants that it has not retained any person or entity to solicit or secure this Contract, or paid a contingent fee, commission or brokerage fee as proscribed in 5 GCA Section 5631(a).

C. Contractor hereby warrants that it has not knowingly influenced a government employee to breach any of the ethical standards set forth in 5 GCA Chapter 5 Article 11 and in Chapter 11 of the Guam Procurement Regulations.

D. Contractor hereby warrants that no person, providing services on behalf of the Contractor has been convicted of a sex offense under the provisions of Chapter of Title 9 GCA or any offense as defined in Article 2 of Chapter 28, Title 9 GCA; and should any person providing services on behalf of the Contractor be convicted during the course of this Contract, such person shall be immediately removed from GWA projects and GWA will be informed of the conviction within twenty-four (24) hours.

SECTION XXII. INSURANCE:

A. Engineer shall procure and maintain insurance as set forth in Exhibit A. Engineer shall cause Owner to be listed as an additional insured on any applicable general liability insurance policy carried by Engineer.

B. Owner shall require Contractor to purchase and maintain policies of insurance covering workers' compensation, general liability, motor vehicle damage and injuries, and other insurance necessary to protect Owner's and Engineer's interests in the Project. Owner shall require Contractor to cause Engineer and its Consultants to be listed as additional insureds with respect to such liability insurance purchased and maintained by Contractor for the Project.

C. Engineer shall each deliver to Owner certificates of insurance evidencing the coverages indicated in Exhibit A. Such certificates shall be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.

D. All policies of property insurance relating to the Project, including but not limited to any builder's risk policy, shall allow for waiver of subrogation rights and contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insured thereunder or against Engineer or its Consultants. Owner and Engineer waive all rights against each other, Contractor, the Consultants, and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by any builder's risk policy and any other

property insurance relating to the Project. Owner and Engineer shall take appropriate measures in other Project-related contracts to secure waivers of rights consistent with those set forth in this paragraph.

E. All policies of insurance shall contain a provision or endorsement that the coverage afforded will not be canceled or reduced in limits by endorsement, and that renewal will not be refused, until at least 10 days prior written notice has been given to the primary insured. Upon receipt of such notice, the receiving party shall promptly forward a copy of the notice to the other party to this Agreement.

F. At any time, Owner may request that Engineer or its Consultants, at Owner's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective than those specified in Exhibit A. If so requested by Owner, and if commercially available, Engineer shall obtain and shall require its Consultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by Owner, and Exhibit A will be supplemented to incorporate these requirements.

IN WITNESS WHEREOF, the parties have entered into this agreement on the dates indicated by their respective names.

EMPSCO Engineering Consultants

By: _____
PETRONILO Q. VILLALUZ, P.E.
President

Date: 04 May 2018

Guam Waterworks Authority:

By: _____
MIGUEL C. BORDALLO, P.E.
General Manager

Date: 6-1-18

Certified Funds Available:

By: _____
for GREG P. CRUZ
GWA Chief Financial Officer

Date: 06/01/18

Approved as to Form

By: _____
KELLY O. CLARK
GWA General Counsel

Date: 5/21/18

Contract Amount: $702,678.13
Amount Certified: $702,678.13
Source of Funding USEPA SRF – Grant No. M96902617

CORPORATE OR PARTNERSHIP CERTIFICATION

AS TO AUTHORIZATION TO BIND

I, REYNALDO M.C. ARCE certify that I am the Secretary of the corporation or managing partner named as Contractor herein; that PETRONILO Q. VILLALUZ who signed this contract on behalf of the Contractor, was then President of said corporation/partnership by authority of said corporation of its governing body, and is within the scope of its corporate/partnership powers to bind said corporation/partnership to the terms and conditions of this Contract.

Signed: _____

Corporate Secretary

Date: May 17, 2018

(CORPORATE/PARTNERSHIP SEAL)

* * * * * * * END OF CONTRACT * * * * * * *

ENGINEERING MANAGEMENT & PLANNING SERVICES CORPORATION
1998 ARMY DRIVE, ROUTE 16, 2/F EMPSCO BLDG., DEDEDO, GUAM 96929 ■ PO BOX 21794 GMF, BARRIGADA, GU 96921
TEL (671) 6384716 /6385716 ■ FAX (671) 6382136

March 23, 2018

Miguel C. Bordallo, P.E.
General Manager
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

Attention: **Thomas F. Cruz, P.E.**
Chief Engineer

Subject: **Construction Management Services for**
Route 4 Relief Sewerline Rehabilitation and Replacement
GWA Project No. S15-006-EPA

Gentlemen,

We are pleased to submit our estimated fee proposal as follows for the subject based on the proposed scope of work and as specified or indicated in the RFP documents:

I. **One Contractor for Schedule A and Schedule B**
Note: No change in our negotiated fee

1) Preconstruction.....$ - 0-
2) Construction Phase..... $ 605,683.40
3) Post-Construction Phase..... $ 23,693.82
4) Misc. Expense Items.....$ 17,513.00

Total Estimated fees for Item I $646,890.22

II. **Additive fees, two different Contractors for Schedule A and Schedule B.**
Note: Schedule A & Schedule B notice to proceed (NTP) start date shall be commenced at the same time.

1) Preconstruction.....$ - 0-
2) Construction Phase..... $ 55,787.91
3) Post-Construction Phase..... $ - 0-
4) Misc. Expense Items.....$ - 0-

Total Additive fees for Item II ..... $ 55,787.91

Summary and Details of these fee estimates are attached herewith.
Estimates are based on the following:

1) Rehabilitation of sewer system in the villages of Hagatna, Along Route 4 and Route 1, from McDonald's on Route 4, to the Agana Main Sewer Pump Station on Route 1.

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TEL (671) 6384716 /6385716 ■ FAX (671) 6382136

2) Work under "Schedule A" consist of replacing of 24" Spirolite pipe with 30" PVC pipe, install new 18" PVC intertie, construction of precast concrete manholes, sewer manhole rehabilitation with epoxy coating, channel construction, disconnection and re-connection of lateral sewer pipes, abandoning existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation and replacement work.

3) Work under "Schedule B" consist of CIPP lining 21", 24", 30" and 36" existing sewer pipes and providing temporary bypass and traffic control as necessary to complete the rehabilitation work.

4) Construction phase: 450 consecutive calendar days.

5) Scope of Work (See attached SOW from RFP document) including paragraph E.3, Testing

6) Contract will be on a time and material (T&M) basis.

7) Project meetings included for this project based on 15 monthly meetings and 60 weekly meetings.

Please give us a call or contact us via email if you have questions regarding this proposal.
Thank you very much.

Sincerely,

Al Tyrone A. de Guzman, P.E.
Project Manager
EMPSCO Engineering Consultants

Attachments:
1) GWA CM Fee Summary – One Contractor for Schedule A&B
2) GWA CM Fee Breakdown cost – One Contractor for Schedule A&B
3) GWA CM Man-hour Breakdown – One Contractor for Schedule A&B
4) GWA CM Fee Summary_Additive – Two Contractor under Schedule A&B
5) GWA CM Fee Breakdown cost_Additive – Two Contractor under Schedule A&B
6) GWA CM Man-hour Breakdown_Additive – Two Contractor under Schedule A&B
7) Scope of work for RFP-09-ENG-2017

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE
REHABILITATION & REPLACEMENT
GWA PROJECT NO. S15-006-EPA

I. ONE CONTRACTOR FOR SCHED. A & SCHED. B

	PAYMENT	Lump sum	T&M	Total
A	**PRECONSTRUCTION**			
1	Selection of Design Team	$ -		$ -
2	Cost Estimating	$ -		$ -
3	Constructability Review	$ -		$ -
4	Document Review	$ -		$ -
5	Value Engineering	$ -		$ -
6	Contract Bidding	$ -		$ -
	SUBTOTAL A PRECONSTRUCTION	**$ -**	**$ -**	**$ -**
B	**CONSTRUCTION PHASE**			
	Project Controls			
1	Project Correspondence		27,158.28	$ 27,158.28
2	Submittals		25,078.88	$ 25,078.88
3	Payment Requests		31,477.28	$ 31,477.28
4	Project Meetings		38,972.00	$ 38,972.00
5	Requests for Information		25,078.88	$ 25,078.88
6	Claims and Disputes		25,078.88	$ 25,078.88
7	Project Records		26,898.08	$ 26,898.08
	subtotal	**$ -**	**$ 199,742.28**	**$ 199,742.28**
	Construction Inspection			$ -
8	Onsite Inspector		291,834.88	$ 291,834.88
9	Acceptance of Work		11,569.28	$ 11,569.28
10	Stop Work Orders			$ -
	subtotal	**$ -**	**$ 303,404.16**	**$ 303,404.16**
	Change Orders			
11	Change Order Review		13,717.12	$ 13,717.12
12	Design Change		12,539.44	$ 12,539.44
13	DCVR		12,539.44	$ 12,539.44
14	Negotiations		12,539.44	$ 12,539.44
15	Change Order Documents		14,358.64	$ 14,358.64
	subtotal	**$ -**	**$ 65,694.08**	**$ 65,694.08**
	Construction Survey			
16	Pipeline Alignments		4,842.92	$ 4,842.92
17	Elevations		4,842.92	$ 4,842.92
	subtotal	**$ -**	**$ 9,685.84**	**$ 9,685.84**
	Project Closeout			
18	Timely Completion		12,002.58	$ 12,002.58
19	Punchlist Development		6,529.38	$ 6,529.38
20	Inspections		8,625.08	$ 8,625.08
21	Training and Warranty		0.00	$ -
	subtotal	**$ -**	**$ 27,157.04**	**$ 27,157.04**
	SUBTOTAL B CONSTRUCTION PHASE	**$ -**	**$ 605,683.40**	**$ 605,683.40**
C	**POST CONSTRUCTION**			
1	Final Report		7,620.90	$ 7,620.90
2	Project Records		7,257.06	$ 7,257.06
3	Record Drawings		8,815.86	$ 8,815.86
	SUBTOTAL C POST CONSTRUCTION	**$ -**	**$ 23,693.82**	**$ 23,693.82**
D	**EXPENSE ITEM**			
1	Mailing & expediting	0.00		$ -
2	Report Reproduction		2,800.00	$ 2,800.00
3	Drawing and Construction docs Reproduction	1,000.00		$ 1,000.00
4	Photo film & development	0.00		$ -
5	Fuel		4,000.00	$ 4,000.00
6	Office Supplies	600.00		$ 600.00
7	Digital Cameras	0.00		$ -
8	Testing		8,363.00	$ 8,363.00
	POST CONSTRUCTION			
1	Mailing & expediting	0.00		$ -
2	Report Reproduction	250.00		$ 250.00
3	Record Drawing Reproduction	500.00		$ 500.00
	SUBTOTAL D EXPENSE ITEMS	**$ 2,350.00**	**$ 15,163.00**	**$ 17,513.00**
	TOTAL FEE (A+B+C+D)			**$ 646,890.22**

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT
GWA PROJECT NO. S15-006-EPA

I. ONE CONTRACTOR FOR SCHED. A & SCHED. B

	Phase Letter and Task Number	Task Description	Principal Engineer	Project Manager	Project Engineer	Project Inspector	Secretary/Clerk	CADD Operator	3- Man Survey Crew	Geo. Subcontract	Amount
		HOURLY LABOR RATES	$ 147.21	$ 147.21	$ 112.58	$ 95.27	$ 45.48	$ 57.42	$ 1,210.73		
	A	PRECONSTRUCTION									
	1	Selection of Contractor									0.00
	2	Cost Estimating									0.00
	3	Constructability Review									0.00
	4	Document Review									0.00
	5	Value Engineering									0.00
	6	Contract Bidding									0.00
		SUBTOTAL A. PRECONSTRUCTION									$ -
	B	CONSTRUCTION PHASE									
		Project Controls									
	1	Project Correspondence	8	60	120		80				27,158.28
	2	Submittals	8	40	160						25,078.88
	3	Payment Requests	8	40	160	60	15				31,477.28
	4	Project Meetings		40	160	120	80				38,972.00
	5	Requests for Information	8	40	160						25,078.88
	6	Claims and Disputes	8	40	160						25,078.88
	7	Project Records	8	40	160		40				26,898.08
		Construction Inspection									
	8	Onsite Inspector	8	40	160	2800					291,834.88
	9	Acceptance of Work	8	40	40	0					11,569.28
	10	Stop Work Orders									0.00
		Change Orders Managements									
	11	Change Order Review	8	24	80						13,717.12
	12	Design Change		24	80						12,539.44
	13	DCVR		24	80						12,539.44
	14	Negotiations		24	80						12,539.44
	15	Change Order Documents		24	80		40				14,358.64
		Construction Survey									
	16	Pipeline Alignments							4		4,842.92
	17	Elevations							4		4,842.92
		Project Closeout / Completion									
	18	Timely/Substantial Completion	8	30	40	20					12,002.58
	19	Punchlist Development	8	18	24						6,529.38
	20	Inspections	8	20	40						8,625.08
	21	Training and Warranty									
		SUBTOTAL B. CONSTRUCTION PHASE									605,683.40
	C	POST CONSTRUCTION									
	22	Final Report	2	24	24		24				7,620.90
	23	Project Records	2	24	24		16				7,257.06
	24	Record Drawings	2	24	24	24					8,815.86
		SUBTOTAL C. POST CONSTRUCTION									23,693.82
	D	EXPENSE ITEMS									
	1	Mailing & expediting									0.00
	2	Report Reproduction									2,800.00
	3	Dwg & construction docs Reproduction									1,000.00
	4	Photo film & development									
	5	Fuel									4,000.00
	6	Office Supplies									600.00
	7	Digital Cameras									
	8	Testing									8,363.00
		POST CONSTRUCTION									
	1	Mailing & expediting									0.00
	2	Report Reproduction									250.00
	3	Record Drawing Reproduction									500.00
		SUBTOTAL D. EXPENSE ITEMS									17,513.00
		TOTAL FEE (A+B+C+D)									646,890.22

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT
GWA PROJECT NO. S15-006-EPA

MAN-HOURS CALCULATION

I. ONE CONTRACTOR FOR SCHED. A & SCHED. B

450 CD per 30 CD = 15 months X 4 weeks\months = 60 weeks

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours
B. CONSTRUCTION PHASE					
Project Control					
1. Project Correspondence					
Project Engineer	60.0	wks	2	hr/wks	120.0
60.0 wks					
Project Manager	60	wks	1	hr/wks	60
60.0 wks					
Principal Engineer	1.0	ls	8	hr	8
1.0 lpsm					
Secretary/Clerk	60.0	wks	1.333	hr/wks	80.0
60.0 wks					
2. Submittals					
Project Engineer	54.0	sub	3	ave.hr/sub	162.0
54.0 submittals					
Project Manager	54.0	sub	0.75	hr/sub	41
54.0 submittals					
Principal Engineer	1.0	ls	8	hr	8
1.0 lpsm					
3. Payment Request					
Project Inspector	15.0	months	4	ave.hr/mo	60.0
15.0 months					
Project Engineer	15.0	months	10.667	hr/mo	160.0
15.0 months					
8 hrs plus review time with PM					
Project Manager	15.0	months	2.667	hr/mo	40.0
15.0 months					
Principal Engineer	1.0	ls	8	hr	8.0
1.0 lpsm					
Secretary/Clerk	15.0	months	1	hr/mo	15.0
15.0 months					
4. Project Meeting					
Project Inspector	60.0	wks	2	hr/wks	120.0
60.0 wks					

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours
Project Engineer	60.0	wks	2	hr/wks	120.0
60.0 wks	60	wks	0.6667	hr/wks	40.0
plus, 40mins prep of meeting minutes					
total manhours					160.0
Project Manager	15	months	2.6667	hr/mo	40.0
15.0 months					
Secretary/Clerk	60.0	wks	1.3333	hr/wks	80.0
60.0 wks					
prep docs related to the progress meetings					
5. Request for Information					
Project Engineer	60.0	wks	2.667	hr/wk	160.0
60.0 wks					
Project Manager	15	months	2.6667	hr/wks	40.0
15.0 months					
Principal Engineer	1.0	ls	8	hr/wks	8.0
1.0 lpsm					
6. Claims and Disputes					
Project Engineer	60.0	wks	2.667	hr/wks	160.0
60.0 wks					
Project Manager	15	months	2.6667	hr/mo	40.0
15.0 months					
Principal Engineer	1.0	ls	8	hr	8.0
1.0 lpsm					
7. Project Records					
Project Engineer	60.0	wks	2.667	hr/wks	160.0
60.0 wks					
Project Manager	15	months	2.6667	hr/mo	40.0
15.0 months					
Principal Engineer	1.0	ls	8	hr	8.0
1.0 lpsm					
Secretary/Clerk	15.0	wks	2.667	hr/mo	40.0
15.0 months					
Construction Inspection					
8. Onsite Inspector					
Project Inspector 60 wks x 6 wrkdays	360	wrkdays	8	hr/days	2880
minus holiday, 10 days holiday a yr	10	days	8	hr/days	-80
total manhours					2800
Project Engineer	40.0	visit	4	hr/visit	160.0
40.0 visit on a 15 months proj sched					
Project Manager	15	visit	2.667	hr/visit	40
15.0 visit on a 15 months proj sched					

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours
Principal Engineer					
1.0 lpsm, case basis	1	ls	8	hr	8
9. Acceptance of Work					
Project Inspector					
0	0				0
Project Engineer	15.0	visit	2.667	hr/visit	40
15.0 visit on a 15 months proj sched					
Project Manager	15.0	visit	2.667	hr/visit	40
15.0 visit on a 15 months proj sched					
Principal Engineer					
1.0 lpsm, case basis	1	ls	8	hr	8
10. Stop Work Order					
Change Order Managements					
11. Change Order Review					
Project Engineer	4.0	ch order	20	hr/co	80
4.0 change order					
incl, evaluation, negotiation and recom.					
Project Manager	4.0	ch order	6	hr/co	24
4.0 change order					
Principal Engineer					
1.0 lpsm	1	ls	8	hr	8
12. Design Change					
Project Engineer	1.0	ls	80	hr	80
1.0 lpsm					
prep changes to the Contract docs					
Project Manager	1.0	ls	24	hr	24
1.0 lpsm					
13. DCVR					
Project Engineer	1.0	ls	80	hr/co	80
1.0 lpsm					
coor. w/ doR, ammendments & solicit fee					
Project Manager	1.0	ls	24	hr/co	24
1.0 lpsm					
14. Negotiations					
Project Engineer	4.0	ch order	20	hr/co	80
4.0 prep independent cost estimate					
Project Manager	4.0	ch order	6	hr/co	24
4.0 review prep independent cost estimate					
15. Change Order Documents					
Project Engineer	4.0	ch order	20	hr/co	80
4.0 change order docs					

ITEM DESCRIPTION		Qty	Unit	Multiplier	Unit	Manhours
Project Manager		4.0	ch order	6	hr/co	24
4.0	change order docs					
Secretary / Clerk		4.0	ch order	10	hr/co	40
4.0	prep change order docs					
Project Closeout/ Completion within 30 CD						
18. Substantial/ Timely Completion						
Project Inspector		10.0	wrkdays	2	hr/days	20
10.0	wrkdays					
Project Engineer		10.0	wrkdays	4	hr/days	40
10.0	wrkdays					
Project Manager		10.0	wrkdays	3	hr/days	30
10.0	wrkdays					
Principal Engineer						
1.0	lpsm	1	ls	8	hr	8
19. Punchlist Documents						
Project Inspector		0.0				0
0.0						
Project Engineer		6.0	wrkdays	4	hr/days	24
6.0	wrkdays					
Project Manager		6.0	wrkdays	3	hr/days	18
6.0	wrkdays					
Principal Engineer						
1.0	lpsm	1	ls	8	hr	8
20. Inspection - Pre-Final, & Final						
Project Inspector		0.0				0
0.0						
Project Engineers		10.0	wrkdays	4	hr/days	40
10.0	wrkdays					
Project Manager		10.0	wrkdays	2	hr/days	20
10.0	wrkdays					
Principal Engineer						
1.0	lpsm	1	ls	8	hr	8
21. Training and Warranty						
C. POST CONSTRUCTION						
22. Final Report						
Project Engineers		1.0	report	24	hr/report	24
1.0	final report					
Project Manager		1.0	report	24	hr/report	24
1.0	final report					

ITEM DESCRIPTION			Qty	Unit	Multiplier	Unit	Manhours
	Principal Engineer		1.0	report	2	hr/report	2
	1.0	Final report					
	Secretary / Clerk		1.0	report	24	hr/report	24
	1.0	Final report					
23. Project Records							
	Project Engineers		1.0	report	24	hr/report	24
	1.0	final report					
	Project Manager		1.0	report	24	hr/report	24
	1.0	final report					
	Principal Engineer		1.0	report	2	hr/report	2
	1.0	Final report					
	Secretary / Clerk		1.0	report	16	hr/report	16
	1.0	Final report					
24. Record Drawings							
	Project Engineers		1.0	lot	24	hr	24
	1.0	As-built review and coordination w/ KTR					
	Project Manager		1.0	lot	24	hr	24
	1.0	As-built review and coordination w/ KTR					
	Principal Engineer		1.0	lot	2	hr	2
	1.0	As-built review					
	Project Inspector		1.0	lot	24	hr	24
	1.0	As-built review					

Fuel Consumption Summary:

No. of trips to Proj Site	2 trip per day	
Miles per trip	16.2 miles	from Route 16 (office) to the project site (2 vechicle)
Total no. of Miles	32.4 miles	
Miles per gallon of vehicle	12	
Total gallon	2.700	
U/C	4.12	
Calendar days	360 workdays	

Total Fuel Cost $ 4,004.64

Report Reproduction

colored sheets	40 sheets	$ 1.00	per sheet	.=	$ 40.00
B/W sheets	210 sheets	$ 0.70	per sheet	.=	$ 147.00
Total sheet per report	250 sheets				$ 187.00
$ 187.00	x	15 months		.=	$ 2,805.00

Office Supply

Tabs, Com Bind spine, CD/DVD, index card CD sleeves, etc.	1 Lpsm	x	$ 600	$ 600.00

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours
Drawing and Construction docs reproduction print of additional copy of drawings, specs, and other related docs on the project	1 Lpsm	x	$ 1,000		$ 1,000
Post Construction **Report Reproduction** print final report and addtl document related to the proj	1 Lpsm	x	$ 250		$ 250.00
Record Drawing Reproduction print As-built drawings and related documents related to the proj	1 Lpsm	x	$ 500		$ 500.00

Testing

i. concrete cylinder testing

a. Concrete collar for paved area

3 MH x $100 per cylinder sample (laboratory test) x 3 sample =	$900
3 MH x $ 60/hr (stand by time) x 1 hour =	$180
Laboratory technician = 3MH x $52/hr x 1hr =	$156

b. Controlled Low Strength material (CLSM) @ every 100 ft

5 test x $100 per cylinder sample (laboratory test) x 3 sample =	$1,500
5 test x $60 hr (stand by time) x 1 hr =	$300
Laboratory technician = 5 test x $52/hr x 1 hr =	$260

i. Total concrete cylinder testing = $3,296

iii. Grout testing

a. Rehabilitation of sewer manhole

7 MH x $50/test MH =	$350
7 MH x $60/hr (stand by time) x 1hr =	$420
Laboratory technician = 7 MH x $52/hr x 1 hr =	$364

iii. Total grout testing = $1,134

iv. Field density for compaction control

15 test x $115/test = $1,725

Field technician, per hour = 15 test x $52/hr = $780

iv. Total field density for compaction control = $2,505

v. Soil Density test and reports

a. Particle size distribution - Sieve analysis
2 test x $65 = $130

b. Maximum Dry Density - Proctor Analysis
4 test x $135 = $540

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours

c. LL, PL PI - Plasticity Limits
1 test x $205 = $205

d. Field technician= 4 test x $52/hr x 1 hr = $208
e. Senior Engineer =3 test x $115/hr x 1 hr = $345

v. Total soil density test and reports $1,428

Total Testing cost = $8,363

Notes:
All testing unit cost includes;
a. 10% - Profit, Admin Fee
b. 4.17% - Gross Receipt Tax (GRT)

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE
REHABILITATION AND REPLACEMENT
GWA PROJECT NO. S15-006-EPA

II. ADDITIVE - TWO CONTRACTORS FOR SCHED. A & SCHED. B

	PAYMENT	Lump sum	T&M	Total
A	PRECONSTRUCTION			
1	Selection of Design Team	$ -		$ -
2	Cost Estimating	$ -		$ -
3	Constructability Review	$ -		$ -
4	Document Review	$ -		$ -
5	Value Engineering	$ -		$ -
6	Contract Bidding	$ -		$ -
	SUBTOTAL A PRECONSTRUCTION	$ -	$ -	$ -
B	CONSTRUCTION PHASE			
	Project Controls			
1	Project Correspondence		0.00	$ -
2	Submittals		9,551.79	$ 9,551.79
3	Payment Requests		0.00	$ -
4	Project Meetings		19,486.00	$ 19,486.00
5	Requests for Information		0.00	$ -
6	Claims and Disputes		0.00	$ -
7	Project Records		0.00	$ -
	subtotal	$ -	$ 29,037.79	$ 29,037.79
	Construction Inspection			$ -
8	Onsite Inspector		0.00	$ -
9	Acceptance of Work		0.00	$ -
10	Stop Work Orders			$ -
	subtotal	$ -	$ -	$ -
	Change Orders			
11	Change Order Review		3,576.49	$ 3,576.49
12	Design Change		1,195.06	$ 1,195.06
13	DCVR		1,342.27	$ 1,342.27
14	Negotiations		2,078.32	$ 2,078.32
15	Change Order Documents		1,671.40	$ 1,671.40
	subtotal	$ -	$ 9,863.54	$ 9,863.54
	Construction Survey			
16	Pipeline Alignments		0.00	$ -
17	Elevations		0.00	$ -
	subtotal	$ -	$ -	$ -
	Project Closeout			
18	Timely Completion		7,690.04	$ 7,690.04
19	Punchlist Development		3,411.90	$ 3,411.90
20	Inspections		5,784.64	$ 5,784.64
21	Training and Warranty		0.00	$ -
	subtotal	$ -	$ 16,886.58	$ 16,886.58
	SUBTOTAL B CONSTRUCTION PHASE	$ -	$ 55,787.91	$ 55,787.91
C	POST CONSTRUCTION			
1	Final Report		0.00	$ -
2	Project Records		0.00	$ -
3	Record Drawings		0.00	$ -
	SUBTOTAL C POST CONSTRUCTION	$ -	$ -	$ -
D	EXPENSE ITEM			
1	Mailing & expediting	0.00		$ -
2	Report Reproduction		0.00	$ -
3	Drawing and Construction docs Reproduction	0.00		$ -
4	Photo film & development	0.00		$ -
5	Fuel		0.00	$ -
6	Office Supplies	0.00		$ -
7	Digital Cameras	0.00		$ -
8	Testing		0.00	$ -
	POST CONSTRUCTION			
1	Mailing & expediting	0.00		$ -
2	Report Reproduction	0.00		$ -
3	Record Drawing Reproduction	0.00		$ -
	SUBTOTAL D EXPENSE ITEMS	$ -	$ -	$ -
	TOTAL FEE (A+B+C+D)			$ 55,787.91

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT
GWA PROJECT NO. S15-006-EPA

II. ADDITIVE - TWO CONTRACTORS FOR SCHED. A & SCHED. B

	Phase Letter and Task Number	Task Description	Principal Engineer	Project Manager	Project Engineer	Project Inspector	Secretary/Clerk	CADD Operator	3- Man Survey Crew	Geo. Subcontract	Amount
		HOURLY LABOR RATES	$ 147.21	$ 147.21	$ 112.58	$ 95.27	$ 45.48	$ 57.42	$ 1,210.73		
	A	PRECONSTRUCTION									
	1	Selection of Contractor									0.00
	2	Cost Estimating									0.00
	3	Constructability Review									0.00
	4	Document Review									0.00
	5	Value Engineering									0.00
	6	Contract Bidding									0.00
		SUBTOTAL A. PRECONSTRUCTION									$ -
	B	CONSTRUCTION PHASE									
		Project Controls									
	1	Project Correspondence									0.00
	2	Submittals	4	15	60						9,551.79
	3	Payment Requests									0.00
	4	Project Meetings		20	80	60	40				19,486.00
	5	Requests for Information									0.00
	6	Claims and Disputes									0.00
	7	Project Records									0.00
		Construction Inspection									
	8	Onsite inspector									0.00
	9	Acceptance of Work									0.00
	10	Stop Work Orders									0.00
		Change Orders Managements									
	11	Change Order Review	3	6	20						3,576.49
	12	Design Change		2	8						1,195.06
	13	DCVR		3	8						1,342.27
	14	Negotiations		8	8						2,078.32
	15	Change Order Documents		4	8		4				1,671.40
		Construction Survey									
	16	Pipeline Alignments									0.00
	17	Elevations									0.00
		Project Closeout / Completion									
	18	Timely/Substantial Completion	4	20	20	20					7,690.04
	19	Punchlist Development	2	12	12						3,411.90
	20	Inspections	4	20	20						5,784.64
	21	Training and Warranty									
		SUBTOTAL B. CONSTRUCTION PHASE									55,787.91
	C	POST CONSTRUCTION									
	22	Final Report									0.00
	23	Project Records									0.00
	24	Record Drawings									0.00
		SUBTOTAL C. POST CONSTRUCTION									0.00
	D	EXPENSE ITEMS									
	1	Mailing & expediting									0.00
	2	Report Reproduction									0.00
	3	Dwg & construction docs Reproduction									0.00
	4	Photo film & development									
	5	Fuel									0.00
	6	Office Supplies									0.00
	7	Digital Cameras									
	8	Testing									0.00
		POST CONSTRUCTION									0.00
	1	Mailing & expediting									0.00
	2	Report Reproduction									0.00
	3	Record Drawing Reproduction									0.00
		SUBTOTAL D. EXPENSE ITEMS									0.00
		TOTAL FEE (A+B+C+D)									55,787.91

CONSTRUCTION MANAGEMENT SERVICE FOR ROUTE 4 RELIEF SEWERLINE REHABILITATION AND REPLACEMENT
GWA PROJECT NO. S15-006-EPA

MAN-HOURS CALCULATION

II. ADDITIVE - TWO CONTRACTORS FOR SCHED. A & SCHED. B

450 CD per 30 CD = 15 months X 4 weeks\ months = 60 weeks

ITEM DESCRIPTION	Qty	Unit	Multiplier	Unit	Manhours
B. CONSTRUCTION PHASE					
Project Control					
1. Submittals					
Project Engineer	20.0	sub	3	ave.hr/sub	60.0
54.0 submittals					
Project Manager	20.0	sub	0.75	hr/sub	15
54.0 submittals					
Principal Engineer	1.0	ls	4	hr	4
1.0 lpsm					
2. Project Meeting					
Project Inspector	30.0	wks	2	hr/wks	60.0
60.0 wks					
Project Engineer	30.0	wks	2	hr/wks	60.0
60.0 wks	30	wks	0.6667	hr/wks	20.0
plus, 40mins prep of meeting minutes					
total manhours					80.0
Project Manager	7.2	months	2.6667	hr/mo	19.2
15.0 months					
Secretary/Clerk	30.0	wks	1.3333	hr/wks	40.0
60.0 wks					
prep docs related to the progress meetings					
Change Order Managements					
3. Change Order Review					
Project Engineer	1.0	ch order	20	hr/co	20
4.0 change order					
incl, evaluation, negotiation and recom.					
Project Manager	1.0	ch order	6	hr/co	6
4.0 change order					
Principal Engineer					
1.0 lpsm	1	ls	3	hr	3
4. Design Change					
Project Engineer	1.0	ls	8	hr	8
1.0 lpsm					
prep changes to the Contract docs					
Project Manager	1.0	ls	2.4	hr	2
1.0 lpsm					

ITEM DESCRIPTION		Qty	Unit	Multiplier	Unit	Manhours
5. DCVR						
Project Engineer		1.0	ls	8	hr/co	8
1.0	lpsm					
	coor. w/ doR, ammendments & solicit fee					
Project Manager		1.0	ls	3	hr/co	3
1.0	lpsm					
6. Negotiations						
Project Engineer		1.0	ch order	8	hr/co	8
4.0	prep independent cost estimate					
Project Manager		1.0	ch order	8	hr/co	8
4.0	review prep independent cost estimate					
7. Change Order Documents						
Project Engineer		1.0	ch order	8	hr/co	8
4.0	change order docs					
Project Manager		1.0	ch order	4	hr/co	4
4.0	change order docs					
Secretary / Clerk		1.0	ch order	4	hr/co	4
4.0	prep change order docs					
Project Closeout/ Completion within 30 CD						
8. Substantial/ Timely Completion						
Project Inspector		10.0	wrkdays	2	hr/days	20
10.0	wrkdays					
Project Engineer		10.0	wrkdays	2	hr/days	20
10.0	wrkdays					
Project Manager		10.0	wrkdays	2	hr/days	20
10.0	wrkdays					
Principal Engineer						
1.0	lpsm	1	ls	4	hr	4
9. Punchlist Documents						
Project Inspector						
0.0						
Project Engineer		6.0	wrkdays	2	hr/days	12
6.0	wrkdays					
Project Manager		6.0	wrkdays	2	hr/days	12
6.0	wrkdays					
Principal Engineer						
1.0	lpsm	1	ls	2	hr	2
10. Inspection - Pre-Final, & Final						
Project Inspector						
0.0						
Project Engineers		10.0	wrkdays	2	hr/days	20

ITEM DESCRIPTION			Qty	Unit	Multiplier	Unit	Manhours
	10.0	wrkdays					
Project Manager			10.0	wrkdays	2	hr/days	20
	10.0	wrkdays					
Principal Engineer							
	1.0	lpsm	1	ls	4	hr	4

EXHIBIT D

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building • 688 Route 15, Mangilao, Guam 96913 • Tel. (647) 300-6036

September 20, 2018

Jean Yeon Yu
President
Propacific Builder Corporation
750 Route 8
Suite 202, Hanam Plaza
Barrigada, Guam 96913

Re: Formal Contract between GWA and Propacific Builder Corporation

Project: Route 4 Relief Sewerline Rehabilitation and Replacement (Re-Bid), Schedule A
GWA Project No. S15-006-EPA

Subject: Notice To Proceed

Hafa Adai Ms. Yu,

You are hereby notified to commence work in accordance with the enclosed approved contract dated September 13, 2018 on or before September 25, 2018 and you are to fully complete the project within 450 calendar days thereafter.

The date of completion of all work is, therefore, not later than December 19, 2019.

Sincerely,

THOMAS F. CRUZ, P.E.
Chief Engineer

Enclosure: Approved Original Contract

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged this 21st ~~September~~ day of September, 2018.

Contractor: Propacific Builder

Print Name & Title: Jean Yu, Owner

Signature:

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building • 688 Route 15, Mangilao, Guam 96913 • Tel. (647) 300-6036

August 29, 2018

Whittney Schulte
Contracting & Attesting Officer
Insituform Technologies, LLC
17988 Edison Avenue
Chesterfield, MO 63005

Re: Formal Contract between GWA and Insituform Technologies, LLC

Project: Route 4 Relief Sewerline Rehabilitation and Replacement (Re-Bid), Schedule B
GWA Project No. S15-006-EPA

Subject: Notice To Proceed

Hafa Adai Mr. Schulte,

You are hereby notified to commence work in accordance with the enclosed approved contract dated August 29, 2018 on or before September 3, 2018 and you are to fully complete the project within 480 calendar days thereafter.

The date of completion of all work is, therefore, not later than December 26, 2019.

Sincerely,

THOMAS F. CRUZ, P.E.
Chief Engineer

Enclosure: Approved Original Contract

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged this 3 day of September, 2018.

Contractor: Insituform Technologies, LLC
Print Name & Title: Whittney Schulte, Contracting & Attesting Officer
Signature: Whittney Schulte

EXHIBIT E

ENGINEERING MANAGEMENT & PLANNING SERVICES CORPORATION
1998 ARMY DRIVE, 2/F EMPSCO, DEDEDO, GU 96929 ■ PO BOX 21794 GMF, BARRIGADA GU 96921 ■ TEL (671)638-4716/5716 ■ FAX (671)638-2136

LETTER OF TRANSMITTAL

TO: **GUAM WATERWORKS AUTHORITY**
Engineering Division
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

DATE: **November 13, 2019**

ATTN: **JOHN RIEGEL, P.E.**
Project Manager

RE: **Construction Management Services for Route 4 Relief Sewer Line Rehabilitation and Replacement**
GWA Project No. S15-006-EPA

WE ARE SENDING YOU

- [ ] Attachments
- [X] Under a Separate Cover via *HAND DELIVERY*

PURPOSE OF TRANSMITTAL

- [X] For Approval
- [ ] For Information Use Only
- [ ] For Review and Comment
- [ ] As Requested

QTY	UNIT	REF NO	DESCRIPTION
1	set	Hard Copy	Signed Change Order No. 1 (Original)

REMARKS:

RECEIVED BY:

RECEIVED BY: Print: LIGAYA HERAMIL
SIGNED: Signature:
DATE: Date and Time: 11/14/19 10AM

Brown AND Caldwell

ISSUED BY: NILO O. VILLALUZ
SIGNED:
DATE: 11/13/2019

GUAM WATERWORKS AUTHORITY
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, GU 96913
Engineering Division
Phone: (671) 300-6058 Fax: (671) 647-2621

CHANGE ORDER NO. 1

Project No. & Title: Route 4 Relief Sewerline Rehabilitation and Replacement
GWA Project No. S15-006-EPA

Contractor's Name: EMPSCO Engineering Consultants Original Contract Date: June 1, 2018

TO: EMPSCO Engineering Consultants

You are directed to make changes noted below in the subject contract. The changes are accepted by:

12 Nov 2019
Petronilo Q. Villaluz, P.E.
Contractor Representative (Print Name & Title)

Signature Date

PREPARED BY: for George Watson 11/13/19
Project Engineer Date

John Riegel P.E. 11/13/19
Managing Engineer Date

RECOMMEND APPROVAL:

Thomas Cruz, P.E. Date
Chief Engineer

G.L. NO. S203.105321.520000
Contract No.: 793 OM
Vendor No.: 15587
Amount: $230,759.62

Nature of Changes:

This Change Order serves to extend the contract time by 216 days and provides for an additional cost of $230,759.62. These changes are necessary to continue providing CM services for the construction of sewer improvement facilities under two GWA construction contracts - one with PPBC, one with InsituForm. The extension of 216 days is required to extend the Construction Management (CM) Services to the end of June 2020 due to severe delays throughout the project mainly from permit requirements.
The total cost of the additional time is estimated to cost approximately $230,759.62 to cover CM services as described in Enclosure 1.

Enclosures:

1) Proposed Change Order #1 - Time Extension for Construction Management Services - Rt.4 Sewer Rehabilitation and Replacement

The changes result in the following adjustment of contract price and time:

Contract price prior to this change order			$702,678.13
Net increase from this Change Order (subject to approved terms & conditions)			$230,759.62
Current contract price including this Change Order			$933,437.75
Contract time prior to this Change Order 545 calendar days	Completion date -	11/27/2019	
Net increase resulting this Change Order 216 calendar days	Additional	216	
Current contract time including this Change Order 768 calendar days	New Completion Date -	6/30/2020	

CERTIFIED FUNDS AVAILABLE:

Taling M. Taitano
Chief Financial Officer, GWA

Date:

APPROVED:

Miguel C. Bordallo, PE
General Manager

Date:

(Name & Title)
Finance/Accounting
Date:

ENGINEERING MANAGEMENT & PLANNING SERVICES CORPORATION
1998 Army Drive Route 16, 2/F EMPSCO Bldg., Dededo, Guam 96929 • P.O. Box 21794 GMF, Barrigada, Guam 96921 • Tel No. 1.671.638.4716/5716 • Fax No. 1.671. 638.2136 • Email:empsco@guam.net

September 27, 2019

Thomas F. Cruz, P.E.
Chief Engineer
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15 Mangilao, Guam 96913

Attention: **George Watson, P.E.**
Project Manager
Brown & Caldwell

Project: **GWA Project no. S15-006-EPA, Route 4 Relief Sewer line Rehabilitation and Replacement**

Subject: **Proposed Change Order No.1 – Time Extension for Construction Management Services**

Gentlemen,

We would like to submit our fee proposal of **Two Hundred Thirty Thousand Seven Hundred Fifty-nine and 62/100 U.S. Dollars ($230,759.62)** to cover the additional time extension of 216 calendar days based on PBBC's time extension end date to June 30, 2020.
The extended CM efforts will involve to the following Project Management, Project Engineering/Inspection and Administration tasks during the additional time period:

1. Prepare and continue project correspondence, reports and inspection documentation as required to monitor project activities and foresee issues during construction.
2. Continue conduct project meetings as required for clear communication of contract requirements and adherence to schedules.
3. Track all requests for information and continue to assist GWA with the development of a response to RFIs regarding any aspect of the contract documents.
4. Notify GWA regarding any issues that arise during construction of the project that could result in claims and/or disputes.
5. Provide and ensure that the project is efficiently managed and constructed according to the terms of the contract.
6. Provide a full time competent on-site inspector to observe all activities of other Contractor on-site to ensure that the work is accomplished by the Contract documents and applicable permits.

Please give us a call or contact us via email if you have questions regarding this proposal.
Thank you very much.

Very Truly,

Al Tyrone A. de Guzman, P.E.
Project Manager
EMPSCO Engineering Consultants

Attached: Fee Proposal Breakdown

EMPSCO ENGINEERING CONSULTANTS

GUAM WATERWORKS AUTHORITY

Construction Management Services for GWA Route 4 Sewerline Rehabilitation and Replacement Project
CM Proposed Change No. 1 - 216 CD Time Extension (from Nov 27, 2019 to June 30, 2020)
October 2019

SUMMARY

ORIGINAL CONTRACT AMOUNT	$	702,678.13
PROPOSED CHANGE ORDER (CO No.1)	**$**	**230,759.62**
REVISED CONTRACT AMOUNT		

Item	Task Description	ORIGINAL CONTRACT AMOUNT	PROPOSED CHANGE ORDER (CO No. 1		
	CONSTRUCTION PHASE				
	Project Controls				
1	Project Correspondences	$ 27,158.28	$ 13,514.20		
2	Submittals	$ 34,630.67	$ -		
3	Payment requests	$ 31,477.28	$ -		
4	Project Meetings	$ 58,458.00	$ 27,280.40		
5	Request for Information	$ 25,078.88	$ 13,180.16		
6	Claims and Disputes	$ 25,078.88	$ 14,453.60		
7	Project Records	$ 26,898.08	$ 14,453.60		
	subtotal	**$ 228,780.07**	**$ 82,881.96**		
	Construction Inspection				
8	Onsite Inspections/Site Issues	$ 291,834.88	$ 137,325.86		
9	Acceptance of Work	$ 11,569.28	$ 8,451.80		
10	Stop Work Order	$ -	$ -		
	subtotal	**$ 303,404.16**	**$ 145,777.66**		
	Change Orders				
11	Change Order Review	$ 17,293.61	$ -		
12	Design Change	$ 13,734.50	$ -		
13	DCVR	$ 13,881.71	$ -		
14	Negotiations	$ 14,617.76	$ -		
15	Change Order Documents	$ 16,030.04	$ -		
	subtotal	**$ 75,557.62**	**$ -**		
	Construction Survey				
16	Pipeline Alignments	$ 4,842.92	$ -		
17	Elevations	$ 4,842.92	$ -		
	subtotal	**$ 9,685.84**	**$ -**		
	Project Close-out				
18	Timely/Substantial Completion	$ 19,692.62	$ -		
19	Punch List Development	$ 9,941.28	$ -		
20	Inspections	$ 14,409.72	$ -		
21	Training & Warranty	$ -	$ -		
	subtotal	**$ 44,043.62**	**$ -**		
	SUBTOTAL - CONSTRUCTION PHASE	**$ 661,471.31**	**$ 228,659.62**		

Construction Management Services for GWA Route 4 Sewerline Rehabilitation and Replacement Project
CM Proposed Change No. 1 - 216 CD Time Extension (from Nov 27, 2019 to June 30, 2020)
October 2019

SUMMARY

ORIGINAL CONTRACT AMOUNT	$	702,678.13
PROPOSED CHANGE ORDER (CO No.1)	**$**	**230,759.62**
REVISED CONTRACT AMOUNT		

Item	Task Description	ORIGINAL CONTRACT AMOUNT	PROPOSED CHANGE ORDER (CO No. 1		
	POST CONSTRUCTION				
1	Final Report	$ 7,620.90	$ -		
2	Project Records	$ 7,257.06	$ -		
3	Record Drawings	$ 8,815.86	$ -		
	subtotal	**$ 23,693.82**	**$ -**		
	EXPENSE ITEMS				
	CONSTRUCTION PHASE				
1	Mailing & Expediting				
2	Report Reproduction	$ 2,800.00	$ -		
3	Drawing Reproduction	$ 1,000.00	$ -		
4	Photo film dev	$ -	$ -		
5	Fuel	$ 4,000.00	$ 2,100.00		
6	Office Supplies	$ 600.00	$ -		
7	Digital Cameras	$ -	$ -		
8	Testing	$ 8,363.00	$ -		
	POST CONSTRUCTION				
1	Mailing & Expediting	$ -	$ -		
2	Report Reproduction	$ 250.00	$ -		
3	Record Drawing Reproduction	$ 500.00	$ -		
	subtotal	**$ 17,513.00**	**$ 2,100.00**		
	Grand Total	**$ 702,678.13**	**$ 230,759.62**		

Construction Management Services for GWA Route 4 Sewerline Rehabilitation and Replacement Project
CM Proposed Change No. 1 - 216 CD Time Extension

Item	Task Description	Principal Engineer	Project Manager	Project Engineer	Project Inspector	Secretary/Clerk	CADD Operator	3-man survey crew	PROPOSED CHANGE ORDER NO. 1 (From Nov. 27, 2019 up to June 30, 2020)
		$ 147.21	$ 147.21	$ 112.58	$ 95.27	$ 45.48	$ 57.42	$ 1,210.73	
	CONSTRUCTION PHASE								
	Project Controls								
1	Project Correspondences	8.00	28.00	56.00		42.00			$ 13,514.20
2	Submittals								$ -
3	Payment requests								$ -
4	Project Meetings		28.00	112.00	84.00	56.00			$ 27,280.40
5	Request for Information	8.00	28.00	70.00					$ 13,180.16
6	Claims and Disputes	8.00	28.00	70.00		28.00			$ 14,453.60
7	Project Records	8.00	28.00	70.00		28.00			$ 14,453.60
	subtotal								**$ 82,881.96**
	Construction Inspection								
8	Onsite Inspection	8.00	32.00	42.00	1,330.0				$ 137,325.86
9	Acceptance of Work	8.00	28.00	28.00					$ 8,451.80
10	Stop Work Order								$ -
	subtotal								**$ 145,777.66**
	Change Orders								
11	Change Order Review								$ -
12	Design Change								$ -
13	DCVR								$ -
14	Negotiations								$ -
15	Change Order Documents								$ -
	subtotal								**$ -**
	Construction Survey								
16	Pipeline Alignments								$ -
17	Elevations								$ -
	subtotal								**$ -**
	Project Close-out								
18	Timely Completion								$ -
19	PunchList Review & Verification								$ -
20	Inspections								$ -
21	Training & Warranty								$ -
	subtotal								**$ -**
	SUBTOTAL - CONSTRUCTION PHASE								**$ 228,659.62**
	POST CONSTRUCTION								

Item	Task Description	Principal Engineer	Project Manager	Project Engineer	Project Inspector	Secretary/Clerk	CADD Operator	3-man survey crew	PROPOSED CHANGE ORDER NO. 1 (From Nov. 27, 2019 up to June 30, 2020)
		$ 147.21	$ 147.21	$ 112.58	$ 95.27	$ 45.48	$ 57.42	$ 1,210.73	
1	Final Report								$ -
2	Project Records								$ -
3	Record Drawings								$ -
	subtotal								**$ -**
	EXPENSE ITEMS								
	CONSTRUCTION PHASE								
1	Mailing & Expediting								
2	Report Reproduction								$ -
3	Drawing Reproduction								$ -
4	Photo film dev								$ -
5	Fuel								$ 2,100.00
6	Office Supplies								$ -
7	Digital Cameras								$ -
8	Testing								$ -
	subtotal								**$ 2,100.00**
	Grand Total								**$ 230,759.62**

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649 3002 | guamccu.org

GWA RESOLUTION NO. 15-FY2020

RESOLUTION AUTHORIZING THE ISSUANCE AND SALE OF GUAM WATERWORKS AUTHORITY WATER AND WASTEWATER SYSTEM REVENUE BONDS AND/OR REFUNDING BONDS, APPROVING FORMS OF RELATED DOCUMENTS, AGREEMENTS AND ACTIONS, AND AUTHORIZING THE EXECUTION AND DELIVERY THEREOF

WHEREAS, Article 2, Chapter 14, Title 12 of the Guam Code Annotated (the "Act") authorizes Guam Waterworks Authority (the "Authority") to issue revenue bonds to raise funds for the purpose of acquiring, constructing, improving, equipping, maintaining, repairing, renewing, replacing, reconstructing or insuring the System (as that term is defined in the Act), or any part thereof, or for the purpose of redeeming or retiring any such bonds or any other prior obligations of the Authority, or for any combination of such purposes, in accordance with and subject to the requirements and limitations set forth in the Act; and

WHEREAS, this Consolidated Commission on Utilities (the "Commission") has determined that there exists a need for certain additions and improvements to the System, including certain water production, treatment and distribution projects, certain wastewater collection and treatment projects, and certain electrical projects, contained in the Authority's Capital Improvement Plan (collectively, the "Projects"), that a certain number of the Projects requiring immediate financing are for Court Order (approximately forty million dollars), potential Consent Decree (approximately thirty nine million dollars), and water loss control (approximately twelve million dollars), and has determined that it is in the public interest for the Authority to issue bonds pursuant to the Act for such purposes; and

WHEREAS, the Authority has informed this Commission that the opportunity has arisen to issue refunding bonds to redeem or otherwise retire a portion of the outstanding Guam

Waterworks Authority Water and Wastewater System Revenue Bonds, Series 2013 (the "Prior Bonds") for debt service savings; and

WHEREAS, the Authority has determined it is necessary and desirable to issue one or more series of Guam Waterworks Authority Water and Wastewater System Revenue Bonds to finance the Projects (as more particularly defined in Section 2, "New Bonds") and to redeem or otherwise retire a portion of the Prior Bonds (as more particularly defined in Section 2, "Refunding Bonds" and collectively with the New Bonds, the "Bonds"); and

WHEREAS, the Authority has previously made and entered into an Indenture dated as of December 1, 2005 (as previously supplemented and amended, the "General Indenture"), by and among the Authority, Bank of Guam, as trustee (the "Trustee") and U.S. Bank National Association, as co-trustee (the "Co-Trustee"), which authorized one or more series of Guam Waterworks Authority Water and Wastewater System Revenue Bonds; and

WHEREAS, there has been presented to this meeting the form of a seventh supplemental indenture (Exhibit A), by and among the Authority, the Trustee and the Co-Trustee (the "Supplemental Indenture" and, together with the General Indenture, the "Indenture"), pursuant to which the Authority proposes to issue the Bonds in one or more series; and

WHEREAS, the Authority previously has executed a Master Continuing Disclosure Agreement with Digital Assurance Certification, L.L.C., as dissemination agent (the "Dissemination Agent"), dated as of December 1, 2005, which authorized one or more supplemental continuing disclosure agreements to be entered into in connection with the issuance of one or more series of bonds; and

WHEREAS, there has been presented to this meeting the form of a supplemental continuing disclosure agreement (the "Continuing Disclosure Agreement") (Exhibit B), by and between the Authority and the Dissemination Agent, in connection with the Bonds; and

WHEREAS, there has been presented to this meeting the form of a bond purchase agreement (the "Bond Purchase Agreement") (Exhibit C), between the Authority and Citigroup

Global Markets Inc., as representative (the "Representative") of itself and Barclays Capital, Inc., as underwriters (together, the "Underwriters"), relating to the sale of the Bonds; and

WHEREAS, the Supplemental Indenture, the Continuing Disclosure Agreement and the Bond Purchase Agreement are collectively referred to herein as the "Bond Documents"; and

WHEREAS, there has been presented to this meeting the form of preliminary official statement of the Authority (the "Preliminary Official Statement") (Exhibit D) relating to the Bonds;

WHEREAS, the Authority has commissioned and presented to this meeting a draft of the Consulting Engineers Report (Exhibit E), pursuant to the Indenture, to support the issuance and sale of the Bonds; and"

WHEREAS, the Authority has requested or will request the Guam Economic Development Authority ("GEDA") to approve the issuance and sale of the Bonds pursuant to the Act and Section 50103(k) of Title 12, Guam Code Annotated;

WHEREAS, the Authority is authorized to request that the Public Utilities Commission of Guam (the "PUC") approve the issuance of the Bonds pursuant to the Act;

WHEREAS, in accordance with the Act, the authorization provided by this resolution to sell and issue the Bonds has been approved by *I Liheslaturan Guahan* (the "Legislature") pursuant to the terms and conditions set forth in Public Law No. 28-71, as amended by Public Law Nos. 30-145 and 32-069 (collectively, the "Legislation");

NOW, THEREFORE, BE IT RESOLVED, by Consolidated Commission on Utilities as follows:

Section 1. The foregoing recitals are true and correct.

Section 2. Issuance of one or more series of additional Bonds from time to time pursuant to the Act and the General Indenture as supplemented by the Supplemental

Indenture to be designated as "Revenue Bonds" or "Revenue Refunding Bonds" as appropriate (or as otherwise designated by the Supplemental Indenture, as finally executed) is hereby authorized (i) in an aggregate principal amount not to exceed $134,000,000 to finance the Projects, to pay costs of issuance, to pay for credit enhancement, if any, to pay for capitalized interest, and to fund a deposit to a debt service reserve fund, if any (the additional bonds authorized to be issued for such purposes, the "New Bonds"), plus (ii) with respect to the Prior Bonds, in a principal amount not to exceed a principal amount sufficient to provide funds for the redemption or retirement of such Prior Bonds, plus the related costs of issuance and of such redemption or retirement (the additional bonds authorized to be issued for such purposes, the "Refunding Bonds"). Such Bonds shall be issued in such series and amounts and at such times as the Chair of the Commission, the Vice-Chair of the Commission or the General Manager of the Authority (the "Designated Officers") deem appropriate, provided that such Bonds have a final maturity not later than 30 years from their date of issuance with respect to the New Bonds, and not later than the final maturity of the Prior Bonds with respect to the Refunding Bonds, bear interest at such rate or rates and are sold for such price or prices not exceeding any limitation established by the Legislation, and are issued and sold pursuant to the Indenture and otherwise in compliance with the provisions of the Act.

The Bonds shall be limited obligations of the Authority payable solely from revenues and other assets of the Authority pledged for such purpose and shall not be a debt or liability of the Government of Guam.

The Chair of the Commission and the appropriate officials of the Authority are hereby authorized and directed, subject to the approval of the PUC, to execute and countersign, for and on behalf and in the name of the Authority and under its seal, the Bonds, in an aggregate principal amount not to exceed the amount authorized hereby, in accordance with the Indenture.

Section 3. The form of Preliminary Official Statement presented to this meeting is hereby approved, with such additions, changes and modifications as the Designated Officers may approve upon consultation with legal counsel, such approval to be conclusively evidenced by the execution thereof or of a certificate deeming final the Preliminary Official Statement for purposes of Rule 15c2-12 of the Securities and Exchange Commission by one or more of the Designated Officers, who are each hereby authorized and directed, subject to the approval of the PUC, to execute the same and to authorize the Underwriters to distribute such Preliminary Official Statement to potential purchasers of the Bonds and other interested parties. The Designated Officers are also hereby authorized to execute and cause to be delivered a final Official Statement to purchasers of the Bonds and other interested parties, with such additions, changes and modifications from the Preliminary Official Statement as the Designated Officers may approve upon consultation with staff and legal counsel, such approval to be conclusively evidenced by the execution and delivery of the final Official Statement by one or more of the Designated Officers. The Underwriters are hereby authorized to cause the Official Statement to be delivered to the purchasers of the Bonds and to be distributed in preliminary form in connection with the marketing and sale of the Bonds.

Section 4. The Bond Documents presented to this meeting are hereby approved, with such additions, changes and modifications as the Designated Officers may approve upon consultation with legal counsel, such approval to be conclusively evidenced by the Bond Documents executed by such Designated Officers, who are each hereby severally authorized and directed, subject to the approval of the PUC, to execute the same.

Section 5. The Designated Officers are hereby authorized to approve such bond insurance, surety bond (including a surety bond which may substitute for a deposit in a bond reserve fund under the Indenture) or other supplemental security arrangements for the Bonds as are approved by the Designated Officers, and to approve any other similar agreements deemed by the Designated Officers to be necessary or appropriate in connection therewith.

Section 6. The appropriate officials of the Authority are hereby authorized and directed to do any and all things and to execute and deliver any and all documents, certificates, notices, directions, consents and agreements which they may deem necessary or advisable in order to effectuate the purposes of this resolution, including, without limitation, closing documents and certificates, including a tax certificate, an escrow agreement, amendments to any existing agreements and any documents or agreements necessary in order to obtain credit enhancement for the Bonds or the obligations of the Authority with respect thereto.

Section 7. All actions heretofore taken by the officers, representatives or agents of the Authority in connection with the issuance and sale of the Bonds are hereby ratified, confirmed and approved.

Section 8. The Bonds shall not be issued without the approval of the Guam Public Utilities Commission in accordance with the Act and Chapter 12 of Title 12, Guam Code Annotated, and shall be in all respects subject to such approval and to the terms and conditions of the approval of GEDA, and to the terms and conditions of the Legislation.

Section 9. This resolution shall take effect from and after its adoption.

RESOLVED, that the Chairman certified and the Board Secretary attests to the adoption of this Resolution.

DULY AND REGULARLY ADOPTED, this 28th day of January 2020.

Certified by:

JOSEPH T. DUENAS
Chairperson

Attested by:

MICHAEL T. LIMTIACO
Secretary

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Board Secretary of the Consolidated Commission on Utilities as evidenced by my signature above do hereby certify as follows:

The foregoing is a full, true and accurate copy of the resolution duly adopted at a regular meeting by the members of the Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

AYES: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
P.O. Box 2977 Hagatna, Guam 96932 | (671)649-3002 | guamccu.org

RESOLUTION NO. 2020-02

AUTHORIZING THE MANAGEMENT OF THE GUAM POWER AUTHORITY TO PETITION THE PUBLIC UTILITIES COMMISSION FOR THE PROCUREMENT OF A CONTRACTOR FOR THE SUPPLY OF DIESEL FUEL OIL NO.2 FOR THE TENJO VISTA POWER PLANT

WHEREAS, GPA intends to issue an Invitation for Bid (IFB) for the procurement of a contractor for the Supply of Diesel Fuel Oil No.2 for the TENJO VISTA Power Plant; and

WHEREAS, the contract for the Supply of Diesel Fuel Oil No.2 for the TENJO VISTA Power Plant shall be for a base period of three (3) years, to commence on or about June 01, 2020 through May 31, 2023, with two (2) additional one-year extension options; and

WHEREAS, the draft bid solicitation documents for the procurement of a new Diesel Fuel Oil No.2 supply contract is hereby attached as **Exhibit A**; and

WHEREAS, the total cost for the new contract is anticipated to exceed $1.5M requiring GPA to seek authorization for this procurement from the PUC; and

WHEREAS, GPA is requesting the approval of the CCU to petition the PUC for the issuance of an Invitation for Bid for the Supply of Diesel Fuel Oil No.2 for the TENJO VISTA Power Plant.

NOW THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, subject to the review and approval of the Public Utilities Commission, as follows:

1. GPA's request to solicit competitive bids for the Supply of Diesel Fuel Oil No.2 Supply for the TENJO VISTA Power Plant through a Multi-Step Bid process is reasonable, prudent and beneficial to its customers.

2. GPA is authorized to petition the Public Utilities Commission for approval to issue bids to procure a Contractor for the Supply of Diesel Fuel Oil No.2 for the TENJO VISTA Power Plant.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 28th DAY OF JANUARY 2020.

Certified by:

JOSEPH T. DUENAS
Chairperson
Consolidated Commission on Utilities

Attested by:

MICHAEL T. LIMTIACO
Secretary
Consolidated Commission on Utilities

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows: The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: 5

Nays: 0

Absent: 0

Abstain: 0

CONSOLIDATED COMMISSION ON UTILITIES
Guam Power Authority | Guam Waterworks Authority
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RESOLUTION NO. 2020-03

AUTHORIZING THE MANAGEMENT OF THE GUAM POWER AUTHORITY TO PETITION THE PUBLIC UTILITIES COMMISSION FOR THE EXTENSION OF THE EXISTING CONTRACT FOR THE MANAGEMENT, OPERATION AND MAINTENANCE OF THE GUAM POWER AUTHORITY'S FUEL BULK STORAGE FACILITY WITH ISLA PETROLEUM & ENERGY, LLC. (IP&E)

WHEREAS, the first (1st) year extension of the contract with IP&E for the Management, Operation, and Maintenance of the GPA Fuel Bulk Storage Facility under GPA-014-17 will expire on September 30, 2020;

WHEREAS, the contract does include up to three optional one-year extensions; and

WHEREAS, it would be in GPA's best interest to have a continuity of this contract to avoid complications that could occur as GPA converts the facility to ULSD for use with the new power plant and for compliance with USEPA requirements; and

WHEREAS, GPA negotiated and mutually agreed for the remaining 2 years extension of the existing contract with IP&E commencing in October 1, 2020; and

WHEREAS, the total requirement for the second (2nd) year contract extension is estimated to cost $885,108.88 and the total requirement for the third (3rd) year contract extension is estimated to cost $911,662.13 **(Exhibit A)**; and

WHEREAS, GPA has determined that the 3% annual increase in the contract fee is reasonable; and

WHEREAS, the aggregate total cost for the 2-Year base period thru the 3-Year extension period of the contract is about $4,300,400.01; and

WHEREAS, GPA is requesting for the approval of the second (2nd) and third (3rd) year extension of the contract with IP&E.

NOW THEREFORE, BE IT RESOLVED, by the Consolidated Commission on Utilities, subject to the review and approval of the Guam Public Utilities Commission, as follows:

1. The Guam Power Authority is hereby authorized to execute an agreement with IP&E for the second (2nd) and third (3rd) year extension of the contract for the Management, Operation, and Maintenance of the GPA Fuel Bulk Storage Facility commencing in October 01, 2020 and terminating in September 30, 2022.

2. The General Manager of the Guam Power Authority is hereby authorized an increase in obligating authority to the annual value of the contract over $750,000.00 and execute such agreements and documents necessary for a contract extension with IP&E.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY AND REGULARLY ADOPTED AND APPROVED THIS 28th DAY OF JANUARY 2020.

Certified by:

JOSEPH T. DUENAS
Chairperson
Consolidated Commission on Utilities

Attested by:

MICHAEL T. LIMTIACO
Secretary
Consolidated Commission on Utilities

SECRETARY'S CERTIFICATE

I, Michael T. Limtiaco, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows: The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: 5

Nays: 0

Absent: 0

Abstain: 0

CONSOLIDATED COMMISSION ON UTILITIES
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EXHIBIT A

GPA-014-17: GPA BULK FUEL FARM MANAGEMENT, OPERATION, AND MAINTENANCE CONTRACT

IP &E Contract Price	2 YEAR BASE PERIOD (MANDATORY)			3-YEAR EXTENSION OPTION				2 YEAR BASE + 3 YEAR EXTENSION OPTION
	1st Year Oct2017-Sep2018	2nd Year Oct2018-Sep2019	Total	1st Yr Extn Oct2019-Sep2020	2nd Yr Extn Oct2020-Sep2021	3rd Yr Extn Oct2021-Sep2022	Total	Over-all
Item 1	$ 516,560.00	$ 532,056.80	$ 1,048,616.80	$ 548,018.50	$ 564,459.06	$ 581,392.83	$ 1,693,870.39	$ 2,742,487.19
Item 2	$ 144,540.00	$ 148,876.20	$ 293,416.20	$ 153,342.49	$ 157,942.76	$ 162,681.04	$ 473,966.29	$ 767,382.49
Item 3	$ 35,000.00	$ 36,050.00	$ 71,050.00	$ 37,131.50	$ 38,245.45	$ 39,392.81	$ 114,769.76	$ 185,819.76
Item 4	$ 20,400.00	$ 21,012.00	$ 41,412.00	$ 21,642.36	$ 22,291.63	$ 22,960.38	$ 66,894.37	$ 108,306.37
Item 5	$ 2,500.00	$ 2,575.00	$ 5,075.00	$ 2,652.25	$ 2,731.82	$ 2,813.77	$ 8,197.84	$ 13,272.84
Item 6	$ 91,000.00	$ 93,730.00	$ 184,730.00	$ 96,541.90	$ 99,438.16	$ 102,421.30	$ 298,401.36	$ 483,131.36
TOTAL (Items 1 thru 6)	**$ 810,000.00**	**$ 834,300.00**	**$ 1,644,300.00**	**$ 859,329.00**	**$ 885,108.88**	**$ 911,662.13**	**$ 2,656,100.01**	**$ 4,300,400.01**
Variance vs. Previous year		**3%**		**3%**	**3%**	**3%**		
Contract Status	**Completed**	**Completed**		**In Progress**	**For Approval**	**For Approval**		
Aggregate Total Cost	**$ 810,000.00**	**$ 1,644,300.00**		**$ 2,503,629.00**	**$ 3,388,737.88**	**$ 4,300,400.01**		

Legend: Bid Price Proposal Parameters for Mandatory Items		Remarks:
Item 1	Management and Administration Fees (Include all expenses for staffing, office maintenance, expenses for utilities and communications, management fees and administration fees)	Fixed Cost
Item 2	Security Contractor	Fixed Cost
Item 3	Spill Response Company Membership Fees	Fixed Cost
Item 4	Insurance Fees (Volume I - 5.41A)	Fixed Cost
Item 5	Inventory - Environmental / Oil Spill Equipment *Oil Spill Response & Environmental Compliance (OPA 90, SPCC and FRP, etc.)	Fixed Cost
Item 6	Operation and Maintenance Budget	Reimbursible Cost

CONSOLIDATED COMMISSION ON UTILITIES
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RESOLUTION NO. 2020-04

Recognizing and Congratulating GPA's Recent Professional Engineers (PE); and Un Dångkulu Na Si Yu'os Ma'åse' to the Professional Engineers (PE) Who Continue to Mentor and Guide Other Prospective Engineers to Attain Professional Licensure

WHEREAS, GPA requires highly skilled professionals especially in the area of Engineering. GPA Engineers provide professional and technical engineering expertise in planning, designing and managing projects required for the upgrade and maintenance of transmission and distribution lines, substation and generation facilities and for renewable energy production. Engineers communicate effectively, oversee special projects, develop economical solutions to technical problems and improve the reliability of electricity and power grids; and

WHEREAS, GPA currently has a total of **45** Engineers throughout the organization performing electrical, civil, mechanical, and environmental/regulatory work; and

WHEREAS, of the **45** Engineers in GPA, **14** Engineers are licensed Professional Engineer (PE). According to the National Society of Professional Engineers, a Professional Engineer is an individual, who has fulfilled education and experience requirements and passed a rigorous exam that, under State licensure laws, permits them to offer engineering services directly to the public; and

WHEREAS, a Professional Engineer (PE) license matters if you work in the electric power and renewable energy industry; and

WHEREAS, only a licensed Professional Engineer, may prepare, sign, seal and submit engineering plans and drawings to any public authority for approval, or to seal engineering work for public and private clients; and

WHEREAS, the National Society of Professional Engineers best summarizes the power of the PE designation stating: "Licensure is the mark of a professional. It's a standard recognized by employers and their clients, by governments and by the public as an assurance of dedication, skill and quality." It tells the public that you have mastered the critical elements of your profession; and

WHEREAS, more and more with each passing day, government agencies, educational institutions and private industries are requiring that they hire and contract only with licensed professional engineers; and

WHEREAS, within the last 5 years, 3 GPA Engineer employees have achieved the distinct designation of Professional Engineer (P.E.), they include **Mr. Louis C. Camacho, P.E., Engineer III** with the Distribution Section of Engineering, **Mrs. Kristy C. Cuenca, Engineer III** with the Substation/Transmission section of Engineering, and **Special Projects Engineer, Mrs. Paz A. Tison** with SPORD; and

WHEREAS, there is an additional team of **11** other current professional engineers on staff at GPA who continue to mentor and guide other prospective engineers to attain professional licensure; and

WHEREAS, all of GPA's professional engineers' level of expertise contribute to the progress GPA has made and will continue to make to provide outstanding energy solutions to benefit our ratepayers and island community; and

WHEREAS, the number of GPA professional engineers is the largest concentration within the Government of Guam and is comparable with the concentration of registered professional engineers employed by the federal government and engineering firms on Guam.

NOW, THEREFORE BE IT RESOLVED BY THE CCU, AS THE GOVERNING BODY OF GPA, AS FOLLOWS:

1. Recognizes and extends a sincere **CONGRATULATIONS** to the most recent Engineers at GPA, **Mr. Louis C. Camacho, P.E., Engineer III, Mrs. Kristy C. Cuenca, P.E., Engineer III** and **Mrs. Paz A. Tison, P.E., Special Projects Engineer** for becoming a licensed Professional Engineer (PE).

2. Recognizes and extends Un Dångkulu Na Si Yu'os Ma'åse' to the licensed Professional Engineers (PE) of GPA (list attached) who continue to mentor and guide other prospective Engineers to attain Professional Licensure in service to the people of Guam.

RESOLVED, that the Chairman of the Commission certifies and the Secretary of the Commission attests the adoption of this Resolution.

DULY and REGULARY ADOPTED and APPROVED THIS 28TH DAY OF JANUARY, 2020.

Certified by:

JOSEPH T. DUENAS
Chairperson
Consolidated Commission on Utilities

Attested by:

MICHAEL T. LIMTIACO
Secretary
Consolidated Commission on Utilities

I, Michael T. Limtiaco, Secretary for the Consolidated Commission on Utilities (CCU), as evidenced by my signature above do certify as follows:

The foregoing is a full, true, and accurate copy of the resolution duly adopted at a regular meeting of the members of Guam Consolidated Commission on Utilities, duly and legally held at a place properly noticed and advertised at which meeting a quorum was present and the members who were present voted as follows:

Ayes: 5

Nays: 0

Absent: 0

Abstain: 0



GPA Business Units	Registered Professional Engineers		Total PEs
	Electrical	Mechanical	
General Manager		1	1
Engineering & Technical Services	8	3	11
Operations	2		2
GPA Total	**10**	**4**	**14**

#	Employee	Title/Organization	Discipline	Year
1	John M Benavente	General Manager	Mechanical	1980
2	John J Cruz Jr	Assistant General Manager, Engineering & Technical Services (AGMETS)	Electrical	1999
3	Jennifer G Sablan	Manager, Strategic Planning & Operations Research Division (SPORD)	Mechanical	2010
4	Roel A Cahinhinan	SPORD	Electrical	2003
5	Lorraine O Shinohara	SPORD	Electrical	2005
6	Paz Tison	SPORD	Mechanical	2020
7	Francis J Iriarte	SPORD	Mechanical	2007
8	Joven G Acosta	Manager, Engineering	Electrical	1999
9	Irwin B Loyola	Engineering	Electrical	2002
10	Vincent J Sablan	Engineering	Electrical	1999
11	Kristie Carreon Cuenca	Engineering	Electrical	2016
12	Louis C Camacho	Engineering	Electrical	2015
13	Melinda C. Mafnas	Assistant General Manager, Operations (AGMO)	Electrical	2000
14	Vince A. Pangelinan	Operations (T&D)	Electrical	1998