



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

REGULAR BOARD MEETING
CCU Conference Room, Gloria B. Nelson Public Service Building
5:30 p.m., Tuesday, November 28, 2023

***AMENDED AGENDA**

1. **CALL TO ORDER**
2. **[APPROVAL OF MINUTES](#)**
3. **PUBLIC COMMENTS** (Limit to 2 Minutes)
4. **NEW BUSINESS**
 - 4.1 [Joint Cyber Security Briefing](#)
 - 4.1.1 GPA
 - 4.1.2 GWA
5. **GWA**
 - 5.1. [GM Report](#)
 - 5.2. [Financial](#)
 - 5.3. [Resolution No. 03-FY2024 – Relative to Approval of Additional Funding for the Hagåtña Main Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project, GWA Project No. S20-002-EPA](#)
 - 5.4. [Resolution No. 04-FY2024 – Relative to Approval of Additional Funding for the Fujita Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project, GWA Project No. S20-003-EPA](#)
 - 5.5. [Resolution No. 05-FY2024 - Relative to Approval of Additional Funding for the Yigo Sewer Pump Station Flood Mitigation and Facility Rehabilitation Construction Project, GWA Project No. S18-001-BND](#)
 - 5.6. [Resolution No. 06-FY2024 – Relative to Approval of an Increase in Funding and Scope of Work for Construction Management Contract of Santa Rosa, Sinifa and Santa Rita Tank and System Upgrades](#)
6. **GPA**
 - 6.1. [GM Report](#)
 - 6.2. [Financial](#)
 - 6.3. [Resolution No. FY2024-05 – Request to Increase the Contract Expenditures for the Supply of Diesel Fuel Oil No. 2 for the GPA Water System Diesel \(WSD\) Generators](#)
 - 6.4. [Resolution No. FY2024-06 – Relative to Approving the Purchase of WSD Generators](#)
 - 6.5. [Resolution No. FY2024-08 – To Authorize the Management of Guam Power Authority to Petition the Guam Public Utilities Commission to Adjust the Levelized Energy Adjustment Clause \(LEAC\) for the Period of February 1, 2024 through July 31, 2024](#)

- 6.6. [Resolution NO. FY2024-09 – Relative to Authorizing the Increase of Contract Amount for Janitorial Services for Various Locations](#)

7. OTHER DISCUSSION

8. EXECUTIVE SESSION

- *8.1. [GWA Litigation Matter](#)

9. ANNOUNCEMENT

- 9.1. Next CCU Meetings: No New Meetings in December

10. ADJOURNMENT



CONSOLIDATED COMMISSION ON UTILITIES

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**CCU Special Board Meeting
Oath of Office Ceremony for Elected Commissioners
Simon A. Sanchez II, Francis E. Santos and Michael T. Limtiaco
CCU Conference Room, Gloria B. Nelson Public Service Building
10:00 a.m., January 12, 2023**

MINUTES

1. SALUTATIONS & GUEST INTRODUCTIONS

GWA General Manager Miguel Bordallo was the Master of Ceremonies. He welcomed and recognized Chief Justice Philip Carbullido presider and administrator of the Oath of Office to Commissioners-elect, Simon A. Sanchez II, Francis E. Santos and Michael T. Limtiaco. He welcomed all guests and dignitaries that were physically present and those who attended virtually. He welcomed GPA General Manager John Benavente who gave the welcoming remarks.

2. WELCOME REMARKS

GPA General Manager John Benavente welcomed everyone to the Special Meeting and Administration of the 11th Oath of Office for the Consolidated Commission on Utilities. He said this is the 11th Consolidated Commission on Utilities providing organizational governance for GPA and GWA as it has done since its inception which carries with it many challenges not the least of which is managing management.

3. CALL TO ORDER

Mr. Bordallo then called on Chief Justice Carbullido to administer the Oath of Office. The Chief Justice called the meeting to order. He thanked the Commissioners for inviting him to officiate the swearing it. He said the last time he was invited to do so was two (2) years ago. He asked the current CCU Commissioners to stand and be recognized – Commissioner Joseph Duenas and Commissioner Peter Roy Martinez.

4. ROLL CALL OF COMMISSIONERS-ELECT

The Chief Justice then called on the newly-elected Commissioners Simon Sanchez, Francis Santos and Michael Limtiaco to please stand. He certified that he reviewed the election certificates provided by the Guam Election Commission and all is in order.

5. ADMINISTRATION OF OATH OF OFFICE

The Chief Justice then administered the Oath of Office to all three Commissioner-elects Sanchez, Santos and Limtiaco at the same time. Chief Justice told the newly elected Commissioners they could sign their certificates and return to their chairs. Chief Justice then opened the floor for the

CCU Special Board Meeting

**Oath of Office Ceremony for Elected Commissioners Simon A. Sanchez II, Francis E. Santos and Michael T. Limtiaco
January 12, 2023**

nominations for the position of Chairperson of the CCU. The Chief Justice then recognized Comm. Simon A. Sanchez, who thanked everyone and talked about the 20-year history of the CCU.

6. ELECTION OF CHAIRPERSON

The Chief Justice then recognized Comm. Simon A. Sanchez who nominated Joseph T. Duenas as Chairman of the 11th Consolidated Commission on Utilities. The Chief Justice asked Comm. Duenas if he accepts the nomination and he responded yes. The Chief Justice asked if there were other nominations, and Commissioner Sanchez motioned to close the nominations for Chairman. Chief Justice said there was a motion to close the nominations and asked if there were any objections and there were none. The Chief Justice confirmed that there being no objections, the nominations for CCU Chairman was now closed. He said on the main motion to elect Joseph T. Duenas the Chairman for the Consolidated Commission on Utilities Board he asked for vote by show of raising their right hands. Chief Justice said since it was unanimous, Mr. Joseph T. Duenas is the Chairman. Chief Justice then said before I relinquish the podium, and ask chairman to resume business and I did this two years ago, I'm going to ask the newly elected Commissioners to please come forward so that the spouses and mother could put the lei on the newly elected members. Members can you come back up here please?

So now it is time for me to relinquish the podium and turn it over the Chairman who will take over the proceedings of the rest of this meeting.

7. ADOPTION OF STANDING RULES

The Chairman said that we need to adopt the Standing Rules first. The Standing Rules were circulated among all the members, could I have a motion to adopt the Standing Rules? Commissioner Santos, you are recognized to move. Commissioner Santos moved to accept the Standing Rules, Chairman asked if there was a second and Commissioner Martinez seconded the motion. On the motion there was no further discussion or objection and the motion passed unanimously.

8. ELECTION OF OTHER OFFICERS

Chairman Duenas then proceeded with the election of the Vice-chairperson for the CCU. The Chairman then recognized Comm. Sanchez who said he would like to nominate Commissioner Francis Santos for CCU Vice-Chairman, seconded by Commissioner Pedro Roy Martinez. Any further discussions? Any other nominations? All those in favor signify by saying aye, the vote was unanimous.

The Chairman then asked if there was a nomination of CCU Secretary and recognized Comm. Sanchez who nominated Commissioner Peter Roy Martinez for Secretary of CCU, second by Comm. Santos. Any further discussions? Any other nominations? All those in favor signify by saying aye, the vote was unanimous.

CCU Special Board Meeting

**Oath of Office Ceremony for Elected Commissioners Simon A. Sanchez II, Francis E. Santos and Michael T. Limtiaco
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9. ELECTION OF COMMITTEE CHAIRPERSONS

The Chairman then recognized Commissioner Sanchez who nominated the following separate standing committee chairpersons:

- Committee on Rules – Commissioner Michael Limtiaco
- Committee on Audit – Commissioner Michael Limtiaco
- Committee on Finance and Budget – Commissioner Francis Santos
- Committee on Physical and Cyber Security – Commissioner Pedro Roy Martinez

Chairman asked if there was a second to these nominations. Commissioner Martinez seconded. Any further discussions? All those in favor signify by saying aye, the vote was unanimous.

Chairman recognized Commissioner Martinez who nominated Commissioner Sanchez as the chair for Communications Committee. Commissioner Santos seconded the motion. Any further discussions? No further discussion, all those in favor signify by saying aye, the vote was unanimous.

10. ADJOURNMENT

The Chairman said the Agenda for this Special Meeting of the Consolidated Commission is complete and that there is no other business. Chairman then recognized Commissioner Sanchez and Commissioner Sanchez stated that there be no further business Mr. Chairman, I move that we adjourn. No further discussion? Chairman stated this meeting is now adjourned.

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ABG

Attested:

JOSEPH T. DUENAS, Chairman

PEDRO ROY MARTINEZ, Secretary



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SPECIAL BOARD MEETING
CCU Board Room, Gloria B. Nelson Public Service Building
10:30 a.m., Tuesday, October 24, 2023

MINUTES

1. CALL TO ORDER

Chairman Duenas opens CCU Special Board Meeting, October 24, 2023 at 10:40 a.m. Present in the meeting, Chairman Duenas, Commissioners Limtiaco, Sanchez, Santos, and Martinez. This special meeting is to meet with Alan Searle who has done our compensation studies in the past and continues to work with us. He will give us the results of the study for Guam Waterworks and Guam Power Authority.

Commissioners:

Joseph T. Duenas	CCU Chairman
Francis E. Santos	CCU Vice-Chairman
Pedro Roy Martinez	CCU Secretary
Michael T. Limtiaco	Commissioner
Simon Sanchez	Commissioner

Executives, Management, & Staff:

GPA

John Benavente, GM
Jennifer Sablan, AGMO
John Cruz, AGMET
John Kim, CFO
Jon-Rey Aguigui, HR
Joshua Manibusan, HR
Joyce Sayama, Communications
Sylvia Ipanag, P&R
Vladimir Navasca, IT
Lourissa Gilman, Utility Board Secretary

GWA

Miguel Bordallo, GM
Chris Budasi, AGMA
Tom Cruz, AGMO
Taling Taitano, CFO
Jeanet Owen, AGME
Therese Rojas, Legal Counsel
Michael Schniep, HR
Zina Pangilinan-Charfauros, HR
John Dixon, IT

Guests:

Alan Searle, Alan Searle & Associates
Naina Rao, KPRG (online)
David Castro, Guam Daily Post
Joe Taitano, Pacific Daily News

2. NEW BUSINESS

Alan Searle thanks the board and the utilities for giving him the opportunity to make this presentation. In preparing the presentation, it dawned on him that he has now been operating in Guam some 18 years and it goes back to 2007-2006 when he first did some work for the utilities.

He would like to take the opportunity to thank the utilities for the working relationship over the last 18 years. In between that time, some of the recent work has been with the University of Guam and the Guam Visitors Bureau. The model that was used continues to be extended around the island.

To start, what are the critical components of a compensation model? In short that are two models, Internal Equity and External Equity. What constitute a model... it's about being both internally equitable and externally competitive. We look at GovGuam, the basic percentage they have a heavy emphasis on internal equity using their job evaluation tool under the Hay Methodology and probably less on the external data. With regard to the Round Methodology, it's the other way around. I've always believed that you need to keep your finger firmly on the pulse when it comes to market data, in this case, the market data for every position within GPA and GWA. With our particular methodology, the two results there, we can bring them together by way of a regression analysis is probably the most visual result we can give. What it does, it shows clearly where both utilities are relative to the external marketplace. That one page document in of itself is worth a million dollars. It's the most valuable thing we can put on the table. With the regression analysis, we can pull that data together to generate a new pay schedule and implementation ranges for every cost option. One of the benefits of the model is that it is both structured and transparent.

Look at Internal Equity. It is a job evaluation tool. GovGuam uses its own methodology called the Hay Methodology. We use one that was developed by Price Waterhouse. In essence what it does is job evaluation is a tool whereby it endeavors to assess each individual position not the employee holding those positions, but to assess the position using a variety of factors and to arrive to an overall figure at the end of the day. In the case of our tool, we use 12 Factors as you can see on the screen. Each one of those derives a numeric value which we can add up to give a total result for the position. In the case of GPA and GWA, there are the ranges there. Essentially very similar...averages 758 for GPA and averages 768 for GWA. What these results do is just start bringing together and do the first component of that regression analysis that I spoke about. Here we have the result for GPA so along the X-axis, we've got 12 valuation points. On the Y-axis, we have US Dollars. Quickly flip over to the results for GWA, you can see they're very similar, but what's not on that graph is market data. So, this is step one to generating that full regression analysis. In terms of market data, external equity, we spent a long-time gathering data. About 3-4 months in gather data for both GPA and GWA. There are a lot of positions involved and we gather a lot of data on every position. In your handout, Appendix A on both sheets pages 1 through 10, that is the results of the market data. It is very extensive. It covers fifth market percentile through the 95th. In terms of where we gather it from, One and Two...American Power Association and American Water Works Association, fairly standard, the US Bureau of Labor Statistics, US Department of Labor, Federal Government, etcetera, etcetera, etcetera. We also have third party providers that we gather a variety of sources in which we gather data from. So, it's a sort of a reciprocal exchange of data. In some cases, that's just the way the market is. The results that you see, I said pages One through 10, it represents the market percentile, the fifth through the 95th for every position within the utilities. I will also point out to the CCU that it also includes unclassified positions. In terms of looking at what the market is paying for those unclassified positions, please refer to that document. It will give you a guide. The 50th Market Percentile, is the market average.

Let's come back to the regression analysis, the following print out excludes the GMs, but includes data from the fifth right through the 95th 2022 Market Data they're an exponential regression line. Look at GPA for a start, the red line represents GPA. It's considered an average line through the data spots. The spots are a point for every employee. The dash lines are what the market is paying.

So, you got the fifth market percentile, the 25th, and the 50th. So, the 50th market percentile once again is the market average within the United States utilities. Essentially, the graph is showing that GPA right now approximates the fifth market percentile against utilities in the United States. It means 95% of the market in the United States are paying more than GPA. It's a bit of a hard hit, that one. That's what is showing. If you look at GWA, essentially it is a similar result. Basically, equate both utilities at being at the fifth market percentile. Comm. Sanchez replies, so Alan, that sort of where we were 17 years ago...fifth. Then we thought we were moving up the ladder to the 25th the last time I saw your presentation. But now, as the rest of the market has adjusted what they're paying people, we've fallen back to the fifth? Searle points out that's a very good point. In fact, in the very next slide, what I want to do is explain seven reasons as to why you are where you are at the moment. So, we'll discuss the seven factors and then I'll present the results of the costing to you.

Let's look at number one, I cannot over emphasize the importance of conducting regular market reviews. It's the backbone of the work with do. I used to say conduct one every three years, but bring that back down to conduct one every two years. Whether we do it or the HR in their respective utilities do it, at the end of the it needs to be done. The results when talking about the market review is pages one through 10. The basic premise is you cannot make strategic decisions on pay, unless you know the true market position. A little note on GovGuam's 22% increase...I suspect they would have struggled to do that. Why, step one, our models are different in terms of methodology. GovGuam is not monitoring every position within GovGuam in term of what the market is paying. We are for GPA and GWA. In terms of calculating the 22%, I did a little research as to how it was calculated. Essentially, they divided all the positions under the general pay plan into 12 categories. They assessed the average salaries of those positions within these categories then they compared them to GPA, GPA, the airport and the port in terms of comparable positions and the variance identified. They then went about using the same 12 categories in looking up the bureau stats in the states says about in terms about the average market position. They got two averages and looked at the variance of that, applied a weighting and came up with 22%. A little bit different. I think they would have found it difficult. You have to monitor the market to get yield results. For those interested, we did an analysis, the two black lines is the 50th and the 25th of what the utilities market is at the moment. The blue lines at the bottom are the 25th and 50th from the new adjusted pay schedule from GovGuam. What I want to show is the little bit of gap there. I'm thinking DOA's submission to GovGuam, to the government, they also make a note there that the 22% is going to fall short. I think that what they are doing is trying to become more competitive, it is very good and it is obviously where they need to start their growth. Unless you can clearly say where DOE is in the market or any other entity within GovGuam, unless you can clearly say where you are in the marketplace, it becomes a very difficult exercise. Just one last comment of 22%, it was across the board, it's a bit of a danger in doing that. Obviously, mainly people live on very high wages that may be outside of the market who get 22% as opposed to someone down at the bottom. It's not the best way in terms of handling it. Nonetheless, it's a step in the right directions of being externally competitive.

Inflation, the current rate of inflation is the highest in 40 years in 2022. Look at the graph, in 2022 it got up to 8%...the highest in 40 years. If you look at the last review done in 2017, it was obviously a lot more stable. In 2022, it jumped to 8% as of Sept 2023, it's come down to 3.7%. Why is it high? I'm not sure. It could be related to the COVID events in terms of the industry's response. But it is very high, it has had an impact in salaries and in terms of it starting to creep up. People are getting a bit cautious...trying to attracts and retain their employees.

Industry Salary Trends, national salary growth within the US is approximately 3% annually. Over the last few years within the utilities industry, this has exceeded the 3%. The last market review in 2017, fairly stable 2.6% then it started to increase. These particular reasons will have an effect that is pushing up salaries at the moment. People's response, you read about it every day, people are having difficulty getting their employees to come back into the office. I read about Amazon giving their management the authority to fire people if they don't come into the office for a least three days a week. Generally, salaries do sort of track the same as inflation, but we're not expecting an 8% increase. It has peaked a come back to 3.7%. But nonetheless, there is a trend for the utility's salaries in the last few years to increase.

Methodology, for each cost option, we're looking at costing of moving from the 15th percentile or 20th percentile, etc. for each cost option, we've identified implementation range. For example, Line Electrician II, this was basically the 15th market percentile we have an implementation range, very simply, we have a range minimum value and a range maximum value. The difference between these is five sub steps or five percent. Historically, as a comparator, we've have used the range minimum value. What I mean as a comparator, once we calculate and identified this value, we compare this value to all the Line Electrician 2s is the base salary above or below that figure that how we do that costing. One problem and part of this is that the maximum value the maximum range is actually where the true 15th market percentile is. So, we're costing at the 15th that is actually the true comparator, but we come back five sub steps. This we have done historically. Several times over the year since 2008, we have used this little buffer in between to allow for the inclusion of employee performance data. Whereby, we've collected the last three performance reviews on file. We've calculated those that have been performing extremely well where we're able to slot further up the chart. It's been a valuable tool, but we've moved away from it now. As a result of that, because we've been using this figure here which is 5% lower than the True Value. We look at the two reviews that were conducted in 2017 and 2020, it's probably GPA and GWA migrated to the 10th in 2017 into the 15th in 2020. Once again, that'll help explain why you might be thinking that you're going higher is it has been a little bit less than that. Moving forward, I won't be going into too much detail, but essentially that range maximum value is going to come down here so we'll still identify our implementation ranges. For those that do in HR, the range of minimum value will be the true value I would put the model that is based on.

Competitive Recruitment, recruitment on island particularly for specific positions is becoming very very competitive. Particularly, Engineers at the moment, but will extend out to IT, Skater technical positions. This is just some details from Naval Facilities Guam. Catch Catchy phrase, show me the money, trying to hit you these percentages here are a percentage of base salary. So, you get your base salary for hires from the US, extra 12% for COLA, 15% of locality fee, 12.38% foreign post differential. Either way, they're padding it up and it does look quite if you're an engineer in the states and possibly looking to come here. It doesn't seem to be consistent in terms if you look at the results from Naval facilities, it does vary between position that are endeavoring to recruit for, but particularly with Engineers, it's becoming very competitive. I am aware that both GPA and GWA has lost engineers recently. Once again, in part that's reflective of where you are in the market, but we obviously need to be competitive in that area. I just want to make a point on COLA here, COLA sort of raises the head a little bit when inflation's high. Obviously, it's a response that employers can give COLA allowance in time are tough invariably COLA is given as a percentage of base salary. I've always wrestled with it myself in terms of the percentage. Obviously, someone earning a lot of money, is a very good percentage. Someone on low wages gets a small amount of COLA. At the end of the day, a loaf of bread is a loaf of bread. In terms of what you're paying for those good and services. I think the way we do it in terms of our model, we have our regression line and whether you're above or below, the focus is on those that are

below, those that are in need that are vulnerable in the marketplace do get that benefit of going to a higher market percentile.

How do we counter this problematic recruitment? Obviously, you said migrating to higher market percentile is one option and that's what this review is about, but you also have a couple other options that are at your fingertips. Those for both John and Miguel, Above Step Recruitment and migrating selected positional groups.

Above Step Recruitment, we need to review the terminology of the wording on this, but the tools do exist for you to do that. I remember years ago, John, I think you were having trouble with a generation manager, it's just those types of things. Miguel, you're looking for a chief engineer, certainly look at the market data and all the position there and how much you need to go further up the line in terms of making it attractive. Once again, you may just need to review the verbiage on that, but again that's a tool that you should use more than perhaps have done in the past.

The other option is what we just called Migrating Selected Positional Groups. It's here where you have a group that is exposed to attraction or attention...you got heavy recruitment and we can move that group above the rest. For example, we look at this just take a plot of the engineering as it is in GPA, so this is just engineering as a group. Probable similar 5% down the bottom start to increase a little bit down here. I would still say at the end of the day, you're not very competitive as a group when it comes to engineering. If you look at GWA, line B, different here. Miguel, I think it clearly show in your absence of your chief engineer, it's not there, but I think what it shows is that your next senior supervisor engineer P.E.s, you're paying well, you're trying to look after them which is obviously where you want to be, you want to keep them. What both of you have got in terms of a tool, that you can move engineering as a group or IT, what could be a higher market percentile than the rest. We'll talk later on about moving utilities to a certain market percentile, but even with that, you could elect to go a higher market percentile for a particular group. For this particular example, the rate the utilities at the 20th, we could have engineering at the 30th. The option is there to do this and I would certainly suggest you seriously look at doing that. Looking at the situation, with regarding Engineers, that's getting extremely competitive.

Rewarding Qualification, is a very important. Both utilities are vulnerable to the dynamics of a changing workforce at the moment. You've got a lot of older employees that are retiring, but unwilling to learn and acquire new skills, but that probably is the case for a lot of situations. You've got the older population, but we also want to look to retain those that are moving up through the ranks and obviously for them to obtain new skills as moving forward. How can we do that? One of the challenges is to identify the specific qualifications of those CTP positions. A lot of it gets lost in translation. People can get employment in a role here on Guam by not necessarily having the formal qualifications, but you can take that position through your experience and skills, etc., etc. I can relate to that, but you as the employer what you want to do is that you want that employee to gain and achieve the particular qualifications that are relevant to the position. How can we do that? This is one option I will put on the table; you have a differential if we just take your engineer supervisor, yes, we can still have our implementation range. For example, at the 15th market percentile the range minimum would be the 15th market percentile, but have a differential. In this particular example, the differential was actually in sub steps up to here. So, if someone does have a PE qualification, professional engineer qualification, you can put them on there. I'll mention this as a differential because what's important is when we migrate to a higher market percentile, it's important to retain that differential. So, you can go for that 15th to the 20th and there still be that 10 points, 10 sub step differential. There are different ways you can do it, you could for smaller,

less critical qualifications, but still important, you can have it go up 8 sub steps. The beauty of the pay schedule and having sub steps allows for that sort of tool to be introduced.

Lastly, Target Market Percentile, we've been talking about moving to the 10, 20, 30th and 40th, but what is the target at the end of the day? It makes sense that it should be the 50th market percentile. That's the market average within the United States and as a target, I think you want to be there. Once you get more than the 50th, you start to become a market leader in your own right. Not necessarily do you want to be in that position, you want to become competitive, but you necessarily want to be a leader in that particular field. One strategy is for employees less than the 50th market percentile, increments to be continued to be added to base salary as they are now. For someone who's over the increment is paid out at a lump sum versus it being added based salary. It's a good move, it's a win win strategy. It is both the employees still getting their increment, the win-win for the employer and so far as that little base salary amount is not being added so it's still being held back so it's a win-win. If you want to look at it for both utilities in terms of how many are over, it might be a little hard to see, but this is GPA...there's the 50th market percentile looks like you've got one employee. For GWA, again a bit hard to see, but probably one, two, three, four maybe fifth one possibly. It comes back to what I've said about being able to implement that and GCC are doing it right now, by the way. They've moved to paying out people above the 50th market percentile by way of a lump sum. But what it does come back to what I was saying before about monitoring the market. In order to do this, you need to know what the 50th market percentile is every year. There's a challenge to do this...you can do the full market reviews every two years but obviously to look at maybe to what extent the market has moved in the intervening year, apply that percentage, calculate it and look who's above or below it. I hope I touched on a little bit as to some of the reasons you are where you are. Obviously, we're here at the moments to look as the cost results.

Structural Adjustment, when I talk about migrating to higher market center, obviously, we have our red line here at the moment, talking about moving that red line to a more competitive market position. We've examined five cost option moving to the 10th, 15th, 20th, 25th and 30th the results are the 2022 Market Data. Slight error on the bottom here, I think EPA works on a two-year cycle for their budget, but I understand GWA is on a one-year cycle. My apologies here for a little bit of an error. I know certainly for GPA, there a \$2 million dollar amount set aside per annum to allow for structural adjustment. We've taken the assumption that the same exist for GWA.

The cost results that you've got in the handout, are based on migrating the utility from the current staffing pattern from now the 10th now to the 15th, etc. If you want to look at the variance between them you got to look at between the 15th and the 20th to look how much in between times. We've also gone ahead and added some additional calculations which I think you will be interested in, they included helping to offset that transition by taking into consideration the full performance being paid annually. Let's get into it.

So, for GPA, we've got two options. Option 1 is talking about FY24 going from the 20th to the 30th. Option 2 going from the 25th market percentile to the 30th. Similar amount in terms of the two options, in terms of your \$2M budget per annum, certainly Option A fits within that. Option 2, a little over in the first year, but in the second year, you can see on both cases, considerably less. Why these are initially high is because you have current employees some high some low and by moving them to the first transition, we actually pull that together to be a lot tighter. Once it tighter, going from the 20th to the 30th is less and going to the 25th to the 30th is less. So, both options, you're looking around for GPA at about \$2.7M. In terms of what is the preference, if possible, I would go with 2. Why? Obviously, you're going to a higher market percentile you want

to make yourself start to get more competitive in time and I realize with the moment, but come January for example, GPA, you could be at the 25th and the 30th the following year. Just look at the GPA results, keep in mind that both these results are contingent upon the pay for performance being paid out on an annual basis. In case of GPA, FY24, the first payment will be done in January that'll be paid out then you can migrate to the 20th for \$1.7M. John, 80% of your employees at the moment are below the 20th market percentile. It hurts a little bit; I mean that's quite significant and 88 below the 30th. We look at Option 2, once again you're going from the 25th market percentile to the 30th. You might see why it's not applicable here. Obviously, this first part is the first step in the process it gets everyone to the new pay schedule. Once we do the second component here, all these people are already on the new pay schedule we're just moving those that are below. So even though you have 81 employees are still below the 30th, they're already on the pay schedule and we don't have to actually adjust them. So, once again just for GPA, those are the cost results roughly \$2.7M.

For GWA, Option 1, here the same options going from the 20th to 30th, 25th to 30th. Once again, in terms of whether the funds are available, here you are a little bit over, if it is your \$2M budget on an annual basis. Once again if you can go to that the second year is actually a lot more less demanding. Option 2, again this would be the same ideal if GPA can do it, it would be excellent if GWA could follow suit. I know it's a little bit of a stretch, Miguel, in terms of doing that, I take comfort in the fact in the fact that the second year is only \$180K. I know it's easy for me to say that, but the initial hit is obviously in here at the moment as well. Once again contingent upon those pay for performance being paid out. Miguel, right now you've got 88% of your employees below the 20th market percentile. That is a little bit higher to GPA's 80%. And, the second option, Option 2, once again going from the 25th to the 30th. Once again, the summary, so \$2.7 for GPA and \$3.1, we at roughly \$400K difference between the utilities. Thank you.

Are there any questions? Comm. Sanchez asks, so, between John, Miguel and Alan, can you remind us how the pay for performance works, this is base salary that you're showing us, right? How does it work, GWA, whoever can answer it. The typical dollar annually, and the same for GPA? How does it work and what's the typical incremental... Searle states, I can help with that. I think the model they both use at the moment is one that actually the military follow whereby managers of a particular department can award a certain percentage of the range on offer to the employees so for example, if I was manager in charge of T&D for example, I could give, I think, 3% increase to percentage of my employees. Personally, I think it's a good model. I've looked at performance options over the years and I think some may say that is very structured and everyone could be doing well, but as a manager, I think it forces you to identify those that are performing well. If you don't have that control in place, you run the risk of everyone getting a three, everyone getting a four. One of the difficulties to reflect back to GovGuam, is that there's no distinction to be able to identify a top performer from a mediocre performer and everyone gets the same increment and that's a problem. What happens is that it starts to fall into disarray and people don't like filling out the forms. There is also the risk within the utilities of that doing that happening as well. So, we've got to be on tight. You really need a simplistic but an effective tool to be able to do it but manages themselves. It's a part of my role to actually assess the performance of my employees. I should actually be remunerated for me actually doing that work. To come back, it's based on a percentage basis, Simon. At the moment, the range is from zero to 1, 2, or 3%.

John Benavente states, I think that way it works actually, it used to be zero to 6% early on. At that, it was three for an average person and then four to six. Now, it's two, three, and four. For an above average performer and then an excellent performer and even within the organization there is a cap, how many can be provided based on that. It does reward the above average person.

Comm. Sanchez asks, so, if I make my base salary is \$25K and I get a 3% pay for performance, I could get \$750.00 additional added to my base pay...my base stays the same. Comm. Santos interject, no, added to the base. Comm. Sanchez states, oh, it is added to the base, okay. GM Benavente states, at the 3%, you're slotted into the next step. Comm. Sanchez clarifies, you actually bump my base pay, but then that's all captured in that data. GM Benavente states, actually those who are performing come up above certain levels because they keep performing.

Searle thinks is could be very valuable for the CCU at the start of the financial year to look at that. What range is on offer, I mean I say that to actually all the boards that I talk to. What I mean by that is if you've had a good year, yes, the range could be 2, 3, 4% or 3, 4, 5% for an exceptional year. But, if it's been tough, maybe you're saying it's going to be 1, 2, 3% this year. That's been very prudent in terms of how you manage it, but again, it's something the board could look at the start of each financial year in terms of what performance range is off. I think right now it's 2, 3, 4%.

GM Bordallo states, it now is if it hasn't been a good year we defer. Comm. Sanchez states, which is zero percent. Bordallo agrees. Sanchez states, well at least your exercising discretion which is sort of the idea.

Searle begins, with the other point is the pay schedule that we use here is lots of sub steps. They're all in a 1% increment between the sub steps and it makes it very easy to go up. Two sub steps, 2%, up three sub steps 3%, etc. Comm. Santos asks, how do you differ with respect to GovGuam in increments? Searle responds, the pay schedule on the GovGuam doesn't have sub steps. They just go on steps and the steps do vary between each step. But there's no facility to have that broken down. A mediocre performer and a top performer we still get the same increment if you know what I mean. Here, because of the sub steps, we can split it down and give someone 1%, we can give someone zero if need be. That is the main different is actually in the format in the pay schedule itself. Comm. Santos asks, now, with respect to only talking about salaries, do you take into account benefits? If we came and said to the employee, this year we hope to convince our Legislature to carve out health benefits and we can come to the employee and say we're going to pay for all your medical insurance. Searle responds, yeah, historically we've left benefits out of the model. I think in the costing that you've got there in the hand out there, I think we calculate benefits as being 40% of total compensation. Just to give you a figure in there as well, but it's showing in those last pages of the handout... Comm. Sanchez responds, that retirement, health, that's the whole fact, retirement is the whole piece of it.

Searle response, it's roughly, 40% of total compensation of benefits, roughly. Comm. Sanchez asks, what's our contribution to retirement? The employer side? Comm. Santos responds, 29.... What is it? Does anybody know? Comm. Sanchez asks, what's our employer contribution? Comm. Santos mentions, employer contribution is about 26% on payroll, right? Because it's the largest single... Comm. Sanchez replies, no, no, no, payroll is one of our lowest expenditures here. LEAC is more expensive and Debt Service is more expensive. Comm. Santos mentions, maybe he is equating it to GovGuam.

Chairman Duenas, responds, Alan, first off, the presentation that you made on the screen, you're going to give that to us? Searle responds, yes. Comm. Santos states, it's on Board Books, under CCU, correct? Chairman Duenas replies, okay, good. Searle apologizes he could not get the presentation to the board sooner. Chairman Duenas second questions is if he heard Searle

correctly, the utilities should be updating the market survey every year, is that correct? Searle response, certainly every two years and that result is what is on pages one to ten. That is what I'm saying you need to keep on top of. Do that certainly every two years, whether we do it or HR does it within the respected utilities, it has to be done. The basic premise said before you have to be able to know where you are in the market to make informed strategic decisions on pay. Chairman Duenas agrees, that's an important one. Okay, we have employees from top to bottom, now, our general managers for examples, we may be paying them at a higher percentile than the rest of the company, is that a good thing, bad thing? Searle responds, you can have a differential, I mean, the beauty of that document, page one to ten, includes all unclassified positions. So, if you decide to go to the 30th market percentile for all employees, yes, you could have a small differential. In terms of your top management, they could be paid at the 40th market percentile. You got the market data in front of you in terms of what the market is paying. The 50th market percentile is the market average. We do some work for fuel companies; petrol companies and they have a policy that top management get paid at the 75th market percentile. The rest are paid at the 50th. This has always been the case. Its probably why petrol is so high, but I mean, that's just their strategy of how you do it.

Chairman Duenas states, I have to tell you because the difference is you have engineers and they're engineers and they grow up, but when you get to the level of the general manager or CEO of the company, you have to be more of a business person in addition to the engineer. That has to be recognized somehow. Look at the president of a bank, he stops being a credit officer and becomes more of a marketing person. That's what time trying to say, that there are specific talents that go there. Searle replies, I think it's up to all of you to decide on what the differential should be. If you know that the model is being implemented at the 30th market percentile, yes, there can be a differential that high for the senior management, but I would strongly advise that you certainly make reference to or use that data that's in the appendix. That's what I'm saying should be reviewed every two years.

Chairman Duenas asks, in terms of pay for performance, the five steps in between? Searle responds, that's the implementation ranges. Chairman Duenas agrees, okay, the implementation ranges. That's the call of management. Searle inserts, we just use it for costing purposes, for recruitment. You see HR uses it as a range. There's a range that's the implementation range so they're identified for each cost option for every position. GM Bordallo responds, for the current schedules that you've given us in the current implementation ranges based on the current market percentile. This is the first year where the minimum of the range is actually at... Searle interject, correct, correct. So, if we're talking the 30th market percentile, the range minimum value will be the 30th market percentile so hopefully, we'll see a little bit better improvement.

GM Benavente states, it's very difficult to recruit and retain and your suggestion is to increase the percentile, right, to 25 up to 30, 35%. Searle replies, it certainly something you want to look at, I mean, it's been a rough road recently. GM Benavente states for example, recently everyone's pulling our IT right now... Comm. Sanchez replies, but general managers, we can bring down the percentile to off-set the budget... Comm. Santos responds, he's being funny.

Chairman Duenas responds, seriously though, I think it is very important because we are very competitive. I like the way you described the military of the Department of Defense or the federal government's pay and how they are very aggressive in recruiting and retaining their people and that to me is a great concern for engineers, for IT people, for top management people. We do have senior management folks besides the general managers. Searle mentions, it particularly volatile for engineers at the moment. John and Miguel, I would certainly look at that option in

term of we got to decide whether is it just my chief engineer or a particular position or do we want to migrate that as a group to a higher market percentile? I'm more than happy to help you with that if you want to do that. We can just keep improving it until we are competitive. Comm. Sanchez asks, the wage data you're providing now is this the latest survey? Searle states it is based on 2022 data, yes, it is. Comm. Sanchez asks, so we would do another one next year 2024, next year? Searle replies, conceivable, yeah. But it's whether we do it or you yourselves do it. Comm. Sanchez asks, and we're asking our engineer, GMs to evaluate what we pay engineers? Chairman Duenas comments, as we go forward, we passed a resolution adopting the CTP wage scale and this market percentile concept back in 2006 or 2007, when you first came here. If I remember correctly, I read that resolution and one thing that stuck in my mind is we were going to get to the 50th percentile within 10 years, that was the resolution. So, as the two general managers decide to put their resolution together, be very careful on what we do. I really believe that if you're going to represent something to your labor, that you should stick to it if you're going to do it in 10 years, you do it in 10 years. If you're not going to do it in 10 years, then don't say it. Comm. Sanchez states, if you don't have the money, you can't predict the money in 10 years. Chairman states, therefore you word the resolution differently, okay? Comm. Sanchez states, it's a goal. My memory says we were trying to get to the 25th percentile because we were at the fifth. Whatever it was, the idea that I liked was we as a board said we want to migrate our people up, do it over time to mitigate, to minimize rate payer impact and I think, collectively, we've done a good job. We've also seen the world has taken on a different face than 20 years ago where we've had inflations. You got all the issues that Alen describes then a particular sector of labor like engineers, in our case, is beyond some of the world events that have raised salaries in general. The engineering department has been raised even more on a competitive basis is the nature of the world apparently. Chairman Duenas reiterates, his point being, he would encourage the two general managers to really work on the resolution. That they should be in the driver's seat on that. Of course, we will discuss it at the CCU... Comm. Sanchez states, because actually it is our policy. Chairman Duenas states, he understands, but he is trying to encourage them to rally focus in their recommendations to us. To put in where they believe things should be so that we can consider it. We make the decision, I get that, but I want them to put their recommendations in place. Searle states, as a last comment, I've just got two costings coming up again here. I think, if possible, option two for both utilities are where the target you want to go. I think it will be a little tough in that first year, but if somehow you can not necessarily split it but accommodate it over the two years. That'll get you to the 25th market percentile in case of GPA, in January and the following year to the 30th for the following year. For GWA, again 25th to the 30th, a little bit tougher to get to the 25th, but again in the following year you could be at the 30th market percentile. I think option two for both is the ideal and if it can be done, I think where you want to go, it'll certainly be a boost in terms of making you more competitive in the marketplace.

Chairman Duenas asks the general managers if they have any other questions? Both respond, no. Chairman reminds all that this issue will be taken up another time and not decisions will be made today. He just wanted the Commission to be briefed and this can come up when the GMs are both ready. It will be a joint resolution. We're both going to go at the same time.

3. ADJOURNMENT

Chairman Duenas states with no other questions, he calls for a motion to adjourn. Comm. Santos motions to adjourn the meeting; Comm. Martinez and Sanchez second. Meeting is adjourned at 11:35 AM.

//s/

Lourissa Gilman

Attested

JOSEPH T. DUENAS, Chairman

PEDRO ROY MARTINEZ, Secretary

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GPWA Cyber Security Update

CCU Presentation
November 28, 2023

Changes in the Cybersecurity Landscape

In the past 2 years the cybersecurity landscape has shifted:

- The Pandemic brought an increase in digitization of services and new processes. This increases the potential for expanded security issues.
- Increased Geo Political agendas raising ongoing concerns with electronic warfare and cybersecurity.
- Ramped up Cyber Activity from Nation State Actors leading to targeted attacks on Guam.
- Growing demand for Cyber and IT professionals leading to a shortage of skillsets and staffing.
- Ever changing technology requirements.
- Supply chain issues and delays in procuring new technology.

Volt Typhoon

Chinese Malware Hits Systems on Guam. Is Taiwan the Real Target?

*New York Times
(May 24, 2023)*

The code, which Microsoft said was installed by a Chinese government hacking group, set off alarms because Guam would be a centerpiece of any U.S. military response to a move against Taiwan.



[Research](#) [Threat intelligence](#) [Microsoft Defender](#) [Threat actors](#)

10 min read

Volt Typhoon targets US critical infrastructure with living-off-the-land techniques

By [Microsoft Threat Intelligence](#)

Cybersecurity and Network Assessments

GPA and GWA have had the following assessments completed:

- ***DHS Cybersecurity and Infrastructure Security Agency (CISA)***
 - Risk and Vulnerability Assessment (RVA) Feb. 2023
- ***FBI Network & Vulnerability Assessment Team***
 - OT Network Assessment May 2023
- ***Coast Guard - Cybersecurity Protection Team (CPT)***
 - Hunt & Threat Assessment Aug. 2022 (GWA) and Sept. 2023 (GPA)
 - Numerous network sensors have been put in place since early 2023 and will remain until further notice.
 - Network & Host Assessment schedule forthcoming.



Digitization of Services

- Energy Sense Rebate Application significantly reduced CS traffic, reduced application processing times, reduced number of staff directly involved in application processing. Prior to implementation, no applications processed within 20 days. New KPI of 50% conforming applications processed within 30 days. (Harvey chime in)
- Meter provisioning and exchange process on MWFM
- Online Energy Audit Application Rollout in April/May 2024. (AI driven)
- Distribution Troubleshooting and Planning using Smart Grid Big Data Applications (Advanced Grid Analytics, MilSoft WindMil Engineering suite)
- Exploring AI for Grid Controller

Challenges for GPWA

1. Technology Upkeep (keeping up with the everchanging technology landscape)
 - Evaluating and implementing new technology that is constantly improving has proven to be challenging.
 - Ensuring that such technology can coexist with GPA and GWA's IT environment and future proofing such technologies are complex.
 - Increased acquisition cost and maintenance of such solutions are driving up the price of implementing these new technologies.

Challenges for GPWA

2. End of Life (EOL) Equipment

- GPA and GWA is working on addressing end of life (EOL) equipment
- For GPA and GWA, this covers replacement aging equipment estimated to be over \$1.2 and \$1.4 million dollars, respectively.
- GPA and GWA is currently working with Federal partners to assist in funding for the replacement of such equipment.

3. Supply Chain Issues

- Issues with the availability of equipment and delivery. Specialized equipment purchases have an estimated delivery of over 6 to 10 months.
- Enforcing Cybersecurity requirements from vendors adds additional cost and also limits vendor participation in the procurement process.

Challenges for GPWA

4. Development of Skillsets/Workforce Retention

- Need for training and certification of IT personal for Cybersecurity, Networking and Communication.
- Staff augmentation to support and address current shortfalls in staffing.
- GPA has a Cybersecurity Internship for 3 months to expose potential interns to the cybersecurity field.
- Development of long term internships (1 year) for Cybersecurity and Network Technicians for GPWA workforce.
- GPA and GWA have worked with GCC on Computer Science internships as part of their degree requirement.
- Working with HR to address pay gaps for technical related positions

Challenges for GPWA

5. Recruitment/Development of Positions

– In the IT Integration plan GPA and GWA need to develop new positions relevant to IT/OT Operations:

- **Cybersecurity Manager**
- Cybersecurity Administrator
- Incident Response Analysts
- Compliance Analyst
- **Infrastructure Support Supervisor**
- **Programmer Analyst Supervisor**
- OT Integration Supervisor
- **Systems Administrator**
- **Applications Support Supervisor**
- Project Manager
- Communications Technician

GPWA Future Goals

The CCU approved the GPWA IT Integration Plan in 2021 which will drive the following:

Converged Infrastructure

- Move towards a shared Internet edge utilizing next generation firewalls
- Share network infrastructure
- Configure GWA SSIDs on Headquarters Wireless Infrastructure
- Expand GPA's SolarWinds Orion installation and Splunk SIEM
- Complete Island Wide Fiber Ring Project
- Complete Buildout of Disaster Recovery Site

GPWA Future Goals

Converged Policies

- Develop Governance Policies
- Develop Supporting Governance Documentation

Converged OT Applications

- Complete the shared SCADA system deployment
- Geospatial Strategy Consulting Assessment and Implementation

Shared Business Applications

- Implement Customer Care & Billing (CC&B) Application Management Centralized Administration
- Customer Service Web Applications Development, Support and Maintenance
- Shared ERP environment with JD Edwards

GPWA Future Goals

Shared IT Services

- Deploy a Shared Services Ticketing and Change Management System
- Share disaster recovery (DR) capabilities and move backups to a remote data center
- Deploy a Shared Services Email Solution for GWA and GPA
- Consolidate to a shared virtual environment
- Implement asset and inventory management tool
- Merge customer records databases

GPWA IT Future State

GPWA Cyber Security Update

DRAFT

GPWA IT Future State

GPWA Cyber Security Update

DRAFT

Questions





Presentation To:

Consolidated Commission on Utilities

CCU Board Meeting
November 28, 2023



Management Report CCU Board Meeting November 28, 2023

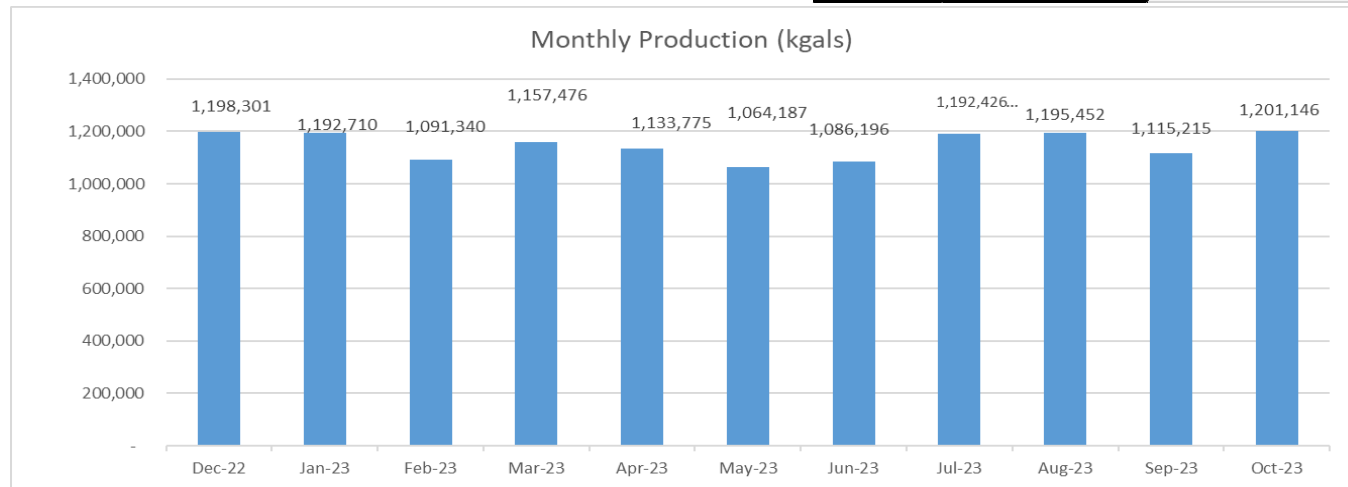




Operations Update

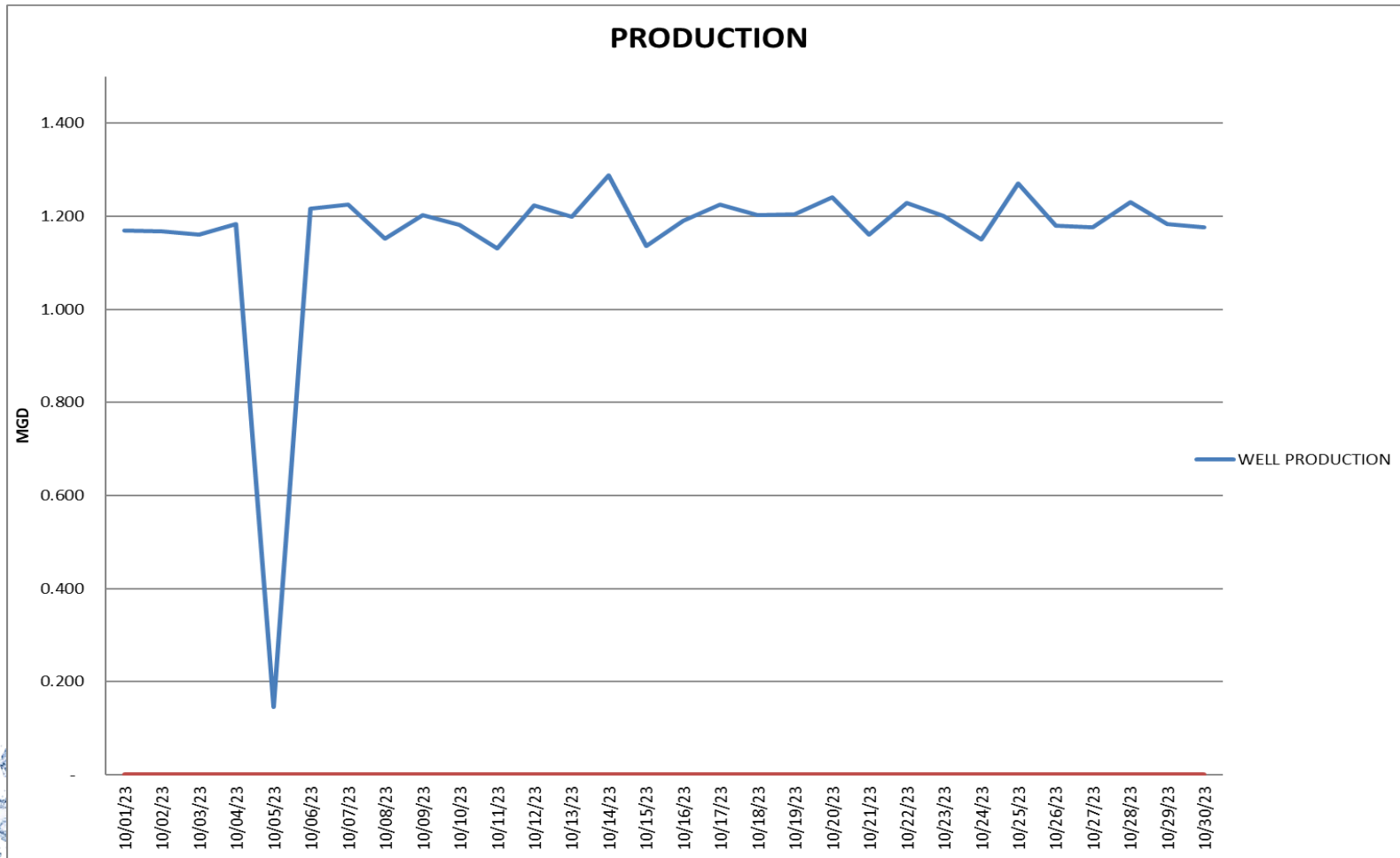
Water Production (October 2023)

Monthly Production Summary - October 2023				DW Status as of 10/31/2023		REMARKS
Deep Wells			35.5 MGD		Active	94 DW units on line
Active wells =	94	of 120			Standby	1 A29
Avg days in operation =	31	days				
Total Production =	1,100,437	Kgals				
Springs			0.43 MGD		Grounded Motors	14 A18-A26-D01-D03-D09-D12-F01-F10-F13-F20-M05-Y09-Y12-Y16
Avg days in operation =	31	days				
Total Production =	13,349	Kgals				
Ugum Surface Water Plant			1.7 MGD		Out of Commission	9 A02-A07-A28-D05-D13-M01-M14-MJ01-MJ05
Avg days in operation =	31	days				
Total Production =	51,346	Kgals				
Tumon Maui Well			1.16 MGD		Secured - PFO	2 A23 and-A25
Avg days in operation =	31	days				
Total Production =	36,014	Kgals				
			1,201,146	Kgals	38.7	MGD
				TOTAL	120	





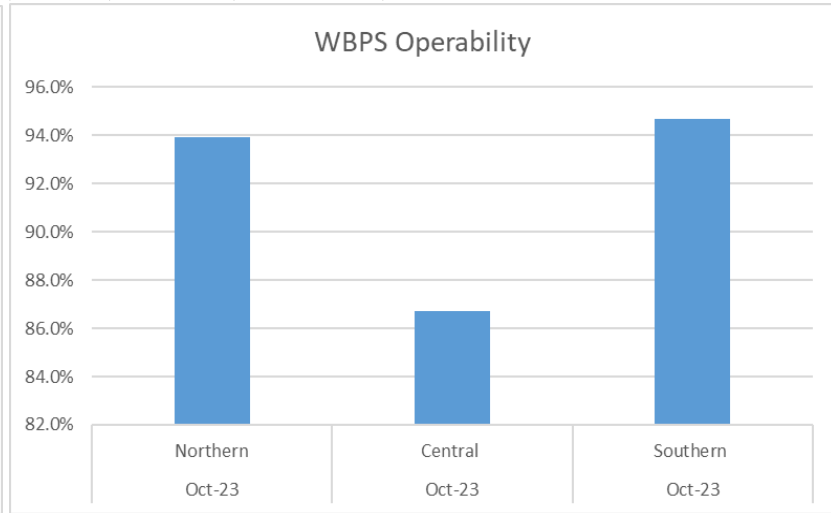
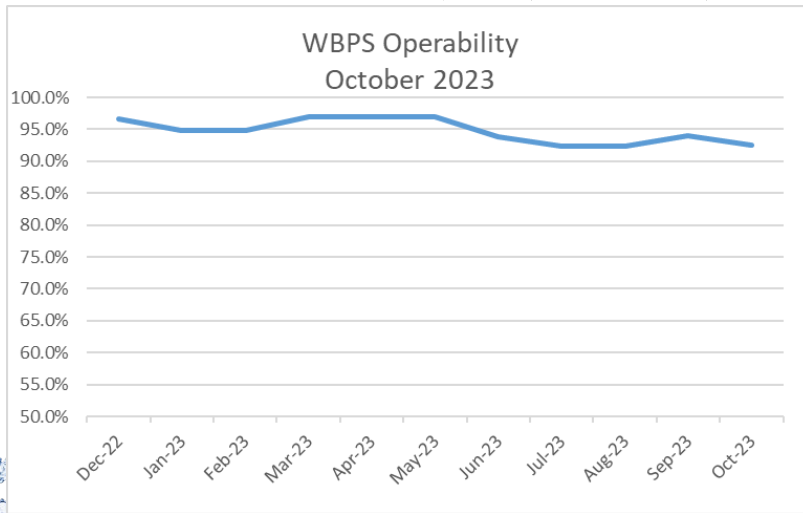
Tumon Maui Well Production (October 2023)





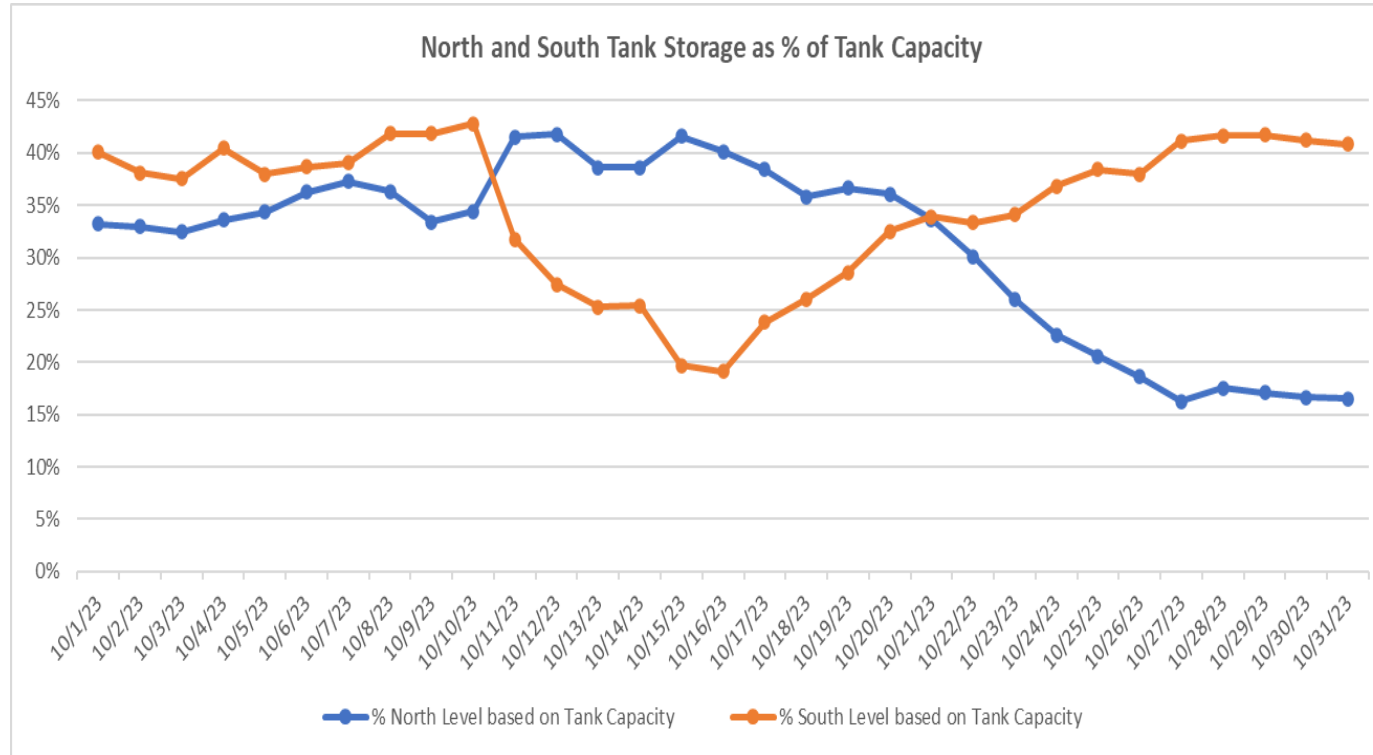
Water Distribution (October 2023)

Monthly Distribution Summary - October 2023					
Water Booster Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	14	33	31	93.9%
	Central	7	15	13	86.7%
	Southern	8	19	18	94.7%
		29	67	62	92.5%





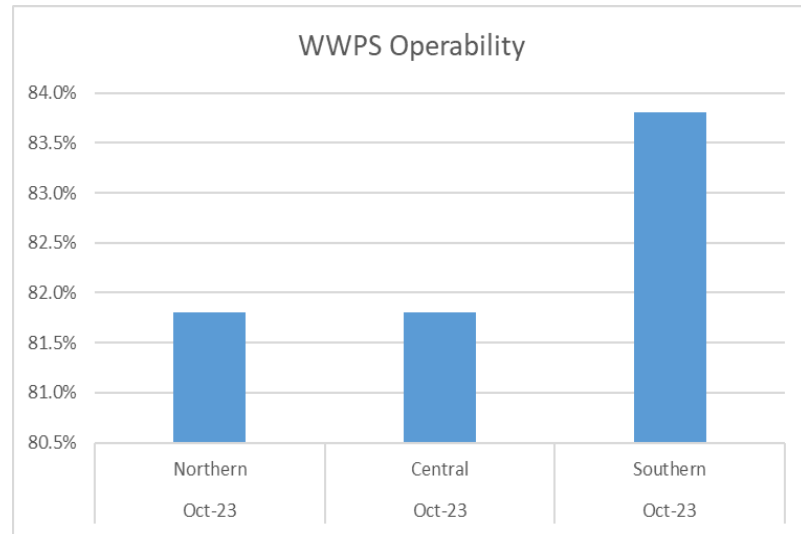
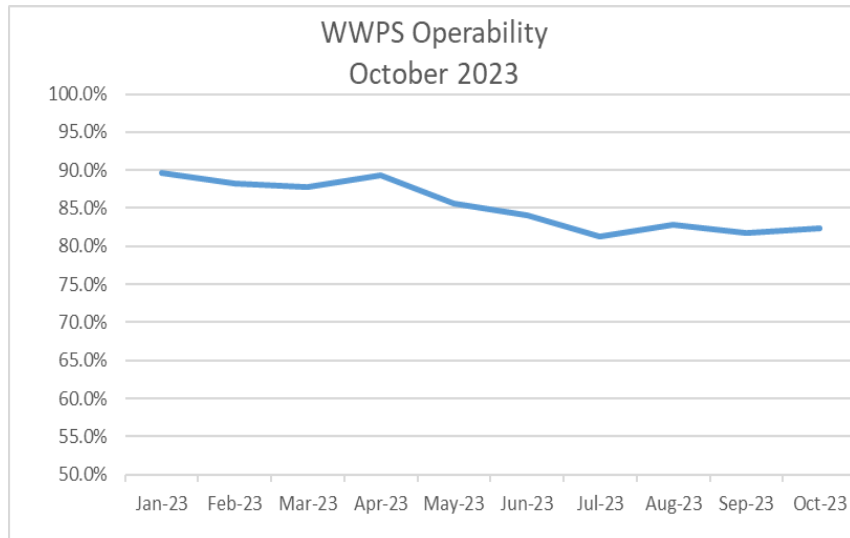
Water Distribution – Tank Levels (October 2023)





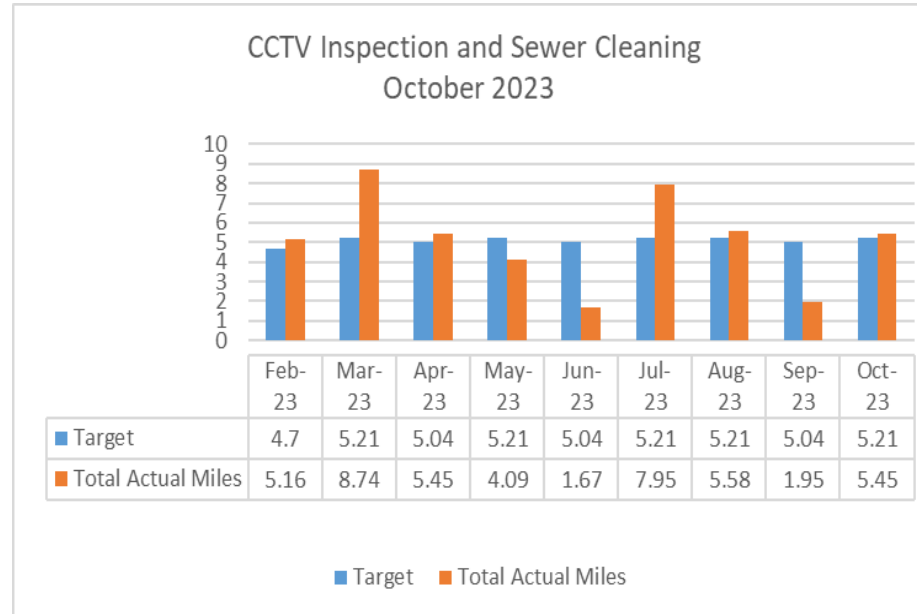
Wastewater Collections (October 2023)

Monthly Collections Summary - October 2023					
Wastewater Pump Stations					
	District	No. of Stations	Total Pumps	Pumps Operating	% Operational
	Northern	22	52	42	80.8%
	Central	30	66	54	81.8%
	Southern	32	68	57	83.8%
		84	186	153	82.3%





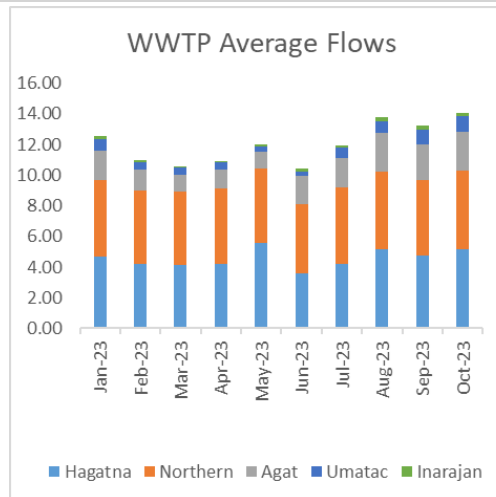
Wastewater Collections – CCTV (October 2023)





Wastewater Treatment (October 2023)

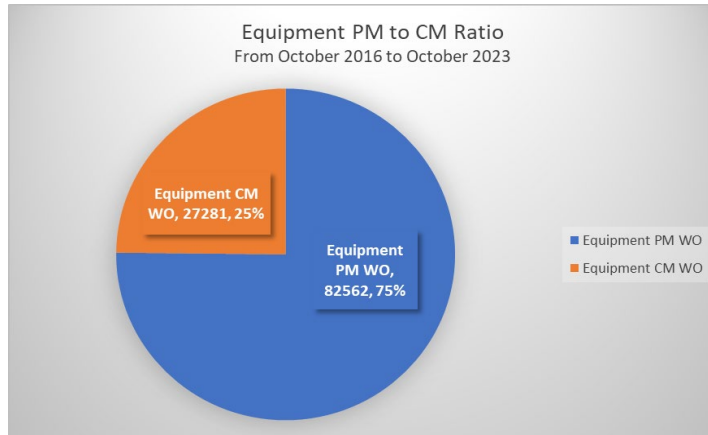
Monthly Wastewater Treatment Summary - October 2023				
WW Treatment Plants - Flows				
	Facility	Avg. Daily Flows	Sludge (lbs)	Sludge Disp. (\$)
	Hagatna	5.14	248,620	\$ 22,376
	Northern	5.14	628,040	\$ 56,524
	Agat	2.57	39,780	\$ 3,580
	Umatac	0.98		
	Inarajan	0.26		
		14.09	916,440	\$ 82,480



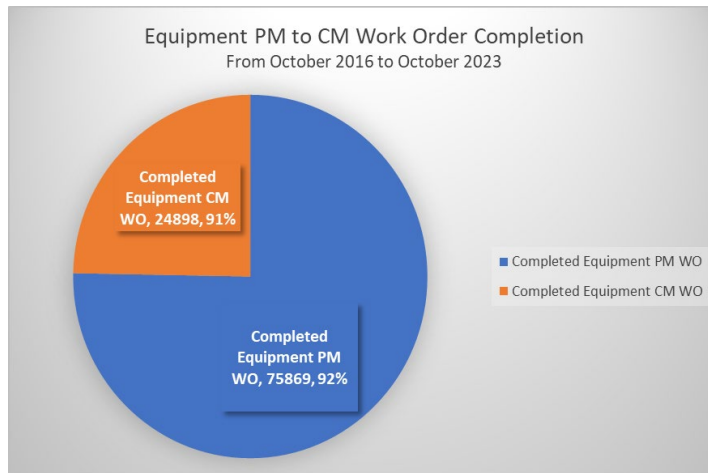


Asset Management (through October 2023)

I. Equipment Preventive Maintenance to Corrective Maintenance *Ratio*



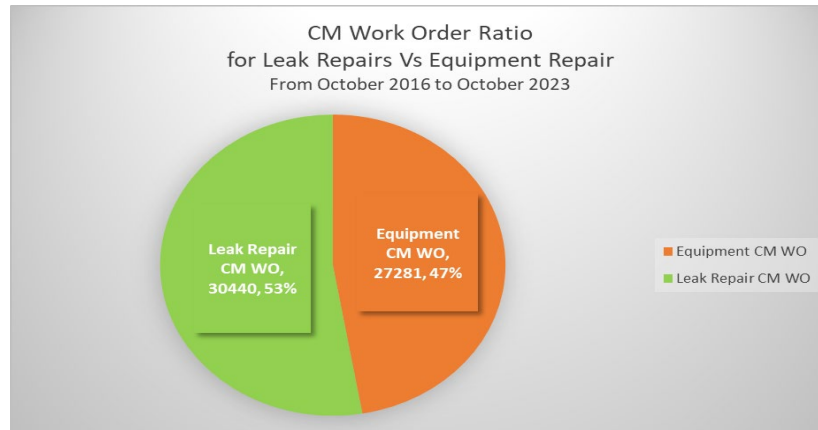
II. Equipment Preventive Maintenance to Corrective Maintenance *Work Order Completion*



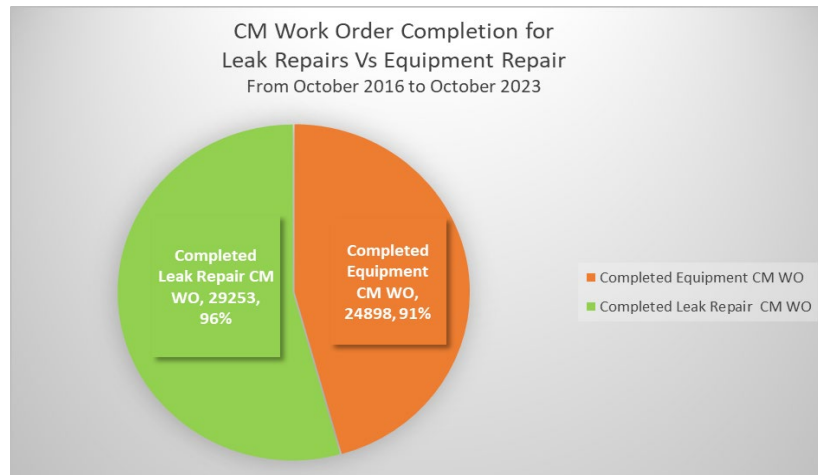


Asset Management (through October 2023)

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



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





One Guam Update (October 2023)

- TMW, AG-1, Tarague Waterline Lease
 - License/Lease for all three facilities will take about 30 days to complete. Interim licenses until long-term leases in place.
 - Increase in pumping rates not addressed for the interim. Intent was to have TMW up to 900 GPM for the long-term lease.
- Property Transfers
 - Murray Road/Schoeffel Heights Easement – No update.
 - Transfer of ACEORP
 - Governor confirmed that there are delays due to the AG's Office and SHPO concerns with 2 other federal parcels which are part of the same property package. Department of Land Management is scheduled to meet with the Governor on the properties. GovGuam does want to finalize the transfer. DOD Real Estate to consider if they can separate ACEORP from the other 2 properties so that the transfer can move forward.
- Easements
 - Andersen Water Line – AG-1 to Route 9 – No update.
 - GWA WW Collection System Easement at Marbo/Skaggs - No update.
- Information Requests
 - Navy's request to GWA:
 - 1) Navy contractor (EA) received most information requested in the last package, a few things remain / EA will follow up.
 - 2) PFAS Levels vs. Life of GAC Information
 - Working on formal presentation pending additional information from Ops.



(Continued on next page)



One Guam Update (October 2023 - continuation)

- Information Requests
 - Navy's request to GWA:
 - 3) GWA Wells within a Mile of Naval Hospital, Radio Barrigada, or NCTS Finegayan – GWA is reviewing the requested data. Information will be submitted to DOD once GWA management has reviewed the information.
 - GWA's request to Navy: 3 Consecutive Years' Worth of Production Reports for All Bases (2020 to 2022) for WRMP Update. Data was provided to GWA.
- Interagency Billing & Contracts/Agreements – still ongoing; draft expected in November
- Other
 - Water for the Marines – Potts Junction Intertie Operation
 - Potts Junction water specification is in the MOU but can update or specify in the lease.
 - Navy received the information from GWA's Customer Service to apply for a name change since for Potts Junction (Camp Blaz) water meter. Camp Blaz will reach out to GWA and coordinate the commissioning of the system.
 - Water to Navy Meter at Power Substation across Micronesia Mall –DOD will reach out to GPA to let them know that GPA will need to connect the waterline at the substation.

(Continued on next page)





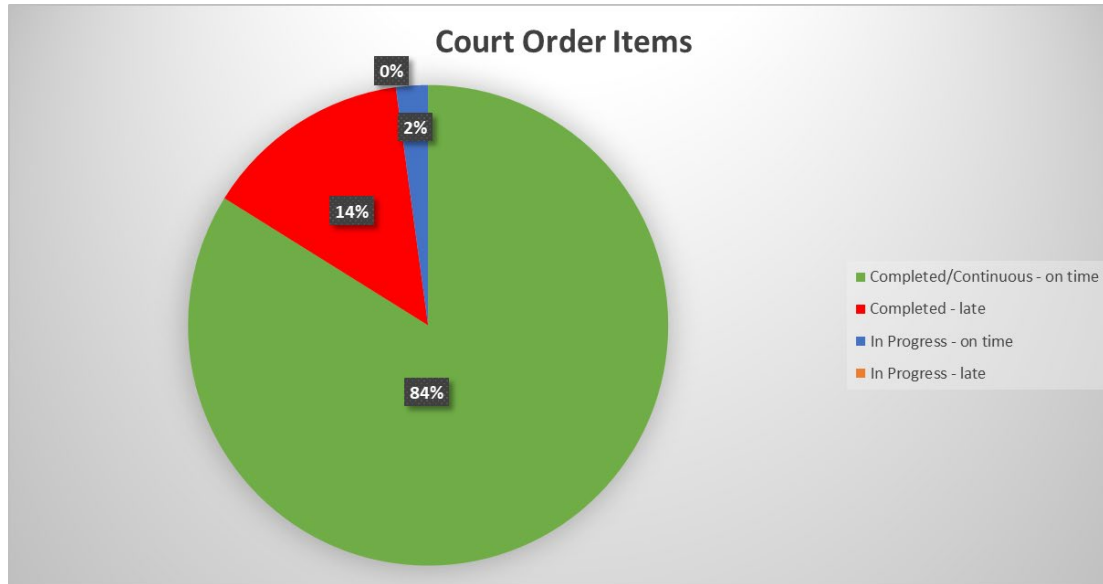
One Guam Update (October 2023 - continuation)

- Other
 - Summer Breeze- Radio Barrigada – DOD does not have control over the easement and cannot transfer the easement to GWA. GWA may need to get the easement from the private property owners.
 - DOD is asking if GWA has concerns on the wastewater load at Route 8 with all the proposed development at Radio Barrigada. GWA may need to do some modeling, DOD will provide GWA with flow projections.
- New Business
 - SAFF Bench-Scale Testing
 - DOD will share with their Engineering Dept the SAFF document; any questions from DOD Engineering will be forward to GWA.
 - Annual WERI Advisory Council Meeting – Thursday, November 30 at Hyatt.





Court Order Summary (through October 2023 – no changes)



Court Order Summary

	Court Order Items	%	Performance % Completed	Performance (on-time or completed)
Completed/Continuous - on time	78	84%	97.8%	100.0%
Completed - late	13	14%		
In Progress - on time	2	2%		
In Progress - late	0	0%		
Totals	93	100%		





Court Order – Status Information (October 2023)

The following SSO was reported for October 2023 on November 3, 2023:

- 1) 11/03/2023, SSO#1404335 – Hyatt Dock, Tamuning, due to Pump Station Failure at Fujita PS.





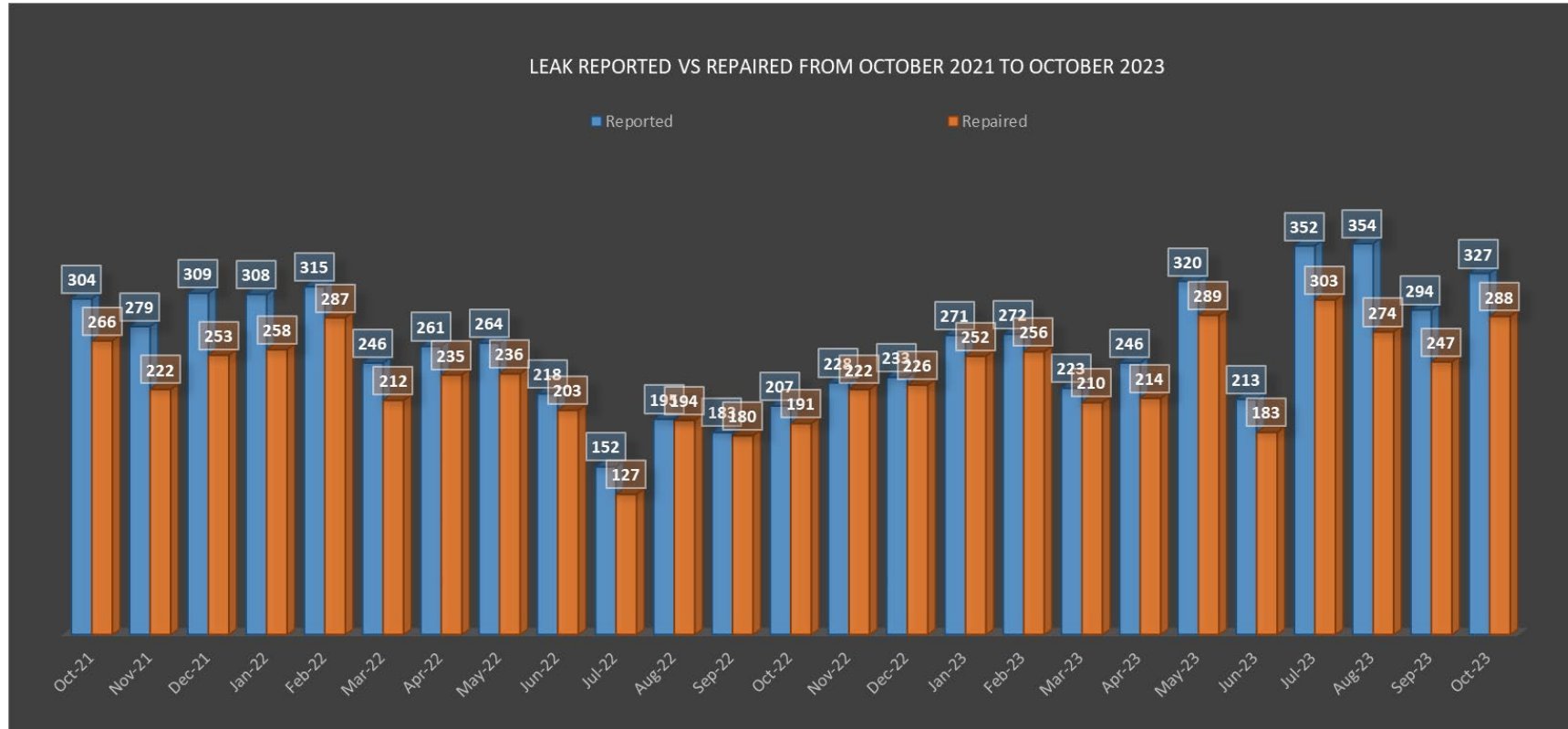
Land Acquisition Summary (through October 2023 – no updates)

GWA Facility	Location	Gov. or Private Property	Land Acquisition Status
Tanks	Astumbo-L10164	Gov't. - CLTC	Petition of Land Registration package forwarded to Attorney General by DLM 11/04/19. AG pending court filing 06/30/2021 – Follow up status sent to DLM 10/06/2021; 11/03/2021; 01/27/2022; 03/04/2022; 05/12/2022; 07/07/2022;09/12/2022; 12/27/2022; DLM response 07/11/2023 have not been able to meet with Assignment AG for LR proceedings. Follow up with DLM 09/05/2023; 10/02/2023
	Piti-L259	Private/Federal	Received final comments from DoAg. Waiting on the archaeological report before we can submit 299 forms. Waiting for permission from NPS to access the lot and perform the Archeological survey.
	Ugum River Intake/Booster Pump Station	Private	EPA GRANT FUNDED PROJECT: Remove sedimentation/silt accumulation in the area upstream of the Ugum dam and at the Ugum Water Treatment Intake. Remove dirt collected on the gabion blanket revetment. PROPERTY ISSUE: Land Agent currently researching property owners for Lot 292, owned by the Aguin Family. GWA would need to secure a Grant of Easement for the access road and booster pump facility along the river intake due to no proper reservation.
Deep Wells	AG-12-L10154-4	Dept. of Agriculture/Manhita Farms	Right of Entry Agreement sent to Manhita Farms for signature 05/24/18. 2 nd follow up sent on 04/10/19; 06/03/2021. ROE Agreement information sent to GWA legal counsel for further review and processing 01/28/2022; 08/11/2023 –GM signed and submitted to DCA for final review and processing at DLM; 09/26/2023-Submitted to DCA for final map processing
Booster Pump Station	Agfayan-T3734 B19 L28	Private	TGE working on structural design for pump station area for L28, B19, T3734, Inarajan 11/07/19. Letter of Decision received by CLTC 06/09/2021. CLTC has responded for in-kind service letter 10/08/2021. 1 st appraisal report submitted to GWA 05/11/2022. 2 nd appraisal submittal to GWA 09/20/2022. Appraisal report sent to GM/legal counsel for review, approval and response 09/22/2022. Request for updated Appraisal report sent to TG Engineers for cost estimate 09/28/2023
Asan Springs	Asan-L501	Federal	<p>In order for NPS to issue a land ROW agreement with GWA, NPS has to complete NEPA first. GWA has HDR under contract to perform this work and an Environmental Assessment (EA) will be developed. The permit for the biological survey was submitted on 6/12/2020 and was signed by NPS on 1/22/2021. Further coordination between NPS and SHPO is pending to determine necessary approach for an archaeological survey. New Chief of Resources for War in the Pacific National Historical Park, Timothy Clark, hired. Replacing Tatzay Jones, who was previously working with us. HDR working with Tim Clark on coordinating things with NPS.</p> <p>Biological Survey:</p> <ul style="list-style-type: none"> HDR working with NPS to develop formal BA pending template of BA from USFWS; HDR completed draft Public Scoping Document for NPS review for NEPA process, 11/5/2021; still waiting on NPS for edits/comments on Scoping documents/BA for NEPA. <p>DOAG Environmental Consultation Letter:</p> <ul style="list-style-type: none"> Pending response from HDR if they had previously sent over their Biological Survey. <p>SHPO Letter: Pending archaeological survey requirements from SHPO</p> <ul style="list-style-type: none"> Revised Archeological Monitoring and Discovery Plan submitted to SHPO on 5/2/2023. <p>Asan Springs – Public Meeting:</p> <ul style="list-style-type: none"> Public engagement meeting was held at the Asan Mayor's office on 4/19/2022. The purpose of the public meeting was to inform the public about the rehabilitation of Asan Spring project and its unique property condition being on NPS and GWA land. As of 6/24/2022, NPS has not received any public comments. <p>Biological Assessment Report:</p> <ul style="list-style-type: none"> USFWS accepts modification to Appendix B – Biosecurity Plan on 5/4/2023 <p>Environmental Assessment:</p> <ul style="list-style-type: none"> HDR is in the beginning process of getting a draft to NPS for review. The EA will include the NEPA process and follow all necessary requirements for compliance to obtain a ROW agreement with NPS. The EA is under revision by HDR to include comments from all relevant parties. The Office of Congressman Moylan has offered assistance to resolve land discussions with the NPS on 9/18/23.



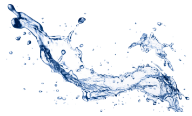
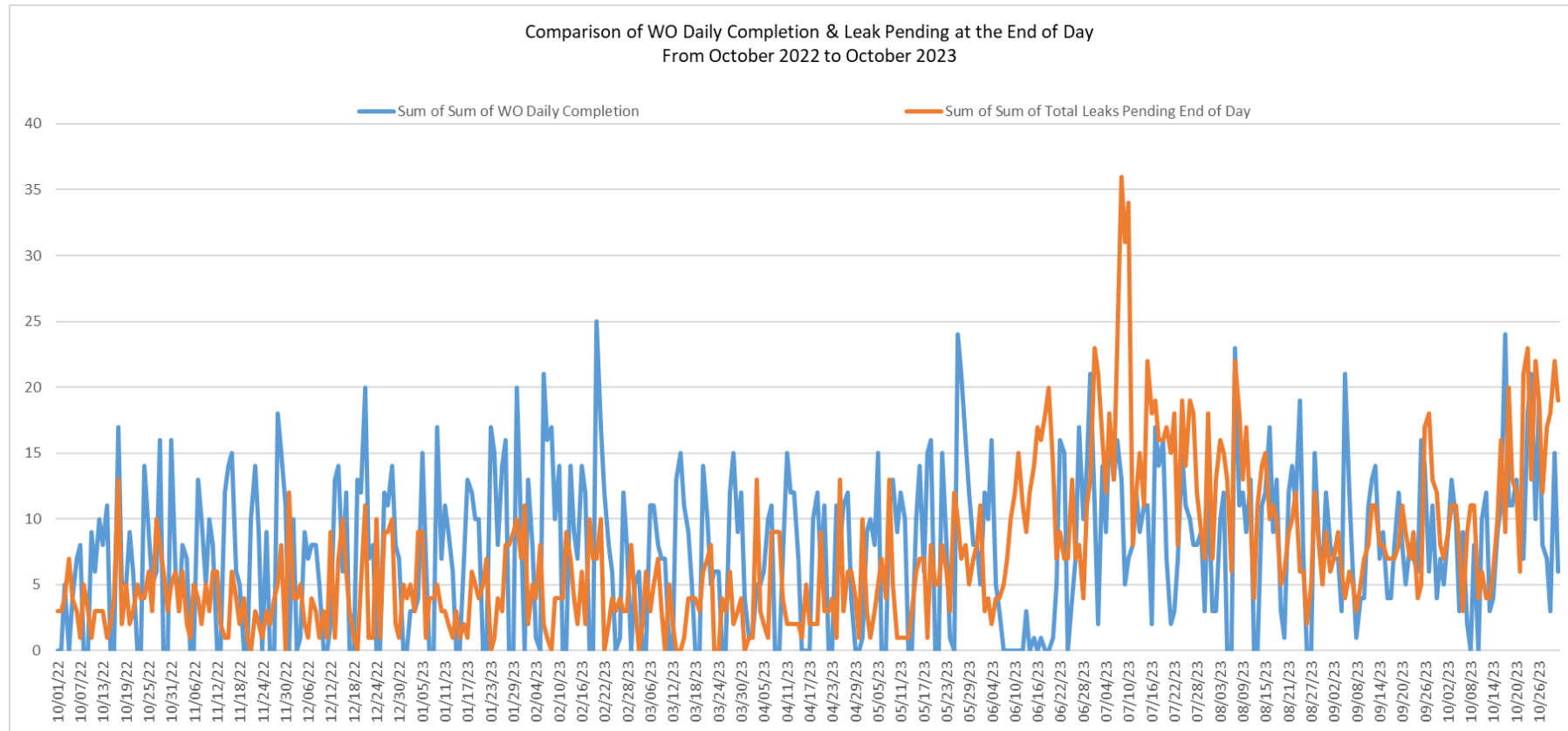


Comparison of Leaks Reported vs. Leaks Repaired (through October 2023)



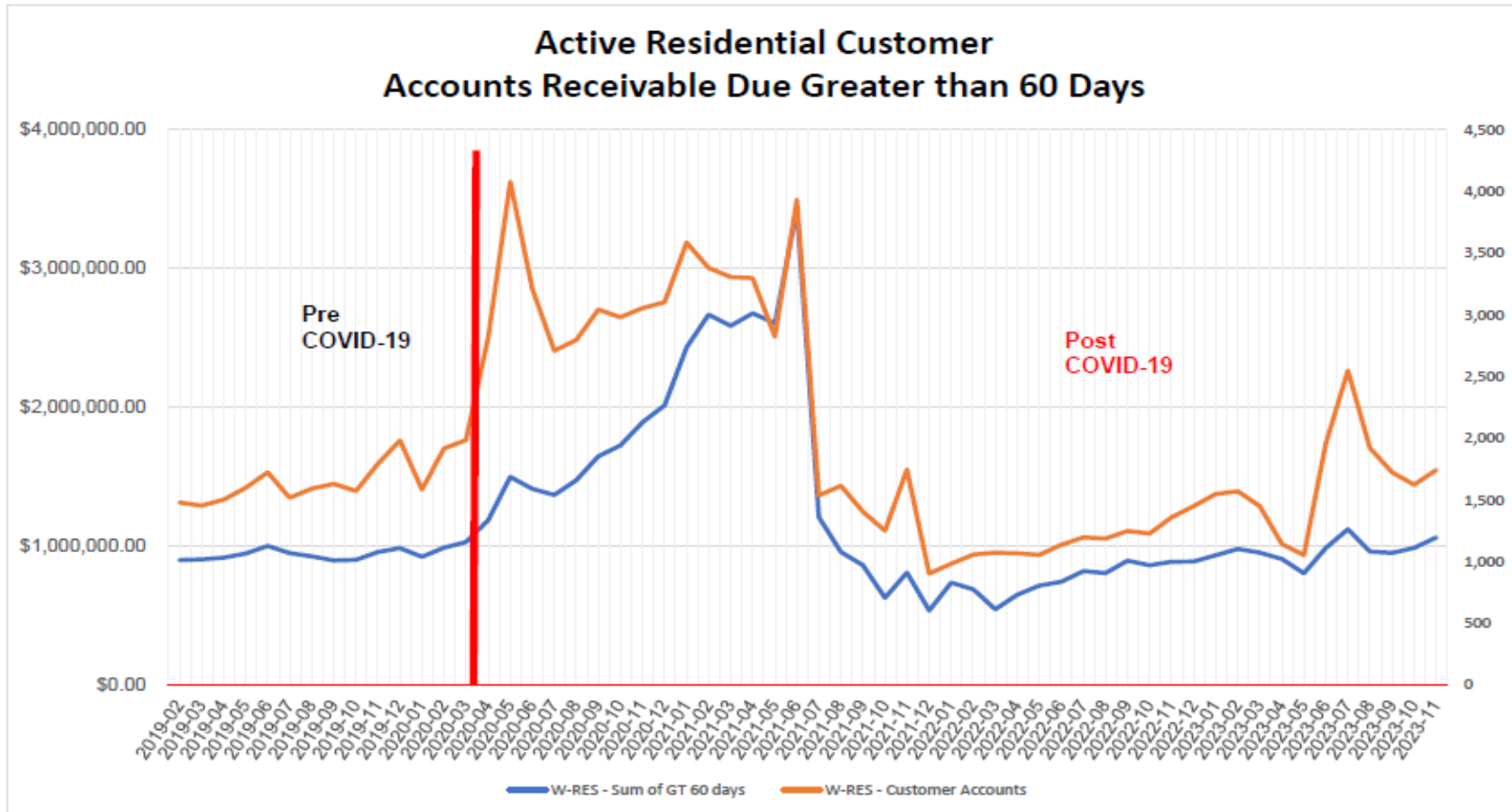


Daily Leak Repairs (through October 2023)





Accounts Receivables – Active Residential Customers (for October 2023, dated November 11, 2023)

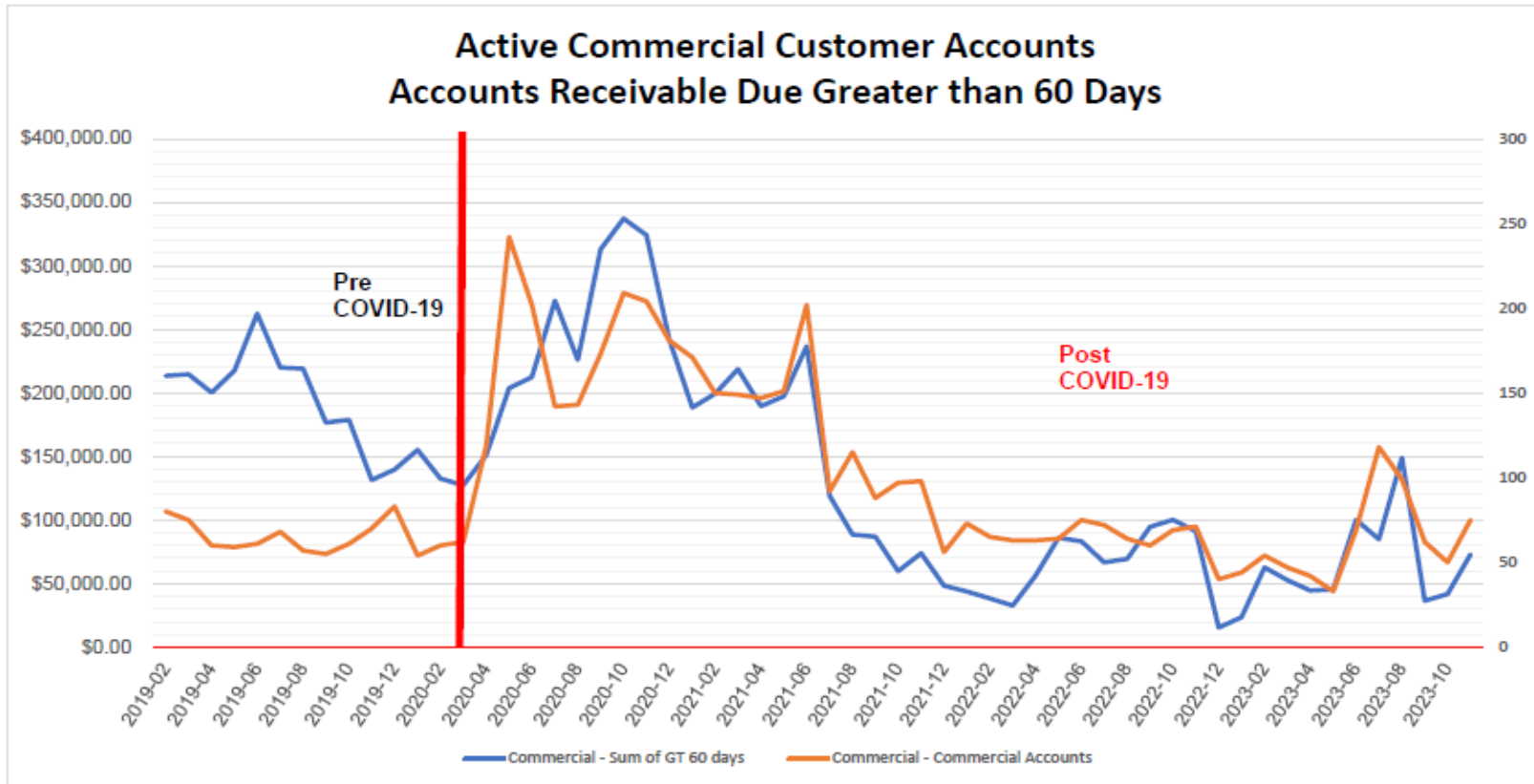


* Excluding customers on payment plans





Accounts Receivables – Active Commercial Customers (for October 2023, dated November 11, 2023)



* Excluding customers on payment plans





Highlights of Customer Care Section Operations (October 2023)

- The average wait time for all 3 locations is 5.1 minutes up from 4.6 minutes in Sept 2023.
- The average number of Facebook visits increased to 16,718 as compared to 6,808 for Sept 2023. This occurred during the threat of a tropical storm Bolaven on October 9 & 10, 2023.
- Instagram profile visits for Oct 2023 is 1,020 up from 373 for Sept 2023.
- Our average Facebook page responsive rate for October 2023 is 61% down from 74% for Sept 2023.
- Oct 2023 average number of active pay plans is 361 which compares similarly to Sept 2023 average number of active pay plans is 370.
- There was a decrease in emails received in Oct 2023 @ 335 as compared to Sept 2023 @ 446.
- Meter Reading Unit reported a 97.63% successful electronic read percentage as compared to 97.93% for Sept 2023.
- 12.8% of GWA customer meters recorded ongoing leakages for the month of October 2023 as compared to September 2023 @ 12.5%.
- Customer Care Section completed Sexual Harassment Awareness training.
- The Customer Care Section celebrated the 2023 National Customer Service Week on October 2 through 6. During the week, a survey was given to customers in contact with the Customer Care Section. The following are the results of all the customers that took time to complete the survey:

(Continued on next page)



Highlights of Customer Care Section Operations (October 2023)

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Highlights of Customer Care Section Operations (October 2023)

COMMENTS MADE BY SURVEY RESPONDENTS:

- Great service.
- All good.
- It was a quick process. They were friendly! Great customer service.
- Wouldn't change a thing.
- Very happy with the service on time.
- Make GPA faster to call my name.
- GWA'S CUSTOMER SERVICE TEAM DOES AN OUTSTANDING JOB.
- Improve online application.
- Need more reps to handle high volume customers. Waited for 2.5 hours to get attended to.
- None.
- Ms. Nina has a great customer service, and she should get a raise.
- Great customer service; was able to help me with my issue on my bill. Very understanding.
- Excellent job GWA EMPLOYEES! My FAVORITE part is able to make payment with pay by phone. 😊



(Continued on next page)



Highlights of Customer Care Section Operations (October 2023)

COMMENTS MADE BY SURVEY RESPONDENTS:

- More training, improve customer service. Employees at the main office are rude!!! They need to show compassion to the customers when they come in because services have been disconnected. They have bad attitudes, mean when they talk to the customers.
- Louissa was very courteous, professional and helpful! Keep up the good work!
- I was first assisted by GPA, I was impressed by the preparation of the docs and application for GWA that I was presented with during the wait so that I'd be ready when I was called at GWA. Their teamwork was indeed pleasant to see. GWA employees were pleasant n helpful and had a smile. That too was nice to see as I have had my fair share of seemingly unhappy "I hate my job" type of service before. Kudos for a job well done to the CST staff and the management as well. It was a painless visit.
- You have good people and they know what is required to assist customers with the task of setting up your utility. Many thanks.
- Service is superb. processor is knowledgeable with all my inquiry.
- Special thanks to Trudy for all her help! She is always quick to respond and process our applications!
- Ms. T. Guererro is very friendly and welcoming. She navigates the GWA system well - she works quickly & efficiently (she made copies of paperwork that I would need to supply for my GPA visit)





Issues for Resolution

CCU Board Meeting
November 28, 2023



Hagatna Main Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project

Relative to Approval of Additional Funding for the Hagatna Main Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project; GWA Project No. S20-002-EPA

GWA Resolution No. 03-FY2024

What is the project's objective and is it necessary and urgent?

- The Hagatna Main force main is approximately 2,700 feet long, traverses under Hagatna Bay, and is the sole conveyance of wastewater from the pump station to the Hagatna Wastewater Treatment Plant. The force main's condition, unknown at this time and failure of the force main could lead to service disruptions which may impact the health of the community, environment, and economy of the capital village of Guam.
- The project's original design was to utilize horizontal directional drilling to install two (2) new force mains. However, the original rough order of magnitude estimated construction cost of \$10.3M for two (2) new force mains increased to a range between \$17.7 million and \$20.6M for a single force main. In order to keep construction costs manageable, the design was pivoted to construct a bypass force main to maintain sewer service while the existing force main will be rehabilitated.
- The Hagatna Main Pump Station is essential to force main operations in which the impending Consent Decree requires it to be rehabilitated within two years of the Consent Decree's effective date. The designer's proposal includes the assessment, rehabilitation and an allotment for design, as the actual design scope has not yet been determined since it is dependent on the assessment of the existing force main and sewage pump station. A 20% contingency is requested to allow the designer to move forward with a design based on a negotiated design price. The contingency will also allow the designer to assist with specification and procurement of long-lead items prior to a construction contract being awarded.

Where is the project located?

- The Hagatna Main Sewage Pump Station is located at the Northeast Corner of the Route 1 and the entrance to Chamoru Village, in Hagatna. The force main originates at the pump station, traverses south of the station along Route 1, then crosses under Hagatna Bay, and terminates at the Hagatna Wastewater Treatment Plant (see map on page 2)

(continued on next page)

27

Hagatna Main Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project *(continuation)*

Relative to Approval of Additional Funding for the Hagatna Main Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project; GWA Project No. S20-002-EPA

GWA Resolution No. 03-FY2024

How much will it cost?

• Original Contract Cost:	\$603,951.14
• Additional Cost for new bypass FM Design:	\$ 59,911.65
• Additional Cost for pump station assessment including a design allowance of \$350,000.00:	<u>\$695,227.00</u>
• Contract + change order:	\$1,359,089.79
• Twenty (20) percent contingency	<u>\$271,817.96</u>
• Total authorized amount	\$1,630,907.75

When will it be completed?

- Design is scheduled to be completed eight months after change order execution (anticipated to be September 2024). Construction procurement will begin upon completion of the design.

What is the funding source?

- United States Environmental Protection Agency grants

The RFP/BID responses (if applicable):

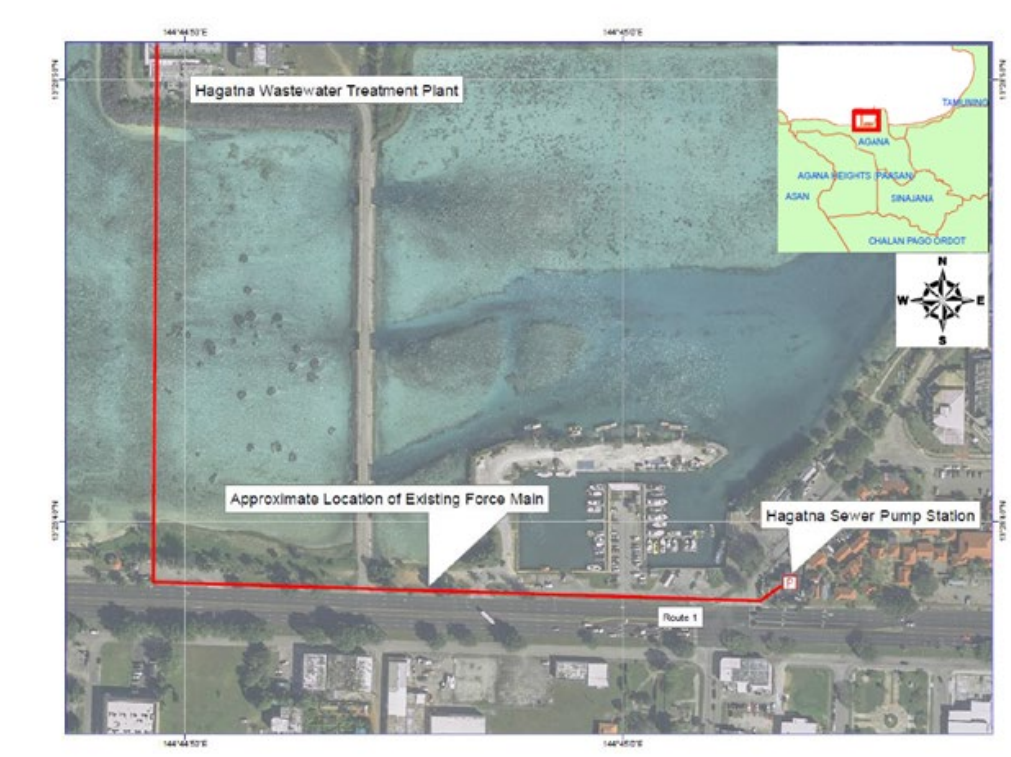
- Not Applicable.

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Hagatna Main Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project *(continuation)*

Relative to Approval of Additional Funding for the Hagatna Main Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project; GWA Project No. S20-002-EPA

GWA Resolution No. 03-FY2024



Fujita Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project

Relative to Approval of Additional Funding for the Fujita Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project; GWA Project No. S20-003-EPA

GWA Resolution No. 04-FY2024

What is the project's objective and is it necessary and urgent?

- The Fujita Sewage Pump Station (SPS) and force main conveys most of Tumon Bay's out of the Tumon area and towards the Northern Wastewater Treatment Plant. The force main is approximately 7,100 feet long. Due to a lack of redundancy, the existing force main cannot be isolated or removed from service to perform repairs, maintenance, or condition assessments. The force main's condition is not fully known and failure of the force main could lead to service disruptions, which may impact the health of the community, environment, and negatively impact Guam's main tourist area. Also, given the location of the Fujita SPS in the collection system, incoming flows to the Fujita SPS cannot be easily diverted to allow the pump station to be taken out of service for major repair activities.
- The design project's goal is to design and construct a redundant force main, which would allow a single force main to be out of service for repairs or maintenance without interrupting service. An initial assessment of accessible sections of the existing force main at air relief valves (ARV) identified a maximum force main wall thickness loss of eleven percent (11%) at one ARV and thirty-eight (38%) at another ARV. Additional subsurface investigations requiring trenching and potholing of the existing force main in buried sections is needed to confirm its condition to properly design its rehabilitation or replacement. A change order is required for the additional subsurface investigation. The additional force main assessment will be scheduled during the construction of the new force main, to take advantage of the trenching activities for the new force main.
- The Fujita SPS is essential to force main operations and required to be rehabilitated within seven years of the Consent Decree's effective date. Therefore, a change order is requested to include the Fujita SPS rehabilitation to the redundant force main design project.
- The designer's proposal for the SPS assessment and rehabilitation design, as well as additional force main subsurface investigation, is \$670,764.72. A fifteen percent (15%) contingency is requested to for future change orders, which may include the designer's assistance with specification and procurement of long-lead items prior to a construction contract being awarded.

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Fujita Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project *(continuation)*

Relative to Approval of Additional Funding for the Fujita Sewage Pump Station Redundant Force Main and Station
Rehabilitation Design Project; GWA Project No. S20-003-EPA

GWA Resolution No. 04-FY2024

How much will it cost?

• Original Contract Cost:	\$930,834.57
• Additional Cost for pump station assessment and design, and additional FM condition assessment services	<u>\$670,764.72</u>
• Contract + change order:	\$1,601,599.29
• Fifteen percent contingency	<u>\$240,239.89</u>
• Total authorized amount	\$1,841,839.18

When will it be completed?

- The design of the new force main and SPS rehabilitation is anticipated to be completed in April 2025. Construction procurement will begin upon completion of the design.

What is the funding source?

- United States Environmental Protection Agency grants

The RFP/BID responses (if applicable):

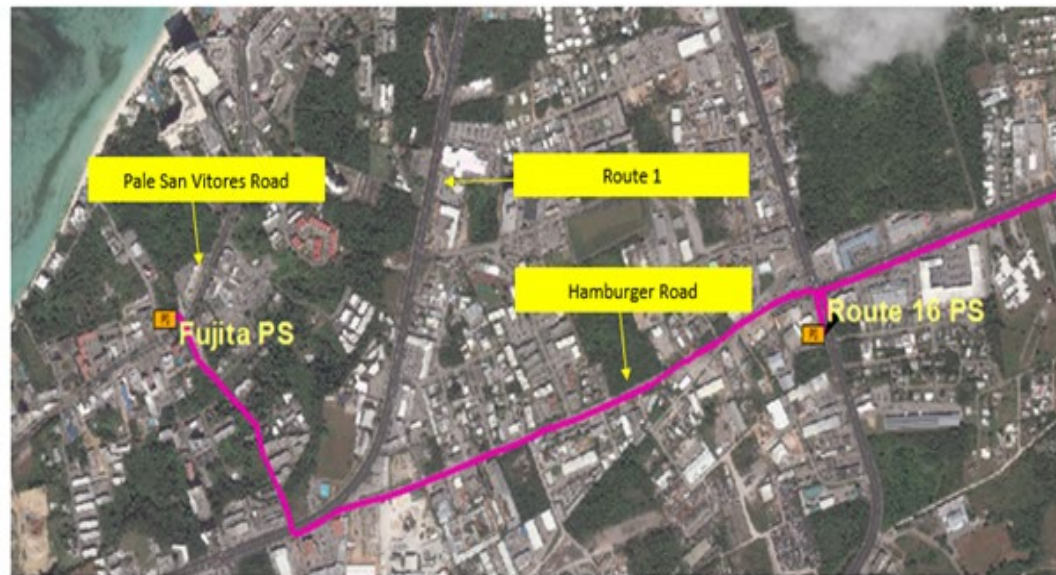
- Not Applicable.

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Fujita Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project *(continuation)*

Relative to Approval of Additional Funding for the Fujita Sewage Pump Station Redundant Force Main and Station Rehabilitation Design Project; GWA Project No. S20-003-EPA

GWA Resolution No. 04-FY2024



Fujita Sewer Pump Station and Force Main Locations

Yigo Sewage Pump Station Flood Mitigation and Facility Rehabilitation Construction Project

Relative to Approval of Additional Funding for the Yigo Sewage Pump Station Flood Mitigation and Facility Rehabilitation Construction Project; GWA Project No. S18-001-BND

GWA Resolution No. 05-FY2024

What is the project's objective and is it necessary and urgent?

- The Yigo SPS rehabilitation was to mitigate flooding impacts on operations. Equipment was raised off the ground floor, a service platform was installed, and removable flood barriers were provided for doorways.
- An increase in contract cost is requested for Change Order No. 3, for cleaning after flooding caused by Typhoon Mawar. An increase in contract cost for Change Order no. 4 is requested for safety improvements (including painting trip hazards yellow and installing a chain at a fall hazard) and the replacement of instrumentation damaged during flooding (including an autodialer).
- Damage caused by Typhoon Mawar was included in Federal Emergency Management Agency damage assessments and reimbursement will be requested.

Where is the project located?

- Project site is located in Chalan Nanalao, Yigo

How much will it cost?

- **Original Contract:** \$928,884.74
 - Change Order No. 1 (approved): \$184,491.28
 - Current approved contract cost \$1,113,376.02
- **This resolution:**
 - Change Order No. 3: \$14,753.48
 - Change Order No. 4: \$70,000.00
- Total additional contract cost: \$84,753.48

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Yigo Sewage Pump Station Flood Mitigation and Facility Rehabilitation Construction Project *(continuation)*

Relative to Approval of Additional Funding for the Yigo Sewage Pump Station Flood Mitigation and Facility Rehabilitation Construction Project; GWA Project No. S18-001-BND

GWA Resolution No. 05-FY2024

When will it be completed?

- Project completion is dependent on parts are delivered. Once the parts are delivered, installation and commissioning should take no longer than 2 months.

What is the funding source?

- Bonds

The RFP/BID responses (if applicable):

- Not applicable

Santa Rosa, Sinifa and Santa Rita Tank and System Upgrades Construction Management Contract

Relative to Approval of an Increase in Funding and Scope of Work for Construction Management Contract of Santa Rosa, Sinifa and Santa Rita Tank and System Upgrades

GWA Resolution No. 06-FY2024

What is the project's objective and is it necessary and urgent?

- The project is part of the 2011 Court Order Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program. As a Court Order project, it is necessary and urgent to work towards meeting the Court Order deadlines. This resolution seeks to provide additional funding to the contract to provide construction management services for the construction of the Santa Rosa, Sinifa, and Santa Rita Tank and System Upgrade project specifically to address:
 1. Remaining work due to contractor's delay of the new Santa Rosa Reservoir booster pump station, Sinifa Reservoir control building, and remaining site work (paving, gutters, electrical, instrumentation) that remain ongoing. Contractor's recovery schedule has May 27, 2024, Final Completion for the Santa Rosa Project and January 29, 2024, for the Final Completion of the Sinifa Project.
 2. Engineering consultation support (review and analysis of Engineer of Record's slope remediation plan), supplemental geotechnical exploration, conceptual design development, geotechnical investigation, preparation of landslide remediation design a needed under the Construction Manager's geotechnical subconsultant for the Santa Rita slope failure situation.
 3. Construction Management services for the Santa Rosa No. 1 and Sinifa No. 1 steel tank major repairs. GWA and the Contractor is negotiating the scope of work and cost to rehabilitate the tanks. The ability to amend the Contract to include repair work was included in the Invitation for Bid documents (IFB-01-ENG-2019). Both tanks are listed under the Court Order for Preliminary Relief.

Where is the project located?

- Santa Rosa reservoir and booster pump station is located in Yigo village.
- Sinifa and Santa Rita reservoirs are located in Santa Rita village.

(continued on next page)

Santa Rosa, Sinifa and Santa Rita Tank and System Upgrades Construction Management Contract *(continuation)*

Relative to Approval of an Increase in Funding and Scope of Work for Construction Management Contract of Santa Rosa, Sinifa and Santa Rita Tank and System Upgrades

GWA Resolution No. 06-FY2024

How much will it cost?

- Total not-to-exceed additional funding requested: \$1,098,345.10 (includes 15% contingency)
- The total authorized funding will be: \$7,708,929.03

When will it be completed?

- All work is anticipated to be completed by the end of January 2025.

What is the funding source?

- PW 09-11: Water System Reservoirs 2005 Improvements
- Special Damages Assessment

The RFP/BID responses (if applicable):

Not applicable



GWA Financial Overview

OCTOBER 2023





Key Financial Indicators

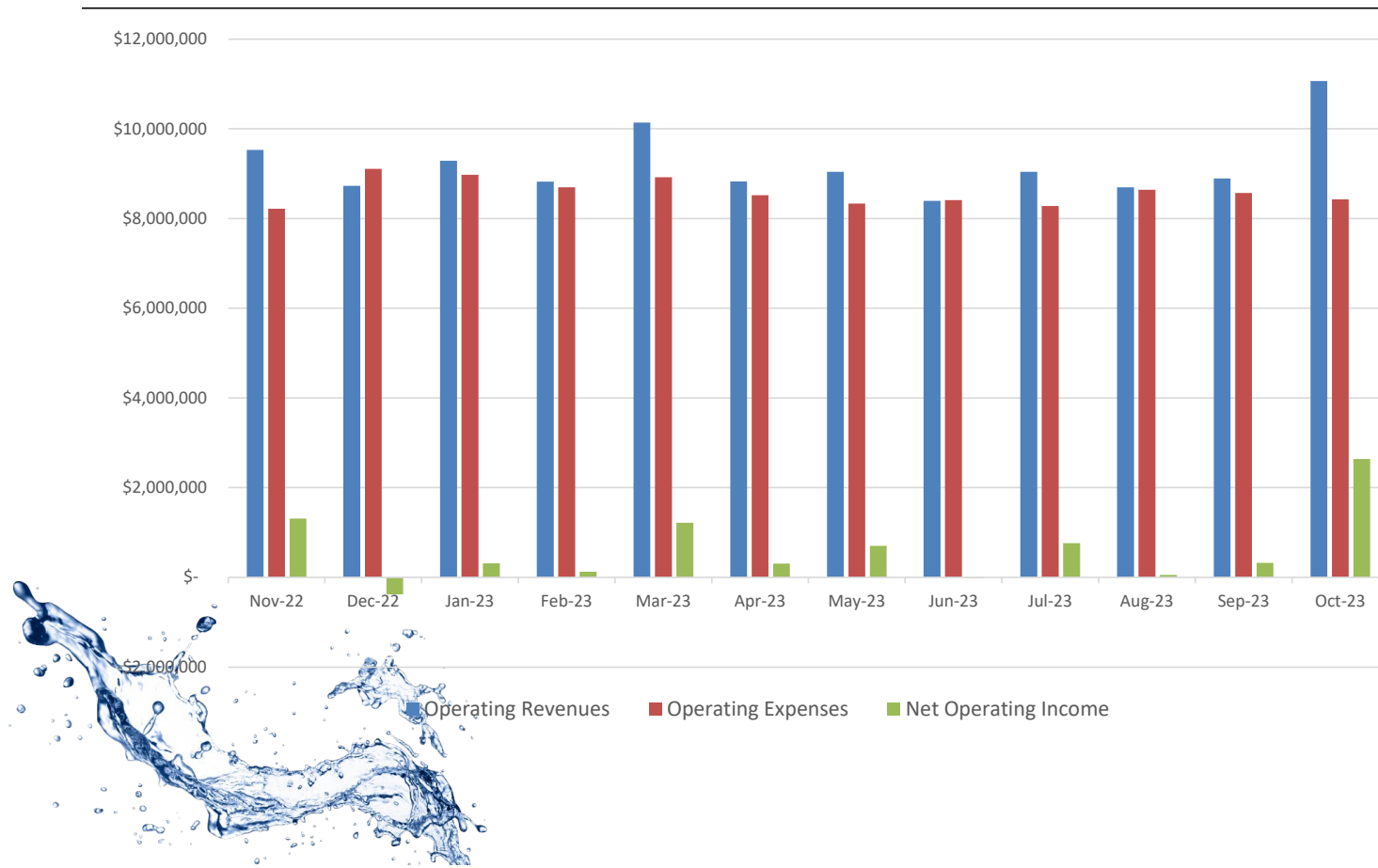
Indicator	Target	August 2023	September 2023	October 2023
DSC YTD				
• Per Section 6.12 of Indenture	1.25	1.31	1.32 ¹	1.51
• Per PUC / CCU	1.30	1.31	1.32 ¹	1.51
Days - Cash on Hand*	120 days	282 days	271 days ¹	294 days
Collection Ratio				
• Month to Date	99%	107%	93%	90%
• Year to Date	99%	98%	97%	90%
Days Billed	30 days	30 days	31 days	30 days
Account Receivable Days	30 days	34 days	35 days	30 days
Account Payable Days	45 days	33 days	30 days	44 days
Employee Count	400 FTE	359 FTE	356 FTE	359 FTE
Water Demand				
• Month to Date	451,933	404,535	399,479	406,286
• Year to Date	451,933	4,662,533	5,062,012	406,286
Wastewater Flow				
• Month to Date	317,500	322,641	294,046	305,787
• Year to Date	317,500	3,459,672	3,753,719	305,787
Operations & Maintenance Expense*	\$6,567,186	\$6,221,283	\$6,153,810 ¹	\$6,014,838
Water Customers	43,978	43,657	43,658	43,549
Wastewater Customers	27,304	30,791	30,757	30,901

*Excludes Depreciation
¹Updated





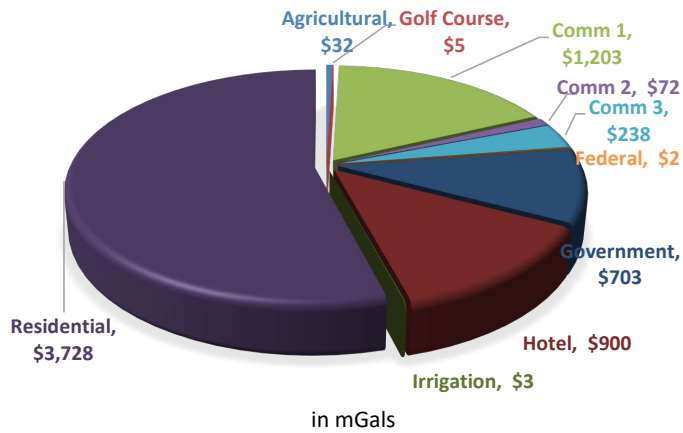
Income Statement



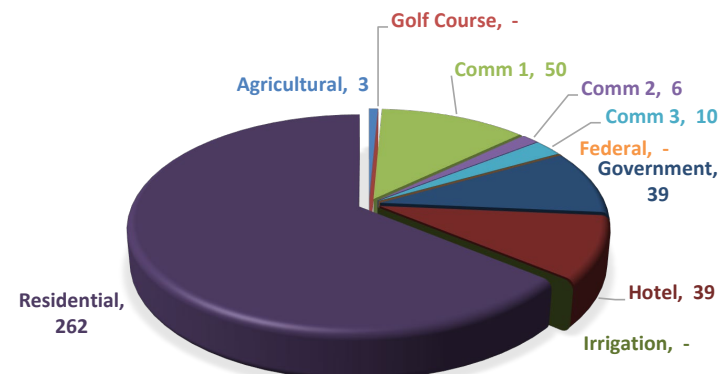
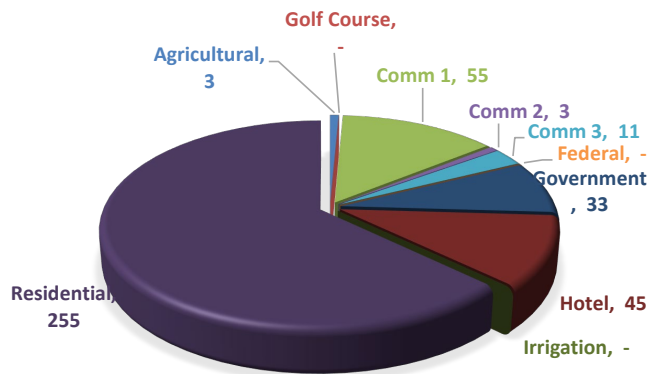
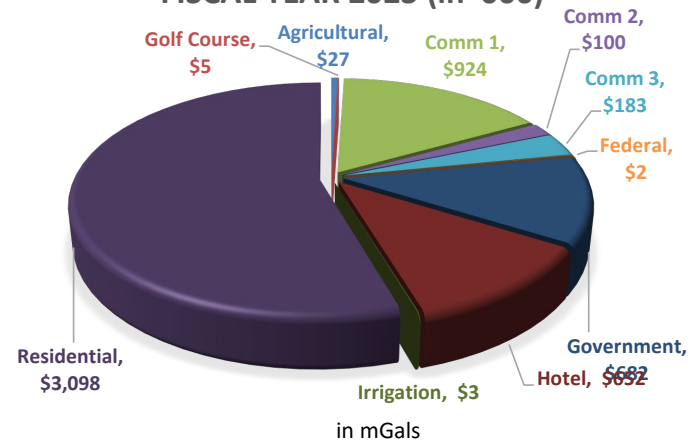


OCTOBER YTD Water Revenue/Demand by Rate Class

FISCAL YEAR 2024 (in '000)



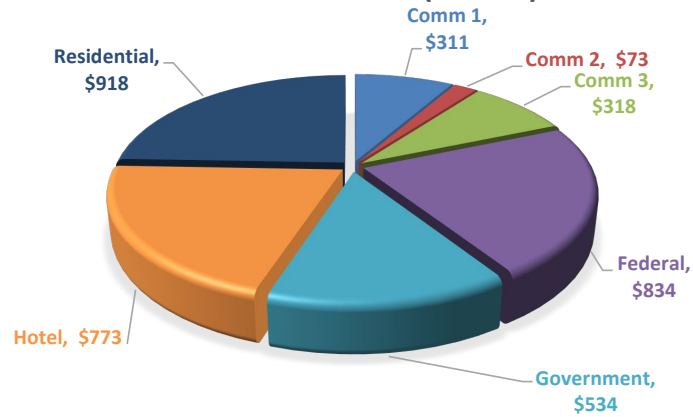
FISCAL YEAR 2023 (in '000)



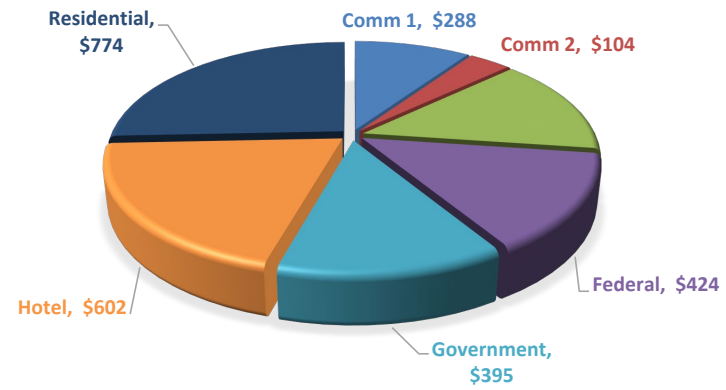


OCTOBER YTD Waste Water Revenue/FLOW by Rate Class

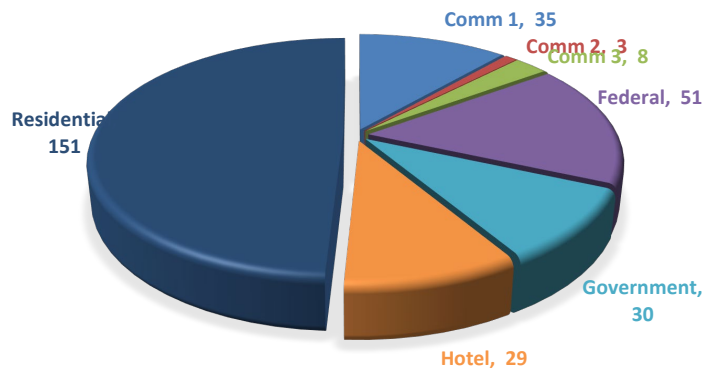
FISCAL YEAR 2024 (in '000)



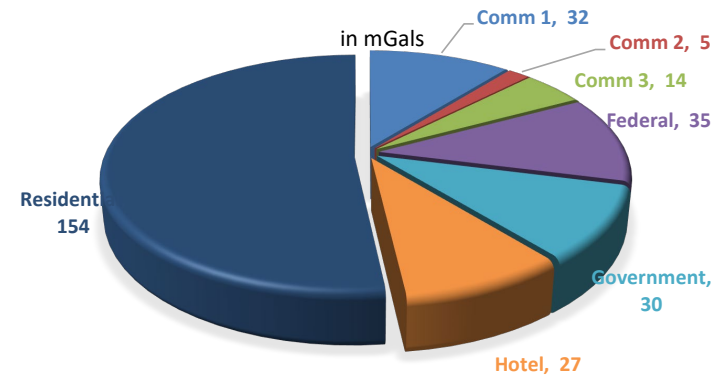
FISCAL YEAR 2023 (in '000)



in mGals

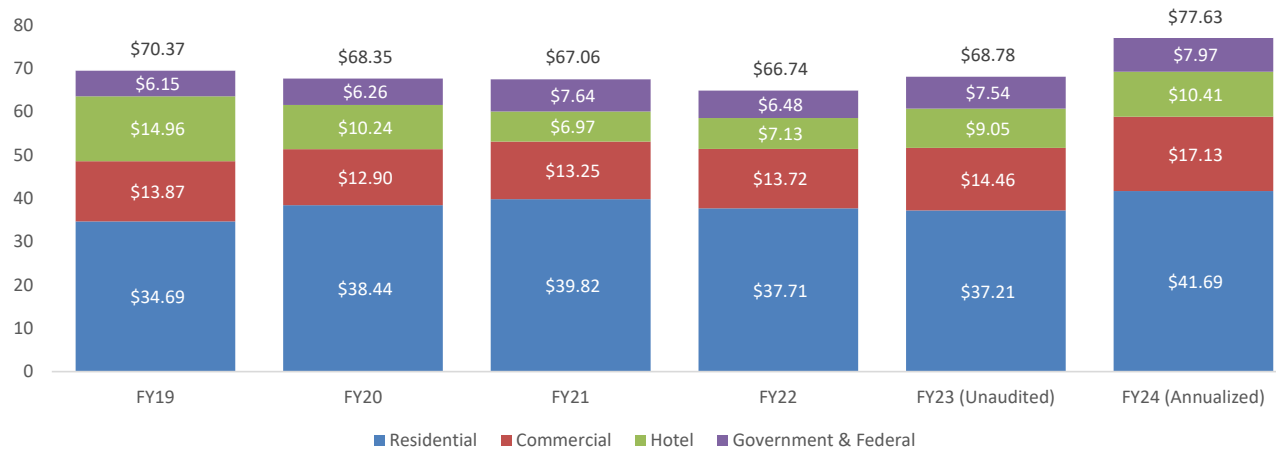
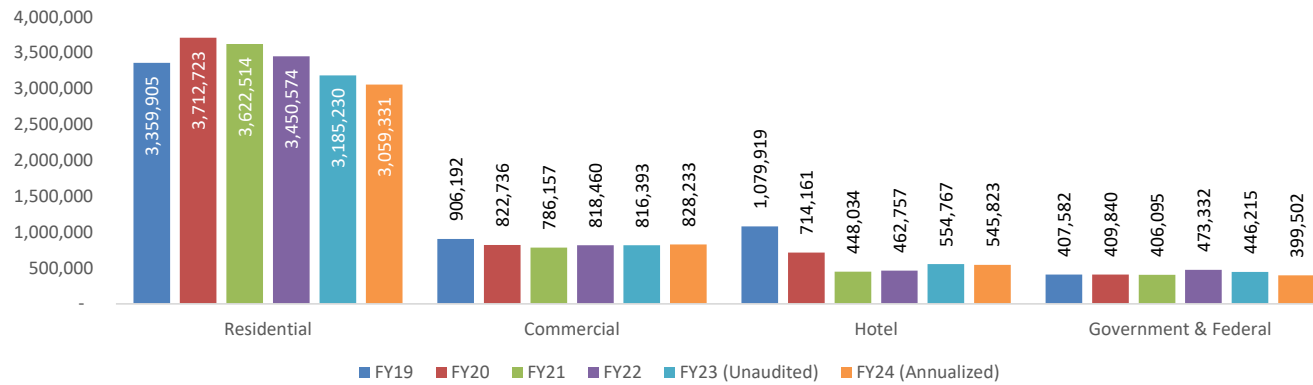


in mGals



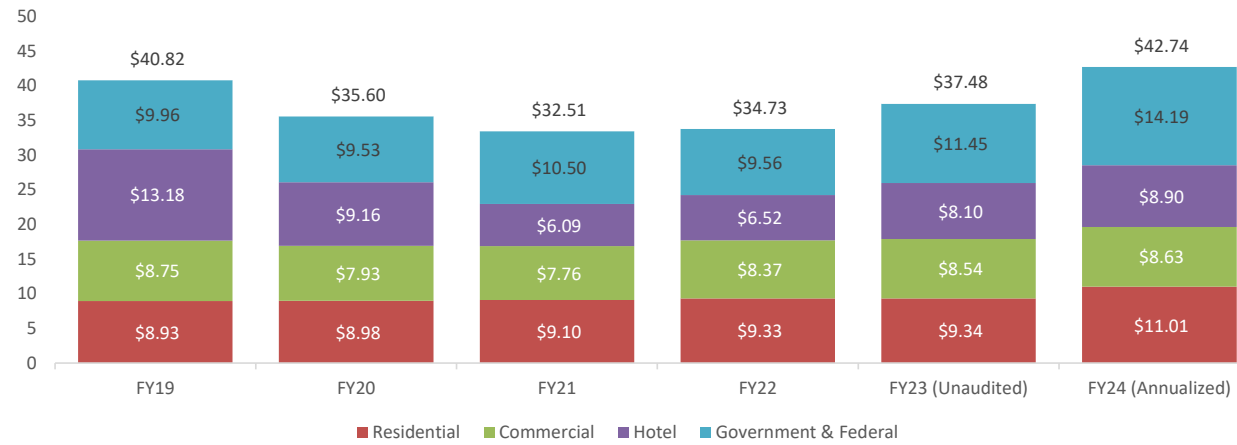
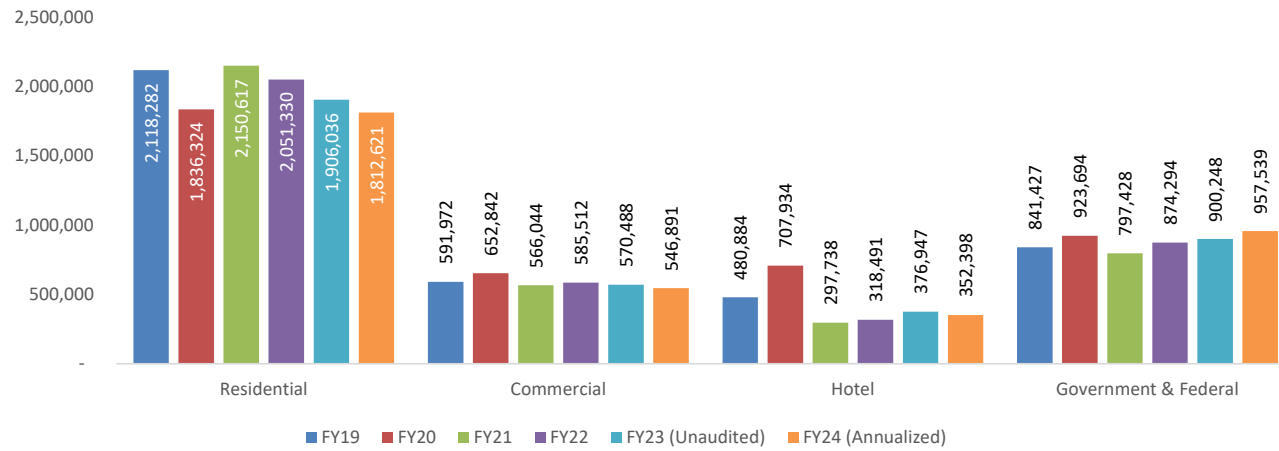


Annual Water Demand and Revenues by Rate Class



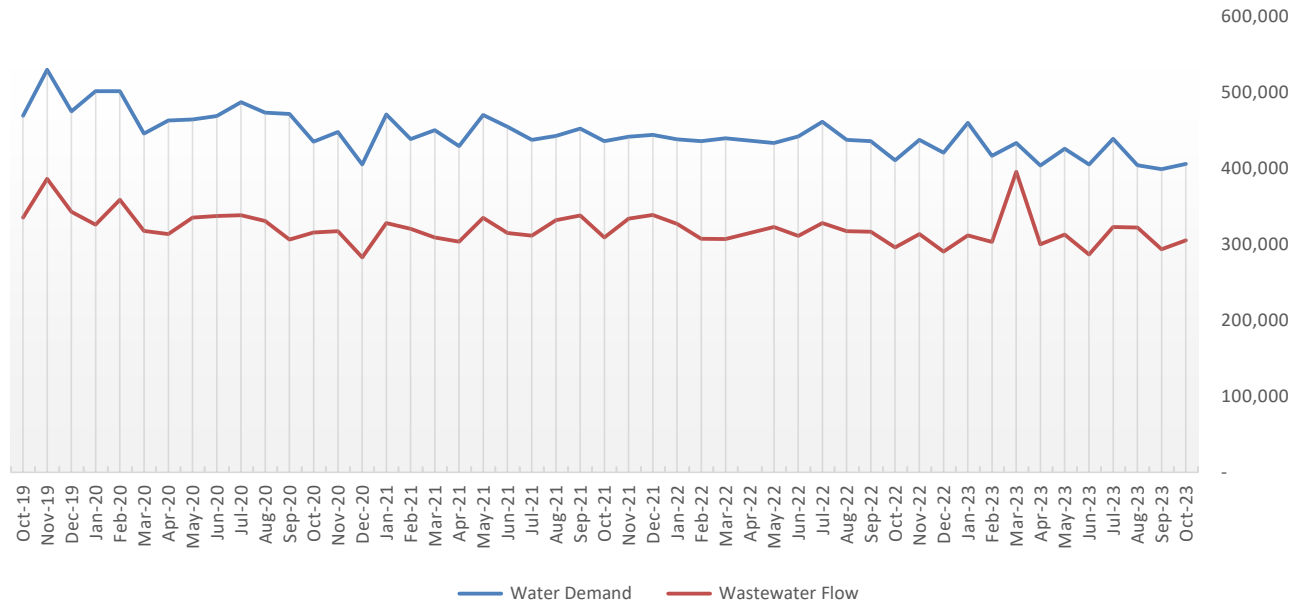


Annual Wastewater Billable Flows and Revenues by Rate Class





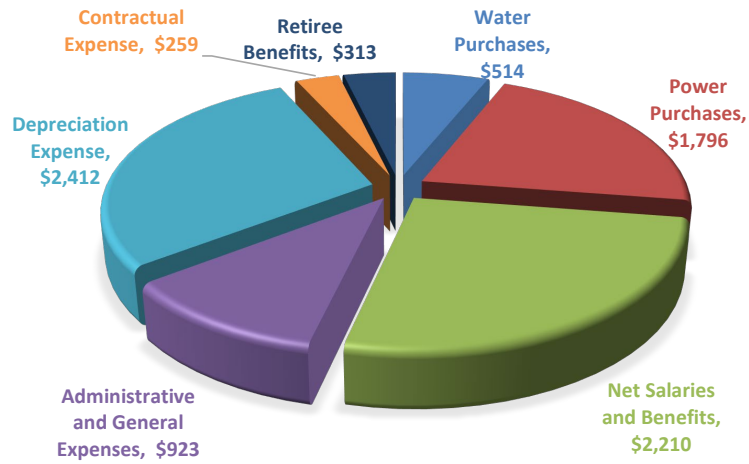
Water Demand & Wastewater Flow – 4 Years



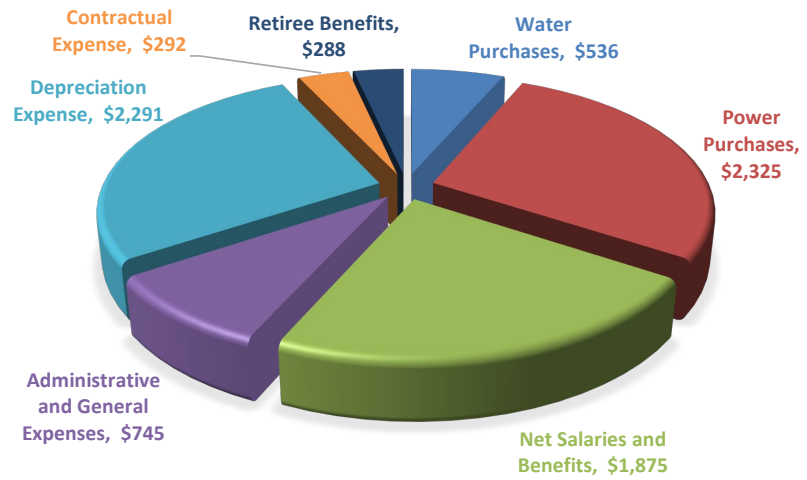


OCTOBER YTD Expenses by Categories

FY2024 (IN '000)

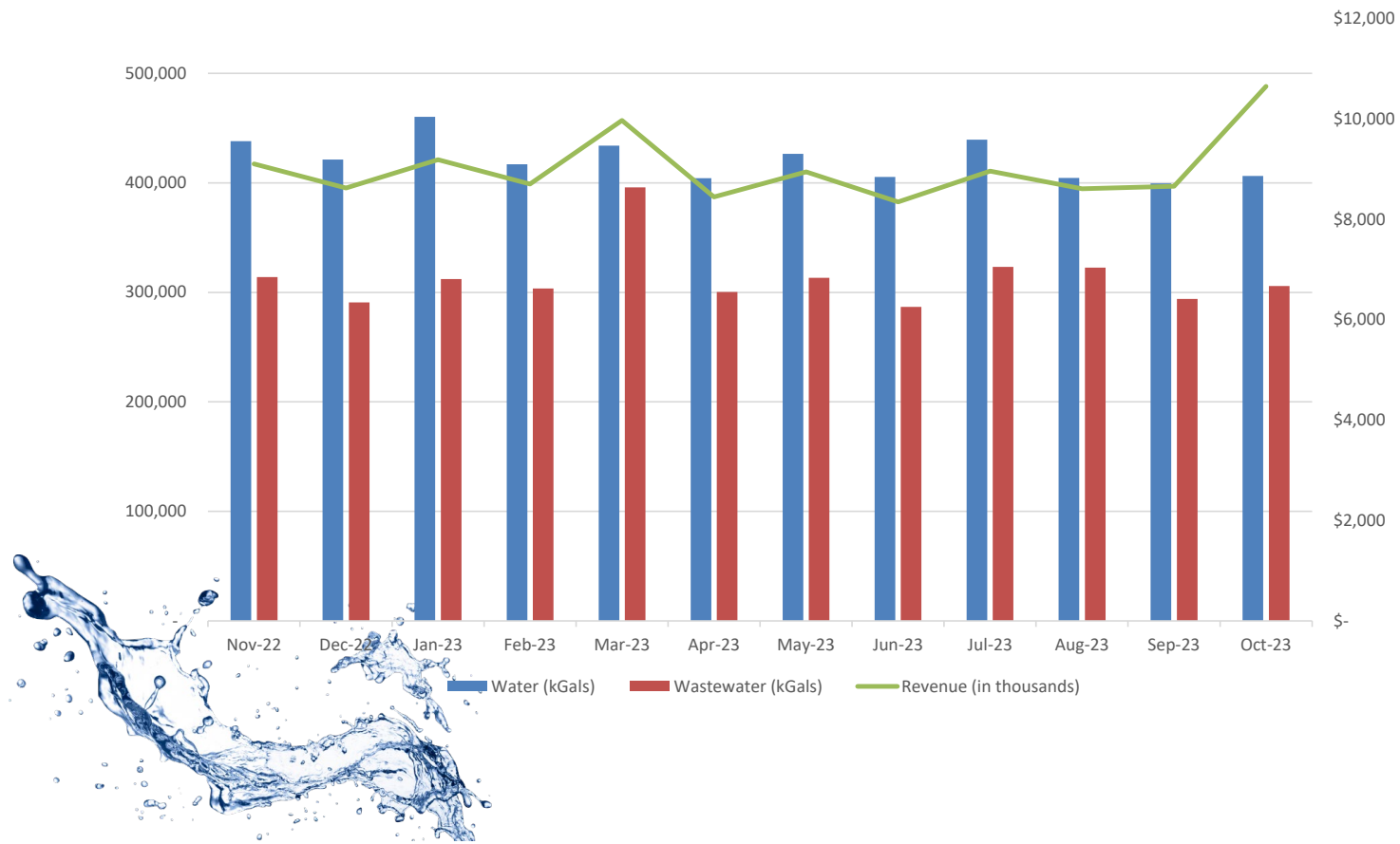


FY2023 (IN '000)



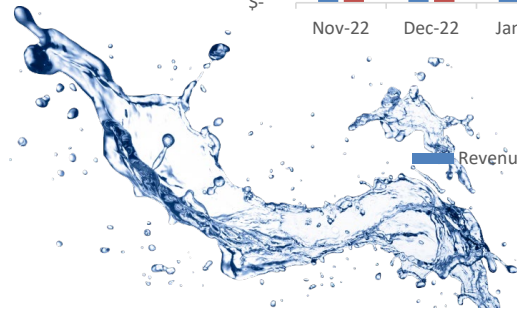
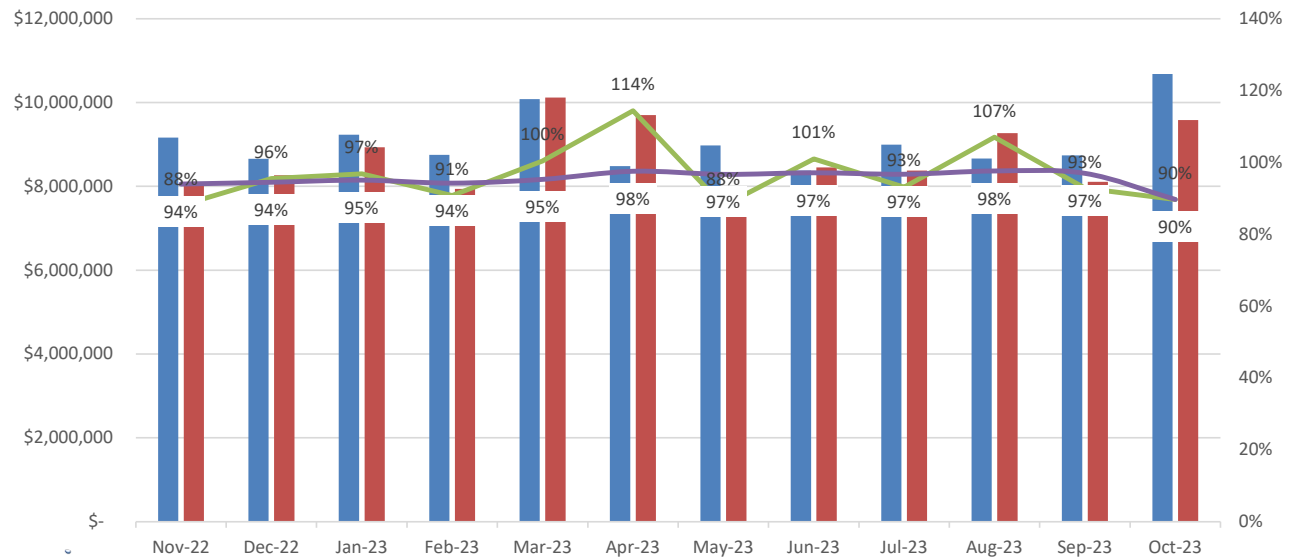


Overall Revenues and Demand





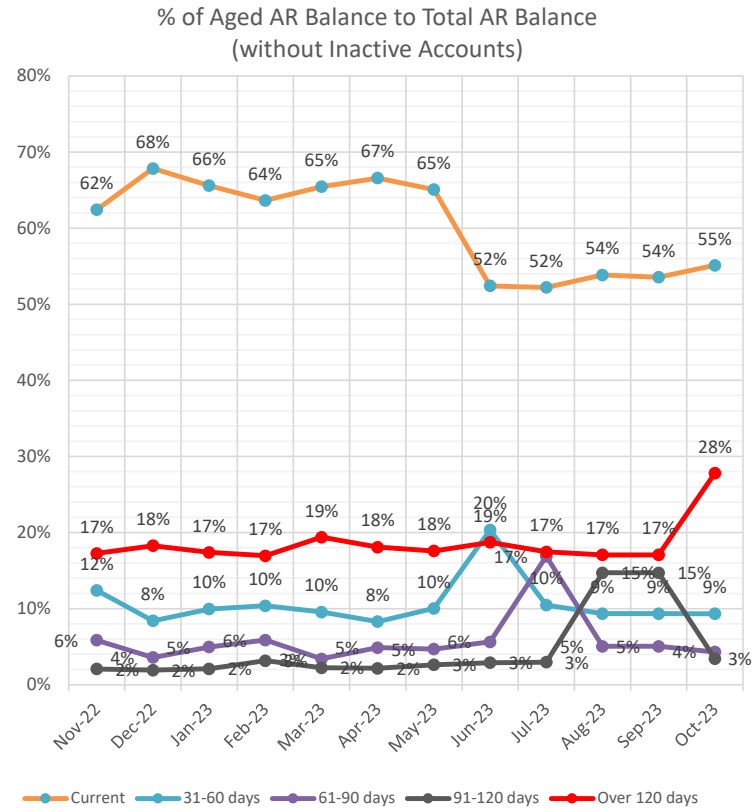
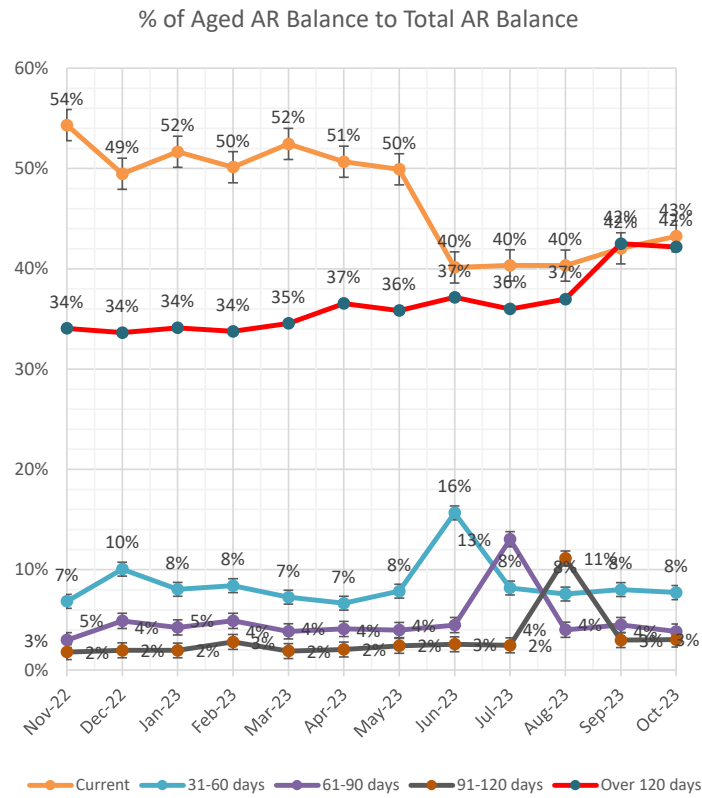
Overall Revenues and Collections



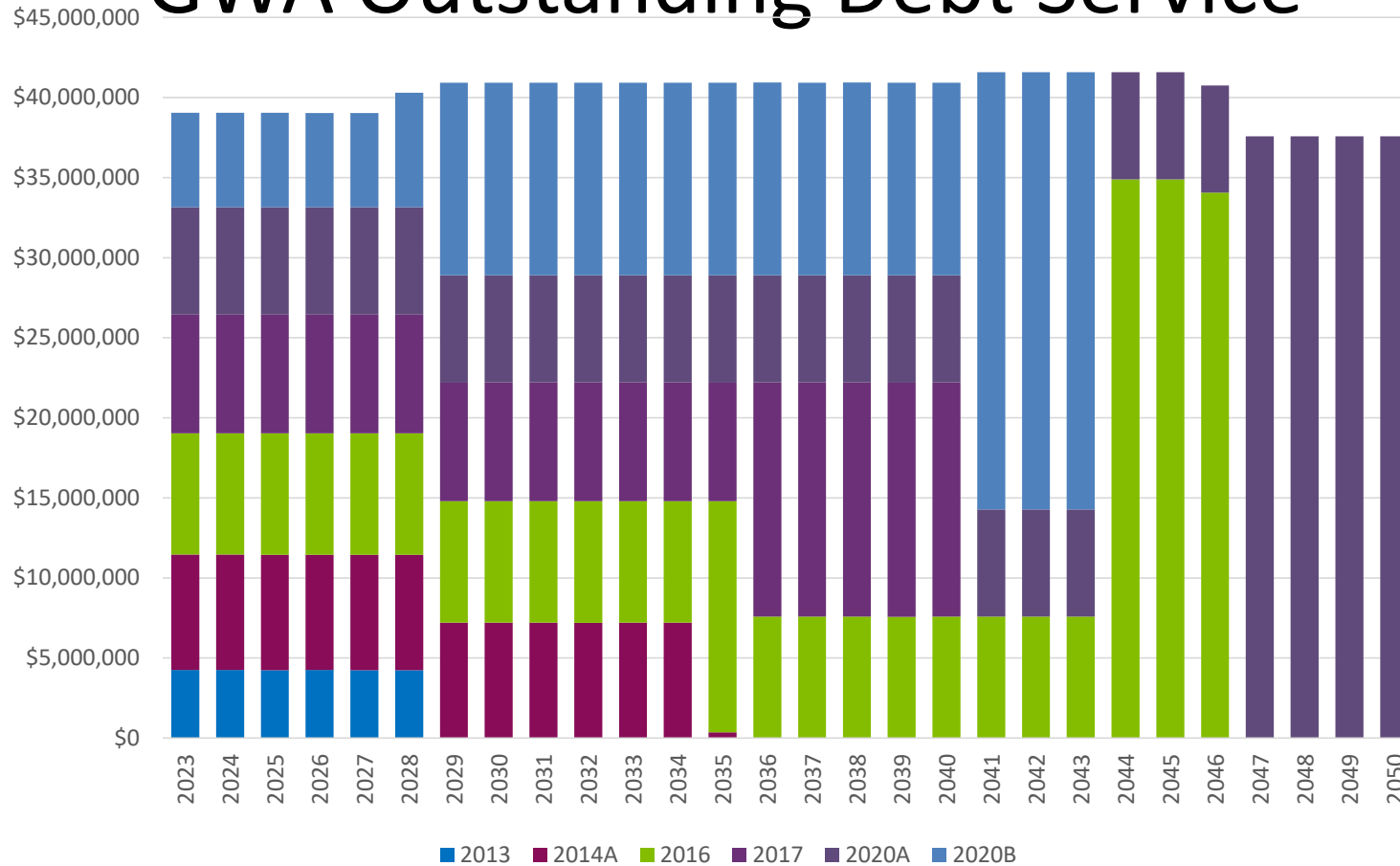
■ Revenue
 ■ Collection
 — MTD Collection Ratio
 — YTD Collection Ratio



Overall – AR Aging



GWA Outstanding Debt Service



Source: Guam Waterworks Authority.
 Aggregated by Fiscal Year Ending September 30.



Financial Statement Overview October 2023

Key Financial Indicators

Indicator	Target	August 2023	September 2023	October 2023
DSC YTD				
• Per Section 6.12 of Indenture	1.25	1.31	1.32 ¹	1.51
• Per PUC / CCU	1.30	1.31	1.32 ¹	1.51
Days – Cash on Hand*	120 days	282 days	271 days ¹	294 days
Collection Ratio				
• Month to Date	99%	107%	93%	90%
• Year to Date	99%	98%	97%	90%
Days Billed	30 days	30 days	31 days	30 days
Account Receivable Days	30 days	34 days	35 days	30 days
Account Payable Days	45 days	33 days	30 days	44 days
Employee Count	400 FTE	359 FTE	356 FTE	359 FTE
Water Demand				
• Month to Date	451,933	404,535	399,479	406,286
• Year to Date	451,933	4,662,533	5,062,012	406,286
Wastewater Flow				
• Month to Date	317,500	322,641	294,046	305,787
• Year to Date	317,500	3,459,672	3,753,719	305,787
Operations & Maintenance Expense*	\$6,567,186	\$6,221,283	\$6,153,810 ¹	\$6,014,838
Water Customers	43,978	43,657	43,658	43,549
Wastewater Customers	27,304	30,791	30,757	30,901

*Excludes Depreciation

¹Sep23 Updated (subject to change at final audit)

Water and Wastewater Consumption

Water consumption is 1% less and wastewater flows are 3% more for the month of October compared to last year. The decrease in water demand was due to decreases in Commercial 2 (laundries), Government of Guam, and Residential Customer Classes. Wastewater flows increases in the Federal Government and Hotels customer classes offset decreases in other customer classes. Note that billing days in October this year were 30 days compared to 29 days last year.

Average daily water consumption (ADC) for October 2023 of 13,543 kgals is 4% less than October 2022's 14,179 kgals. Decreases in the Government of Guam and residential customer classes largely drove the reduction in ADC.

Balance Sheet (Schedule A)

- Total Assets & Deferred Outflows of Resources of \$1.219B in September 2023 increased by \$5.3M or less than 1% to \$1.224B in October 2023. Current Assets increased by \$7.9M primarily due to increases in cash and prepaid expenses. Property, Plant and Equipment decreased by \$2.2M due to increases in depreciation. Other Noncurrent Assets decreased by \$196 thousand due to decreases in restricted cash.



- Liabilities & Deferred Inflow of Resources of \$885.3M in September 2023 increased by \$3.9M or less than 1% to \$889.2M in October 2023 primarily due to increases in Accounts Payables and Interest Payable.
- Accounts Receivable days in October decreased to 30 days from 35 days in September. Accounts Payable days increased to 44 days in October compared to 30 days in September. Schedule I presents Accounts Receivable Aging by Customer Class and Schedule H contains a breakdown of Government Receivables. Schedule J reports Accounts Payable Aging.

Statement of Operations and Retained Earnings (Schedules B-E)

- Total Operating Revenues for October 2023 of \$11.1M is \$235K more than the budget of \$10.8M. October 2023 Total Operating Revenues are 26% or \$2.3M more than October 2022's \$8.8M. Note there was a rate increase of 16.7% effective this month.
- Below are the percentages of operating revenues (water and wastewater) contributed by GWA's customer classes for FY2024 and FY2023 as well as the revenue totals:

Customer Class	FY2024		FY2023	
o Residential	\$4,646,421	43.64%	\$3,871,809	44.56%
o Commercial	2,215,601	20.81%	2,025,841	23.31%
o Hotel	1,672,611	15.71%	1,253,449	14.43%
o Government of Guam	1,236,233	11.61%	1,077,377	12.40%
o Federal Government	836,360	7.86%	426,359	4.91%
o Agriculture, Golf Course, Irrigation	39,787	0.37%	34,279	0.39%
TOTALS	\$10,647,014	100%	\$8,689,114	100.00%

- Total Operating Expenses for October 2023 of \$8.4M were \$461.5K or 5% less than budget of \$8.9M. October 2023 Total Operating Expenses were 1% or \$72.2K more than October 2022's \$8.4M.
- Earnings from Operations for October 2023 of \$2.6M were 36% or \$696.6K more than the budget of \$1.9M and \$2.2M more than October 2022's \$426.3K. Change in Net Assets for October 2023 of \$1.4M was 25% or \$454.1K less than the \$1.8M budget and \$3.1M more than October 2022's -\$1.7M. The increase in the Change in Net Assets year over year was mostly due to the increases in Earnings from Operations.
- No Rate Stabilization Funds were used in October 2023. There is a balance of \$950K in the RSF at the end of October 2023 due to a transfer of settlement monies.

Cash Flow (Schedule F)

- FY2024 cash flows from operating activities were \$3.8M, cash used in capital and financing activities was \$704.7K, and cash used for investing activities was \$3.6M resulting in a FY2024 decrease in cash of \$517.4K. Days Cash on Hand for October 2023 was calculated at 294 days compared to September 2023's 271 days. Schedule G contains a schedule of restricted and unrestricted cash and investments.



Customer Payments

While only 6% of payments are made in cash, a third of payments continue to be made in person. The Upper Tumon drive through continues to remain open.

On April 28, 2020, CCU Resolution 24-FY2020 granted the lifting of credit card limits on payments for non-residential accounts. In FY2023, approximately 48% of payments were made with credit cards. Below is a summary of non-residential credit card payments and related fees.

Month	Customer Count	Amount Paid	Fees	% Of Fees to Payments
May - September 2020	140	\$241,335	\$4,952	2.05%
October 2020-September 2021	526	\$1,119,286	\$22,505	2.01%
October 2021- September 2022	738	\$3,076,971	\$61,588	2.00%
October -December 2022	203	\$878,486	\$16,756	1.91%
January - March 2023	212	\$894,615	\$17,063	1.91%
April - June 2023	166	\$754,679	\$14,394	1.91%
July -September 2023	202	\$889,571	\$17,886	2.01%
October 2023	58	\$307,437	\$6,181	2.01%

The increase in percentage of fees is due to more customers paying on-line versus making payments at the GPWA offices. Credit card payments at GPWA offices use the FHB facility while BOH processes online payments; BOH charges higher fees. An RFP for merchant services should be issued in the upcoming months.

The Upper Tumon office is open for payments on Saturdays. For the four Saturdays in October, 480 payments totaling \$86,359 were made towards GWA billings and 594 payments totaling \$220,044 were made for GPA.

For the month of October, Finance posted \$36,453 in utility payments from the Department of Administration (DOA) for eligible renters as part of the Guam Emergency Rental Assistance Program (GERAP). There were \$15,862 in payments received for eligible homeowners as part of the Guam Homeowners Assistance Fund (GHAFF). There were no payments from the Guam Low Income Household Water Assistance Program (GLIHWAP).

Guam Solid Waste (GSW) Customer Payments

GPWA began to accept GSW payments on June 6, 2022. For the month of October 2023, GWA accepted \$62,737 in GSW payments at the Upper Tumon Office. GWA will bill \$1,143 to GSW for processing fees.

CIP Update

Below is a table providing a summary of the various sources of funding available for GWA CIPs. The expenditures are life to date. Note that Department of Interior Grants also include funding for training.



Funding Source	Balance net of CIF Transfer	Expenditures as of 10/31/2023	Outstanding Encumbrances	Funding Request	Total Expenditures, Encumbrances, & Funding Requests	Unobligated Project Costs 10/31/2023	% Unobligated
B2016	\$ 142,030,084	\$ 115,239,275	\$ 17,143,174	\$ 934,212	\$ 133,316,660	\$ 8,713,424	6.13%
B2017	\$ 87,808,135	\$ 84,144,502	\$ 598,920	\$ 177,272	\$ 84,920,694	\$ 2,887,442	3.29%
B2020A	\$ 128,983,807	\$ 17,470,152	\$ 13,612,385	\$ 6,394,983	\$ 37,477,520	\$ 91,506,287	70.94%
B2020B	\$ 140,391,938	\$ 137,193,336	\$ 563,896	\$ 1,545,277	\$ 139,302,510	\$ 1,089,428	0.78%
Construction Fund	\$ 4,729,284	\$ -	\$ -	\$ 1,798,477	\$ 1,798,477	\$ 2,930,807	61.97%
SDC	\$ 17,518,277	\$ 12,185,510	\$ 260,303	\$ 1,094,000	\$ 13,539,814	\$ 3,978,463	22.71%
DOI	\$ 2,133,783	\$ 101,019	\$ 64,653		\$ 165,672	\$ 1,968,111	92.24%
USEPA	\$ 120,828,094	\$ 30,805,690	\$ 7,413,397		\$ 38,219,087	\$ 82,609,007	68.37%
ARPA	\$ 8,637,400	\$ 100,570	\$ 1,063,752		\$ 1,164,322	\$ 7,473,078	86.52%
IFCIP	\$ 21,514,402	\$ 12,754,820	\$ 1,610,358	\$ 6,349,006	\$ 20,714,183	\$ 800,219	3.72%
Totals	\$ 674,575,205	\$ 409,994,874	\$ 42,330,838	\$ 18,293,227	\$ 470,618,939	\$ 203,956,265	30.23%

FY2025-FY2029 Financial Plan

The budget call for the FY2025-FY2029 rate plan was issued. Initial submittals by business units to their AGMs were due October 20, 2023, and from the AGMs to Budget on November 3rd. The PUC Rate Order included a submission deadline of April 1, 2024, for the next five-year financial plan. The Rate Payers Bill of Rights requires a 3-month and 1-month notice prior to the filing of the plan with the PUC. The update of the master plan will help to build the 5-year CIP which will be an integral part of the financial plan. GWA has proposed a timeline to the PUC to facilitate a timely review and approval of the financial plan.

Rating Agency Actions

On November 3, 2023, Moody's affirmed GWA's Baa2 rating and changed the outlook from negative to stable. A Baa2 rating is considered medium grade and subject to moderate risk.

Subsequently, on November 17, 2023, S&P Global Ratings affirmed GWA's A- rating but revised the outlook from stable to negative. The outlook change was due to the narrowing of debt service coverage, use of reserves and one-time revenues to augment debt service coverage and lack of an approved rate plan. An A- rating indicates a strong capacity to meet financial commitments but susceptibility to adverse economic conditions or changing circumstances.



GUAM WATERWORKS AUTHORITY

"Better Water, Better Lives."

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

Tel: (671) 300-6846/7

Issues for Decision

Resolution No. 03-FY2024

Relative to Approval of Additional Funding for the Hagatna Main Sewage Pump Station Rehabilitation and Redundant Force Main Design Project, GWA Project No. S20-002-EPA

What is the project's objective and is it necessary and urgent?

The Hagatna Main force main is approximately 2,700 feet long, traverses under Hagatna Bay, and is the sole conveyance of wastewater from the pump station to the Hagatna Wastewater Treatment Plant. The force main's condition, unknown at this time and failure of the force main could lead to service disruptions which may impact the health of the community, environment, and economy of the capital village of Guam.

The project's original design was to utilize horizontal directional drilling to install two (2) new force mains. However, the original rough order of magnitude estimated construction cost of \$10.3M for two (2) new force mains increased to a range between \$17.7 million and \$20.6M for a single force main. In order to keep construction costs manageable, the design was pivoted to construct a bypass force main to maintain sewer service while the existing force main will be rehabilitated.

The Hagatna Main Pump Station is essential to force main operations in which the impending Consent Decree requires it to be rehabilitated within two years of the Consent Decree's effective date. The designer's proposal includes the assessment, rehabilitation and an allotment for design, as the actual design scope has not yet been determined since it is dependent on the assessment of the existing force main and sewage pump station. A 20% contingency is requested to allow the designer to move forward with a design based on a negotiated design price. The contingency will also allow the designer to assist with specification and procurement of long-lead items prior to a construction contract being awarded.

Where is the project located?

The Hagatna Main Sewage Pump Station is located at the Northeast Corner of the Route 1 and the entrance to Chamoru Village, in Hagatna. The force main originates at the pump station, traverses south of the station along Route 1, then crosses under Hagatna Bay, and terminates at the Hagatna Wastewater Treatment Plant (see map on page 2)

How much will it cost?

Original Contract Cost: \$603,951.14
 Additional Cost for new bypass FM Design: \$ 59,911.65

Additional Cost for pump station assessment including
 a design allowance of \$350,000.00: \$695,227.00
Contract + change order: \$1,359,089.79

Twenty (20) percent contingency \$271,817.96
Total authorized amount \$1,630,907.75

When will it be completed?

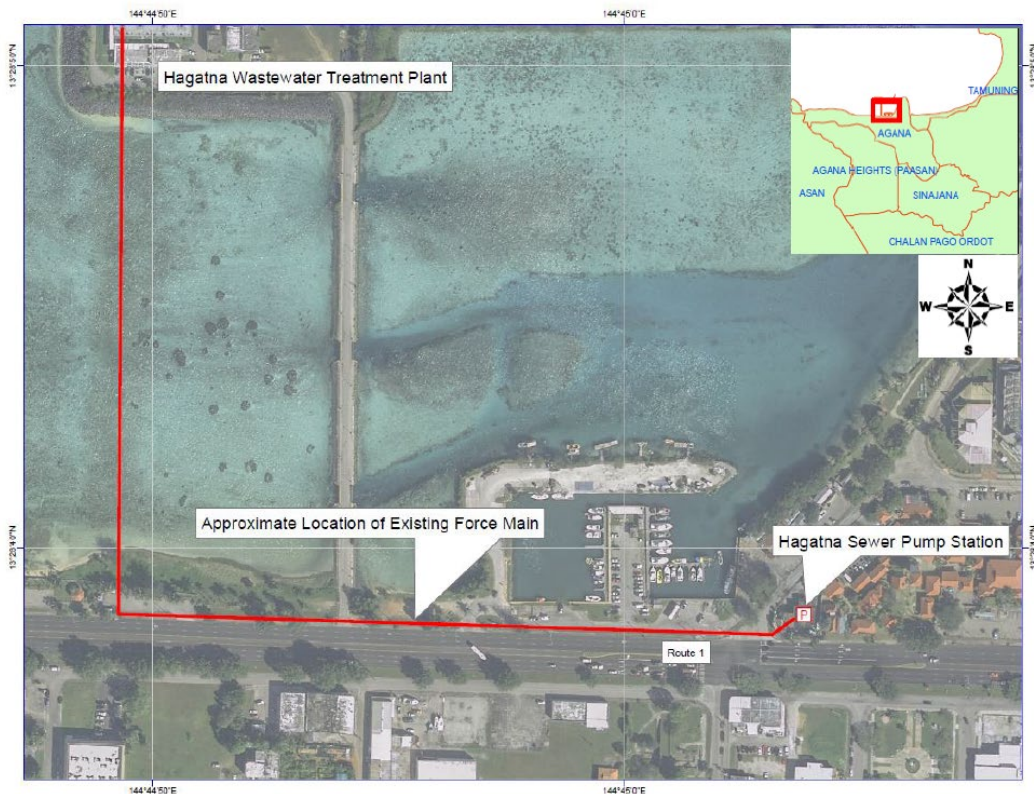
Design is scheduled to be completed eight months after change order execution (anticipated to be September 2024). Construction procurement will begin upon completion of the design.

What is the funding source?

United States Environmental Protection Agency grants

The RFP/BID responses (if applicable):

Not Applicable.



Hagatna Sewage Pump Station and Force Main Location



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

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GWA RESOLUTION NO. 03-FY2024

RELATIVE TO APPROVAL OF ADDITIONAL FUNDING FOR THE HAGATNA MAIN SEWAGE PUMP STATION REHABILITATION AND REDUNDANT FORCE MAIN DESIGN PROJECT, GWA PROJECT NO. S20-002-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 (“GWA”) is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA's public wastewater collection/transmission system, consisting of gravity mains, manholes, laterals, force mains (FM), sewer pump stations (SPS), and other related appurtenances, are in need of repair, rehabilitation, or replacement; and

WHEREAS, GWA has received United States Environmental Protection Agency (USEPA) grant funding for the Hagatna Main FM design project; and

WHEREAS, the Hagatna Main FM is approximately 2,700 feet long, runs along Route 1, then under West Hagatna Bay to the Hagatna Wastewater Treatment Plant (WWTP), and is the sole conveyance of wastewater from the pump station to the Hagatna WWTP; and

WHEREAS, the FM’s condition is unknown, and failure of the FM could lead to service disruptions which may impact the health of the community, environment, and economy of the large service area and the island; and

WHEREAS, to address this concern, GWA advertised a Request For Proposals on July 7, 2020, and entered into a contract for design services for a redundant FM with GHD, Inc., on April 7,

1 2021, in the amount of Six Hundred and Three Thousand Nine Hundred Fifty-One Dollars and
2 Fourteen cents (\$603,951.14), as shown in Exhibit A; and

3
4 **WHEREAS**, the original rough order of magnitude estimated construction cost to horizontal
5 directional drill two (2) FM was Ten Million Three Hundred Thousand Dollars (\$10,300,000) when
6 design was initiated and then it increased to a range between Seventeen Million Seven Hundred
7 Thousand Dollars (\$17,700,000) to Twenty Million Six Hundred Thousand Dollars (\$20,600,000)
8 for a single FM; and

9
10 **WHEREAS**, to reduce cost and manage the construction budget, the design approach was
11 pivoted to construct a temporary bypass FM over the Hagatna WWTP Causeway to provide
12 continuous wastewater service while rehabilitating the existing FM; and

13
14 **WHEREAS**, the cost for the FM design pivot was negotiated to be Two Hundred Sixty-Five
15 Thousand Eight Hundred Ninety Dollars and Eighty-Four Cents (\$265,890.84), as shown in Exhibit
16 B; and

17
18 **WHEREAS**, the remaining contract budget for the two new FM design as well as the pivot
19 to a new design for the bypass FM results in an additional Fifty-Nine Thousand, Nine Hundred
20 Eleven Dollars and Sixty-Five Cents (\$59,911.65) (refer to Exhibit B); and

21
22 **WHEREAS**, the impending Consent Decree with USEPA requires a Force Main Condition
23 Assessment, Force Main Action Plan and Implementation of the Force Main Action Plan for the FM
24 identified in Consent Decree Table A (refer to Exhibit C) to be completed within nine (9) years of
25 the Effective Date; and in which Hagatna FM is the highest priority listed in Table A; and

26
27 **WHEREAS**, the impending Consent Decree with the USEPA requires the rehabilitation of
28 the Hagatna Main SPS within two (2) years of the effective date including any start-up activities and
29 any related Operations & Maintenance training by field personnel; and

30

1 **WHEREAS**, USEPA has approved the Hagatna FM and the inclusion of the SPS
2 rehabilitation in the design project, as pump station operations are essential for FM operations; and

3
4 **WHEREAS**, the negotiated cost for the SPS rehabilitation assessment and design allowance
5 is Six Hundred Ninety-Five Thousand Two Hundred Twenty-Seven Dollars (\$695,227), as shown in
6 Exhibit D; and

7
8 **WHEREAS**, given the two (2) year time frame required to complete the SPS rehabilitation, a
9 twenty percent (20%) contingency of Two Hundred Seventy-One Thousand Eight Hundred
10 Seventeen Dollars and Ninety-Six Cents (\$271,817.96) is requested to reduce processing time for
11 any future change orders and provide a budget for the designer to assist with the specification and
12 procurement of long-lead items prior to construction contract execution; and

13
14 **WHEREAS**, the total contract cost to include the bypass FM design and SPS assessment and
15 design rehabilitation is One Million Three Hundred Fifty-Nine Thousand Eight-Nine Dollars and
16 Seventy-Nine Cents (\$1,359,089.79), with a twenty percent (20%) contingency of Two Hundred
17 Seventy-One Thousand Eight Hundred Seventeen Dollars and Ninety-Six Cents (\$271,817.96) will
18 bring the total authorized funding amount to One Million Six Hundred Thirty Thousand Nine
19 Hundred Seven Dollars and Seventy-Five Cents (\$1,630,907.75); and

20
21 **WHEREAS**, funding for this design project will be from the USEPA grants; and

22
23 **NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities does
24 hereby approve the following:

- 25 1. The recitals set forth above hereby constitute the findings of the CCU.
26 2. The CCU finds that the requested funding authorization increases to be fair,
27 reasonable, and necessary for the Hagatna Main FM and SPS rehabilitation
28 design.
29 3. The CCU hereby authorizes the management of GWA to execute a Change Order
30 to the contract with GHD, Inc., for a total contract amount of One Million Three

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Hundred Fifty-Nine Thousand Eight-Nine Dollars and Seventy-Nine Cents (\$1,359,089.79).

4. The CCU hereby authorizes the total funding amount to include a twenty percent (20%) contingency, increasing the authorized funding amount to One Million Six Hundred Thirty Thousand Nine Hundred Seven Dollars and Seventy-Five Cents (\$1,630,907.75).

5. The CCU hereby further authorizes the use of USEPA grants as the funding source.

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

DULY AND REGULARLY ADOPTED, this 28th day of November 2023.

Certified by:

Attested by:

JOSEPH T. DUENAS
Chairperson

PEDRO ROY MARTINEZ
Secretary

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SECRETARY'S CERTIFICATE

I, Pedro Roy Martinez, 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: _____
- ABSENT: _____
- ABSTAIN: _____

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EXHIBIT A

**AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR PROFESSIONAL SERVICES**

EJCDC® E-500, Agreement Between Owner and Engineer for Professional Services.
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TABLE OF CONTENTS

	<u>Page</u>
ARTICLE 1 – SERVICES OF ENGINEER	1
1.01 Scope	1
ARTICLE 2 – OWNER’S RESPONSIBILITIES.....	1
2.01 General	1
ARTICLE 3 – SCHEDULE FOR RENDERING SERVICES.....	2
3.01 Commencement.....	2
3.02 Time for Completion	2
ARTICLE 4 – INVOICES AND PAYMENTS	2
4.01 Invoices.....	2
4.02 Payments	3
ARTICLE 5 – OPINIONS OF COST	3
5.01 Opinions of Probable Construction Cost	3
5.02 Designing to Construction Cost Limit	3
5.03 Opinions of Total Project Costs.....	4
ARTICLE 6 – GENERAL CONSIDERATIONS.....	4
6.01 Standards of Performance	4
6.02 Design Without Construction Phase Services	6
6.03 Use of Documents.....	6
6.04 Electronic Transmittals.....	7
6.05 Insurance	7
6.06 Suspension and Termination	8
6.07 Controlling Law.....	9
6.08 Successors, Assigns, and Beneficiaries	9
6.09 Dispute Resolution	10
6.10 Environmental Condition of Site.....	10
6.11 Indemnification and Mutual Waiver	11
6.12 Records Retention.....	12
6.13 Miscellaneous Provisions	12
ARTICLE 7 – DEFINITIONS.....	12
7.01 Defined Terms	12
ARTICLE 8 – EXHIBITS AND SPECIAL PROVISIONS	16
8.01 Exhibits Included:	16
8.02 Total Agreement:	17
8.03 Designated Representatives:	17
8.04 Engineer’s Certifications:	17

**AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR PROFESSIONAL SERVICES**

THIS IS AN AGREEMENT effective as of April 7, 2021 (“Effective Date”) between
Guam Waterworks Authority (“Owner”) and
GHD INC. (“Engineer”).

Owner's Project, of which Engineer's services under this Agreement are a part, is generally identified as follows:

**Hagatna Main Sewage Pump Station Redundant Force Main
GWA Project No. S20-002-EPA**

Other terms used in this Agreement are defined in Article 7.

Engineer's services under this Agreement are generally identified as follows:

- 1) Identify redundant force main options and provide the design for the selected option.**
- 2) Investigate the current condition of the existing force main. If repair/relocation is needed, then identify options and provide the design for the selected option, including pump station upgrades, if necessary.**

Owner and Engineer further agree as follows:

ARTICLE 1 – SERVICES OF ENGINEER

1.01 *Scope*

- A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

ARTICLE 2 – OWNER'S RESPONSIBILITIES

2.01 *General*

- A. Owner shall have the responsibilities set forth herein and in Exhibit B.
- B. Owner shall pay Engineer as set forth in Article 4 and Exhibit C.
- C. Owner shall be responsible for all requirements and instructions that it furnishes to Engineer pursuant to this Agreement, and for the accuracy and completeness of all programs, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use and rely upon such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement, subject to any express limitations or reservations applicable to the furnished items.

- D. Owner shall give prompt written notice to Engineer whenever Owner observes or otherwise becomes aware of:
 - 1. any development that affects the scope or time of performance of Engineer's services;
 - 2. the presence at the Site of any Constituent of Concern; or
 - 3. any relevant, material defect or nonconformance in: (a) Engineer's services, (b) the Work, (c) the performance of any Constructor, or (d) Owner's performance of its responsibilities under this Agreement.

ARTICLE 3 – SCHEDULE FOR RENDERING SERVICES

3.01 Commencement

- A. Engineer is authorized to begin rendering services as of the Effective Date.

3.02 Time for Completion

- A. Engineer shall complete its obligations within a reasonable time. Specific periods of time for rendering services, or specific dates by which services are to be completed, are provided in Exhibit A, and are hereby agreed to be reasonable.
- B. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's services is impaired, or Engineer's services are delayed or suspended, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.
- C. If Owner authorizes changes in the scope, extent, or character of the Project or Engineer's services, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.
- D. Owner shall make decisions and carry out its other responsibilities in a timely manner so as not to delay the Engineer's performance of its services.
- E. If Engineer fails, through its own fault, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then Owner shall be entitled, as its sole remedy, to the recovery of direct damages, if any, resulting from such failure.

ARTICLE 4 – INVOICES AND PAYMENTS

4.01 Invoices

- A. *Preparation and Submittal of Invoices:* Engineer shall prepare invoices in accordance with its standard invoicing practices and the terms of Exhibit C. Engineer shall submit its invoices to Owner on a monthly basis. Invoices are due and payable within 45 days of receipt.

4.02 *Payments*

- A. *Application to Interest and Principal:* Payment will be credited first to any interest owed to Engineer and then to principal.
- B. *Failure to Pay:* If Owner fails to make any payment due Engineer for services and expenses within 45 days after receipt of Engineer's invoice, then:
 - 1. amounts due Engineer will be increased at the maximum rate of interest permitted by law from said forty-fifth day; and
 - 2. Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement until Owner has paid in full all amounts due for services, expenses, and other related charges. Owner waives any and all claims against Engineer for any such suspension.
- C. *Disputed Invoices:* If Owner disputes an invoice, either as to amount or entitlement, then Owner shall promptly advise Engineer in writing of the specific basis for doing so, may withhold only that portion so disputed, and must pay the undisputed portion subject to the terms of Paragraph 4.01.
- D. *Sales or Use Taxes:* If after the Effective Date any governmental entity takes a legislative action that imposes additional sales or use taxes on Engineer's services or compensation under this Agreement, then Engineer may invoice such additional sales or use taxes for reimbursement by Owner. Owner shall reimburse Engineer for the cost of such invoiced additional sales or use taxes; such reimbursement shall be in addition to the compensation to which Engineer is entitled under the terms of Exhibit C.

ARTICLE 5 – OPINIONS OF COST

5.01 *Opinions of Probable Construction Cost*

- A. Engineer's opinions (if any) of probable Construction Cost are to be made on the basis of Engineer's experience, qualifications, and general familiarity with the construction industry. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer. If Owner requires greater assurance as to probable Construction Cost, then Owner agrees to obtain an independent cost estimate.

5.02 *Designing to Construction Cost Limit*

- A. If a Construction Cost limit is established between Owner and Engineer, such Construction Cost limit and a statement of Engineer's rights and responsibilities with respect thereto will be specifically set forth in Exhibit F to this Agreement.

5.03 *Opinions of Total Project Costs*

- A. The services, if any, of Engineer with respect to Total Project Costs shall be limited to assisting the Owner in tabulating the various categories that comprise Total Project Costs. Engineer assumes no responsibility for the accuracy of any opinions of Total Project Costs.

ARTICLE 6 – GENERAL CONSIDERATIONS

6.01 *Standards of Performance*

- A. *Standard of Care:* The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with any services performed or furnished by Engineer.
- B. *Technical Accuracy:* Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct deficiencies in technical accuracy without additional compensation, unless such corrective action is directly attributable to deficiencies in Owner-furnished information.
- C. *Consultants:* Engineer may retain such Consultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner.
- D. *Reliance on Others:* Subject to the standard of care set forth in Paragraph 6.01.A, Engineer and its Consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.
- E. *Compliance with Laws and Regulations, and Policies and Procedures:*
 - 1. Engineer and Owner shall comply with applicable Laws and Regulations.
 - 2. Engineer shall comply with any and all policies, procedures, and instructions of Owner that are applicable to Engineer's performance of services under this Agreement and that Owner provides to Engineer in writing, subject to the standard of care set forth in Paragraph 6.01.A, and to the extent compliance is not inconsistent with professional practice requirements.
 - 3. This Agreement is based on Laws and Regulations and Owner-provided written policies and procedures as of the Effective Date. The following may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, or compensation:
 - a. changes after the Effective Date to Laws and Regulations;
 - b. the receipt by Engineer after the Effective Date of Owner-provided written policies and procedures;

- c. changes after the Effective Date to Owner-provided written policies or procedures.
- F. Engineer shall not be required to sign any document, no matter by whom requested, that would result in the Engineer having to certify, guarantee, or warrant the existence of conditions whose existence the Engineer cannot ascertain. Owner agrees not to make resolution of any dispute with the Engineer or payment of any amount due to the Engineer in any way contingent upon the Engineer signing any such document.
- G. The general conditions for any construction contract documents prepared hereunder are to be EJCDC® C-700 "Standard General Conditions of the Construction Contract" (2013 Edition), prepared by the Engineers Joint Contract Documents Committee, unless expressly indicated otherwise in Exhibit J or elsewhere in this Agreement.
- H. Engineer shall not at any time supervise, direct, control, or have authority over any Constructor's work, nor shall Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, or the safety precautions and programs incident thereto, for security or safety at the Site, nor for any failure of a Constructor to comply with Laws and Regulations applicable to that Constructor's furnishing and performing of its work. Engineer shall not be responsible for the acts or omissions of any Constructor.
- I. Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's, failure to furnish and perform the Work in accordance with the Construction Contract Documents.
- J. Engineer shall not be responsible for any decision made regarding the Construction Contract Documents, or any application, interpretation, clarification, or modification of the Construction Contract Documents, other than those made by Engineer or its Consultants.
- K. Engineer is not required to provide and does not have any responsibility for surety bonding or insurance-related advice, recommendations, counseling, or research, or enforcement of construction insurance or surety bonding requirements.
- L. Engineer's services do not include providing legal advice or representation.
- M. Engineer's services do not include (1) serving as a "municipal advisor" for purposes of the registration requirements of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) or the municipal advisor registration rules issued by the Securities and Exchange Commission, or (2) advising Owner, or any municipal entity or other person or entity, regarding municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, or other similar matters concerning such products or issuances.
- N. While at the Site, Engineer, its Consultants, and their employees and representatives shall comply with the applicable requirements of Contractor's and Owner's safety programs of which Engineer has been informed in writing.

6.02 *Design Without Construction Phase Services*

- A. Engineer shall be responsible only for those Construction Phase services expressly required of Engineer in Exhibit A, Paragraph A1.05. With the exception of such expressly required services, Engineer shall have no design, Shop Drawing review, or other obligations during construction, and Owner assumes all responsibility for the application and interpretation of the Construction Contract Documents, review and response to Contractor claims, Construction Contract administration, processing of Change Orders and submittals, revisions to the Construction Contract Documents during construction, construction observation and review, review of Contractor's payment applications, and all other necessary Construction Phase administrative, engineering, and professional services. Owner waives all claims against the Engineer that may be connected in any way to Construction Phase administrative, engineering, or professional services except for those services that are expressly required of Engineer in Exhibit A.

6.03 *Use of Documents*

- A. All Documents are instruments of service, and Engineer shall retain an ownership and property interest therein (including the copyright and the right of reuse at the discretion of the Engineer) whether or not the Project is completed.
- B. If Engineer is required to prepare or furnish Drawings or Specifications under this Agreement, Engineer shall deliver to Owner at least one original printed record version of such Drawings and Specifications, signed and sealed according to applicable Laws and Regulations.
- C. Owner may make and retain copies of Documents for information and reference in connection with the use of the Documents on the Project. Engineer grants Owner a limited license to use the Documents on the Project, extensions of the Project, and for related uses of the Owner, subject to receipt by Engineer of full payment due and owing for all services relating to preparation of the Documents, and subject to the following limitations: (1) Owner acknowledges that such Documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project, on any other project, or for any other use or purpose, without written verification or adaptation by Engineer; (2) any such use or reuse, or any modification of the Documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to its officers, directors, members, partners, agents, employees, and Consultants; (3) Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification of the Documents without written verification, completion, or adaptation by Engineer; and (4) such limited license to Owner shall not create any rights in third parties.
- D. If Engineer at Owner's request verifies the suitability of the Documents, completes them, or adapts them for extensions of the Project or for any other purpose, then Owner shall compensate Engineer at rates or in an amount to be agreed upon by Owner and Engineer.

6.04 *Electronic Transmittals*

- A. Owner and Engineer may transmit, and shall accept, Project-related correspondence, Documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, in accordance with a mutually agreeable protocol.
- B. If this Agreement does not establish protocols for electronic or digital transmittals, then Owner and Engineer shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

6.05 *Insurance*

- A. Engineer shall procure and maintain insurance as set forth in Exhibit G. Engineer shall cause Owner to be listed as an additional insured on any applicable general liability insurance policy carried by Engineer.
- B. Owner shall procure and maintain insurance as set forth in Exhibit G. Owner shall cause Engineer and its Consultants to be listed as additional insureds on any general liability policies carried by Owner, which are applicable to the Project.
- C. 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.
- D. Owner and Engineer shall each deliver to the other certificates of insurance evidencing the coverages indicated in Exhibit G. Such certificates shall be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.
- E. 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.

- F. 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.
- G. 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 G. 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 G will be supplemented to incorporate these requirements.

6.06 *Suspension and Termination*

A. *Suspension:*

- 1. *By Owner:* Owner may suspend the Project for up to 90 days upon seven days written notice to Engineer.
- 2. *By Engineer:* Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement if Owner has failed to pay Engineer for invoiced services and expenses, as set forth in Paragraph 4.02.B, or in response to the presence of Constituents of Concern at the Site, as set forth in Paragraph 6.10.D.

B. *Termination:* The obligation to provide further services under this Agreement may be terminated:

- 1. For cause,
 - a. by either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.
 - b. by Engineer:
 - 1) upon seven days written notice if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional; or
 - 2) upon seven days written notice if the Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control, or as the result of the presence at the Site of undisclosed Constituents of Concern, as set forth in Paragraph 6.10.D.
 - 3) Engineer shall have no liability to Owner on account of such termination.
 - c. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 6.06.B.1.a if the party receiving such notice begins, within seven days of

receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience, by Owner effective upon Engineer's receipt of notice from Owner.
- C. *Effective Date of Termination:* The terminating party under Paragraph 6.06.B may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.
- D. *Payments Upon Termination:*
1. In the event of any termination under Paragraph 6.06, Engineer will be entitled to invoice Owner and to receive full payment for all services performed or furnished in accordance with this Agreement and all Reimbursable Expenses incurred through the effective date of termination. Upon making such payment, Owner shall have the limited right to the use of Documents, at Owner's sole risk, subject to the provisions of Paragraph 6.03.
 2. In the event of termination by Owner for convenience or by Engineer for cause, Engineer shall be entitled, in addition to invoicing for those items identified in Paragraph 6.06.D.1, to invoice Owner and receive payment of a reasonable amount for services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with Engineer's Consultants, and other related close-out costs, using methods and rates for Additional Services as set forth in Exhibit C.

6.07 *Controlling Law*

- A. This Agreement is to be governed by the Laws and Regulations of the state in which the Project is located.

6.08 *Successors, Assigns, and Beneficiaries*

- A. Owner and Engineer are hereby bound and the successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 6.08.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.
- B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, money that is due or may become due) in this Agreement without the written consent of the other party, except to the extent that any

assignment, subletting, or transfer is mandated by law. 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 this Agreement.

- C. Unless expressly provided otherwise in this Agreement:
1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Constructor, other third-party individual or entity, or to any surety for or employee of any of them.
 2. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.
 3. Owner agrees that the substance of the provisions of this Paragraph 6.08.C shall appear in the Construction Contract Documents.

6.09 *Dispute Resolution*

- A. Owner and Engineer agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice prior to invoking the procedures of Exhibit H or other provisions of this Agreement, or exercising their rights at law.
- B. If the parties fail to resolve a dispute through negotiation under Paragraph 6.09.A, then either or both may invoke the procedures of Exhibit H. If Exhibit H is not included, or if no dispute resolution method is specified in Exhibit H, then the parties may exercise their rights at law.

6.10 *Environmental Condition of Site*

- A. Owner represents to Engineer that as of the Effective Date to the best of Owner's knowledge no Constituents of Concern, other than those disclosed in writing to Engineer, exist at or adjacent to the Site.
- B. If Engineer encounters or learns of an undisclosed Constituent of Concern at the Site, then Engineer shall notify (1) Owner and (2) appropriate governmental officials if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations.
- C. It is acknowledged by both parties that Engineer's scope of services does not include any services related to unknown or undisclosed Constituents of Concern. If Engineer or any other party encounters, uncovers, or reveals an undisclosed Constituent of Concern, then Owner shall promptly determine whether to retain a qualified expert to evaluate such condition or take any necessary corrective action.
- D. If investigative or remedial action, or other professional services, are necessary with respect to undisclosed Constituents of Concern, or if investigative or remedial action beyond that reasonably contemplated is needed to address a disclosed or known Constituent of Concern, then Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until such portion of the Project is no longer affected.

- E. If the presence at the Site of undisclosed Constituents of Concern adversely affects the performance of Engineer's services under this Agreement, then the Engineer shall have the option of (1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or (2) terminating this Agreement for cause on seven days notice.
- F. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and shall not be required to become an "owner," "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer's activities under this Agreement.

6.11 *Indemnification and Mutual Waiver*

- A. *Indemnification by Engineer:* To the fullest extent permitted by Laws and Regulations, Engineer shall indemnify and hold harmless Owner, and Owner's officers, directors, members, partners, agents, consultants, and employees, from losses, damages, and judgments (including reasonable consultants' and attorneys' fees and expenses) arising from third-party claims or actions relating to the Project, provided that any such claim, action, loss, damages, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Engineer or Engineer's officers, directors, members, partners, agents, employees, or Consultants. **This indemnification provision is subject to and limited by the provisions, if any, agreed to by Owner and Engineer in Exhibit I, "Limitations of Liability."**
- B. *Indemnification by Owner:* Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants as required by Laws and Regulations **and to the extent (if any) required in Exhibit I, "Limitations of Liability."**
- C. *Environmental Indemnification:* To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants from all claims, costs, losses, damages, actions, and judgments (including reasonable consultants' and attorney's fees and expenses) caused by, arising out of, relating to, or resulting from a Constituent of Concern at, on, or under the Site, provided that (1) any such claim, cost, loss, damages, action, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (2) nothing in this paragraph shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.
- D. *No Defense Obligation:* The indemnification commitments in this Agreement do not include a defense obligation by the indemnitor unless such obligation is expressly stated.
- E. *Percentage Share of Negligence:* To the fullest extent permitted by Laws and Regulations, a party's total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party

and in part by the negligence of the other party or any other negligent entity or individual, shall not exceed the percentage share that the party's negligence bears to the total negligence of Owner, Engineer, and all other negligent entities and individuals.

- F. *Mutual Waiver:* To the fullest extent permitted by Laws and Regulations, Owner and Engineer waive against each other, and the other's employees, officers, directors, members, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to this Agreement or the Project, from any cause or causes.

6.12 *Records Retention*

- A. Engineer shall maintain on file in legible form, for a period of five years following completion or termination of its services, all Documents, records (including cost records), and design calculations related to Engineer's services or pertinent to Engineer's performance under this Agreement. Upon Owner's request, Engineer shall provide a copy of any such item to Owner at cost.

6.13 *Miscellaneous Provisions*

- A. *Notices:* Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.
- B. *Survival:* All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.
- C. *Severability:* Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Engineer, which agree that the Agreement 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.
- D. *Waiver:* A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.
- E. *Accrual of Claims:* To the fullest extent permitted by Laws and Regulations, all causes of action arising under this Agreement shall be deemed to have accrued, and all statutory periods of limitation shall commence, no later than the date of Substantial Completion.

ARTICLE 7 – DEFINITIONS

7.01 *Defined Terms*

- A. Wherever used in this Agreement (including the Exhibits hereto) terms (including the singular and plural forms) printed with initial capital letters have the meanings indicated in the text above, in the exhibits, or in the following definitions:

1. *Addenda*—Written or graphic instruments issued prior to the opening of bids which clarify, correct, or change the bidding requirements or the proposed Construction Contract Documents.
2. *Additional Services*—The services to be performed for or furnished to Owner by Engineer in accordance with Part 2 of Exhibit A of this Agreement.
3. *Agreement*—This written contract for professional services between Owner and Engineer, including all exhibits identified in Paragraph 8.01 and any duly executed amendments.
4. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Construction Contract.
5. *Basic Services*—The services to be performed for or furnished to Owner by Engineer in accordance with Part 1 of Exhibit A of this Agreement.
6. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Construction Contract Price or the Construction Contract Times, or other revision to the Construction Contract, issued on or after the effective date of the Construction Contract.
7. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth in the Construction Contract, seeking an adjustment in Construction Contract Price or Construction Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Construction Contract Documents or the acceptability of Work under the Construction Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Construction Contract.
8. *Constituent of Concern*—Asbestos, petroleum, radioactive material, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, State, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
9. *Construction Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
10. *Construction Contract Documents*—Those items designated as “Contract Documents” in the Construction Contract, and which together comprise the Construction Contract.

11. *Construction Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Construction Contract Documents.
12. *Construction Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve milestones, if any, in the Construction Contract; (b) achieve Substantial Completion; and (c) complete the Work.
13. *Construction Cost*—The cost to Owner of the construction of those portions of the entire Project designed or specified by or for Engineer under this Agreement, including construction labor, services, materials, equipment, insurance, and bonding costs, and allowances for contingencies. Construction Cost does not include costs of services of Engineer or other design professionals and consultants; cost of land or rights-of-way, or compensation for damages to property; Owner's costs for legal, accounting, insurance counseling, or auditing services; interest or financing charges incurred in connection with the Project; or the cost of other services to be provided by others to Owner. Construction Cost is one of the items comprising Total Project Costs.
14. *Constructor*—Any person or entity (not including the Engineer, its employees, agents, representatives, and Consultants), performing or supporting construction activities relating to the Project, including but not limited to Contractors, Subcontractors, Suppliers, Owner's work forces, utility companies, other contractors, construction managers, testing firms, shippers, and truckers, and the employees, agents, and representatives of any or all of them.
15. *Consultants*—Individuals or entities having a contract with Engineer to furnish services with respect to this Project as Engineer's independent professional associates and consultants; subcontractors; or vendors.
16. *Contractor*—The entity or individual with which Owner enters into a Construction Contract.
17. *Documents*—Data, reports, Drawings, Specifications, Record Drawings, building information models, civil integrated management models, and other deliverables, whether in printed or electronic format, provided or furnished in appropriate phases by Engineer to Owner pursuant to this Agreement.
18. *Drawings*—That part of the Construction Contract Documents that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date*—The date indicated in this Agreement on which it becomes effective, but if no such date is indicated, the date on which this Agreement is signed and delivered by the last of the parties to sign and deliver.
20. *Engineer*—The individual or entity named as such in this Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Construction Contract Price or the Construction Contract Times.

22. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
23. *Owner*—The individual or entity named as such in this Agreement and for which Engineer's services are to be performed. Unless indicated otherwise, this is the same individual or entity that will enter into any Construction Contracts concerning the Project.
24. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the services to be performed or furnished by Engineer under this Agreement are a part.
25. *Record Drawings*—Drawings depicting the completed Project, or a specific portion of the completed Project, prepared by Engineer as an Additional Service and based on Contractor's record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications, as delivered to Engineer and annotated by Contractor to show changes made during construction.
26. *Reimbursable Expenses*—The expenses incurred directly by Engineer in connection with the performing or furnishing of Basic Services and Additional Services for the Project.
27. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site during the Construction Phase. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative. The duties and responsibilities of the Resident Project Representative, if any, are as set forth in Exhibit D.
28. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
29. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Construction Contract Documents.
30. *Site*—Lands or areas to be indicated in the Construction Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
31. *Specifications*—The part of the Construction Contract Documents that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

32. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
 33. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Construction Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
 34. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
 35. *Total Project Costs*—The total cost of planning, studying, designing, constructing, testing, commissioning, and start-up of the Project, including Construction Cost and all other Project labor, services, materials, equipment, insurance, and bonding costs, allowances for contingencies, and the total costs of services of Engineer or other design professionals and consultants, together with such other Project-related costs that Owner furnishes for inclusion, including but not limited to cost of land, rights-of-way, compensation for damages to properties, Owner’s costs for legal, accounting, insurance counseling, and auditing services, interest and financing charges incurred in connection with the Project, and the cost of other services to be provided by others to Owner.
 36. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Construction Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Construction Contract Documents.
 37. *Work Change Directive*—A written directive to Contractor issued on or after the effective date of the Construction Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.
- B. *Day*:
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

ARTICLE 8 – EXHIBITS AND SPECIAL PROVISIONS

8.01 Exhibits Included:

- A. Exhibit A, Engineer’s Services.
- B. Exhibit B, Owner’s Responsibilities.
- C. Exhibit C, Payments to Engineer for Services and Reimbursable Expenses.

- D. Exhibit D, Incorporated Guam Procurement Law Clauses.
- E. Exhibit E, Notice of Acceptability of Work.
- F. Exhibit F, DELETED.
- G. Exhibit G, Insurance.
- H. Exhibit H, Dispute Resolution.
- I. Exhibit I, Limitations of Liability.
- J. Exhibit J, DELETED.
- K. Exhibit K, Amendment to Owner-Engineer Agreement.

8.02 *Total Agreement*

- A. This Agreement, (together with the exhibits included above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a written instrument duly executed by both parties. Amendments should be based whenever possible on the format of Exhibit K to this Agreement.


8.03 *Designated Representatives*

- A. With the execution of this Agreement, Engineer and Owner shall designate specific individuals to act as Engineer's and Owner's representatives with respect to the services to be performed or furnished by Engineer and responsibilities of Owner under this Agreement. Such an individual shall have authority to transmit instructions, receive information, and render decisions relative to this Agreement on behalf of the respective party whom the individual represents.

8.04 *Engineer's Certifications*

- A. Engineer certifies that it has not engaged in corrupt, fraudulent, or coercive practices in competing for or in executing the Agreement. For the purposes of this Paragraph 8.04:
 - 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 selection process or in the Agreement execution;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the selection process or the execution of the Agreement to the detriment of Owner, or (b) to deprive Owner of the benefits of free and open competition;
 - 3. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the selection process or affect the execution of the Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

Owner: **Guam Waterworks Authority**
By: 
Print name: MIGUEL C. BORDALLO, P.E.
Title: General Manager
Date Signed: 4.7.2021

Engineer: **GHD INC.**
By: 
Print name: MATTHEW G. KENNEDY, P.E.
Title: Vice President/Principal
Date Signed: April 2, 2021

Engineer License or Firm's Certificate No.: 336


State of: Territory of Guam

Address for Owner's receipt of notices:
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

Address for Engineer's receipt of notices:
865 S Marine Corps Drive
Suite 202, Orlean Pacific Plaza
Tamuning, Guam 96913

Certified Funds Available:

Approved as to Form:

By: 
 TALING M. TAITANO, CPA, CGFM
GWA Chief Financial Officer 
Date Signed: 4/7/2021

By: 
KELLY O. CLARK
GWA General Counsel
Date Signed: 4/6/21

Contract Amount: \$603,951.14
Amount Certified: \$603,951.14
Source of Funding: USEPA-SRF Grant M96902619-1
**** Contingency to be identified as needed**

This is **EXHIBIT A**, consisting of ___ pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated _____.

Engineer's Services

Article 1 of the Agreement is supplemented to include the following agreement of the parties.

Engineer shall provide Basic and Additional Services as set forth in the attached Scope of Work and Fee Proposal dated March 12, 2021.

Exhibit A – Engineer's Services

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Page 1

This is **EXHIBIT B**, consisting of 3 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated _____.

Owner's Responsibilities

Article 2 of the Agreement is supplemented to include the following agreement of the parties.

B2.01 In addition to other responsibilities of Owner as set forth in this Agreement, Owner shall at its expense:

- A. Provide Engineer with all criteria and full information as to Owner's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility, and expandability, and any budgetary limitations.
- B. Give instructions to Engineer regarding Owner's procurement of construction services (including instructions regarding advertisements for bids, instructions to bidders, and requests for proposals, as applicable), Owner's construction contract practices and requirements, insurance and bonding requirements, electronic transmittals during construction, and other information necessary for the finalization of Owner's bidding-related documents (or requests for proposals or other construction procurement documents), and Construction Contract Documents. Furnish copies (or give specific directions requesting Engineer to use copies already in Engineer's possession) of all design and construction standards, Owner's standard forms, general conditions (if other than EJCDC® C-700, Standard General Conditions of the Construction Contract, 2013 Edition), supplementary conditions, text, and related documents and content for Engineer to include in the draft bidding-related documents (or requests for proposals or other construction procurement documents), and draft Construction Contract Documents, when applicable. Owner shall have responsibility for the final content of (1) such bidding-related documents (or requests for proposals or other construction procurement documents), and (2) those portions of any Construction Contract other than the design (as set forth in the Drawings, Specifications, or otherwise), and other engineering or technical matters; and Owner shall seek the advice of Owner's legal counsel, risk managers, and insurance advisors with respect to the drafting and content of such documents.
- C. Furnish to Engineer any other available information pertinent to the Project including reports and data relative to previous designs, construction, or investigation at or adjacent to the Site.
- D. Following Engineer's assessment of initially-available Project information and data and upon Engineer's request, obtain, furnish, or otherwise make available (if necessary through title searches, or retention of specialists or consultants) such additional Project-related information and data as is reasonably required to enable Engineer to complete its Basic and Additional Services. Such additional information or data would generally include the following:
 - 1. Property descriptions.
 - 2. Zoning, deed, and other land use restrictions.

Exhibit C – Compensation Packet BC-1: Basic Services (other than RPR) – Lump Sum Method of Payment
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Page 1

3. Utility and topographic mapping and surveys.
 4. Property, boundary, easement, right-of-way, and other special surveys or data, including establishing relevant reference points.
 5. Explorations and tests of subsurface conditions at or adjacent to the Site; geotechnical reports and investigations; drawings of physical conditions relating to existing surface or subsurface structures at the Site; hydrographic surveys, laboratory tests and inspections of samples, materials, and equipment; with appropriate professional interpretation of such information or data.
 6. Environmental assessments, audits, investigations, and impact statements, and other relevant environmental, historical, or cultural studies relevant to the Project, the Site, and adjacent areas.
 7. Data or consultations as required for the Project but not otherwise identified in this Agreement.
- E. Arrange for safe access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services under the Agreement.
- F. Recognizing and acknowledging that Engineer's services and expertise do not include the following services, provide, as required for the Project:
1. Accounting, bond and financial advisory (including, if applicable, "municipal advisor" services as described in Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) and the municipal advisor registration rules issued by the Securities and Exchange Commission), independent cost estimating, and insurance counseling services.
 2. Legal services with regard to issues pertaining to the Project as Owner requires, Contractor raises, or Engineer reasonably requests.
 3. Such auditing services as Owner requires to ascertain how or for what purpose Contractor has used the money paid.
- G. Provide the services of an independent testing laboratory to perform all inspections, tests, and approvals of samples, materials, and equipment required by the Construction Contract Documents (other than those required to be furnished or arranged by Contractor), or to evaluate the performance of materials, equipment, and facilities of Owner, prior to their incorporation into the Work with appropriate professional interpretation thereof. Provide Engineer with the findings and reports generated by testing laboratories, including findings and reports obtained from or through Contractor.
- H. Provide reviews, approvals, and permits from all governmental authorities having jurisdiction to approve all phases of the Project designed or specified by Engineer and such reviews, approvals, and consents from others as may be necessary for completion of each phase of the Project.

- I. Advise Engineer of the identity and scope of services of any independent consultants employed by Owner to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, and constructability review.
- J. If Owner designates a construction manager or an individual or entity other than, or in addition to, Engineer to represent Owner at the Site, define and set forth as an attachment to this Exhibit B the duties, responsibilities, and limitations of authority of such other party and the relation thereof to the duties, responsibilities, and authority of Engineer.
- K. If more than one prime contract is to be awarded for the Work designed or specified by Engineer, then designate a person or entity to have authority and responsibility for coordinating the activities among the various prime Contractors, and define and set forth the duties, responsibilities, and limitations of authority of such individual or entity and the relation thereof to the duties, responsibilities, and authority of Engineer as an attachment to this Exhibit B that is to be mutually agreed upon and made a part of this Agreement before such services begin.
- L. Inform Engineer in writing of any specific requirements of safety or security programs that are applicable to Engineer, as a visitor to the Site.
- M. Examine all alternative solutions, studies, reports, sketches, Drawings, Specifications, proposals, and other documents presented by Engineer (including obtaining advice of an attorney, risk manager, insurance counselor, financial/municipal advisor, and other advisors or consultants as Owner deems appropriate with respect to such examination) and render in writing timely decisions pertaining thereto.
- N. Inform Engineer regarding any need for assistance in evaluating the possible use of Project Strategies, Technologies, and Techniques, as defined in Exhibit A.
- O. Advise Engineer as to whether Engineer's assistance is requested in identifying opportunities for enhancing the sustainability of the Project.
- P. Place and pay for advertisement for Bids in appropriate publications.
- Q. Furnish to Engineer data as to Owner's anticipated costs for services to be provided by others (including, but not limited to, accounting, bond and financial, independent cost estimating, insurance counseling, and legal advice) for Owner so that Engineer may assist Owner in collating the various cost categories which comprise Total Project Costs.
- R. Attend and participate in the pre-bid conference, bid opening, pre-construction conferences, construction progress and other job related meetings, and Site visits to determine Substantial Completion and readiness of the completed Work for final payment.
- S. Authorize Engineer to provide Additional Services as set forth in Part 2 of Exhibit A of the Agreement, as required.

This is **EXHIBIT C**, consisting of 1 page, referred to in and part of the Agreement between Owner and Engineer for Professional Services dated _____.

Payments to Engineer for Services and Reimbursable Expenses
COMPENSATION PACKET BC-1: Basic Services – Lump Sum

Article 2 of the Agreement is supplemented to include the following agreement of the parties:

ARTICLE 2 – OWNER’S RESPONSIBILITIES

C2.01 Compensation for Basic Design Services – Lump Sum Method of Payment

- A. Owner shall pay Engineer for Basic Design Services set forth in Exhibit A as follows:
1. A Lump Sum amount of \$603,951.14 based on the following estimated distribution of compensation:

See attached Design Fee Proposal dated March 12, 2021.

Engineer may alter the distribution of compensation between individual phases noted herein to be consistent with services actually rendered, but shall not exceed the total Lump Sum amount unless approved in writing by the Owner.
 2. The Lump Sum includes compensation for Engineer’s services and services of Engineer’s Consultants, if any. Appropriate amounts have been incorporated in the Lump Sum to account for labor costs, overhead, profit, expenses (other than any expressly allowed Reimbursable Expenses), and Consultant charges.
 3. The portion of the Lump Sum amount billed for Engineer’s services will be based upon Engineer’s estimate of the percentage of the total services actually completed during the billing period.
 4. The basis of any adjustment under this Article may include at the request of the Owner, cost and pricing data pursuant to 2 GAR §3118 and will also be subject to 2 GAR § 5107 Fiscal Responsibility.
- A. *Period of Service:* The compensation amount stipulated in Compensation Packet BC-1 is conditioned on a period of service not exceeding ____months. If such period of service is extended, the compensation amount for Engineer's services shall be appropriately adjusted.

Payments to Engineer for Services and Reimbursable Expenses
COMPENSATION PACKET BC-2: Basic Services – Standard Hourly Rates

Article 2 of the Agreement is supplemented to include the following agreement of the parties:

ARTICLE 2 – OWNER’S RESPONSIBILITIES

C2.01 Compensation For Basic Post-Design Services – Standard Hourly Rates Method of Payment

- A. Owner shall pay Engineer for Basic Post-Design Services set forth in Exhibit A as follows:
1. An amount equal to the cumulative hours charged to the Project by each class of Engineer’s personnel times Standard Hourly Rates for each applicable billing class for all services performed on the Project, plus Reimbursable Expenses and Engineer’s Consultants’ charges, if any.
 2. The Standard Hourly Rates charged by Engineer constitute full and complete compensation for Engineer’s services, including labor costs, overhead, and profit; the Standard Hourly Rates do not include Reimbursable Expenses or Engineer’s Consultants’ charges.
 3. Engineer’s Standard Hourly Rates are indicated in the negotiated Fee Proposal dated March 12, 2021 and included in the total compensation for services under Paragraph C2.01.
 4. The total compensation for services under Paragraph C2.01 is estimated to be \$603,951.14 based on the following estimated distribution of compensation:
 - a. See attached Revised Design Fee Proposal, March 12, 2021.
 5. Engineer may alter the distribution of compensation between individual phases of the work noted herein to be consistent with services actually rendered, but shall not exceed the total estimated compensation amount unless approved in writing by Owner.
 6. The total estimated compensation for Engineer’s services included in the breakdown by phases as noted in Paragraph C2.01.A.3 incorporates all labor, overhead, profit, Reimbursable Expenses, and Engineer’s Consultants’ charges.
 7. The amounts billed for Engineer’s services under Paragraph C2.01 will be based on the cumulative hours charged to the Project during the billing period by each class of Engineer’s employees times Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and Engineer’s Consultants’ charges.

C2.02 Compensation For Reimbursable Expenses

- A. Owner shall pay Engineer for all Reimbursable Expenses.

- B. Reimbursable Expenses include the following: transportation (including mileage), lodging, and subsistence incidental thereto; providing and maintaining field office facilities including furnishings and utilities; toll telephone calls, mobile phone charges, and courier charges; reproduction of reports, Drawings, Specifications, bidding-related or other procurement documents, Construction Contract Documents, and similar Project-related items; and Consultants' charges. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for the use of highly specialized equipment.
- C. The amounts payable to Engineer for Reimbursable Expenses will be the Project-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to the Project, the latter multiplied by a factor of 1.0.

C2.03 *Estimated Compensation Amounts:*

- 1. Engineer's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to Engineer under the Agreement.
 - 2. When estimated compensation amounts have been stated herein and it subsequently becomes apparent to Engineer that the total compensation amount thus estimated will be exceeded, Engineer shall give Owner written notice thereof, allowing Owner to consider its options, including suspension or termination of Engineer's services for Owner's convenience. Upon notice, Owner and Engineer promptly shall review the matter of services remaining to be performed and compensation for such services. Owner shall either exercise its right to suspend or terminate Engineer's services for Owner's convenience, agree to such compensation exceeding said estimated amount, or agree to a reduction in the remaining services to be rendered by Engineer, so that total compensation for such services will not exceed said estimated amount when such services are completed. If Owner decides not to suspend the Engineer's services during the negotiations and Engineer exceeds the estimated amount before Owner and Engineer have agreed to an increase in the compensation due Engineer or a reduction in the remaining services, then Engineer shall be paid for all services rendered hereunder.
- D. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at cost.

This is **EXHIBIT D** has been deleted.

This is **EXHIBIT E**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated _____.



NOTICE OF ACCEPTABILITY OF WORK

PROJECT: Hagatna Main Sewage Pump Station Redundant Force Main
GWA Project No. S20-002-EPA

OWNER: Guam Waterworks Authority

CONTRACTOR:

OWNER'S CONSTRUCTION CONTRACT IDENTIFICATION:

EFFECTIVE DATE OF THE CONSTRUCTION CONTRACT:

ENGINEER:

NOTICE DATE:

To: _____
Owner

And To: _____
Contractor

From: _____
Engineer

The Engineer hereby gives notice to the above Owner and Contractor that Engineer has recommended final payment of Contractor, and that the Work furnished and performed by Contractor under the above Construction Contract is acceptable, expressly subject to the provisions of the related Contract Documents, the Agreement between Owner and Engineer for Professional Services dated _____, and the following terms and conditions of this Notice:

Exhibit E – Notice of Acceptability of Work.

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CONDITIONS OF NOTICE OF ACCEPTABILITY OF WORK

The Notice of Acceptability of Work ("Notice") is expressly made subject to the following terms and conditions to which all those who receive said Notice and rely thereon agree:

1. This Notice is given with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the Engineer's professional opinion.
3. This Notice is given as to the best of Engineer's knowledge, information, and belief as of the Notice Date.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's work) under Engineer's Agreement with Owner, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Agreement.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the related Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Construction Contract Documents, or to otherwise comply with the Construction Contract Documents or the terms of any special guarantees specified therein.
6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

By: _____

Title: _____

Dated: _____

EXHIBIT F has been DELETED.

This is **EXHIBIT G**, consisting of 1 page, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated _____.

Insurance

Paragraph 6.05 of the Agreement is supplemented to include the following agreement of the parties:

G6.05 *Insurance*

A. The limits of liability for the insurance required by Paragraph 6.05.A of the Agreement are as follows:

1. By Engineer:

- a. Workers' Compensation: Statutory
- b. Employer's Liability:
 - Bodily Injury, each accident: \$100,000
 - Bodily injury by disease, each employee: \$100,000
 - Bodily injury/disease, aggregate: \$200,000
- c. General Liability --
 - 1) Each Occurrence (Bodily Injury and Property Damage): \$1,000,000
 - 2) General Aggregate: \$2,000,000
- d. Excess or Umbrella Liability
 - Per Occurrence: \$2,000,000
 - General Aggregate: \$4,000,000
- e. Automobile Liability --Combined Single Limit (Bodily Injury and Property Damage):
\$ 500,000
- f. Professional Liability :
 - Each Claim Made \$2,000,000
 - Annual Aggregate \$4,000,000

To maintain, and cause to maintain throughout the life of the contract and up until the project is completely constructed, insurance for the Engineer and the named subs-consultants, in the amounts and types specified below which name Guam Waterworks Authority as an additional insured for the project in a separate endorsement:

Exhibit G – Insurance.

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1.

2.

3.

B. *Additional Insureds:*

1. The following individuals or entities are to be listed on Engineer's general liability policies of insurance as additional insureds:

Guam Waterworks Authority

2. The Owner shall be listed on Engineer's general liability policy as provided in Paragraph 6.05.B.

This is **EXHIBIT H**, consisting of 1 page, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated _____.

Dispute Resolution

Paragraph 6.09 of the Agreement is supplemented to include the following agreement of the parties:

H6.09 Mediation, Decision and Action

- A. In the event a claim or controversy is not resolved by mutual agreement, the GWA General Manager shall, after written request by the Contractor for a final decision, promptly issue a written decision. A copy of the decision shall be immediately transmitted to the Contractor by a method that provides evidence of receipt.**
- B. All claims or controversies that remain unresolved after a final decision by the GWA General Manager shall be submitted to mediation in accordance with the rules of the American Arbitration Association, or other dispute resolution rules accredited on Guam. 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.**
- C. In the event mediation is not successful, the General Manager’s decision remains final and conclusive unless the Contractor files an appeal with the Guam Office of Public Accountability (“OPA”) after receipt of the decision. Upon written request by the Contractor, the 60-day appeal period may be extended for a mutually agreed upon tolling period to allow for mediation after the final 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 Guam Superior Court.**

Exhibit H - Dispute Resolution.

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Page 1

This is **EXHIBIT I**, consisting of 1 page, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated _____.

Limitations of Liability

Paragraph 6.11 of the Agreement is supplemented to include the following agreement of the parties:

A. *Limitation of Engineer's Liability*

1. *Engineer's Liability Limited to Stated Amount, or Amount of Engineer's Compensation:* To the fullest extent permitted by Laws and Regulations, and notwithstanding any other provision of this Agreement, the total liability, in the aggregate, of Engineer and Engineer's officers, directors, members, partners, agents, employees, and Consultants, to Owner and anyone claiming by, through, or under Owner for any and all injuries, claims, losses, expenses, costs, or damages whatsoever arising out of, resulting from, or in any way related to the Project, Engineer's or its Consultants' services. or this Agreement, from any cause or causes whatsoever, including but not limited to the negligence, professional errors or omissions, strict liability, breach of contract, indemnity obligations, or warranty express or implied, of Engineer or Engineer's officers, directors, members, partners, agents, employees, or Consultants, shall not exceed the total amount of \$4,000,000.00 or the total compensation received by Engineer under this Agreement, whichever is greater. Higher limits are available for an additional fee.
2. *Exclusion of Special, Incidental, Indirect, and Consequential Damages:* To the fullest extent permitted by Laws and Regulations, and notwithstanding any other provision in the Agreement, consistent with the terms of Paragraph 6.11, the Engineer and Engineer's officers, directors, members, partners, agents, Consultants, and employees shall not be liable to Owner or anyone claiming by, through, or under Owner for any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to this Agreement or the Project, from any cause or causes, including but not limited to:

- B. *Indemnification by Owner:* To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Owner or Owner's officers, directors, members, partners, agents, employees, consultants, or others retained by or under contract to the Owner with respect to this Agreement or to the Project.

Exhibit I - Limitations on Liability.

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Page 1

EXHIBIT J has been DELETED.

Exhibit J - Special Provisions.

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Page 1

This is **EXHIBIT K**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated _____.

**AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. 00**

The Effective Date of this Amendment is: _____.

Background Data

Owner: Guam Waterworks Authority

Engineer:

Project: Hagatna Main Sewage Pump Station Redundant Force Main
GWA Project No. S20-002-EPA

Nature of Amendment: [Check those that are applicable and delete those that are inapplicable.]

- Additional Services to be performed by Engineer
- Modifications to services of Engineer
- Modifications to responsibilities of Owner
- Modifications of payment to Engineer
- Modifications to time(s) for rendering services
- Modifications to other terms and conditions of the Agreement

Description of Modifications:

Incorporated Guam Procurement Law Clauses

Article 6.07 of the Agreement is supplemented to include the following agreement of the parties:

- B. Engineer 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.
- C. Engineer 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).
- D. Engineer hereby warrants that it has not knowingly influence 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.
- E. Engineer hereby warrants that no person, providing services on behalf of the Engineer 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

Engineer 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.

Agreement Summary:

Original agreement amount:	\$ _____
Net change for prior amendments:	\$ _____
This amendment amount:	\$ _____
Adjusted Agreement amount:	\$ _____

Change in time for services (days or date, as applicable): _____

The foregoing Agreement Summary is for reference only and does not alter the terms of the Agreement, including those set forth in Exhibit C.

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect.

OWNER:

ENGINEER:

Guam Waterworks Authority

By: _____
Print
name: MIGUEL C. BORDALLO, P.E.

By: _____
Print
name: MATTHEW G. KENNEDY, P.E.

Title: General Manager

Title: Principal/Vice President

Date Signed: _____

Date Signed: _____



Reference No. 11215742

March 12, 2021

Mr. Miguel C. Bordallo, PE, General Manager
Guam Waterworks Authority
PO Box 21868
GMF, GU 96921

Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, GU 96913-6203

Attn: Mauryn McDonald, PE, Wastewater CIP Senior Engineer Supervisor

**SUBJECT: FORMAL SUBMITTAL OF SCOPE OF WORK AND FEE PROPOSAL
FOR HAGÁTÑA MAIN SEWAGE PUMP STATION REDUNDANT FORCE MAIN
GWA PROJECT NO. S20-002-EPA
RFP-02-ENG-2020**

Dear Mr. Bordallo:

GHD is pleased to submit our amended Scope of Work and Fee Proposal for the above referenced project. We have revised the scope of work and fee proposal based on our communication with GWA since August 18, 2020 when we were notified of preliminary selection.

If you require additional information or would like to discuss further, please feel free to contact Matt Kennedy, Principal Engineer (707) 540-3376 or me at (671) 688-5422. We look forward to working with you on this critical project and are prepared to begin working immediately.

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott Wenger", is written over a light blue horizontal line.

Scott Wenger, PE
Sr. Project Manager

Encl. Scope of Work & Fee Proposal

cc: Matt Kennedy, P.E., Principal Engineer
Aaron Sutton, P.E., Guam Office Manager



**Guam Waterworks Authority (GWA)
Design and Construction Support Services
Scope of Work & Fee Proposal
for the
Hagåtña Main Sewage Pump Station Redundant Force Main
GWA Project No. S20-002-EPA
March 12, 2021**

GENERAL

This Scope Of Work and Fee Proposal is in response to your invitation to enter negotiations following our submittal to your Request For Proposals RFP-02-ENG-2020. GHD, as the design consultant for the Hagåtña Main Sewage Pump Station Redundant Force Main project shall provide services for:

- Project management
- Research and field investigation
- Assessing design alternatives for a redundant force main
- Preparing a Basis Of Design Report
- Permitting
- Preparation of design documents
- Supporting construction contract bidding
- Engineering support during construction
- Analyzing inspection data of the existing force main
- Preparing a scope of work for improvements to the existing force main

This work is to be performed in accordance with the description provided by GWA in the RFP. We have received information from personal communication, email correspondence, and a site visit with the GWA wastewater department that augment the RFP work description. This Scope of Work and Fee Proposal (Proposal) reflects all information that we have obtained to date.

The project is in two phases with the first phase providing for design documents for the construction of a redundant force main between the Hagåtña Pump Station and the Hagåtña Wastewater Treatment Plant (WWTP). Following construction of the new force main, the condition of the existing force main is to be assessed for necessary repairs or replacement. This Proposal includes work to accomplish Phase 1 to include inspection of the existing force main and determining the scope of the Phase 2 design. This Proposal does not include design fees for Phase 2 that are contingent on the outcome of inspection of the existing force main.

Phase 1 consists of seven main components: (1) Assess information about the existing sewer facilities at the Hagåtña Pump Station and the force main to the WWTP, (2) Determine options for a redundant force main, (3) Design a force main following selection of a preferred alternative, (4) Support construction of the force main, (5) Perform a condition assessment of the existing

force main, (6) Recommend methods for rehabilitation or replacement of the existing force main, and (7) Prepare a scope of work for Phase 2.

The following description follows the Scope Of Work section of the RFP with our understanding of effort required to perform the itemized tasks.

1. PROJECT MANAGEMENT

- 1.1 Project Management Plan – We will meet with GWA to discuss design concepts and project execution. GHD will prepare a Project Management Plan (PMP) that includes a project description based on all information provided up to the time of the PMP preparation. The PMP will include this Proposal and the approved budget and a description of methods to keep both on track. We will describe GHD's quality management system with specific procedures for ensuring consistency within the project documents. We will describe how we will perform risk management with performance risk identification and resolution. We will describe our process for managing scope changes. We will describe our communication plan and methods for documentation to provide intuitive information access. We will describe our process for document control including version control and drafting standards. We will provide document templates to be used on this project including a Monthly Progress Report. GHD's safety program (Health, Safety, and Environment (HSE)) will be described with procedures applicable to fieldwork such as pump station assessment, flow measurements, geotechnical investigation support, and permitting field support. The personnel and subcontractors supporting this project will be identified in an organization chart with a description of their key skills and responsibilities.
- 1.2 Project Schedule – We will prepare a Gantt Chart project schedule that includes project tasks described in this Proposal. These include meetings for project initiation, monthly updates, permit initiation and completion, field investigations, and phases for the design process through approval by USEPA and bidding. We propose to create this schedule in MS Project or equivalent. Schedule updates and analysis will be provided monthly.
- 1.3 Progress Reports – We will provide a description of work performed within the billing period with each monthly invoice. The description will identify tasks, percent completion, and plots of actual spending, projected spending, and earned value.
- 1.4 Meetings and Coordination – We will attend regularly scheduled progress meetings with GWA and agency representatives to facilitate progress with permitting and compliance. We have included 26 progress meetings over the 26-month duration of the project. Progress meeting frequency during construction is anticipated to be weekly and those additional meetings are included in task 5c. The meetings will include agenda topics as determined by GWA and GHD to address project issues such as design, permitting, schedule, budget, and revisions to scope. Environmental permitting consultation with a representative from EA will be provided for up to 20 meetings. Design review meetings

will be held at each stage of design (30%, 60%, 90%, and 100%) for a total of four meetings.

2. PRELIMINARY DESIGN

- 2.1 Research and Field Investigation – This task includes review of existing documentation, gathering information through meetings with GWA personnel, and pursuit of additional supporting information from files, preparing for field assessments by obtaining permits, performing field investigations, and reporting on the findings in a report. We will assess operational and maintenance information, with the objective of understanding the operation of all the sewer facilities related to this project. Planning documents such as the Water Resources Master Plan Update have been provided to us and will be used for our assessments. We will provide preliminary recommendations for design alternatives for discussion and evaluation with GWA.
- a. GHD will review drawings and documentation relevant to the existing sewer facilities related to the Hagåtña pump station, force main, and WWTP. We have received some documents and we understand there have been many upgrades to the facilities since construction in the 1960s. The upcoming structural assessment of the WWTP access road is anticipated to provide information regarding siting options for the redundant force main.
 - b. Potential corridors for the redundant force main will be evaluated. A property boundary investigation will be performed to determine existing rights of ways and easements. Existing utilities include GWA water and sewer, Navy water, communications, and GPA power. Our work will include efforts to distinguish between active and abandoned utilities. Probable utility locations will be initially determined by as-built documentation, with confirmation by electronic underground location by utility companies. Additional utility location effort is within task 2.1 k.
 - c. GHD will review the maintenance history related to the pump station, force main, and WWTP influent structure. This information is anticipated to be documented within work orders and equipment asset records and may be supplemented by descriptions by GWA maintenance staff. This information will be considered for our mechanical design, where we will choose alternatives if there have been problems with specific types of equipment. We will look for opportunities to mitigate problems where possible.
 - d. We will review prior force main and pump station inspection data as a part of our overall assessment of the facilities performance over their design life span.
 - e. We will pursue a thorough understanding of operation of the facilities through review of operation records and discussion with GWA staff. Operation procedures, whether written or anecdotal, will guide our design so that it is optimized for performance and fit within the GWA operations system.

- f. Flow records and projections provided in the Master Plan will be assessed in our design for the redundant force main to be adequately sized for a 20 year projection from this project completion date.
- g. Approximately four meetings with GWA staff are anticipated as a part of this task. Meetings are typically attended by the Project Manager and principal designer. Records of the meetings will be documented in minutes and distributed to attendees.
- h. Assessment for required permits and environmental permitting is to be performed by EA Engineering, Science, and Technology, Inc. (EA). Initial permit applications will be for subsequent field investigations. EA and GHD will prepare permit applications for applicable federal and Guam permits as listed below. Note that GWA will be responsible for all permit fees.

	Lead Agency	Permit(s) / Review(s) / Approval(s)	Applicable	Estimated Time for Approval		
				Permit / Request Completion	Agency Review	Application Negotiation and Permit / Approval Receipt
Federal	NOAA-NMFS	ESA, Magnuson-Stevens Fishery Conservation and Management Act, and Marine Mammal Protection Act (MMPA)	N			
	USFWS	ESA and Migratory Bird Treaty Act	Y	10d	45d	60-120d
	USACE	CWA, Sections 402 and 404	Y	30d	45d	60-120d
	USFWS	CWA	Y	Review concurrent w/ USACE review		
Guam	Guam Land Use Commission (GLUC)	Wetlands Permit	Y	30d	45d	60-120d
	GLUC/Guam Seashore Protection Commission	Seashore Clearance Permit	Y	10d	84d	10d
	Guam DPW	Flood Hazard Permit	Y	10d	45d	10d
		Clearing and Grading Permit	Y	10d	45d	10d
	Bureau of Statistics and Plans	Coastal Zone Consistency Determination	Y	10d	90d	10d
	Guam EPA	Environmental Land Use Permit	Y	10d	60d	10d
		Environmental Protection Plan	Y	30d	60d	10d
		Environmental Impact Assessment	Y	30d	60d	10d
		Erosion Control Permit	Y	10d	60d	10d
		Aquifer Protection Review	Y	10d	60d	10d
	Guam Dept. of Parks and Recreation Historic Resources Div.	Historic Preservation Determination	Y	30d	90d	60d

EA will initiate communication with personnel who have performed initial environmental field surveys to discuss their findings. Participation with agencies may include GWA as desired or necessary. Agency communication will be factored into the design strategies to minimize adverse impacts and expedite permitting.

Permitting activities and exclusions are as follows:

Section 7 of the Endangered Species Act (ESA): This work has been initiated by and is to be performed by others and is therefore excluded from our scope.

Clean Water Act (CWA) Section 404 and 401 Application: This work will not be performed in primary scope of work. If designs indicate that permitting will be required, then we will do so under a contract amendment.

Section 402 Permit (Construction General Permit): This work will be completed by the construction contractor and is excluded from our scope at GWA request.

Coastal Zone Management Act (CZMA) Consistency Determination : We will prepare the Guam CZMA that will include evaluation of field and document data, confirming use requirements within the Coastal Zone, and prepare the Coastal Zone Consistency Determination. Information obtained and analyzed by others in the development of the Categorical Exclusion (CatEx) and other permit applications will be used to support development of the Coastal Zone Consistency Determination. We will perform one round of responses to agency comments in order to expedite issuance of the consistency determination.

Guam Land Use Commission (GLUC) Wetland Permit: We will prepare and submit a proposed work plan and other supporting documents necessary for the GLUC wetland permit to GWA for submittal to the agency.

National Environmental Policy Act (NEPA): A Categorical Exclusion (CatEx) for NEPA compliance is to be prepared by others and is therefore excluded from our scope. An Environmental Assessment is also not included in this scope, as a CatEx is anticipated to be provided to GWA.

Archeological site investigation, permitting, and monitoring will be performed by our consultant, SEARCH Inc. SEARCH will perform background research, consultations, preparation of a draft, and final versions of an Archaeological Monitoring and Discovery Plan (AMDP), artifact analysis (up to 5 total), preparation of draft and final Technical Reports, preparation of a Guam Historic Preservation Office (GHPO) Site Inventory Form, and curation of recovered artifacts (up to 5 total).

- i. Permit preparation to perform site assessments is included in task 2.1 h.
- j. GHD will prepare an initial condition assessment of the pump station and visible portions of the force main. This assessment is separate from the existing force main internal inspection and assessment that will be performed after the redundant force main is constructed. Electrical facilities in the pump station will be assessed with consideration of prior investigation results and considering the capacity of the pump station for future flows.
- k. Following selection of one or more possible corridors for the redundant force main, additional utility information may be necessary. Ground penetrating radar will be used to verify utility locations and a half day of location services are included in our Proposal. Excavation (pothole) investigation, is available as an addition to this Proposal.
- l. We will evaluate options for the size, material, and location of the redundant force main

and provide a technical memorandum summarizing our findings with a recommendation for the preferred option.

- m. A condition assessment of the existing force main will be performed following construction and commissioning of the redundant force main. This work is anticipated to be performed in this sequence: 1) The construction contractor (contractor) completes construction of the redundant force main. 2) The contractor performs video inspection of the redundant force main for compliance with the contract documents. 3) The contractor bypasses flow from the existing to the redundant force main. 4) The contractor cleans the existing force main to prepare for video inspection. 5) The contractor performs video inspection of the existing force main with GWA and GHD present. 6) The contractor provides GHD with the video inspection files for further evaluation. If video inspection or other procedures indicate further pipeline assessment is necessary, we will evaluate and recommend options.
- n. Geotechnical investigation will be performed for land-based force main alignments. Information to be obtained from the geotechnical borings includes soil and rock type and density and presence and level of groundwater. This scope is for eight borings to a depth of 20 feet each or a combination of borings not exceeding 12 total for a combined depth of 160 lineal feet. Lab testing and reporting are included. Geotechnical investigations for aquatic construction are available and are not included in this scope.

2.2 Design Alternatives Report – GHD will prepare a report to describe the findings of the meetings, document review, and field investigations. Options for the redundant force main design will be presented with a recommendation for a preferred option. GWA will select the final design alternative.

- a. We will summarize all of the data that we have reviewed and analyzed and describe how the information affects our design process. Information will be weighted for relevance based on its impact to key project elements including performance, capital cost, operation and maintenance (O&M) cost, construction impacts on the project area, and schedule.
- b. We will summarize the field investigation findings and how they impact the project alternatives. We anticipate key factors will include permitting timing for alternative force main alignments, available space for a construction corridor, presence of cultural artifacts, and condition of existing sewer facilities.
- c. The alternatives analysis will include the following:
 - 1. Information deficiencies and needs for further investigation if required or desirable in order to choose a design option. Alternative choices may compel additional investigations that we will include in the report;

2. Cultural and historic survey requirements for the design options. GHD will coordinate with SEARCH to perform this work;
 3. Class 4 (budget level) construction cost estimates for the design alternatives;
 4. Preliminary MS Project Gantt schedules for the construction of the alternative designs;
 5. A description of the construction implementation of the alternative designs including equipment staging, traffic control, flow bypass, and pump station modifications;
 6. Permitting requirements for each alternative design.
- d. Design alternatives will include our recommendation of a preferred alternative with justifications for our recommendation.
- 2.3 Basis Of Design Report (BODR) - Methods and criteria for designs will be documented in a report based on information determined during Task 2.1. The BODR will address the following tasks:
- a. Analysis of current and projected flow rates. We understand that flow rate data will be available to us as has been provided for other improvements to the WWTP process.
 - b. Force main capacity will be designed for peak flows while maintaining flow velocities below critical levels that would result in excessive head loss.
 - c. The analysis in item b, above, will develop a revised System Curve for the force main that will be assessed with the existing pump performance curves. We will evaluate alternatives for optimizing performance of existing pumps with the redundant force main. Improvements to the existing equipment will be evaluated including mechanical, electrical and structural recommendations associated with equipment and piping.
 - d. The existing control system will be evaluated and alternatives for upgrades presented. We understand that existing controls are for wet well level, with the ability to control two pumps with Variable Frequency Drives (VFDs).
 - e. We will provide a plan for maintaining uninterrupted pump station operation during construction, anticipating flows of approx. 5 MGD. We understand that bypass pumping has been performed in the past, however, alternatives will be assessed.
 - f. Configuration of valves and mechanical components at the pump station will be designed for ease of operation to change from one force main to another.

- g. Structural requirements for the redundant force main will be provided.
- h. Geotechnical analysis and implications for design will be provided. Impacts of marine construction will be presented.
- i. Environmental protections for the project area and their implications for design choices will be presented.
- j. Existing infrastructure and available property and its effects on choices for the redundant force main corridor will be presented.
- k. Construction cost estimates will be provided for that alternatives evaluated including incremental costs that may preclude proceeding with design choices.

3. Design Service

3.1 Design review meetings are to be held monthly during the 8-month design period. These meetings are anticipated to be approximately four hours each, including preparation and documentation. The project manager will be included in all meetings and a design engineer will participate for approximately half of the meeting durations. In addition, four in-depth pre-design and design meetings will be held with anticipated durations of six hours each including preparation and documentation. The cost for meetings under this task is included in the cost for task 1.4.

3.2 Permitting

- a. Permits are to be obtained in accordance with the assessment performed in task 2.1 h. GHD will participate with coordination of tasks with agencies, scheduling, and communication. Costs for EA work to identify permit needs are included in task 3.2 b.
- b. A Categorical Exclusion for the project will be pursued by others. GHD and EA will participate in communication for this task.
- c. An Archeological Monitoring Plan will be prepared by SEARCH. GHD will perform agency coordination, scheduling, and communication for this task.
- d. Coordination and communication with permitting agencies and participating in plan presentation meetings for the four plan submittal stages (30% - 100%) is included in this task.

3.3 Final Design Documents

- a. GHD will maintain regular communication with the GWA Program Manager to verify information exchange throughout the design process.
- b. Site surveying will be performed for a selected alignment for the redundant force main. Guam Surveyor, our contractor, will prepare a property boundary survey drawing that will show private property boundaries, property ownership information, public Rights-Of-Way, and easements within the project area. A topographic survey will also be prepared for the project work area that will include elevation data for contours at one foot intervals, location and identification of existing improvements: buildings, structures, pavement, surfacing improvements, sign posts, landscaping, surface utilities, stormwater, sewer, and water structures (pipe inverts, valve nut measurements from surface), and underground utility location marks.

The cost quoted is for a single terrestrial alignment. Performing a survey for an alignment through the seabed will add additional survey costs to this proposal. If that option is selected and only an alignment crossing the seabed is chosen, the additional cost is \$5960. We will quote variations on this scope if needed.

- c. Preparation of an equipment and instrument list is included with Progress Plans, tasks 3.3 e, g, i, and k.
- d. The final BODR for the selected design alternative will be prepared and distributed. The BODR will include topics described in task 2.3.
- e. 30% Progress Plans and Specifications will be prepared. We will provide two full size plan sets (22" x 34") and two reduced sets (11" x 17") with pdf files. This task includes preparation of a Class 2 estimate and preliminary constructability assessment.
- f. GWA will review the project documents within a three week period and provide consolidated review comments to GHD for changes to incorporate in the documents. We will respond to the review comments prior to proceeding with the next design stage to verify a shared understanding of the changes.
- g. 60% Progress Plans and specifications will be prepared and delivered with the same hardcopy and digital deliverables as for task 3.3 e.
- h. GWA will review the project documents within a three-week period and provide consolidated review comments to GHD for changes to incorporate in the documents. GHD will provide a response to the comments as described in task 3.3 f.
- i. 90% Progress Plans and specifications will be prepared and delivered with the same hardcopy and digital deliverables as for task 3.3 e.

- j. GWA will review the project documents within a three-week period and provide consolidated review comments to GHD for changes to incorporate in the documents. GHD will provide a response to the comments as described in task 3.3 f.
- k. 100% Progress Plans and specifications will be prepared and delivered with the same hardcopy and digital deliverables as for task 3.3 e with the addition of AutoCad 2019 or 2018 drawing files. Digital files will be provided for GWA GIS mapping updates, although as-built plans are likely an even better choice. We will provide documents for submittal to USEPA by GWA. We estimate plan sheets as follows:

ESTIMATED NUMBER OF SHEETS	Proposed Design Drawings for the Hagåtña Redundant FM	
GENERAL-Phase 1		
1	T-001	TITLE SHEET, LOCATION MAP, VICINITY MAP
1	T-002	INDEX OF DRAWINGS
1	T-003	GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
1	G-001	PROPERTY BOUNDARIES
2	G-002-003	TOPOGRAPHY & SURFACE FEATURES
1	G-004	SURVEY CONTROL
CIVIL-Phase 1		
1	C-001	GENERAL CIVIL NOTES
1	C-101	EXISTING SITE PLAN HAGÁTÑA PUMP STATION & WWTP
1	C-102	EXISTING SITE PLAN MARINE CORPS DR.
1	C-103	DEMOLITION PLAN
2	C-104-105	EROSION & SEDIMENT CONTROL PLAN
3	C-106-108	FM PLAN AND PROFILE
1	C-109	MAINTENANCE OF SERVICE PLAN
2	C-110-111	RESTORATION PLAN
2	C-112-113	TRAFFIC CONTROL PLAN
2	C-301-302	HAGÁTÑA PUMP STATION PLAN AND SECTIONS
2	C-303-304	HAGÁTÑA WWTP PLAN AND SECTIONS
2	C-501-502	EROSION & SEDIMENT CONTROL DETAILS
1	C-503	TEMPORARY TRAFFIC CONTROL DETAILS
2	C-504-505	SANITARY SEWER DETAILS
2	C-506-507	HAGÁTÑA PUMP STATION & WWTP CIVIL DETAILS
2	C-508-509	GENERAL CIVIL DETAILS
STRUCTURAL-Phase 1		
1	S-001	STRUCTURAL NOTES, SYMBOLS, AND ABBREVIATIONS
1	S-101	HAGÁTÑA PUMP STATION UNDERGROUND STRUCTURES
1	S-102	FM SUPPORTS
2	S-501-502	HAGÁTÑA PUMP STATION & WWTP STRUCTURAL DETAILS
MECHANICAL-Phase 1		
1	M-001	MECHANICAL NOTES, SYMBOLS, AND ABBREVIATIONS

1	M-101	HAGÁTÑA PUMP STATION YARD PIPING
1	M-102	HAGÁTÑA WWTP YARD PIPING
2	M-501-502	MECHANICAL DETAILS
44	DRAWING SHEET COUNT TOTAL	

- l. GHD will verify adherence to Guam Procurement Laws in the project documents.
- m. GHD will use current GWA procurement templates for the front end specifications section.
- n. We will prepare permit applications in coordination with EA for all local authorities with jurisdiction over the project. Permit fees are not included in our scope and are assumed to be paid by GWA. Permitting tasks may be included in task 3.2 b.
- o. Digital copies of the final design documents will be provided as described in task 3.3 k.
- p. Cost estimates will be provided within tasks 3.3 e, g, and i.
- q. We will provide deliverables as described in tasks 3.3 e, g, and i. We understand that at any stage of design, changes that result in significant cost changes will be identified and brought to GWA's attention.
- r. Digital drawing files will be provided as described in tasks 3.3 e, g, and i.

4. Contract Bidding Support

Work under this task assumes a single bid event.

- a. Pre-bid Meeting – We will prepare a meeting agenda, sign in sheets, and will facilitate the meeting with GWA. We will prepare meeting minutes and distribute them to GWA.
- b. Compile Requests for Information (RFI) – We will receive RFIs and provide responses to GWA for distribution to planholders. We will prepare addenda to address issues in the final design documents.
- c. Bid Evaluation – We will attend a bid evaluation conference with GWA. We have included a single conference in this scope. With complex or variations with bid submissions, the evaluation process can become lengthy and additional participation may be subject to a contract amendment with GWA approval.
- d. Review and Certify Bids – We will receive hardcopies of bids from GWA for review at our office to determine the lowest responsible and responsive bidder. Hardcopies are a

crucial part of the review process and we can print these at our standard rates if needed. We will perform a detailed analysis of the two lowest bids for conformance to the bid requirements. Discrepancies between bids received and bid requirements will be tabulated for evaluation by GWA. We will prepare a spreadsheet bid tabulation for GWA review.

- e. Recommend Construction Contract Award – We will recommend award of a construction contract based on criteria provided in the bid documents. We will provide a technical memorandum summarizing our review and recommendations. GWA is to provide the final determination of contract award.

5. ENGINEERING SUPPORT DURING CONSTRUCTION

Work under this task is to be performed on a Lump Sum basis with the conditions stated below.

- a. Prepare Conformed Plans and Specifications – We will prepare plans and specifications that incorporate any changes that occurred during the bid phase. These documents will be provided to GWA as hard copies (4 sets - 22" x 34", 4 sets -11" x 17", and bound documents on 8.5" x 11") and as PDF files.
- b. GHD will assist with preconstruction and partnering conferences, assuming two meetings for this proposal.
- c. GHD will attend weekly construction meetings throughout the 14 month construction period. This task includes three meetings per month in addition to the meetings in task 1.4. The Project Manager or senior engineer will attend all meetings. A design engineer is anticipated to support the meeting effort at approximately 1/3 of the time allocated for the Project Manager.
- d. Shop Drawing & Contractor Calculation Review – We will perform a single review of up to a total of 10 document packages not to exceed 40 review items. We will provide comments in a review summary spreadsheet.
- e. Substitution Requests – We will review and respond to up to 8 material substitution requests. We will provide comments in a review summary spreadsheet.
- f. Site Visits – We will visit the site monthly during the 14-month construction period and provide a field visit report of our observations and communication.
- g. Coordination with CM – GHD will coordinate with GWA's CM contractor throughout construction to provide support for execution of construction in accordance with the design. Our scope includes 40 hours of GHD Project Manager and 10 hours design engineer or equivalent role for the purpose of coordination.

- h. Archeological Monitoring – This work is not included in the scope but is available as required at the standard rates by SEARCH.
- i. Submittal, RFI, CO, and Schedule Review – We will review up to 50 submittals, 30 Requests for Information, and a combination of 15 total reviews of Change Orders and Schedules. We will provide our responses in spreadsheets and memos to GWA.
- j. Final Inspection – We will participate in a final inspection and prepare a punchlist with up to 50 items, limited so that the contractor is not relying on the inspection and punchlist in lieu of contractor-provided project supervision.
- k. Final Record Drawings – We will prepare a set of Record Drawings from one submittal of marked construction plans and notes. We will provide these drawings to GWA in both PDF and AutoCAD 2018 formats. In conjunction with Record Drawings, we will coordinate with GWA and the CM to provide to us with PDF and .mp4 files for all startup and equipment commissioning documentation. We will prepare digital O&M content to augment hardcopies provided by the CM contractor: (up to 30 pdf files, 1200 page limit), up to 15 minutes of video, and up to 4 procedure documents (total of 20 pages of procedures) and will provide this information to GWA in PDF and .mp4 files.

FEE SCHEDULE

GHD proposes to perform the work described in this proposal for the lump sum amount of \$603,951.14. Additive items for permitting are included with a budgeted amount of \$46,315.72. A cost breakdown per task is provided separately.

Final 3/12/21				
Rev 1 1/13/21; Rev 2 2/15/21; Rev 3 2/26/21				
Task	Task Description	Sub-consultants	Expenses	GHD Labor & Totals
1	PROJECT MANAGEMENT			
1.1	Prepare Project Management Plan		\$ 200.00	\$9,582.50
1.2	Prepare Project Schedule			\$1,537.00
1.3	Monthly Progress Reports (25 months)			\$9,420.00
1.4	Meetings with GWA & Agencies (26 over 26 months of project)			\$31,903.50
	Environmental Permitting Support (20 meetings) + Consultation	\$18,717.40		
	Archeological Permitting Support	\$4,824.25		
	PM GHD HOURS SUBTOTAL			\$ 52,443.00
	PM SUB-CONSULTANTS SUBTOTAL	\$ 23,541.65		\$ 23,541.65
	PM EXPENSES SUBTOTAL		\$ 200.00	\$ 200.00
	PM GHD LABOR, SUB-CONSULTANTS, & EXPENSES TOTAL	\$ 23,541.65	\$ 200.00	\$ 76,184.65
2	PRELIMINARY DESIGN			
2.1	Research and Field Investigation			
a	Obtain and Review Record Drawings			\$3,650.00
b	Property Boundary, ROW and Easement Research	\$ 6,097.30		\$1,871.50
c	Determine Maintenance History			\$2,219.50
d	Obtain and Review Pump Station and FM Inspection Data			\$2,088.00
e	Obtain and Review Pump Station Operation Data			\$2,088.00
f	Obtain and Review Flow Records			\$2,088.00
g	Meet with GWA Staff (4 meetings)			\$5,135.00
h1	Environmental Permitting Assessment	\$ 19,404.75		\$2,389.50
h2	Archeological Permitting Assessment	\$ 4,824.25		\$1,523.50
i	Prepare Permits for Site Assessments (incl in h1)			
j	Prepare a Condition Assessment of PS and FM	\$ 1,048.80		\$8,093.00
k	Coordination & Verification of Utility Locates	\$ 2,518.50		\$1,655.00
l	Evaluate FM options and Recommend Alternative			\$5,189.00
m	Investigate Existing FM Condition for Phase 2 Scope			\$14,479.50
n	Geotechnical	\$ 22,057.00		\$1,956.50
2.2	Design Alternatives Report			
a	Data Research Summary			\$4,827.50
b	Field Investigation Summary			\$2,521.00
c	Additional content			
1	Additional Investigation Requirements			\$1,562.00
2	Cultural Resource and Historical Survey Requirements	\$ 1,447.28		
	Coordination with SEARCH			\$866.00
3	Class 4 Construction Cost Estimates			\$2,258.00
4	Proposed Construction Schedule			\$1,129.00
5	Proposed Construction Implementation			\$2,261.00
6	Permitting Requirements			\$1,175.50
d	Design Alternative Recommendation			\$2,761.00
2.3	Basis of Design Report			
a	Current and Projected Flow Rates			\$1,477.00
b	Redundant FM Design -Projected Flow and Exist Pumps			\$1,477.00
c	System Curve Revisions, Pump Operating Point Changes			\$5,462.00
d	Control Upgrades to Meet New Flows			\$4,290.00
e	PS Operation Plan During Upgrades			\$2,193.00
f	FM Valve Configuration			\$433.00
g	Structural Design for FM			\$3,665.78

Task	Task Description	Sub-consultants	Expenses	GHD Labor & Totals
h	Geotechnical and Marine Considerations			\$1,392.00
i	Environmental Protections			\$1,438.50
j	Infrastructure Utilities, Easement Considerations			\$2,287.50
k	Class 4 Construction Cost Estimate	\$ 4,025.00		
	PRELIMINARY DESIGN GHD HOURS SUBTOTAL			\$ 97,902.78
	PRELIMINARY DESIGN SUB-CONSULTANTS SUBTOTAL	\$ 61,422.88		\$ 61,422.88
	PRELIMINARY DESIGN EXPENSES SUBTOTAL		\$ -	\$ -
	PRELIMINARY DESIGN GHD LABOR, SUB-CONSULTANTS, & EXPENSES TOTAL	\$ 61,422.88	\$ -	\$ 159,325.66
3	DESIGN SERVICE			
3.1	Meetings (Same as 1.4 b)			
3.2	Permitting			
a	Identify Permits (Incl in 3.2 b) Assist Owner Preparing and Obtaining Permits			\$2,660.50
b	Permitting Completion	\$ 16,524.75		\$ 2,134.50
c	Archeological Monitoring Plan AMDRP	\$ 4,824.25		\$ 1,175.50
d	Agency Coordination by GHD			\$5,042.00
3.3	Final Design Documents			
a	Coordinate with Program Manager			\$ 1,732.00
b	Property Boundary & Topo Survey	\$ 10,908.90		\$2,570.50
c	Equipment and Instrument List/Specifications (incl in Specifications)			
d	Finalize and Distribute BOD		\$ 200.00	\$ 4,026.00
e	30% Progress Plans & Specifications 30% Construction Cost Estimate, CI 2	\$ 4,025.00	\$ 400.00	\$54,127.14
f	GWA Review & Communication			\$ 433.00
g	60% Progress Plans & Specifications 60% Construction Cost Estimate, CI 2	\$ 4,025.00	\$ 400.00	\$47,455.26
h	GWA Review & Communication			\$ 433.00
i	90% Progress Plans & Specifications 90% Construction Cost Estimate, CI 1	\$ 4,025.00	\$ 400.00	\$33,596.51
j	GWA Review & Communication			\$ 433.00
k	100% Plans & Specifications		\$ 600.00	\$ -
l	Guam Procurement law check			\$ 479.50
m	Prepare procurement docs			\$ 1,825.00
n	Prepare permit applications			\$ 3,096.00
o	Prepare digital final documents			\$ 1,525.00
p	Cost Estimates (incl in prior items)			\$ -
q	Deliverables always 1 hardcopy, 1 electronic (incl in prior items)			\$ -
r	Final Drawings pdf and ACAD (Incl in prior items)			\$ -
	DESIGN SERVICE GHD HOURS SUBTOTAL			\$ 188,769.04
	DESIGN SUBCONSULTANTS SUBTOTAL	\$ 44,332.90		\$ 44,332.90
	DESIGN SERVICE EXPENSES SUBTOTAL		\$ 2,000.00	\$ 2,000.00

Task	Task Description	Sub-consultants	Expenses	GHD Labor & Totals
	DESIGN SERVICE GHD LABOR, SUB-CONSULTANTS, & EXPENSES TOTAL	\$ 44,332.90	\$ 2,000.00	\$ 235,101.94
4	CONTRACT BIDDING SUPPORT			
a	Pre-bid meeting agenda, meeting prep, minutes			\$ 2,197.50
b	Compile up to 20 RFIs, Prepare Addenda			\$ 3,310.00
	Coordination & communication with GWA			\$ 866.00
c	Attend Bid Evaluation conference			\$ 1,392.00
d	Certify Bid Tabulation and evaluate			\$ 1,655.00
e	Recommend Construction Award			\$ 1,523.50
	CONTRACT BIDDING PHASE GHD HOURS SUBTOTAL			\$ 10,944.00
	CONTRACT BIDDING SUBCONSULTANT SUBTOTAL	\$ -	\$ -	\$ -
	CONTRACT BIDDING EXPENSES SUBTOTAL		\$ -	\$ -
	CONTRACT BIDDING GHD LABOR, SUB-CONSULTANTS, & EXPENSES TOTAL	\$ -	\$ -	\$ 10,944.00
5	ENGINEERING SUPPORT DURING CONSTRUCTION			
a	Prepare Conformed plans and specs		\$ 600.00	\$ 6,482.00
b	Assist with Preconstruction and Partnering Confernces			\$ 2,088.00
c	Attend Weekly Meetings (3 additional to item 1.4 per month during construction)			\$ 21,868.00
d	Review Shop Drawings, Calcs, etc (30 total)	\$ 699.20		\$ 10,869.50
e	Evaluate Substitution Requests (8 total)			\$ 2,258.00
f	Perform Monthly Site Vists (14 total)			\$ 6,124.50
g	Coordination with CM consultant throughout construction			\$ 9,975.00
h	Archeological Montoring (on call)			
i	Review submittals (50), RFIs (30) COs and schedule (15 total)			\$ 20,742.00
j	Perform Final Inspection and Punch List			\$ 2,088.00
k	Perform Final Record Drawings (1 set of construction sketches)			\$ 8,404.00
	EOB SUPPORT GHD HOURS SUBTOTAL			\$ 90,899.00
	EOB SUPPORT SUBCONSULTANTS SUBTOTAL	\$ 699.20		\$ 699.20
	EOB SUPPORT PHASE EXPENSES SUBTOTAL		\$ 600.00	\$ 600.00
	EOB SUPPORT GHD LABOR, SUB-CONSULTANTS, & EXPENSES TOTAL	\$ 699.20	\$ 600.00	\$ 92,198.20
ALL	TOTAL GHD HOURS			\$ 440,957.82
ALL	TOTAL SUBCONSULTANTS	\$ 129,996.63		\$ 129,996.63
ALL	TOTAL EXPENSES		\$ 2,800.00	\$ 2,800.00
ALL	TOTAL GHD LABOR, SUB-CONSULTANTS, & EXPENSES TOTAL	\$ 129,996.63	\$ 2,800.00	\$ 573,754.45
ALL	GRT AT 5.263%			\$ 30,196.70
ALL	GRAND TOTAL			\$ 603,951.14
Additive Quantities				
2.1 h1 A	Environmental Permitting Assessment	\$ 20,000.00		
3.2 b A	Permitting Completion	\$ 24,000.00		
ALL	TOTAL GHD HOURS			
ALL	TOTAL SUBCONSULTANTS	\$ 44,000.00		
ALL	TOTAL EXPENSES		\$ -	
ALL	TOTAL GHD LABOR, SUB-CONSULTANTS, & EXPENSES TOTAL	\$ 44,000.00	\$ -	\$ 44,000.00
ALL	GRT AT 5.263%			\$ 2,315.72
ALL	GRAND TOTAL			\$ 46,315.72



EXHIBIT B

**Amendment No. 1
Guam Waterworks Authority (GWA) Design and Construction Support Services Scope of Work &
Fee Proposal for the Hagåtña Main Sewage Pump Station Redundant Force Main Design Pivot to a
Temporary Force Main**

**GWA Project No. S20-002-EPA
October 24, 2023**

GENERAL

This Scope Of Work and Fee Proposal is in response to the design pivot of the Hagåtña Main Sewage Pump Station Redundant Force Main project. Under the original scope with GHD, the intent of the project was to install a new buried force main via open trench and directional drilling techniques and then investigate and evaluate the condition of the existing force main, which could then subsequently be potentially rehabilitated. GHD completed the 65% design of the redundant force main and GWA subsequently decided to pivot the project approach to reduce the cost to within the budget as well as for other reasons. GWA has directed GHD to prepare this amendment to refocus the project scope on GWA's new preferred approach to the project.

GWA's preferred approach is focused on developing a new force main that is intended to be temporary and would be completed to allow the existing force main to be taken out of service and then inspected to determine the approach to rehabilitation. The rehabilitation of the existing force main could take place based on the nature of the necessary improvements, costs, timing, and other factors as GWA deems fit. It is assumed that the temporary force main would need to be in service for up to approximately five years to allow time for the evaluation of the existing force main, development of a rehabilitation strategy, development of plans and specifications, bidding, and contractor materials procurement and construction. After a rehabilitated existing force main is back in service, then the temporary force main could be decommissioned or made more permanent if desired. Given the extended period that the temporary force main will need to be in service, it will require a nominal 36" ID pipeline based on the previously submitted flow analysis technical memorandum.

TEMPORARY FORCE MAIN CONFIGURATION

The existing 65% design work included piping modifications just outside of the Hagåtña Main pump station to allow for the installation of a second force main with valving to allow operational flexibility. It is envisioned that the temporary force main system will utilize this yard piping concept and be buried along Marine Corps Drive up to the causeway. The piping will transition from below to above ground at the causeway entrance and then be surface mounted along the western edge of the causeway. GWA has engaged a separate



consultant to design the replacement of the three culvert crossings along the causeway and this consultant will also be responsible for the design of the temporary force main along the causeway. The causeway portion is envisioned to be mounted on the grouted riprap, outside slope of the causeway and will be bridged over the three culvert sections so that it does not encroach into the existing travel way. GWA's other design consultant shall be responsible for all force main design and detailing along the causeway. Depending on the timing of the two projects, the tie in between the landward portion and the causeway portion of the temporary force main will be coordinated with the other consultant so that the project that is constructed second is responsible for the connections between the piping. On the WWTP island side, the temporary force main will be laid above ground between the outside edge of the perimeter access road and the rip rap up to a point opposite the headworks. Then the pipe will transition to below ground and will tie into the headworks based on the concepts presented in the 65% design package.

GHD will revise the existing 65% design plans based on this temporary force main configuration.

EVALUATION OF EXISTING FORCE MAIN

Once the temporary force main is in place and operational, then the existing force main can be evaluated. It is envisioned that the bid package for the installation of the temporary force main that GHD will finalize under this scope will include the evaluation of the existing force main. This will include guidance for the contractor to take the existing force main out of service, remove selected elbows or pipe segments to facilitate access to reaches of the existing pipe, hydro clean the existing pipe, video record and inspect the existing pipe, recover, repair, and/or backfill excavated portions as appropriate to prepare them to await future rehabilitation or other work. The evaluation of the video records, consideration of potential rehabilitation strategies, and development of a bid package to complete desired rehabilitation would be completed under a separate scope and budget and are not part of this scope amendment. Only under direction from GWA, GHD may review the Contractor's condition assessment report under a Time and Materials format.

The tasks below are based on the original scope for this project with modifications appropriate for the pivot of the design approach discussed above.

1. PROJECT MANAGEMENT

- 1.1 Project Management Plan – Project management plan from the original contract will remain, no new documents will be submitted.
- 1.2 Project Schedule – Same as original contract but adjusted for the extended duration



of 8 months from NTP.

- 1.3 Progress Reports – Same as original contract but adjusted for the extended duration of 8 months.
- 1.4 Meetings and Coordination – Same as original contract but adjusted for the extended duration of 8 months. Design meetings will be held at each stage of design (90% and 100%) for a total of two meetings.

2. PRELIMINARY DESIGN

- 2.1 Research and Field Investigation – The research and field investigation has been completed as per the original contract, no additional research or field investigation work is included in this scope.
- 2.2 Design Alternatives Report – The Design Alternatives Report has been completed as per the original contract, no additional report is included in this scope
- 2.3 Basis Of Design Report (BODR) – An addendum to the basis of the design report will be prepared to reflect the changes due to the design pivot as described in the narrative above. Additional discussion will include pipe material evaluation for above-ground use. The addendum will only reflect anticipated changes and will be based on providing a brief summary of the temporary force main concept. The previously submitted BODR will not be modified.
- 2.4 Geotechnical investigation – the scope for Geotechnical investigation has been reduced for the pivot design. It is anticipated that a total of four borings are needed for the project, three for the landside and one on the island, to a max depth of 15 feet.
- 2.5 Topographic survey – additional topographic survey is not anticipated for the pivot design.

3. DESIGN SERVICE

- 3.1 Design progress meetings are to be held monthly during the additional 8-month design period. These meetings are anticipated to be approximately one hour in length, and GHD will invest additional time preparing for the meetings and preparing meeting minutes.
- 3.2 Permitting
 - a. A Categorical Exclusion for the project will be pursued by others. GHD and EA



will participate in communication for this task.

- b. An Archeological Monitoring and Discovery Plan (AMDP) has been prepared by SEARCH for the original project concept, and will require modifications to that existing plan due to the change in design. SEARCH will revise the current AMDP to suit the new pivot design. GHD will perform agency coordination, scheduling, and communication for this task.
- c. Coordination and communication with permitting agencies and participating in plan presentation meetings for the two design submittal stages (90% - 100%) is included in this task. This also includes providing responses to permitting agencies' comments.

3.3 Final Design Documents

- a. GHD will maintain regular communication with the GWA Program Manager throughout the design process.
- b. 90% Progress Plans and Specifications will be prepared. GHD will provide design deliverables in pdf format. This task includes preparation of a Class 3 estimate. Note that cost estimate for the portion of piping and supports within the causeway will not be included.
- c. GWA will review the project documents within three-weeks and provide consolidated review comments to GHD to incorporate in the documents. GHD will respond to the review comments prior to proceeding with the next design stage to verify an understanding of the changes.
- d. 100% Final Plans and specifications will be prepared and delivered in pdf format similar to the 90% design deliverables with the addition of AutoCad 2019 or 2018 drawing files. This task includes preparation of a Class 1 estimate. Note that cost estimate for the portion of piping and supports within the causeway will not be included.
- e. GHD will use current GWA procurement templates for the front end specifications section.
- f. GHD will prepare permit applications in coordination with EA for all local authorities with jurisdiction over the project. Permit fees shall be paid directly by GWA.



4. CONTRACT BIDDING SUPPORT

Work under this task assumes a single bid event and a single bid package.

- 4.1 Pre-bid Meeting – GHD will prepare a meeting agenda, sign in sheets, and will facilitate the meeting with GWA. GHD will prepare meeting minutes and distribute them to GWA.
- 4.2 Compile Requests for Information (RFI) – GHD will receive RFIs and provide responses to GWA for distribution to plan holders. GHD will prepare addenda to address questions during bidding.
- 4.3 Bid Evaluation and Bid Certification – GHD will attend a single bid evaluation conference with GWA. Upon receipt of hard copies of the bids from GWA, GHD will review to determine the lowest responsible and responsive bidder. GHD will perform an analysis of the two lowest bids for conformance to the bid requirements. Discrepancies between bids received and bid requirements will be tabulated for evaluation by GWA. GHD will prepare a spreadsheet bid tabulation for GWA review. If there are bid protests or complications with the bid beyond what is normally expected, GHD will negotiate with GWA for a contract amendment.
- 4.4 Recommend Construction Contract Award – GHD will recommend award of a construction contract based on criteria provided in the bid documents. GHD will provide a brief memo summarizing recommendations. GWA is to provide the final determination of contract award.

5. ENGINEERING SUPPORT DURING CONSTRUCTION

Work under this task is to be performed on a Lump Sum basis with the conditions stated below. GWA will provide a full time construction inspector and manager and GHD will provide supplemental Engineering Support During Construction. It is assumed that GWA's construction manager will manage all communication and correspondence with the Contractor and shall log and manage all submittals, RFI's, CO's, Schedules, Pay Requests, and other project management documentation.

- 5.1 Prepare Conformed Plans and Specifications – GHD will prepare plans and specifications that incorporate any changes that occurred during the bid phase. These documents will be provided to GWA as hard copies (4 sets - 22" x 34", 4 sets - 11" x 17", and bound documents on 8.5" x 11") and as PDF files.
- 5.2 GHD will assist with preconstruction and partnering conferences, assuming two



meetings for this proposal.

- 5.3 GHD will attend up to three weekly construction meetings per month throughout the anticipated 14 month construction period.
- 5.4 The Project Manager or senior engineer will attend all meetings. A design engineer is anticipated to support the meeting effort at approximately 1/3 of the time allocated for the Project Manager.
- 5.5 Shop Drawing & Contractor Calculation Review – GHD will perform a single review of up to a total of 10 document packages not to exceed 40 review items.
- 5.6 Substitution Requests – GHD will review and respond to up to 8 material substitution requests.
- 5.7 Site Visits – GHD will periodically visit the site during the construction period and provide a field visit report of observations and communication. It is anticipated that up to ten site visits will be performed.
- 5.8 Coordination with CM – GHD will coordinate with GWA's CM contractor throughout construction to provide periodic support related to the technical aspects of the design. This scope includes 40 hours of GHD Project Manager and 10 hours design engineer or equivalent role for the purpose of coordination.
- 5.9 Archeological Monitoring – This work is not included in the scope but is available as required at the standard rates by SEARCH.
- 5.10 Submittal, RFI, CO, and Schedule Review – GWA's construction manager will be responsible for addressing submittals related to contractual and administrative matters as well as standard materials of construction (such as aggregate base, concrete, etc.) and GHD will review specialized technical submittals (such as piping, valves, fittings, and installation techniques). GWA's construction manager will be responsible for addressing RFI's related to contractual and administrative items and GHD will address RFI's related to technical design matters. All schedules and project change orders (CO) will first be evaluated by GWA's construction manager and then will be reviewed by GHD if necessary. It is anticipated that GHD may review up to 25 submittals, 25 Requests for Information, and a combination of 15 total reviews of Change Orders and Schedules.
- 5.11 Final Inspection – GHD will participate in a final project inspection coordinated by GWA's CM contractor and provide input to the CM who will prepare the punchlist. The contractor shall not rely on the inspection and punchlist in lieu of contractor-provided project supervision.



5.12 Final Record Drawings – GHD will prepare a set of Record Drawings from one set of marked construction plans and notes compiled by GWA's CM contractor. GHD will provide these drawings to GWA in both PDF and AutoCAD 2018 formats. The contractor shall be responsible for providing PDF copies of any startup, equipment commissioning, and O&M documentation.

6. Fee Proposal Summary

TASK #	DESCRIPTION	GHD ADDITIONAL FEE	SUBCONSULTANT ADDITIONAL FEE	TOTAL FEE
<i>Task1</i>	<i>Project Management</i>	\$17,571.00	-	\$17,571.00
<i>Task2</i>	<i>Preliminary Design</i>	(\$4,173.64)	-	(\$4,173.64)
<i>Task3</i>	<i>Design Service</i>	\$33,743.68	\$ 9,775.00	\$43,518.68
<i>Task4</i>	<i>Contract Bidding Support</i>	\$0.00	-	\$0.00
<i>Task5</i>	<i>Engineering Support During Construction</i>	\$0.00	-	\$0.00
	Subtotal	\$47,141.04	\$9,775.00	\$56,916.04
	GRT @ 5.2632%			\$2,995.61
	Fee Proposal Grand Total			\$59,911.65

ATTACHMENT A
DETAILED FEE BREAKDOWN



Pivot Design for the Hagatna Main Pump Station
GHD Fee Proposal

A	B	C	D	E	F
Task	Description	GHD Labor & Expenses to complete Pivot design	Total Subs (Refer to page 2)	GHD Remaining Contract Fee as of Oct 2023 Invoice (Does not include subs)	GHD Additional Fee (Column C-E)
Task1	PROJECT MANAGEMENT	\$17,571.00	-	\$0.00	\$17,571.00
1.1	Prepare Project Management Plan	\$0.00	-		
1.2	Prepare Project Schedule	\$959.00	-		
1.3	Monthly Progress Reports (8 months - assumed for pivot)	\$2,784.00	-		
1.4	Meetings with GWA & Agencies (16 over 8 months) [bi-weekly]	\$13,828.00	-		
Task2	PRELIMINARY DESIGN	\$26,094.14	-	\$30,267.78	(\$4,173.64)
2.1	Data Gathering	\$0.00	-		
2.2	Design Alternatives Report	\$0.00	-		
2.3	Basis of Design Report	\$26,094.14	-		
Task3	DESIGN SERVICE	\$106,314.72	-	\$72,571.04	\$33,743.68
3.1	Meetings (Same as 1.4 b)	\$0.00	-		
3.2	Permitting	\$6,318.50	-		
3.3	Final Design Documents	\$99,996.22	-		
Task4	CONTRACT BIDDING SUPPORT	\$10,944.00	-	\$10,944.00	\$0.00
	No changes	\$10,944.00	-		
Task5	ENGINEERING SUPPORT DURING CONSTRUCTION	\$92,198.20	-	\$92,198.20	\$0.00
	No changes	\$92,198.20	-		
	Subtotal	\$253,122.06	-	\$205,981.02	\$47,141.04
	GRT @ 5.2632%				\$2,481.13
				GHD Fee Proposal Total	\$49,622.17



Pivot Design for the Hagatna Main Pump Station
Subconsultant Fee Proposal

*Does not include subcontractor amounts billed to date

	Description	Original Contract Fee	Proposed Additional Fee for Pivot design	Notes
SUB A	ENVIRONMENTAL	\$54,646.90	-	Modifications can be made within the existing contract fee
SUB B	GEOTECHNICAL	\$22,057.00	-	Modifications can be made within the existing contract fee
SUB C	ARCHAEOLOGICAL	\$15,920.03	\$ 5,750.00	Additional effort to revise Monitoring plan for review by SHPO. Assumes total of two revisions.
SUB D	COST ESTIMATING	\$16,100.00	\$ 4,025.00	Additional effort to revise cost estimate and provide ROM cost for BODR.
SUB E	SURVEY	\$17,006.20	-	No additional survey required
SUB F	UTILITY INVESTIGATION AND ASSESSMENT	\$4,266.50	-	No additional effort required
Subconsultant Subtotal		\$129,996.63	\$9,775.00	
GRT @ 5.2632%			\$514.48	
Subconsultant Fee Proposal Total			\$10,289.48	

EXHIBIT C

Consent Decree Table A - Force Mains

1. Hagåtña Main

2. Asan
3. Bayside
4. Pago Double Shaft
5. Mamajanao
6. Barrigada
7. Mangilao
8. Piti
9. Tai Mangilao
10. Pump Station No. 17
11. Paseo De Oro
12. Dairy Road
13. Pump Station No. 16
14. Maite
15. Harmon
16. Fujita
17. Route 16
18. Yigo
19. Chaligan
20. Ypao
21. Inarajan Main
22. Southern Link
23. New Chaot
24. Gaan
25. Alupang Cove



EXHIBIT D

**Scope of Services
Between
GWA and GHD
For the Evaluation and Recommendation Phase (“Phase 1”)
and Forecasted Allowance for Design and Construction Assistance (“Phase 2”)
for the Hagatna Main Pump Station
to Assist with Compliance with the EPA Consent Decree**

Introduction

The Guam Waterworks Authority (GWA) is currently in the process of negotiating with the US Environmental Protection Agency (EPA) Terms and Conditions of a Consent Decree calling for improvements to GWA’s wastewater management system on the island of Guam. The Hagatna Main pump station is of high priority because all wastewater flows from the area are collected at this pump station and are then conveyed to the treatment plant. This scope of services addresses the pump station upgrades in two Phases. Phase 1 relates to the evaluation and planning for improvements at the Hagatna Main Pump Station. Phase 2 relates to the design and construction management associated with the priority improvements that result from the Phase 1 work. Since the detailed scope for the design and construction services under Phase 2 cannot be determined until Phase 1 is complete, a forecasted budget allowance is included in this scope. It is anticipated that at the conclusion of the Phase 1 work, that a detailed scope and budget for the Phase 2 construction services will be prepared by GHD based on GWA’s confirmation of the desired improvements and that the budget allowance for Phase 2 services will be adjusted as warranted.

Phase 1 is the evaluation of the pump station, recommendation for improvements, developing a Basis of Design for high-priority near term improvements, consideration of required permitting and approvals, cost estimation based on concept level analysis, and development of an implementation plan, project schedule, and scope of services for the subsequent design and construction support. Phase 2 will include final design, permitting, construction, and startup of recommended improvements.

The assessment and recommendations for improvements will be based on the following general approach and criteria:

Sewage Pump Stations: Condition Assessments.

- Review of existing condition assessment information and prior studies;
- Review of existing operations plans, operational data, and asset management data;
- Interviews with operations, maintenance, and engineering staff;
- Review of available engineering drawings;
- Pump Station inspections that include structural, mechanical, electrical, and civil assessments, and utilize up-to-date industry standard technologies, tools, and practices; and
- For each pump: designed horsepower, power demands, designed flows, installation date, and Preferred Operating Region;
- For each Pump Station: average flows, overall power demand, and overall wet well capacity.

Sewage Pump Station Acceptance Criteria.

- Emergency Operations
- Screening baskets, comminutors, or grit removal devices
- Proper site security and safety measures
- Emergency action sheets
- Backflow prevention devices



- Alarms and SCADA systems
- Adequate pumping capacity and redundancy
- Adequate wet-well capacity
- Corrosion protection
- Adequate electrical panels, lighting, and Power Supply
- Force Mains
- Pumps
- Valves

Project deliverables will be completed in accordance with GWA Guidelines. The work under this scope will be performed by appropriately Registered Professional Engineers.

Overall Project Team

To complete the evaluations and recommendations phase of the project, GHD will be collaborating with ArcSine Engineering for Electrical and SCADA analysis, J. Uno & Assoc. for the conceptual cost analysis, and EA Engineering, Science and Technology, Inc. for environmental consultation.

Sequence of Work for Phase 1 Tasks

The sequence of work to complete the deliverables for Phase 1 begins with Task 3, which is the assessment, evaluation, and recommendation task. Following the completion of Task 3, Tasks 4, 5, and 6 may be developed concurrently. Task 7 may only begin after the final Basis of Design Report (BODR) has been accepted by GWA, and upon GWA's instructions to proceed.

Task 1: Project Management

Project Management Plan: GHD will prepare a brief Project Management Plan (PMP) highlighting the overall management of the GHD project team and subconsultants, schedule of activities, preparation of draft deliverables, scope management, quality management, progress meetings and updates to GWA, preparation of progress reports, and other project management functions.

Project Schedule: GHD will prepare a project schedule for this scope of services highlighting major activities and deliverables. The schedule will include the initial project planning phase, timeframes for field investigations, project subconsultant activities, schedules for preparation of draft deliverables, review periods for GWA, deliverable finalization, and preparation of recommendations and scopes for follow on activities. Schedule updates will be provided monthly.

Progress Reports: GHD will prepare brief progress reports to be delivered along with monthly invoices reviewing the progress schedule and summarizing activities completed the previous month, activities planned for the following month, and highlighting any notable findings or challenges requiring attention to keep the project on track.

Meetings and Coordination: GHD will coordinate and facilitate regular progress meetings with internal team members and subconsultants as part of ongoing project coordination and management. Regular meetings will also be held with GWA to include discussions of project progress and interim findings, cost implications, and schedule updates. Meetings will be held with related local and federal agencies as needed to review project requirements and findings. Progress meetings will be held with GWA to review project deliverables. Meetings will generally be held using Microsoft Teams



Task 1 Assumptions:

- GWA to Provide Timely Project Input
- GWA to provide coordinated reviews summarizing GWA's comments
- Meetings to be held via Microsoft Teams
- All deliverables to be in electronic format

Task 1 Deliverables:

- Brief Project Management Plan
- Overall project schedule updates as warranted throughout the project
- Monthly progress reports delivered along with monthly invoices
- Meeting minutes

Task 2: Data Gathering and Site Investigations

The GHD team will assess the condition of the Pump Station through evaluation of existing background information, through site investigations, and through interviews with GWA personnel. It is expected for the GHD team to be **on the field** to observe the testing of equipment by the operators and observe operator's typical operational activities.

This information will be used to complete a condition and capabilities assessment and to identify design and operational issues, evaluate the overall performance of the system, to update the Pump Station asset condition profiles, and to assess the rate of deterioration or remaining useful life of Pump Station assets.

Task 2 Assumptions:

- GWA to make key personnel available for consultation
- GWA to provide historical flow data, asset management data, and pump station operational data
- GWA to provide historical design drawings, pump curves, and related information
- All deliverables to be in electronic format

Task 2 Deliverables:

- No formal deliverable will be provided under this task. Information gathered under this task will be used to develop deliverables under subsequent tasks.

Task 3: Assessment, Evaluation, and Recommendation

Based on the data collected under Task 2 along with the results of the site condition assessment, and interviews with GWA staff, the GHD team will evaluate the information and prepare a Pump Station Condition Assessment and Summary of Recommended Improvements. The evaluation of the pump station will include evaluation of the following elements based on the Recommended Standards for Wastewater Facilities, 2014 Edition:

- Average and peak wet-weather flow conditions
- Existing wet well geometry volume and performance under anticipated wet-weather peak hourly flow conditions
- Pumping capacity and pump redundancy with a minimum of two pumps running
- Pump operating range based on evaluation of a range of flows, pump curves, and the system curve
- Pump cycle time with fixed speed pumps under various flow scenarios
- Potential benefits from the use of Variable Frequency Drives
- Piping and valving configuration to allow for removal or maintenance of the pumps and check valves without affecting the operation of remaining pumps and operations during normal, peak, and bypass conditions
- Worker accessibility to controls, pumps, valves, etc.



- Pump station equipment, including wet-well and valve equipment, that may be rendered inoperable from corrosion, and recommendation for adequate corrosion protection
- Lifting system (hoists, beams, etc.) within the pump station to lift pumps and equipment for maintenance purposes
- Washdown and cleaning systems
- Ventilation systems and air flow requirements
- Operation and maintenance efficiency
- Spare parts and tools kept in stock for regular maintenance and emergency operations.
- Historical pump clogging and the potential benefits of screening baskets, comminutors, or grit removal devices to remove and/or comminute grit and large solids contained in the wastewater before it is pumped.
- Backflow prevention devices necessary to protect potable water sources from cross- contamination from wastewater backflow.
- Force main capacity, condition, material and location leaving the Pump Station based on current and proposed future dual force main configuration.
- Site perimeter walls, fencing, and access gates including vegetation management.
- Site storm water control and drainage
- Instrumentation, such as flow meters and, level sensors. GWA would like to be able to retrieve and gather data even while SCADA is not fully integrated into the GWA system.
- Interlock between instrumentation and equipment so that the pump station can be operated as HAND-OFF-AUTO
- Operational set points and pump controls
- SCADA compatibility for pump controllers and electrical panels with modems capable of communicating either wireless or by wired data service connection with GWA central data.
- Local and SCADA alarms
- SCADA data collection including operating hours, number of pump starts, wet well levels, flow (instantaneous and average), discharge pressure, high water level alarm, drywell flooding, power failure, low battery, remote signal failure.
- Integration of local SCADA to overall GWA SCADA system
- Site surveillance and security
- Site electrical system condition and capacity
- Standby power system condition and capacity
- Standby power fuel storage and piping condition and capacity
- SCADA implementation for standby power fuel storage
- Site and building lighting
- Backup power to lighting, motors, SCADA system, instrumentation, as well as other items necessary for the pump station operations
- Wet well configuration. GWA would like to be able to isolate one chamber of the wet well, while keeping the other in operation.
- Odor control

In addition to assessing overall design and the physical condition of the pump station facilities the GHD team will assist GWA to review standard operating placards to include design pressure and flow ranges and emergency action sheets for the following Pump Station scenarios: power failure; backup power failure; emergency response to an SSO; high- level alarm; and pre- and post-storm response. Each emergency action sheet should include standard operating procedures such as: response time, response personnel, chain of notification, response equipment, response procedures with order of operations, safety precautions, and close-out procedures.



A summary report in technical memorandum format will be developed providing the Condition Assessment and Summary of Recommended Improvements. It is envisioned that the report will include a variety of improvements that could be implemented in the near as well as longer term and that such improvements will be implemented through several phased construction projects, operational improvements, and other administrative and system improvements. The potential phasing of improvements will be considered under Task

Task 3 Assumptions:

- Evaluations based on Recommended Standards for Wastewater Facilities, 2014 Edition well as GWA Standards
- GWA will assist in setting priorities for improvements and identification of near term improvements to be implemented through a subsequent design project
- All deliverables to be in electronic format
- Review of draft technical memorandum to be conducted with GWA via Microsoft Teams Meeting prior to finalization

Task 3 Deliverables:

- Condition Assessment and Summary of Recommended Improvements Technical Memorandum in draft and final form.

Task 4: Basis of Design Report (BODR) For Priority Construction Improvements

The Final Condition Assessment and Summary of Recommended Improvements Technical Memorandum developed under Task 3 will provide a summary of the improvements recommended for the Hagatna Main Pump Station based on GWA feedback and engineering review, analysis, and recommendations. To further refine the analysis and prepare for the subsequent design and implementation of improvements, the GHD team will prepare a BODR of the priority construction improvements that are anticipated to be implemented through a near term design project. The GHD team will work with GWA throughout this project to identify project phasing and anticipated project implementation schedule that will be developed collectively based on GWA’s overall priorities, funding, status of finalization of the consent decree, and other factors.

The BODR will include a summary of the recommended improvements, project phasing, implementation steps, along with a project schedule. Relevant information such as the following will also be discussed:

- Materials of construction
- Hydraulic component sizing
- A draft equipment and instrument list, supportive data, and references
- Pre-purchase strategy identifying long lead materials recommended for early procurement
- Conceptual layouts of anticipated improvements

The BODR will be prepared in summary technical memorandum format with attachments as appropriate providing relevant supporting documentation. Information gathered from Task 5, Cost Estimate Analysis, and Task 6, Permitting and Approvals Analysis, will be considered in the final BODR. It is important to gain consensus on the Basis of Design, so the subsequent design may proceed smoothly based on GWA’s concurrence.

Upon the completion of the BODR and determination of the implementation steps, GHD will be able to prepare a scope of services and fee proposal for the design phase (“Phase 2”). Phase 2 scope will include completing the design(s), preparing bid documents, providing permitting assistance, preparing updated cost estimates, and assisting during bidding, and construction.



Task 4 Assumptions:

- BODR to focus on critical criteria for the recommended improvements, development of project phasing, summary of implementation steps, and schedules established under Task 3
- All deliverables to be in electronic format
- Review of draft report to be conducted with GWA via Microsoft Teams Meeting, prior to finalization

Task 4 Deliverables:

- BODR in draft and final form.
- Scope of Services and Fee Proposal for Phase 2

Task 5: Conceptual Cost Analysis

A conceptual cost analysis of the recommended improvements identified under Task 3 and further evaluated through the BODR under Task 4 will be prepared by J. Uno as a subconsultant to GHD. Based on the conceptual level of detail that the project will be developed to, a Class 4 cost estimate will be prepared. Such an estimate has a typical accuracy range of -15% to -30% on the low side, and +20% to +50% on the high side. Such an estimate is appropriate for initial evaluation of potential project costs. Costs would be further refined during the subsequent design phase.

Task 5 Assumptions:

- Cost Estimate to be Class 4
- Review of Draft Conceptual Cost Analysis with GWA via Microsoft Teams Meeting
- All deliverables to be in electronic format

Task 5 Deliverables:

- Cost Estimate in draft and final form.

Task 6: Permitting and Approvals Analysis

Based on the BODR prepared under Task 4 for the priorities for near term implementation, GHD will evaluate the anticipated permitting requirements for implementation. It is anticipated that permitting agencies may include the United States Army Corp of Engineers, Guam Environmental Protection Agency, Coastal Management, Department of Parks and Recreation, and the United States Fish and Wildlife Service. In addition, there may be related archaeological related permits required depending on the type of improvements that are included for near term implementation.

The permitting and approvals analysis will be summarized in a brief Technical Memorandum to be delivered in draft and final form.

Task 6 Assumptions:

- Permitting and approvals analysis based on priorities for near term implementation established under Task 3 and analyzed further under Task 4
- This Task focused on evaluating permit requirements. Actual permit applications will be prepared under a subsequent scope of services.
- All deliverables to be in electronic format
- Review of Draft Permitting and Approvals Analysis Technical Memorandum with GWA via Microsoft Teams Meeting

Task 6 Deliverables:

- Permitting and Approvals Analysis Technical Memorandum in draft and final form.



Task 7 Phase 2 Design Initial Fee Allowance (Time and Materials):

Based on GWA's request, an initial Phase 2 fee allowance is provided to allow the continued progress to Phase 2 design once Phase 1 reports and technical memorandums have been completed. Under this Task GHD will begin preparation of construction documents for bidding. These documents include plans, specifications, cost estimates, and permitting documentation. The initial fee allowance does not cover the entire Phase 2 design effort but allows GHD to continue working and begin the design phase and minimize delays due to procurement and processing time of the formal Phase 2 Change Order. The formal Phase 2 change order will include a detailed scope and budget based on the Phase 1 analysis and recommendations. The initial Phase 2 fee allowance is to be utilized as a Time and Materials basis as directed by GWA. The initial fee allowance for Phase 2 under this task is **\$350,000.**

- The fee allowance assumes 6 months effort for the following team members:
 - (1) Project Manager/Lead Engineer, full time hours
 - (1) Staff Civil Engineer, full time hours
 - (1) Staff Mechanical Engineer, quarter time hours

As noted under Task 4, GHD will prepare a full scope of services and fee proposal for the design phase ("Phase 2").



Evaluation and Recommendation Phase for the Hagatna Main Pump Station Fee Proposal

Description		Labor & Expenses	Total Subs	Estimated Project Total
*Task 1 to 7 are LS. Task 8 is T&M.				
Task1		\$27,845	\$17,250	\$45,095
Subtask 1.1	Project Management Plan	\$3,260	\$0	\$3,260
Subtask 1.2	Project Schedule	\$7,675	\$0	\$7,675
Subtask 1.3	Progress Reports	\$6,350	\$0	\$6,350
Subtask 1.4	Meetings and Coordinations	\$10,560	\$17,250	\$27,810
Task2		\$26,090	\$26,450	\$52,540
Subtask 2.1	Data Gathering	\$8,885	\$0	\$8,885
Subtask 2.2	Site Investigation	\$17,205	\$26,450	\$43,655
Task3		\$75,965	\$27,600	\$103,565
Subtask 3.1	Evaluation	\$21,150	\$11,500	\$32,650
Subtask 3.2	Pump Station Condition Assessment and Recommendations (Draft)	\$28,460	\$8,050	\$36,510
Subtask 3.3	Pump Station Condition Assessment and Recommendations (Final)	\$26,355	\$8,050	\$34,405
Task4		\$34,998	\$27,600	\$62,598
Subtask 4.1	Basis of Design Report (Draft)	\$18,930	\$13,800	\$32,730
Subtask 4.2	Basis of Design Report (Final)	\$16,068	\$13,800	\$29,868
Task5		\$5,078	\$20,010	\$25,088
Subtask 5.1	Cost Estimate (Draft)	\$2,490	\$1,955	\$4,445
Subtask 5.2	Cost Estimate (Final)	\$2,588	\$18,055	\$20,643
Task6		\$4,330	\$17,250	\$21,580
Subtask 6.1	Permitting and Approvals Analysis (Draft)	\$2,318	\$8,625	\$10,943
Subtask 6.2	Permitting and Approvals Analysis (Final)	\$2,013	\$8,625	\$10,638
Task7		\$350,000	\$0	\$350,000
Subtask 7.1	Phase 2 Design Fee Allowance (T&M)	\$350,000	\$0	\$350,000
		\$0	\$0	\$0
Total Labor Hours				
Estimated Project Subtotal		\$524,305	\$136,160	\$660,465
GRT				\$34,762
Estimated Project Total				\$695,227

10/24/2023

10/24/2023



GUAM WATERWORKS AUTHORITY

"Better Water, Better Lives."

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

Tel: (671) 300-6846/7

Issues for Decision

Resolution No. 04-FY2024

Relative to Approval of Additional Funding for the Fujita Sewage Pump Station Rehabilitation and Redundant Force Main Design Project, GWA Project No. S20-003-EPA

What is the project's objective and is it necessary and urgent?

The Fujita Sewage Pump Station (SPS) and force main conveys most of Tumon Bay's out of the Tumon area and towards the Northern Wastewater Treatment Plant. The force main is approximately 7,100 feet long. Due to a lack of redundancy, the existing force main cannot be isolated or removed from service to perform repairs, maintenance, or condition assessments. The force main's condition is not fully known and failure of the force main could lead to service disruptions, which may impact the health of the community, environment, and negatively impact Guam's main tourist area. Also, given the location of the Fujita SPS in the collection system, incoming flows to the Fujita SPS cannot be easily diverted to allow the pump station to be taken out of service for major repair activities.

The design project's goal is to design and construct a redundant force main, which would allow a single force main to be out of service for repairs or maintenance without interrupting service. An initial assessment of accessible sections of the existing force main at air relief valves (ARV) identified a maximum force main wall thickness loss of eleven percent (11%) at one ARV and thirty-eight (38%) at another ARV. Additional subsurface investigations requiring trenching and potholing of the existing force main in buried sections is needed to confirm its condition to properly design its rehabilitation or replacement. A change order is required for the additional subsurface investigation. The additional force main assessment will be scheduled during the construction of the new force main, to take advantage of the trenching activities for the new force main.

The Fujita SPS is essential to force main operations and required to be rehabilitated within seven years of the Consent Decree's effective date. Therefore, a change order is requested to include the Fujita SPS rehabilitation to the redundant force main design project.

The designer's proposal for the SPS assessment and rehabilitation design, as well as additional force main subsurface investigation, is \$670,764.72. A fifteen percent (15%) contingency is requested to for future change orders, which may include the designer's assistance with specification and procurement of long-lead items prior to a construction contract being awarded.

Where is the location?

The Fujita Sewage Pump Station is located at the Northeast corner of Pale San Vitores Road and Fujita Road, in Tumon. The force main originates at the pump station, goes up Happy Landing Road to Route 1, across Route 1 to Hamburger Road, and then terminates near the Route 16 SPS (see attached map).

How much will it cost?

Original Contract Cost:	\$930,834.57
Additional Cost for pump station assessment and design, and additional FM condition assessment services	<u>\$670,764.72</u>
Contract + change order:	\$1,601,599.29
Fifteen percent contingency	<u>\$240,239.89</u>
Total authorized amount	\$1,841,839.18

When will it be completed?

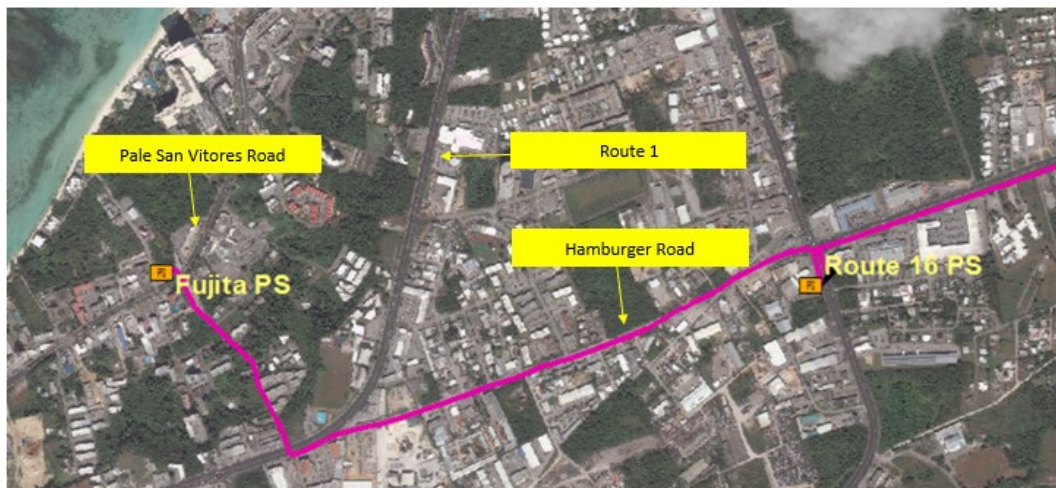
The design of the new force main and SPS rehabilitation is anticipated to be completed in April 2025. Construction procurement will begin upon completion of the design.

What is the funding source?

United States Environmental Protection Agency grants

The RFP/BID responses (if applicable):

Not Applicable.



Fujita Sewer Pump Station and Force Main Locations



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. 04-FY2024

**RELATIVE TO APPROVAL OF ADDITIONAL FUNDING FOR THE FUJITA
SEWAGE PUMP STATION REHABILITATION AND REDUNDANT FORCE MAIN
DESIGN PROJECT, GWA PROJECT NO. S20-003-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 (“GWA”) is a Guam Public Corporation established and existing under the laws of Guam; and

WHEREAS, GWA's public wastewater collection/transmission system, consisting of gravity mains, manholes, laterals, force mains (FM), sewer pump stations (SPS), and other related appurtenances, are in need of repair, rehabilitation, or replacement; and

WHEREAS, GWA has received United States Environmental Protection Agency (USEPA) grant funding for the Fujita FM design project; and

WHEREAS, the Fujita FM serves most of the Tumon Bay area and is approximately 7,100 feet long; and

WHEREAS, the FM’s condition is not known and failure of the FM could lead to service disruptions which may impact the health of the community, environment, and environment, and negatively impact Guam’s main tourist area; and

WHEREAS, to address this concern GWA advertised a Request For Proposals on August 25, 2020, and entered into a contract for design services for a redundant FM with AECOM Technical Services, Inc., on October 5, 2022, in the amount of Nine Hundred Thirty

1 Thousand Eight Hundred Thirty-Four Dollars and Fifty-Seven Cents (\$930,834.57), as shown in
2 Exhibit A; and

3
4 **WHEREAS**, an initial assessment of accessible sections of the FM at air relief valves
5 (ARV) identified a maximum FM wall thickness loss of eleven percent (11%) at one ARV and
6 thirty-eight (38%) at another ARV; and

7
8 **WHEREAS**, additional sub-surface investigation (requiring trenching and pot-holing) of
9 the FM in buried sections is needed to confirm its condition and design its rehabilitation or
10 replacement; and

11
12 **WHEREAS**, the impending Consent Decree with USEPA requires a Force Main
13 Condition Assessment, Force Main Action Plan and Implementation of the Force Main Action
14 Plan for the FM identified in Consent Decree Table A (see Exhibit B) to be completed within
15 nine (9) years of the Effective Date; and in which Fujita FM is listed in Table A; and

16
17 **WHEREAS**, the approval of this resolution will enable the Fujita FM project to meet
18 Consent Decree requirements and deadlines; and

19
20 **WHEREAS**, the impending Consent Decree with USEPA requires the rehabilitation of
21 the SPS listed in Consent Decree Table B, Tier 1 (see Exhibit C) within seven (7) years of the
22 Effective Date; and in which, the Fujita SPS is listed in Tier 1; and

23
24 **WHEREAS**, the approval of this resolution will enable the Fujita SPS rehabilitation to
25 be completed within (7) years; and

26
27 **WHEREAS**, USEPA has approved the inclusion of the redundant Fujita FM and SPS
28 rehabilitation in the design project, as pump station operations are essential for FM operations;
29 and

30
31 //

1 **WHEREAS**, the negotiated cost for the SPS rehabilitation assessment and design, as
2 well as subsurface investigation of buried sections of the FM, is Six Hundred Seventy Thousand
3 Seven Hundred Sixty-Four Dollars and Seventy-Two Cents (\$670,764.72), as shown in Exhibit
4 D; and

5
6 **WHEREAS**, given the seven (7) year time frame required to complete the SPS
7 rehabilitation, a Fifteen Percent (15%) contingency of Two Hundred Forty Thousand Two
8 Hundred Thirty-Nine Dollars and Eighty-Nine Cents (\$240,239.89) is requested to reduce
9 processing time for any future change orders and allow the designer to assist with the
10 specification and procurement of long-lead items prior to construction contract execution; and

11
12 **WHEREAS**, the total contract cost to include the SPS assessment and design
13 rehabilitation, and additional FM assessment, is One Million Six Hundred and One Thousand
14 Five Hundred Ninety-Nine Dollars and Twenty-Nine Cents (\$1,601,599.29), and a Fifteen
15 Percent (15%) contingency of Two Hundred Forty Thousand Two Hundred Thirty-Nine Dollars
16 and Eighty-Nine Cents (\$240,239.89) will bring the total authorized funding amount to One
17 Million Eight Hundred Forty-One Thousand Eight Hundred Thirty-Nine Dollars and Eighteen
18 Cents (\$1,841,839.18); and

19
20 **WHEREAS**, funding for this design project will be from the USEPA grants; and

21
22 **NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities
23 does hereby approve the following:

- 24 1. The recitals set forth above hereby constitute the findings of the CCU.
25 2. The CCU finds that the requested funding authorization increases to be fair,
26 reasonable, and necessary for the Fujita Redundant FM and SPS rehabilitation design
27 project.
28 3. The CCU hereby authorizes the management of GWA to execute a Change Order to
29 the contract with AECOM Technical Services, Inc., for a total contract amount of
30 One Million Six Hundred One Thousand Five Hundred Ninety-Nine Dollars and
31 Twenty-Nine Cents (\$1,601,599.29).

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- 4. The CCU hereby authorizes the total authorized funding to include a fifteen percent (15%) contingency, increasing the authorized funding amount to One Million Eight Hundred Forty-One Thousand Eight Hundred Thirty-Nine Dollars and Eighteen Cents (\$1,841,839.18).
- 5. The CCU hereby further authorizes the use of USEPA grants as the funding source.

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

DULY AND REGULARLY ADOPTED, this 28th day of November 2023.

Certified by:

Attested by:

JOSEPH T. DUENAS
Chairperson

PEDRO ROY MARTINEZ
Secretary

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EXHIBIT A

PROJECT OVERVIEW

(DESIGN SERVICES)

Project: **FUJITA SEWAGE PUMP STATION REDUNDANT FORCE MAIN**

Project Number: S20-003-EPA

Consultant: AECOM Technical Services, Inc.

Contract Amount: \$930,834.57

Contingency: -0-

Selection Notification: October 20, 2020

Request to Award: May 23, 2022

USEPA Approval: May 20, 2022

CCU Approval: N/A

PUC Approval: N/A

Notice of Award Decision: June 3, 2022

Fund Source: USEPA SRF Grant No. M96902619-1

Other documents pertaining to the solicitation of this project are available at Engineering folder:
<Z:\Project Information\CIP Projects - Wastewater\Fujita SPS Redundant FM\Design\Procurement>

Prepared by:


JOSEPHINE E. SMITH

**AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR PROFESSIONAL SERVICES**

EJCDC® E-500, Agreement Between Owner and Engineer for Professional Services.
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TABLE OF CONTENTS

	<u>Page</u>
ARTICLE 1 – SERVICES OF ENGINEER	1
1.01 Scope	1
ARTICLE 2 – OWNER’S RESPONSIBILITIES.....	1
2.01 General	1
ARTICLE 3 – SCHEDULE FOR RENDERING SERVICES.....	2
3.01 Commencement.....	2
3.02 Time for Completion	2
ARTICLE 4 – INVOICES AND PAYMENTS	2
4.01 Invoices.....	2
4.02 Payments	3
ARTICLE 5 – OPINIONS OF COST	3
5.01 Opinions of Probable Construction Cost	3
5.02 Designing to Construction Cost Limit	3
5.03 Opinions of Total Project Costs.....	4
ARTICLE 6 – GENERAL CONSIDERATIONS.....	4
6.01 Standards of Performance	4
6.02 Design Without Construction Phase Services	6
6.03 Use of Documents.....	6
6.04 Electronic Transmittals.....	7
6.05 Insurance	7
6.06 Suspension and Termination	8
6.07 Controlling Law.....	9
6.08 Successors, Assigns, and Beneficiaries	9
6.09 Dispute Resolution	10
6.10 Environmental Condition of Site.....	10
6.11 Indemnification and Mutual Waiver	11
6.12 Records Retention.....	12
6.13 Miscellaneous Provisions	12
ARTICLE 7 – DEFINITIONS.....	12
7.01 Defined Terms	12
ARTICLE 8 – EXHIBITS AND SPECIAL PROVISIONS	16
8.01 Exhibits Included:	16
8.02 Total Agreement:	17
8.03 Designated Representatives:	17
8.04 Engineer’s Certifications:	17

**AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR PROFESSIONAL SERVICES**

THIS IS AN AGREEMENT effective as of October 5, 2022 (“Effective Date”) between
Guam Waterworks Authority (“Owner”) and
AECOM Technical Services, Inc. (“Engineer”).

Owner's Project, of which Engineer's services under this Agreement are a part, is generally identified as follows:

**Fujita Sewage Pump Station Redundant Force Main
GWA Project No. S20-003-EPA**

Other terms used in this Agreement are defined in Article 7.

Engineer's services under this Agreement are generally identified as follows:

- 1) Identify redundant force main options and provide the design for the selected option.**
- 2) After the redundant force main is placed in operation, investigate the condition of the original 14-inch force main to determine if repair, relocation, or replacement is needed in order to ensure force main redundancy. Identify options and provide the design for the selected option, including potential use of CIPP and if necessary, pump station upgrades.**

Owner and Engineer further agree as follows:

ARTICLE 1 – SERVICES OF ENGINEER

1.01 *Scope*

- A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

ARTICLE 2 – OWNER'S RESPONSIBILITIES

2.01 *General*

- A. Owner shall have the responsibilities set forth herein and in Exhibit B.
- B. Owner shall pay Engineer as set forth in Article 4 and Exhibit C.
- C. Owner shall be responsible for all requirements and instructions that it furnishes to Engineer pursuant to this Agreement, and for the accuracy and completeness of all programs, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use and rely upon such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement, subject to any express limitations or reservations applicable to the furnished items.

- D. Owner shall give prompt written notice to Engineer whenever Owner observes or otherwise becomes aware of:
 - 1. any development that affects the scope or time of performance of Engineer's services;
 - 2. the presence at the Site of any Constituent of Concern; or
 - 3. any relevant, material defect or nonconformance in: (a) Engineer's services, (b) the Work, (c) the performance of any Constructor, or (d) Owner's performance of its responsibilities under this Agreement.

ARTICLE 3 – SCHEDULE FOR RENDERING SERVICES

3.01 Commencement

- A. Engineer is authorized to begin rendering services as of the Effective Date.

3.02 Time for Completion

- A. Engineer shall complete its obligations within a reasonable time. Specific periods of time for rendering services, or specific dates by which services are to be completed, are provided in Exhibit A, and are hereby agreed to be reasonable.
- B. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's services is impaired, or Engineer's services are delayed or suspended, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.
- C. If Owner authorizes changes in the scope, extent, or character of the Project or Engineer's services, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.
- D. Owner shall make decisions and carry out its other responsibilities in a timely manner so as not to delay the Engineer's performance of its services.
- E. If Engineer fails, through its own fault, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then Owner shall be entitled, as its sole remedy, to the recovery of direct damages, if any, resulting from such failure.

ARTICLE 4 – INVOICES AND PAYMENTS

4.01 Invoices

- A. *Preparation and Submittal of Invoices:* Engineer shall prepare invoices in accordance with its standard invoicing practices and the terms of Exhibit C. Engineer shall submit its invoices to Owner on a monthly basis. Invoices are due and payable within 45 days of receipt.

4.02 *Payments*

- A. *Application to Interest and Principal:* Payment will be credited first to any interest owed to Engineer and then to principal.
- B. *Failure to Pay:* If Owner fails to make any payment due Engineer for services and expenses within 45 days after receipt of Engineer's invoice, then:
 - 1. amounts due Engineer will be increased at the maximum rate of interest permitted by law from said forty-fifth day; and
 - 2. Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement until Owner has paid in full all amounts due for services, expenses, and other related charges. Owner waives any and all claims against Engineer for any such suspension.
- C. *Disputed Invoices:* If Owner disputes an invoice, either as to amount or entitlement, then Owner shall promptly advise Engineer in writing of the specific basis for doing so, may withhold only that portion so disputed, and must pay the undisputed portion subject to the terms of Paragraph 4.01.
- D. *Sales or Use Taxes:* If after the Effective Date any governmental entity takes a legislative action that imposes additional sales or use taxes on Engineer's services or compensation under this Agreement, then Engineer may invoice such additional sales or use taxes for reimbursement by Owner. Owner shall reimburse Engineer for the cost of such invoiced additional sales or use taxes; such reimbursement shall be in addition to the compensation to which Engineer is entitled under the terms of Exhibit C.

ARTICLE 5 – OPINIONS OF COST

5.01 *Opinions of Probable Construction Cost*

- A. Engineer's opinions (if any) of probable Construction Cost are to be made on the basis of Engineer's experience, qualifications, and general familiarity with the construction industry. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer. If Owner requires greater assurance as to probable Construction Cost, then Owner agrees to obtain an independent cost estimate.

5.02 *Designing to Construction Cost Limit*

- A. If a Construction Cost limit is established between Owner and Engineer, such Construction Cost limit and a statement of Engineer's rights and responsibilities with respect thereto will be specifically set forth in Exhibit F to this Agreement.

5.03 *Opinions of Total Project Costs*

- A. The services, if any, of Engineer with respect to Total Project Costs shall be limited to assisting the Owner in tabulating the various categories that comprise Total Project Costs. Engineer assumes no responsibility for the accuracy of any opinions of Total Project Costs.

ARTICLE 6 – GENERAL CONSIDERATIONS

6.01 *Standards of Performance*

- A. *Standard of Care:* The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with any services performed or furnished by Engineer.
- B. *Technical Accuracy:* Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct deficiencies in technical accuracy without additional compensation, unless such corrective action is directly attributable to deficiencies in Owner-furnished information.
- C. *Consultants:* Engineer may retain such Consultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner.
- D. *Reliance on Others:* Subject to the standard of care set forth in Paragraph 6.01.A, Engineer and its Consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.
- E. *Compliance with Laws and Regulations, and Policies and Procedures:*
 - 1. Engineer and Owner shall comply with applicable Laws and Regulations.
 - 2. Engineer shall comply with any and all policies, procedures, and instructions of Owner that are applicable to Engineer's performance of services under this Agreement and that Owner provides to Engineer in writing, subject to the standard of care set forth in Paragraph 6.01.A, and to the extent compliance is not inconsistent with professional practice requirements.
 - 3. This Agreement is based on Laws and Regulations and Owner-provided written policies and procedures as of the Effective Date. The following may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, or compensation:
 - a. changes after the Effective Date to Laws and Regulations;
 - b. the receipt by Engineer after the Effective Date of Owner-provided written policies and procedures;

- c. changes after the Effective Date to Owner-provided written policies or procedures.
- F. Engineer shall not be required to sign any document, no matter by whom requested, that would result in the Engineer having to certify, guarantee, or warrant the existence of conditions whose existence the Engineer cannot ascertain. Owner agrees not to make resolution of any dispute with the Engineer or payment of any amount due to the Engineer in any way contingent upon the Engineer signing any such document.
- G. The general conditions for any construction contract documents prepared hereunder are to be EJCDC® C-700 "Standard General Conditions of the Construction Contract" (2013 Edition), prepared by the Engineers Joint Contract Documents Committee, unless expressly indicated otherwise in Exhibit J or elsewhere in this Agreement.
- H. Engineer shall not at any time supervise, direct, control, or have authority over any Constructor's work, nor shall Engineer have authority over or be responsible for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, or the safety precautions and programs incident thereto, for security or safety at the Site, nor for any failure of a Constructor to comply with Laws and Regulations applicable to that Constructor's furnishing and performing of its work. Engineer shall not be responsible for the acts or omissions of any Constructor.
- I. Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's, failure to furnish and perform the Work in accordance with the Construction Contract Documents.
- J. Engineer shall not be responsible for any decision made regarding the Construction Contract Documents, or any application, interpretation, clarification, or modification of the Construction Contract Documents, other than those made by Engineer or its Consultants.
- K. Engineer is not required to provide and does not have any responsibility for surety bonding or insurance-related advice, recommendations, counseling, or research, or enforcement of construction insurance or surety bonding requirements.
- L. Engineer's services do not include providing legal advice or representation.
- M. Engineer's services do not include (1) serving as a "municipal advisor" for purposes of the registration requirements of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) or the municipal advisor registration rules issued by the Securities and Exchange Commission, or (2) advising Owner, or any municipal entity or other person or entity, regarding municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms, or other similar matters concerning such products or issuances.
- N. While at the Site, Engineer, its Consultants, and their employees and representatives shall comply with the applicable requirements of Contractor's and Owner's safety programs of which Engineer has been informed in writing.

6.02 *Design Without Construction Phase Services*

- A. Engineer shall be responsible only for those Construction Phase services expressly required of Engineer in Exhibit A, Paragraph A1.05. With the exception of such expressly required services, Engineer shall have no design, Shop Drawing review, or other obligations during construction, and Owner assumes all responsibility for the application and interpretation of the Construction Contract Documents, review and response to Contractor claims, Construction Contract administration, processing of Change Orders and submittals, revisions to the Construction Contract Documents during construction, construction observation and review, review of Contractor's payment applications, and all other necessary Construction Phase administrative, engineering, and professional services. Owner waives all claims against the Engineer that may be connected in any way to Construction Phase administrative, engineering, or professional services except for those services that are expressly required of Engineer in Exhibit A.

6.03 *Use of Documents*

- A. All Documents are instruments of service, and Engineer shall retain an ownership and property interest therein (including the copyright and the right of reuse at the discretion of the Engineer) whether or not the Project is completed.
- B. If Engineer is required to prepare or furnish Drawings or Specifications under this Agreement, Engineer shall deliver to Owner at least one original printed record version of such Drawings and Specifications, signed and sealed according to applicable Laws and Regulations.
- C. Owner may make and retain copies of Documents for information and reference in connection with the use of the Documents on the Project. Engineer grants Owner a limited license to use the Documents on the Project, extensions of the Project, and for related uses of the Owner, subject to receipt by Engineer of full payment due and owing for all services relating to preparation of the Documents, and subject to the following limitations: (1) Owner acknowledges that such Documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project, on any other project, or for any other use or purpose, without written verification or adaptation by Engineer; (2) any such use or reuse, or any modification of the Documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to its officers, directors, members, partners, agents, employees, and Consultants; (3) Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification of the Documents without written verification, completion, or adaptation by Engineer; and (4) such limited license to Owner shall not create any rights in third parties.
- D. If Engineer at Owner's request verifies the suitability of the Documents, completes them, or adapts them for extensions of the Project or for any other purpose, then Owner shall compensate Engineer at rates or in an amount to be agreed upon by Owner and Engineer.

6.04 *Electronic Transmittals*

- A. Owner and Engineer may transmit, and shall accept, Project-related correspondence, Documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, in accordance with a mutually agreeable protocol.
- B. If this Agreement does not establish protocols for electronic or digital transmittals, then Owner and Engineer shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

6.05 *Insurance*

- A. Engineer shall procure and maintain insurance as set forth in Exhibit G. Engineer shall cause Owner to be listed as an additional insured on any applicable general liability insurance policy carried by Engineer.
- B. Owner shall procure and maintain insurance as set forth in Exhibit G. Owner shall cause Engineer and its Consultants to be listed as additional insureds on any general liability policies carried by Owner, which are applicable to the Project.
- C. 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.
- D. Owner and Engineer shall each deliver to the other certificates of insurance evidencing the coverages indicated in Exhibit G. Such certificates shall be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.
- E. 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.

- F. 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.
- G. 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 G. 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 G will be supplemented to incorporate these requirements.

6.06 *Suspension and Termination*

A. *Suspension:*

- 1. *By Owner:* Owner may suspend the Project for up to 90 days upon seven days written notice to Engineer.
- 2. *By Engineer:* Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement if Owner has failed to pay Engineer for invoiced services and expenses, as set forth in Paragraph 4.02.B, or in response to the presence of Constituents of Concern at the Site, as set forth in Paragraph 6.10.D.

B. *Termination:* The obligation to provide further services under this Agreement may be terminated:

- 1. For cause,
 - a. by either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.
 - b. by Engineer:
 - 1) upon seven days written notice if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional; or
 - 2) upon seven days written notice if the Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control, or as the result of the presence at the Site of undisclosed Constituents of Concern, as set forth in Paragraph 6.10.D.
 - 3) Engineer shall have no liability to Owner on account of such termination.
 - c. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 6.06.B.1.a if the party receiving such notice begins, within seven days of

receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience, by Owner effective upon Engineer's receipt of notice from Owner.
- C. *Effective Date of Termination:* The terminating party under Paragraph 6.06.B may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.
- D. *Payments Upon Termination:*
1. In the event of any termination under Paragraph 6.06, Engineer will be entitled to invoice Owner and to receive full payment for all services performed or furnished in accordance with this Agreement and all Reimbursable Expenses incurred through the effective date of termination. Upon making such payment, Owner shall have the limited right to the use of Documents, at Owner's sole risk, subject to the provisions of Paragraph 6.03.
 2. In the event of termination by Owner for convenience or by Engineer for cause, Engineer shall be entitled, in addition to invoicing for those items identified in Paragraph 6.06.D.1, to invoice Owner and receive payment of a reasonable amount for services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with Engineer's Consultants, and other related close-out costs, using methods and rates for Additional Services as set forth in Exhibit C.

6.07 *Controlling Law*

- A. This Agreement is to be governed by the Laws and Regulations of the state in which the Project is located.

6.08 *Successors, Assigns, and Beneficiaries*

- A. Owner and Engineer are hereby bound and the successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 6.08.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.
- B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, money that is due or may become due) in this Agreement without the written consent of the other party, except to the extent that any

assignment, subletting, or transfer is mandated by law. 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 this Agreement.

- C. Unless expressly provided otherwise in this Agreement:
1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Constructor, other third-party individual or entity, or to any surety for or employee of any of them.
 2. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.
 3. Owner agrees that the substance of the provisions of this Paragraph 6.08.C shall appear in the Construction Contract Documents.

6.09 *Dispute Resolution*

- A. Owner and Engineer agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice prior to invoking the procedures of Exhibit H or other provisions of this Agreement, or exercising their rights at law.
- B. If the parties fail to resolve a dispute through negotiation under Paragraph 6.09.A, then either or both may invoke the procedures of Exhibit H. If Exhibit H is not included, or if no dispute resolution method is specified in Exhibit H, then the parties may exercise their rights at law.

6.10 *Environmental Condition of Site*

- A. Owner represents to Engineer that as of the Effective Date to the best of Owner's knowledge no Constituents of Concern, other than those disclosed in writing to Engineer, exist at or adjacent to the Site.
- B. If Engineer encounters or learns of an undisclosed Constituent of Concern at the Site, then Engineer shall notify (1) Owner and (2) appropriate governmental officials if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations.
- C. It is acknowledged by both parties that Engineer's scope of services does not include any services related to unknown or undisclosed Constituents of Concern. If Engineer or any other party encounters, uncovers, or reveals an undisclosed Constituent of Concern, then Owner shall promptly determine whether to retain a qualified expert to evaluate such condition or take any necessary corrective action.
- D. If investigative or remedial action, or other professional services, are necessary with respect to undisclosed Constituents of Concern, or if investigative or remedial action beyond that reasonably contemplated is needed to address a disclosed or known Constituent of Concern, then Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until such portion of the Project is no longer affected.

- E. If the presence at the Site of undisclosed Constituents of Concern adversely affects the performance of Engineer's services under this Agreement, then the Engineer shall have the option of (1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or (2) terminating this Agreement for cause on seven days notice.
- F. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and shall not be required to become an "owner," "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer's activities under this Agreement.

6.11 *Indemnification and Mutual Waiver*

- A. *Indemnification by Engineer:* To the fullest extent permitted by Laws and Regulations, Engineer shall indemnify and hold harmless Owner, and Owner's officers, directors, members, partners, agents, consultants, and employees, from losses, damages, and judgments (including reasonable consultants' and attorneys' fees and expenses) arising from third-party claims or actions relating to the Project, provided that any such claim, action, loss, damages, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Engineer or Engineer's officers, directors, members, partners, agents, employees, or Consultants. **This indemnification provision is subject to and limited by the provisions, if any, agreed to by Owner and Engineer in Exhibit I, "Limitations of Liability."**
- B. *Indemnification by Owner:* Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants as required by Laws and Regulations **and to the extent (if any) required in Exhibit I, "Limitations of Liability."**
- C. *Environmental Indemnification:* To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Engineer and its officers, directors, members, partners, agents, employees, and Consultants from all claims, costs, losses, damages, actions, and judgments (including reasonable consultants' and attorney's fees and expenses) caused by, arising out of, relating to, or resulting from a Constituent of Concern at, on, or under the Site, provided that (1) any such claim, cost, loss, damages, action, or judgment is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (2) nothing in this paragraph shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.
- D. *No Defense Obligation:* The indemnification commitments in this Agreement do not include a defense obligation by the indemnitor unless such obligation is expressly stated.
- E. *Percentage Share of Negligence:* To the fullest extent permitted by Laws and Regulations, a party's total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party

and in part by the negligence of the other party or any other negligent entity or individual, shall not exceed the percentage share that the party's negligence bears to the total negligence of Owner, Engineer, and all other negligent entities and individuals.

- F. *Mutual Waiver:* To the fullest extent permitted by Laws and Regulations, Owner and Engineer waive against each other, and the other's employees, officers, directors, members, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to this Agreement or the Project, from any cause or causes.

6.12 *Records Retention*

- A. Engineer shall maintain on file in legible form, for a period of five years following completion or termination of its services, all Documents, records (including cost records), and design calculations related to Engineer's services or pertinent to Engineer's performance under this Agreement. Upon Owner's request, Engineer shall provide a copy of any such item to Owner at cost.

6.13 *Miscellaneous Provisions*

- A. *Notices:* Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.
- B. *Survival:* All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.
- C. *Severability:* Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Engineer, which agree that the Agreement 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.
- D. *Waiver:* A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.
- E. *Accrual of Claims:* To the fullest extent permitted by Laws and Regulations, all causes of action arising under this Agreement shall be deemed to have accrued, and all statutory periods of limitation shall commence, no later than the date of Substantial Completion.

ARTICLE 7 – DEFINITIONS

7.01 *Defined Terms*

- A. Wherever used in this Agreement (including the Exhibits hereto) terms (including the singular and plural forms) printed with initial capital letters have the meanings indicated in the text above, in the exhibits, or in the following definitions:

1. *Addenda*—Written or graphic instruments issued prior to the opening of bids which clarify, correct, or change the bidding requirements or the proposed Construction Contract Documents.
2. *Additional Services*—The services to be performed for or furnished to Owner by Engineer in accordance with Part 2 of Exhibit A of this Agreement.
3. *Agreement*—This written contract for professional services between Owner and Engineer, including all exhibits identified in Paragraph 8.01 and any duly executed amendments.
4. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Construction Contract.
5. *Basic Services*—The services to be performed for or furnished to Owner by Engineer in accordance with Part 1 of Exhibit A of this Agreement.
6. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Construction Contract Price or the Construction Contract Times, or other revision to the Construction Contract, issued on or after the effective date of the Construction Contract.
7. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth in the Construction Contract, seeking an adjustment in Construction Contract Price or Construction Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Construction Contract Documents or the acceptability of Work under the Construction Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Construction Contract.
8. *Constituent of Concern*—Asbestos, petroleum, radioactive material, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, State, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
9. *Construction Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
10. *Construction Contract Documents*—Those items designated as “Contract Documents” in the Construction Contract, and which together comprise the Construction Contract.

11. *Construction Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Construction Contract Documents.
12. *Construction Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve milestones, if any, in the Construction Contract; (b) achieve Substantial Completion; and (c) complete the Work.
13. *Construction Cost*—The cost to Owner of the construction of those portions of the entire Project designed or specified by or for Engineer under this Agreement, including construction labor, services, materials, equipment, insurance, and bonding costs, and allowances for contingencies. Construction Cost does not include costs of services of Engineer or other design professionals and consultants; cost of land or rights-of-way, or compensation for damages to property; Owner's costs for legal, accounting, insurance counseling, or auditing services; interest or financing charges incurred in connection with the Project; or the cost of other services to be provided by others to Owner. Construction Cost is one of the items comprising Total Project Costs.
14. *Constructor*—Any person or entity (not including the Engineer, its employees, agents, representatives, and Consultants), performing or supporting construction activities relating to the Project, including but not limited to Contractors, Subcontractors, Suppliers, Owner's work forces, utility companies, other contractors, construction managers, testing firms, shippers, and truckers, and the employees, agents, and representatives of any or all of them.
15. *Consultants*—Individuals or entities having a contract with Engineer to furnish services with respect to this Project as Engineer's independent professional associates and consultants; subcontractors; or vendors.
16. *Contractor*—The entity or individual with which Owner enters into a Construction Contract.
17. *Documents*—Data, reports, Drawings, Specifications, Record Drawings, building information models, civil integrated management models, and other deliverables, whether in printed or electronic format, provided or furnished in appropriate phases by Engineer to Owner pursuant to this Agreement.
18. *Drawings*—That part of the Construction Contract Documents that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date*—The date indicated in this Agreement on which it becomes effective, but if no such date is indicated, the date on which this Agreement is signed and delivered by the last of the parties to sign and deliver.
20. *Engineer*—The individual or entity named as such in this Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Construction Contract Price or the Construction Contract Times.

22. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
23. *Owner*—The individual or entity named as such in this Agreement and for which Engineer's services are to be performed. Unless indicated otherwise, this is the same individual or entity that will enter into any Construction Contracts concerning the Project.
24. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the services to be performed or furnished by Engineer under this Agreement are a part.
25. *Record Drawings*—Drawings depicting the completed Project, or a specific portion of the completed Project, prepared by Engineer as an Additional Service and based on Contractor's record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications, as delivered to Engineer and annotated by Contractor to show changes made during construction.
26. *Reimbursable Expenses*—The expenses incurred directly by Engineer in connection with the performing or furnishing of Basic Services and Additional Services for the Project.
27. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site during the Construction Phase. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative. The duties and responsibilities of the Resident Project Representative, if any, are as set forth in Exhibit D.
28. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
29. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Construction Contract Documents.
30. *Site*—Lands or areas to be indicated in the Construction Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
31. *Specifications*—The part of the Construction Contract Documents that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

32. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
 33. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Construction Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
 34. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
 35. *Total Project Costs*—The total cost of planning, studying, designing, constructing, testing, commissioning, and start-up of the Project, including Construction Cost and all other Project labor, services, materials, equipment, insurance, and bonding costs, allowances for contingencies, and the total costs of services of Engineer or other design professionals and consultants, together with such other Project-related costs that Owner furnishes for inclusion, including but not limited to cost of land, rights-of-way, compensation for damages to properties, Owner’s costs for legal, accounting, insurance counseling, and auditing services, interest and financing charges incurred in connection with the Project, and the cost of other services to be provided by others to Owner.
 36. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Construction Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Construction Contract Documents.
 37. *Work Change Directive*—A written directive to Contractor issued on or after the effective date of the Construction Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.
- B. *Day*:
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

ARTICLE 8 – EXHIBITS AND SPECIAL PROVISIONS

8.01 Exhibits Included:

- A. Exhibit A, Engineer’s Services.
- B. Exhibit B, Owner’s Responsibilities.
- C. Exhibit C, Payments to Engineer for Services and Reimbursable Expenses.

- D. Exhibit D, DELETED.
- E. Exhibit E, Notice of Acceptability of Work.
- F. Exhibit F, DELETED.
- G. Exhibit G, Insurance.
- H. Exhibit H, Dispute Resolution.
- I. Exhibit I, Limitations of Liability.
- J. Exhibit J, DELETED.
- K. Exhibit K, Amendment to Owner-Engineer Agreement.

8.02 *Total Agreement*

- A. This Agreement, (together with the exhibits included above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a written instrument duly executed by both parties. Amendments should be based whenever possible on the format of Exhibit K to this Agreement.

8.03 *Designated Representatives*

- A. With the execution of this Agreement, Engineer and Owner shall designate specific individuals to act as Engineer's and Owner's representatives with respect to the services to be performed or furnished by Engineer and responsibilities of Owner under this Agreement. Such an individual shall have authority to transmit instructions, receive information, and render decisions relative to this Agreement on behalf of the respective party whom the individual represents.

8.04 *Engineer's Certifications*

- A. Engineer certifies that it has not engaged in corrupt, fraudulent, or coercive practices in competing for or in executing the Agreement. For the purposes of this Paragraph 8.04:
 - 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 selection process or in the Agreement execution;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the selection process or the execution of the Agreement to the detriment of Owner, or (b) to deprive Owner of the benefits of free and open competition;
 - 3. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the selection process or affect the execution of the Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

Owner: **Guam Waterworks Authority**

Engineer: **AECOM Technical Services, Inc.**

By: 

By: 

Print name: **MIGUEL C. BORDALLO, P.E.**

Print name: **MARTIN NAKASONE**

Title: **General Manager**

Title: **Area Manager, Hawaii-Pacific Islands**

Date Signed: October 5, 2022

Date Signed: 07 Jun 2022

Engineer License or Firm's Certificate No. (if required):

State of: Territory of Guam

Address for Owner's receipt of notices:
Gloria B. Nelson Public Service Building
688 Route 15, Mangilao, Guam 96913

Address for Engineer's receipt of notices:
414 W. Soledad Ave.
Suite 708
Hagatna, Guam 96910

Certified Funds Available:

Approved as to Form:

By: 
TALING M. TAITANO, CPA, CGFM
GWA Chief Financial Officer 

By: 
THERESA G. ROJAS, ESQ
GWA General Counsel

Date Signed: 8/26/2022

Date Signed: 6/13/2022

Contract Amount: \$930,834.57

Amount Certified: \$930,834.57

Source of Funding: USEPA-SRF Grant M96902619-1

****Contingency to be identified as needed**

This is **EXHIBIT A**, consisting of 24 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated October 5, 2022.

Engineer's Services

Article 1 of the Agreement is supplemented to include the following as an agreement of the parties.

Engineer shall provide the following Basic and Additional Services as set forth in AECOM's letter dated April 29, 2022 and as set forth in AECOM's April 29, 2022, Enclosures labeled: Appendix A: Scope of Work / Appendix B: Fee Detail; and / Appendix C: Tentative Project Schedule.

Exhibit A – Engineer's Services

EJCDC® E-500, Agreement Between Owner and Engineer for Professional Services.

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Page 1



APPENDIX A: SCOPE OF WORK

I. PROJECT TITLE

FUJITA SEWAGE PUMP STATION (SPS) REDUNDANT FORCE MAIN (FM);
GWA PROJECT NO. S20-003-EPA

II. PROJECT BACKGROUND

The Fujita SPS is one of the largest capacity stations in the Northern District Wastewater Treatment Plant (WWTP) service area. It is located at the intersection of the Fujita and San Vitores Roads in Tumon. The Tumon area can be divided into 3 wastewater service areas (Ypao, Central Tumon, and Gun Beach). The Fujita SPS receives flow primarily from the Central Tumon Bay area. In geographical terms, the Central Tumon Basin encompasses the sector extending from the Pacific Star Hotel to the Lotte Hotel at Gogna Road and bounded to the north by the cliff line and to the south by the Tumon Bay shoreline. The Nikko Hotel also discharges its wastewater to the Central Tumon Basin. The Fujita SPS conveys flow through a single ductile iron force main towards the Route 16 SPS (see **Figure 1**). The FM has an approximate length of 6,623 LF and ranges in diameter from 14-in, 16-in, and 18-in. All the flow from the Route 16 SPS is conveyed towards the Southern Link SPS, which pumps wastewater to the Northern District WWTP.

Due to a lack of redundancy, the existing Fujita SPS FM cannot be isolated or removed from service to perform repairs, maintenance, or condition assessments. Failure of the FM could lead to service disruptions, which may impact the health of the community, environment, and negatively impact Guam's main tourist area. Also, given the location of the Fujita SPS in the collection system, incoming flows to the Fujita SPS cannot be easily diverted to allow the pump station to be taken out of service for major repair activities.

III. PROJECT OBJECTIVES

The objectives of the PROJECT are as follows:

- Identify redundant force main options, including construction methods.
- Provide the design for the selected option, including potential use of CIPP and if necessary, pump station upgrades.
- After the redundant force main is placed in operation, investigate the condition of the original force main to determine if repair, relocation, or replacement is needed to ensure force main redundancy.
- The Fujita SPS must have two (2) force mains, each capable of transferring the current and future peak wet weather flow (PWWF).
- Projected PWWF and domestic sewage flow to be considered will be at least 20 years from the date of the DESIGN CONSULTANT Contract Agreement.

IV. PROJECT LIMITS

Given the various alternatives for this project, a figure was developed in conjunction with GWA to define project areas to assist the development of the fee proposal. The project limits are shown in **Figure 2** and is summarized as follows:

- The existing Fujita SPS site (Project Area 1) is located at the intersection of Fujita Road and Pale San Vitores Road in Tumon, Guam.
- The existing Fujita SPS FM alignment runs along the following route:
 - Pale San Vitores Road/Route 14 (Project Area 2),
 - Happy Landing Road/Old San Vitores Road (Project Area 3),
 - Marine Corps Drive/Route 1 (Project Area 4),
 - Hamburger Road/Route 27 (Project Area 5)
 - Army Drive/Route 16 (Project Area 6).