



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. 25-FY2022

RELATIVE TO APPROVAL OF ADDITIONAL FUNDING TO THE CONSTRUCTION MANAGEMENT CONTRACT FOR SANTA ROSA, SINIFA, AND SANTA RITA TANK AND SYSTEM UPGRADES

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

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

WHEREAS, GWA is currently working on critical reservoir projects at the GWA Santa Rosa, Sinifa and Santa Rita reservoir sites under the 2011 Court Order (“CO”) Paragraph 29 – Storage Tank/Reservoir Repair, Replacement, and Relocation Program; and

WHEREAS, the CCU approved Resolution No. 13-FY2018 for Construction Management (CM) services on the construction projects at these sites, which authorized CM contract funding of Two Million Nine Hundred Seventy Seven Thousand Two Hundred Thirty Four Dollars and Sixty Nine Cents (\$2,977,234.69) along with a 10% contingency of Two Hundred Ninety Seven Thousand Seven Hundred Twenty Three Dollars and Forty Seven Cents (\$297,723.47) to bring the total authorized funding amount to a maximum of Three Million Two Hundred Seventy Four Thousand Nine Hundred Fifty-Eight Dollars and Sixteen Cents (\$3,274,958.16) (Exhibit A); and

WHEREAS, the CCU approved Resolution No. 32-FY2020 which authorized additional funding, due to construction permitting and archaeological delays, in the amount of Thirty Nine Thousand Six Hundred Thirteen Dollars and Ninety Two Cents (\$39,613.92) to supplement the available contingency of Two Hundred Ninety Seven Thousand Seven Hundred Twenty Three

1 Dollars and Forty Seven Cents (\$297,723.47) to fund Change Order No.1 in the amount of Three
2 Hundred Thirty Seven Thousand Three Hundred Thirty Seven Dollars and Thirty Nine Cents
3 (\$337,337.39), bringing the total authorized funding amount to Three Million Three Hundred
4 Fourteen Thousand Five Hundred Seventy Two Dollars and Eight Cents (\$3,314,572.08)
5 (Exhibit B); and
6

7 **WHEREAS**, the construction of improvements at these sites have been delayed by the
8 impacts of the COVID-19 pandemic, global supply chain issues, and a slope failure (landslide)
9 event due to severe weather at the Santa Rita reservoir site, all of which are outside of the control
10 of the contractor and CM; and
11

12 **WHEREAS**, despite these impacts, the construction of the Santa Rosa and Sinifa
13 reservoirs are nearing completion and will be ready for service by the end of August 2022; and
14

15 **WHEREAS**, the Santa Rosa booster pump station construction will be extended to April
16 2023 due to the long lead supply of the booster pump skid and generator systems; and
17

18 **WHEREAS**, the Santa Rita reservoir construction will be extended to April 2023 for two
19 reasons: 1) Change of Casted-In-Drill Holes (CIDH) foundation to Pre-Casted pile foundation, 2)
20 Redesign of waterline, electrical, roadway, and ponding basin due to slope failure; and
21

22 **WHEREAS**, test foundation pile driving at the Santa Rita reservoir is scheduled to start
23 this month, and the redesign of the waterline, electrical, roadway, and ponding basin is being
24 finalized by the Engineer of Record and geotechnical engineer; and
25

26 **WHEREAS**, in order to provide continuity of needed construction management services
27 until construction has been completed, GWA and GHD have negotiated a scope and fee of Two
28 Million One Hundred Eighteen Thousand Five Hundred Twenty-Three Dollars and Thirty-Six
29 Cents (\$2,118,523.36), (Exhibit C); and
30

31 //

32 //

1 **WHEREAS**, GWA Management is seeking Two Million One Hundred Eighteen
2 Thousand Five Hundred Twenty-Three Dollars and Thirty-Six Cents (\$2,118,523.36), along with
3 a 10% contingency of Two Hundred Twenty-One Thousand Eight Hundred Fifty-Two Dollars
4 and Thirty-Four Cents (\$221,852.34) in additional funding to execute a contract modification to
5 continue construction management services for the three construction sites; and

6
7 **WHEREAS**, funding for this project will be from the Bond Funds under the line item
8 “PW 09-11 Water System Reservoirs 2005 Improvements.”

9
10 **NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities
11 does hereby approve the following:

- 12
13 1. The recitals set forth above hereby constitute the findings of the CCU.
- 14 2. The CCU finds that the terms of the fee proposal submitted by GHD are fair
15 and reasonable.
- 16 3. The CCU hereby authorizes Two Million Three Hundred Forty Thousand
17 Three Hundred Seventy-Five Dollars and Seventy Cents (\$2,340,375.70) in
18 additional funding to bring the total authorized funding to Five Million Six
19 Hundred Fifty-Four Thousand Nine Hundred Forty-Seven Dollars and
20 Seventy-Eight Cents (\$5,654,947.78).
- 21 4. The CCU hereby authorizes the management of GWA the option to issue a
22 change order in the not-to-exceed amount of Two Million One Hundred
23 Eighteen Thousand Five Hundred Twenty-Three Dollars and Thirty-Six Cents
24 (\$2,118,523.36).
- 25 5. The CCU hereby authorizes the funding source to be from the bond funds
26 under CIP line-item PW 09-11: Water System Reservoirs 2005 Improvements.

27 //

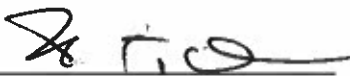
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1 **RESOLVED**, that the Chairman certified and the Board Secretary attests to the adoption
2 of this Resolution.

3
4 **DULY AND REGULARLY ADOPTED**, this 26th day of July 2022.

5
6 Certified by:

7 

8 **JOSEPH T. DUENAS**
9 Chairperson

10 Attested by:

11 

12 **MICHAEL T. LIMTIACO**
13 Secretary

14 **SECRETARY'S CERTIFICATE**

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

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

21 AYES: 3

22 NAYS: 0

23 ABSENT: 1

24 ABSTAIN: 0

25
26 ///

27
28
29 ///

30
31
32 ///





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. 13-FY2018

RELATIVE TO APPROVAL OF THE CONSTRUCTION MANAGEMENT CONTRACT FOR SANTA ROSA, SINIFA, AND SANTA RITA TANK AND SYSTEM UPGRADES

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

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

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

WHEREAS, the design of Santa Rosa, Sinifa, and Santa Rita Tank designs (RFP-09-ENG-2014) have been completed; and

WHEREAS, GWA has advertised the Request for Proposals (RFP-06-ENG-2017) soliciting statement of qualifications from experienced and qualified engineering firms to provide construction management services for the Santa Rosa, Sinifa, and Santa Rita Tank and System Upgrades project; and

WHEREAS, RFP packages were picked up by 19 interested parties, from which GWA received proposal submittals from 8 firms before the RFP submittal deadline; and

WHEREAS, the GWA A-E Selection committee reviewed and evaluated the 8 proposals (See Exhibit A – Score Summary) and generated a short list of the top 3 firms with a

1 recommendation to award a contract to the firm GHD (See Exhibit B – GM’s Determination);
2 and
3

4 **WHEREAS**, GHD and GWA negotiated the price for the construction management
5 services (Santa Rosa, Sinifa, and Santa Rita tank and off-site system upgrades related to all three
6 tank sites) to be provided in the total amount of Two Million Nine Hundred Seventy-Seven
7 Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents (\$2,977,234.69) (See Exhibit
8 C – Scope of Work and Fees); and
9

10 **WHEREAS**, GWA management seeks approval of the fee proposal amount of Two
11 Million Nine Hundred Seventy-Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-
12 Nine Cents (\$2,977,234.69), along with a 10% contingency of Two Hundred Ninety-Seven
13 Thousand Seven Hundred Twenty Three Dollars and Forty Seven Cents (\$297,723.47), to bring
14 the total authorized funding amount to a maximum of Three Million Two Hundred Seventy-Four
15 Thousand Nine Hundred Fifty-Eight Dollars and Sixteen Cents (\$3,274,958.16); and
16

17 **WHEREAS**, funding for this project will be from the Bond Funds under the line item
18 “PW 09-11 Water System Reservoirs 2005 Improvements”; and
19

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

- 22 1. The recitals set forth above hereby constitute the findings of the CCU.
- 23 2. The CCU finds that the terms of the fee proposal submitted by GHD are fair
24 and reasonable (Exhibit C).
- 25 3. The CCU hereby authorizes the management to accept the fee proposal from
26 GHD, which is also incorporated into this Resolution in its entirety.
- 27 4. The CCU hereby further authorizes the management of GWA to enter into a
28 contract with GHD, in the amount of Two Million Nine Hundred Seventy-
29 Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents
30 (\$2,977,234.69).
- 31 5. The CCU hereby further approves the total funding amount for this project of
32 Two Million Nine Hundred Seventy-Seven Thousand Two Hundred Thirty-

Four Dollars and Sixty-Nine Cents (\$2,977,234.69), along with a 10% contingency of Two Hundred Ninety-Seven Thousand Seven Hundred Twenty-Three Dollars and Forty-Seven Cents (\$297,723.47), to bring the total authorized funding amount to Three Million Two Hundred Seventy-Four Thousand Nine Hundred Fifty-Eight Dollars and Sixteen Cents (\$3,274,958.16).

6. The CCU hereby further authorizes the funding source to be from bond funds under the CIP line Item PW 09-11 "Water System Reservoirs 2005 Improvements".

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

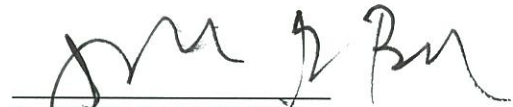
DULY AND REGULARLY ADOPTED, this 23rd day of January 2018.

Certified by:



JOSEPH T. DUENAS
Chairperson

Attested by:



J. GEORGE BAMBA
Secretary

SECRETARY'S CERTIFICATE

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

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

AYES: 5

NAYS: 0

ABSTENTIONS: 0

ABSENT: 0





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. 32-FY2020

**RELATIVE TO APPROVAL OF ADDITIONAL FUNDING TO THE CONSTRUCTION
MANAGEMENT CONTRACT FOR SANTA ROSA, SINIFA, AND SANTA RITA TANK
AND SYSTEM UPGRADES**

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

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

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

WHEREAS, the CCU approved Resolution No. 13-FY2018 authorized a funding of \$2,977,234.69 along with a 10% contingency of \$297,723.47 to bring the total authorized funding amount to a maximum of \$3,274,958.16 (Exhibit A) for the construction management contract; and

WHEREAS, the construction management contract for the Santa Rosa, Santa Rita, and Sinifa tanks and system upgrade project was issued on April 2, 2018;

WHEREAS, the construction management team has completed pre-construction and limited construction task which included design document review, bid review and analysis, development of quality assurance plan, project document control software setup, meetings, and submittal review; and

1 **WHEREAS**, the construction contract for the Santa Rosa, Santa Rita, and Sinifa tanks
2 and system upgrade project was issued on September 30, 2019;

3
4 **WHEREAS**, construction at the sites have not started due to the following reasons:

- 5 1. Engineer of Record (Designer) did not complete the archaeological survey
6 process for the three sites before the bid, which led to the State Historic
7 Preservation Office delay in reviewing the permit package;
- 8 2. Permitting agencies shut down due to the COVID-19 pandemic, which further
9 extended the permit review process with the State Historic Preservation Office
10 and Guam Environmental Protection Agency;

11
12 **WHEREAS**, the construction management construction performance period has expired
13 due to no construction site activity;

14
15 **WHEREAS**, GWA and GHD has negotiated Change Order No. 1 scope and fee of Three
16 Hundred Thirty-Seven Thousand Three Hundred Thirty-Seven Dollars and Thirty-Nine Cents
17 (\$337,337.39) to continue and extend the construction management period to match contractor's
18 performance period and construction management cost escalation (Exhibit B); and

19
20 **WHEREAS**, GWA Management is seeking Thirty-Nine Thousand Six Hundred Thirteen
21 Dollars and Ninety-Two Cents (\$39,613.92) to supplement the available contingency of
22 \$297,723.47 to fund Change Order No. 1 in the amount of Three Hundred Thirty-Seven
23 Thousand Three Hundred Thirty-Seven Dollars and Thirty-Nine Cents (\$337,337.39); and

24
25 **WHEREAS**, funding for this project will be from the Bond Funds under the line item
26 "PW 09-11 Water System Reservoirs 2005 Improvements"; and

27
28 **NOW BE IT THEREFORE RESOLVED**, the Consolidated Commission on Utilities
29 does hereby approve the following:

- 30
31 1. The recitals set forth above hereby constitute the findings of the CCU.

2. The CCU finds that the terms of the scope and fee proposal submitted by GHD are fair and reasonable.
3. The CCU hereby authorizes \$36,613.92 in additional funding to bring the total authorized funding amount to \$3,314,572.08.
4. The CCU hereby authorizes the management of GWA the option to issue Change Order No. 1 in the not-to-exceed amount of \$337,337.39. (Exhibit "B")
5. The CCU hereby authorizes the funding source to be from bond funds under the CIP line Item PW 09-11 "Water System Reservoirs 2005 Improvements".

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

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

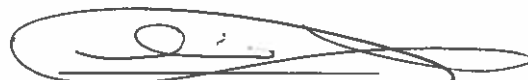
Certified by:

Attested by:



JOSEPH T. DUENAS

Chairperson



MICHAEL T. LIMTIACO

Secretary

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SECRETARY'S CERTIFICATE

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

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

AYES:

5 ²

NAYS:

0

ABSENT:

0

ABSTAIN:

0

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865 South Marine Corps Drive, Suite 202
Tamuning, Guam 96913
United States
www.ghd.com

Our ref: 11136961

11 July 2022

Mr. Brett Railey, PE
Chief Engineer
Guam Waterworks Authority
Gloria B. Nelson Public Service Building
688 Route 15
Mangilao, Guam 96913

Change Order Request #2 (Rev. 2) – Additional Professional Services – North/South Reservoirs

Dear Mr. Railey:

GHD is pleased to submit Change Order #2 to GWA for the extension of GHD's construction management (CM) contract for the above referenced project. As you are aware, there have been considerable challenges encountered during construction resulting in construction delays. With construction delays, are accompanying construction management and inspection services to complete construction at all three sites. These challenges include schedule impacts related to the COVID-19 pandemic, slower than anticipated construction progress, slope failure at Santa Rita Tank requiring additional investigation, design-related errors and omissions and additional scope of work for electrical testing for all sites. GHD's current contract period of performance ended in April 2022, and this change order proposal provides additional contract time for our construction management and inspection services with the intent of aligning the additional contract time with the time extension GWA intends to provide to the Contractor. Below is a summary of the primary issues necessitating the contract extension and our proposed fees for them.

Construction Schedule Extension

The construction schedule for all three sites has exceeded our anticipated contractual agreement from Change Order #1, and the Contractor continues to submit requests for additional time. We also anticipate additional time extension requests are forthcoming from the Contractor. These delays are attributed to the impact the current COVID 19 pandemic has had on material procurement, design modifications, unforeseen or changed site conditions, additional scope of work and material procurement, and property access issues. These issues and associated delays are beyond GHD's control as the CM, and we are uncertain when the Contractor's time extension requests will cease. For this reason, we are proposing a monthly fixed fee for continued CM and inspection services to GWA for each project site beginning 01 May 2022. By providing a monthly fee, GWA can estimate their future expenses until project completion for each site and we will not need to continue estimating additional change order amounts for future schedule extensions.

During the proposal for this project in 2017, we estimated there would be 17 roles fulfilled by GHD's team with varying time commitments to the project. The average full-time-equivalent (FTE) labor effort for the 2017 estimate calculated to 7.2 people. Since around December 2020, GHD has executed our work with approximately 6.5 to 7 people, which is slightly less than the estimated level of effort at the time of proposal. Because of this reduced staffing, we agreed to reduce our monthly invoices until we met or exceeded the anticipated level of effort – we exceeded the 7.2 FTE beginning on 31 JAN 2022.

Our past invoices were on average \$61,500 for GHD labor per month and \$5,900 for our CM and CI expenses per month for each site. If GWA is agreeable to reduce our Construction Manager's effort to less than full time, we are able to reduce our monthly rates for GHD labor. The work at SRO and SIN sites has begun to move out of the ground which means there should be less unforeseen condition claims from the

Contractor. For these reasons, we believe it is possible to reduce the Construction Manager's level of effort back to 50% as originally proposed in 2017. For this change order, we propose to utilize 2022 GHD rates for a 6.7 FTE construction management and construction inspection crew.

Our expenses have increased for mileage, fuel, vehicle maintenance, cell phone services, Procore subscription, live video and photo feed, and weather monitoring, therefore we need to increase our monthly expense rate \$100 from \$5,900 to \$6,000 per site.

In addition to GHD's labor and expense, we also need to account for GRT. The current GRT rate as of the date of this proposal is 5.263% which is an increase from 4.167% in our 2017 proposal.

We propose additional budget for subconsultant work at this time only for the specific items identified in this change order request. In our current contract agreement, services for geotechnical sampling, testing, and inspection as well as surveying quality assurance checks are to be billed at cost plus a 10% markup. We will continue to coordinate these subconsultant services under our current contract until we identify the need to request additional budget for such services.

To summarize our revised monthly fees, we propose the following.

PROPOSED MONTHLY FEES

Monthly CM Services Any Sites	\$60,000	Includes 50% Construction Manager, Full Time Resident Engineer, and Full Time Construction Admin Assistant. This rate is lump sum per month whether there are one, two, or three active sites. This rate will also apply toward CM services for post-construction work to complete the project reporting and final closeout.
Monthly CI Services Santa Rita	\$30,000	Includes full time construction inspector, partial special inspectors, and engineering support from various engineering disciplines. This rate is lump sum per month until the Santa Rita construction works are complete.
Monthly CI Services Santa Rosa	\$30,000	Includes full time construction inspector, partial special inspectors, and engineering support from various engineering disciplines. This rate is lump sum per month until the Santa Rosa construction works are complete.
Monthly CI Services Sinifa	\$30,000	Includes full time construction inspector, partial special inspectors, and engineering support from various engineering disciplines. This rate is lump sum per month until the Sinifa construction works are complete.
Monthly CM – Expenses Each Site	\$6,000	Includes GHD's mileage, fuel, equipment maintenance, cell phone services, Procore subscription, live video and photo feed, and weather monitoring equipment and service. This rate is lump sum per month per site until the construction works are complete.

Additional Electrical Testing

In Technical Specification Section 260505-1.3, there are electrical testing requirements that are the responsibility of the owner. These tests were not included in GHD's original scope of work, and requires a contract modification should GWA desire GHD subcontract the testing services. We are seeking an on-island source to perform the highlighted tests below. Additionally, we are negotiating with the Contractor, through our CM efforts, to have the Contractor perform some of the tests currently listed under the owner's responsibility to help reduce GWA's costs.

C. Testing Responsibility Matrix:

System	Testing Agency
Automatic Lighting Control Equipment	O
Control Voltage Electrical Power Cables	O
Contactors	O
Disconnect Switches	O
Electricity Metering	O
Equipotential Grounding Systems	I
Exterior Lighting Systems	O
Grounding Systems	I
Interior Lighting	O
Lighting Control Equipment	O
Lightning Protection Systems	I
Low Voltage Power Switchboard	O
Low Voltage Transformers	O
Metering Equipment	O
Overhead Electrical Power Systems	O
Panelboard SPD	O
Panelboards	O
Protective Devices	I
Surge Protection Devices	O
Vibration and Seismic Controls	I
Variable Frequency Drives	O

The final scope of work for electrical testing is not yet fully defined, because the Contractor may perform some of it, however, we propose an initial not-to-exceed fee of \$30,000 for electrical testing at cost plus 10% markup with the intent Patrick McCandless will perform these services. If additional budget is necessary, we will submit a request in writing to GWA.

ENGEO Landslide Evaluation and Reporting

In response to the slope failure that occurred at the Santa Rita Reservoir project site, GWA has requested GHD subcontract slope stability analysis to ENGEO. ENGEO will contract with APDI to perform drilling services onsite and ENGEO will have onsite engineers, review the findings with ENGEO's engineering geologist on the mainland and provide a report. GHD will provide supporting manpower in the field and project management to facilitate this investigation.

To begin the field investigation, APDI must submit a DPW permit application to be allowed to drill. Part of the permit process requires APDI to submit a copy of their purchase order before DPW will approve the permit. We have met onsite with the project stakeholders and DPW is aware of the need to expedite this work. GHD has proactively provided a purchase order to ENGEO so they can in turn provide APDI with a purchase order. We have proceeded in advance of an executed Change Order in good faith with GWA's knowledge to minimize schedule impacts.

The purpose of this letter is to request approval from GWA to amend our contract and increase the contract fee amount by \$48,000. ENGEO's proposal to GHD is attached for your reference. We propose a time-and-materials fee for this effort because the geotechnical investigations have a strong potential to encounter unforeseen conditions. We intend to only invoice GWA for the actual costs incurred plus a 10% subcontractor mark-up.

It should be noted that we had originally provided the estimate for this landslide evaluation work in January 2022 with the expectation that the permitting process would require minimal effort to obtain signature approvals. Unfortunately, ENGEO has spent considerably more effort than anticipated to obtain the permit approvals from all the agencies, primarily GEPA. On 09 MAR 2022, ENGEO asked if we could request an additional \$4,000 budget to account for their permitting efforts.

ENGEO will only bill for actual hours worked and GHD will only bill actual costs plus 10% markup for this work. If ENGEO's efforts require additional compensation beyond this change order, we will notify GWA immediately to discuss the need for another change order request.

Additional Geotechnical Sampling and Testing

We are also requesting additional soil and concrete sampling and testing budget due to the increased scope of work related to the Santa Rita site utility realignment, ponding basin reconstruction, possible benching of the slope failure, and for additional underground piping installation.

Also at Santa Rita site, the deep foundation system has changed from cast-in-drilled-hole piles to precast concrete driven piles. The precast piles will require additional geotechnical subconsultant investigations prior to concrete placement. It will also require additional observations of the test piles prior to production pile driving.

During the concrete construction of the tanks, vaults, and retaining walls at Santa Rosa and Sinifa sites, the contractor has scheduled more days of concrete place than we originally anticipated. We will need additional budget to properly sample, test, and document the concrete test results.

We still have approximately \$30,000 remaining budget for the geotechnical sampling, testing, and special inspections, however, we are requesting in this change order an additional \$70,000 budget to perform the work listed above. We propose this \$70,000 budget will only be billed at cost plus 10% markup for this work if needed. If our geotechnical sampling and testing require additional compensation beyond this change order, we will notify GWA immediately to discuss the need for another change order request.

Summary

As mentioned above, we are uncertain as to the actual completion date of construction for each tank site at this time because we are awaiting a contract time extension request from the Contractor. However, in review of their proposed monthly schedules we understand the contractor assumes the following final completion dates.

1. Santa Rita – No completion date has been provided but we have assumed April 2023.
2. Santa Rosa – The contractor's latest schedule update anticipates April 2023 final completion.
3. Sinifa – The contractor's latest schedule update anticipates December 2022 final completion.

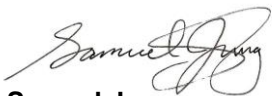
The total cumulative amount of budget for construction management and construction inspection should be decided by GWA. As requested, I have included with this change order request a matrix of the proposed GHD rates and hours we propose to provide for this additional work broken down by month. This matches the current services we have been providing with our current staff and we have managed to provide GWA with a reduced monthly billing rate.

In talking with our Senior Management and Accounting staff, GHD has offered to provide our continued services through 30 April 2022 although we could have stopped worked after our contract period ended. We continued our services in good faith that this change order would be executed between GHD and GWA in a timely manner. We also proposed in our latest invoice dated 06 May 2022, that we bill for the remainder of the contractual unbilled fee remaining to account for our construction management and inspection services through the end of 30 April 2022. By so doing, we believe GWA and GHD can mutually agree that all past disagreements in services, staffing, or performance up through 30 April 2022 are considered finalized. Beginning 01 May 2022, GHD will invoice for our services under the terms proposed in this change order. We understand it may take some time to process this change order which means we will not invoice until the change order is executed. At which time, we will present an invoice to GWA for review and acceptance with the pay period beginning 01 May 2022.

We understand, GWA may want to add scope of work to GHD's CM and CI team concurrent with the designed scope of work. If GHD can use the same CM and CI staff to perform our services without exceeding 8 hours per day, additional staff, or additional expenses we will likely be able to perform the work without raising our fees. Of course, we will need to review GWA's proposed additional scope of work upon written request.

We remain open to discussion with you on the specifics of our proposal. We welcome the opportunity to continue working with you on this important project and look forward to contributing to its successful completion. Should you have any questions about this proposal, please do not hesitate to contact Matt Kennedy or me.

Regards,



Samuel Jung
Sr. Construction Manager

+1 671-727-6802
samuel.jung@ghd.com



Matthew G. Kennedy, PE
Principal Engineer

+1 707-540-3376
Matt.Kennedy@ghd.com

Copy: Garrett Yeoh, Kimberlee Loop
Attachment: GHD Fee Matrix for Change Order 02; Summary of Proposed Fees

Change Order 02 Summary of Proposed Fees

Change Order Summary

Description	Amount	Notes
Estimated CM & CI Fees to Project Completion	\$ 1,970,523.36	Estimated CM & CI fees through April 2023 (see Note 1). See attached fee projections for support.
Special Inspections & Testing - Electrical and Instrumentation	\$ 30,000.00	Additional budget amount to be invoiced for actual hours worked at cost plus 10% markup
ENGEO Landslide Evaluation	\$ 48,000.00	Additional budget amount to be invoiced for actual hours worked at cost plus 10% markup
Additional Special Inspections & Testing - Geotechnical	\$ 70,000.00	Additional budget amount to be invoiced for actual hours worked at cost plus 10% markup

Change Order 02 Sub-Total **\$ 2,118,523.36** Total amount requested this change order

Note 1: Based on the current AIC revised project schedule anticipated completion dates for the completion of field work are December 2022 and April 2023 for the Sinifa and Santa Rosa locations, respectively. We have assumed an estimated completion of April 2023 for the Santa Rita location as there is no current schedule (portions of the Santa Rita project in re-design).

Proposed Staffing Breakdown

Proposed Change Order Monthly Rates

Description	Amount	Notes
Monthly Construction Management Services	\$ 60,000.00	Lump Sum for 1, 2, or 3 Sites
Monthly Construction Inspection Services	\$ 30,000.00	Lump Sum per site
Monthly CM Expenses	\$ 6,000.00	Lump Sum per site
Special Inspections & Testing - Electrical and Instrumentation	Cost + 10%	To be invoiced for actual hours worked at cost plus 10% markup
ENGEO Landslide Evaluation	Cost + 10%	To be invoiced for actual hours worked at cost plus 10% markup
Additional Special Inspections & Testing - Geotechnical	Cost + 10%	To be invoiced for actual hours worked at cost plus 10% markup
GRT	5.263%	Current Guam GRT as of the date of this change order request.

Proposed Staffing Breakdown

Construction Management

	Project Director	Construction Manager	Resident Engineer	CM Admin
GHD Rates	\$ 220.00	\$ 210.00	\$ 160.00	\$ 80.00
Weekly Hours	4.00	16.00	40.00	40.00
Monthly Hours	17.60	70.40	176.00	176.00
Est. Weekly Fees	\$ 880.00	\$ 3,360.00	\$ 6,400.00	\$ 3,200.00
Est. Monthly Fees	\$ 3,872.00	\$ 14,784.00	\$ 28,160.00	\$ 14,080.00

GHD Weekly Rate S/T \$ 13,840.00

GHD Monthly Rate S/T \$ 60,896.00

Monthly Rate (Rounded) \$ 60,000.00

Construction Inspection (Per Site)

	Field Inspector	Support Inspector	Special Inspector	Eng Support
GHD Rates	\$ 135.00	\$ 90.00	\$ 140.00	\$ 200.00
Weekly Hours	40.00	6.00	4.00	2.00
Monthly Hours	176.00	26.40	17.60	8.80
Est. Weekly Fees	\$ 5,400.00	\$ 540.00	\$ 560.00	\$ 400.00
Est. Monthly Fees	\$ 23,760.00	\$ 2,376.00	\$ 2,464.00	\$ 1,760.00

GHD Weekly Rate S/T \$ 6,900.00

GHD Monthly Rate S/T \$ 30,360.00

Monthly Rate (Rounded) \$ 30,000.00

Estimated GHD Monthly Labor Based on Current Contractor Schedule Projections as of 09 MAY 2022 (See Notes)

	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22
Monthly CM Fees	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00
Monthly SRI Fees	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00
Monthly SRO Fees	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00
Monthly SIN Fees	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00
Monthly Expenses	\$ 18,000.00	\$ 18,000.00	\$ 18,000.00	\$ 18,000.00	\$ 18,000.00	\$ 18,000.00	\$ 18,000.00
Sub-Total	\$ 168,000.00	\$ 168,000.00	\$ 168,000.00	\$ 168,000.00	\$ 168,000.00	\$ 168,000.00	\$ 168,000.00
GRT (5.263%)	\$ 8,841.84	\$ 8,841.84	\$ 8,841.84	\$ 8,841.84	\$ 8,841.84	\$ 8,841.84	\$ 8,841.84
Total	\$ 176,841.84	\$ 176,841.84	\$ 176,841.84	\$ 176,841.84	\$ 176,841.84	\$ 176,841.84	\$ 176,841.84
CUMULATIVE TOTAL	\$ 176,841.84	\$ 353,683.68	\$ 530,525.52	\$ 707,367.36	\$ 884,209.20	\$1,061,051.04	\$1,237,892.88

	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23
Monthly CM Fees	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00	\$ 60,000.00
Monthly SRI Fees	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00
Monthly SRO Fees	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00
Monthly SIN Fees	\$ 30,000.00				
Monthly Expenses	\$ 18,000.00	\$ 12,000.00	\$ 12,000.00	\$ 12,000.00	\$ 12,000.00
Sub-Total	\$ 168,000.00	\$ 132,000.00	\$ 132,000.00	\$ 132,000.00	\$ 132,000.00
GRT (5.263%)	\$ 8,841.84	\$ 6,947.16	\$ 6,947.16	\$ 6,947.16	\$ 6,947.16
Total	\$ 176,841.84	\$ 138,947.16	\$ 138,947.16	\$ 138,947.16	\$ 138,947.16
CUMULATIVE TOTAL	\$1,414,734.72	\$1,553,681.88	\$1,692,629.04	\$1,831,576.20	\$1,970,523.36

Notes

1 - Sinifa Site is projected to complete work by end of DEC 2022, based on current approved contract extensions.
2 - Santa Rosa Site is projected to complete work by end of APR 2023
3 - Santa Rita Site has no current projected end date due to the slope stability issue and pile pre-design, but has been assumed to be completed by end of APR 2023 for budgeting purposes.
4 - No additional time beyond contractor completion has been included for post-construction contract administration/CM project closeout.