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

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

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

WHEREAS, the CCU approved Resolution No. 25-FY2022 which authorized additional funding, due to delays by the impacts of the COVID-19 pandemic, global supply chain issues, and a slope failure (landslide) event due to severe weather at the Santa Rita reservoir site, all of which outside of the control on the Contractor and CM, in the amount of Two Million Three Hundred Forty Thousand Three Hundred Seventy Five Dollars and Seventy Cents (\$2,340,375.70), bringing the total authorized funding amount to Five Million Six Hundred Fifty Four Thousand Nine Hundred Forty Seven Dollars and Seventy Eight Cents (\$5,654,947.78) (Exhibit C).

WHEREAS, the Santa Rosa and Sinifa Reservoirs have been completed and placed online in October 2022; and

WHEREAS, due to Santa Rita Reservoir pile foundation issues, potentially requiring additional piles or a foundation shear ring wall, and redesign of the waterline, electrical, roadway, and ponding basin due to the slope failure, the construction of the Santa Rita Reservoir is projected to be fully completed in January 2024; and

WHEREAS, the Santa Rosa booster pump station construction will be extended to July 2023 due to the long lead supply of the booster pump and generator systems and associated design changes; and

WHEREAS, in order to provide continuity of needed construction management services until construction has been completed, GWA and GHD have negotiated a scope and fee not-to-exceed the amount of Nine Hundred Fifty Five Thousand Six Hundred Thirty Six Dollars and Fifteen Cents (\$955,636.15) (Exhibit D); and

 WHEREAS, GWA Management is seeking the not-to-exceed amount of Nine Hundred Fifty-Five Thousand Six Hundred Thirty-Six Dollars and Fifteen Cents (\$955,636.15) in additional funding to execute a contract modification to continue construction management services for the three construction sites; and

WHEREAS, funding for this project will be from the Bond Funds under the following line item:

PW 09-11 Water System Reservoirs 2005 Improvements

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

- 1. The recitals set forth above hereby constitute the findings of the CCU.
- The CCU finds that the terms of the fee proposal submitted by GHD are fair and reasonable.
- 3. The CCU hereby authorizes Nine Hundred Fifty-Five Thousand Six Hundred Thirty-Six Dollars and Fifteen Cents (\$955,636.15) in additional funding to bring the total authorized funding to Six Million Six Hundred Ten Thousand Five Hundred Eighty-Three Dollars and Ninety-Three Cents (\$6,610,583.93).
- 4. The CCU hereby authorizes the management of GWA the option to issue a contract modification in the not-to-exceed amount of Nine Hundred Fifty-Five Thousand Six Hundred Thirty-Six Dollars and Fifteen Cents (\$955,636.15) (Exhibit D).
- 5. The CCU hereby authorizes the funding source to be from the bond funds under 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.

1	DULY AND REGULARLY ADOPTED, this 21st day of February 2023.
2	Certified by:  Attested by:
3	Attested by:
4 5	QTQ But
6	JOSEPH T. DUENAS PEDRO ROY MARTINEZ
7	Chairperson Secretary
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9	SECDETA DVIS CEDTIFICATE
10	SECRETARY'S CERTIFICATE
11	I, Pedro Roy Martinez, Board Secretary of the Consolidated Commission on
12	Utilities as evidenced by my signature above do hereby certify as follows:
13	Samues as evidenced of my signature above do neroly corning as follows.
14	The foregoing is a full, true and accurate copy of the resolution duly adopted at a
15	regular meeting by the members of the Guam Consolidated Commission on Utilities,
16	duly and legally held at a place properly noticed and advertised at which meeting a
17	quorum was present and the members who were present voted as follows:
18	- Bala
19	AYES:
20	NAYS:
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23	ABSENT:
24	ABSTAIN:
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# **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

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recommendation to award a contract to the firm GHD (See Exhibit B – GM's Determination); and

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

WHEREAS, GWA management seeks approval of the fee proposal amount 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); and

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

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

- 1. The recitals set forth above hereby constitute the findings of the CCU.
- The CCU finds that the terms of the fee proposal submitted by GHD are fair and reasonable (Exhibit C).
- The CCU hereby authorizes the management to accept the fee proposal from GHD, which is also incorporated into this Resolution in its entirety.
- 4. The CCU hereby further authorizes the management of GWA to enter into a contract with GHD, in the amount of Two Million Nine Hundred Seventy-Seven Thousand Two Hundred Thirty-Four Dollars and Sixty-Nine Cents (\$2,977,234.69).
- The CCU hereby further approves the total funding amount for this project 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 Three Million Two Hundred Seventy-Four Thousand Nine Hundred Fifty-Eight Dollars and Sixteen Cents (\$3,274,958.16).

 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:

L 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:		
NAYS:	0	

ABSTENTIONS: 0

ABSENT: 0





# CONSOLIDATED COMMISSION ON UTILITIES Guam Power Authority | Guam Waterworks Authority P.O. Bex 2977 Hagatna, Guam 96932 | (671)649-3002 | guamecu.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

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

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

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

WHEREAS, the construction management construction performance period has expired due to no construction site activity;

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

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

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

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

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

- 2. The CCU finds that the terms of the 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** 

MICHAEL T. LIMTIACO

Chairperson

Secretary

# **SECRETARY'S CERTIFICATE**

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

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

AYES:

NAYS:

ABSENT:

ABSTAIN:



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# CONSOLIDATED COMMISSION ON UTILITIES Guarr Power Authority | Guarr Waterworks Authority P.O. Box 2977 Hagatna, Guarr 96932 | (671)649-3002 | guarreculorg

### **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

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

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

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

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

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

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

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

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

WHEREAS, funding for this project will be from the Bond Funds under the line item "PW 09-11 Water System Reservoirs 2005 Improvements."

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

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

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

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

Certified by:

Attested by:

JOSEPH T. DUENAS

Chairperson

MICHAEL T. LIMTIACO

Secretary

#### SECRETARY'S CERTIFICATE

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

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

AYES: 3

NAYS: 0

ABSENT: 0

ABSTAIN: 0



GHD

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

Your ref: W14-007-BND Our ref: 11136961

13 February 2023

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

Change Order Request #3 – Additional Professional Services – Construction Management Services for the Northern and Southern Guam Reservoirs (Santa Rosa, Sinifa, and Santa Rosa)

Dear Mr. Railey:

GHD is pleased to submit Change Order (CO) #3 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 which have contributed to delays at each of the three reservoir sites and require additional time to resolve and to complete construction. 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 and design changes, design-related errors and omissions, incomplete and incorrect submittals, and other issues.

GHD's current contract period of performance end dates for each site are summarized below:

Sinifa Reservoir: December 31, 2022

Santa Rosa Reservoir: April 30, 2023

Santa Rita Reservoir: April 30, 2023

Our review of the Contractor's most current construction schedule included with Payment Application No. 23 (November 2022), shows the following dates for Substantial Completion:

Sinifa Reservoir: May 15, 2023Santa Rosa Reservoir: July 14, 2023

- Santa Rita Reservoir: January 6, 2024

These dates are currently best our estimates for Substantial Completion and are contingent upon, but not limited to, completion of the following activities:

- Resolution of outstanding
- tank construction issues
- Procurement and installation of key products and materials needed for pump station improvements
- Procurement and installation of key products and materials needed for generator and fuel system improvements
- Resolution of pile foundation design and construction issues at Santa Rita Reservoir site
- Resolution of landslide remediation design at Santa Rita Reservoir site

This change order proposal provides additional contract time and budget for our construction management and inspection services with the intent of aligning the additional contract time with the expected time needed to reach Substantial Completion at each site. We understand that this project has required significantly more time to construct than anyone anticipated, and our approach is to provide the right level of construction oversight for a positive project outcome at reasonable cost. 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 the anticipated contractual agreement from Change Order #2. We 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 changes to address errors and omissions, design changes to address unforeseen or changed site conditions that may be related to errors and omissions, additional scope of work and material procurement, incomplete and unacceptable submittals, and property access issues. These issues and associated delays are beyond GHD's control as the CM, and we are uncertain exactly when the Contractor's time extension requests will cease. For this reason, we are proposing to extend the current monthly fixed fee for continued CM and inspection services to GWA for each project site once our current contract period of performance ends. By continuing with the monthly fee schedule, 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.

# **Proposed Staffing**

CO #2 pricing was developed based on an average of our monthly labor, Quality Assurance (QA) subconsultants and expense costs. For this change order, we propose to utilize FY2023 GHD rates for approximately 6.1 FTE construction management and construction inspection team consisting of the following staffing levels.

Role	Full-Time Equivalent (FTE) Staffing	Notes		
Construction Manager	0.5	Maintain current staffing level		
Resident Engineer	1.0 (0.5)	Maintain current staffing level through completion of SRI, then reduce to half time		
Construction Administration Assistant	1.0 (0.50)	Maintain current staffing level through completion of SRI, then reduce to half time		
Civil/Structural Inspector-SIN (January 1-April 30, 2023)	1.0	Maintain current staffing level		
Civil/Structural Inspector-SRO (May 1-July 31, 2023)	1.0 (0.50)	Maintain current staffing level through completion of SRI, then reduce to half time		
Civil/Structural Inspector-SRI (May 1-December 31, 2023)	1.0 (0.50)	Maintain current staffing level through completion of SRI, then reduce to half time		
Special Inspector	0.3	Reduce staffing level based on anticipated work remaining		
Construction Engineering Support	0.2	Reduce staffing level based on anticipated work remaining		
FTE Staffing for Project	6.1	CO#2 staffing level was 6.7 FTE		

The proposed staffing levels are a reduction relative to CO #2 at the request of GWA. We feel that many of the key construction engineering challenges, questions and reviews have been resolved with the Santa Rosa and Sinifa Reservoir sites, and that the remaining issues at the Santa Rita Reservoir site can be addressed with reduced engineering effort based on previous resolutions and lessons learned. We are also assuming that the Engineer will actively address the design errors and omissions that have previously been brought to their attention through design reviews, meetings, and site visits.

# Fee Proposal

The table below summarizes the proposed monthly fees for CO #3. These are the same as those approved in CO #2. We understand that this project has lasted much longer than anyone anticipated, and that comes with additional cost to GWA. While our rates did increase on July 1, 2022, we proposed to hold our monthly construction inspection rate at \$30,000 per site. Our expenses have also increased since CO #2, but we will hold our expense budget at \$6,000 per month per site. Expenses include vehicle mileage, vehicle maintenance, cell phone services, Procore software subscription, live video and photo feed, and weather monitoring.

PROPOSED MONTHLY FEE	S	NOTES			
Monthly CM Services May 1-December 31, 2023 All Sites	\$50,000	Includes half-time Construction Manager, full-time Resident Engineer through construction of SIN then reducing to half-time, and full-time Construction Admin Assistant through construction of SIN then reducing to half-time. This proposal accounts for the current CO #2 budget for CM services through April 30, 2023.			
Monthly CI Services May 1-December 31, 2023 Santa Rita	\$30,000	Includes full-time construction inspector through construction of SIN then reducing to half-time, partial special inspectors, and engineering support from various engineering disciplines. This proposal accounts for the current CO #2 budget for Santa Rita inspection services through April 30, 2023.			
Monthly CI Services May 1-July 31, 2023 Santa Rosa	\$30,000	Includes full-time construction inspector through construction of SIN then reducing to half-time, partial special inspectors, and engineering support from various engineering disciplines. This proposal accounts for the current CO #2 budget for Santa Rosa inspection services through April 30, 2023.			
Monthly CI Services through January 1-April 30, 2023 Sinifa	\$30,000	Includes full-time construction inspector, partial special inspectors, and engineering support from various engineering disciplines. The CO #2 inspection services budget for Sinifa inspection services through December 31, 2022.			
Construction Close-out	\$60,000	Includes part-time construction inspector efforts for construction closeout activities at each site, estimated at \$20,000 per site, and includes compilation of warranties, O/M material, Record Drawings, and other construction documentation. Materials would be uploaded to Procore for final delivery to GWA of a complete record of construction documentation at each site.			
Monthly Expenses Per 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. Video service will be ended at Substantial Completion at each site.			

The date ranges included in the table above generally align the Contractor's most current schedule dates for Substantial Completion, which is included with Payment Application No. 23.

The tables below summarize the monthly CO #3 budgets proposed to continue providing CM and inspection services for each of the sites through January 2023, which reflects the Contractor's estimated Substantial Completion date for the Santa Rita Reservoir. These are in addition to CO #2 remaining budget. In addition to labor and expense, the estimate also accounts for GRT (5.263%).

Description	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
Monthly CM Fees	\$0.00	\$0.00	\$0.00	\$0.00	\$50,000.00	\$50,000.00
Monthly SRI Fees	\$0.00	\$0.00	\$0.00	\$0.00	\$15,000.00	\$15,000.00
Monthly SRO Fees	\$0.00	\$0.00	\$0.00	\$0.00	\$15,000.00	\$15,000.00
Monthly SIN Fees	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$0.00	\$0.00
Monthly Expenses	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00	\$8,000.00	\$8,000.00
Sub-Total	\$36,000.00	\$36,000.00	\$36,000.00	\$36,000.00	\$88,000.00	\$88,000.00
GRT (5.263%)	\$1,894.68	\$1,894.68	\$1,894.68	\$1,894.68	\$4,631.44	\$4,631.44
Total	\$37,894.68	\$37,894.68	\$37,894.68	\$37,894.68	\$92,631.44	\$92,631.44

Description	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
Monthly CM Fees	\$50,000.00	\$50,000.00	\$50,000.00	\$50,000.00	\$50,000.00	\$50,000.00
Monthly SRI Fees	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
Monthly SRO Fees	\$15,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Monthly SIN Fees	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Monthly Expenses	\$8,000.00	\$4,000.00	\$4,000.00	\$4,000.00	\$4,000.00	\$4,000.00
Sub-Total	\$88,000.00	\$69,000.00	\$69,000.00	\$69,000.00	\$69,000.00	\$69,000.00
GRT (5.263%)	\$4,631.44	\$3,631.47	\$3,631.47	\$3,631.47	\$3,631.47	\$3,631.47
Total	\$92,631.44	\$72,631.47	\$72,631.47	\$72,631.47	\$72,631.47	\$72,631.47

# Geotechnical QA Services

We do not propose additional fees for QA subconsultant work with exception of ENGEO's request for change order for additional efforts associated with pile driving installation, landslide slope monitoring and related design reviews and meetings. We have included ENGEO's change order amount of \$31,687 plus a 10% markup in our proposal for your consideration.

We have included additional \$20,000 budget for as-needed geotechnical engineering services related to the Santa Rita Reservoir construction and landslide slope monitoring in this proposal. This budget includes \$2,000 that ENGEO was previously authorized for to perform a geotechnical design review of the TGE proposed temporary slope stabilization design for the Santa Rita site, and approximately \$2,000 for ENGEO's field check and report related to the Santa Rita landslide monitoring on January 12, 2023. We will not use this budget unless pre-approved by GWA.

We have also included \$20,000 for a structural and geotechnical peer review of the foundation design for the Santa Rita Reservoir. From our review of the structural design and recommendation from the structural engineer for additional piles, we recommend GWA perform an independent structural and geotechnical review of the foundation design.

As reported in our December 2022 invoice, we currently have the following remaining budgets for QA testing and inspections:

#### Change Order #1 QA Testing and Inspection Budget Remaining:

Subtotal:	\$4.171.95
Sinifa Reservoir:	<b>\$4,171.95</b>
Santa Rosa Reservoir:	\$0.00
Santa Rita Reservoir:	\$0.00

#### Change Order #2 QA Testing and Inspection Budget Remaining:

Subtotal:	\$32,546.88
QA Surveying:	\$11,400.13
Geotechnical Inspections and Testing	\$207.45
Electrical Inspections and Testing:	\$20,939.30

Total QA Testing and Inspection Budget: \$36,718.83

Electrical inspections and testing budget in CO#2 was earmarked for efforts outlined in Technical Specification Section 260505 paragraph 1.3, which are indicated as the responsibility of GWA. We have discussed the budget with GWA and included additional QA inspection budget to address any inspection and testing needs beyond the current contract budget. We will continue to manage subconsultant QA services within the contract budget until we identify the need to request additional budget for such services.

# **Summary**

The table below summarizes the proposed CO #3 amount based on the level of CM and inspection services and other costs described above.

Description	Fee
Monthly CM Fees	\$400,000.00
Monthly SRI Fees	\$120,000.00
Monthly SRO Fees	\$45,000.00
Monthly SIN Fees	\$120,000.00
Construction Closeout	\$60,000.00
Monthly Expenses	\$68,000.00
ENGEO CO Request	\$34,855.70
QA Inspection Budget	\$40,000.00
Foundation Peer Review	\$20,000.00
Sub-Total	\$907,855.70
GRT (5.263%)	\$47,780.45
Total	\$955,636.15

We happy to discuss our proposal with you and adjust the level of effort and service we propose based on your feedback. 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 me.

Regards,

Matthew G Kennedy, PE
Principal Engineer/Construction Manager

+1 707-540-3376 matt.kennedy@ghd.com

Copy to: Garrett Yeoh, Paul Baron, Joe Heitzler

Attachments:

1. ENGEO Request for Change Order

#### Attachment 1



ENGEO Incorporated 215 Rojas Street, Suite 122 Harmon, Guam 96913 (925) 866-9000 / FAX (888) 279-2698

#### REQUEST FOR CHANGE ORDER

(DRAFT for review)

TO: Mr. Matt Kennedy, PE GHD Incorporated 865 South Marine Corps Drive, Suite 202 Tamuning, GU 96913

DATE: November 14, 2022

ENGEO Project Nos. 19128.000.001

19128.000.002

ENGEO Contact: Dustin Agnew, PE

PROJECT NAME: GWA Northern - Southern Reservoirs, Santa Rita, Santa Rosa, Sinfa, Guam

**ORIGINAL GHD PROJECT NO. 11136961** 

ORIGINAL GHD PURCHASE ORDER NO. 380-000171 with CO-1, CO-2, CO-3

ORIGINAL CONTRACT DATE: June 20, 2021

#### **Additional Scope of Services and Fees:**

### 19128.000.001: Geotechnical Quality Assurance - Observation for Deep Foundation Installation

GHD requested support during the redesign of the foundation system at the Santa Rita Reservoir tank. At GHD's request, ENGEO attended meetings and provided additional consultation and review of documents associated with the redesign. In addition, the installation of the pile foundations required more onsite time than originally budgeted. Detail for each additional scope item, or overage is presented below.

#### Additional meeting and consultation scope:

ENGEO attended meetings and performed site visits associated with the foundation redesign detailed below STAFF RATE HOURS DATE TOTAL COMMENT Discuss driving schedule w/ GHD. Prepare 7/7/2022 DA \$ 230.00 2 Ś 460.00 documents, pile forms. Receive and review supplemental geotech report 7/13/2022 DA \$ 230.00 2 460.00 for driven piles Onsite meeting with Sam & Elijah for pile driving 7/14/2022 DA \$ 230.00 2 \$ 460.00 preparation Onsite meeting with Sam & Elijah for pile driving 7/14/2022 HE \$ 145.00 2 290.00 preparation Phone meeting with GHD, designers, GWA about 8/16/2022 DA \$ 230.00 \$ 230.00 concrete spalling during driving Indicator pile summary meeting and review of the 8/19/2022 DA \$ 230.00 2 460.00 week's pile driving logs Total \$2,360

#### Additional review and commentary scope:

Detail of ENGEO's effort for review and comment on the foundation redesign through this submittal: 19128000001\_2021-07-23\_CIDH Alternatives Considerations\_DRAFT\_ENGEO comment.pdf

DATE	STAFF	RATE	HOURS	TOTAL		COMMENT
7/15/2021	DA	\$ 230.00	1	\$	230.00	review received deep foundation alternatives
7/16/2021	DA	\$ 230.00	2	\$	460.00	research and responses on alternatives
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7/22/2021	DA	\$ 230.00	2	\$	460.00	Draft responses for alternatives and discuss with Joe  Total \$1,610
7/21/2021		\$ 230.00		Ş ¢		Responses for alternatives

#### Additional review and commentary scope:

Detail of ENGEO's effort for review and comment on the foundation redesign through this submittal: 022.05.02 Santa Rita Water Tank Foundation Redesign Comments ENGEO.xlsx

DATE	STAFF	RATE	HOURS	TOTA	L STORY	COMMENT
3/23/2022	DA	\$230.00	1	\$	230.00	Receive and review revised foundation plan
3/29/2022	JS	\$265.00	1	\$	265.00	review revised pile plan
3/30/2022	JS	\$265.00	2	\$	530.00	review revised pile plan
3/31/2022	JS	\$265.00	1	\$	265.00	review revised pile plan
4/4/2022	JS	\$265.00	3	\$	795.00	review revised pile plan
4/5/2022	JS	\$265.00	2	\$	530.00	review revised pile plan
4/6/2022	JS	\$265.00	1	\$	265.00	review revised pile plan
4/8/2022	DA	\$230.00	1	\$	230.00	Comments on revised pile plan
4/26/2022	JS	\$265.00	1	\$	265.00	finalize comments
4/29/2022	JF	\$315.00	1	\$	315.00	review of comments

# Additional time for on-site observation and documentation during pile installation

Our original scope estimated 312 hours onsite for foundation installation observation and 80 hours for review, reporting and documentation. In total the original budget for these two combined was \$63,640.00.

As of the end of pile driving, we had performed onsite foundation installation observation for a total of 423.5 hours and review, reporting and documentation for a total of 74 hours. Fees for these tasks combined total \$74,187.00.

#### 19128.000.002: Landslide consultation and document review

GHD requested support during the landslide assessment as the design team proposed remediation measures for the active slide. At GHD's request, ENGEO attended meetings associated with the landslide, and provided review and comment on remediation documents. In addition to the reviews, we expended more effort than expected in preparation of our Landslide Assessment report dated June 17, 2022. Detail for each additional scope item, or overage is presented below.

# • Additional time required for permitting

The permitting process for our exploration on the landslide mass took significantly more effort than anticipated, causing an overage on our report: 19128000002\_2022-06-17\_GWA Santa Rita Reservoir Landslide Assessment.pdf

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DATE	STAFF	RATE	HOURS	TOT	AL	COMMENT
1/4/2022	HE	\$145.00	1	\$	145.00	DPW and GEPA permits and signatures
1/7/2022	HE	\$145.00	2	\$	290.00	DPW permitting, coordination with APDI
1/12/2022	HE	\$145.00	4	\$	580.00	DPW permitting map
						DPW permitting map, coordination with Joe and
1/13/2022	HE	\$145.00	5	\$	725 00	Kina

Internal Review: 1. DA 2. TPB

1/14/2022	HE	\$145.00	6.5	\$	942.50	Signatures for Land Management, GGN, Dept. Agriculture, Parks and Rec. Coordinate with Joe and Garret for Parks and Rec Permit drop for signature at Parks and Rec, GEPA,
1/18/2022	HE	\$145.00	4	\$	580.00	GWA
1/20/2022	DA	\$210.00	0.5	\$	105.00	Permitting review, signatures, submittals
1/21/2022	HE	\$145.00	0.5	\$	72.50	GEPA permit additional requested information
1/25/2022	HE	\$145.00	1	\$	145.00	DPW and Dep. Agriculture follow up
1/26/2022	HE	\$145.00	2	\$	290.00	Permit drop for signature at Dept. Agriculture
1/28/2022	HE	\$145.00	1	\$	145.00	Pickup at Dep. Agriculture
2/2/2022	DA	\$210.00	0.5	\$	105.00	DPW permitting
2/8/2022	DA	\$210.00	1	\$	210.00	GEPA permitting
2/9/2022	DA	\$210.00	1	\$	210.00	GEPA permitting follow up
2/15/2022	DA	\$210.00	0.5	\$	105.00	GEPA permitting follow up
2/22/2022	DA	\$210.00	0.5	\$	105.00	GEPA permitting follow up
2/23/2022	DA	\$210.00	0.5	\$	105.00	GEPA permitting follow up
2/28/2022	DA	\$210.00	0.5	\$	105.00	GEPA permitting follow up
3/3/2022	DA	\$210.00	0.5	\$	105.00	GEPA permitting follow up
3/9/2022	DA	\$210.00	2	\$	420.00	Original permits to GEPA Main for signature
3/14/2022	DA	\$210.00	1	\$	210.00	GEPA permit pickup
3/18/2022	HE	\$145.00	2	\$	290.00	Prepare DPW CD for submittal
3/21/2022	HE	\$145.00	3	\$	435.00	Final DPW permit drop with CD
The Section	18108	20年 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		AG	DAY SALT	Total \$6,425

#### Additional review and commentary scope:

Detail of ENGEO's effort for review and comment on the landslide plans through this submittal: 19128 000 002 Santa Rita Reservoir Plan Review Comments DRAFT 09-30-2022 ndf

DATE	STAFF	RATE	HOURS	TOT	AL	COMMENT	
9/28/2022	DA	\$210.00	1	\$	210.00	Plan review	
9/28/2022	TB	\$265.00	1	\$	265.00	Consultation and memo	
9/29/2022	JH	\$170.00	3	\$	510.00	Plan review	
9/29/2022	TB	\$265.00	1	\$	265.00	Final Review	
9/30/2022	JH	\$170.00	2	\$	340.00	Final revisions and submittal	
			and Marie 1			Total \$1	.590

#### • Additional review and commentary scope:

Detail of ENGEO's effort for review and comment on the landslide plans through this submittal: 19128.000.002 Santa Rita Reservoir Plan Review Comments DRAFT 10-14-2022.pdf

DATE	STAFF	RATE	HOURS	TOT	AL	COMMENT
10/2/2022	DA	\$210.00	1	\$	210.00	Review new slope grading
10/3/2022	DA	\$210.00	1	\$	210.00	Review comments
10/4/2022	JH	\$170.00	1	\$	170.00	Internal meeting
10/6/2022	TB	\$265.00	2	\$	530.00	Review geotech report and repair plans
10/6/2022	JH	\$170.00	1	\$	170.00	Internal meeting
10/7/2022	JH	\$170.00	3.5	\$	595.00	Landslide plan review
10/10/2022	JH	\$170.00	4	\$	680.00	Landslide plan review
10/11/2022	JH	\$170.00	2	\$	340.00	Prepare figures
10/12/2022	JH	\$170.00	4	\$	680.00	Plan review comments

Internal Review: 1. DA 2. TPB

GHD Incorporated GWA Northern – Southern Reservoirs, Santa Rita, Santa Rosa, Sinfa, Guam REQUEST FOR CHANGE ORDER 19128.000.001 November 14, 2022 Page 4

10/12/2022 LI	. \$140.00	4	\$	560.00	Update plans and sections
10/13/2022 LI	\$140.00	2	\$	280.00	Update base plans and sections
10/13/2022 JH	\$170.00	2.5	\$	425.00	Plan review comments
10/13/2022 TI	\$ \$265.00	2	\$	530.00	Review revised plans and geotech report
_10/14/2022 JH	\$170.00	0.5	\$	85.00	Transmittal
Towns of the sale	ACT OF		A STATE OF		Total \$5,465

REQUESTED TOTAL FEE INCREASE

\$31,687.00

If you are in agreement with the scope of services and fees outlined in this request, please forward a change order to the above-referenced original contract as authorization for us to proceed. All other terms and conditions of the original contract shall remain in effect.

#### **ENGEO INCORPORATED**

BY:	
PRINTED NAME:_	
TITLE:	
DATE:	

Internal Review: 1. DA 2. TPB