

## FIFTH AMENDMENT TO WORK AUTHORIZATION (“WA”)

PROJECT NAME: NORTH & SOUTH KUEHLER WASTEWATER TREATMENT PLANT EXPANSION (the “Project”)

TASK REQUEST: North and South Kuehler Wastewater Treatment Plant Expansion – Scope Change and Redesign for Decreased Flows

DATE ISSUED: April \_\_, 2024

CLIENT: New Braunfels Utilities (“NBU”)  
ENGINEER: Quiddity Engineering, LLC (“QE”)

CONTRACT: EP10-075  
QE JOB NO.: 05487-0005-00

This Fifth Amendment to WA amends the Work Authorization dated November 6, 2017, between NBU and QE (the “12/15/17 WA”), which was supplemented on through Board action on February 27, 2020 (the “Supplement to WA”), amended on November 5, 2020 (the “First Amendment to WA”), amended on March 8, 2021 (the “Second Amendment to WA”), amended on January 6, 2023 (the “Third Amendment to WA”), and amended on May 25, 2023 (the “Fourth Amendment to WA”). The 12/15/17 WA, together with the Supplement to WA, the First Amendment to WA, the Second Amendment to WA, the Third Amendment to WA, and the Fourth Amendment to WA was issued under the Professional Services Agreement (“PSA”) dated December 10, 2010, between NBU and Jones & Carter, Inc. (now known as Quiddity Engineering, LLC, and all terms and provisions set forth therein. Except as stated herein, all other terms and conditions of the PSA remain in full force and effect.

### **Scope Description:**

The design of the North & South Kuehler Wastewater Treatment Plant Rehabilitation (“WWTP”) was completed, and approval received from the TCEQ and partial approvals from the City of New Braunfels permitting. Due to decreasing flows and budget constraints, NBU elected to reduce the scope, modify the design concept for the rehabilitation, and modify the design to include certain scope items as bid alternates to provide NBU with bid award flexibility to align with budget for the North & South Kuehler WWTP Rehabilitation. This Fifth Amendment to WA modifies the 12/15/17 WA and Fourth Amendment to add the following tasks: (i) modify the design to remove the proposed preliminary treatment unit from the design including the screening area, aerated grit chambers, grit removal system including the screenings garage, lift station, and influent junction box; (ii) modify the design to remove the proposed odor control system for the preliminary treatment unit from the design; (iii) modify the design to remove the preliminary treatment unit fat, oils, and grease (“FOG”) removal system; (iv) modify the design to remove the electrical building and all electrical gear for the preliminary treatment unit from the design; (v) modify the design to remove the proposed elevated flow splitter from the design; (vi) modify the design to remove the proposed pipe bridge that crosses the North Tributary from the design; (vii) modify the design to remove the sludge dewatering box station from the design; (viii) modify the design to remove the North Kuehler WWTP drain return pumps from the design; (ix) modify the design to make a bid alternate and to design an alternate concept to replace the South Kuehler WWTP non-potable water (“NPW”) pump system; (x) as a bid alternate, modify the design to remove the proposed hydropneumatic tank at South Kuehler from the design; (xi) modify the design to replace the screens and screenings conveyor at the existing headworks at the North Kuehler WWTP; (xii) modify the design to include modifying the existing concrete screenings channel structure at the North Kuehler WWTP to lower the

floor, as needed, to accommodate the new screen and changing hydraulics as a result of NBU's SK-20 project (not part of this authorization); (xiii) modify the design to replace the screens and screenings conveyor at the existing headworks at the South Kuehler WWTP; (xiv) modify the design to include modifying the existing concrete structure at the South Kuehler WWTP to lower the floor, as needed, to accommodate the new screen and changing hydraulics as result of NBU's SK-20 project (not part of this authorization); (xv) modify the design to retain the existing storage buildings at the South Kuehler WWTP; (xvi) modify the design to include the replacement of the NPW system hydropneumatic tank ("HPT") at North Kuehler WWTP; (xvii) modify the design to include modifying the existing chlorine and sulfur dioxide feed rooms at the North Kuehler WWTP to install a ventilation system compliant with current TCEQ Chapter 217 design criteria; (xviii) modify the design to include modifying the existing chlorine and sulfur dioxide feed rooms at the South Kuehler WWTP to install a ventilation system compliant with current TCEQ Chapter 217 design criteria; (xix) modify the design to remove and replace the existing helical screw screen at the South Kuehler membrane thickeners ("MBTs") and; (xx) modify the design to remove and replace the existing step screens at the North Kuehler MBTs and digester; (xxi) as a bid alternate, modify the design to include the replacement of the existing South Kuehler MBTs and replacement with ceramic MBTs including replacement of the permeate pumping system; (xxii) as a bid alternate, modify the design to include replacement of the existing North Kuehler MBTs and replacement with ceramic MBTs including replacement of the permeate pumping system; (xxiii) modify the design to allow for alternate manufacturers for the electrical gear and VFDs for the North Kuehler WWTP; (xxiv) modify the design to allow for alternate manufacturers for the electrical gear and VFDs for the South Kuehler WWTP; (xxv) redesign of the influent sanitary sewer at South Kuehler WWTP to connect to the existing headworks in lieu of the currently proposed headworks to be removed; (xxvi) redesign the proposed yard piping arrangement and elevations at both North and South Kuehler WWTPs to accommodate the removal and modified process units noted above; (xxvii) redesign of site paving to accommodate site changes at both North and South Kuehler WWTPs for the removal and modified process units noted above; (xxviii) redesign of site drainage at both North and South Kuehler WWTPs to accommodate the removal and modifications of the process units noted above; (xxix) prepare a new, updated drainage model and analysis for the North Tributary for floodplain impact assessment and to comply with updated City of New Braunfels criteria; (xxx) modify the design to make the replacement of the existing aeration basin air delivery system, the existing the process blowers, and related blower electrical and controls modifications at the North Kuehler WWTP a bid alternate; (xxxi) modify the design to make the replacement of the existing digester and membrane thickener blowers, and related blower electrical and controls modifications at the North Kuehler WWTP a bid alternate; (xxxii) modify the design to make the replacement of the existing digester and membrane thickener blowers, and related blower electrical and controls modifications at the South Kuehler WWTP a bid alternate; and (xxxiii) resubmit for agency approvals for the revised project design scope. Detailed scope descriptions of these improvements are noted as follows:

- I. Removal of Preliminary Treatment Unit: Removal from the design of the entire preliminary treatment unit structure (screenings, grit removal and lift station) including all equipment, gates, piping, valves, instruments, panels, conduit, wire, and other miscellaneous items; concrete masonry unit ("CMU") screenings garage; the upstream influent junction box including all gates, piping, instruments, conduit, and wire, and all surrounding paving. This effort includes removal of certain plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications.
- II. Removal of Preliminary Treatment Unit Odor Control System: Removal from the design of the entire preliminary treatment unit odor control system including the slab structure, equipment, piping, valves, instruments, panels, conduit, wire, and other miscellaneous items. This effort

includes removal of certain plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications.

- III. Removal of Preliminary Treatment Unit FOG Removal System: Removal from the design of a wet well mixer and blower at the proposed preliminary process unit to address FOG in both wet wells and related electrical components to power the FOG Removal System including new conduit/wire and duct bank. This effort includes removal of certain plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications.
- IV. Removal of Preliminary Treatment Unit Electrical Building: Removal from the design of the entire preliminary treatment unit electrical building including the CMU building, all electrical equipment, transformer, instruments, panels, conduit, wire, duct bank and other miscellaneous items. This effort includes removal of certain plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications.
- V. Removal of Elevated Flow Splitter: Removal from the design of the entire elevated flow splitter structure including all gates, piping, valves, instruments, stairs, conduit, wire, duct bank and other miscellaneous items. This effort includes removal of certain plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications.
- VI. Removal of Pipe Utility Bridge: Removal from the design of the entire pipe utility bridge that crosses the North tributary including all fencing, gates, supports, piping, and other miscellaneous items. This effort includes removal of certain plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications.
- VII. Removal of Sludge Dewatering Box Station: Removal from the design of the entire sludge dewatering box station including the dewatering box equipment, the sunken concrete structure and drive approach, piping, valves, and other miscellaneous items. This effort includes removal of certain plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications.
- VIII. Removal of North Kuehler WWTP Drain Return Pumps Replacement: Removal from the design of the entire replacement of the existing North Kuehler WWTP drain return pumps including the pump replacement, variable frequency drives (“VFDs”) addition, control panel replacement, piping, valves, and instruments. Due to the age of the electrical equipment in the room, the programmable logic controller (“PLC”) and motor control center (“MCC”) will be replaced, including conduit, wire, duct bank and other miscellaneous items. This effort includes removal of certain plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications.
- IX. Replacement of South Kuehler WWTP NPW Pump System Replacement: To provide NBU with flexibility on the project scope to award in comparison to its available budget, the construction plans and technical specifications will be modified to show the South Kuehler WWTP NPW Pump System Replacement as a bid alternate. The bid alternate will include the demolition and replacement of the existing South Kuehler NPW system including demolition of the two existing pumps and installation of two self-priming centrifugal pumps, VFDs, new pump control system with an Allen-Bradley ControlLogix PLC that will be connected to the existing supervisory control and data acquisition (“SCADA”) system, a flow control valve for pressure maintenance, modifications to the control panel feeder breaker including new conduit and wire with new

controls for the pumps; addition of a double basket strainer on the discharge line within the existing building; demolition and replacement of the existing NPW suction and discharge piping inside the existing building and the interior wall of each line. The pumps will remain in the existing Drain Pump Station building and no modifications or alterations will be made to the structure or other components not listed above. The proposed pump capacities will be based on the demand determined by a review of the existing and proposed equipment. The new NPW system will not operate with a hydropneumatics tank.

- X. Replacement of North Kuehler WWTP Headworks Screens and Conveyor: Addition to the design of replacement of the two existing mechanical screens with two new catenary bar screens manufactured by Ovivo USA, LLC and each sized for a peak flow for 11.5 million gallons per day (“MGD”); a replacement screening conveyor to convey screenings from both screens to the dumpster area; replacement of each slide gate not replaced within the past 5 years with new slide gates (total of 4 anticipated); replacement stepover, if needed, to accommodate belt conveyor; new control panel; and associated instruments, conduit, wire, duct bank, and other miscellaneous items. This effort includes additional plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications.
- XI. Modification of North Kuehler WWTP Headworks Structure: Addition to the design to analyze the hydraulics of the incoming sanitary sewer balancing line from the South Kuehler headworks and, if necessary to accommodate the new hydraulic condition, modify the existing headworks concrete structure to remove and reconstruct the finished floor of the screening area to a lower elevation; removal of the existing Parshall flume and all related instruments, conduit, and wire; and addition of a new flow measurement device on a process line upstream of the aeration basin. This effort includes additional plan sheets and technical specifications.
- XII. Replacement of South Kuehler WWTP Headworks Screens and Conveyor: Addition to the design of replacement of the one existing mechanical screen and one manual screen with two new mechanical screens utilizing catenary bar screens manufactured by Ovivo USA, LLC and each sized for a peak flow of 12.6 MGD; a replacement screening belt conveyor to convey screenings from both screens to the dumpster area; replacement of each slide gate not replaced within the past 5 years with new slide gates (total of 4 anticipated); replacement stepover, if needed to accommodate belt conveyor; new control panel; and associated instruments, conduit, wire, duct bank, and other miscellaneous items. This effort includes additional plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications.
- XIII. Modification of South Kuehler WWTP Headworks Structure: Addition to the design to analyze the hydraulics of the incoming sanitary sewer line from the SK-20 project (separate authorization) and the balancing line from the North Kuehler headworks, and if necessary to accommodate the new hydraulic condition, modify the existing headworks concrete structure to remove and reconstruct the finished floor of the screening area to a lower elevation; removal of the existing Parshall flume and all related instruments, conduit, and wire; and addition of a new flow measurement device on a process line upstream of the aeration basin. This effort includes additional plan sheets and technical specifications.
- XIV. Modification of South Kuehler WWTP to Retain Existing Storage Buildings: Modify the site layout design to retain the two existing metal storage buildings that were proposed to be demolished as part of the existing rehabilitation scope but will now remain in the same location. This includes modifications to the site paving, site piping, and site drainage designs. This effort

includes additional plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications.

- XV. Replacement of North Kuehler WWTP NPW System High Pressure Tank (“HPT”): Removal and replacement of the existing pressure vessel with a new ASME certified pressure vessel of a similar size to be installed on the existing foundation and connect to the existing plant piping near the existing tank. This effort includes additional plan sheets and technical specifications and modifications to the remaining plan sheets.
- XVI. Modification of North Kuehler WWTP Chemical Feed Buildings Ventilation System: Removal of the existing mechanical ventilation equipment and louvers; modifications to the existing concrete masonry unit walls to isolate the two chemical rooms and add openings necessary for new fans and louvers; installation of a louver and mechanical fan in each room sized and located in accordance with TCEQ’s Chapter 217 WWTP design criteria; and associated instruments, conduit, wire, lighting panels, disconnects, and other miscellaneous items. This effort includes additional plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications. No structural modifications or expansions will be performed on the building.
- XVII. Modification of South Kuehler WWTP Chemical Feed Buildings Ventilation System: Removal of the existing mechanical ventilation equipment and louvers; modifications to the existing CMU walls to isolate the two chemical rooms and add openings necessary for new fans and louvers; installation of a louver and mechanical fan in each room sized and located in accordance with TCEQ’s Chapter 217 WWTP design criteria; and associated instruments, conduit, wire, lighting panels, disconnects, and other miscellaneous items. This effort includes additional plan sheets and technical specifications and modifications to remaining plan sheets and technical specifications. No structural modifications or expansions will be performed on the building.
- XVIII. South Kuehler WWTP Digester Fine Screen: Demolition and replacement of the existing Huber helical screw screen at South Kuehler WWTP digesters, upstream of the mechanical biological treatment (“MBT”) basin. The scope of work includes demolition of the existing fine screen and conveyor, installation of one new fine screen and screenings with necessary piping modifications required to accommodate the new screen and conveyor, concrete repairs necessary for structural modifications and support structures, and paving near the proposed discharge dumpster area.
- XIX. North Kuehler WWTP Digester Fine Screen: Demolition and replacement of the existing fine screens at North Kuehler WWTP digesters, upstream of the MBT basin. The scope of work includes demolition of the existing screens and conveyors, installation of two new fine screens and screenings conveyor, modifications to the existing air lifts, piping modifications required to accommodate the new screens and conveyor, concrete repairs necessary for modification to the air lift and support structures and modifications to paving near the proposed discharge dumpster area.
- XX. South Kuehler WWTP MBTs: To provide NBU with flexibility on the project scope to award in comparison to its available budget, the construction plans and technical specifications will be modified to include demolition of the existing MBTs at the South Kuehler WWTP and replacement of the MBT equipment as a bid alternate. The bid alternate will include demolition of the existing MBTs and associated piping and electrical; demolition of the existing permeate

pumps, piping and electrical; demolition of existing basin divider walls; new concrete divider walls; new SiIC-TAD™ submerged, ceramic MBT equipment (the MBTs will operate in a single train and provide single-stage thickening); two (2) new progressive cavity permeate pumps; one (1) HDPE permeate backpulse tank; extension of existing permeate pump slab and canopy; and all necessary piping, electrical, controls, supports, hardware, and miscellaneous items of work required.

- XXI. North Kuehler WWTP MBTs: To provide NBU with flexibility on the project scope to award in comparison to its available budget, the construction plans and technical specifications will be modified to include demolition of the existing MBTs at the North Kuehler WWTP and replacement of the MBT equipment as a bid alternate. The bid alternate will include demolition of the existing MBTs and associated piping and electrical; demolition of the existing permeate pumps, piping and electrical; demolition of existing basin divider walls; new concrete divider walls; new SiIC-TAD™ submerged, ceramic MBT equipment (the two MBT trains will operate in parallel to provide single-stage thickening); three (3) new progressive cavity permeate pumps; two (2) HDPE permeate backpulse tanks; extension of existing permeate pump slab; new permeate pump and backpulse tank canopy; and all necessary piping, electrical, controls, supports, hardware, and miscellaneous items of work required.
- XXII. Outdoor MCC Sun-Shade Installation: Addition of design scope to provide sunshade features to the existing outdoor MCCs at North and South Kuehler. NBU Operations has stated all outdoor MCCs were failing during the highest heat portions of the summer. The intent of this design would be to provide a sunshade feature for the outdoor MCCs to reduce the amount of direct sunlight seen during the hottest portion of the day during the summer months.
- XXIII. Modification of North Kuehler WWTP Electrical Gear to Allow Multiple Manufacturers: Modification of the design to provide a design that can include electrical equipment for the proposed MCCs and VFDs at the North Kuehler WWTP from Eaton, Schneider Electric/Square D. The design will include modifying MCC and panel specification requirements to remove infrared viewing windows and modifying layouts and footprints based on all allowable manufacturers. This effort includes modifications to existing plan sheets and technical specifications.
- XXIV. Modification of South Kuehler WWTP Electrical Gear to Allow Multiple Manufacturers: Modification of the design to provide a design that can include electrical equipment for the proposed MCCs and VFDs at the South Kuehler WWTP from Eaton, ABB, or Schneider Electric/Square D. The design will include modifying MCC and panel specification requirements to remove infrared viewing windows and modifying layouts and footprints based on all allowable manufacturers. This effort includes modifications to existing plan sheets and technical specifications.
- XXV. Redesign of South Kuehler WWTP Influent Sanitary Sewer: Redesign of the on-site sanitary sewer from the manhole termination of the SK-20 bid documents (separate authorization) to the existing South Kuehler headworks to allow existing structures to remain (as a result of other items in this amendment) and connect to the existing headworks. This includes a reassessment of the hydraulic conditions for the new alignment and coordination with the upstream conditions designed in the SK-20 replacement project (separate authorization); and removal and replacement of necessary portions of the existing junction box to accommodate the realigned sanitary sewer. This effort includes modifications to existing plan sheets and technical specifications.

- XXVI. Redesign of North and South Kuehler WWTPs Yard Piping: Redesign of the on-site yard piping at North and South Kuehler WWTPs to remove yard piping associated with structures removed from the design as noted above; redesign to modify alignment, depth, and connection points of yard piping to remain; and redesign of fitting and valve quantity, type, and locations. This effort includes modifications to existing plan sheets and technical specifications.
- XXVII. Redesign of North and South Kuehler WWTPs Site Paving and Grading: Redesign of the on-site site paving at the North and South Kuehler WWTPs to remove site paving that provided access to process units removed from the design as noted above; redesign to modify alignment, turn radius and location, and connection points of site paving to remain; and redesign of existing pavement to be removed and replaced as a result of the scope changes included herein. This effort includes modifications to existing plan sheets and technical specifications.
- XXVIII. Redesign of North and South Kuehler WWTPs Site Drainage: Redesign of the on-site drainage and conveyance at the North and South Kuehler WWTPs including sizing, location, and alignment of drainage system components to accommodate the scope changes included herein. This effort includes modifications to existing plan sheets and technical specifications.
- XXIX. Prepare New, Updated Drainage Model and Analysis: During the previous design phase, the City of New Braunfels changed their design criteria during the approval process necessitating a complete recreation of the model of the North Tributary from the Guadalupe River to upstream of the WWTP site. In addition to the effort required to complete the approval process dictated by the change in design criteria and multiple City reviews, the change in design scope noted above will necessitate a significant model update be prepared to accurately portray current scope of development for the property to be submitted for the City's review and approval.
- XXX. Modification of North Kuehler WWTP Aeration Delivery System and Process Blowers: To provide NBU with flexibility on the project scope to award in comparison to its available budget, the construction plans and technical specifications will be modified to include the North Kuehler WWTP aeration system and process blower scope as a bid alternate. The bid alternate will include the replacement of the aeration delivery system and diffusers at Aeration Basin Nos. 1 and 2, process blower replacement to remove the existing Kaeser blowers and replace with Aerzen blowers, VFD replacement and additions, disconnect switches, control panel replacement, MCC modifications, piping, valves, instruments, conduit, wire, duct bank, and other miscellaneous items including separation of the existing aeration basin air piping from the digester air piping. This effort includes the addition of plan sheets and modifications to remaining plan sheets and technical specifications.
- XXXI. Modification of North Kuehler WWTP Digester & Membrane Thickener Blowers: To provide NBU with flexibility on the project scope to award in comparison to its available budget, the construction plans and technical specifications will be modified to include the North Kuehler WWTP digester and membrane thickener blower scope as a bid alternate. The bid alternate will include the replacement of the digester and membrane thickener blower replacement to remove the existing Kaeser blowers and replace with Aerzen blowers, VFD replacement, disconnect switches, control panel replacement, MCC modifications, piping, valves, instruments, conduit, wire, duct bank and other miscellaneous items. This effort includes the addition of plan sheets and modifications to remaining plan sheets and technical specifications.

- XXXII. Modification of South Kuehler WWTP Digester & Membrane Thickener Blowers: To provide NBU with flexibility on the project scope to award in comparison to its available budget, the construction plans and technical specifications will be modified to include the South Kuehler WWTP digester and membrane thickener blower scope as a bid alternate. The bid alternate will include the replacement of the digester and membrane thickener blowers to remove the existing Kaeser blower and replace with Aerzen blowers, VFD replacement, disconnect switches, control panel replacement, MCC modifications, piping, valves, instruments, conduit, wire, duct bank and other miscellaneous items. This effort includes the addition of plan sheets and modifications to remaining plan sheets and technical specifications.
- Resubmission for Agency Approvals: The current design scope was submitted for agency review to the Texas Commission on Environmental Quality, City of New Braunfels Engineering Department, City of New Braunfels Commercial Building including City of New Braunfels Fire Marshal, City of New Braunfels Development Planning, and City of New Braunfels Floodplain Management. Comments were received, addressed, and approvals obtained from the TCEQ, City of New Braunfels Floodplain Management, City of New Braunfels Development Planning, and City of New Braunfels Fire Marshal. Due to the change in design scope, the redesign will need to be resubmitted for the revised scope and new scope of work items, review comments addressed, and then resubmitted for approvals from the agencies noted above.
    - i. Outstanding City of New Braunfels review comments remain concerning the approved plat and property ownership of the site, and coordination with the City of New Braunfels to provide the necessary assignment documents.
    - ii. The City of New Braunfels recently modified their City Building Code of Ordinances to require all buildings to comply with 2021 NEC, IBC, IMC, and IECC as opposed to the existing 2017 NEC, and 2018 IBC, IMC, and IECC as the original scope of work was designed from. Updated designs for the proposed South Kuehler Process blower building will need to be made and addressed on required COMCheck and engineering affidavits confirming design of the buildings for this scope.
    - iii. The extent of the project changes for this project, including the new scope of work, will require a new plan review submittal to all regulatory jurisdictions.

#### **Detailed Assignment and Tasks:**

The following tasks will be performed with the additional scope of work added, in addition to all prior work authorizations not removed from this scope:

##### Additional Design Phase Tasks

- ii. Management of project integration, scope, schedule, cost, quality, staff resources, sub-consultants, and communications.
- iii. Attending up to eleven (11) progress meetings with NBU.



- iv. Modification of the existing drawings and specifications to incorporate the proposed scope of work into the previously completed North & South Kuehler WWTP Rehabilitation design documents, including removal and addition of sheets for design items added/removed scope of work and providing design and administrative updates to every sheet.
- v. Preparation and submission of 90% plans, technical specifications, and engineer's opinion of probable construction cost ("OPCC") for the complete scope of work.
- vi. Review by NBU of 90% submittal of revised bid documents.
- vii. Attend a 90% design review meeting with NBU.
- viii. Incorporation of NBU revisions following 90% submittal review meeting.
- ix. Preparation and submission of 100% plans, technical specifications, and engineer's opinion of probable construction cost ("OPCC") for the complete scope of work.
- x. Revise and re-submit the Summary Transmittal submittal to TCEQ.
- xi. Revise and re-submit the plans and drainage reports to all City of New Braunfels review departments.
- xii. Review the contractor's provided documentation for work sequencing, phasing, shutdowns, and construction sequencing including service interruptions to existing treatment units.
- xiii. Attend up to four (4) additional Process Control Systems ("PCS") start-ups and observe bump tests, loop checking, manufacture certification of installation, results of performance testing required by individual technical specifications, NBU training documentation, and spare parts. The additional PCS start-ups include:
  - i. PCS #1 – South Kuehler Digester Fine Screen System;
  - ii. PCS #2 – North Kuehler Digester Fine Screen System;
  - iii. PCS #3 – South Kuehler MBT System;
  - iv. PCS #4 – North Kuehler MBT System.
- xiv. Provide additional contract administration including review of contractor pay requests and preparation and submission of necessary correspondence for the contract due to the additional scope of work.
- xv. Provide up to five (5) reviews of Contractor requests for information ("RFIs") for added equipment and scope of work.
- xvi. Provide up to eight (8) reviews of Contractor submittals for added equipment and scope of work.
- xvii. Provide up to four (4) reviews of Contractor Operation and Maintenance Manuals.
- xviii. Provide up to four (4) reviews of Contractor submitted field/change order requests. This scope does not include assistance or evaluation of contractor claims.
- xix. Prepare a memorandum that provides the asset information listed below for all above grade facilities constructed new in this project for insurance purposes within 90 days after substantial completion to include:
  - i. Address
  - ii. Year Built
  - iii. Description
  - iv. Square Footage of Building
  - v. Building Value
  - vi. Contents Value

**Compensation:**

Compensation for the services described above will be Method IIB-LUMP SUM (LS) as described in the PSA. NBU shall pay QE for the services rendered under this WA not to exceed \$1,162,000.

<b>Task</b>	<b>Engineering Fee</b>
Engineering for New Design Scope	\$759,000
Plan Revisions for Removal of Scope and Bid Alternates	\$241,000
Additional Floodplain Modeling	\$68,000
Revised Regulatory Approvals	\$31,000
Additional Construction Phase Services	\$63,000
Total	\$1,162,000

**Schedule:**

QE will perform services in a timely manner in order to support NBU in meeting project milestones to have the project complete and on-line within the time frames noted below. QE shall complete the services within the execution of this Agreement.

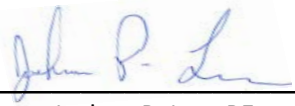
<b>Task</b>	<b>Project Milestone</b>
90% Design Submittal	6 months
100% Design Submittal	3 months
Bid Phase	6 months
Construction Phase	24 months

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New Braunfels, Texas 78130

Quiddity Engineering, LLC  
6330 W. Loop South, Suite 150  
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BY: \_\_\_\_\_  
Ryan Kelso, PE

BY:  \_\_\_\_\_  
Joshua P. Lee, PE

TITLE: Chief Executive Officer

TITLE: Vice President

DATE: \_\_\_\_\_

DATE: May 1, 2024

ATTEST:  \_\_\_\_\_