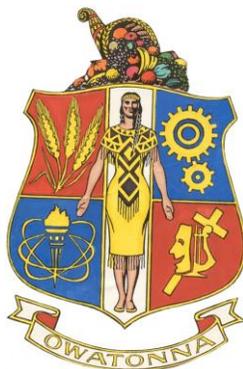


THE CITY OF

Office of Public Works Director
City Engineer



OWATONNA

540 West Hills Circle
Owatonna, MN 55060-4701
Ph. (507) 444-4350
FAX: (507) 444-4351

TO: HONORABLE MAYOR AND CITY COUNCIL
FROM: KYLE SKOV, PUBLIC WORKS DIRECTOR AND CITY ENGINEER
DATE: September 28, 2021
SUBJECT: WWTP Expansion Project, Final Engineering

Purpose

Council approval of Resolution 97-21 authorizing the Nero Engineering Proposal for the WWTP Final Engineering.

Background:

The City of Owatonna has been working on approvals necessary for the expansion of the WWTP from 5.0 MGD to 9.1 MGD. With the permit complete and plans currently at 30% completion, staff is recommending starting to complete the final engineering for the project.

Final engineering will design the project to 100% plan completion. Once the final engineering is complete, the project will be ready to go out for bids. Council will authorize bidding prior to proceeding. The cost for final engineering is not to exceed \$2,249,385 which isn't changed from the preliminary estimate of cost which was \$2.3 million. Additional services for design of modifications to the administration building are \$15,000 if that option is selected.

The proposed costs bring the project through the bidding phase. Once bids are received council will be asked to approve a contract administration phase as well.

Budget Impact:

Not to exceed cost is \$2,249,385. Preliminary engineering costs were \$1,181,366.00 bringing the total engineering cost to \$3,430,751.

Staff Recommendation:

Staff recommends approval of Resolution 97-21 approving this contract with Nero Engineering.

RESOLUTION NO. 97-21

A RESOLUTION AUTHORIZING CONTRAT FOR FINAL PLAN DEVELOPMENT
FOR THE WASTWATER TREATMENT PLANT PROJECT

WHEREAS, the City of Owatonna is proceeding with expansion of the wastewater treatment plant from 5.0 million gallons per day to 9.1 million gallons per day; and

WHEREAS, this project is ready to begin the preliminary engineering design phase:
and

WHEREAS, a proposal for preliminary engineering services has been received from Nero Engineering in the amount of \$2,249,385

BE IT RESOLVED by the City Council of the City of Owatonna, Minnesota, that the City agrees with the use of Nero Engineering to complete the final engineering design of the wastewater treatment plant.

Passed and adopted this ____ day of _____, 2021, with the following vote:

Aye ____; No ____; Absent ____.

Approved and signed this ____ day of _____, 2021.

Thomas A. Kuntz, Mayor

ATTEST:

Kris M. Busse, City Administrator/City Clerk



&



ENGINEERING SERVICES AGREEMENT

Project: WWTF Expansion Design- Final Design & Bidding Phase (Project)

This Agreement is by and between:

City of Owatonna (Owner)
540 West Hills Circle
Owatonna, MN 55060

and

Nero Engineering, LLC (Nero)
7135 Madison Avenue W
Minneapolis, MN 55427

Who agree as follows:

Owner hereby engages Nero to perform the Services set forth in Part I for the compensation set forth in Part III. Nero will be authorized to commence the Services upon execution and receipt of this Agreement from Owner. Owner and Nero agree that this signature page, together with Parts I through IV attached, constitute the entire agreement for this Project.

APPROVED FOR OWNER

By: _____

Printed Name: _____

Title: _____

Date: _____

APPROVED FOR NERO

By: Eric Meester

Printed Name: Eric J Meester, PE

Title: President

Date: September 27, 2021

PART I
PROJECT DESCRIPTION/SCOPE OF SERVICES/TIMING

A. PROJECT DESCRIPTION

In 2017, the City retained Nero to conduct a Facility Plan (FP) to expand the wastewater treatment facility (WWTF). The Facility Plan effort not only included an existing facility assessment, flows and loadings determinations and expansion alternatives, but also an antidegradation analysis in lieu of accepting frozen mass limits as a result of the increased flows. The facility plan developed a 30-yr design to better address the long-term viability of the wastewater plant for the community and its ability to meet current and future permit limits more easily. The facility plan was submitted to the MPCA in October 2019 and the City finally received its draft permit incorporating the facility plan recommendations in June 2021.

The existing WWTF is designed to treat 5 million gallons per day (mgd) on an Average Wet Weather Daily Flow (AWW) basis and the FP identified a 30-yr AWW design flow of 9.1 mgd. This flow increase was based upon 30-yr population projections, commercial and industrial growth planning and anticipated inflow and infiltration. Because the WWTF already has pretty stringent limits (i.e., BOD 5 mg/L, phosphorus \approx 0.4 mg/L, ammonia 1.5-7 mg/L, etc.), feasible alternatives to expand the plant were limited. Essentially two base alternatives were evaluated, expanding the existing activated sludge process and converting the process to membrane bioreactors (MBR). Within these two base alternatives, both chemical and biological phosphorus (Bio-P) removal options were evaluated too. The following five alternatives were evaluated in detail, which included wastewater treatment modeling (with Biowin software) to incorporate into the Antidegradation Analysis.

1. Alternative 1A- Activated Sludge with chemical phosphorus removal
2. Alternative 1B- Activated Sludge with Biological Nutrient Removal (BNR)
3. Alternative 2A- MBR with chemical phosphorus removal
4. Alternative 2B- MBR with Biological Nutrient Removal
5. Alternative 2C- MBR with Modified BNR

Alternative 2C was ultimately chosen as the selected alternative as it first met the obligations of the Antidegradation Analysis (most feasible and least degrading alternative) and secondly, the MBR process best prepares the City for long-term growth and permit flexibility.

Nero's team started the preliminary design in January and submitted to the 30% design to the City and a Value Engineering team in mid-July. The value engineering exercise was very productive, primarily addressing long-term operational challenges with the solids train and lack of redundancy. The design and processes in the preliminary design were developed in collaboration with the WWTF's staff. Below are the preliminary design processes that were developed for the 30% cost estimates and what is planned to move forward into final design.

Liquid Train Preliminary Design

- Fine screening
- Primary Clarifier Improvements
- Peak Flow Pumping
- Biological Phosphorus Removal improvements
 - Anaerobic Zone Recycles
 - Anoxic Zone Recycles

- Activated Sludge and Aeration system improvements
- Membrane Bioreactors (Suez membranes were preselected through a proposal process)
- RAS recycle deoxygenation and rescreening

Solids Train Preliminary Design

- WAS storage & blending
- WAS thickening
- Acid Phase Anaerobic Digestion
- Primary Anaerobic Digestion improvements
- Post Aerobic Digestion (converting secondary digester to post aerobic digester)
- Biogas Storage improvements
- Sludge Storage Tank mixing improvements

From the value engineering/peer review, the solids train design was modified as listed below. This was done to primarily to better address solids handling redundancy and simplified operations based upon the historical wastewater characteristics.

- WAS storage & blending
- WAS thickening
- Primary Anaerobic Digestion Improvements (converting secondary digester to 2nd primary digester)
- Converting EQ tank to Post Aerobic Digestion
- Biogas Storage Improvements
- Sludge Storage Tank Mixing Improvements

B. OUR TEAM

The City and Nero conducted a Request for Qualifications (RFQ) process to select a teaming partner to design the WWTF Expansion. The RFQ was issued to three regional consultants, AE2S, Donohue and SEH. In addition to receiving a Statement of Qualifications (SOQ), we also conducted 1.5-2 hr interviews with each consulting team. Some of the key evaluation criteria in the SOQ and interviews were experience, technical capabilities, operations collaboration tools and company/project cultures. All three consultants presented very well and the differences between them were small, but important. Ultimately, the City and Nero decided that AE2S would be the best teaming partner for this project because of their proven demonstrations of their communications and operations collaboration tools and project experience similar to the proposed improvements. An organizational chart is attached to the project, which shows the various people between AE2S and Nero that will be performing the design work. Some of the key personnel for this project are:

- Client/Project Manager- Eric Meester, Nero
- Lead Process Engineer- Jennifer Svenes, Nero
- Lead Liquid Train Process Engineer- Jennifer Svenes, Nero
- Lead Solids Train Process Engineer- Jason Benson, AE2S
- Lead Structural Engineer- Jordon Geiger, AE2S
- Lead Electrical Engineer- Mark Ruda, AE2S
- Lead Instrumentation & Controls Engineer- Anthony Pittman, AE2S
- Biosolids Technical Advisor- Patricia Scanlan, ESG
- Project Delivery (Revit/BIM360)- Steve Seibert (AE2S) and Dave Kruschke (Nero)

C. SCOPE OF SERVICES

Basic Services to be provided by the Nero/AE2S team for this Project under this Agreement are as follows and are also shown in the attached Scope and Fee Schedule. The Preliminary Design Phase has been completed. One task from the preliminary scope was not completed (high strength waste study). The fees for that task have been allocated to the biogas storage task in final design (added scope). The other added scope (peak flow management, primary clarifiers, final clarifiers, added thickening scope, electrical upgrades and SCADA upgrades to name a few) from the draft scope identified in December 2021 has been incorporated into the final design scope shown below, but no additional fees were included.

Final Design Phase includes 60% design deliverables, 90% design deliverables and Construction documents. The scope also includes bidding support.

1. Task 12: Value Engineering (\$60,247)

The value engineering task was completed under the preliminary design agreement; however, the cost of the value engineering was not included in the previous agreement because the value engineering team had not been identified until later. The value engineering task was initially estimated at \$66,047 but actual costs for this task are \$60,247.

2. Task 13: General Final Design (\$2,053,891 for tasks 13 through 31)

This task covers front-end and back-end document tasks and the development of 60%, 90% and final design deliverables related to the Final Design, such as:

- Finalizing the basis of design based upon the agreed upon scope to move forward with into final design
- Development of front-end documents
- Team meetings
- MPCA coordination and meetings
- Submitting documents for agency approval
- Funding coordination efforts
- QA/QC efforts

3. Tasks 14-28: Final Design tasks by structure/building

Final design of the following processes/building/structures. The work will incorporate the structural, architectural, process, mechanical, electrical and control disciplines.

- Main Lift Station
- Fine Screen Building
- Grit Removal
- Primary Clarifiers
- Aeration Basins
- Anoxic Zone Splitter box
- MBR Building
- RAS/WAS Complex
- Process Building
- Disinfection
- Digester Complex
- Sludge Storage
- Thickening Complex
- Biogas Storage

4. Task 29 & 30

Process, civil and structural coordination for development of the site drawings, which will include site facilities, site grading, site demolition, site piping and site electrical drawings.

5. Task 31- Standard Details

All disciplines will develop the required standard details to facilitate the design.

6. Task 32- B3 Requirements (\$48,917)

B3 stands for Buildings, Benchmarks & Beyond. The B3 Guidelines will be applied to the design of new buildings or renovations to meet sustainability goals for site, water, energy, indoor environment, materials and waste. The B3 Guidelines are required on all projects that receive general obligation bond funding from the State of Minnesota.

7. Task 32- Bidding (\$71,331)

Nero will support the City in bidding of the project. These tasks will include:

- Develop bidding advertisement
- Respond to RFQs
- Prepare Addendums
- Pre-Bid Meeting
- Bid Opening
- Evaluate Bids/ Check References
- Prepare Notice of Award & Contracts
- Prepare Conformed Plans & Specs

8. Additional Services (\$15,000)

- Admin building addition- the exact scope of the addition to the admin building has not been determined yet and thus will be address as additional services and scoped out in more detail later. The scope indicated in the fee and expense schedule (\$15,000) reflects the structural and architectural scope to add a lunch/cafeteria room to the Admin building, as was identified in the Facility Plan.

D. PROJECT TIMING

Our goal is to be prepared to bid this project in February 2022. We believe to maximize the ideal bidding market and minimize overall project costs, we need to bid the project prior to the 2022 construction season (spring 2022). The anticipated project design schedule is based upon council approval at the October 5, 2021 council meeting. Some elements of the final design have been ongoing since the value engineering phase of the preliminary design. A more detailed project schedule is also attached.

- | | |
|-----------------------|-------------------|
| • 60% Design | September 1, 2021 |
| • 90% Design | November 30, 2021 |
| • 100% Design | December 30, 2021 |
| • Final Bid Documents | January 30, 2022 |

PART II OWNER RESPONSIBILITIES

- A. In addition to other responsibilities of Owner set forth in this Agreement, Owner shall:
1. Identify a person authorized to act as the Owner's representative to respond to questions and make decisions on behalf of Owner, accept completed documents, approve payments to Nero, and serve as liaison with Nero as necessary for Nero to complete its Services.
 2. Furnish to Nero copies of existing documents and data pertinent to Nero's Scope of Services, including but not limited to and where applicable: design and record drawings for existing facilities; property descriptions, land use restrictions, surveys, geotechnical and environmental studies, or assessments.
 3. Provide to Nero existing information regarding the existence and locations of utilities and other underground facilities.
 4. Provide Nero safe access to premises necessary for Nero to provide the Services.

PART III COMPENSATION, BILLING AND PAYMENT

- A. Compensation for the work as defined in the Scope of Services (Part I) of this Agreement shall be in accordance with Nero's standard chargeout rates in effect at the time the Services are performed (see the attached Fee Schedule). Routine expenses will be billed at cost and subconsultant costs will include no more than a 10% markup. The total cost for these basic Services will not exceed \$2,249,385 without prior written approval from Owner.
- B. Nero will bill Owner monthly, with net payment due in 30 days.
- C. Nero will notify Owner if Project scope changes require modifications to the above-stated contract value. Services relative to scope changes will not be initiated without authorization from Owner.

**NERO ENGINEERING, LLC
TERMS AND CONDITIONS**

ARTICLE 1 - PAYMENTS TO NERO ENGINEERING

1.01 Other Provisions Concerning Payment

A. *Preparation of Invoices.* Invoices will be prepared monthly in accordance with Nero Engineering's standard invoicing practices and will be submitted to Owner by Nero Engineering, unless otherwise agreed. The amount billed in each invoice will be calculated as set forth in Proposal or Task Order.

B. *Payment of Invoices.* Invoices are due and payable upon receipt. If Owner fails to make any payment due Nero Engineering for services and expenses within 30 days after receipt of their invoice therefore, the amounts due Nero Engineering will be increased at the rate of 1.5% per month (or the maximum rate of interest permitted by law, if less.) In addition, Nero Engineering may after giving seven days written notice to Owner, suspend services under this Agreement until Nero Engineering has been paid in full all amounts due for services, expenses, and other related charges. Design professionals shall not have any liability whatsoever to the Client for any costs or damages as a result of such suspension caused by any breach of this Agreement by the Client. Payments will be credited first to interest then to principal.

C. As required by the Construction Lien Law, Nero Engineering hereby notifies Owner that persons or companies furnishing labor or materials for the construction on Owner's land may have lien rights on Owner's land and buildings if not paid.

D. *Disputed Invoices.* If the Client objects to any portion of an invoice, the Client shall so notify the Design Professional in writing within 30 calendar days of receipt of the invoice. The Client shall identify the specific cause of the disagreement and shall pay when due that portion of the invoice not in dispute. Interest as stated shall be paid by the Client on all disputed invoiced amounts resolved in the Design Professional's favor and unpaid for more than 30 calendar days after date of submission.

E. *Payments Upon Termination.* In the event of any termination under Paragraph 2.04, Nero Engineering will be entitled to invoice Owner and will be paid in accordance with Proposal for all services performed or furnished and all Reimbursable Expenses incurred through the effective date of termination.

ARTICLE 2 - GENERAL CONSIDERATIONS

2.01 Standards of Performance

A. The standard of care for all professional services and related services performed or furnished by Nero Engineering under this Agreement will be the care and skill ordinarily used by members of their profession practicing under similar circumstances at the same time and in the same locality. Nero Engineering makes no warranties, expressed or implied, under this Agreement, in connection with their services.

B. Nero Engineering shall perform or furnish professional services and related services in phases of the Project to which this Agreement applies. Nero Engineering shall serve as Owner's prime professional for the Project. Nero Engineering may employ such Subconsultants as they deem necessary to assist in the performance or furnishing of the services. Nero Engineering shall not be required to employ any Subconsultant unacceptable to them.

C. Nero Engineering and Owner will endeavor to comply with applicable Laws or Regulations. This Agreement is based on these requirements as of its Effective Date. Changes to these requirements after Effective Date of this Agreement may be the basis or modifications to Owner's responsibilities or to Nero Engineering's scope of services, times of performance, or compensation.

D. Owner shall be responsible for, and Nero Engineering may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by Owner to Nero Engineering pursuant to this Agreement. Nero Engineering may use such requirements, reports, data, and information in performing or furnishing services under this Agreement.

E. Owner shall make decisions and carry out its other responsibilities in a timely manner and shall bear all costs incident thereto so as not to delay the services of Nero Engineering.

2.02 Use of Documents

A. All Documents are instruments of service in respect to this Project, and Nero Engineering shall retain an ownership and property interest therein (including the right of reuse at the discretion of Nero Engineering) whether or not the project is completed.

B. Copies of Documents that may be relied upon by Owner are limited to the printed copies (also known as hard copies) that are signed or sealed by Nero Engineering. Files in electronic media format of text, data, graphics, or of other types that are furnished by Nero Engineering to Owner are only for convenience of Owner. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk.

C. Owner may make, and retain, and reuse copies of Documents for information and reference in connection with use on the Project by Owner with written permission from Nero Engineering. Such Documents are not intended or represented to be suitable for reuse by Owner or others on extensions of the Project or on any other project. Any such reuse or modification without written verification or adaptation by Nero Engineering, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Nero Engineering or its Subconsultants. Owner shall indemnify and hold harmless Nero Engineering and its Subconsultants from all claims, damages, losses, and expenses, including attorneys' fees arising out of or resulting therefrom.

D. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

2.03 Insurance

A. Nero Engineering shall procure and maintain Professional Liability, General Liability, Workers Compensation, and Automotive Liability which are applicable to the Project

B. Owner shall procure and maintain General Liability and Property Insurance policies which are applicable to the Project.

2.04 Termination

A. The obligation to provide further services under this Agreement may be terminated:

1. *For cause*, by either party upon 30 days written notice in the event of substantial failure upon the other party to perform in accordance with the terms hereof through no fault of the terminating party

2. *For Convenience*, by Owner effective upon the receipt of notice by Nero Engineering.

2.05 Dispute Resolution

A. Owner and Nero Engineering agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice, prior to exercising their rights under provisions of this Agreement, or under law.

B. Mediation - In an effort to resolve any conflicts that arise during the design or construction of the project or following the completion of the project, the Client and the Design Professional agree that all disputes between them arising out of or relating to this Agreement shall be submitted to nonbinding mediation unless the parties mutually agree otherwise. The Client and the Design Professional further agree to include a similar mediation provision in all agreements with independent contractors and consultants retained for the project and to require all independent contractors and consultants also to include a similar mediation provision in all agreements with subcontractors, subconsultants, suppliers, or fabricators so retained, thereby providing mediation as the primary method for dispute resolution between the parties to those agreements.

2.06 Hazardous Environmental Condition

A. Owner represents to Nero Engineering that to the best of its knowledge, a Hazardous Environmental Condition does not exist.

B. Owner has disclosed to the best of its knowledge to Nero Engineering the existence of Asbestos, PCB's, Petroleum, Hazardous Waste, or Radioactive Material located at or near the Project Site, including type, quantity, and location.

C. It is acknowledged by both parties that Nero Engineering scope of services does not include any services related to asbestos or hazardous or toxic materials. In the event the Design Professional or any other party encounters asbestos or hazardous or toxic materials at the jobsite, or should it become known in any way that such materials may be present at the jobsite or any adjacent areas that may affect the performance of the Design Professional's services,

the Design Professional may, at his or her option and without liability for consequential or any other damages, suspend performance of services on the project until the Client retains appropriate specialist consultants or contractors to identify, abate and/or remove the asbestos or hazardous toxic materials, and warrant that the jobsite is in full compliance with applicable laws and regulations.

D. The Client agrees, notwithstanding any other provision of this Agreement, to the fullest extent permitted by law, to defend, indemnify and hold harmless the Design Professional, his or her officers partners, employees, agents and consultants from and against any and all claims, suits, demands, liabilities, losses, or cost, including reasonable attorneys' fees and defense costs, resulting or accruing to any and all persons, firms and any other legal entity, caused by, arising out of or in any way connected with the detection, presence, handling, removal, abatement, or disposal of any asbestos or hazardous toxic substances, products or materials that exist on, about or adjacent to the jobsite, whether liability arises under breach of contract or warranty, tort, including negligence, strict liability or statutory liability or any other cause or action.

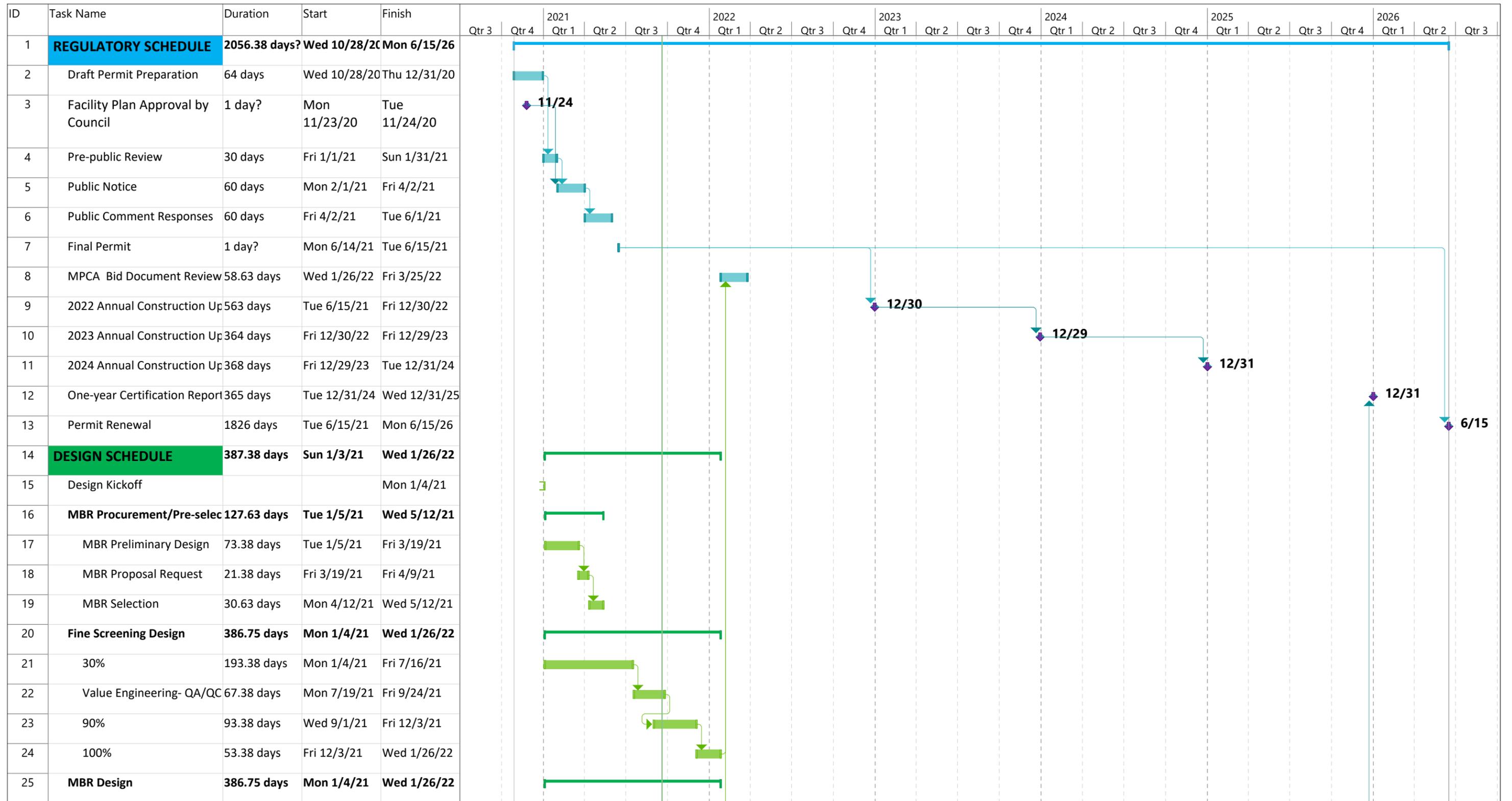
2.07 Allocation of Risks

A. Indemnification

1. To the fullest extent permitted by law, Nero Engineering shall indemnify and hold harmless Owner, Owner's officers, directors, partners, and employees from and against any and all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professions, and all court or arbitration or other dispute resolutions costs) caused solely by the negligent acts or omissions of Nero Engineering or its officers, directors, partners, employees in the performance and furnishing of Nero Engineering's services under this Agreement.

2. To the fullest extent permitted by law, Owner shall indemnify and hold harmless Nero Engineering, its officers, directors partners, employees, and Subconsultants from and against any and all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) caused solely by the negligent acts or omissions of Owner or Owner's officers, directors, partners, employees, and Owner's Consultants with respect to this Agreement or the Project.

3. To the fullest extent permitted by law, Nero Engineering's total liability to Owner and anyone claiming by, through, or under Owner for any cost, loss or damages caused in part by the negligence of Nero Engineering and in part by the negligence of Owner or any other negligent entity or individual, shall not exceed the percentage share that Nero Engineering negligence bears to the total negligence of Owner. Nero Engineering, and all other negligent entities and individuals.



Project: Preliminary Project Sch Date: Sun 9/19/21	Task		Project Summary		Manual Task		Start-only		External Tasks		Deadline
	Split		Inactive Task		Duration-only		Finish-only		External Milestone		Progress
	Milestone		Inactive Milestone		Manual Summary Rollup		External Milestone		Manual Progress		
	Summary		Inactive Summary		Manual Summary		External Milestone				

Owatonna WWTF Expansion
 Nero Project #10044
 AE2S Project #

Responsible Team

Project Task/Description	NERO Subtotal Budget Hours	Nero Labor Fees	AE2S Subtotal Budget Hours	AE2S Labor Fees	Sub-Consultant Fees	Expenses	Value Engineering	Total Fee
Preliminary Design	2815	\$426,380	3588	\$656,849	\$95,550	\$2,588	\$0	\$1,181,366
Project Management	85	\$13,600	0	\$0	\$0	\$2,588	\$0	\$16,188
General	658	\$101,180	1052	\$203,490	\$0	\$0	\$0	\$304,670
NFPA 820 Assessment	41	\$6,560	60	\$12,600	\$0	\$0	\$0	\$19,160
Membrane Equipment Preprocurement	310	\$46,920	20	\$4,742	\$0	\$0	\$0	\$51,662
Main Lift Station	54	\$7,560	108	\$18,648	\$0	\$0	\$0	\$26,208
Fine Screening	163	\$22,880	144	\$26,653	\$0	\$0	\$0	\$49,533
Coarse Grit Removal	20	\$2,800	32	\$5,279	\$0	\$0	\$0	\$8,079
Primary Clarifiers	20	\$2,800	36	\$5,897	\$0	\$0	\$0	\$8,697
RAS Splitter Box	10	\$1,400	12	\$2,087	\$0	\$0	\$0	\$3,487
Aeration Basins	319	\$48,460	94	\$17,220	\$0	\$0	\$0	\$65,680
Aeration Basin Splitterbox	66	\$9,840	44	\$8,224	\$0	\$0	\$0	\$18,064
MBR Equipment Building	709	\$109,120	218	\$41,567	\$79,275	\$0	\$0	\$229,962
Secondary Clarifiers	72	\$10,080	34	\$5,620	\$0	\$0	\$0	\$15,700
Digester Complex	0	\$0	444	\$77,809	\$16,275	\$0	\$0	\$94,084
Sludge Storage	0	\$0	70	\$11,483	\$0	\$0	\$0	\$11,483
Advanced Digestion	24	\$4,160	492	\$89,888	\$0	\$0	\$0	\$94,048
Sitework (SW)	12	\$1,760	96	\$15,662	\$0	\$0	\$0	\$17,422
Site Utilities (SU)	7	\$1,120	2	\$512	\$0	\$0	\$0	\$1,632
30% Design Deliverables	166	\$25,080	520	\$89,601	\$0	\$0	\$0	\$114,681
Value Engineering	40	\$6,400	48	\$11,647	\$0	\$863	\$42,200	\$60,247
Final Design	3079	\$465,960	7426	\$1,251,643	\$333,700	\$2,588	\$0	\$2,053,891
Project Management	64	\$10,240	0	\$0	\$0	\$2,588	\$0	\$12,828
Team Meetings	400	\$59,200	272	\$52,777	\$0	\$0	\$0	\$111,977
General (GEN)-T13	21	\$3,360	328	\$47,334	\$0	\$0	\$0	\$50,694
Main Lift Station-T14	43	\$5,880	0	\$0	\$0	\$0	\$0	\$5,880
Fine Screening-T15	380	\$52,800	262	\$44,033	\$0	\$0	\$0	\$96,833
Coarse Grit Removal-T16	28	\$3,760	48	\$7,980	\$0	\$0	\$0	\$11,740
Primary Clarifiers-T17	54	\$7,560	56	\$8,980	\$0	\$0	\$0	\$16,540
Aeration Basins-T18	342	\$51,120	92	\$15,716	\$0	\$0	\$0	\$66,836
Anoxic Zone Splitterbox-T19	90	\$13,500	128	\$21,386	\$0	\$0	\$0	\$34,886
MBR Building-T20	480	\$73,600	462	\$78,313	\$0	\$0	\$0	\$151,913
RAS/WAS Complex- T21	68	\$10,080	216	\$38,046	\$0	\$0	\$0	\$48,126
Process Building-T22	72	\$10,800	64	\$10,202	\$0	\$0	\$0	\$21,002
Disinfection-T23	10	\$1,500	0	\$0	\$0	\$0	\$0	\$1,500
Digester Complex-T24	0	\$0	576	\$103,442	\$94,500	\$0	\$0	\$197,942
Sludge Storage-T25	0	\$0	182	\$26,328	\$0	\$0	\$0	\$26,328
Thickening Complex-T26	0	\$0	588	\$103,954	\$0	\$0	\$0	\$103,954
Post Aerobic Digestion-T27	0	\$0	136	\$24,114	\$0	\$0	\$0	\$24,114
Biogas Storage-T28	0	\$0	0	\$0	\$0	\$0	\$0	\$0
Sitework (SW)-T30	36	\$5,760	122	\$20,660	\$0	\$0	\$0	\$26,420
Site Utilities (SU)-T31	54	\$8,640	34	\$6,203	\$0	\$0	\$0	\$14,843
Standard Details (SD)- T32	160	\$25,600	164	\$26,309	\$0	\$0	\$0	\$51,909
60% Design Deliverables	144	\$23,040	1188	\$192,058	\$0	\$0	\$0	\$215,098
90% Design Deliverables	144	\$23,040	1420	\$227,512	\$0	\$0	\$0	\$250,552
Final Design Deliverables	238	\$38,080	728	\$116,340	\$224,200	\$0	\$0	\$378,620
QA/QC	251	\$38,400	360	\$79,956	\$0	\$0	\$0	\$118,356
Final Design B3 Requirements- T32	50	\$8,000	116	\$18,367	\$22,550	\$0	\$0	\$48,917
Bidding/Negotiation	170	\$27,200	184	\$32,831	\$11,300	\$345	\$0	\$71,331
Project Management	8	\$1,280	0	\$0				\$1,280
Communications	24	\$3,840	0	\$0				\$3,840
Bid Document Distribution	24	\$3,840	0	\$0				\$3,840
Contractor Questions	48	\$7,680	66	\$12,086				\$19,766
Addenda	40	\$6,400	118	\$20,746				\$27,146
Pre-Bid Conference	16	\$2,560	0	\$0				\$2,560
Bid Opening, Recommendation, Contract	8	\$1,280	0	\$0				\$1,280
Architectural	0	\$0	0	\$0	\$6,300			\$6,300
Mechanical	0	\$0	0	\$0	\$5,000			\$5,000
Award Contract	2	\$320	0	\$0				\$320
Additional Services	0	\$0	0	\$0	\$15,000	\$0	\$0	\$15,000
Admin Building	0	\$0	0	\$0	\$15,000	\$0	\$0	\$15,000
Electrical	0	\$0	0	\$0				\$0
Architectural	0	\$0	0	\$0	\$15,000			\$15,000
Mechanical	0	\$0	0	\$0				\$0
TOTAL PROJECT COST/HOURS	6114	\$927,540	11314	\$1,959,690	\$463,100	\$5,520	\$0	\$3,415,751