

**Proposal to Provide
Engineering Services for
WTP Chemical System Phase II Improvements
Design Phase Services**

Services to be provided by: Kimley-Horn and Associates, Inc. (Kimley-Horn)

Services provided to: Village of Wellington (Village)

Proposal Date: April 25, 2022

This Work Authorization authorizes Kimley-Horn and Associates, Inc. to perform work set forth herein and is issued pursuant to the Agreement for Consulting Services, between Wellington ("Client" or "Village") and Kimley-Horn and Associates, Inc. ("Consultant" or "Kimley-Horn"). All terms and conditions of said Agreement are hereby incorporated and made part of this Work Authorization.

BACKGROUND

Kimley-Horn recently prepared a technical memorandum for the Village to evaluate the existing chemical feed systems used at the existing Water Treatment Plant (WTP). As part of this memorandum, current operating conditions and equipment conditions were evaluated to prioritize efforts towards a complete chemical feed system rehabilitation. Kimley-Horn provided engineering design services to implement improvements listed in the memorandum to the ammonia feed system, caustic feed system, membrane cleaning system, and scale inhibitor feed system, which are referred to as Phase 1 improvements. The Village has requested Kimley-Horn prepare a scope of services to move forward with the Phase II improvements which include upgrades to the Village's bulk chemical storage spill containment structure and regional storage and feed facilities.

The following scope of services is provided to prepare construction drawings and specifications, CMAR coordination, and PBCHD permit application submittal associated with the spill containment structure and regional feed facility improvement.

SCOPE

Task 1 – Design

Consultant will attend a project kick-off meeting with the Village. Consultant will present conceptual layouts for the proposed equipment for Village review and input. Consultant will utilize input at kickoff meeting to locate proposed chemical system equipment.

Consultant will design bulk chemical containment structure with overhead cover to be constructed on the north side of the access road between the existing fluoride and caustic buildings. Consultant will utilize tension canvas design to cover proposed chemical tanks.

Consultant will design bulk chemical storage facilities for one (1) chemical to be located within the proposed covered structure. Consultant will design dilution system for the proposed chemical

system, consisting of permeate water supply from either M1 or M2 facilities (pre-degasified). Consultant will design chemical transfer system to move diluted chemical from the proposed bulk storage area to each of the two (2) regionalized feed systems.

Consultant will prepare design improvements to the existing caustic day tank spill containment area to house one of the two proposed regionalized feed facilities. Consultant will design regionalized storage and feed system with cover. Consultant will design dedicated chemical feed lines from each respective feed pump to the injection location. This will consist of six (6) dedicated metering pumps and injection assemblies, with a spare/backup pump to serve any pump that is out of service for maintenance.

Consultant will design regionalized feed facility adjacent to Clearwell #4. This system will consist of four (4) dedicated metering pumps and injection assemblies with a spare/backup pump to serve any pump that is out of service for maintenance.

Consultant will design chemical feed piping from each respective regionalized feed facility to injection location.

Consultant will prepare construction plans for the chemical system improvements. It is estimated that approximately 45-50 drawings will be required. The construction drawings of the proposed improvements are estimated to consist of the following sheets:

- Cover with Site Location Map
- Site Plan and General Notes
- Site Civil Plan
- Site Civil Plan – Yard Piping Improvements
- Bulk Chemical Storage Containment Plan – Mechanical
- Bulk Chemical Storage Containment Sections – Mechanical – 2 sheets
- Bulk Chemical Storage Containment – Mechanical Details
- Bulk Chemical Storage Containment Plan – Structural
- Bulk Chemical Storage Containment Sections – Structural – 2 sheets
- Regionalized Feed System #1 – Mechanical Plan
- Regionalized Feed System #1 – Mechanical Section – 2 sheets
- Regionalized Feed System #1 – Mechanical Details – 2 sheets
- Regionalized Feed System #1 – Structural Details
- Regionalized Feed System #2 – Mechanical Plan
- Regionalized Feed System #2 – Mechanical Section – 2 sheets
- Regionalized Feed System #2 – Mechanical Details – 2 sheets
- Regionalized Feed System #2 – Structural Plan
- Regionalized Feed System #2 – Structural Section
- Construction Details – 2-4 sheets
- Process and Instrumentation Diagrams – 3 sheets
- Electrical – Single Line Diagrams, Conduit/raceway schedule, plans, panel details, etc.
– refer to Electrical scope included herein – 24-26 sheets

Consultant will prepare technical specifications for the proposed chemical feed system improvements.

Consultant will prepare an Opinion of Probable Construction Costs (OPCC) for the proposed chemical feed system improvements.

Consultant will prepare a control narrative for the proposed chemical feed system.

Consultant will utilize the services of Hiller's Electrical Engineering to provide professional services related to chemical system electrical design.

Consultant will prepare a preliminary set of deliverables (~80% complete) consisting of design plans, specifications and OPCC. Consultant will attend one (1) review meeting for this initial set of deliverables. Consultant will incorporate Village review comments into design and submit deliverables to the Village as final.

Task 2 – Permitting Application Preparation and Submittal

Consultant will prepare a Preliminary Design Report (PDR) that outlines the proposed improvements to be included in the permit application submittal to the Palm Beach County Health Department (PBCHD).

Consultant will submit signed and sealed (S&S) plans, PDR, and "Application for a specific Permit to Construct PWS Components" to PBCHD. Consultant will respond to a reasonable number of requests for additional information (RAI).

Permit application fees are assumed to be paid directly by Village.

Task 3 – CMAR Coordination

Consultant will attend one (1) pre-proposal meeting with the Village's CMAR. Consultant will respond to a reasonable number of questions from the CMAR for pricing.

Consultant will review the Village's CMAR Guaranteed Maximum Price (GMP) for completeness. Consultant will prepare GMP review letter for Village record.

ADDITIONAL SERVICES

Any services not specifically provided for in the above scope, as well as any changes in the scope requested by the Village, will be considered additional services to this Work Authorization and will be performed based on subsequent Work Authorizations approved prior to performance of the additional services.

SCHEDULE

The Kimley-Horn fee structure assumes timely completion within the terms of the construction contract. Failure of the Client's contractor(s) to complete the projects within the original contract term may result in an adjustment to the Kimley-Horn's compensation, subject to mutual acceptance of the Client and the Kimley-Horn.

COMPENSATION

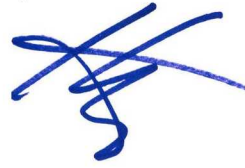
Kimley-Horn will perform the services described in the Scope of Services on a lump sum basis for \$184,945.

Accepted by:

Village of Wellington

Date: _____

Kimley-Horn and Associates, Inc.



Michael F. Schwartz, P.E.

Sr. Vice President

Date: 04/21/2022

ESTIMATE FOR ENGINEERING SERVICES											
PROJECT:	VOW Chemical Feed System Improvements - Phase II								SHEET 1 of 1		
CLIENT:	Wellington								FILE NO.		
ESTIMATOR:	Nick Black								DATE:	04/25/22	
DESCRIPTION: See Scope of Services											
DIRECT LABOR (MAN-HOURS)											
	Principal	Senior PM	PM (PE)	Senior Prof.	Prof. (PE)	Engineer (EI)	Sr. Designer	Supp. Staff	Sr. Inspector	SUB Hillers	EXP
										Electrical	LINE
	JP/MM	JRL/CL	NB	AC	AG/CS	MM	SS	TC	JF		TOTAL
Task 1 - Design											
Project Kickoff Meeting			3.0		3.0						\$945
Bulk Chemical Facilities Design - Structural		1.0	6.0		12.0	6.0					\$3,656
Bulk Chemical Facilities Design - Mechanical/Process		1.0	6.0		12.0	4.0					\$3,428
Design Improvements to NaOH day tank containment structure		1.0	6.0		12.0	6.0					\$3,656
Permeate Water Supply			1.0		2.0	4.0					\$916
Regionalized Feed Facility #1 Design - Mechanical/Process		1.0	4.0		10.0	6.0					\$3,026
Regionalized Feed Facility #2 Design - Structural		1.0	6.0		10.0	6.0					\$3,366
Regionalized Feed Facility #2 Design - Mechanical		1.0	4.0		10.0	6.0					\$3,026
Yard Piping Chemical Improvement Design		1.0	6.0		10.0	6.0					\$3,366
Preliminary Plans (x31 sheets KHA)		1.0	60.0		120.0	240.0					\$55,172
Preliminary Specs		1.0	20.0		60.0	20.0					\$14,592
Preliminary OPCC		1.0	6.0		12.0	20.0					\$5,252
Preliminary Control Narrative		1.0	8.0		3.0						\$2,007
Review Meeting			3.0		3.0						\$945
Finalize Deliverables		2.0	10.0		40.0	60.0				52173.0	\$66,937
Electrical Services			2.0		2.0						\$630
QA/QC	12.0										\$2,916
Task 2 - Permitting Application Preparation and Submittal											
Preliminary Design Report			4.0		8.0						\$1,840
Permit Application & Cover Letter			2.0		4.0						\$920
Response to RAIs			2.0		4.0						\$920
Electrical Services			2.0		2.0					3528.0	\$4,158
QA/QC	2.0										\$486
Task 3 - CMAR Coordination											
Pre-proposal Meeting			3.0		3.0						\$945
GMP Review			4.0		8.0						\$1,840
											\$0
											\$0
	14	13	168	0	350	384	0	0	0	55701	
	\$243	\$212	\$170	\$160	\$145	\$114	\$124	\$83	\$124	1.00	
	\$3,402	\$2,756	\$28,560	\$0	\$50,750	\$43,776	\$0	\$0	\$0	\$55,701	\$184,945



HILLERS ELECTRICAL ENGINEERING, INC.

April 14, 2022

Mr. Nick Black, PE
Kimley-Horn and Associates, Inc.
1920 Wekiva Way, Suite 200
West Palm Beach, FL 33411

Subject: Village of Wellington Utilities– Water Treatment Plant Chemical System Phase II
Improvements Design and Procurement Phase Services

Dear Nick:

Hillers Electrical Engineering, Inc. (HEE) is pleased to provide Kimley-Horn and Associates, Inc. (KHA) this proposal for electrical, instrumentation and control engineering services for the above referenced project. The Village of Wellington Utilities (Village) desires to upgrade the bulk chemical storage, spill containment structure, and regional storage and feed facilities. The proposed improvements were described in “Chemical System Evaluation and Improvement Design Technical Memorandum” Dated January 3rd, 2022, by KHA. This proposal is for design, permitting, Construction Manager At-Risk (CMAR) procurement phase assistance.

The project scope consists of the design of a bulk chemical containment structure, with overhead cover, to be constructed on the north side of the access road between the existing Fluoride and Caustic Buildings. The bulk chemical storage facilities will be designed for one (1) chemical to be located within the proposed covered structure. The scope also includes the design of a dilution system for the proposed chemical system, consisting of permeate water supply from either M1 or M2 Membrane Treatment Facilities (pre-degasified) and chemical transfer systems to move diluted chemical from the proposed bulk storage area to each of two (2) regionalized feed systems; one system will be located adjacent to the existing Filter Structure and will consist of six (6) dedicated metering pumps and injection assemblies, with a spare/backup pump to serve any pump that is out of service for maintenance; and a second, located adjacent to Clearwell #4 and will consist of four (4) dedicated metering pumps and injection assemblies with a spare/backup pump to serve any pump that is out of service for maintenance. New dedicated chemical feed lines from each respective feed pump to the associated injection location will also be designed.

Our scope of work consists of the following:

Task 1 – Design

- A. HEE will assist KHA with the electrical, instrumentation and control design improvements the new chemical storage and feed system. HEE will assist KHA in preparing construction drawings and specifications to reflect the necessary modifications.
- B. Design deliverables will be at the draft and final design stages; HEE will submit to KHA plans, specifications, and opinion of probable construction cost (OPCC)

associated with each design interval. HEE will attend one (1) review meeting with KHA and the Village for the draft design deliverable to discuss and receive comments. HEE will incorporate Village review comments in the final design deliverable. HEE anticipates no design review meeting will be held with KHA and Village after the final design submittal.

Task 2 – Permit Application Preparation and Submittal

- A. HEE anticipates that KHA will prepare and submit all permitting applications as appropriate. HEE anticipates no involvement with this task and no level of effort is included in this proposal for the work of this task.

Task 3 – CMAR Coordination

- A. HEE will assist KHA in respond to a reasonable number of questions from Village staff and the Village's Construction Manager at Risk (CMAR) related to the electrical, instrumentation and control design to assist CMAR with the Guaranteed Maximum Price (GMP) process.
- B. HEE will attend one (1) pre-proposal meeting with KHA, Village staff and CMAR.
- C. HEE will assist KHA with review the Village's CMAR Guaranteed Maximum Price (GMP) for completeness as related to electrical systems. HEE assumes KHA will prepare a GMP review letter for Village records.

Our proposed lump-sum engineering services fees are:

Task 1:	\$52,173.00
Task 3:	<u>\$3,528.00</u>
Total:	\$55,701.00

Assumptions:

1. HEE anticipates the following design drawings:
Electrical:
 - a. Electrical Legend and Symbols– 1 Sheet
 - b. Electrical General Notes and Specifications – 1 Sheet
 - c. Electrical Site Plan – 1 Sheet
 - d. Electrical Plan - Bulk Chemical Storage Containment Plant – 1 Sheet
 - e. Electrical Plan – Regionalized Feed System No.1 – 1 Sheet
 - f. Electrical Plan – Regionalized Feed System No.2 – 1 Sheet
 - g. Electrical One Line Diagrams - 1 Sheet
 - h. Electrical Schematic Diagrams – 1 Sheet
 - i. Electrical Riser Diagrams -1 Sheet
 - j. Electrical Schedules – 2 Sheets
 - k. Electrical Details – 3 Sheets

Mr. Nick Black, PE

Subject: Village of Wellington Utilities–Water Treatment Plant Chemical System Phase II Improvements Design and Procurement Phase Services

Instrumentation and Control:

- a. Instrumentation Legend and Symbols– 1 Sheet
 - b. Process and Instrumentation Diagrams – 3 Sheets
 - c. Control Panel Details – 2 Sheets
 - d. PLC 2 Details – 4 Sheets
 - e. Instrumentation Details – 2 Sheets
2. KHA will provide all background (base) AutoCAD files to HEE for use in creating the design drawings.
 3. Project does not include short circuit, device coordination or Arc Flash Study; this will be specified to be provided by the installing contractor.
 4. It is assumed that the 2017 Water Treatment Plant Renewal and Rehabilitation Design will be used as the basis for creating the design documents for this project.
 5. No construction phase services are included in this proposal.

HEE wishes to thank Kimley-Horn and Associates, Inc. for the opportunity to assist with this project. Please do not hesitate to call me if you have any questions regarding this proposal or any other related matter.

Sincerely,



Mark E. Luther, PE

MEL/mel

Attachment

Village of Wellington Utilities Water Treatment Plant Chemical System Phase II Improvements Design and Procurement Phase Services

Kimley-Horn & Associates

HILLERS ELECTRICAL ENGINEERING, INC.

Scope Fee Breakdown -Design Services

Date: 4/14/22

Rate	\$225.00	\$192.00	\$153.00	\$147.00	\$129.00	\$90.00	\$81.00	\$138.00	\$78.00				
	Principal	Chief Engineer	Project Manager	Professional Engineer	Lead Engineer	Designer	CADD/ Technician	Construction Coordinator	Secretarial	Total Task	Expenses	SUBTOTAL	TASK TOTAL
PHASE OF WORK	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Cost	Cost	Cost
Task 1 Design Improvements and Permitting													\$52,173.00
Draft Design	20			110		150				280		\$34,170.00	
Draft Design Review Meeting				4						4		\$588.00	
Final Design	10			45		95				150		\$17,415.00	
Task 3 Procurement Phase Assistance													\$3,528.00
Respond to CMAR Questions				8						8		\$1,176.00	
Pre-Proposal Meeting				4						4		\$588.00	
GMP Review - Electrical, Instrumentation and Controls				12						12		\$1,764.00	
Lump Sum Totals	30			183		245				458		\$55,701.00	\$55,701.00
<i>Cost by Labor Rate</i>	\$6,750.00			\$26,901.00		\$22,050.00							