

AGREEMENT 16129 FOR ENGINEERING SERVICES

This AGREEMENT is entered into by and between Lake County (County) and Greengard, Inc., 111 Barclay Boulevard, Suite 310, Lincolnshire, IL (hereafter "Engineer").

RECITALS

WHEREAS, Lake County is seeking an Engineer to provide Engineering services for

PW#2014.097 Fox Lake Hills Water System Improvements as described in Attachment A; and

WHEREAS, the Engineer is a professional provider of Engineering services; and

NOW, THEREFORE, Lake County and the Engineer AGREE AS FOLLOWS:

SECTION 1. AGREEMENT DOCUMENTS

This AGREEMENT constitutes the entire agreement between the County and the Engineer.

SECTION 2. SCOPE OF SERVICES

The Engineer shall provide engineering services described in Attachment A

SECTION 3. DURATION

The works shall be completed within 180 days after execution of this Agreement.

SECTION 4. INDEMNIFICATION

The Engineer agrees to indemnify, save harmless and defend the County, their agents, servants, and employees, and each of them against and hold it and them harmless from any and all lawsuits, claims, demands, liabilities, losses and expenses, including court costs and attorney's fees, for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to property, which may arise or which may be alleged to have arisen out of Engineer's negligent acts in connection with the services covered by this Agreement. The foregoing indemnity shall apply except if such injury, death or damage is caused directly by the willful and wanton conduct of the County, their agents, servants, or employees or any other person indemnified hereunder.

SECTION 5. INSURANCE

The Engineer must obtain, for the Contract term and any extension of it, insurance issued by a company or companies qualified to do business in the State of Illinois and provide the County with evidence of insurance. Insurance in the following types and amounts is necessary:

- **Worker's Compensation Insurance** covering all liability of the Engineer arising under the Worker's Compensation Act and Worker's Occupational Disease Act at statutory limits.
- **Professional Liability** to include, but not be limited to, coverage for Errors and Omissions to respond to claims for loss there from.
 - **General Aggregate Limit** \$3,000,000
 - **Each Occurrence Limit** \$1,000,000
- **Automobile Liability:**
 - **Bodily Injury, Property Damage (Each Occurrence Limit) \$1,000,000**

Engineer agrees that with respect to the above required Automobile Liability insurance, Lake County shall:

- Be named as additional insured by endorsement to the extent of the negligence of the Engineer;
- Be provided with thirty (30) days notice, in writing, of cancellation of material change;
- Be provided with Certificates of Insurance evidencing the above required insurance, prior to commencement of this Contract and thereafter with certificates evidencing renewals or replacements of said policies of insurance at least fifteen (15) days prior to the expiration of cancellation of any such policies. Forward Notices and Certificates of Insurance to: Lake County Central Services, 18 N. County St, Waukegan, IL 60085-4350.

SECTION 6. AGREEMENT PRICE

Lake County will pay to the Engineer the amount not to exceed \$ 153,500.00.

SECTION 7. INVOICES & PAYMENT

Invoices may be submitted for work performed on a monthly basis based upon the percent of work completed in the amount not-to-exceed in Section 6. Submit invoice(s) detailing the services provided. Payments shall be made in accordance with the Local Government Prompt Payment Act.

Engineer will address Invoices to:

Lake County Department of Public Works
 650 Winchester Road
 Libertyville, IL 60048-1391
 Attn: Heather L. Galan, PE

County will make Payments to:

Greengard, Inc.
 111 Barclay Boulevard, Suite 310
 Lincolnshire, IL 60069-3623

SECTION 8. STATEMENT OF OWNERSHIP

The drawings, specifications and other documents prepared by the Engineer for this Project are the property of the County, and Engineer may not use the drawings and specifications for any purpose not relating to the Project without the County's consent, except for the Engineer's services related to this Project. All such documents shall be the property of the County who may use them without Engineer's permission for any current or future Lake County project; provided, however, any use except for the specific purpose intended by this Agreement will be at the County's sole risk and without liability or legal exposure to the Engineer.

The Engineer shall retain its copyright and ownership rights in its design, drawing details, specifications, data bases, computer software, and other proprietary property. Intellectual property developed, utilized, or modified in the performance of the services shall remain the property of the Engineer.

SECTION 9. TERMINATION

The County reserves the right to terminate this Agreement, or any part of this Agreement, upon thirty(30) days written notice. In case of such termination, the Engineer shall be entitled to receive payment from the County for work completed to date in accordance with terms and conditions of this Agreement. In the event that this Agreement is terminated due to Engineer's default, the County shall be entitled to contract for consulting services elsewhere and charge the Engineer with any or all losses incurred, including attorney's fees and expenses.

SECTION 10. JURISDICTION, VENUE, CHOICE OF LAW

This Agreement shall be governed by and construed according to the laws of the State of Illinois. Jurisdiction and venue shall be exclusively found in the 19th Judicial Circuit Court, State of Illinois.

SECTION 11. INDEPENDENT CONTRACTOR

The Engineer is an independent contractor and no employee or agent of the Engineer shall be deemed for any reason to be an employee or agent of the County.

SECTION 12. WARRANTS

The Engineer represents and warrants to the County that none of the work included in this contract will in any way infringe upon the property rights of others. The Engineer shall defend all suits or claims for Engineer's infringement of any patent, copyright or trademark rights and shall hold the County harmless from loss on account thereof.

SECTION 13. ASSIGNMENT

Neither the Engineer nor the County shall assign any duties of performance under this Agreement without the express prior written consent of the other.

SECTION 14. MODIFICATION

This Agreement may be amended or supplemented only by an instrument in writing executed by the party against whom enforcement is sought.

SECTION 15. DISPUTE RESOLUTION

All issues, claims, or disputes arising out of this Agreement shall be resolved in accordance with the Appeals and Remedies Provisions in Article 9 of the Lake County Purchasing Ordinance.

SECTION 16. NO IMPLIED WAIVERS

The failure of either party at any time to require performance by the other party of any provision of this Agreement shall not affect in any way the full right to require such performance at any time thereafter. Nor shall the waiver by either party of a breach of any provision of this Agreement be taken or held to be a waiver of the provision itself.

SECTION 17. SEVERABILITY

If any part of this Agreement shall be held to be invalid for any reason, the remainder of this Agreement shall be valid to the fullest extent permitted by law.

SECTION 18. CHANGE IN STATUS

The Engineer shall notify the County promptly of any change in its status resulting from any of the following: (a) vendor is acquired by another party; (b) vendor becomes insolvent; (c) vendor, voluntary or by operation law, becomes subject to the provisions of any chapter of the Bankruptcy Act; (d) vendor ceases to conduct its operations in normal course of business. The County shall have the option to terminate this Agreement with the Engineer immediately on written notice based on any such change in status.

SECTION 19. DELIVERABLES

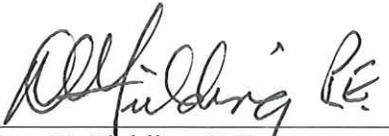
The Engineer shall provide deliverables as identified in Attachment A.

IN WITNESS HEREOF, the undersigned have caused this Agreement to be executed in their respective names on the dates hereinafter enumerated.

Lake County:

Greengard, Inc.

RuthAnne Hall
Purchasing Agent
Lake County



Don R. Fielding, P.E.
President

Date: _____

Date: 4/26/14

Attachment A



GREENGARD, INC.

Engineers . Surveyors . Planners

111 Barclay Boulevard, Suite 310, Lincolnshire, Illinois 60069-3623
847-634-3883 www.greengardinc.com 847-634-0687 FAX



March 21, 2016
File - 61034

Peter Kolb, P.E.
Director of Engineering
Lake County Public Works
650 Winchester Road
Libertyville, IL 60048

Dear Peter:

We are pleased to submit a proposal to perform the necessary engineering services for the water system improvements including two potential booster station sites and a new elevated tank site as part of the Fox Lake Hills Water Treatment Plant connection to the CLCJAWA Lake Michigan Water Supply.

PROJECT UNDERSTANDING

The original plan to construct a ground storage reservoir at the existing Fox Lake Hills Water Treatment Plant has been changed due to the proximity of the proposed reservoir to local neighbors and existing site restrictions. It is now proposed to construct a new elevated storage tank or underground storage reservoir at the north end of the distribution system on an existing easement. The capacity of the storage tank or ground storage reservoir will be 250,000 gallons. The high capacity line for the elevated tank would be around 927 ft elevation. The design of the tank will be similar to the new Countryside Manor elevated tank in terms of instrumentation, antenna supports, safety valves, and chlorination system equipment.

A new booster station will be required to boost pressure to fill the elevated tank at the north end of the system. The County has two parcels identified along IL Rt. 59 to possibly site the new booster station. The County is handling the potential acquisition of one of the parcels for this purpose.

The addition of the new elevated tank or ground storage reservoir, and booster station posed the question whether the system should remain as a single pressure zone (as existing) or a two pressure zone system. There is a concern that the new pressure may be too great for existing household plumbing or existing water main in the area around Piper Lane. An analysis in WaterCAD is proposed to help assess the best operation of the water distribution system. The model will utilize the County's GIS information (elevation, pipe sizes, and condition), static pressure readings, and the existing 1996 water system report to run an extended period simulation to analyze a single versus two pressure zone system. Results of the model will be analyzed and a memo of recommendation will be prepared. The connection to CLCJAWA will remain at the existing Water Treatment Plant as the receiving station (designed by others) will be located on site. As a result of the elimination of the ground reservoir, the design piping inside the plant will be modified as needed. There was discussion of eliminating the existing iron filter system, but as of now the filter system is remaining. Therefore the piping to receive CLCJAWA water will be modified in its currently proposed location in the basement.

SCOPE OF SERVICES

1. Topographic/Location Survey

- Site topography has been completed for the existing reservoir site at 25346 W. Lincoln Drive and additional topography would not be required. We shall order County records for the right of way and parcel for the Easement "D" Elevated Tank site, and the two potential booster station locations. We shall bring the nearest County benchmark the potential booster station sites, the Elevated Tank Site, and establish a job site benchmark for each. We shall obtain ground topography of the lot and right of way. We shall locate the property corners and establish the lot boundary. We shall locate all physical features including but not limited to, trees greater than 6" in diameter, buildings, streets, fences, driveways, mailboxes, utilities, culverts, and ditches. We shall supply a tree inventory depicting size, species, rated condition, and form. This data shall be drawn at an appropriate scale and be used in the final contract drawings.

The fee for the services outlined in Section 1 above shall be in the lump sum amount of **\$15,000**, to be partially billed as work progresses.

2. Water Distribution Model

- Prepare a steady state water model simulation to compare a one-pressure zone scenario vs. a two-pressure zone scenario.
- Simulate the model with an elevated storage tank or ground storage reservoir at the storage site location.
- Determine the location of a pressure reducing station or pressure reducing valves as required.
- Model inputs are expected to include the County GIS elevation info, pipe sizes, existing pump information, proposed elevated storage tank location and elevation, and static pressure readings in the system.
- If calibration of the model is necessary to balance the model results, we will ask the County to perform flow tests on the system as necessary.
- Prepare a summary memo of the modeling results and assist the County in determining the preferred storage method for the system and site.

The fee for the services outlined in Section 2 above shall be in the lump sum amount of **\$12,500**, to be partially billed as work progresses.

3. Water Storage Options: Elevated Tank Design or Ground Storage Reservoir Design

- Prepare a design concept for either an elevated tank or ground storage reservoir based on the results of the water distribution model and County's preferences.
- Draft preliminary site plan exhibits of the Elevated Tank or Ground Storage Reservoir for discussions with property owners, permitting agencies, etc.
- Design a new elevated storage tank or ground storage reservoir with a volume of 250,000 gallons. The storage will be located at the north end of the existing system within Easement "D".
- Design the water system connections to and from the new storage tank including piping, valves and hydrants as requested by the Client.
- Design a chemical feed system as part of the elevated tank or reservoir to feed sodium hypochlorite into the distribution system.
- Design a new altitude valve vault to control system pressure, and design level controls for the elevated tank or reservoir.
- Provide electrical engineering services including tank level controls, lighting, and power design.
- Provide structural engineering services including elevated tank conceptual foundation design based on manufacturer's requirements, or full foundation design for ground storage reservoir.
- Coordinate with a geotechnical consultant to provide soil borings for the proposed elevated tank or reservoir location.
- Design the elevated tank or storage reservoir for SCADA and communication capability (elevated tank to include painters rings, conduits for future wiring, prepared location for future antennas to be mounted, etc), along with any requested instrumentation such as meters and control signals.
- Design of access road to replace existing walking path around soccer fields north of tower site.
- Generate 3D renderings of the view of the elevated tank or storage reservoir from 3 different vantage points. (Locations to be determined).
- Prepare a full set of plans and specifications detailing the improvements and work to be completed including a site plan, detail sheets, process sheets, structural sheets, and electrical sheet, as required.
- Prepare a preliminary construction cost estimate by the end of May 2016.
- Prepare a final construction cost estimate based on the final design and specifications.

The fee for the services outlined in Section 3 above shall be in the lump sum amount of **\$50,000**, to be partially billed as work progresses.

4. Booster Station

- Draft preliminary site plan exhibits of the booster station for discussions with property owners, permitting agencies, etc.
- Design an aboveground, prefabricated water booster pump station at the designated location. It is assumed the booster station will be housed in a prefabricated housing that will blend into the neighborhood.
- Size and design two (2) booster pumps (one pump as a standby) for the station.
- Design a pressure reducing altitude valve station for pressure regulation, if required.
- Provide process design, structural, electrical, instrumentation and control design for the new booster station.
- Design the station to have SCADA output and intrusion alarm capability.
- Provide site design including driveway access to the booster station.
- Prepare a full set of plans and specifications detailing the improvements and work to be completed including a site plan, detail sheets, process sheets, structural sheets, and electrical sheet, as required.
- Prepare a preliminary construction cost estimate by the end of May 2016.
- Prepare a final construction cost estimate based on the final design and specifications.

The fee for the services outlined in Section 4 above shall be in the lump sum amount of **\$55,000**, to be partially billed as work progresses.

5. Fox Lake Hills Water Treatment Plant Modifications

- Modify the “reservoir” piping design to eliminate the reservoir fill and reconfigure for just receiving CLCJAWA water to the Fox Lake Hills water system.
- Prepare a full set of plans and specifications detailing the improvements and work to be completed including a site plan, detail sheets, process sheets, structural sheets, and electrical sheet, as required.
- Prepare a preliminary construction cost estimate by the end of May 2016.
- Prepare a final construction cost estimate based on the final design and specifications.

The fee for the services outlined in Section 5 above shall be in the lump sum amount of **\$8,000**, to be partially billed as work progresses.

6. Permit Application & Meetings

- Prepare and submit any necessary documents to the Illinois Environmental Protection Agency, Illinois Department of Transportation, Lake Villa Township, and Lake County Planning Building and Zoning. Attend meetings as necessary to obtain those permits. LCPW will pay any permit fees. Greengard, Inc. will incorporate any comments into the contract documents.

The fee for the services outlined in Section 6 above shall be in the lump sum amount of **\$8,000**, to be partially billed as work progresses.

7. Easements

- Generate an easement document to allow LCPW access to the new water tower or underground storage reservoir from an alternate location.
- Draft easement documents and/or plats of subdivision as necessary to acquire property and/or rights to property or amend/vacate old easements for the overall project.

The fee for the services outlined in Section 7 above shall be in the lump sum amount of **\$5,000**, to be partially billed as work progresses.

1. Schedule of Hourly Rates

Principal/Design	\$205.00	Land Survey Manager	\$125.00
/Testimony	\$305.00	Senior Project Surveyor	\$105.00
Project Manager	\$145.00	Survey Technician 1	\$ 74.00
Project Coordinator	\$100.00	Survey Technician 2	\$ 62.00
Project Engineer	\$120.00	Robotic Survey Crew	\$130.00
Design Engineer	\$105.00	GPS Survey Crew	\$140.00
Staff Engineer	\$ 90.00	Two Man Survey Crew	\$155.00
Senior Engineering		Party Chief	\$105.00
Technician 1	\$100.00	Instrument man	\$ 65.00
Engineering Technician 1	\$ 88.00	Rodman	\$ 55.00
Engineering Technician 2	\$ 74.00	Two-Man Field Crew 1	\$155.00
Construction Coordinator	\$105.00	Two-Man Field Crew 2	\$130.00
Resident Engineer	\$120.00	Principal Forester	\$135.00
Inspector	\$ 90.00	Senior Forester	\$ 95.00
		Project Forester	\$ 85.00
		Field Forester	\$ 65.00

1. Extra services when authorized shall be billed at the Schedule of Hourly Rates.
2. Payment: Invoices are due and payable within thirty days of presentation. All past-due amounts shall bear interest at the rate of 1.50 percent per month. We reserve the right to suspend performance in the event our invoices are not paid when due.
3. Reimbursable Expenses: All blueprinting, messenger, express delivery and similar out-of-pocket expenses shall be billed to the Agency.

Very Truly Yours,



Don R. Fielding, P.E.
Greengard, Inc.



GREENGARD, INC.

Engineers • Surveyors • Planners

111 Barclay Boulevard, Suite 310, Lincolnshire, Illinois 60069-3623
847-634-3883 www.greengardinc.com 847-634-0687 FAX



April 26, 2016
File - 61034

Peter Kolb, P.E.
Director of Engineering
Lake County Public Works
650 Winchester Road
Libertyville, IL 60048

PW#2014.097 FOX LAKE HILLS WATER SYSTEM IMPROVEMENTS SCOPE OF SERVICES SUMMARY:

1. Topographic/Location Survey = \$15,000
2. Water Distribution Model = \$12,500
3. Water Storage Options: Elevated Tank Design or Ground Storage Reservoir Design = \$50,000
4. Booster Station = \$55,000
5. Fox Lake Hills Water Treatment Plant Modifications = \$8,000
6. Permit Application & Meetings = \$8,000
7. Easements = \$5,000

TOTAL FEE = \$153,500

Very Truly Yours,

Don R. Fielding, P.E.
Greengard, Inc.