

Thomas R. Eisenbart
Senior Vice President
Phone: (312) 269-6478
FAX: (312) 269-6494
E-mail: thomas.r.eisenbart@sargentlundy.com

September 23, 2014
Proposal No. SL-RMU-2014-0002

Rochelle Municipal Utilities

Phase 2 Engineering Services for the
138-13.8kV Caron Road Substation Expansion Project

TASK AUTHORIZATION No. 12 – Caron Road Expansion Project

Mr. Joe Orlikowski
Electric Operations Superintendent
Rochelle Municipal Utilities
700 West 2nd Ave
Rochelle, IL. 61068

Dear Mr. Orlikowski:

Sargent & Lundy, LLC (S&L) is pleased to submit this proposal to Rochelle Municipal Utilities (RMU) for Phase 2 Engineering Services for the Caron Road Substation Expansion project.

We appreciate the opportunity to submit a proposal for these Phase 2 engineering services. If you have any questions or require any additional information, please contact me at (312) 269-6478.

Yours very truly,



Thomas R. Eisenbart
Project Director

ACCEPTED

DATE: _____

Rochelle Municipal Utilities

BY: _____

TITLE: _____

CC: Joseph Orlikowski – RMU
Joann Peters – RMU
Tom Eisenbart
Warren Vahle

INTRODUCTION AND EXECUTIVE SUMMARY:

Sargent & Lundy^{LLC} (S&L) is pleased to submit this proposal to provide engineering and detail design services for the expansion of Caron Road Substation, Phase 2 – Detailed Design.

Phase 2:

- Specifications, bid evaluations, procurement support, and letters of recommendation.
- Physical layout and foundation design for the expansion of the 138-13.8-kV facilities at Caron Road Substation.
- Protective relaying and controls for the expansion of the 138-13.8-kV facilities at Caron Road Substation.
- Protective Relay Settings for the 138-kV Line tie 4 to Old Caron Road, transformer 7, 13.8-kV bus 7 and 8, and the 138-kV circuit breaker 710.

SCOPE OF WORK:

PHASE 2:

- Design the expansion of the 138-13.8-kV facilities at Caron Road consisting of:
 - ✓ Expanding the 4-position ring bus to include a fifth position, isolation means for the sixth position and install a new (1) 138-13.8-kV transformer (rated 20/26.7/33.33 MVA).
 - ✓ Install one (1) 13 cubicle switchgear lineup in the second switchgear room. The lineup to consist of two (2) 13.8-kV buses. Each bus shall have three (3) 13.8-kV feeder breakers and one main breaker. Three (3) 13.8-kV tie breakers are to be provided between the 13.8-kV buses of each switchgear lineup.
 - ✓ Revise the existing 13.8-kV straight bus feeder switchgear units to support a ring bus configuration with the new switchgear lineup for bus 7 and 8.
 - ✓ Finish the second the 13.8-kV metalclad switchgear room flooring, including rail mounting provisions and cable vault feeder penetration.
 - ✓ Install 138-kV protective relaying for the new 138-13.8-kV distribution transformer, and revise the protective relaying for Tie Line 4 to utilize CTs off of the new 138-kV breaker.
- Completion of the design drawings associated with the material specifications for the new 138/13.8-kV transformer and 13.8-kV metal clad switchgear. Design on these drawings was initiated in June for support of the specifications.
- Finalization of the material specifications for the new 138/13.8-kV transformer and the 13.8-kV metal clad switchgear for procurement. Development of the specifications was initialized under the Phase 1 proposal.

-
- Develop specifications for procurement, provide specifications to RMU for release for bids, receive copy of bids from RMU, evaluate bids, and provide RMU with a letter of recommendation for purchase of the following equipment:
 - ✓ 138/13.8-kV distribution transformer
 - ✓ 13.8-kV metal clad switchgear
 - ✓ 138-kV dead tank circuit breakers
 - ✓ 138-kV disconnect switches
 - ✓ Control & relay panels
 - ✓ Above and Below Grade Construction Specification
 - Develop bills of material/letter-type specifications (B/M) for procurement, provide B/M's to RMU for release for bids, receive copy of bids from RMU, evaluate bids, and provide RMU with a letter of recommendation for purchase of the following equipment/materials:
 - ✓ 138-kV coupling capacitor voltage transformers (CCVT's)
 - ✓ Aluminum bus tubing
 - ✓ Bare, stranded aluminum conductor
 - ✓ 138-kV bus connectors & fittings
 - ✓ 138-kV connectors & fittings for stranded aluminum conductor
 - ✓ Control cable (600V)
 - ✓ Power cable (600V)
 - ✓ Instrumentation cable
 - Support procurement activities with participation at the bid meetings, preparing Notification letters and participation at Town Hall meetings.
 - Develop specification for procurement of construction labor for substation installation, provide specification to RMU for release for bids, receive copy of bids from RMU, evaluate bids, and provide RMU with a letter of recommendation for procurement of construction labor.
 - Provide suggested list of bidders for equipment and construction labor where RMU does not have preferred suppliers.
 - Provide coordination of design with ComEd.
 - Provide relay settings for the new protective relaying schemes.
 - Provide constructability review

APPROACH TO WORK:

Following approval, we will proceed with solicitation of vendor quotes for the transformer and switchgear equipment, and develop specifications and bills of material (letter type specifications) for the remainder of the equipment and materials in parallel with the preparation of design drawings. Contractor furnished materials such as ground cable, ground rods, exothermic molds and connection materials for ground connections, etc. will be shown on the drawings. B/M's will not be developed for the Contractor furnished materials.

During the engineering and design phase of the project, we will prepare and submit monthly progress reports to RMU and we will conduct monthly meetings to review

progress and any technical issues. We will develop a proposed schedule of meetings to coincide with major project milestones.

At the completion of the project, we expect to receive a set of "red-lined" drawings from RMU, showing the changes made during the construction and testing phases of the project. We assume that RMU will coordinate these marked drawings and provide us with a consolidated set of markings. Our project team will incorporate these markings on the project drawings and will provide two final sets (hardcopies) of "record" drawings to RMU along with an AutoCAD file of these "record" drawings. We will also provide two (2) copies of the final design calculations. This will constitute our final set of deliverables for this project.

DELIVERABLES:

As a part of our engineering and design work for Phase 2 of this project, we would develop the following deliverables:

Phase 2:

- 10 - Bid Packages (Transformer, Switchgear, Circuit Breaker, Disconnect Switches, CCVT/PTs, Relay Panel, Steel, Below Grade and Above Grade Construction, Cable, High Voltage Materials)
- 10 – Recommendation Letters
- 1 – Physical Design Package (Above grade, below grade and structural steel)
- 1 – Electrical Design Package (Schematic and wiring)
- Bill of Materials
- Monthly Project Status Report and Project Schedule
- 1 – Record package reflecting the "as-constructed" project
- Relay Settings

CLARIFICATIONS AND ASSUMPTIONS:

- Electronic files for drawings of New Caron Road Substation (e.g. Single Line Diagram, Plan, Sections, Foundation Plan, Foundation Details, Control House Plan, Control House Sections, AC & DC Schematic Diagrams, Wiring Diagrams, Cable Tabulation, etc.) are available and will be given to S&L at requested times.
- Equipment/material procurement will be by Rochelle Municipal Utilities (RMU).
- The substation design will be based on Industry and S&L standards since RMU does not have specific design standards.
- All drawings will be prepared in AutoCAD version 2014.

PRICING:

Our proposal for the engineering and design services is based on the existing general services agreement, contract number 30155. Please let us know if you have any additional requirements or comments related to the existing terms and conditions.

The estimated "Time & Material" price for the engineering and design of Phase 2 scope of work, as defined above, for the expansion of the 138-13.8-kV facilities at Caron Road substation is Two Hundred and Forty Thousand Dollars (\$240,000). Invoices will be submitted on a monthly basis in accordance with the attached Hourly Billing Rates by Category attached hereto as **Attachment A**.

ATTACHMENT A

**Rochelle Municipal Utilities
Sargent & Lundy, L.L.C.
Power Delivery Services
Hourly Billing Rates by Category
Effective for Calendar Year 2014**

<u>Classification</u>	<u>Billing Rate (\$/hr.)</u>
Principal	188.00
Senior Manager	170.00
Manager	158.00
Senior Project Associate	141.00
Project Associate	131.00
Senior Associate	110.00
Associate II/III	93.00
Associate I	83.00
Senior Designer	110.00
Designer	80.00
Drafter	60.00
Administrative II	68.00
Administrative I	54.00

Notes:

1. Computer and reprographics usage charges as well as miscellaneous charges such as telephone, special mailing, etc. are included in the above rates.
2. Travel expenses are not included in the above rates and will be billed at actual cost.
3. Subcontractors will be billed with a 10% handling charge, or commensurate with their work scope.
4. Billing Classifications include one or more S&L position categories that are typically grouped under a classification on the basis of similarities in position function, experience factors, and/or wage levels. Acceptance of this schedule includes the rates shown, the period of time for which they are effective, and the combination of individual position categories that comprise each classification.
5. Billing rates are subject to annual escalation
6. Billing rates are considered to be proprietary to S&L. Please treat them as confidential.
7. All costs, fees or other charges associated with client utilization of a third party administrator shall be invoiced for payment.