December 11, 2023

Mr. Cris Papierniak
Public Works Director
Village of Arlington Heights, IL
222 North Ridge Avenue
Arlington Heights, IL 60005

Subject: Algonquin Road Sewer Capacity Improvement – Final Design Services
Proposal/Review of Smart Cover Data

Dear Mr. Papierniak:

RJN Group, Inc. (RJN) is pleased to provide this proposal to the Village of Arlington Heights (Village) for the final design of improvements to increase the capacity of the sanitary sewer on Algonquin Road.

Key Project Goals and Objectives

Algonquin Road Sewer Capacity Improvement

RJN has completed a preliminary design to increase the undersized existing 18" sewer along Algonquin Road and Dempster Street between Cedar Glen Drive and Busse Road to a 27" sewer to accommodate current flows and projected flows from a new development. Due to the high flows expected by certain businesses planned for this development, it is critical that the Village complete this project before the new businesses are operating. A separate proposal for the surveying work was submitted to expedite the schedule.

The plan is to install a parallel sewer in the right westbound lane of Algonquin Road from Cedar Glen Drive all the way to Busse Road. It will deviate from the existing sewer that jogs onto Dempster Street. The parallel sewer will minimize the bypass pumping needs on this project, which could have otherwise been significant.

There are many stakeholders for this project, so project coordination is a critical element of this design. In addition to the Village, the key stakeholders on this project include the following:

- Metropolitan Water Reclamation District of Greater Chicago (MWRD)
- Illinois Department of Transportation (IDOT)
- Cook County Department of Transportation and Highways (CCDOTH)
- Village of Mt. Prospect (Mt. Prospect)
- Various utility companies
- Adjacent property owners

During the preliminary design, we received conceptual approval from MWRD and IDOT on the conceptual plan for the new sewer. There are additional details on this design that need to be

coordinated with these stakeholders early in the process, particularly with MWRD. Since the construction will be primarily in the IDOT right-of-way, they will dictate the terms of when the contractor will be able to work.

We will utilize the Village's standard "front end" contractual documents and add the technical specifications. We will utilize standard details from IDOT, MWRD and the Village (in that order) where applicable. Remaining standard details will be per the Standard Specifications for Water and Sewer constriction in Illinois.

SmartCover Analysis

The Village owns several SmartCover ultrasonic depth sensor for use in manholes. These SmartCovers were installed in manholes identified by RJN in the South Arlington Heights Road TIF area for evaluating the response of the sewer to rain events, to provide more understanding about where excess flows may be entering the sewer.

This analysis is to review that data and determine if there are any conclusions that can be made regarding sources of I/I in the sewer and to verify and/or reassess the level of sanitary sewer overflow (SSO) risk within the corridor between Algonquin Road and Interstate 90.

Assuring Quality and Safety

RJN is committed to providing **quality** deliverables. RJN's use of QC tools as well as our corporate training and QA processes in place will ensure that our services will provide value to the Village.

As an employee-owned firm, RJN's commitment to the **safety** of our employees and of the community is paramount. That commitment to safety is demonstrated in our internally developed and audited safety program where our goal is to have all field staff, engineers, and project managers "RJN Safety Certified." Included in the certification is confined-space entry training, temporary traffic control, OSHA 10-hour, fall protection, and many more.

Price and Schedule Summary

This project will be invoiced on a Time and Material Basis

- Final Design Base Services $247,435
- SmartCover Analysis $ 16,165
- Contingency $ 10,000

for a total base fee of **$263,600 plus a $10,000 contingency for a total not-to-exceed fee of $273,600**. Complete Scope of Services, Pricing, Schedule, and Project Map are provided in the following exhibits:

- Exhibit A – Scope of Services
- Exhibit B – Pricing
- Exhibit C – Schedule
- Exhibit D – Project Map

It is our pleasure to submit this proposal to continue the work in this area of Arlington Heights. We are looking forward to the opportunity to work with the Village of Arlington Heights on this important project. Please feel free to contact Karol Giokas at 630.364.4362 if you would like to discuss this proposal or have any questions.

Sincerely,

Akwasi Nketia, P.E.
Principal Project Manager

Karol G. Giokas, P.E.
Senior Project Manager

EXHIBIT A
SCOPE OF SERVICES

RJN is proposing the following scope of services for the:

Final design of the capacity improvements for the sanitary sewer along Algonquin Road for Arlington Heights.

1. Schedule and attend a design kick-off meeting with Village staff. Prepare the meeting agenda and minutes. Discuss the following at the meeting:
    a. Recent changes to the development plan that would impact the population equivalency calculations used to determine the needed sewer capacity.
    b. Key design elements and remaining questions to address.
    c. Coordination with project stakeholders
    d. Planned project schedule.

2. Incorporate the survey base sheets prepared under a separate proposal and prepare the design base files.

3. Review CCTV videos from existing sewer to confirm live service connections to be abandoned and relocated to new sewer or to a separate Mt. Prospect sewer. Coordinate with Mt. Prospect on services to be reconnected.

4. Schedule a coordination meeting with the Village, IDOT, CCDOTH and Mt. Prospect to discuss the planned construction.

5. Schedule a meeting with the MWRD to coordinate the following:
    a. Obtain approval to upsize the sewer to 27 inches (approval to upsize from 18 inches to 24 inches previously received)
    b. Options for service connections to Mt. Prospect buildings along Dempster Street (including coordination with Mt. Prospect).
    c. Potential abandonment of sewer on Dempster Street including connection to MWRD at Dempster Street and Busse Road.
    d. New connection to existing MWRD manhole at Algonquin Road and Busse Road.

6. Complete 11 soil bores with a depth of 20 feet with one at a depth of 30 feet. Prepare and submit a boring log and geotechnical report.

7. Provide an assessment as to whether the site is a potentially impacted property (PIP). Provide laboratory testing and analysis on two soil samples. Provide an assessment of the project site and the laboratory data for characterization and completion of Form LPC 663.

8. Request design-stage J.U.L.I.E. locates and identify potential utility conflicts.

9. Provide preliminary design submittal at 40% after preliminary quality control/quality assurance review on design, alignment, and sizing of the new interceptor. Submittal to include a memo summarizing route options, costs, materials, and coordination.

10. Identify traffic control and surface restoration needs during construction in compliance with jurisdictional requirements.

11. Prepare detailed schedules and design details for new sewer installation, service lateral installations, and manhole installations.

12. Prepare Contract Plans, including the following:
    a. Cover Sheet
    b. General Notes and Quantities
    c. MWRD General Notes
    d. Alignment and Ties
    e. Summary of Quantities
    f. Quantities Table
    g. Sewer Plan and Profile Sheets
    h. Storm Water Pollution and Prevention Plan
    i. Bypass Exhibits
    j. Restoration and Pavement Plans
    k. IDOT, CCDOTH, MWRD, and Village specific Details

13. Prepare Contract Front End Documents and detailed Specifications:
    a. Utilize Village front end documents with only project specific modifications.
    b. Prepare technical specifications.
    c. Appendices

14. Send 60% Plans to utility companies for review.

15. Prepare an Opinion of Probable Construction Cost.

16. Provide two additional progress review submittals at 60% and 90% of Plans, Specifications and Opinion of Probable Construction cost for Village review and comment prior to bidding.

17. Perform a final quality control/quality assurance review on final plans and specifications.

18. Coordinate permitting and construction plan with the Village, Mt. Prospect, MWRD, IDOT, CCDOTH and other governmental agencies. Obtain project approval from Mt. Prospect.

19. Prepare permit applications for MWRD, IDOT and CCDOTH. In addition to the contract documents, prepare exhibits and other documentation as needed. Address up to two rounds of permit review comments. As part of the permitting for this project, RJN will also

obtain clearance from the State Historic Preservation Agency.

20. Prepare and apply for a general NPDES permit for stormwater discharges from construction site activities through IEPA's online CDX Exchange portal.

21. After receiving construction permit from MWRD, prepare IEPA Sanitary Sewer Permit to construct, own and operate the proposed sanitary sewer.

22. Assist Village with contacting property owners impacted by the construction. Provide notification to the residents of impacts to sewer and water service, and any limitations to access to driveways/property.

23. Prepare bid package with plans, front-end documents, and specifications. Submit a pdf of the final bid package to the Village with one full size set of the final plans.

24. RJN will prepare for the Village a set of final construction documents in original AutoCAD or GIS and Microsoft Word formats.

25. Bidding Assistance:
    a. Post to on-line bidding service.
    b. Prepare Addenda.
    c. Respond to Contractors' questions.
    d. Prepare bid tabs and letter of recommendation.

26. Coordinate mandatory pre-bid meeting, prepare agenda, attend meeting, and prepare and distribute meeting minutes.

27. Project management service for the duration of the project and attend up to three in-person meetings and virtual meetings with the Village and other stakeholders.

Contingency:

The $10,000 contingency will only be used outside the base fee with Village approval in the event of:

1. Significant changes during the permitting process with the MWRD and other governmental agencies
2. Additional work required by Mount Prospect
3. Additional subsurface exploration work
4. Additional work requested and approved by the Village.

Smart Cover Analysis

1. Review of SmartCover Data
    a. Review of data looking for data outliers or evidence of overflows. Classify rain events that have occurred since installation, review depth levels.

2. Validate hydraulic model using SmartCover data
    a. Field data collection for approximately 10 structures
    b. Update physical model with additional data
    c. Evaluate observed differences between model and SmartCover data.
    d. This does not include a full recalibration of the model.

3. Provide Tech memo with results and recommendations.

4. Provide PM services for project, including one virtual meeting to discuss results.

Items Requested from the Village

1. Updated GIS for both sanitary and Storm Sewers
2. Assistance coordinating with other stakeholders.
3. Lead any required discussions with residents.
4. Provide traffic control assistance (arrow board, etc.) if needed.

Items Not Included in this Proposal.

1. Services related to obtaining easements (not anticipated to be required)
2. Engineering Construction Supervision Services.

EXHIBIT B
PRICING

The services provided for the Algonquin Road Sewer Capacity Improvement Final Design and SmartCover Analysis Services will be invoiced on a time and materials basis as shown below.

Task #	Task Description	Cost
1001	Kick-off Meeting	$3,548
1002	CCTV Review/Base file prep	$9,911
1003	Coordination Meetings w/Agencies/stakeholders	$15,975
1004	Geotech Coordination	$33,014
1005	Preliminary Design (40%)	$29,975
1006	Final Design Plans	$73,381
1007	Front End/Technical Specs	$25,597
1008	Opinion of Construction Costs	$7,590
1009	Permitting	$18,205
2001	Bidding Assistance	$14,685
2002	Project Management	$15,554
3001	SmartCover Analysis	$16,165
4001	Contingency**	$10,000
	Total Contract Amount	**$273,600**

***** Contingency amount would only be used with Village approval.***

Hourly Rate Schedule

	Classification	2024 Rates*
PD	Project Director	$255.00
SPM	Senior Project Manager	$225.00
PM	Project Manager	$190.00
SCM	Sr. Construction Manager	$180.00
CM	Construction Manager	$160.00
CO	Construction Observer	$140.00
SPE	Senior Project Engineer	$160.00
PE	Project Engineer	$145.00
EI	Engineer I	$130.00
GSS	GIS Specialist	$125.00
GIS	GIS Analyst	$110.00
SDA	Senior Data Analyst	$125.00
DA	Data Analyst	$105.00
FM	Field Manager	$110.00
FS	Field Supervisor	$100.00
FT	Field Technician	$95.00
AS	Administrative Support	$100.00

Notes

- The geotechnical services include a 10% markup on the subconsultant.

EXHIBIT C
PROPOSED SCHEDULE AND DELIVERABLES

RJN is prepared to begin work on this project upon an agreement. Assuming there are no delays with subconsultants, the anticipated schedule for the Algonquin Road Sewer Capacity Improvement is as follows:

Task	Timeline
Algonquin Rd Sewer Capacity Improvement:	
• **Subsurface Exploration and Soil Report**	Within 60 days of Notice to Proceed.
• **40% Preliminary Design Completion**	Within 60 days after topographic survey completion
• **90% Design Completion**	Within 75 days of preliminary design approval.
• **Final Bid Documents**	Within 30 days of 90% design comments.

***The above design schedule is dependent on cooperation from various governmental agencies during the permitting process and delays in responses from these agencies may impact the schedule.

***The surveying services will be completed within 2 months of a notice to proceed.

The anticipated completion date for the SmartCover Analysis is **June 1, 2024.**

EXHIBIT D

PROJECT LOCATION MAP