

Memorandum



To: Dale Berman, Village President & Board of Trustees
Cc: Steven Bosco, Village Administrator
From: John Laskowski, Public Works Director
Date: November 27, 2017
Re: Silo Project Consultant Selection

One of the goals in the Strategic Plan is Community Vitality. In order to achieve this goal there are several objectives that have been identified in the plan. One of these strategic objectives involves the silo located on the west bank of the Fox River just south of State Street.

The Village followed the action plan outlined in the Strategic plan that led to partnerships with Harner's, the Fox Valley Park District, and North Aurora River District Alliance (NoARDA). After discussing potential adaptive re-uses and developing a preliminary concept plan in conjunction with the (FVPD) staff determined the next step would be to identify a consulting firm to begin developing final concepts that could be implemented in phases as early as summer 2018.

At the November 6th Committee of the Whole meeting staff described the scope of work for the silo project and introduced Muller and Muller Incorporated (M&M). M&M had been selected by the evaluation team as the most qualified firm for the project through the Qualifications Based Selection (QBS) process.

Staff worked with M&M to develop a scope of work. It consists of a site condition analysis, a strategic plan, charrette, development of a preliminary concept development, final concept development, and the final masterplan deliverable. The detailed scope of work is found in the attached agreement.

Based upon the agreed scope of work staff negotiated a cost for services Muller and Muller and included it in the agreement. Staff is recommending approval of the agreement in the not to exceed amount of \$63,792.98 with M&M to provide the services necessary to complete the scope of work outlined in the attached agreement. This expense was budgeted this year at \$65,000 from the TIF fund.

November 28, 2017

Village of North Aurora
25 East State Street
North Aurora, IL 60542

Attention: Steve Bosco
Village Administrator

Subject: Professional Architectural/Engineering Services Proposal
Village of North Aurora Silo Project

Mr. Bosco:

Thank you for the selection of our Team for the Village of North Aurora Silo Project. We are excited to collaborate with you on this project. The purpose of this correspondence is to outline our understanding scope of the project and to identify scope of services required from our team.

As noted in our qualifications submittal, we are proposing the following team:

- Muller & Muller, Ltd.: Prime, Project Management, Architecture and Planning
- Wills Burke Kelsey Associates: Survey and Civil Engineering
- Simpson Gumpertz & Heger: Structural Engineering
- Hitchcock Design Group: Planning and Landscape Architecture (for future phases)
- Calor Design Group, Ltd.: Electrical, Mechanical, Plumbing, Fire Protection (for future phases)
- Schuler Shook, Inc.: Lighting Design

SCOPE OF WORK

Based on our review of the RFQ document and our Scope Review Meeting held on October 31, 2017, M+M understands that the Village of North Aurora desires to transform the concrete silo located adjacent to Harner's Bakery east of the intersection of State Street (State Route 31) and Lincolnway Street (State Route 56). The structure itself is 98 feet tall with an approximate outside diameter of 17.5 feet.

The site is uniquely situated along the Fox River, where the Silo Project can potentially become a significant point of interest along the Fox River Trail. We understand that the Silo Site is part of the Village's overall vision for redevelopment of the adjacent park areas, with the creation of a central gathering spot at this location. The development of the site should consider the relationship and connectivity to the area around Village Hall, to the potential developments across State Street to the north, and to North Aurora Island immediately opposite the silo. The height of the structure can be utilized to strengthen North Aurora's identity along the Trail, with great potential to highlight this beacon with accent lighting.

Repurposing the silo offers a great opportunity for a playful recreational space with an impressive civic presence. For instance, a rooftop observation deck (with potential for intermediate look-out points) would offer spectacular views overlooking the Fox River, the Fox River Trail, and North Aurora Island Park. A recreational use, such as a climbing wall, could be complimentary to the existing trail. A further possibility could be exhibition space, for public art and/or interpretive exhibits on North Aurora and the Fox River.

We further understand that the Village of North Aurora would like to use this opportunity to transform and integrate the existing structure into the natural and built environments. The surrounding area could be enhanced with site amenities such as an outdoor seating area, a gathering space, fishing outposts, a kayak launch at the river, or other site improvements designed to connect the seating area and silo to the riverfront, Harner's restaurant, the adjacent public parking lot, and the Fox River Trail.

As discussed, we understand that the project will likely be completed in phases, to accommodate funding streams. Our team will work with the Village and identified Stakeholders to develop a comprehensive masterplan, which will include phasing recommendations. We further understand that approximately \$500,000.00 is available for construction in 2018 and the first phase of construction should fit within that budget amount.

BASE SCOPE OF SERVICES

M+M shall render the following professional services relating to the subleased space:

Masterplan Phase

1. Site Conditions Analysis

- a. Perform a Design Level Topographical Survey of the Silo site.
- b. Conduct site analysis of the area surrounding the silo, documenting features of the surrounding area, to determine the potential uses and options for development of the site. Site investigation will include full review of waterway requirements of both State and Federal agencies pertinent to this location.
- c. Review existing conditions documentation and review proposed concept plans for adjacent Village-owned parcels.
- d. Perform a condition assessment on the silo including both visual and detailed testing surveys. Reference **Appendix 1** for details of assessment.
- e. Perform structural analysis on existing silo and proposed designs, providing recommended rehabilitation and design strategies. Reference **Appendix 1** for details of analysis and recommendations.

2. Strategic Plan Charette

- a. Engage elected officials at their Wednesday November 29, 2017 strategic planning session:
 - i. Facilitate a 2-hour discussion with elected officials to gain an understanding of their goals for the project.
 - ii. Present preliminary findings of the Site Conditions Analysis.
 - iii. Review precedent images assemble and to collect feedback on potential concepts.
 - iv. Review preliminary site-specific concepts/ideas.
 - v. Determine goals and directions of the desired program for the space and extent of desired site intervention.
 - vi. Document discussions, feedback, and findings from the workshop.

3. Preliminary Concept Development and Workshop

- a. Discuss feedback received from strategic planning and preliminary phasing strategies with Village project team.
- b. Based on staff feedback and feedback received from Strategic Plan Charette, develop up to three concept options, including plans, sketches, digital model and optional 3-D printed model.
- c. Develop a preliminary phasing approach for each concept.
- d. Develop an order of magnitude opinion of probable construction cost for each option.
- e. Prepare for and attend Workshop with Stakeholders to present development on concepts.
- f. If requested, prepare for and provide presentation to the Village Council.

4. Final Concept Development and Presentations

- a. Based on feedback received from Workshop , refine selected concept.
- b. Refine phasing approach for selected concept.
- c. Refine order of magnitude opinion of probable construction cost for selected option.
- d. Prepare for and attend presentation with Stakeholders to present refinements to selected concept.
- e. If requested, prepare for and provide presentation to the Village Council.
- f. Provide updates to final concept, based on feedback received at Presentations.

5. Final Masterplan Deliverable

- a. Prepare compile and submit electronically and hard copy an 11 x 17 booklet, containing:
 - i. Site Analysis of existing conditions
 - ii. Silo Structural Investigation
 - iii. Project Narrative, describing process, program, and option selected

- iv. Proposed Site Plan
- v. Multiple Sketch-Level Views
- vi. Phasing Plan
- vii. Opinion of Probable Construction Cost (by phase)

ADDITIONAL SERVICES

Public Involvement

We have limited our Public Involvement to two presentations to the Village Council. We can provide additional public presentations and workshops as an additional service, including:

- 1. Preparation for and conducting of one public workshop.
- 2. Preparation of summary document from the public workshop.
- 3. Preparation for and provide one follow-up public presentation.

Additional Presentation Materials

We have limited our presentation materials to sketch-level views taken from a digital model. We can provide additional presentation materials, as an additional service, including:

- 1. Photo realistic renderings
- 2. 3-D Printed Models

Phase I - Detailed Design and Construction Administration

As noted, we understand that the first phase of construction will need to be accommodate within the Village's initial budget of approximately \$500,000.00. Subject to masterplan verification, this phase might include decorative Silo lighting, site improvements, and potentially limited improvement to the Silo structure. Scope will be further defined, based on completion of Masterplan. Below are the typical steps M+M would propose for this project type. Depending on the findings of the masterplan, these steps are subject to modification.

- 1. Detailed Design Services:
 - a. Contract Development and preparation of bid related documents:
 - i. Develop drawings, specifications, and project manual suitable for public bidding.
 - ii. Provide Construction Documents for the following disciplines: Architecture, Civil, Landscape, Structural, Lighting, Mechanical, and Electrical (Pending development of the Masterplan, additional disciplines might be requested: Telecommunications, Plumbing, and Fire Protection).
 - iii. Provide in-progress reviews at the approximate 60% and 90% completion milestones, for review by Stakeholders (or otherwise agreed to milestones).

- iv. Update opinion of probable construction costs.
 - v. Review plans with permit officials.
 - vi. Conduct in-progress review meetings with Stakeholders and solicit feedback.
- b. Bidding Phase
- i. Issue Bid Documents, following standard North Aurora protocol (or applicable funding agency standards).
 - ii. Provide attendance at a pre-bid conference.
 - iii. Respond to bidder's inquiries and issue addenda, if required.
 - iv. Review bids submitted and provide recommendation of award to the Village.
2. Construction Administration Services:
- a. Coordinate permit application.
 - b. Provide attendance at construction meetings.
 - c. Review Contractor submittals.
 - d. Provide responses to Contractor's Request for Information (RFIs).
 - e. Review contractor's pay application.
 - f. Review work for general conformance with the Contract Documents.
 - g. Meet with the Village Council, if requested.
 - h. Provide punch list review and substantial completion review.
 - i. Review Contractor's Close-out Documents.

Phase II – Detailed Design and Construction Administration

Phase II envisions full implementation of the masterplan. Scope of services for phase II can be further detailed after acceptance of the masterplan.

BASE COMPENSATION

For the Basic Scope of Services identified, M+M shall be compensated on an hourly not to exceed (plus estimated reimbursable expenditures) basis of sixty-three thousand seven hundred sixty-two dollars and ninety-eight cents (\$63,762.98), broken down as indicated on the attached.

We shall be reimbursed for expenditures made by us, and our consultants, specifically for this project such as: equipment rental, materials testing, reproduction/printing of documents, postage, messenger/courier services, long distance communication, mileage, parking, transportation, and other similar expenses. Reimbursable expenditures will be invoiced at cost. For this project we have estimated the following reimbursable allowances:

- Misc. Travel and Printing \$800.00
- Structural Assessment Direct Costs \$12,050.00

Reimbursable allowances identified are subject to revision based on actual field conditions encountered and based on market fluctuations outside of our control, which may require an adjustment to our not-to-exceed total, and subject to pre-approval by the Village.

ADDITIONAL SERVICES COMPENSATION

For the Additional Services identified, M+M shall be compensated as follows:

- Public Involvement: \$4,400.00
- Additional Presentation Materials: \$6,000.00 (estimated)
- Phase I - Detailed Design and Construction Administration: Compensation TBD, Dependent on Masterplan Development.
- Phase II - Detailed Design and Construction Administration: Compensation TBD, Dependent on Masterplan Development.

ASSUMPTIONS AND CLARIFICATIONS

In addition to the scope of services outlined, this proposal is also based on the following Assumptions and Clarifications:

1. Permit fees are not included.

TERMS AND CONDITIONS

Access to Site:

Unless otherwise stated, the Consultant will have access to the site for activities necessary for the performance of the services. The Consultant will take precautions to minimize damage due to these activities, but has not included in the fee the cost of restoration of any resulting damage.

Dispute Resolution:

This contract shall be governed and construed in accordance with the laws of the State of Illinois. Venue and jurisdiction for any legal action arising out of or related to this Agreement shall be exclusively fixed in the Kane County Circuit Court, Kane County, Illinois.

Billings/Payments:

Invoices for the Consultant's services shall be submitted, at the Consultant's option, either upon completion of such services or on a monthly basis. Invoices shall be payable within 30 days after the invoice date. If the invoice is not paid within 30 days, the Consultant may, without waiving any claim or

right against the Client, and without liability whatsoever to the Client, terminate the performance of the service. Retainers shall be credited on the final invoice.

If the Consultant seeks to impose any change in the fee schedule (whether in terms of hourly fee or lump sum fees), then the Consultant shall provide not less than 15 days written notice of its intent to change its fee schedule, and any such change in fee schedule shall require the approval of the Village Administrator.

Late Payments:

Accounts unpaid 60 days after the invoice date may be subject to a monthly service charge of 1.5% (or the legal rate) on the then unpaid balance. In the event any portion or all of an account remains unpaid 90 days after billing, the Client shall pay all costs of collection, including reasonable attorney's fees.

Indemnification:

Consultant shall indemnify and hold harmless the Village and Village's agents, servants, and employees against all loss, damage, taxes, liabilities, charges or expense, including but not limited to attorneys fees and court costs, which the Village may sustain or for which it may become liable on account of injury to or death of persons, or on account of damage to or destruction of property resulting from the performance of work under this agreement by Consultant or its SubConsultants, due to or arising in any manner from the intentional or wrongful act or negligence of Consultant or its SubConsultants of any employee of any of them.

Insurance Requirements

1. All Consultants and All Contracts.

Consultant shall provide any and all insurance required under any applicable law, regulation, statute or ordinance, including but not limited to Workers' Compensation insurance, unemployment insurance, automobile liability insurance and other legally required insurance. Consultant shall produce a certificate evidencing current coverage, upon request from the Village. Consultant shall indemnify and hold harmless the Village from any and all liability, damage, cost or expense which the Village may incur or be liable to pay as a result of any and all accidental injuries or damages suffered by the Consultant or its employees (in addition to any other required indemnification or insurance from Consultant).

2. Certificates and General Conditions.

Unless otherwise indicated herein, any certificate of insurance shall further indicate that the Village is additional primary insured on such policy of insurance, shall indicate that such policies shall not have any right of subrogation against the Village or the Village's insurers, and shall indicate that said policy shall not be cancelled or revoked except after the provision of not less than thirty (30) days' notice to the Village. Consultant shall maintain said policy in full force and effect for the duration of this agreement, and shall periodically provide updated certificates of insurance to evidence continuing coverage in compliance herewith. For purposes of this agreement and insurance provided hereunder, the "Village" shall include the Village of DeKalb, its employees, appointed and elected officers, its committees, its attorneys, and all corporate bodies that exist as a subsidiary to the Village.

3. Comprehensive General Liability Coverage Requirements.

Unless this Section 3 of Exhibit E is clearly marked out as being inapplicable, Consultant shall also be required to provide the Village with a Certificate of Insurance, in a form and from an issuer acceptable to

the Village, indicating that the Consultant has obtained and maintains comprehensive general liability insurance with policy limits of not less than One Million Dollars (\$1,000,000) per person / Two Million Dollars (\$2,000,000) per occurrence. This insurance shall include independent Consultants' protective liability, products and completed operations broad form property damage coverage. The completed operations and products liability coverage shall be maintained for at least two years after final payment. The coverage shall also include contractual liability insurance coverage for the Consultant's obligations to indemnify and hold harmless the Village and the Village Indemnitees.

4. Professional Liability Insurance Coverage / Errors & Omissions Insurance Coverage.

a. Professional Liability / Malpractice. Consultant shall also be required to provide the Village with a Certificate of Insurance, in a form and from an issuer acceptable to the Village, indicating that the Consultant has obtained and maintains professional liability or malpractice insurance with policy limits of not less than One Million Dollars (\$1,000,000) per person / per occurrence. Said policy need not identify the Village as additional primary insured.

b. Errors & Omissions Insurance Coverage. Consultant shall also be required to provide the Village with a Certificate of Insurance, in a form and from an issuer acceptable to the Village, indicating that the Consultant has obtained and maintains errors & omissions insurance with policy limits of not less than One Million Dollars (\$1,000,000) per person / per occurrence. Said policy need not identify the Village as additional primary insured.

5. Indemnification.

The policy limits availability or unavailability of insurance coverage or the applicability of claims, defenses or limitations based upon applicable law (including but not limited to the Illinois Workers' Compensation Act or similar laws or statutes) shall in no way limit the Consultant's obligation to indemnify and hold harmless the Village from any claims for damage, liabilities or other costs arising out of or relating to the Consultant's work or this Agreement.

EACH CERTIFICATE OF LIABILITY INSURANCE SHALL REFERENCE THE SPECIFIC PROJECT IN THE ADDITIONAL INSURED FIELD AND MUST BE PROVIDED DIRECTLY TO THE VILLAGE REPRESENTATIVE.

Certifications: Executing this Agreement constitutes acknowledgment, acceptance, and certification of the accuracy of the following certifications, and any other certifications required under any applicable law relating to the performance of this Agreement. The Consultant is responsible for identifying all such applicable regulations and certifications, and for compliance with the same.

Sexual Harassment: The Consultant certifies that it is in compliance with the Illinois Human Rights Act 775 ILCS 5/1.101, et seq. including establishment and maintenance of sexual harassment policies and program.

Tax Delinquency: The Consultant certifies that it is not delinquent in payment of any taxes to the Illinois Department of Revenue in accordance with 65 ILCS 5/11-42.1, and is not delinquent in the payment of any tax, charge or obligation to the Village of DeKalb.

Anti-Bribery: The Consultant certifies it is not barred under 30 Illinois Compiled Statutes 500/50-5(a) - (d) from contracting as a result of a conviction for or admission of bribery or attempted bribery of an officer or employee of the State of Illinois or any other state.

Felony Certification: The Consultant certifies that it is not barred pursuant to 30 ILCS 500/50-10 from conducting business with the State of Illinois or any agency as a result of being convicted of a felony.

Barred from Contracting: The Consultant certifies that it has not been barred from contracting as a result of a conviction for bid-rigging or bid rotating under 720 ILCS 5/33E-3 (Bid Rigging) or 720 ILCS 5/33-4 (Bid Rotating) or a similar law of another state or of the federal government.

Non-Discrimination, Certification, and Equal Employment Opportunity: The Consultant agrees to comply with applicable provisions of the Illinois Human Rights Act (775 Illinois Compiled Statutes 5), the U.S. Civil Rights Act, the Americans with Disabilities Act, Section 504 of the U.S. Rehabilitation Act and the rules applicable to each. The equal opportunity clause of Section 750.10 of the Illinois Department of Human Rights Rules is specifically incorporated herein. The Consultant shall comply with Executive Order 11246, entitled Equal Employment Opportunity, as amended by Executive Order 11375, and as supplemented by U.S. Department of Labor regulations (41 C.F.R. Chapter 60). The Consultant acknowledges that neither it nor the Village shall discriminate on the basis of any protected classification.

Authorized in Illinois: The Consultant covenants that it is authorized to lawfully transact business in the State of Illinois, under all applicable Illinois laws and regulations. The Consultant certifies that it shall comply with the Corporate Accountability for Tax Administration Act, 20 ILCS 715/1, *et. seq.* Where applicable, the Consultant certifies that it is not barred from bidding by virtue of having been adjudicated to have committed a willful or knowing violation of Section 42 of the Environmental Protection Act within the five years preceding this bid, pursuant to 415 ILCS 5/1, *et. seq.* The Consultant further certifies that it is in compliance with all applicable requirements of the Business Enterprise for Minorities, Females and Persons with Disabilities Act, 30 ILCS 575/1, *et. seq.*

General Compliance and Certification: The Consultant certifies that it has and will comply with all other applicable laws, regulations, ordinances or restrictions applicable to any component of the bidding process, agreement, or any services or materials provided in connection therewith. The Consultant acknowledges that it is responsible for identifying and complying with all applicable laws, ordinances, rules and regulations, and that it shall indemnify and hold harmless the Village of North Aurora from any claim, liability or damages arising out of the failure to identify or comply with any such applicable legal restriction. The Village reserves the right to, cancel any contract or pursue any other legal remedy deemed necessary should it become aware of any violation of any laws, ordinances, rules or regulations on the part of the Consultant or any subconsultant.

The Consultant shall not be required to execute any document that would result in its certifying, guaranteeing or warranting the existence of conditions whose existence the Consultant cannot ascertain.

Additional Services/Change in Services:

If any additional services and or change/modifications to Consultant's scope of services are proposed by Client, Consultant shall, upon receipt of such written change or modification, determine the impact on both time and compensation and notify Client in writing. Upon agreement between Client and Consultant as to the extent of said impacts to time and compensation, an amendment to this agreement shall be prepared describing such changes. Execution of the amendment by Client and Consultant shall constitute the Consultant's notice to proceed with the changed scope.

Termination of Services:

This agreement may be terminated by the Client or the Consultant at any time with or without cause upon giving the other party thirty (30) calendar days prior written notice. The Client shall within thirty (30) calendar days of termination pay the Consultant for all services rendered and all costs incurred up to the date of termination, in accordance with the compensation provisions of this contract. The Consultant will turn over all project related files in hard copy and editable electronic formats to the Village of North Aurora.

Ownership of Documents:

All documents produced by the Consultant under this agreement shall be the property of the Village of North Aurora and shall be provided in electronic or editable formats at the request of the Village of North Aurora. The Consultant shall have the right to retain original documents. The Client shall not reuse or make any modification to the construction documents without the prior written authorization of the Consultant. The Client agrees, to the fullest extent permitted by law, to indemnify and hold harmless the Consultant, its officers, directors, employees and subconsultants against any damages, liabilities or costs arising from or in any way related to or connected with the unauthorized reuse or modification of the documents by the Client or any person or entity that acquires or obtains the documents from or through the Client without the written authorization of the Consultant.

Jobsite Safety:

Neither the professional activities of the Consultant, nor the presence of the Consultant or its employees and subconsultants at a construction/project site, shall impose any duty on the Consultant, nor relieve the General Contractor of its obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending and coordinating the Work in accordance with the Contract Documents and any health or safety precautions required by any regulatory agencies. The Consultant and its personnel have no authority to exercise any control over any construction contractor or its employees in connection with their work or any health or safety programs or procedures. The Client agrees that the General Contractor shall be solely responsible for jobsite and worker safety and warrants that this intent shall be carried out in the Client's contract with the Contractor.

Standard of Care

In providing services under this Agreement, the Consultant shall perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances at the same time and in the same or similar locality.

Municipal Advisor Exclusion

In providing services under this agreement, the Consultant is not acting as a municipal advisor as defined by the Dodd-Frank Act. The Consultant will not offer advice regarding any municipal financial products or securities. Any advice or recommendations provided by the Consultant is intended as Architectural Design Services and not to be interpreted as advice regarding municipal financial products or services. The Client must, via contract, retain the services of a registered municipal advisor for any advice it seeks regarding municipal financial product and securities. The Consultant does not owe Client a fiduciary duty in the delivery of Design Services.

We greatly appreciate your consideration and look forward to the opportunity to work with you. If you need any additional information or require further discussion, please do not hesitate to contact Kaitlin Streyle at kstreyle@muller2.com or 312 312.7703

Sincerely,

CONSULTANT

Muller & Muller, Ltd.

CLIENT

APPROVED AND ACCEPTED

Village of North Aurora

By: _____

Title: _____

Date: _____

Cynthia B. Muller, AIA

President

Attachments: Appendix 1 – Structural Assessment Scope
Pricing Breakdown

1. SILO CONDITION ASSESSMENT

Simpson Gumpertz & Heger Inc. (SGH) will perform a condition assessment of the silo concrete structure to assess the existing conditions, and to determine the extent, degree, severity, and nature of deterioration. We anticipate that this phase will include two days on site for our staff. The assessment work will include the following:

1.1 Document Review and Project Start-Up

SGH will review available documentation on the silo structure for pertinent information. This task includes the preparation of field sheets needed to complete the condition assessment. We will also develop a work plan for the condition assessment and establish a schedule with the Village of North Aurora and a contractor. We anticipate needing access to the parking lot of Harner's Bakery and the bike path adjacent to the site.

1.2 Visual Condition Survey

We will perform a visual condition survey of the exterior silo structure using binoculars and an aerial boom lift to assess the existing conditions and determine the degree of concrete deterioration. We will review the exposed, accessible concrete surfaces of the silo structure to identify and document the location, extent, and nature of visible deterioration. We will note deterioration on elevation sheets for use in preparation of drawings for the rehabilitation phase.

For the silo interior, we propose to access the interior of the silo with contractor assistance. We plan to illuminate the interior with high powered work lights. The visual survey will be performed at arms-length near grade and by using binoculars for viewing the higher elevations. We do not plan to access the upper elevation in the interior, as interior access is unknown at this stage and likely difficult in the confined space.

1.3 Detailed Condition Survey

We will select three locations from our visual survey to perform a detailed condition survey on the silo structure. These conditions will be representative of "good" to "poor" areas, in order to assess the existing conditions and determine the degree of concrete deterioration. This work will generally consist of the following:

- **Nondestructive Testing:** Perform nondestructive testing (NDT) on select concrete surfaces. Nondestructive test methods consist of ground penetrating radar (GPR) or cover meter surveys to determine spacing and depth to existing reinforcement. Depth to the existing reinforcement can influence the selected rehabilitation strategy.
- **Limited Destructive Testing:** Make small openings in the concrete to verify and calibrate the selected NDT test. These openings will primarily be used to verify reinforcement size and concrete cover. Field carbonation tests will also be conducted on freshly broken concrete surfaces.
- **Delamination Survey:** Mechanically sound accessible concrete surfaces focusing on distressed locations in the selected areas. Sounding allows us to identify regions of

delaminated concrete, incipient spalling, and general soundness of the concrete in the structure.

- **Concrete Core Removal:** At each detailed survey area, we will remove one or two concrete core samples for laboratory work. These samples will provide us with additional information regarding the depth of carbonation and general concrete quality. We will require contractor support for procuring cores and patching the core holes.

Contractor assistance is required to provide lighting, power, and access to portions of the concrete walls. This is listed within our expense summary.

1.4 Concrete Compressive Strength

Selected concrete core samples will be tested to establish the in-place compressive strength. This information will be used later in any analysis of the silo to resist code-prescribed loadings.

1.5 Petrographic Examination

We will examine all of the samples in our Materials Laboratory to characterize the nature and overall quality of the concrete, including depth of carbonation. We will select two representative cores for full petrographic analysis, which involves the microscopic observation of the concrete in order to evaluate its general quality, including the characteristics of the air void system, the depth of carbonation, the condition of the cement paste, the soundness of the aggregate, and the water/cement ratio.

Because of the strong effect on future corrosion, we will determine the depth of the carbonation front from the concrete surface within the samples at different locations. The degree of carbonation will be determined to be considered in the development of rehabilitation strategies and materials.

2. REHABILITATION AND DESIGN

2.1 Rehabilitation Strategy & Recommendations

We will prepare rehabilitation strategy recommendations for the differing conditions observed on the silo. If corrosion or concrete carbonation are deemed critical, we will likely recommend application of a penetrating corrosion inhibitor or a film-forming coating.

We will review the findings of the condition assessment with the design team and the Village, and provide recommendations for the rehabilitation work. Our review will be in the form of a brief presentation, summarizing our findings and recommendations to facilitate discussion and collectively determine the rehabilitation approach.

2.2 Masterplan Design Support

We will use our knowledge gained in the previous phase to provide input and recommendations to the Architecture team for design proposals for the silo structure including, but not limited to attaching exterior lights, exterior coating, and viability of public occupancy.

We will provide assistance and recommendations to the Architecture team on design proposals occurring outside the footprint of the silo structure.

- **Work in Future Project Phases**
- Structural analysis of existing silo
- Refined repair strategies
- Rehabilitation contract documents
- Soil borings & geotechnical report
- Design of new structures / structural elements
- Contract documents for new structure(s)

Village of North Aurora
 Silo Masterplan and Structural Assessment
 Fee Breakdown Summary
 November 22, 2017

| 1. Site Conditions Analysis | Hours | Fee |
|------------------------------------|-------|-------------|
| M+M | 16 | \$ 1,336.88 |
| WBK | 26 | \$ 3,638.00 |
| SGH | 0 | \$ - |
| Hitchcock | 0 | \$ - |
| Calor | 0 | \$ - |
| Schuler Shook | 4 | \$ 580.00 |
| Sub Total | 46 | \$ 5,554.88 |

| 2. Strategic Plan Charette | Hours | Fee |
|-----------------------------------|-------|-------------|
| M+M | 30 | \$ 3,329.88 |
| WBK | 0 | \$ - |
| SGH | 0 | \$ - |
| Hitchcock | 0 | \$ - |
| Calor | 0 | \$ - |
| Schuler Shook | 0 | \$ - |
| Sub Total | 30 | \$ 3,329.88 |

| 3. Preliminary Concept Development and Workshop | Hours | Fee |
|--|-------|--------------|
| M+M | 116 | \$ 11,538.32 |
| WBK | 0 | \$ - |
| SGH | 0 | \$ - |
| Hitchcock | 0 | \$ - |
| Calor | 0 | \$ - |
| Schuler Shook | 0 | \$ - |
| Sub Total | 116 | \$ 11,538.32 |

| 4. Final Concept Development and Presentations | Hours | Fee |
|---|-------|-------------|
| M+M | 60 | \$ 5,930.06 |
| WBK | 0 | \$ - |
| SGH | 0 | \$ - |
| Hitchcock | 0 | \$ - |
| Calor | 0 | \$ - |
| Schuler Shook | 12 | \$ 2,280.00 |
| Sub Total | 72 | \$ 8,210.06 |

| 5. Final Masterplan Deliverable | Hours | Fee |
|--|-------|-------------|
| M+M | 42 | \$ 3,989.84 |
| WBK | 8 | \$ 1,680.00 |
| SGH | 2 | \$ 500.00 |
| Hitchcock | 0 | \$ - |
| Calor | 0 | \$ - |
| Schuler Shook | 12 | \$ 2,280.00 |
| Sub Total | 64 | \$ 8,449.84 |

| Appendix Activities | Hours | Fee |
|----------------------------|-------|--------------|
| M+M | | |
| WBK | | |
| SGH | 73 | \$ 13,830.00 |
| Hitchcock | | |
| Calor | | |
| Schuler Shook | | |
| Sub Total | 73 | \$ 13,830.00 |

| Base scope totals | Hours | Fee |
|--------------------------|-------|--------------|
| M+M | 264 | \$ 26,124.98 |
| WBK | 34 | \$ 5,318.00 |
| SGH | 75 | \$ 14,330.00 |
| Hitchcock | 0 | \$ - |
| Calor | 0 | \$ - |
| Schuler Shook | 28 | \$ 5,140.00 |
| Total | 401 | \$ 50,912.98 |

Plus Reimbursables/Direct Costs Below

| Reimbursable Expenses | Unit | Cost |
|------------------------------|-----------|-----------|
| Misc. Travel and Printing | Allowance | \$ 800.00 |
| | | \$ 800.00 |

| Structural Assessment Direct Costs | | |
|---|-------------|--------------|
| Equipment | | |
| 125 ft. manlift | week | \$ 3,000.00 |
| Contractor Assistance | estimate | \$ 1,000.00 |
| Drone (for roof) | estimate | \$ 500.00 |
| NDT Equipment | estimate | \$ 450.00 |
| Material Testing | | |
| Concrete core removal | 6 cores | \$ 1,500.00 |
| Compressive strength | 4 cores | \$ 400.00 |
| Petrography work | 2 cores | \$ 3,700.00 |
| Report from testing lab | estimate | \$ 1,000.00 |
| Shipping material | estimate | \$ 100.00 |
| Geotechnical Sub-Consultant | | |
| Soil Boring & Report | 2 locations | NA |
| Travel | | |
| Mileage, meals, tolls, etc. | estimate | \$ 400.00 |
| | | \$ 12,050.00 |

Total Base Services Costs \$ 63,762.98

Additional (Optional) Services

| | | |
|----------------------------------|------|-------------|
| 3-D printed model | Each | \$ 2,400.00 |
| Photo Quality Renderings | 2 | \$ 3,600.00 |
| Optional Public Meeting/Workshop | Each | \$ 4,400.00 |