



**City of Kawartha Lakes
Purchasing Department**
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Emergency Procurement Approval Form

Notwithstanding the provisions of the Purchasing Policy, the following shall only apply in case of an emergency, when an event occurs that as determined by a Director or the CAO or the CSD to be:

- a threat to public health;
- the welfare of persons or of public property; or
- the continuity of service is at risk and the occurrence requires the immediate delivery of goods and services and time does not permit for a competitive procurement process.

Once the emergency is declared, the Emergency Procurement Approval Form is completed immediately and depending on the above criteria, the requirements for procurement will be determined as follows:

Procurement under \$100,000.00:

Goods and services shall be secured by the most suitable procurement process as determined by the Director and Corporate Services Manager, Financial Services at the lowest obtainable price and where time is of the essence. When possible, the Purchasing Division may maintain a list of vendors to call in the event of an Emergency Procurement.

Procurement equal to or greater than \$100,000.00:

A procurement process deemed appropriate to the situation will be used to mitigate the risk of the emergency at hand and will be determined by the CAO or the CSD, Director and Corporate Services Manager, Financial Services. Complex, on going situations will be reviewed as soon as the occurrence has been safely secured and a subsequent procurement process may be used to provide a permanent solution to the consequence of the emergency.

An information report shall be submitted for all emergency procurement spending $\geq \$100,000.00$, per incident, to Council by the Corporate Services Manager, Financial Services at the earliest possible date.

Name: Richard Monaghan
Department/Division: Public Works - Roads
Date: May 16, 2017

1. Emergency Situation:

This emergency procurement encompasses two similar but independent projects.

Hartley Depot Sand Dome and Salt Shed Demolition.

These structures were inspected in late 2016 and revealed that these structures are well past their useful life expectancy and considered a present hazard until they can be demolished. These structures cannot be economically rehabilitated as is and replacement would be a less costly option. Operationally this depot is not fully utilized and the demolition of both structures is recommended.

Lindsay Salt Shed Rehabilitation. *design to admin + rehabilitation*

This structure was inspected in late 2016 and revealed the shed is clearly not structurally adequate due to the severe and widespread damage and deterioration of the roof structure. The continued use of this structure for winter maintenance requires immediate rehabilitation.

2. Specifications/Requirements:

Hartley Depot Sand Dome and Salt Shed Demolition.

Appendix A – Inspection report of the Hartley Depot Sand Dome

Appendix B – Inspection report of the Hartley Depot Salt Shed

Appendix C – Informal RFQ released for the Demolition of both structures includes all specifications of this project.

Lindsay Salt Shed Rehabilitation.

Appendix D – Inspection report for the Lindsay Depot Salt Shed

Appendix E – Proposal from James Knight and Associates for design and specifications for construction tender process.

DIRECTOR: _____

CORP. SERV.
DIRECTOR: _____

APPROVAL

CORP SERV.
MGR, FS: _____

3. Financial Considerations:

Hartley Depot Sand Dome and Salt Shed Demolition.

Appendix F – Received Informal RFQ package from Everson Excavating Ltd. for \$30 750.00, a \$5000 contingency requested for this project. Total project cost is \$35 750.00 991170301

Lindsay Salt Shed Rehabilitation.

The design and specifications proposal (Appendix E) from James Knight and Associates provides a cost of \$7 200.00 to prepare tender documents for this project as well as structural inspection of the work. James Knight and Associates provided a cost estimate (Appendix D) of \$25 000 for the construction work associated with this project. A \$10 000.00 contingency is requested for this project. Total project cost is \$42 200.00 991170302

Capital budget for both of these projects does not exist but as per the structural inspections carried out after the 2017 Capital budget was established, both of these projects are immediate needs.

It is recommended that the following existing Capital projects be closed to accommodate this emergency procurement:

1. Fenelon Depot Sand Dome - \$65 000.00 (Project 991170202) be closed as per structural inspections carried after capital budget approval revealed this project to not be an immediate need.
2. Oakwood Depot Secure Storage Expansion - \$32 585.27 remaining (Project 991160701) be closed as work has been completed and due to a creative engineering solution was done significantly under budget.

Total Capital Budget being closed through this request \$97 585.27. Total Capital budget being requested \$77 950.00. Amount returned to Capital Reserves \$19635.27.

Hartley Vendors asked to quote. and quote \$37,000
2 - no bid & 1 no response - all attached back ground

looked at by H. J. Engler M. J. Engler May 19/17

SRN Number:	Report to Council Reg'd to close projects
Capital Project Number:	as recommended by dept. Upon Council
GL Number:	approval funding will be recorded.
Budget \$	New Codis setup to allow work to proceed. May 29/17

APPROVAL

DIRECTOR:

CORP. SERV.
DIRECTOR:

CORP SERV.
MGR, FS:

Balance Available: \$	
Taxes Payable and	
Remaining Budget: \$	

Estimated Cost of Emergency Request: \$77 950.00

DIRECTOR: 

CORP. SERV.
DIRECTOR: _____

APPROVAL

CORP SERV.
MGR, FS: _____

JAMES KNIGHT & ASSOCIATES PROFESSIONAL ENGINEERS

POB 273 ST. GEORGE ONTARIO CANADA N0E 1N0
519 448 3548 FAX 519 448 4657 (cell) 905 691 6489
jkwoodeng@sympatico.ca

January 31, 2017

Mr. Oliver Vigelius
Manager, West Maintenance Area (Lindsay) and Capital Projects
Public Works - General Operations
The City of Kawartha Lakes
12 Peel Street
POB 9000
LINDSAY, Ontario
K9V 5R8

**Re: Inspection of (Former) Salt Shed
Lindsay Works Yard
The City of Kawartha Lakes**

Dear Mr. Vigelius:

I have completed field inspection of the (former) salt shed at the City's Lindsay Works Yard at 89 St. David Street. This inspection was made to locate, identify and assess any distress, deterioration and/or vehicle damage that may exist within the shed.

Field investigation was undertaken on August 3, 2016, pursuant to your February 29, 2016 email instructions, your March 5 telephone request, the City's Purchase Order No. 30755 and related correspondence.

This is the Report of my findings, opinions and recommendations.

1.0 Description, Background and Limitations

1.1 Description

At grade the Lindsay shed is ~24 ft. wide north-south by ~26 ft. long east-west. The shed's roof is extended and cantilevered a further ~5 ft. to the east to provide protection from the weather at the doorway. That doorway is created by leaving the east end open. The shed's wood-framed superstructure is gable-roofed with the roof ridge running east-west. The 12 ft. high stud walls provide 16 ft. clearance to the underside of structure.

The shed is supported atop a 4 ft. concrete wall whose founding condition is unknown. The shed floor is a slab floating at grade. As originally used the concrete wall also served to retain salt for its full height.

1.2 Background

The age and provenance of the shed are unknown. Moreover, engineering drawings of the shed are not available.

As background, it is the writer's understanding that in the years immediately preceding and immediately following 2000 salt sheds that are similar to this Lindsay shed were built at seven City yards: Burnt River, Cameron, Carden, Eldon, Emily, Oakwood and Sturgeon Point. The conceptual design for those standard sheds was produced in-house and provided to contractor(s) for construction. There was no detailed structural design by an engineer, albeit the roof trusses would have been engineered to conform to the structural requirements of the Ontario Building Code, hereinafter the "Code".

The Lindsay shed is very similar to the aforementioned seven KWL standard sheds. However, it differs in three distinct ways:

- a) The Lindsay shed is somewhat smaller in plan.
- b) The concrete side walls are extended ~4 ft. south beyond the end of the stud wall, with such extensions being oriented at ~45 degrees, i.e., the opening between the end of the walls is ~6 ft. greater than the clear width within the shed.
- c) The concrete walls are thinner and of constant thickness, i.e., not battered.

The process of design and acquisition is unknown, but it is likely to have been more or less as the preceding.

The shed was built to store de-icing salt. The corrosion of the truss plates per Section 3.3 below suggests that the shed was so used for a number of years. Latterly the shed has been used as dry storage of equipment and supplies. The plates' corrosion also suggests that this shed must pre-date those KWL standard sheds by at least a decade and probably by much more. Moreover, the relatively good condition of the steel cladding suggests that the shed may have been re-clad within the last decade or so.

1.3 Limitations

Inspection was made from grade inside and outside. The shed was sufficiently accessible that adequate and complete assessment was possible. Hence the findings and the estimated costing herein are adequate and sufficient for the City to determine the action that is to be taken re this shed.

2.0 Steel Cladding

2.1 Generally speaking, and apart from No. 2.2 following, the steel cladding is in an adequate condition as befits material estimated to still be within the first half of its expected service life. Complete recladding should not be required prior to ~2040.

2.2 The following issues were noted requiring repair.

- a) At the doorway, the gable end cladding is bent, dented and punctured, and the trim on both wall extensions is bent, loose or lost.
- b) At the west end the base trim is bent and much of the trim at the roof level is loose or lost.
- c) The north wall cladding is locally bent and corroded at the base and some screws are corroded.
- d) The south wall cladding is locally corroded, some screws are corroded or broken, and the base trim is corroded.

Repairs are recommended to assure the shed's continued weatherproofness. Said repairs should be undertaken as part of a comprehensive rehabilitation project that also includes the structural work of Sections 3.3 and 3.4 below. In this regard it should be noted that undertaking the required structural work will of necessity entail additional work vis-a-vis the cladding.

3.0 The Structure

3.1 There are no significant distortions or deflections of the shed's overall profile, i.e., walls are plumb, roofs are plane, all meeting square, etc.

3.2 The concrete foundation wall is in generally good condition, albeit there are the usual scrapes, gouges, etc. that are common of foundation walls of this age and used in the manner of this shed. In my opinion general remedial work is not required for the foundation wall.

3.3 The following significant damage and deterioration was found.

- a) The connecting plates of all trusses are highly corroded and are no longer adequate. Some plates at some joints have failed. The load carrying capacity of all roof trusses is significantly compromised.
- b) The bottom chords of at least six trusses are broken due to vehicle damage. The load carrying capacity of all affected trusses is reduced to near zero.
- c) The hold-down anchors of all trusses are highly corroded and are no longer adequate.

This damage and deterioration is significant in that the structural competence of the roof structure is greatly compromised. Repair* is urgently required.

*Damage of a similar extent and severity in similar salt sheds elsewhere has usually been remedied by retaining the concrete and stud wall and replacing the entire roof structure. Such a repair protocol is assumed in the costing of Section 6.1.

3.4 Further to No. 3.3 above, other damage requiring attention was found.

- a) The structure of the west end wall is damaged by vehicular collisions. However, the extent and severity of such damage is unknown as the structure is hidden by the steel and plywood cladding.
- b) There are some holes through the interior plywood wall cladding and some sections are missing. Repairs to seal the openings are recommended to avoid the cavities being colonized as nesting sites by birds, rodents or insects.

I recommend that repairs be all be undertaken as part of a comprehensive program of rehabilitation that also includes the work of Sections 2.2 and 3.3.

3.5 The shed's ceiling is bird-netting. It is not effective, having been breached or lost in several places. I recommend that the netting be replaced with plywood (as has been done at most other City sheds of this type).

4.0 Storage of Materials

4.1 In the past the shed was loaded above the top of the concrete wall such that the stored salt was piled directly against the wood superstructure. This is bad practice and contrary to the assumptions and intent of the shed's design:

- a) It imparts loads to the wood superstructure for which it was not designed.
- b) Reclaim from such storage can impart vehicle loads to the wood superstructure for which it was not designed.
- c) Such storage creates conditions that are conducive to decay and/or other deterioration of the wood.
- d) Such storage creates conditions that promote corrosion of the nails and other fasteners.

In the event that the shed might be returned to service for salt storage operations should be conducted to ensure that the stored salt cannot contact the wood structure. Moreover, if the shed is to continue as dry goods storage then operations should be conducted to avoid contact with the wood structure.

4.2 No evidence was noted of asphalt, other materials and/or equipment having been piled against the exterior of the shed's foundation wall. Nor should the exterior face be used to retain materials as the wall was (presumably) designed to retain materials only on the inside. Hence storage of materials and/or

equipment against the outside face of the concrete foundation and/or the wood superstructure is to be avoided in that:

- a) Refer to (a) to (d) inclusive of Section 4.1 preceding.
- b) Such storage may impede run off, causing water to run under the sill plates and into the shed.
- c) Such storage interferes with clean-up of snow from around the shed base.
- d) Contact with granular materials, stored supplies and/or equipment will abrade, dent, tear and loosen the steel cladding.

I recommend that you conduct your outside storage practices to ensure that materials and equipment are not stored against or in close proximity to the shed.

5.0 Discussion

The Lindsay salt shed is estimated to be not less than 25 years old and may be much older. Overall the shed is in poor condition requiring extensive repairs to the wood structure and the cladding.

The shed's compliance with the structural requirements of the Code at the time of construction is unknown. Moreover, the compliance with the structural requirements of today's Code is also unknown. Notwithstanding this, and based on inspection alone, there is nothing about the shed's **design** to suggest any inadequacy and/or non-conformity with the Code. However, the as-found shed is clearly not structurally adequate due to the severe and widespread damage and deterioration of the roof structure. Repairs/strengthening are urgently required.

Regardless of the materials to be stored the shed's present and future operational utility is limited by its relatively small size, its low clearance and its relatively small doorway. Realistically nothing can be done to significantly improve either of these three limitations.

6.0 Options for Shed Rehabilitation

6.1 Rehabilitate As Is

Section 2.2 describes damaged steel cladding. Sections 3.3 and 3.4 respectively describe major and lesser repairs and/or strengthening required for the structure. I recommend that all be undertaken together as one comprehensive rehabilitation project.

I estimate that the costs associated with such immediate rehabilitation would be approximately \$30,000, as follows:

Replacement of roof structure including cladding.....	20,000
Allowance for repair of rear wall.....	2,500

Total
\$25,000

Allowance for other cladding/structural repairs.....2,500
Engineering, including design of repairs,
drawings, technical specifications, draft
commercial specifications and field review.....5,000
TOTAL.....\$30,000

6.2 Future Recladding and Rehabilitation

The shed will require complete recladding by ~2040* or shortly thereafter. At that time it is likely that some vehicle damage and/or material deterioration will also require repair.

*Some cladding repairs and structural repairs are likely to be periodically required as/when significant vehicle damage might occur. Also, this ~2040 date may well be deferred for some time depending upon the measures to be taken now re Section 6.1.

I estimate that the costs associated with such future recladding and remedial work would be approximately \$40,000, as follows:

Recladding.....25,000
Allowance for repair of damaged/decayed components....10,000
Allowance for modifications/improvements.....0
Engineering, including design of repairs,
drawings, technical specifications, draft
commercial specifications and field review.....5,000
TOTAL.....\$40,000

6.3 Provide Improved Doorway

The existing doorway is suitable as-is vis-a-vis in-load and out-load operations. Increasing the width and/or height is not needed, and would be neither practical nor cost-effective.

6.4 Raise Existing Concrete Foundation

The existing foundation was designed to retain salt to a maximum depth of 4 ft. Increasing the height of concrete (and depth of retained salt) would essentially entail replacement of the foundation, which is neither practical nor cost-effective.

6.5 Relocate Shed to a New Site

The shed was designed and constructed as a site-specific permanent structure with no requirement for it to be demountable. Relocation of the superstructure, either intact or as dismantled components is possible, but not cost-effective.

I trust all of the above to be as you require. Should you have any questions, or require anything further, please telephone me at 519 488 3548.

Yours very truly,

A handwritten signature in dark ink, appearing to be 'J. Knight', with a long horizontal stroke extending to the right.

James Knight, M.Sc.F., P.Eng.
16-840



JAMES KNIGHT & ASSOCIATES PROFESSIONAL ENGINEERS

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jkwoodeng@sympatico.ca

MEMORANDUM

May 2, 2017

To: Richard Monaghan, C.E.T.
Senior Engineering Technician
City of Kawartha Lakes - Public Works

Re: **Proposal for Engineering Services**
Rehabilitation of Dome @ Manvers Works Yard
Rehabilitation of (Former) Salt Shed @ Lindsay Works Yard
Replacement of Fabric Shed @ Lindsay Works Yard

This is my proposal for engineering services re the repair, reroofing, rehabilitation and/or replacement of:

- a) the 30 m dome at your Manvers works yard;
- b) the small wood-framed (former) salt shed at your Lindsay works yard; and
- c) the fabric-covered steel-framed salt shed at your Lindsay works yard.

This proposal is being sent by email on May 2, 2017 with the confirming signed original following by regular mail. It is in response to your email request of April 28, 2017

1.0 Preliminary Comments

1.1 I understand your intent to be that:

- a) All design drawings and specifications for the Manvers dome are to be completed and delivered as soon as possible in 2017 such that all necessary construction can be completed prior to the 2017-2018 winter season.
- b) All design drawings and specifications for the Lindsay wood-framed (former) salt shed are to be completed and delivered as soon as possible in 2017 such all necessary construction can be completed prior to the 2017-2018 winter season.
- c) Design drawings and specifications for the replacement Lindsay fabric-covered salt shed are to be completed and delivered in 2017 to facilitate demolition/construction occurring in 2018.

1.2 You will recall that the relevant inspections were undertaken in 2016. All buildings have since gone through one more year of use, abuse and wear and tear. So:

- a) At Manvers it is highly likely that some additional damage and/or deterioration may now exist. (I would not expect the extent of such additional damage/deterioration to be large.) Hence the contract for dome rehabilitation must include provision for additional repairs to be undertaken on a pre-approved Unit Price basis. This is as done previously re domes at your other yards.
- b) At Lindsay it is also likely that some additional damage and/or deterioration may now exist. However, both sheds were found to be so deteriorated in 2016 that any such additional damage will not affect the work to be done.

1.3 Further to No. 1.2, I have considered the option to reinspect the ~~Manvers~~ domes now so that any "new" damage might be captured in the specified Lump Sum work. I do not recommend this option be pursued in that:

- a) It will delay completion of documents, tendering and completion of the work by some weeks.
- b) It will add to the cost of the immediate engineering work, but with (little or) no commensurate reduction in costs of later engineering or construction.
- c) It will not reduce the amount or cost of field review. In other words, and per Section 6.3.2, an interim inspection and a final inspection will still be required.
- d) Further to (c), reinspection now will not necessarily identify all issues that are currently hidden by the existing shingles or the pile.

1.4 This proposal assumes that the work will be designed, tendered, contracted and constructed as three separate, discrete contracts. In this regard:

- a) If your request involved two or more "like" buildings there would be merit and savings in combining said like buildings into one contract.
- b) Contractors who do wood domes are specialized and few in number.
- c) Small sheds such as the Lindsay (former) salt shed are fodder for all manner of general contractors. Hence the tender and contract should allow for as broad a response as possible.
- d) Contractors who do fabric-covered sheds are highly specialized and limit their work to only such buildings. They too are few in number.
- e) It appears unlikely that the contracts might be tendered, awarded and actually constructed on the same schedule. Hence it is also unlikely that site visits re field review and/or other matters work might coincide.

- f) Further to (e), and in light of the intended schedule, all documentary work re Manvers and Lindsay (former) salt shed is likely to be completed well before that of Lindsay fabric shed. In this regard:
- i) There is lesser urgency re the fabric shed as construction cannot proceed prior to 2018.
 - ii) There are no issues re the Manvers dome or the Lindsay (former) salt shed requiring extensive research by me or input from the City.
 - iii) There will definitely be issues re the replacement Lindsay fabric shed that will require our research and your input, i.e., availability of drawings/data re the existing shed; required doorway size and/or end condition(s); wall height; clearances; etc. While such issues are not major it has been my experience that resolution of same can be time consuming.

2.0 Schedule

A schedule such as the following will normally prevail for work such as this:

- a) Allow up to four weeks for design, drawings, specifications and all deliverables to be delivered by me to the City.
- b) Preparation of tender package by the Owner, allow rarely less than three weeks.
- c) Tender period, allow not less than two weeks and probably three weeks if you wish a pre-tender site meeting.
- d) Time to award, varies from two to six weeks depending on your award process and particularly if council approval is required.
- e) Actual construction period, realistically we must allow at least eight weeks for each contract even though experienced, competent contractors will likely finish each within ~4 to ~6 weeks once work actually starts.

Past experience and the above suggest that if the process can start by late-May then a late-September completion can be realized depending on weather during the construction period, and on the successful contractor's workload.

3.0 Scope of Work

3.1 At Manvers the relevant Report is dated November 15, 2016. The scope of work is to be "Future Reroofing and Rehabilitation" of Section 8.2 plus the immediate structural repairs within Section 8.1.

3.2 At the Lindsay (former) salt shed the relevant Report is dated January 31, 2017. The scope of work is to be "Future Recladding and Rehabilitation" per Section 6.2.

3.3 At the Lindsay fabric shed the relevant Report is dated January 31, 2017. The scope of work is to be demolition and replacement of the existing shed with a new more or less "like" structure occupying more or less the same "footprint".

4.0 Engineering Work and Deliverables

4.1 Manvers Dome

4.1.1 A set of engineering drawings that are specific to the dome will be provided. (I expect that it will consist of three drawings, being one sheet of General Notes and two sheets of details.) These drawings will be supplied to the City as hard copy (full size and 11 X 17) as well as electronically in pdf format.

These dome-specific drawings will be included in the tender and in the contract exactly as provided, i.e., not modified in any way by the City.

4.1.2 One set of standard details will be supplied that specify repair details that are common to the City's domes. These drawings will be supplied to the City as hard copy (8 1/2 X 11) as well as electronically in pdf format.

These standard details will be included in the tender and in the contract exactly as provided, i.e., not modified in any way by the City.

4.1.3 A technical specification re materials and methods will be supplied re the dome. It will be supplied as camera-ready hard copy as well as electronically.

This technical specification will be included in the tender and in the contract exactly as provided, i.e., not modified in any way by the City.

4.1.4 A suggested tender package and commercial specification re the dome will be provided for the guidance of the City. The intent here is to indicate to the City all of the matters that need to be addressed in the tender document and contract that the City is to prepare.

Having previously completed the rehabilitation of other City domes I believe that the tender and contract package can best be handled by building on one of your past contracts. In this regard I shall:

- a) Make a copy of the most recent relevant past contract.
- b) Review the Contract, noting by number of where changes, additions and/or deletions are required.

c) Compile a list of changes, additions and/or deletions that are numbered to match (b).

d) Provide the City with copies of the marked-up contract of (b) and the list of (c).

Using the materials that I provide per the above the City would finalize the tender/contract document to conform to its current tendering/contracting practice.

4.2 Lindsay (Former) Salt Shed

4.2.1 A set of engineering drawings that are specific to the shed will be provided. (I expect that it will consist of three drawings, being one sheet of General Notes and two sheets of plans, sections, elevations and details.) These drawings will be supplied to the City as hard copy (full size and 11 X 17) as well as electronically in pdf format.

These shed-specific drawings will be included in the tender and in the contract exactly as provided, i.e., not modified in any way by the City.

4.2.2 The technical specification re materials and methods will be the General Notes on the drawings of No. 4.2.1. In my experience shed-rehabilitation contracts such as this do not require a separate technical specification.

4.2.3 A suggested tender package and commercial specification re the shed will be provided for the guidance of the City. The intent here is to indicate to the City all of the matters that need to be addressed in the tender document and contract that the City is to prepare.

Having previously completed the rehabilitation of other City domes and sheds I believe that the tender and contract package can best be handled by building on one of your past contracts. In this regard I shall:

a) Make a copy of the most recent relevant past contract.

b) Review the Contract, noting by number of where changes, additions and/or deletions are required.

c) Compile a list of changes, additions and/or deletions that are numbered to match (b).

d) Provide the City with copies of the marked-up contract of (b) and the list of (c).

Using the materials that I provide per the above the City would finalize the tender/contract document to conform to its current tendering/contracting practice.

4.2.4 In addition to the above and the field review of Section 5.0, we would undertake shop drawing review, liaison with Owner and Contractor, etc. all as required to complete the project.

4.3 Lindsay Replacement Fabric Shed

4.3.1 The nature of this project, and therefore the proposed scope of our work, will be very different to that of the previous two projects.

- a) In Sections 4.1 and 4.2 we will design the repairs, strengthening, modifications, etc.; we will produce drawings and specifications re same; we will undertake field review and assist re tendering and contracting.
- b) However, fabric-covered steel frame sheds are normally supplied on a design/build basis wherein the actual building design and engineering drawings are all produced by the specialized fabricator of such buildings. Hence our role is to provide a performance specification, if you will, as to the building's overall features and requirements to serve as the design criteria, i.e., plan dimensions, wall height, overall profile, clearances, material requirements, etc. This has been my role in all previous acquisitions of fabric buildings for other municipalities. It is also how the City's most recent acquisition of a fabric shed (Bobcaygeon) was made.

4.3.2 Full engineering drawings that are specific to the shed are unlikely to be needed and will not be provided. As of this writing I expect that the performance specification can be handled entirely by text alone, as has been the case with our past projects. Notwithstanding this, some matters might best be handled by concept sketches which would be supplied to the City as hard copy (8 1/2 X 11) as well as electronically in pdf format.

If produced such concept sketches would be included in the tender and in the contract exactly as provided, i.e., not modified in any way by the City.

4.3.3 A detailed performance and technical specification re the shed, its materials and methods will be supplied. It will be supplied as camera-ready hard copy as well as electronically.

This technical specification will be included in the tender and in the contract exactly as provided, i.e., not modified in any way by the City.

4.3.4 A suggested tender package and commercial specification re the shed will be provided for the guidance of the City. The intent here is to indicate to the City all of the matters that need to be addressed in the tender document and contract that the City is to prepare.

Having previously completed the rehabilitation of other City buildings I believe that the tender and contract package can best be handled by building on one of your past contracts. In this regard I shall:

- a) Make a copy of the most recent relevant past contract.

- b) Review the Contract, noting by number of where changes, additions and/or deletions are required.
- c) Compile a list of changes, additions and/or deletions that are numbered to match (b).
- d) Provide the City with copies of the marked-up contract of (b) and the list of (c).

Using the materials that I provide per the above the City would finalize the tender/contract document to conform to its current tendering/contracting practice.

4.3.5 In addition to the above and the field review of Section 5.0, we would undertake drawing review, liaison with Owner and Contractor, etc. all as required to complete the project.

5.0 Site Visits and Field Review

The Ontario Building Code requires that construction be subject to periodic field review to assure conformity with the design, drawings and specifications. This requirement is normally formalized in the issue of the Building Permit wherein the responsible engineer is required to issue a "Commitment to Review" form. The level of field review that might be required, i.e., number of Site Visits, general depends on two factors:

- a) Firstly, the complexity of the project and the need to see/accept some elements/work before other work be undertaken and/or before it will be covered up and hidden by later work. The nature of the domes and sheds is generally that they are open and that access is unimpeded such that for any given building one interim inspection and one final inspection will generally suffice. For example, the first, or interim, site visit for a dome would be timed for relatively early in the work when the dome has been stripped of the existing roofing. This enables reinspection so that any additional work that may be needed can be authorized on the contract's pre-approved Unit Price basis. With respect to your dome such Unit Prices will be specified within the contract(s) re replacement of plywood, panel lumber, canopy roof joists and sill plates.
- b) Secondly, the skill, experience and competence of the contractor who is undertaking the work. Generally speaking there are a very few contractors who are experienced and competent with domes, but they do tend to win most of the tenders. With such contractors I have found that two site visits per dome will generally suffice. Additional site visits may be required with a contractor who is otherwise competent and workmanlike but not experienced re domes.

Other site visits may be required for some dome/shed projects, usually re client preferences and/or Owner-mandated purchasing procedures. Such additional site visits might be required re:

- a) Client meeting to start the tender/drawing preparation process.
- b) Pre-tender site meeting with bidders, whether mandatory or otherwise.
- c) Pre-Start site meeting with the Owner and the successful contractor.
- d) Additional interim site visits re issues arising during the project, generally related to project difficulties, deficiencies, schedule, and the like with inexperienced contractors.
- e) Wrap-up inspection once all deficiencies are corrected and all paperwork has been submitted.

6.0 Engineering Charges

6.1 General

My charges re this work will be computed on a time basis with expenses to be reimbursed at cost. The charges relate to two categories of work as follows.

6.2 Design, Documents and Deliverables

6.2.1 Manvers Dome

My charges to complete the design and to supply all of the documents and deliverables of Section 4.1 are estimated to be \$5,000.00 + HST. You may assume this to be a not-to-exceed upset limit.

6.2.2 Lindsay (Former) Salt Shed

4,000

My charges to complete the design and to supply all of the documents and deliverables of Section 4.2 are estimated to be \$4,000.00 + HST. You may assume this to be a not-to-exceed upset limit.

6.2.3 Lindsay Replacement Fabric Shed

My charges to supply all of the documents and deliverables of Section 4.3 are estimated to be \$4,000.00 + HST. You may assume this to be a not-to-exceed upset limit.

6.3 Site Visits and Field Review

6.3.1 General

As I am somewhat removed from the City travel is a major cost component of site visits and field review. Hence it behooves us

to orchestrate the projects as/where possible so as to minimize the number of site visits.

I estimate the cost per site visit to be \$1,600 + HST. This includes all travel, inspection and other time on site, reporting etc. You may assume this to be the fixed cost per visit.

6.3.2 Manvers Dome

For budget purposes I suggest that you assume that a total of two Site Visits will suffice.

- a) One would be an interim inspection re work in progress and to reinspect/authorize re Unit Price work.
- b) One would be a final acceptance inspection once all work is done.

6.3.3 Lindsay (Former) Salt Shed

\$3,200

For budget purposes I suggest that you assume that a total of two Site Visits will suffice.

- a) One would be an interim inspection once materials are on site, demolition is complete and work is in progress to assure understanding and acceptability of the work.
- b) One would be a final acceptance inspection once all work is done.

6.3.4 Lindsay Replacement Fabric Shed

For budget purposes I suggest that you assume that a total of three Site Visits will suffice.

- a) One would be an interim inspection once demolition, excavations and backfill are complete, foundation materials are on site, and foundation work is in progress so as to assure understanding and acceptability of the work.
- b) One would be an interim inspection once the foundation is complete, materials of the structure are on site and work re same is in progress so as to assure understanding and acceptability of the work.
- c) One would be a final acceptance inspection once all work is done.

6.3.5 Other

6.3.5.1 Manvers Dome and Lindsay (Former) Salt Shed

For projects such as these, and in view of the cost:

- a) My attendance at a pre-design meeting with the Owner is not required. All issues and related matters can be adequately handled by telephone, email, etc.

- b) My attendance at a pre-tender site meeting is generally preferred but not essential. (The Owner's tendering by-law and procedures often require such attendance.)
- c) I do not recommend my attendance at a pre-construction meeting with the contractor provided the selected contractor is demonstrably experienced and competent.
- d) Any additional visit(s) would only occur and be invoiced, if/when needed and subject to your discretion/approval.

6.3.5.2 Lindsay Replacement Fabric Shed

In my experience design-build projects usually require somewhat enhanced field review. In this regard:

- a) My attendance at a pre-design meeting with the Owner is not required. All issues and related matters can be adequately handled by telephone, email, etc.
- b) My attendance at a pre-tender site meeting is recommended. (The Owner's tendering by-law and procedures often require such attendance.)
- c) My attendance at a pre-construction meeting with the Contractor and Owner is generally preferred but not essential to ensure understanding and agreement by all parties re the project's requirements, standards, etc.
- d) Any additional visit(s) would only occur and be invoiced, if/when needed and subject to your discretion/approval.

I trust this to be as you require.

I shall undertake no further work re this file pending receipt of your direction.

Best regards.

James Knight, M.Sc.F., P.Eng.
P17-840



Request for Informal Quotation HARTLEY PW DEPOT SAND DOME AND SALT SHED DEMOLITION

Quotations are due on or before: April 6, 2017 at 11:00 am

Note: Quotations that are received after the deadline or incomplete will not be considered.

Requirements

Quotations are requested for all labour, fuel, equipment and materials necessary for the dismantling, demolition and removal of the sand dome and salt shed at the Hartley Public Works Depot located at 574 Hartley Road. Please read this document carefully.

Questions will be received via email to Oliver Vigelius (ovigelius@city.kawarthalakes.on.ca) until April 3, 2017 at 11:00am. If required, an addendum may be released to address the questions that are submitted. It is the Vendor's responsibility to read and acknowledge addendums.

Please complete the information requested below. Email this completed and signed form directly to Oliver Vigelius (ovigelius@city.kawarthalakes.on.ca). Fulfillment of any order is in accordance with the standard terms and conditions with this request for quotation. Any materials used, labour or service expended to provide an estimate or quotation for goods or service, prior to any order by the City, shall be at the risk and expense of the Vendor providing the quotation.

Vendor Management Program

The City of Kawartha Lakes is committed to providing a safe and healthy working environment for employees and contractors. To promote this type of environment, the City created a vendor management program consisting of three components:

- a) Pre-qualification;
- b) Environment, Health and Safety; and
- c) Performance Management

The vendor management program specifies the minimum standards required to work with the City.

Effective June 1, 2015, all vendors wishing to do business with the City of Kawartha Lakes must be pre-qualified. Vendors can pre-qualify by registering on-line at:

www.city.kawarthalakes.on.ca/city-hall/purchasing

Note: Copies of the following documents are required at time of registration:

- a) Current insurance certificate, with the City named as additional insured;
- b) A valid WSIB clearance certificate

c) Company Health and Safety Policy (if applicable)

Questions about the Vendor Management Program can be forwarded to:
vendors@city.kawarthalakes.on.ca

Electronic Funds Transfer

As of September 1, 2015, the City of Kawartha Lakes will no longer issue cheques for payments. Awarded vendors will be required to register for EFT.

Hartley Public Works Depot – Sand Dome and Salt Shed Demolition

Description		Total Price
DEMOLITION OF SAND DOME		\$ \$ 21, 250.00 L/S
DEMOLITON OF SALT SHED		\$ \$ 9, 500.00 L/S
<u>Instructions to Vendors:</u> Submissions will not be considered unless this informal quotation form is completed in full. Quotation may be awarded in whole or in part and all quantities shown are approximate. Actual quantities may be greater than or less than the quantities listed. The City's Standard Terms and Conditions will apply and are attached. The City reserves the right to reject any or all quotations.	Subtotal	\$ \$ 30, 750.00
	13% H.S.T	\$ \$ 3,997.50
	Total Quotation	\$ 34, 747.50

Contract Term/Delivery Timeline

The Contract shall become effective on the award date received and will be in the form of a Purchase Order issued by the City with a completion date of July 31, 2017.

Insurance Requirements

The selected Vendor may be required to submit an insurance certificate. If an insurance certificate is requested, the coverage shall be for Commercial General Liability Insurance, including bodily injury including death, property damage including loss of use thereof, products or completed operations liability, non-owned automobile, personal injury, blanket contractual liability, contingent employer's liability, owner's and contractor's protective coverage and cross liability and severability of interests clause. The limit of liability required is no less than \$2,000,000.00 per occurrence. The City shall be named as additional insured.

Motor Vehicle Liability Insurance of no less than \$2,000,000.00 per occurrence, for all licensed Motor Vehicles owned or leased by the Vendor.

Professional Liability of no less than \$500,000.00 per occurrence. All insurance shall be at the Vendor's sole cost and expense. The Vendor shall be required to pay any deductible amounts in connection with all insurance policies.

WSIB Requirements

A WSIB Clearance Certificate shall be supplied by the successful Vendor within 7 days of notice of selection for award. A Certificate of Clearance issued by the WSIB with the WSIB number and proof of satisfactory standing is mandatory for the Selected Vendor throughout the term of the contract. The Vendor must at all times comply with the provisions of the Act (WSIA). As of January 2014, independent operators are required to register through WSIB.

Evaluation

All Informal Quotations will be evaluated and processed in accordance with the City's Purchasing Policy with amendments or revisions. The policy in its entirety can be viewed on the City's website at: www.city.kawarthalakes.on.ca/purchasing

References:

Provide three references for similar type purchase of goods or work performed in the last 3 years. Past purchase or work for the City will be considered.

Company: McCleans Auction Barn		
Contact Name and Title: Orval McClean Owner		
Telephone Number: 705-324-2783	Email Address:	
Type of Work Demolition	Year 2016	Value \$ 20,000.00
Company: Carbon Contracting		
Contact Name and Title: Ian Carson - President		
Telephone Number: 705-878-5436	Email Address:	
Type of Work: Demolition and Parking Lot	Year: 2015	Value: \$ 250, 000.00
Company: Sunderland CO-OP		
Contact Name and Title: Blair Thompson - President		
Telephone Number: 705-357-3491	Email Address:	
Type of Work: Demolition of Oakwood Elevators	Year: 2010	Value: \$ 56, 000.00

SPECIFICATIONS

All bids shall include a unit price for all labour, materials, equipment, and services necessary to complete the demolition and removal of the Sand Dome and Salt Shed at the Hartley Public Works Depot located at 574 Hartley Road. It is further intended that this specification will provide for the removal of all waste and debris on site and all debris resulting from the demolition, leaving the site clear and free of hazards.

Concrete foundations for both structures are to remain in place to facilitate potential future construction.

The successful contractor must:

- Examine the site where the work is to be performed.
- Work in cooperation with the Contract Administrator.
- Notify the Contract Administrator five (5) days prior to commencement of work.
- Conduct all work in accordance with The Occupational Health and Safety Act and Building code regulations.

All work is subject to inspection and final approval by the Contract Administrator. The Contractor shall remedy any defects in workmanship to the satisfaction of the Contract Administrator.

A non-mandatory pre-bid site meeting will be held on March 29, 2017 from 10:00 to 11:00 am. Potential bidders are encouraged but not required to attend this meeting to view the structures requiring demolition and assess the general site conditions.

Change orders to increase the cost of this quotation will not be considered for any issues, circumstances, etc. that would have been evident during the non-mandatory pre-bid site meeting.

PERMITS

The Contractor will be responsible for obtaining a demolition permit from the City of Kawartha Lakes Building Department for this project. The Contractor will be responsible for obtaining and for paying for all applicable permits required.

The Contractor shall comply with all building, fire and Health codes/laws, rules and regulations applicable to the demolition of the buildings and preservation of public health and safety.

PRE-CONSTRUCTION MEETING

Upon an award of contract and before the commencement of the work, the Contract Administrator will arrange with the Contractor for a pre-construction meeting. The intent of this meeting will be review of contract documents, proposed schedule of work, health and safety policy, and general questions and concerns with the project.

EXISTING UTILITIES

There may be various utilities within the Contract limits. It shall be the Contractors' responsibility to contact the local utility authorities to determine the exact location of these utilities and for the protection of all existing utilities during the time of construction.

No responsibility will be assumed by the City for the correctness or completeness of any drawings with respect to existing utilities, pipes, or other objects, either underground or on the surface and the City shall not be liable for the incorrectness or inadequacy thereof. It shall be the responsibility of the Contractor to determine the location of such utilities, pipes, or other objects. All costs of working around and supporting utilities and services shall be included in the unit prices Bid.

SITE CLENDLINESS

The Contractor is to maintain the worksite in a clean and orderly fashion at all times. During periods when the Contractor is not working, the site is to be cleaned of all debris caused by the work and the site left in a safe and secure state. The contractor has care and control of the site for the duration of this contract.

WORK RESTRICTIONS

The Contractor can carry out the Work, between the hours of 7:00 AM to 9:00 PM from Monday to Saturday, excluding Sunday and Statutory Holidays, in accordance with the City of Kawartha Lakes Noise By-law, as amended.

No other working hours are permitted unless otherwise approved by Council and / or the Director of Public Works.

The loading and unloading of supplies, materials, equipment and the refueling or repairs of equipment must be carried out during the above hours, unless otherwise approved by the Contract Administrator.

The Contractor shall not encroach onto private property for any reason unless the Contract Administrator and the property owner grant prior approval to do so.

NOISE RESTRICTIONS

The City's Noise By-Law 2005 – 25 prohibits the operation of construction equipment in connection with construction from 9:00 p.m. to 7:00 a.m. Refer to: <http://www.city.kawarthalakes.on.ca/city-hall/by-laws-and-policies/protection-of-persons/2005-025- Consolidated Noise By-law.pdf> for the complete by-law.

ANTI-IDLING POLICY

The City of Kawartha Lakes Anti-Idling Policy outlines a maximum two minute idle time for vehicles & equipment to reduce the air pollution from exhausts, create a healthier environment, promote energy (fossil fuel) conservation, reduce noise pollution and reduce wear and service needs on vehicles and

equipment. Companies operating vehicles and equipment on City property are asked to adhere to the guidelines of this policy as follows:

The Driver/Operator shall:

- a) Not idle the vehicle/equipment while completing a circle check (unless required for air brake pressure or other critical checks necessary);
- b) Not leave the vehicle/equipment unattended while idling;
- c) Shut down the vehicle/equipment when it is expected to exceed the two minute idle time;
- d) Ensure that vehicle/equipment deficiencies are reported immediately to the immediate supervisor or if it is unsafe to turn the unit off;
- e) Idle the vehicle/equipment only if the motor is required to power auxiliary equipment;
- f) Idle the vehicle/equipment only under extreme weather conditions;
- g) Idle the vehicle/equipment only when the health and safety of employees or others will not be jeopardized.

The Company shall ensure sure their employees are made aware of, and adhere to this policy.

SAFETY

The Contractor shall strictly adhere to the safety requirements of all governing authorities.

Should, governing authorities issue, a notice/directive as either an "order to comply" or a "stop Work order", immediate corrective measures shall be taken by the Contractor. A copy of the notice/directive shall be transmitted to the Contract Administrator immediately.

The Contractor shall promptly report to the Contract Administrator, all accidents involving personal injury or property damage, that occur in connection with the Work.

The Contractor shall, provide at the site, the equipment and medical facilities necessary to supply first aid service to anyone who may be injured in connection with the Work, and to conform to the requirements of the authorities having jurisdiction over the Work.

The Contractor shall, submit to the Contract Administrator a copy of the Notice of Project issued to the Ministry of Labour.

MATERIAL DISPOSAL

The Contractor agrees to assume full responsibility to ensure the proper disposal of materials and/or waste removal from the premises. The Contractor is to examine the site prior to demolition and take responsibility for the presence and appropriate disposal of all materials to be demolished at the contractor's expense.

Debris resulting from the demolition shall be removed from the site expeditiously and shall be disposed of at a location approved by the City. The location or other form of disposal shall be in accordance with MOECC and the Environmental Protection Act.

The Contractor's bid price shall include all tipping fees for the disposal of the residual waste upon having maximized opportunities for the reuse/recycling of any debris materials.

RESTORATION

The Contractor shall restore all disturbed areas to an equivalent or better condition than existed prior to the commencement of the contract. Cost of all restoration shall be included in the unit price for the main work.

PRECAUTIONS DURING DEMOLITION

The site must be kept safe and secure from the public and employee's at all times.

The Contractor will be responsible for ensuring that, prior to the demolition project, all necessary safety measures are in place. The Contractor may need to provide additional fencing and barriers for the demolition area. Fencing, barriers and debris must be removed from the site at the conclusion of the project.

All necessary measures to prevent damage to any adjoining property, building and public right of way shall be arranged and put into effect before the demolition work is started.

In all cases the sequence of demolition shall be such that the stability of the structure shall not be endangered through the removal of any supporting member that provides lateral support for the structure. Dust shall be controlled by the water sprinkling or other means to prevent its inhalation by workers, residents of neighboring properties, and the general public.

INSPECTION

The Contract Administrator shall carry out the inspections. The Contract Administrator will be sole judge of the adequacy and completeness of the Contractors work as spelled out by these contract documents. The Contractor shall be responsible for notifying the Contract Administrator at least forty-eight (48) hours prior to the final inspection.

MISCELLANIOUS REQUIREMENT

1. The Contractor shall not burn any trash or debris on the demolition site.
2. No explosives are to be used.
3. The Contractor shall not sub-let the work or any part thereof without the consent in writing by the Contract Administrator.

Acknowledgement

Company Name: Everson Excavating Ltd.

Contact Name: Gerald Eerson

Address: 41 Fieldside rd. Lindsay Ontario K9V 4R5

Phone Number: 705-324-3976

Fax Number: 705-324-2954

E-mail Address: jgeraldeverson@gmail.com

H.S.T. Registration Number: 80858 2472

I agree to supply the above at the price and conditions herein offered as specified in accordance with this informal quotation and addendum # _____ to # _____.

- ☒ I confirm my company has previously registered for the City's Vendor Management Program
☐ I confirm my company has registered for the City's Vendor Management and is awaiting approval.

Vendor/Authorized Signature: 

Name: Gerald Everson

Position/Title: President

Date: April 6 2017

- ☐ Decline to bid. Add a check mark to the box to indicate a decline to bid and please indicate the reason in the box below:

Standard Terms and Conditions

Invoices must quote the Purchase Order and be addressed and forwarded to: The Corporation of the City of Kawartha Lakes, 89 St David St. Lindsay, Ontario, K9V 5K2, to the attention of Richard Monaghan.

This purchase order is strictly limited to its terms and conditions and any counter-offers or changes of terms proposed by the vendor are hereby rejected, unless specifically agreed to in writing by the Corporation of the City of Kawartha Lakes (hereinafter the "City").

The goods and services described in this Purchase Order are subject to the following terms and conditions and the Vendor agrees to be bound by and comply with all such terms and conditions.

Terms and Conditions – Goods and Service:

1. The Purchase Order together with all relevant documents, drawings and specifications referred to herein, shall, when accepted by the Vendor, constitute the contract between the Vendor and the City. By shipping goods as stated on the Purchase Order, the Vendor agrees to these Terms and Conditions and will fulfill its obligations according to the Purchase Order.
2. There shall be no variation, alteration, substitution or amendment of the Purchase Order unless previously approved in writing by the City's Corporate Services Manager, Financial Services or his/her designate.
3. The Vendor may not assign or subcontract the Purchase Order or any part thereof, without the prior written approval of the City, which approval may be withheld by the City in its sole discretion or may be given subject to such terms and conditions as the City may require.
4. All orders are to be shipped to the location FOB City of Kawartha Lakes specified on the Purchase Order.
5. The Vendor shall display the complete Purchaser Order number prominently on all packages, invoices, correspondence, customs documentation, bills of lading and packing slips and ensure that packing slips accompany all shipments.
6. Vendors outside Canada shall provide Canada Customs Invoices with completed, acceptable shipment documentation to the Customs broker.
7. Unless otherwise stated, the City shall pay to the Vendor all amounts in Canadian funds net thirty (30) days from invoice receipt or satisfactory delivery of goods or services, whichever is later, unless otherwise noted on the Purchase Order. Term discounts will be calculated from the same date.
8. The price indicated on the Purchase Order is the total cost and includes all fees and charges of any kind, including patent, permit, inspection, royalty and license fees, charges for crating, boxing, cartage and re-stocking and government tax levies, unless otherwise stated on the Purchase Order.
9. All applicable taxes are specified on the Purchase Order. If the Harmonized Services Tax applies, the Vendor agrees to invoice in accordance with the *Excise Tax Act* and include a valid business registration number on the invoice.
10. Where a delivery date is stated, delivery by such date is regarded as of the essence of the contract. Failure on the part of the Vendor to complete by the stated delivery date for reasons other than those beyond his control, will entitle the City to any one or combination of the following remedies:
 - (a) Cancel the order without incurring or being liable for any costs, fees, charges or surcharges of any kind whatsoever.

- (b) Reassign the contract and charge the original Vendor with all incremental costs involved.
11. In the event of strikes, accidents or unexpected events of Force Majeure causing stoppage of work, the City reserves the right to suspend the application of the Purchase Order.
 12. Delivered goods and services are in accordance with the quantity and the requirements as specified in this Purchase Order and any attached specifications and are subject to inspection and approval, following delivery for a period of not less than sixty (60) days, notwithstanding prior payment. In the event any discrepancy in the order or if the goods are rejected by the City, acting in its sole discretion, the City is entitled to return such goods at the Vendor's expense and the Vendor shall credit the City accordingly within fifteen (15) days of return of the goods.
 13. Notwithstanding delivery of goods, title to the goods remains with the Vendor until the City has inspected and approved the goods or sixty (60) days has passed after delivery without the City rejecting the goods.

The Vendor represents, warrants and covenants that the delivered goods do not infringe any patent, copyright, trademark or other intellectual or industrial property right. In the event that they do so infringe, Vendor will obtain permission for the City to use such goods or, alternatively, at the City's option, substitute similar goods that do not infringe. The Vendor warrants that the shipping and handling of designated products and/or hazardous materials will be made in accordance with the applicable Federal, Provincial and Municipal laws and regulations in force at the time of shipment. Workplace Hazardous Materials Information System, Material Safety Data Sheets, must be provided with the product supplied, as defined under the federal Hazardous Products legislation and provincial WHMIS legislation. Dangerous goods shall be shipped only in compliance with Canadian Transportation of Dangerous Goods (TDG) Regulations, Hazardous Materials Regulations, and all other environmental laws, rules, regulations and procedures, where applicable.

14. The Vendor represents, warrants and covenants that the goods are new, unused, free of defects or deficiencies in design, materials or workmanship, conforming to all manufacturer and City specifications and are fit for their ordinary purposes, unless the City has made a particular purpose known to the Vendor, in which event the goods are fit for that particular purpose as well. Vendor further warrants that the Goods are free of any liens or encumbrances and have not been pledged as security for any obligation.
15. The Vendor warrants that all electrical and electronic components and equipment supplied under this Order shall be approved in accordance in the Ontario Electrical Safety Code and must be certified so the intended use of the equipment in Canada by a certified organization accredited to the *Standards Council of Canada Act*.
16. In the event of any breach of warranty at law or pursuant to the Purchase Order by the Vendor, at any time during the one (1) year warranty period, the Vendor shall, at the City's option, repair or replace the goods with an equivalent or better product at no additional cost to the city within fifteen (15) days of the City's notification to do so.
17. The City makes no guarantee of the value or volume of goods or work to be assigned to the Vendor. The Purchase Order is not an exclusive contract for the provision of the goods and/or services listed. The City may contract with others for the same or similar goods and/or services to those described or may obtain the same or similar internally.
18. The Vendor shall indemnify and save harmless the City, its directors, officers, councilors, employees, contractors and agents from and against all actions, suits, claims, damages, causes of action, demands, penalties, fines, cost and expenses including legal fees or other proceedings of any kind or nature directly or indirectly arising out of any breach or inaccuracy of any representation, warranty or covenant, performance of services or supply of the goods, including

but not limited to personal injuries to anyone, breach or alleged breach of intellectual property laws, environmental non-compliance, product liability or property damage.

19. The Vendor shall provide the goods and services in strict compliance with all laws, regulations, codes and standards of Canada and the Province of Ontario, at the sole cost of the Vendor.
20. This Contract is to be construed and governed by the laws of the Province of Ontario and federal laws of Canada applicable therein. The United Nations Conventions on Contracts for the International Sale of Goods and any legislation enacted for the same do not apply.
21. The Vendor on behalf of itself, its directors, officers, employees and agents acknowledges that for the purposes of the Purchase Order, the provisions of the *Municipal Freedom of Information and Protection of Privacy Act* bind it.
22. These Standard Terms and Conditions are meant to supplement but not supersede the terms and conditions of any competitive bid document, contract or agreement. In the event of a conflict or inconsistency, the terms and conditions of the competitive bid document contract or agreement, will govern.
23. Time is of the essence and the Vendor shall deliver the goods and services contemplated by the Purchase Order in strict accordance with the delivery date, quantity and the requirements as specified on this Purchase Order and any attached specifications.

Terms and Conditions – Specific to Service:

24. For services, the Vendor represents that it has the expertise, experience, facilities, skilled personnel, management and knowledge necessary or required to deliver the services in a competent and professional manner. The Vendor understands that the City is relying upon this representation in issuing the Purchase Order.
25. For the services, the Vendor shall:
 - a) perform all work in a good and workmanlike manner to the full satisfaction of the City;
 - b) obtain and maintain full and adequate insurance covering performance of the work, proof of which will be made available to the City upon request;
 - c) obtain and maintain Worker's Safety Insurance Board coverage and provide both WSIB number and proof of satisfactory standing to the City upon request;
 - d) comply with all applicable by-laws, policies, procedures, guidelines and rules of the City; and
 - e) supervise their workers, consultants, agents and subcontractors to ensure they conform to the requirements of the service, specifications and the terms and conditions of the Purchase Order.
26. The Vendor shall indemnify the City for any liability to the Workers' Safety and Insurance Board of Ontario arising from the Purchase Order.
27. Service performed by a Consultant is an independent contractor and neither an agency, partnership nor employer-employee relationship is intended or created by this Purchase Order or Agreement.
28. For services, the Vendor shall provide, upon request of the City from time to time, staff knowledgeable about the delivery of the services for consultation with a representative or representatives of the City. The City shall provide, upon request of the Vendor, a representative or representatives of the City to consult with the Vendor with respect to the services being delivered by the Vendor pursuant to the Purchase Order.
29. The Vendor will maintain proper records and prepare and submit upon request, comprehensive reports respecting the services provided pursuant to the Purchase Order.

- 30.** The Vendor authorizes the City, its employees, representatives and agents to enter at all reasonable times, any premises used by the Vendor in connection with the provision of services pursuant to the Purchase Order, in order to:
- (a) Observe and evaluate the services provided under the Purchase Order; and
 - (b) Inspect all records, documents and invoices relating to the services provided pursuant to the Purchase Order.
- 31.** The City may terminate the Purchase Order upon thirty (30) days notice in writing, and without any further liability, in the event the City, in its sole discretion, determines that the Service Provider has:
- a) Neglected, failed or refused to proceed promptly with the Services contemplated to be provided by the Service Provider pursuant to the Purchase Order;
 - b) Contravened any of the Service Provider's obligations hereunder; provided however, that the City shall set out particulars of the default of the Service Provider in any such notice of termination and in the event that the Service Provider corrects or remedies the default to the satisfaction of the City within the thirty day notice period, the notice of termination shall be null and void.

JAMES KNIGHT & ASSOCIATES

PROFESSIONAL ENGINEERS

POB 273 ST. GEORGE ONTARIO CANADA N0E 1N0
519 448 3548 FAX 519 448 4657 (cell) 905 691 6489
jkwoodeng@sympatico.ca

January 22, 2017

Mr. Oliver Vigelius
Manager, West Maintenance Area (Lindsay) and Capital Projects
Public Works - General Operations
The City of Kawartha Lakes
12 Peel Street
POB 9000
LINDSAY, Ontario
K9V 5R8

**Re: Inspection of Sand Dome
Hartley Works Yard
The City of Kawartha Lakes**

Dear Mr. Vigelius:

I have completed field inspection of the sand dome at the City's Hartley Works Yard located at 574 Hartley Road. This inspection was made to locate, identify and assess any distress, deterioration and/or vehicle damage that may exist within the dome.

Field investigation was undertaken on July 6, 2016, pursuant to your February 29, 2016 email instructions, your March 5 telephone request, the City's Purchase Order No. 30755 and related correspondence.

This is the Report of my findings, opinions and recommendations.

1.0 Description, Background and Limitations

1.1 Description

The Hartley dome is a 100 ft. diameter*, commercially fabricated, glued dome. It is supported atop a (nominal) 1.5 ft. high concrete foundation ring, with salt/sand being stored inside against an independent wood bull-ring wall. The concrete foundation is a tension ring that floats on grade; the only below-grade concrete is the tie across the doorway.

*The 9-panel 100 ft. dome is the largest member of the 100 ft. Family of Domes.

There are twenty sectors of panels in the dome, with each sector consisting of nine panels. For purposes of this Report the panels are numbered from No. 1 at the dome base to No. 9 at the dome peak. This panel numbering scheme matches that of the dome's original engineering drawings. The sectors are numbered herein in an anticlockwise fashion, beginning with the first sector west of the north-facing doorway. Hence the doorway is in Sector 20. That doorway is 15 ft. wide and of a tapered radial configuration.

1.2 Background

There are no marks or monuments on the dome to indicate its year of construction. Based on the configuration of the dome, its entrance and its foundation ring it is estimated that the dome was built in the mid-1970s.

The dome was in continual use re storage of winter de-icing materials until some years following the amalgamations that formed the present City of Kawartha Lakes. At some point in the early 2000s the dome ceased to be fully used and occupied due to rationalizations of responsibilities among neighbouring City works yards. Thereafter the dome was emptied, barricaded and abandoned.

The writer first inspected the dome in 2009. The resulting Report indicated that the dome was in generally good condition, albeit reroofing was urgently required to maintain weatherproofness. Inasmuch as the yard was already closed the dome served no present or future purpose at the Hartley yard. Hence the Report suggested relocation to a new site as one viable option. In fact though, the dome has stood abandoned and unused ever since.

1.3 Limitations

The following limitations applied to this inspection.

- a) Inspection was made outside from grade.
- b) Inspection of the interior was made solely by viewing through the fencing that permanently barricades the doorway.
- c) Access to the sill plates was not completely available all round without further damaging the structure.

Notwithstanding the above, it was my opinion that the dome was sufficiently accessible that adequate and complete assessment was possible. Hence the findings and the estimated costing herein are adequate and sufficient for the City to determine the action that is to be taken re this dome.

2.0 Dome Type

Per Section 1.1, the Hartley dome is a glued dome that was manufactured/erected by a commercial fabricator of domes.

The dome's design followed sealed engineering drawings signifying compliance with the structural requirements of the then-extant Ontario Building Code, hereinafter the "Code". While there have been several editions of the Code since this dome was built, the structural requirements therein are essentially unchanged insofar as they might affect the dome. Therefore the dome's structural design also conforms to the structural requirements of today's Code.

3.0 Comparison with the Design Drawings

There are no significant differences of the as-built dome as compared with the original design.

4.0 Observations re the Roofing

4.1 The existing shingles are 3-tab Rainbow Green. As found in 2009 the roofing was then already at the end of its effective service life. It is now well past that with little, if any, of the roofing remaining at all effective. In this regard:

- a) Large areas of shingles are missing and have been for some time, thus exposing the wood structure to conditions that are highly conducive to decay.
- b) All remaining shingles are deteriorated, being cracked, crazed or curled, missing tabs and having lost the protective granule coating.
- c) The dome-to-concrete joint is failed such that the sill plates and Panels No. 1 are bathed by run-off, thus remaining constantly damp and highly conducive to decay.

5.0 Observations re the Structure

5.1 Overall the dome is in a very poor condition. The damage, decay and related deterioration as described below is so severe and so extensive that partial or complete collapse is not unlikely in the event that the dome might ever be subject to any significant portion of its design snow load or wind load. Debris from a snow-induced collapse is likely to remain within the yard. But debris from a wind-induced collapse may be spread over a considerable distance and impact neighbouring properties. (There is a public roadway immediately west of the dome as well as houses to the west of that road.) I recommend that:

- a) The dome should be demolished as soon as possible.
- b) In the interim the dome should be construed as a present hazard.

- c) The existing barricading of the dome entrance should be maintained for howsoever long the dome remains in place.
- d) The yard should be kept locked and not used for any purpose for howsoever long the dome remains in place.

5.2 There are several significant distortions/deflections of the dome's overall profile, including local failures of the panels, large holes, etc. The dome shell no longer describes the constant and continuous bi-directional curvature as is shown on the original engineering drawings. Overall, the dome superstructure is in very poor condition.

5.3 The concrete foundation ring is in generally good condition, albeit there are the usual scrapes, gouges, loss of surface fines, etc. that are common of foundation rings of this age.

5.4 Significant and serious decay, deterioration and/or damage was found despite the limited access to the dome's interior.

- a) Sectors 1 to 19 - sill plate, bottomrail and ends of 4X4 verticals and 2X6 siderails of Panel No. 1 decayed.
- b) Sector 10 Panels 1 to 4 - local failures and partial collapse due to leaks from fan dormer.
- c) Sector 12 Panels No. 6 to No. 8 - large holes in panels and portions of panels fallen away.
- d) Sector 13 Panel No. 5 - large hole in panel.
- e) Sector 20 - sill plates and base of entrance trusses decayed. Both trusses are broken.

5.5 Further to Section 5.4, and in light of the limited access to the dome interior, it is clear that much additional damage requiring repair and strengthening would be found once full access to the interior was available and if the existing shingles were to be removed to provide proper access outside.

5.6 The dome has the 1-part compression plug at the peak that was standard for older domes. In service a number of these 1-part plugs have come loose under the constant cycling of wind loads. If this dome were going to be saved I would recommend that the plug be improved by converting it to a 2-part plug that cannot be dislodged by vibration.

5.7 A double layer of overlapping scissor bracing is installed at the base of Panel No. 7. This bracing is installed in the manner that was typical of the earliest domes. Experience has shown that the inadequate end connections and the lack of connection where the members cross renders the bracing less effective than is intended. Furthermore, the bracing can work loose as a result of long-term wind-induced vibration. If this dome were going to be saved I would recommend that the scissor bracing be upgraded to contemporary standards.

5.8 In 2009 a sample of the bolts that could be reached from grade and/or from atop the stored materials was checked for tightness. All bolting was adequate and adequately tight. Notwithstanding the lack of access now, the bolting may be presumed to remain adequately tight.

5.9 The dome is equipped with anchorages for a climbing rope to afford access to the dome peak. Some years ago such ropes were a standard feature of all domes to provide access for roof repair. However, such ropes are not provided today, and indeed they are being removed from municipal salt/sand domes today, since they are not recognized as safe access by newer fall-arrest regulations. If this dome were going to be saved I would recommend that the rope anchorage be removed when the dome is next reroofed or repaired structurally. The rope anchorages should not be used for any purpose.

5.10 Active barn swallow nests were found within the dome and doorway canopy. Any work to the dome including demolition must be scheduled and conducted in accordance with prevailing regulations that protect this species at risk.

6.0 Storage of Materials

The dome is not used to store materials and is abandoned. Section 5.1 herein recommends demolition as the only option. Hence material storage is not an issue re the dome.

7.0 Discussion

The Hartley dome complied with the Code's structural requirements at the time that it was built. Moreover, the dome's design also complies with the structural requirements of today's Code.

However, the dome is in very poor condition with extensive damage, decay and related deterioration. In my opinion, the dome's condition precludes rehabilitation, i.e., replacement would be a less costly option. Hence the dome should be construed as a present hazard until it can be demolished.

8.0 Options

8.1 Rehabilitate As Is

The dome cannot be economically rehabilitated as is. Replacement would be a less costly option. However, the yard is closed and there is no need for a dome to store de-icing materials at Hartley. Moreover, I understand that there is an issue of salt contamination that would preclude this site ever being used again as a works yard.

8.2 Demolish Dome Structure

The estimated cost to demolish and dispose of the dome superstructure is \$25,000.

This assumes the bull-ring and concrete foundation ring would be abandoned intact as has occurred elsewhere. Alternately, the concrete ring and bull-ring may also be demolished; refer to Section 8.3.4 below.

8.3 Foundation Ring

8.3.1 Retain as-is for Uncovered Storage

The foundation may be retained and used for uncovered storage.

- a) Said storage may be for cold patch, gravel, stone, etc. in the manner that the City already uses the abandoned dome foundation at Bobcaygeon. This would entail no expenditure re the foundation itself, albeit some discretionary cost would likely be required to import concrete blocks to compartmentalize the space.
- b) Alternately, the foundation may be used for semi-secure storage, i.e., stocks of culverts and the like. No expenditure would be entailed for such use.

In either case the foundation ring and bull-ring would be retained and used as-is.

8.3.2 Re-use to Support New Wood Dome

Theoretically the existing foundation might be used to support a new wood dome in either of two ways.

- a) The ring may be used as-is to support a new 100 ft. dome of the same geometry, either with the same radial doorway or a revised, wider rectangular doorway.
- b) Alternately the ring may be raised to be 8 ft. or more in height and then support a replacement dome per (a).

However, the site is not a works yard, there is no need for storage of de-icing materials, and domes are ill-suited to any other purpose. So practically speaking, there is no need to use the existing foundation to support a new wood dome.

8.3.3 Re-Use in Conjunction with an Alternate New Superstructure

The foundation's geometry does not lend itself to being incorporated into a foundation for other than some style of dome or similar building. Moreover, the present value of the existing foundation would be relatively small as compared to the additional costs that would be incurred to enable the foundation to be re-used to support other than a dome.

8.3.4 Demolish the Foundation

The dome is located within the yard to facilitate use as a works depot. The presence of an abandoned foundation ring would be an impediment to any other use of the yard.

In the final analysis, and apart from possible continued use per Section 8.3.1, demolition of the dome foundation may be the preferred present and/or future course of action. The estimated cost to demolish and dispose of the dome foundation is \$15,000. This estimate includes an allowance to remove the below-grade doorway slab and bull-ring posts and to make good the excavations with compacted granular.

I trust all of the above to be as you require. Should you have any questions, or require anything further, please telephone me at 519 488 3548.

Yours very truly,



James Knight, M.Sc.F., P.Eng.
16-840



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January 22, 2017

Mr. Oliver Vigelius
Manager, West Maintenance Area (Lindsay) and Capital Projects
Public Works - General Operations
The City of Kawartha Lakes
12 Peel Street
POB 9000
LINDSAY, Ontario
K9V 5R8

**Re: Inspection of Salt Shed
Hartley Works Yard
The City of Kawartha Lakes**

Dear Mr. Vigelius:

I have completed field inspection of the salt shed at the City's Hartley Works Yard located at 574 Hartley Road. This inspection was made to locate, identify and assess any distress, deterioration and/or vehicle damage that may exist within the shed.

Field investigation was undertaken on July 6, 2016, pursuant to your February 29, 2016 email instructions, your March 5 telephone request, the City's Purchase Order No. 30755 and related correspondence.

This is the Report of my findings, opinions and recommendations.

1.0 Description, Background and Limitations

1.1 Description

The Hartley salt shed is a gable roofed rectangular building measuring ~24 ft. north-south by ~30 ft. east-west. It consists of a steel-clad trussed roof atop 12 ft. wood-framed side walls, all supported atop 4 ft. concrete-reinforced masonry foundation walls. The below-grade founding conditions are unknown. The roof ridge runs east-west. The shed's west end is open for most of the width to provide a doorway for in-load/out-load.

While similar in concept to all other salt sheds at City works yards, this shed is distinctly unique vis-a-vis:

- a) its smaller size; and
- b) its foundation type, i.e., original masonry walls later strengthened with concrete.

1.2 Background

There are no marks or monuments on the shed to indicate its year of construction. Based on the configuration of the shed, its foundation and the type of connector plates in the roof trusses it is estimated that the shed was built in the mid-1970s.

The shed was likely in more or less continual use re salt storage until some years following the amalgamations that formed the present City of Kawartha Lakes. At some point in the early 2000s the shed ceased to be used and occupied.

The writer has not previously inspected the shed.

1.3 Limitations

The following limitations applied to this inspection.

- a) Inspection was made inside and outside from grade.
- b) Access to the wall framing and sill plates was not completely available all round without further damaging the cladding.

Notwithstanding the above, it was my opinion that the shed was sufficiently accessible that adequate and complete assessment was possible. Hence the findings and the estimated costing herein are adequate and sufficient for the City to determine the action that is to be taken re this shed.

2.0 Comparison with the Design Drawings

Original design drawings are not available. No inference shall be drawn vis-a-vis the comments herein and possible differences of the as-built shed as compared with the original design.

3.0 Observations re the Steel Roof and Wall Cladding

3.1 The existing roof and wall cladding is at the end of its effective service life.

- a) Much of the roof cladding has been torn loose and/or lost thus exposing the wood structure to conditions that are highly conducive to decay.
- b) Trim, soffits and fascias are missing, damaged and/or ineffective all round at the roof level.
- c) Other trim is missing and/or ineffective.

- d) Large areas of the wall cladding are corroded and/or punctured. Also, large areas have been replaced and/or they are inadequately fastened. On the whole the wall cladding is not weatherproof.

In my opinion the cladding is already so seriously damaged and deteriorated that complete replacement is the only realistic option if the shed is to be retained. Moreover, this conclusion is doubly apparent when one considers the additional repairs that might be required if attempts were to be made to correct the structural distress of Section 4.0 following.

4.0 Observations re the Structure

4.1 Overall the shed is in a very poor condition. The damage, decay and related deterioration as described below is so severe and so extensive that partial or complete collapse is not unlikely in the event that the shed might ever be subject to any significant portion of its design snow load or wind load. Moreover, partial or complete collapse would be likely if the shed were ever to be returned as-is to service and the foundation walls were to be used as "push walls". I recommend that:

- a) The shed should be demolished as soon as possible.
- b) In the interim the shed should be construed as a present hazard.
- c) The entrance should be adequately barricaded for howsoever long the shed remains in place.
- d) The yard should be kept locked and not used for any purpose for howsoever long the shed remains in place.

4.2 There are significant distortions/deflections of the shed's overall superstructure, including walls are no longer plumb, stud walls are pushed off foundations, etc. Overall, the wood-framed superstructure is in very poor condition.

4.3 The concrete-reinforced masonry foundation is in very poor condition, i.e., probably the worst of the three main components of cladding, wood-framed superstructure and foundation. In this regard:

- a) The original foundation appears to be an above grade wall of unreinforced hollow masonry blocks presumably extending below grade to some unknown foundation. This foundation would not be structurally competent to serve as a retaining wall or a push wall.
- b) The original concrete block walls of (a) are highly deteriorated with extensive cracks and vehicle damage. Moreover, the block faces are more or less crumbled all round inside and outside, with the worst such damage being outside. In some locations the entire block face is lost from crumbling, thus exposing the hollow core.

- c) At some point attempts were made to arrest the distress of the masonry. This involved placement of a 2 ft. high concrete wall outside along the north and south sides, plus a 4 ft. high concrete wall outside along the east end wall. The efficacy of this remedy is unknown as the new walls' construction and their founding conditions are unknown. Also unknown is the connectivity of the new walls to the original.

If this shed were to be saved further investigation would be required to assess the adequacy of the existing walls and foundations. Such investigations would be costly. But since so much other cost would also be entailed re the cladding and the wood structure, and since there is no present or future use for the shed, further investigation is not recommended.

4.4 Significant and serious decay, deterioration, damage and/or other structural inadequacies were also noted.

- a) The most westerly ~16 ft. of the shed is fitted with a plywood ceiling fastened to the underside of the roof trusses. The ceiling is decayed beyond repair; replacement is required.
- b) The shed's roof trusses are decayed and their connecting plates are corroded. This is particularly so of those trusses supporting the plywood ceiling.
- c) The trusses are inadequately anchored at their supports against wind-induced uplift.
- d) The bottom chords of most trusses are broken and have been inadequately repaired.

4.5 Further to Section 4.4(a), similar ceilings in salt sheds in other jurisdictions have been found to be supporting large quantities of faecal matter accumulated from years of occupancy by birds and animals. Suitable precautions re handling/exposure of such material must be taken as part of any process of repair, rehabilitation and/or demolition.

4.6 Active barn swallow nests were found within the shed. Any work to the shed including demolition must be scheduled and conducted in accordance with prevailing regulations that protect this species at risk.

5.0 Storage of Materials

The shed is not used to store materials and is abandoned. Section 4.1 herein recommends demolition as the only option. Hence material storage is not an issue re the shed.

6.0 Discussion

It is unknown to what degree to which the Hartley shed complied with the structural requirements of the Code at the time that it was built. However, and based on inspection alone, it is clear that the shed even if materially sound, which it is not, does not comply with the structural requirements of today's Code.

Moreover, the shed is in very poor condition with extensive damage, decay and related deterioration. In my opinion, the shed's condition precludes rehabilitation, i.e., replacement would be a less costly option. Hence the shed should be demolished.

7.0 Options

7.1 Rehabilitate As Is

The shed cannot be economically rehabilitated as is. Replacement would be a less costly option. However, the yard is closed and there is no need for a shed to store de-icing materials at Hartley. Moreover, I understand that there is an issue of salt contamination that would preclude this site ever being used again as a works yard.

7.2 Demolish Shed Structure

The estimated cost to demolish and dispose of the shed is \$15,000. This estimate includes an allowance to remove the below-grade concrete and to make good the excavations with compacted granular.

I trust all of the above to be as you require. Should you have any questions, or require anything further, please telephone me at 519 488 3548.

Yours very truly,



James Knight, M.Sc.F., P.Eng.
16-840

