

January 12, 2018.

Ms. J. Pierce, Manager, Financial Services

Columbia Shuswap Regional District

Dear Ms. Pierce:

**Re: Gas Tax Funds application by Malakwa Community Centre Association**

Thank-you for considering our request for radon mitigation project costs at the Malakwa Community Learning Centre. Supporting documents are attached:

1. Remediation Proposal and Budget prepared by Interior Radiation, October 12, 2017.
2. January 11, 2018 minutes of the Malakwa Community Centre Association meeting.
3. School District #83 Work Order SBF 063842 dated 1/10/2018.

Under separate cover, you will be receiving the following document:

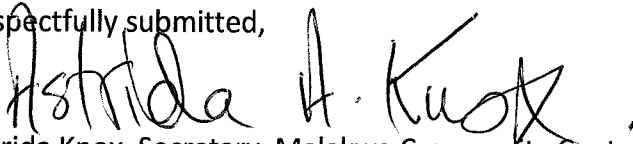
\*Management lease (2018 through 2022) signed by Malakwa Community Centre Association and School District #83 for the former Malakwa Elementary School.

**Budget details for the project** are as follows:

1. Interior Radon's quote is \$67,774.35. Breakdown of the total is provided on pages 3, 4 and 5 of the Remediation Proposal.
2. School District #83's quote for pre-remediation work is \$21,435.00
3. Total funds requested in this application are **\$89,209.35**.

Should you require any further information prior to the January 21<sup>st</sup> CSRD Board Meeting, do not hesitate to contact me.

Respectfully submitted,



Astrida Knox, Secretary, Malakwa Community Centre Association

4118 Community Hall Road, Malakwa, B.C. V0E 2J0      2014mcca@gmail.com

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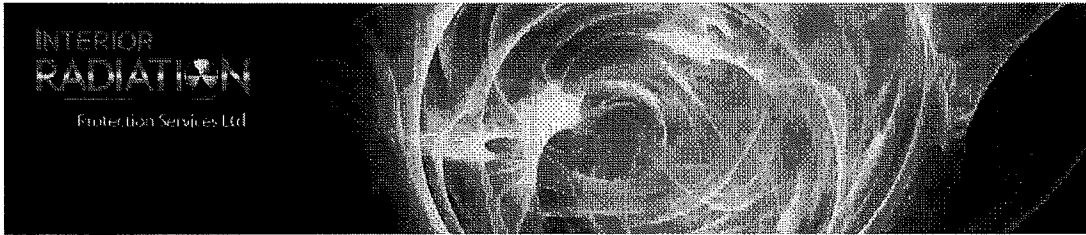
cc. Ms. L. Shykora, Deputy Manager, Corporate Administration Services

Ms. R. Martin, Director, Area "E" CSRD

*- Rhona supported via  
telephone Jan 15/18*



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**RADON CONSULTING**

**RADON TESTING**

**RADON MITIGATION**

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Paul Muntak CRT # 201066 CRMT # 201067

**REMEDICATION PROPOSAL**

**CLIENT:** Malakwa Community Centre Society (Rhona Martin) &  
School District No. 83 (Steve Bennett)

3994 Malakwa Rd.  
Malakwa, BC  
Phone # 250-836-4509  
E-mail: [rhona@malakwa.ca](mailto:rhona@malakwa.ca) & [sbennett@sd83.bc.ca](mailto:sbennett@sd83.bc.ca)

**DATE:** Oct. 12/17

**PREFACE**

On October 24 & 25, 2016, IRPS conducted sub-slab communications testing in the Malakwa Elementary School in Malakwa, BC. Sub-slab communications consist of drilling 1½" (simulated suction point with vacuum) and ¾" (pressure field extension measurement) holes in various locations throughout the building's floor. Obtaining the measurements helps to understand the relationship of the internal building envelope in comparison to the exterior of the building (building under negative, neutral, or positive pressure), and helps to determine how conducive the soils below the slab are to air movement.

The two buildings that were assessed are; the Northern most building (community used building) consisting of slab on grade, concrete block wall, and wood frame wall construction. This building has a flat roof with torch down roofing. The second building (currently used for the School), consists of slab on grade, and crawlspace construction. The walls are wood frame with a mixed flat / pitched roofing. Vermiculite insulation was found in the south building's attic, and a

detailed potential asbestos assessment should be considered on both buildings prior to any further modifications. Some flooring materials are suspect of containing asbestos.

On Sept. 21, 2017, IRPS met with Steve Bennett onsite to discuss remedial work to be conducted and the role that SD #83 will play in the remediation of the 2 buildings. All previous proposals have now been withdrawn by IRPS and this proposal dated Oct. 12, 2017 is the only proposal now in effect.

### **SD #83 SCOPE OF WORK**

- SD #83 to provide a worksite hazard assessment for both buildings.
- SD #83 to provide any asbestos or other site hazardous material related removal / work if required for the systems installation.
- SD #83 to supply garbage dumpster onsite for all garbage removal. Dumpster to be located onsite prior to IRPS arrival for the School building only.
- SD #83 to supply and install required electrical to 5 system fans and system low pressure switch / LED monitors. (2 systems on School building and 3 on the North building). Each system will require a weather proof exterior disconnect switch located near each fan, as well as wiring to the system low pressure switch and LED monitors.
- SD #83 to disconnect and remove the existing crawlspace fan system (School building), prior to IRPS arriving on site.
- SD #83 will provide flat roofing contractor to apply roofing material and seal the roof extension boxes (approximate size per box 24" x 24" x 30") that will be located on the roof of the north building, for the 3 systems. IRPS will build the boxes, supply the aluminum flashings required for each box, the boxes will be mounted to the roof deck. The roofing contractor will then apply the torch down roofing material over and around each extension box.

### **SOUTH SCHOOL BUILDING SCOPE OF WORK**

- Supply and install the materials, and follow up testing as required for the 2 radon mitigation systems to be located in the south building.
- Coring of the 2 holes for the suction points in the southern (School) building and soil removed as required.
- 4" System15 PVC piping will be used for the de-pressurization system. The piping will extend up from each suction point and extend through the eastern exterior wall of the south (School) building, the piping will then discharge above the roofline of the building. The crawlspace portion, the piping will extend up from the membrane, through the southern rim joist and exhaust above the roofline of the building.
- Attachment and support of piping systems as required.
- The fans will be located on the exterior walls of the southern building (electrical provisions SD #83)
- Install 2 system low pressure switches connected to a 2 light LED monitor to alert the occupants of a system malfunction / fan failure. (electrical provisions SD #83)
- Install system performance indicator "U" tube manometer, one on each system.

- Cleaning of crawlspace as required.
- Sealing of cracks and gaps within the crawlspace floor slab as required.
- Install a 6 mil poly over the exposed soils of the crawlspace areas. This layer will not be sealed as it will only provide additional protection from abrasions and punctures to the top membrane.
- Install a 15 mil, virgin polyolefin, radon / vapour membrane over the 6 mil poly. This membrane will be sealed and mechanically fastened to the perimeter foundation wall.
- PVC termination strips will be installed with mechanical fasteners to the foundation walls to permanently attach the membrane to the foundation.
- Membrane will be double sealed at the point of attachment. One seal behind point of attachment and the other seal over lapping the PVC termination bar and foundation.
- The crawlspace will include one suction port into each of the two separate crawlspace sections. The piping will then connect each portion and exit the south building exterior wall.
- Label piping and electrical elements as required.
- Depressurization piping will remain visible.
- Provide system certifications at completion.
- IRPS will also provide short-term follow up testing. Continuous Radon Monitors will be left onsite from beginning until approximately 1 week after the systems have been commissioned to obtain post mitigation readings. **The long term tests will not be deployed until satisfactory short-term test results have been obtained and confirmed.**  
***Malakwa Community Society and SD #83 may be held responsible for any lost or damaged, long or short term, E-perm test devices up to the full replacement cost of any E-perm test device of \$175.00 and a CRM of \$3,800.00 per device.***
- **Price for remedial work as described:** This price is all inclusive of materials, labour, short – term testing fees, GST, and applicable expenses: thirty thousand, six hundred, forty three dollars, and twenty cents (\$30,643.20).

**SOUTH SCHOOL BUILDING  
SCOPE OF WORK  
Long term Testing**

- IRPS will provide long-term follow up testing. **The long term tests will not be deployed until satisfactory short-term test results have been obtained and confirmed.** IRPS will not be held responsible for and resulting condition of retest beyond our reasonable control, expect additional fees for a retest scenario.  
***Malakwa Community Society and SD #83 may be held responsible for any lost or damaged, long or short term, E-perm test devices up to the full replacement cost of any E-perm test device of \$175.00 and a CRM of \$3,800.00 per device.***
- **Price for long term testing:** This price is all inclusive of test devices, lab fees, labour, GST, and applicable expenses: three thousand, five hundred, and seven dollars (\$3,507.00).

## NORTH BUILDING SCOPE OF WORK

- Supply and install the materials, and follow up testing as required for the 3 radon mitigation systems to be located in the south building.
- Coring of the 8 holes for the suction points in the northern building and soil removed as required.
- 4" System15 PVC piping will be used for the de-pressurization system. The piping in the northern most building will extend up from the suction points into the T-Bar ceiling area and discharge through the roof as required. The suction points will connect together as required above the T-bar ceiling before penetrating the roof.
- Attachment and support of piping systems as required.
- The fans will be located on the roof of northern building. (electrical provisions SD #83)
- IRPS will provide rooftop extension boxes and spun aluminum flashings for the 3 system roof penetrations. (flat roofing contractor / supplies other than those mentioned, to be provided by SD #83)
- Install 3 system low pressure switch connected to a 2 light LED monitor to alert the occupants of a system malfunction / fan failure. (electrical provisions SD #83)
- Install system performance indicator "U" tube manometer. one on each system.
- Sealing of cracks and gaps along exposed baseboards as opened by SD #83. It has been understood that all exterior and load bearing walls will be exposed for sealing of the concrete slab perimeter.
- Label piping and electrical elements as required.
- Depressurization piping will remain visible.
- Provide system certifications at completion.
- IRPS will also provide short-term follow up testing. Continuous Radon Monitors will be left onsite from beginning until approximately 1 week after the systems have been commissioned to obtain post mitigation readings. The long term tests will not be deployed until satisfactory short-term test results have been obtained and confirmed.  
*Malakwa Community Society and SD #83 may be held responsible for any lost or damaged, long or short term, E-perm test devices up to the full replacement cost of any E-perm test device of \$175.00 and a CRM of \$3,800.00 per device.*
- **Price for remedial work as described:** This price is all inclusive of materials, labour, short – term testing fees, GST, and applicable expenses: twenty nine thousand, nine hundred, seven dollars, and fifteen cents (\$29,907.15).

## NORTH BUILDING SCOPE OF WORK Long term Testing

- IRPS will provide long-term follow up testing. The long term tests will not be deployed until satisfactory short-term test results have been obtained and confirmed. IRPS will

not be held responsible for and resulting condition of retest beyond our reasonable control, expect additional fees for a retest scenario.

***Malakwa Community Society and SD #83 may be held responsible for any lost or damaged, long or short term, E-perm test devices up to the full replacement cost of any E-perm test device of \$175.00 and a CRM of \$3,800.00 per device.***

- **Price for long term testing:** This price is all inclusive of test devices, lab fees, labour, GST, and applicable expenses: three thousand, seven hundred, and seventeen dollars (\$3,717.00).

#### NOTES:

- All asbestos and / or hazardous materials must be identified prior to installation of systems. Testing for any such substances will be completed by SD #83.
- The owner will be responsible for removal of belongings to facilitate the installation of the system and equipment, prior to IRPS arriving on site.
- IRPS will be using the appropriate manufacturers recommended glues and sealants. Although these are listed as having low VOC's some strong odours may be present during installation and additional ventilation may be required by the homeowner.
- IRPS will install the Radon Reduction System according to Health Canada Radon Mitigation Standards and current BC Building Codes.
- IRPS also recommends that if not installed already to install a carbon monoxide alarm in the building for early detection of any unwanted adverse effects. This may happen if any part of the remediation system is unknowingly damaged in any way; it would then potentially extract inside air and create back drafting situations of carbon monoxide with any gas or oil burning appliance.
- IRPS will perform the work described for the purpose of reducing radon levels in the above building. Health Canada, the World Health Organization, and the US EPA have set guideline levels of acceptable radon concentrations. IRPS does not endorse these or any level to be safe or without risk, as there may be risk involved from long-term exposure to radon at any level.
- Health Canada, and IRPS recommend that the long term follow up testing be completed within two (2) years of mitigation (included in this proposal), and periodic future long term testing to ensure that low radon levels are continually achieved at a minimum of once every five (5) years after mitigation (future ongoing testing is not included in this proposal).

#### WARRANTY

The system shall be free from mechanical defects caused by faulty materials or workmanship for a period of one (1) year. IRPS agrees, at our sole cost and expense, to correct or replace during the one-year period immediately following the date of installation, those parts of the Radon Reduction System which, due to faulty materials or workmanship, are found mechanically defective under normal use. **This warranty will only apply to those components that IRPS installs on the system. IRPS does not provide warranty on system components that have not been installed by IRPS, or those having a specific manufacturer's warranty.**

The fan used on the system carries a five (5) year manufacturer's warranty not covered by IRPS. **Replacement of fan after the installation date will be subject to labour and applicable travel charges.**

This warranty shall not apply if any damage to the Radon Reduction System components or the system's performance is due to occupant negligence or servicing by any occupant, installer or technician other than an authorized representative of IRPS. IRPS liability shall be limited to repair or replacement of those mechanically defective products or materials, and in no event, shall IRPS be responsible for consequential damages to persons or property. IRPS reserves the right to inspect prior to performing any work pursuant to this warranty.

### LIMITATIONS

- The system installed is for the building "as is" in the current state. Please be advised that any alterations or expansions may result in increased Radon levels. It is highly advised that the appropriate testing is completed before and after, any building alterations or expansions. Expect additional suction points and / or fans to compensate for alterations and expansions to the building.

### SYSTEM PERFORMANCE & MAINTENANCE

- The system's basic operation is to create a negative pressure below the slab or membrane to interrupt radon laden soil gas and discharge the radon gas to the outside atmosphere.
- The system is designed to be virtually maintenance free. The "U" Tube Manometer will be used to show system suction pressure (periodically check this against the original data placard for deviations), ensure the electrical breaker has not tripped, and visually inspect any system components for physical damage. If damaged components are found, or if the cause can't be determined, it is then recommended to shut down the power to the fan and contact IRPS immediately.

### PAYMENT TERMS & ACCEPTANCE OF PROPOSAL

- The prices and terms of this proposal may be withdrawn by IRPS Ltd. if not accepted within 30 days of the date on this proposal.
- **The Malakwa Community Centre Society, agrees to make payment in full to IRPS Ltd. upon the of the completion of each of buildings' installations.**
- **Payment for long term testing will be due upon deployment of the testing equipment.**
- **Payment methods are cash, cheque, or E-transfer**



- **Payment of invoice made 15 days past the invoice date will be subject to 2.5% per month late fee surcharge.**
- **Cancellation or delay of the project after signing and setting of job dates will be subject to a 20% cancellation fee.**
- **By signing below, I (The Client) have read and understand the conditions described in this document. The work described, conditions, limitations, prices and payment are hereby accepted. IRPS is authorized to do the work as described.**
- **Payment will be made in full as outlined within this proposal.**
- **This page must be signed and sent back via fax 250-359-8045, or e-mail paul@irps.info as acceptance of this proposal, prior to scheduling of the described work.**

**SOUTH BUILDING (SCHOOL) ACCEPTANCE**

\_\_\_\_\_  
Signature of Malakwa Community Society Authorized Representative Date

\_\_\_\_\_  
Print Name Phone

\_\_\_\_\_  
Address of the subject building

\_\_\_\_\_  
Signature of School District #83 Authorized Representative Date

\_\_\_\_\_  
Print Name Phone

**NORTH BUILDING (COMMUNITY CENTRE) ACCEPTANCE**

\_\_\_\_\_  
Signature of Malakwa Community Society Authorized Representative Date

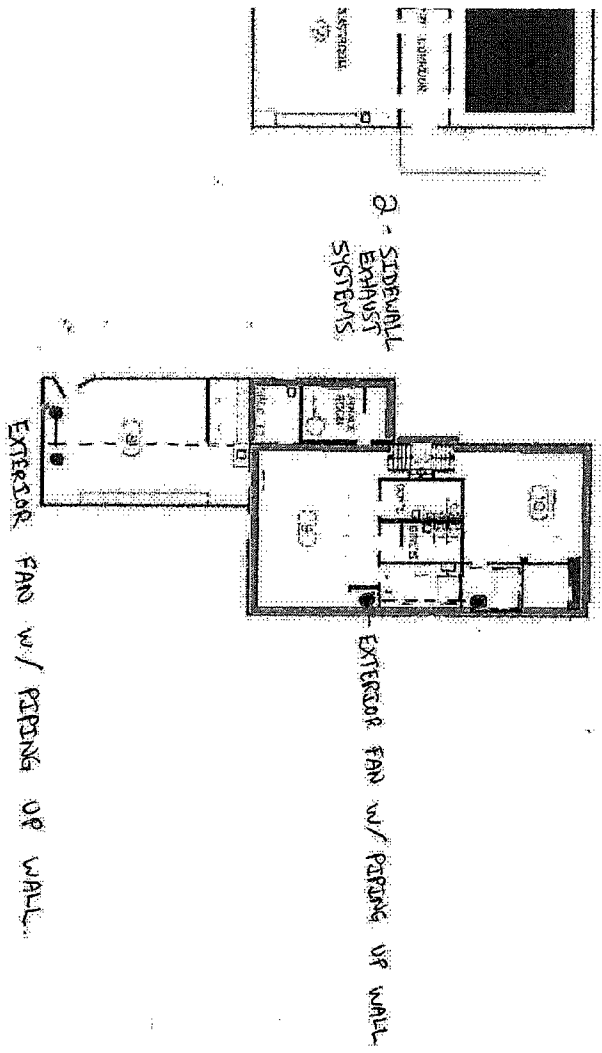
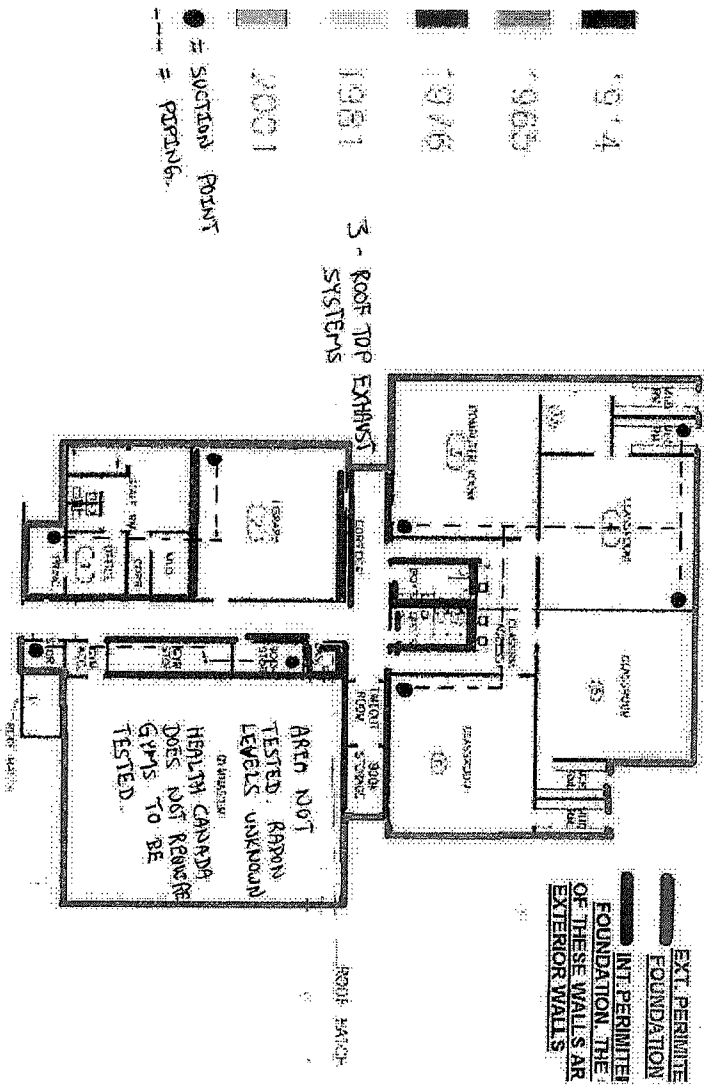
\_\_\_\_\_  
Print Name Phone

\_\_\_\_\_  
Address of the subject building

\_\_\_\_\_  
Signature of School District #83 Authorized Representative Date

\_\_\_\_\_  
Print Name Phone

**PROPOSED PIPING PLAN**



## **January 11, 2018. Minutes of the MCCA General Meeting**

**Welcome** to all by Jim at 7 p.m. **Guest Speaker**, Rhona Martin, was introduced. History of the Community Learning Centre project was provided. For the years 2018 through 2022, \$60,000 per year is available from the District of Sicamous and Area "E" Economic Development Fund. Rhona explained that this money can be accessed by the MCCA if the membership agreed to sign a management lease for five years. Presentations were made by tenants of the building and questions were answered. Voting procedure was with paper ballot by current members only. Ballots were counted immediately and results announced: 25 in favour of signing the five year lease and 2 against.

Correspondence from Derek Sutherland, CSRD Team Leader, regarding the decommissioned 1964 International fire truck, was read. The truck will be donated to the Community Association if the members wish to have it. Storage and costs were discussed. Voting procedure was with paper ballot by current members only. Ballots were counted immediately and results announced: 19 in favour of keeping the truck and 7 against.

**BREAK**

**Call to Order** by Jim for the regular business portion of the meeting. **Minutes** of the November 23<sup>rd</sup>, 2017 meeting were read. Motion to adopt by Lawrence, seconded by Kathy. Carried. Copies of the **financial report** were distributed. Motion to adopt by Roseanne, seconded by Ron. Carried. There was no correspondence.

**Project and Community Reports:** ***Preschool*** – successful fundraiser and concert in December. ***Gospel Church*** – Souper Saturdays average 20 people each week and Teen Centre averages 15. ***Fire Dept.*** – Four callouts since last meeting. Very successful Food Drive by volunteers. Captain James spoke about a fundraising society being formed within the fire dept. It will be named to honour Joe Schandelle. Marco is the OHS rep for fire departments in Area "E". ***Resource Centre*** – Janet thanked everyone who helped to make the Christmas hamper project a huge success. ***Regional District*** – Rhona reported that the Rail Trail negotiations are done.

**New Business:** Rhona gave information on updated information that is required to keep our federal broadcast license for the original tower. Moved by Audrey, seconded by Ron, that a grant-in-aid application be made to cover the \$900+ cost. Carried.

**Motion to Adjourn** by Jim Jackson.

Respectfully submitted by Astrida Knox, Secretary

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