

ECOLE ROCHER-DU-NORD
MAINTENANCE/SERVICE CONTRACT
HVAC AND CONTROLS
CSFP 101-SC-HVAC RDN

2018 - 2022

Issued: September 2018



CONSEIL SCOLAIRE FRANCOPHONE
PROVINCIAL DE TNL
(CSFP)

**H.V.A.C. MAINTENANCE SERVICE CONTRACT
OCT 2018 - AUG 2022**

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MAINTENANCE/SERVICE CONTRACT
HVAC AND CONTROLS
CONSEIL SCOLAIRE FRANCOPHONE PROVINCIAL DE TNL
2018 - 2022

TENDER/CONTRACT FORM

CONTRACT TITLE HVAC and Controls Service Contract CONTRACT # CSFP-101
SC-HVAC RDN

TENDER CLOSING DATE & TIME Oct 5, 2018 2:00 P.M.

TENDER ADDRESS: Att: Peter C Smith, CPA,CGA Assistant Director
of Education (Finance and Administration)
Conseil Scolaire Francophone Provincial
De Terre-Neuve-et Labrador
65 Ridge Road, Suite 212
St. John's, NL
A1B 4P5

OWNER: Conseil Scolaire Francophone
Provincial de TNL
65 Ridge Road, Suit 212
St. John's, NL A1B 4P5

CONTRACTOR: _____

CONTRACTOR'S ADDRESS: _____

TELEPHONE NUMBER _____

EMAIL _____

1. TENDER AND CONTRACT AGREEMENT

1.1 The Contractor hereby tenders to perform all work related to this Contract as required under and on the terms and conditions of the Contract Documents, issued with respect thereto for ad at the unit prices and/or lump sum prices set out in this the Tender/Contract Form

The Contract shall remain in force for the period stated in The Supplementary Instructions to Bidders "Duration of Contract:" of the Contract Specification and more clearly defined in the acceptance letter from the owner as to the exact starting-termination dates.

The Contractor agrees that this Tender/Contract Form when accepted on behalf of the Owner shall constitute a binding Contract between the Contractor and the Owner.

1.2 The Contractor agrees that the owner may reject any and all tenders and the lowest tender may not necessarily be accepted.

2. ADDENDA

The Contractor acknowledges receipt of the following Addenda: Numbers: _____

DELIVER TENDERS TO:

**Att: Peter C Smith, CPA,CGA Assistant Director
of Education (Finance and Administration)
Conseil Scolaire Francophone Provincial
De Terre-Neuve-et Labrador
65 Ridge Road, Suite 212
St. John's, NL
A1B 4P5**

TENDER FOR:

**MAINTENANCE/SERVICE CONTRACT
HVAC AND CONTROLS
CONSEIL SCOLAIRE FRANCOPHONE
PROVINCIAL DE TNL**

FOR THE LUMP SUM OF:

_____ (Dollars)

\$ _____
(INCLUDE HST IN PRICE)

Total tender bid to include totals of lump sum bid on schedule 'A' and totals of unit prices on schedule 'B'

Contractors Signature:

This section to be completed by contractor

Name of Contractor: _____

Address: _____

Signed By: _____

Signed by: _____

Witnessed By: _____

Date: _____

Documentation Received and Completed:

Confirmed on behalf of the owner

Signature: _____

Title: _____

Witnessed by: _____

Date: _____

Schedule "A"

Lump Sum Component Form

The following shall be a breakdown of the lump sum bid.

Item No.	Description	Unit	Quantity	Lump Sum Price	Total
1.	Site Visit HVAC Equipment Servicing Rate for Ecole Rocher-du-Nord, St. John's	Single trip	12 trips total		
Subtotal					
H.S.T. (15% of Contract Price)					
Total Lump Sum Price					

Notes:

1. The lump sums tendered in this form shall be for the Work completed in every respect and they must include all incidental or contingent expenses and risks of every kind necessary to complete the Works in accordance with the Contract.
2. All expenses, travel, meals, accommodations, etc. shall be included in the unit price.
3. The Owner will issue payment within thirty (30) days from the invoice date for invoices presented by the Contractor based on two invoices per year.

Schedule “B”

Unit Price Component Calculation

These rates shall be applied to all additional work required during the course of the contract. The estimated hours/trips are provided for bid evaluation only and the actual hours/trips will be paid based on actual hours/trips requested.

Schedule of Prices

Service Rates

Item No.	Description	Unit	Estimated units	Unit Cost	TOTAL Unit Price
1.	HVAC Technician Service Rate – Regular Hours	/ hr	55		
2.	HVAC Technician Service Rate – Overtime Hours	/ hr	25		
3.	HVAC Technician Apprentice/Helper Service Rate – Regular Hours	/ hr	15		
4.	HVAC Technician Apprentice/Helper Service Rate – Overtime Hours	/ hr	15		
5.	Vehicle Rate within St. John’s Area	/trip	5		
6.	Travel Expense (Including Meals & Hotel Expenses) -St. John’s	/trip	6		
				TOTAL of ALL Unit Prices	

**MAINTENANCE/SERVICE CONTRACT
HVAC AND CONTROLS
CONSEIL SCOLAIRE FRANCOPHONE PROVINCIAL DE TNL
Ecole Rocher-du-Nord
2018-2022**

1. GENERAL

Tenders will be addressed to Assistant Director of Education, Conseil Scolaire Francophone Provincial de Terre-Neuve-et-Labrador, 65 Ridge Road, Suite 212, St. John's, NL A1B 4P5, in a sealed envelope. The tender envelope is to be clearly marked with the name of bidder, the tender closing time and date, the contract title including the applicable contract number and the duration of the contract.

Tenders shall be submitted on the Tender/Contract Form provided, completed in ink or typewritten, properly signed and containing security as required.

Before submitting a tender, bidders are required to fully inform themselves of the existing conditions and limitations and are invited to visit the sites of the proposed Work. Subsequent claims resulting from failure to properly examine the site will not be considered.

Tenders must be received at the address noted above on or before the exact closing time and date indicated in the public advertisement or as amended by the Assistant Director by an addendum. **TENDERS RECEIVED AFTER THAT TIME WILL NOT BE CONSIDERED.**

Bidders are cautioned to examine the Contract Documents thoroughly to determine the nature and extent of the work. During the tendering period any inquiries as to the scope of the Work are to be directed to the Assistant Director. No interpretations or explanations are to be considered part of the Contract Documents, or will be binding on the Owner, unless issued as addenda.

2. TENDER SECURITY AND COMMENCEMENT OF WORK

For each contract a tender security of five hundred dollars (\$500.00) must accompany the tender. This security shall be in the form either of a Certified Cheque, a Money Order or a Bank Draft from a recognized financial institution registered to do business in the Province, made payable to Conseil Scolaire Francophone, Provincial De TNL. No other form of tender security will be accepted.

The tender security will be forfeited to, and become the property of, the Owner if the bidder, after having been issued a Letter of Acceptance within the tender validity period specified in Clause 9 of this Section B, fails to provide the required Worker's Compensation documentation and insurance certificate, and commence work under the contract, within the times provided in the Contract Documents.

The Contractor shall not commence work under the contract until Owner has indicated its satisfactory receipt of the Worker's Compensation documentation and insurance certificate (see GC19 and GC18 of Section C) by having completed Clause 5: "Documentation Received and Completed" of Section A: Tender/Contract Form and issued a copy thereof to the Contractor.

Owner's right respecting the bid security shall be in addition to, and not in substitution for, or limitation of, any other rights that Owner may have for a default of the bidder.

The tender security of the bidders ranking second and third behind the preferred bidder will be returned to them upon expiration of the tender validity period. Tender security of bidders ranking higher than third will be returned after the tender opening.

3. PERFORMANCE SECURITY

The tender security of the successful bidder will be retained as a performance security for the duration of a contract. No other performance security will be required. Upon satisfactory completion of the Work the performance security will be returned to the Contractor. Owner's rights respecting the performance security shall be in addition to, and not in substitution for or limitation of, any other right Owner may have for default of the Contractor.

4. COMPLETION OF THE TENDER/CONTRACT FORM

Type or legibly print all information required, including numbers of Addenda received during the tender period and a listing of subcontractors, if applicable, in the appropriate spaces.

Clause 4: "Contractor's Signature" of Section A: Tender/Contract Form shall be signed, as follows, and must be witnessed:

- (a) If a Sole Proprietor, indicate "Sole Proprietorship" next to signature.
- (b) If a Partnership, all partners must sign. Indicate "Partner" next to signature.
- (c) If a Limited Company, indicate next to signatures the corporate title of the signing officers.

5. UNACCEPTABLE TENDERS

The following will be considered as unacceptable and will not be considered:

- (a) Tenders received after the tender closing time;
- (b) Telegraphic or facsimile tenders; or
- (c) Tenders not accompanied by the required tender security.

6. DEFECTIVE TENDERS

Tenders with the following defects may be rejected if, in the opinion of Owner, the defect is material:

- (a) Tenders not submitted on the Tender/Contract Form provided;
- (b) Incomplete tenders; or
- (c) Tenders containing qualifications or clauses additional to the Tender/Contract Form.

Bidders hereby acknowledge and agree that the Owner's determination of whether a defect is material is final, with respect to either its tender or the tender of any other bidder and shall not be made the subject of judicial review.

7. AMENDMENT TO TENDERS

Properly documented amendments to the tender will be permitted up to the tender closing time. Amendments documented by telegram or facsimile will be acceptable. Amendments must be signed by a signing officer who signed the Tender/Contract Form.

8. ADDENDA

- (a) During the tendering period, any required additions to, deletions from, or alteration to the Contract Documents will be issued in the form of an addendum. All such addenda will become a part of the Contract Documents.

- (b) Tenderers are responsible for ensuring that all addenda issued during the tender period, including addenda bound into the Contract Documents, have been received. Tenderers must insert the numbers of all addenda to the Contract Documents in the space provided in Clause 2 of Section A: Tender/Contract Form: If no addendum has been received, the word "NONE" should be inserted. If the space is left blank all addenda will be deemed to have been received.

9. **ACCEPTANCE OF TENDERS**

- (a) The Owner may reject any and all tenders and the lowest or any tender will not necessarily be accepted.
- (b) Tenders shall be irrevocable and remain in effect and open to acceptance by issuing of a Letter of Acceptance for a period of sixty (60) days, the tender validity period, from the tender closing time.
- (c) A contract for the performance of the Work shall come into effect, and the successful bidder becomes the Contractor, on award of the Contract by issuing of the Letter of Acceptance within the tender validity period.

10. **SEPARATE CONTRACTS**

This tender call may cover more than one contract. Each contract as identified by a separate contract number in the Supplementary Instructions to Bidders must be bid as a separate contract. One or more contracts may be bid on. A separate Tender/Contract Form is required for each contract. Each contract must be bid on in its entirety.

11. **TENDER BREAKDOWN FOR EACH BUILDING**

Bidders shall, when required by the Supplementary Instructions to Bidders, give a cost breakdown in Clause 3.2 of Section A: Tender/Contract Form for each building in the contract. Partial listing of buildings or listing of buildings from a contract other than the contract being bid may render the tender defective.

**MAINTENANCE/SERVICE CONTRACT
HVAC AND CONTROLS
CONSEIL SCOLAIRE FRANCOPHONE PROVINCIAL DE TNL
Ecole Rocher-du-Nord
2018-2022**

1. DURATION OF CONTRACT

The duration of each contract shall be for a period of three years ten months, from the date of the acceptance and verification test (certificate). Starting from 00:01 hours, Oct 15, 2018 and completing three years ten months from that date.

2. PAYMENTS

- .1 The owner will make fifteen (12) equal payments for the lump sum portion of the contract. Payment will be made upon receipt of the Contractor's invoice after servicing and receipt of detailed service, based on three (3) inspections per year, at four (4) month intervals
- .2 Payment for extra work will be made upon completion of the work and receipt of the Contractor's invoice quoting the applicable work order/change order number.
- .3 Payment for unit rate work will be made upon completion of the work and receipt of the Contractors invoice quoting the applicable work order number.

3. TENDERED PRICES

- .1 The lump sum price is the price to provide all work required under the lump sum component for the entire duration of the contract.
- .2 The Unit Rate is the rate that the Contractor will charge for a qualified tradesman per hour for work outside that covered by the lump sum price. The Unit Rate will apply to time during regular hours, after hours, statutory holidays and weekends. The Unit Rate will apply to Foremen and Superintendents and will remain constant for the duration of the contract. It is "the appropriate unit price" referred to in GC.26 - Valuing Changes and Extra Work of Section C.

4. TOTAL TENDERED PRICE

- .1 **"3.1 Total Tendered Price"** of Clause 4: Tender Price of the Tender/Contract Form shall be completed in accordance with this Clause.
- .2 For those contracts with a Unit Rate Component and a lump sum component.

SECTION C
SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

- (a) Bidders shall complete the lump sum Schedule B inserted in the Tender/Contract Form
- (b) Bidders shall complete Schedule B inserted in the Tender/Contract Form
- (c) The estimate of hours/trips in schedule B is made for bid evaluation purposes only and the contractor will be paid based on actual hours/trips requested and worked. No hours/trips of the unit Rate work is guaranteed for any contract
- (d) In completing Schedule B the Unit Rate shall be the hourly rate at which the bidder will provide a qualified tradesman to perform work requested by the Owner and not included under the lump sum bid for work required under Section E, Technical Requirements of the contract or any other Contract Document.
- (c) The bid prices for the lump sum component and the Unit Rate shall be the inclusive cost to the Owner and shall include all taxes, royalties, custom duties, foreign exchanges, transportation costs, travelling time, overhead, profit, fringe benefits, administration costs co-ordination fees and insurance charges. For greater certainty the Unit Rate will be paid only for hours worked and no payment, at the Unit Rate or otherwise, will be made for travelling time.

**MAINTENANCE/SERVICE CONTRACTS
HVAC AND CONTROLS
CONSEIL SCOLAIRE FRANCOPHONE PROVINCIAL DE TNL
2018-2022**

GC1 DEFINITIONS

- .1 "Bidder" means a party submitting a tender for the Work, and may, where appropriate, be read as "Contractor"
- .2 The "Contract Documents" shall consist of the Letter of Acceptance, the Tender/Contract Form, the Supplementary Instructions to Bidders, the Instructions to Bidders, the Supplementary General Conditions, the General Conditions, the Technical Requirements and the Drawings, if any, including all Addenda thereto.
- .3 "Contractor" is the Bidder to whom the contract is awarded by Letter of Acceptance and may, when appropriate, be read as "Bidder".
- .4 "Owner" means the person, as named in Clause 1 of Section B, holding the Assistant Directors of Education position or that person's successor or authorized representative with the CSFP.
- .5 "Subcontractor" means a person, firm or corporation having a direct Contract with the Contractor to perform a part or parts of the Work included in the Contract, or to supply products worked to a special design according to the Contract Documents, but does not include one who merely supplies products not so worked.
- .6 "Work" includes all labour, materials, and services required, as shown or described in the Contract Documents, or any portion thereof.

GC2 DOCUMENTS

The Contract Documents are complimentary, and what is called for by any one shall be as binding as if called for by all. The intention of the documents is to include all labour, equipment and materials necessary for the proper execution of the Work. The various documents shall take precedence over other documents in the descending order as they are listed in GC1.2 of these General Conditions. Within this order documents of later date shall govern, and Drawings of larger scale shall govern drawings of smaller scale.

GC3 RECORDS TO BE KEPT

- .1 The Contractor shall maintain and keep full records, vouchers, and other correspondence and information in respect of his estimates and actual cost of the Work, and shall make them available for copy, audit or inspection by the Owner.

- .2 Records shall include all relevant information such as the number of employees engaged on the Work daily, hours worked and type and quantity of materials used, and any other data required by the Owner. Written progress reports indicating the Work completed and the status of incomplete Work are to be provided to the Owner each month if requested.

GC4 OWNER'S DECISION

- .1 The Owner shall decide on questions arising under the Contract Documents. Any questions regarding wording, omission, etc., shall be presented to the Owner for explanation. If this is not done, it shall be assumed that the Contractor thoroughly understands the terms and conditions of the Contract Documents.
- .2 The Owner shall have the right to decide the proper timing and scheduling for any Work, and whether the Work done or the material supplied by the Contractor is acceptable.
- .3 The Owner's decision on matters arising under the contract shall be final and the Contractor shall proceed with the Work in accordance therewith but should the Contractor disagree with any such decision he shall notify the Owner in writing before carrying out any Work associated with such decision.

GC5 SUPERINTENDENCE AND WORKMEN

The Contractor shall employ a competent superintendent for the Work, authorized to receive any order or communication in respect of the Contract. Any superintendent or workman deemed unacceptable by the Owner will be removed from the site of the Work and replaced forthwith.

GC6 OWNER'S RIGHT TO DO WORK

If the Contractor should neglect to prosecute the Work properly or fail to perform any provision of this Contract, the Owner, after five (5) days' written notice to the Contractor or where, in the opinion of the Owner, the circumstances require that a lesser period of notice is necessary, such period as the Owner may direct to be given verbally, may without prejudice to any other right or remedy that he may have, make good deficiencies and may deduct the cost thereof from the payment then or thereafter due the contractor. The Owner reserves the right to use his own forces for any such work. The direction of the Owner as to the giving of a verbal notification shall be recorded in writing and a copy forwarded to the Contractor. **Any second occurrence requiring the issuance of such written notice will be cause for immediate termination of the Contract in accordance with Section C, GC7.**

The owner reserves the right to decide whether or not to terminate a Contract in any given circumstance and the failure by the Owner to terminate following a second occurrence shall not constitute a waiver of any prior occurrence.

GC7 OWNER'S RIGHT TO TERMINATE CONTRACT

If the Contractor should be adjudged bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should fail to provide the Worker's Compensation documentation (GC19) and insurance certificate (GC18) as required by this Section C, or if he should, except in cases beyond his control, refuse or fail to supply enough properly skilled workmen or proper materials after having received seven (7) days' written notice in writing from the Owner to supply additional workmen or materials, or if he should fail to make prompt payment to Sub-Contractors for material or labour or persistently disregard laws, ordinances or the instruction of the Owner or otherwise be guilty of a substantial violation of the provisions of the Contract, then the Owner may, without prejudice to any other right or remedy he may have, by giving the Contractor a written notice terminate the employment of the Contractor and take possession of the premises and of all materials, equipment, tools and appliances thereon and finish the Work by whatever method he may deem expedient but without undue delay or expense. In any such case, the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract price shall exceed the expense of finishing the Work, including compensation to the Owner for his additional services, such excess shall be paid to the Contractor. If such expenses shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner.

GC8 SETTLEMENT OF DISPUTES AND CLAIMS

In the case of any disputes or claims arising between the Owner and the Contractor as to their respective rights and obligations under the Contract, either party hereto may give the other written notification of such a dispute or claim. The notification of dispute or claim shall be made within fourteen (14) days of the dispute or cause of action arising.

GC9 EMERGENCIES

The Owner has authority in any emergency to stop the progress or make changes to the Work whenever in his opinion such stoppage or changes may be necessary to ensure the safety of life, or of a structure, or neighbouring property.

GC10 MATERIALS, APPLIANCES, WORKMANSHIP

.1 Unless otherwise stipulated the Contractor shall provide and pay for all materials, labour, tools and equipment necessary for the execution of the Work.

- .2 The Owner will supply all heat, light, power, and hot and cold water as may be required and available from existing services. The Contractor shall be responsible for all extensions of the heating, lighting, and water systems that he may require.

GC11 STORAGE

- .1 Where deemed necessary by the Owner for expeditious execution of the Work, adequate storage space in close proximity to the Work will be provided for the Contractor's use. The Contractor will be totally responsible for keeping this area clean, hazard free and secure.
- .2 The Owner's written permission is required before erecting any temporary structure.

GC12 LABOUR

- .1 The Contractor shall meet the requirements of the labour laws of the Province of Newfoundland in carrying out this Work and all other labour laws applicable to the area in which the Work is being done.
- .2 Each person employed on the Work shall be qualified and competent for that specific trade or duty in which he or she is employed and shall be paid as minimum the standard rates of wages applicable thereto.
- .3 Personnel engaged in the Work shall be capable of functioning effectively and co-operatively with the building's staff, occupants, and the visiting public. The Contractor is to supply the necessary equipment to his employees for performance of their duties.
- .4 All personnel will present a clean, neat and orderly appearance at all times and shall conform to all regulations and ensure that high standards of tact, courtesy and discretion are maintained in all places of their Work.
- .5 If so requested by the Owner, the Contractor will supply and require his employees to wear identity badges acceptable to the CSFP.
- .6 In engaging labour for the Work, first consideration will be given to the employment of available and competent workers who are resident in the area where the Work is being done.
- .7 The Contractor shall maintain and keep available for inspection by the Owner, a record of the names and addresses of all individuals who will be performing Work.

- .8 The Contractor must inform his employees that a security clearance may be required. If requested, the Contractor will have this check undertaken.

GC13 INSPECTION OF THE WORK

- .1 The Owner shall be permitted to inspect the Contractor's Work at any time.
- .2 The Contractor shall make all necessary arrangements with any authority having jurisdiction over the Work for the performance of any inspections which may be required and shall notify the Owner at least twenty four (24) hours in advance of such inspections. The Contractor shall be on the site during all inspections. A copy of all reports and certificates resulting from such inspections shall be provided promptly to the Owner.

GC14 REJECTED WORK

- .1 The Contractor shall promptly remove and replace with new Work, at no cost to the Owner, any defective work/service whether the result of poor workmanship, defective materials, damage through carelessness or other acts of the Contractor which the Owner determines does not conform with the Contract.
- .2 If the Contractor fails to carry out the orders relative to the replacement of rejected Work within the time decided by the Owner, the Owner may either (1) carry out such Work and any costs incurred will be the responsibility of the Contractor or (2) deduct from the Contractor's monthly payment an amount as determined by the Owner to equal the value of the rejected Work. The Contractor will NOT be reimbursed for deductions made for rejected work/service.
- .3 Should the Owner direct the Contractor not to correct Work that has not been performed in accordance with the Contract Documents, an equitable deduction from the Contract amount shall be made by the Owner to compensate the Owner for the uncorrected or uncompleted Work.

GC15 PROTECTION OF WORK AND PROPERTY

- .1 The Contractor shall provide and maintain adequate protection as approved by the Owner for the building and its contents during the progress of his Work.

- .2 The Contractor will be solely responsible to ensure that the Owner's property is not damaged, destroyed or stolen during the progress of Work. Any damage or injury to the Work and the property of the Owner resulting from the actions of the Contractor or his employees will be made good with new materials as required to match existing Work in kind, quality, and workmanship at the expense of the Contractor.
- .3 Before commencing any Work the Contractor shall assess the effect of the proposed Work on the existing building structure or systems. Any Work which could result in an adverse effect on building safety and operations must be brought to the attention of the Owner for approval.

GC16 SAFETY HAZARDS

- .1 The Contractor shall be completely responsible for the safety of the Work as it applies to protection of the public and property and the construction of the Work. The codes that must be followed and enforced for safety are:
 - a) The National Building Code, Part 8, Construction Safety Measures (Latest Edition).
 - b) The Workers' Compensation Board Accident Prevention Regulations (Latest Edition).
 - c) Canadian Code for Construction Safety (Latest Edition) as issued by the Associate Committee of the National Building Code.
 - d) Hazardous Materials Information Systems Regulations (WHMIS) under the Occupational Health and Safety Act. This includes submitting Material Safety Data Sheets (MSDS) to the Owner and posting same.
 - e) The National Building Code of Canada (NBC) 2005, and Newfoundland regulation 194/91, Code of Practice for Asbestos Abatement and Applications provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
 - f) ASHRAE Standard (Latest Edition)
- .2 The Contractor shall report immediately to the Owner any equipment or conditions which could be considered unsafe.
- .3 No materials will be stored on site where they might present a hazard to property, personnel or affect the normal operating functions of the building.

GC17 INDEMNIFICATION

- .1 Except as provided in GC17.2, the Contractor shall be liable for, and shall indemnify and hold harmless the Owner from and against, all claims, demands, losses, costs, damages, actions, suits or proceedings whatsoever, arising under any statute or Common Law:
 - a) in respect of personal injury to or the death of any person whomsoever arising out of or in the course of or caused by the carrying out of the Work; and
 - b) in respect of any injury or damage whatsoever to any property, real or personal or any chattel real, insofar as such injury or damage arises out of or in the course of or by reason of the carrying out of the Work.
 - c) The Contractor shall not be liable under Clause 17.1 to the extent that the injury, death, loss or damage is due to any act or neglect of the Owner.

GC18 INSURANCE

- .1 Commercial General Liability Insurance
 - (a) Without restricting the generality of GC17.0 of these General Conditions, the Contractor shall provide and maintain, either by way of a separate policy or by an endorsement to his existing policy, Commercial Liability Insurance acceptable to the Owner and subject to limits set out in detail in the Certificate of Insurance, attached to these General Conditions as Appendix "A" inclusive per occurrence for bodily injury, death, and damage to property including loss of use thereof.
 - (b) This insurance shall include as an additional insured Her Majesty the Queen in Right of Newfoundland. The Contractor shall not commence any Work until he obtains, at his expense, all required insurances as specified in these General Conditions. Such insurance must have the approval of the Owner and be to the limits, form and amounts specified. The Contractor will not permit any Subcontractor to commence Work on this Contract until the same insurance requirements have been complied with by the Subcontractor.
 - (c) The insurance shall also include as Unnamed Insureds the architectural and engineering consultants of the Owner, if any, with respect to Work performed by the Contractor, but excluding professional liabilities associated with such architectural and engineering consultants.

- (d) The Commercial General Liability Insurance will not be limited to, but shall include coverage for:
- | | |
|--|---|
| 1) premises and operations liability | 2) products or completed operations liability |
| 3) blanket contractual liability | 4) broad form property damage |
| 5) cross liability | 6) elevator and hoist liability |
| 7) contingent employer's liability | 8) personal injury liability |
| 9) liability with respect to non-owned licensed vehicles | 10) shoring, blasting, excavating, underpinning, demolition, pile driving and caisson Work, Work below ground surface, tunnelling and grading, as applicable only. |

.2 Automobile Liability Insurance

The Contractor shall provide and maintain liability insurance in respect of (i) owned licensed vehicles and (ii) leased vehicles, subject to limits set out in the Certificate of Insurance inclusive.

.3 All insurance policies shall contain an endorsement requiring notification of Her Majesty and the Named Insured, in writing, thirty (30) days prior to cancellation of any policy or material change, except in the event of non-payment where policy conditions dealing with termination will apply.

.4 The Contractor shall, within the time limit specified in the Certificate of Insurance, provide the Owner with a completed Certificate of Insurance and shall, if requested at any time, provide the Owner with a certified true copy of each policy of insurance.

GC19 WORKERS' COMPENSATION

The Contractor shall within 14 days of award of the contract provide suitable documentation certifying that he is registered and in good standing with the Workers' Compensation Commission.

GC20 ACCIDENTS AND CLAIMS

.1 The Contractor shall promptly report in writing to the Owner all accidents whatsoever, arising out of or in connection with the performance of the Work, whether on or adjacent to the site which caused death, personal injury, or property damages.

- .2 If any claim is made against the Contractor or subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Owner giving full details of the claim.
- .3 The Contractor should provide a first aid kit at the site of the Work to treat minor injuries occurring in connection with the Work.

GC21 PERMITS, NOTICES AND LAWS

The Contractor shall obtain and pay for all necessary permits, certificates, licence or other fees required for the execution of the Work. The Contractor shall comply with all laws, ordinances, rules and regulations relating to the Work.

GC22 TAXES

- .1 Except for the H.S.T., as outlined in Article GC22.2, the Contractor shall pay all taxes as required by Legislation, and these are to be included as part of any prices quoted.
- .2 Contractors are advised that the CSFP is not exempt from the Harmonized Sales Tax (H.S.T.) The prices quoted by the Contractor on the Tender Form shall include the H.S.T. The CFSP will pay the H.S.T. to the Contractor with each regular progress billing.

GC23 ASSIGNMENT

The Contractor shall not assign the Contract or any part thereof or any benefit or interest therein or thereunder without the written consent of the Owner.

GC24 PROGRESS OF WORK

- .1 Following the issue of the Letter of Acceptance by the Owner and a copy of Section A: Tender/Contract Form with Clause 5 thereof completed, the Contractor shall begin the Work and shall prosecute the Work regularly with sufficient force to secure the completion of the Work to the satisfaction of the Owner.
- .2 The Contractor must arrange to meet the Owner's building representative during normal Work hours to discuss Work routines, problem areas, etc., prior to each servicing or inspection visit.
- .3 The Contractor shall familiarize himself with building rules regarding smoking, wearing apparel, off-limit areas, and hard hat areas and shall strictly observe these rules.

- .4 All safety measures presented by the authorities have jurisdiction respecting fire hazards and personnel shall be observed at all times. Personnel should become familiar with the use and location of fire fighting equipment.

GC25 CHANGES IN THE WORK AND EXTRA WORK

- .1 The Owner, or the Owner, without invalidating the Contract, may make changes to the Work or may require the Contractor to do extra Work by supplying services not included in the original scope of the Work or may add buildings to or delete building from the Contract.
- .2 Extra Work or changes in the Work shall not be started until the Owner's written approval has been obtained. No additional payments will be made for unauthorized work.

GC26 VALUING CHANGES AND EXTRA WORK

If any change causes an increase or decrease in the cost of carrying out the Work in comparison with what the Contractor's cost would have been had no change been made in the Work, or if extra Work is approved, payment to the Contractor shall be adjusted as follows:

- a) in the case where buildings are deleted from the Contract the Owner may, at its option, elect to have such adjustment based on the tender breakdowns set out in Clause 3.2 of Section A: Tender/Contract Form, proportionate to the breakdown for that building and the service rendered to the date of deletion;
- b) to the extent that they are appropriate, unit prices or lump sum prices in the Contract shall apply;
- c) to the extent that there are not, in the opinion of the Owner, appropriate unit prices or lump sum prices in the Contract, adjustment shall be made on the basis of lump sums or unit prices agreed upon by the Owner and Contractor for such changes and extra work then being authorized or billed;
- c) to the extent that adjustment has not been made pursuant to paragraphs a, b, or c above of this GC26, by payment to the Contractor of its cost, as approved by the Owner, to perform the subject work plus a mark up of 10% of such costs for overhead and 10% of such cost and overhead for profit, provided that Contractor's cost shall not include any cost for material or the like that are recoverable by the Contractor under any other provision of the Contract.

GC27 CLEANING-UP

The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish caused by his employees or the Work. The Work area shall be kept in a clean condition, satisfactory to the Owner.

GC28 PAYMENT TO CONTRACTOR

- .1 Payment for the Work shall be made in accordance with the Supplementary Instructions to Bidders.
- .2 Before final payment under the Contract is made, the Contractor shall provide to the Owner a Certificate of good standing from the Workers' Compensation Commission.
- .3 Notwithstanding any other provision of the Contract, the Owner may, in the event of a claim by the Owner against the Contractor for damages arising out of the performance or non-performance of the Contract, withhold payment of an amount equal to the alleged damages until the liability for damages is established and no amount of interest will be paid on amounts held under this provision.

GC29 SECURITY CLEARANCES

The Contractor shall inform his employees that a security clearance may be required. Any employee not receiving a satisfactory security clearance shall be replaced by the Contractor.

When requested, the Contractor shall supply the following information to the Owner. At least ten (10) working days are required to process a security clearance.

- a) Full name of the employee
- b) Full address of the employee
- c) Employee's place of birth
- d) Employee's date of birth

GC30 WORK ORDERS

If a work order is issued pursuant to this Contract, then any condition therein, including any printed conditions on the back thereof, that conflicts with, or is in contradiction to, any provision of the Contract Documents shall not apply to the Work.

GC31 CONTRACTOR'S PERFORMANCE EVALUATION

Contractors are advised that Contractor Performance Evaluation System has been introduced. Upon completion of each contract, the contractor's performance will be evaluated according to prescribed criteria.

In accordance with the Public Tender Act Regulations 1998, NFLD Reg. 10/98, Section 3(4), contractors may be required to maintain a certain performance rating to bid. Contractors whose performance on previous contracts falls below the required minimum may have their bid disqualified.

Complete details of the Performance Evaluation System are available upon request

GC32 CERTIFICATE OF RECOGNITION

- .1 The contractor shall within 14 days of award of the contract, and prior to commencement of the work, provide a Letter of Good Standing under the Certificate of Recognition Program from the Newfoundland and Labrador Construction Safety Association.
- .2 At anytime during the term of the Contract, when requested by the Owner, the Contractor shall provide such evidence of compliance by any or all of his or her Subcontractors.

MAINTENANCE/SERVICE CONTRACTS
HVAC AND CONTROLS
CONSEIL SCOLAIRE FRANCOPHONE PROVINCIAL DE TNL
Ecole Rocher-du-Nord
2018-2022

1. GENERAL

- .1 This Section E of the Contract Documents sets out the work required for the lump sum component and includes the technical requirements for the maintenance and servicing of the automatic controls and equipment for heating, ventilation, and air-conditioning systems in schools covered by this contract.
- .2 The Conseil Scolaire Francophone Provincial de TNL requires this contract includes preventative maintenance for one school, Ecole Rocher-du-Nord in St. John's. This specification outlines the minimum requirements for the preventative maintenance contract on the Heating, Ventilation, and Air Conditioning (HVAC) equipment at this school.

2. PREVENTATIVE MAINTENANCE PROGRAM

The contractor shall be required to visit each site and provide a detailed preventative maintenance schedule and check list to be used for the duration of this contract.

3. FREQUENCY OF SERVICING

Unless otherwise provided in this Section E, servicing is to be completed every four (4) months during the life of this contract. The service visits shall be during September, January and May of each year. However, the owner maintains the right to adjust the schedule. **(This will entail twelve (12) service calls during the duration of the contract commencing October 2018).**

4. DESCRIPTION OF SYSTEMS

The Contractor shall inspect and perform preventative maintenance on all the HVAC equipment located in the facilities with the major items listed below:

.1 **Ecole Rocher-du-Nord
St. John's, NL**

Roof Top Air Conditioning Unit (10 Tons) and Variable Volume boxes
A total of Eighteen (16) Ventilation Fans

A total of 3 make-up fans and heating coils
Penthouse built-up ventilation unit, supply fan 7.5HP, return fan
3HP, coil, Damper, etc.
Variable Air Volume Boxes with Electric Reheat
Indirect hot water tank and pump
Oil fired boiler and 6 heating circulating pumps
Outside above grade fuel tank with below grade fuel line
Radiation heaters, valves and thermostats
Old Honeywell Expert ISE Control System with pneumatics

5. SCOPE OF WORK

- .1 Work under the lump sum portion of this Contract shall include, but not necessarily be limited to maintenance and servicing of all automatic temperature controls, heating, ventilation and exhaust units, roof-top A/C units, valves, boiler, pumps, pneumatic compressors and all control devices. The frequency of service calls shall be as outlined.
- .2 Requirements and the Work to be performed under the lump portion of this Contract during each site visit are:
 - .1 The Contractor shall supply and pay for all labour, materials, test instruments, tools and accessories, for the performance of servicing of the controls and associated equipment for heating, boilers, pumps, ventilation, air-conditioning, energy management systems, exhaust systems associated with air-handling systems in the buildings.
 - .2 Examine, adjust, calibrate and clean all thermostats, temperature controllers, pressure controls, valves, relays, motors, compressors, air-conditioning unit, energy management systems, boilers and pumps and all other accessories directly pertaining to heating, ventilation and air-conditioning equipment and controls.
 - .3 Supply oils and lubricants and lubricate such components as valve packing glands, damper bearings, motors and bearings, linkages, heat wheel drive mechanisms and bearings, and switches directly pertaining to heating, ventilation and air-conditioning equipment and controls.
 - .4 Replace the valve packing material of control valves as often as may be necessary to prevent the valves from leaking.
 - .5 Verify tight closure of all valves.
 - .6 Check all solid state heat relays for proper amperage output and verify operation.
 - .7 Instruct the Owner's Representative who is in charge of the building on the day-to-day procedure to help minimize environmental control problems.

- .8 Inspect control parts or complete control components and recommend replacement if required.
- .9 Ensure all gauges such as pressure, temperature, etc., are operating properly.
- .10 Ensure all safety devices are functioning as required.
- .11 It is agreed that under this section of the agreement that the Contractor is not to make replacement or repairs necessitated by reasons of negligence, vandalism or misuse of the equipment or by any other cause beyond the Contractor's control except ordinary wear and tear as part of the lump sum price of the Contract. The Contractor shall not be required to make safety tests or to install new attachments or additional controls as recommended or directed by any insurance company or laboratory or government authority, or to make replacements mentioned herein with parts or to make replacements mentioned herein with parts or devices of different design for any reason whatsoever. Work of this nature shall be classified as extra to the Contract.
- .12 The Contractor shall check levels of refrigerants, add refrigerants if required. Check entire system with leak detector for refrigeration leaks. All leaks are to be corrected.
- .13 Check, adjust and/or replace as required all "V" belts and drive belts for the heating, ventilation, air-conditioning and exhaust.
- .14 Check night set back systems, program for accuracy and adjust as required.
- .15 Clean and/or replace heat recovery/air handling unit air filters and refrigerant filters as required.
- .16 The Contractor shall provide the Owner with a detailed written report after each visit. This report shall include, but not necessarily be limited to the all the maintenance checks made, corrective action taken, procedures followed, parts replaced and any recommendations the Contractor may have regarding the system.
- .17 Check all motor and fan bearings, shafts, and pulleys. Grease all bearings. Report any defects.
- .18 Check heating coils in ducts/ air handling units for proper operation. Report any defects.
- .19 A service report will be completed after each call and provided to the Owner and a copy to be kept with the service Contractor for historical review.

- .20 Provide 24 hour emergency service, 7 days a week on a call from the Owner to address a problem. Within four (4) hours response time to site which is located in St. John's.
- .21 Provide a complete DDC system Input/Output points check. Check sensor/component function. Provide report.
- .22 In addition to tasks listed above complete all equipment/system checks as outlined in attached Maintenance Services lists attached in Appendix A
- .23 Complete DDC maintenance checks as outlined in Appendix B.
- .24 Complete detailed report of the site indicating **all** items checks and results and submit to owner for review and approval. Payment of progress invoices will not be processed until inspection report is received and approved. Prior to first site visit at each site submit for approval blank check list form for all items included in this contract.

6. MATERIALS

- 1. The cost of all material, equipment, etc., required to perform the maintenance as described in this package, are to be included in the lump sum portion of this Contract. All materials supplied are to be new. Contractor to quote all labour rates for the service people. These rates will be used for work outside this Service Contract.
- .2 The Contractor's service personnel must have at their disposal, at all times, an adequate local stock of controls and devices applicable to the systems.
- .3 Replacement parts shall be identical to the original parts, bear the same trademark, and conform to the manufacturer's recommendations. No substitutions of models shall be accepted unless previously authorized by the Owner. The Contractor shall be responsible for purchasing and obtaining parts and components from the manufacturer.
- .4 Materials will be paid for as extra to the contract pursuant to GC.26 of Section C only where they are used in performing extra work authorized under clause 8 of this Section E and are not required to be supplied by the Contractor under the lump sum price pursuant to the Contract Documents. No payment shall be made for use, in performing extra work, of tools, equipment or other items required by the Contract Documents to be made available by the Contractor for the work.

7. REUSE OF EXISTING MATERIALS

- .1 In general, materials and equipment removed from existing systems in the building shall remain the property of the CCFP and are to be turned over to the Owner's representative.

- .2 The Contractor shall not reuse any materials and equipment without the consent of the Owner's representative.
- .3 Equipment and materials that are considered non-reusable shall be disposed of by the Contractor in a manner as instructed by the Owner.

8. EXTRA WORK

When the Contractor is required to perform work (or supply materials) that is considered by the Contractor to be extra to the contract, the Contractor shall submit a written request for authorization, describing the work, briefly explaining the need for the work and estimating the cost. In cases of agreed "Emergency" a verbal request for work will be accepted. No extra work is to commence until authorization is received from the Owner's representative. This authorization will be in the form of either a change order or a work order. Charges for extra work will be paid for under GC.26 of Section C and for contracts with a unit rate component it shall be deemed to be the applicable unit price. Work that shall be considered extra to the contract shall include:

- .1 Replacement of air conditioning and refrigeration compressors.
- .2 Changes to the systems resulting from building renovations.
- .3 Replacement of power motors.
- .4 Replacement of air-handling units.
- .5 replacement of heating coils

9. SUPERINTENDENCE AND WORKMEN

The Contractor shall employ such numbers of qualified service personnel as are necessary for the work. Personnel who service controls must be fully qualified as Instrumentation Technicians or factory trained in the type of system to be serviced and have a minimum of five (5) years experience in the servicing of such systems. At least one of the Contractor's personnel, who shall be the supervisor of other personnel who may be engaged in the work, shall have a minimum of ten (10) years experience in the control industry.

10. WORK SCHEDULE

Upon commencement of the contract, the Contractor shall supply to the Owner an inventory of the systems covered by the contract in each building, together with a detailed maintenance work routine and frequency schedule for this equipment. The schedule shall be satisfactory to the Owner. Once the schedule is agreed upon any deviation must be approved by the Owner.

11. WORK ORGANIZATION

A Service Contractor's Log Book is placed in all buildings by the CSFP for all service trades. The Contractor must have EACH of his employees and supervisors sign themselves in and out of the building noting time of entry and departure and description of the work carried out. The log book must be available for inspection at all times by the Owner's representative.

12. COOPERATION WITH OTHER TRADES

- .1 In general, the Contractor shall familiarize himself with the work of other trades and shall arrange his work and equipment to avoid conflict with these other trades as far as possible.
- .2 Where there is conflict between this Contractor and other trades, the decision of the Owner or his representative shall be sought and his decision shall be final.

13. RECORD OF CHANGES TO THE EXISTING SYSTEMS

- .1 The Contractor shall keep a complete and accurate record of all changes made to existing systems and services.
- .2 If building drawings are available, the Contractor shall be given a complete set to record all changes the Contractor may make. This set of drawings shall be returned to the Owner at the termination of this contract.
- .3 The Owner shall have the right, at any time, to inspect all drawings to ensure that changes are being properly and accurately recorded.

14. MAKING ABANDONED SYSTEMS SAFE

All services which are to be abandoned as a result of the Contractor's work shall be disconnected in a manner satisfactory to the Owner.

15. PRESSURE WELDING

All pressure welding shall conform to the requirements of the Service NL.

16. GUARANTEE

The Contractor shall guarantee all materials used in the work performed, and all workmanship, for a period of one (1) year from the specific date of the completion of each particular item of work.

17. EMERGENCY SERVICE

- .1 Emergency service, including overtime service, shall be provided for Contracts in Region Avalon. The Contractor shall have a service technician available twenty-four (24) hours each day, seven (7) days per week, so that any emergency call can be responded to within two (2) hours after the request is made by the Owner's representative.
- .2 The Contractor shall supply the names and telephone numbers of service personnel to the Owner so that in the event of an emergency the Owner's representative may contact the service personnel directly.
- .3 Emergency service shall mean activities undertaken on site, other than scheduled maintenance, to correct malfunctions or breakdowns of the systems.

- .4 Emergency service shall be paid for as Unit Rate Work by Extra Work under GC. 26 - Valuing Changes and Extra Work - of Section C.

18. APPENDIX SAMPLES

The samples given in the following appendix shall be used as a standard of acceptance for all work done under this contract.

APPENDIX A

MAINTENANCE SERVICE EXAMPLES

MAINTENANCE SERVICES

Mechanical Systems Built-up Air Handling Unit & Exhaust Fans

Service Procedure	Function	Benefit
Air Handling Unit Inspection(Built Up)	Check and clean fan assembly. Lubricate fan bearings per manufacturer's recommendations. Lubricate motor bearings per manufacturer's recommendations. Check belts and sheaves. (Replace and adjust as required) Tighten all nuts and bolts. Check motor mounts and vibration pads. (Replace and adjust as required) Check motor operating conditions. Inspect electrical connections and contactors. Lubricate and adjust associated dampers and linkage. Check fan operation. Clean outside air intake screen. Check and clean drains and drain pans. Check and clean strainers, check steam traps and hand valves. Check filter advancing mechanism. Lubricate and adjust as required. Inspect filters. Check heating and cooling coils. Inspect and clean drain pass, drain lines, and drains. Inspect humidifier.	Inspection and adjustment for proper operation ensures ventilation and positive pressurization eliminating stale air and discomfort. Proper ventilation is a basic requirement for good indoor air quality.
Exhaust Fan Inspection	Lubricate fan bearings per manufacturer's recommendations. Lubricate motor bearings per manufacturer's recommendations. Check belts and sheaves. (Replace and adjust as required) Check motor mounts and vibration pads. Check fan operation. Dust grilles. (Optional)	Proper operation ensures that undesirable odors and fumes will be eliminated producing a more desirable work area.

Mechanical Systems Heating Pumps

Service Procedure	Function	Benefit	Frequency
Primary Inspection	Lubricate pump bearings per manufacturer's recommendations. Lubricate motor bearings per manufacturer's recommendations. Tighten all nuts and bolts. Check motor mounts and vibration pads. (Replace and adjust as required) Visually check pump alignment and coupling. Check motor operating conditions. Inspect electrical connections and contactors. Check and clean strainers and check hand valves. Inspect mechanical seals or pump packing. Replace as required. Verify gauges for accuracy.	Proper maintenance of the pumping systems ensures that comfort conditions will be maintained and heating and cooling media will be contained in the mechanical system. This will protect against leakage with its associated costs and potential safety concerns.	Semi-Annually
Operational Inspection	Lubricate pump bearings per manufacturer's recommendations. Lubricate motor bearings per manufacturer's recommendations. Check suction and discharge pressures. Check packing or mechanical seal.	Periodic maintenance ensures that unsafe conditions will be eliminated and comfort will be maintained.	Semiannually

Mechanical Systems Heating Boiler

Service Procedure	Function	Benefit
Preseason Inspection	Brush and vacuum soot and dirt from flues and combustion chamber. Check operation and calibration of gas train components. Inspect, clean and lubricate the burner and combustion control equipment. Check burner sequence of operation and combustion air equipment. Check fuel piping for leaks and proper support. Tighten all nuts and bolts. Inspect electrical connections and contactors. Lubricate and adjust associated dampers and linkage. Clean outside air intake screen.	Fine tuning and trouble shooting procedures prior to heavy work load ensures safe, reliable, economical operation on start up. This produces a comfortable, energy efficient building. By detecting minor problems, corrective action can be taken before seasonal demands tax the design of the system. This lessens the possibility of occupant discomfort due to system downtime.
Seasonal Startup	Review manufacturer's recommendations for boiler and burner startup. Check fuel supply. Check auxiliary equipment operation. Inspect burner and controls prior to startup. Start burner, check operating controls. Test safety controls. Perform combustion test and adjust burner for maximum efficiency. Log all operating conditions. Review operating procedures and owner's log with boiler operator.	Review of all systems and communication with the operators ensures minimal problems at startup and during initial seasonal operation. Keeping the building operators informed helps them operate the building more comfortably and economically.
Operational Inspection	Review owner's log. Log all operating conditions. Inspect burner and make adjustments as required. Check operating and safety controls. Review operation with operator.	Periodic review and correction ensures continued system reliability, comfort, and economy.
Seasonal Shutdown	Review owner's log. Log all operating conditions. Shut off burner and open electrical disconnect. Close fuel supply valves. Review operation with operator.	Proper shutdown and review protects the investment in the machinery to ensure that it will be ready for trouble free operation in future years.

MAINTENANCE SERVICES

Mechanical Systems Make Up Air Units With Heat

Service Procedure	Function	Benefit
Preseason Inspection	Check and clean fan assembly. Lubricate fan bearings per manufacturer's recommendations. Lubricate motor bearings per manufacturer's recommendations. Check belts and sheaves. (Replace and adjust as required) Tighten all nuts and bolts. Check motor mounts and vibration pads. (Replace and adjust as required) Check motor operating conditions. Inspect electrical connections and contactors. Lubricate and adjust associated dampers and linkage. Check fan operation. Clean outside air intake screen.	Fine tuning and trouble shooting procedures prior to heavy work load ensures safe, reliable, economical operation on start up. This produces a comfortable, energy efficient building. By detecting minor problems, corrective action can be taken before seasonal demands tax the design of the system. This lessens the possibility of occupant discomfort due to system downtime.
Seasonal Startup	Test safety controls. Log all operating conditions. Review operating procedures.	Review of all systems and communication with the operators ensures minimal problems at startup and during initial seasonal operation. Keeping the building operators informed helps them operate the building more comfortably and economically.
Operational Inspection	Review owner's log. Log all operating conditions. Check operating and safety controls. Review operation with operator.	Periodic review and correction ensures continued system reliability, comfort, and economy.
Seasonal Shutdown	Review owner's log. Log all operating conditions. Review operation with operator.	Proper shutdown and review protects the investment in the machinery to ensure that it will be ready for trouble free operation in future years.

MAINTENANCE SERVICES

Mechanical Systems Miscellaneous HVAC Equipment

Service Procedure	Function	Benefit
Reheat Coils Inspection	Visually inspect coil. Clean as required. Check and clean strainers. Check steam traps and hand valves. Inspect electrical connections. Check relays, contactors and operating and safety controls.	Proper maintenance lessens the danger of winter freeze up and system shut down.
Radiators Inspection	Visually inspect fins/cast iron. Clean as required. Check and clean strainers. Check steam traps and hand valves.	Maintenance increases heat transfer and saves energy.

MAINTENANCE SERVICES

Mechanical Systems Pumps

Service Procedure	Function	Benefit
Primary Inspection	Lubricate pump bearings per manufacturer's recommendations. Lubricate motor bearings per manufacturer's recommendations. Tighten all nuts and bolts. Check motor mounts and vibration pads. (Replace and adjust as required) Visually check pump alignment and coupling. Check motor operating conditions. Inspect electrical connections and contactors. Check and clean strainers and check hand valves. Inspect mechanical seals or pump packing. Replace as required. Verify gauges for accuracy.	Proper maintenance of the pumping systems ensures that comfort conditions will be maintained and heating and cooling media will be contained in the mechanical system. This will protect against leakage with its associated costs and potential safety concerns.
Operational Inspection	Lubricate pump bearings per manufacturer's recommendations. Lubricate motor bearings per manufacturer's recommendations. Check suction and discharge pressures. Check packing or mechanical seal.	Periodic maintenance ensures that unsafe conditions will be eliminated and comfort will be maintained.

MAINTENANCE SERVICES

Mechanical Systems Rooftop Units

Service Procedure	Function	Benefit
Startup Inspection Cooling	<p>Review manufacturer's recommendation for startup.</p> <p>Energize crank case heater per manufacturer's recommendation for warm-up.</p> <p>Remove all debris from within and around unit.</p> <p>Check unit for refrigerant leaks.</p> <p>Check and calibrate safety controls.</p> <p>Check and tighten electrical connections, contactors, relays and operating safety controls.</p> <p>Check starter; tighten all terminals and check contacts for wear.</p> <p>Lubricate motor bearings per manufacturer's specifications.</p> <p>Lubricate fan bearings per manufacturer's specifications.</p> <p>Check and clean fan blades as required.</p> <p>Check belts and sheaves. Replace and adjust as required.</p> <p>Check damper operation and lubricate; adjust dampers and linkage.</p> <p>Check motor operating conditions.</p> <p>Check external interlocks.</p> <p>Inspect filters.</p> <p>Check vibration eliminators. Replace or adjust as required.</p> <p>Check compressor oil level, acid test oil and meg hermetic motor.</p> <p>Change oil and refrigerant filter drier as required.</p> <p>Inspect coils for blockage and cleanliness. Straighten fins as required.</p> <p>Check burner or heating elements (where applicable).</p> <p>Check and clean drain pan and drains.</p> <p>Check operation of control circuit.</p>	<p>Fine tuning and trouble shooting procedures prior to heavy work load ensures reliable economical operation on start up. This produces a comfortable, energy efficient building.</p> <p>By detecting minor problems, corrective action can be taken before seasonal demands tax the design of the system. This lessens the possibility of occupant discomfort due to system downtime.</p>
Mid-Season Cooling Inspection	<p>Visually inspect for leaks.</p> <p>Lubricate fan bearings per manufacturer's recommendation.</p> <p>Lubricate motor bearings per manufacturer's recommendation.</p> <p>Check belts and sheaves. Replace and adjust as required.</p> <p>Clean and straighten fins as required.</p> <p>Check operating conditions. Adjust as required.</p> <p>Clean coil external surfaces with chemical and high pressure spray.</p> <p>Log temperatures, pressures, voltages, amperages, etc.</p> <p>Prepare report listing deficiencies.</p>	<p>Review of all systems and communication with the operators ensures minimal problems at startup and during initial seasonal operation. Keeping the building operators informed helps them operate the building more comfortably and economically.</p>
Seasonal Cooling Shutdown	<p>Review manufacturer's recommendation for shutdown.</p> <p>Verify economizer operation (if applicable).</p> <p>Visual inspection of leaks.</p> <p>Verify auxiliary heater operation (if applicable).</p> <p>Inspect belts and filters.</p> <p>Test all safety controls.</p>	<p>Proper shutdown and review protects the investment in the machinery to ensure that it will be ready for trouble free operation in future years.</p>
Heating Start up Inspection	<p>Inspect and tighten electrical connections.</p> <p>Check heating coil.</p> <p>Check and calibrate operating-safety controls.</p> <p>Check heating elements. (Electric heat)</p> <p>Check operation and calibration of gas train components.</p> <p>Check and calibrate operating-safety controls.</p>	<p>Review of all systems and communication with the operators ensures minimal problems at startup and during initial seasonal operation. Keeping the building operators informed helps them operate the building more comfortably and economically.</p>
Operational Inspection	<p>Review owner's log. Log all operating conditions.</p> <p>Inspect burner and make adjustments as required.</p> <p>Check operating and safety controls.</p> <p>Review operation with operator.</p>	<p>Periodic review and correction ensures continued system reliability, comfort, and economy.</p>
Heating Shutdown	<p>Review owner's log. Log all operating conditions.</p> <p>Review operation with operator.</p>	<p>Proper shutdown and review protects the investment in the machinery to ensure that it will be ready for trouble free operation in future years.</p>

MAINTENANCE SERVICES

Mechanical Systems Terminal HVAC Equipment

Service Procedure	Function	Benefit
Unit Heaters Inspection	Brush and vacuum coil, fan and housing as required. Lubricate fan and motor bearings per manufacturer's recommendations. Check belt and sheaves. Check and clean strainers. Check hand valves. Inspect electrical connections, contactors, relays and operating-safety controls. Check unit operation. Adjust as required.	Properly maintained units provide heat where needed as economically as possible.

APPENDIX B

DIRECT DIGITAL CONTROL SYSTEM

Direct Digital Control System Maintenance Schedule

	Function	Benefit
Database Verification	Verify setup and operation of remote site dial-up communications.	Provides routine testing and verification that programs are performing as designed to produce expected results.
Verification of System operations and functions	Verify setup of users, passwords and privilege levels as agreed.	Ensures that operational staff has thorough knowledge of system operation and methods.
Visual Inspection	Verify operation of input and output points as per as built shop drawings.	Protects total system database from catastrophic loss or damage.
Backup database	Provide backup of system database to off-site storage location.	Ensures there are no impending device failures which can adversely affect system operation and integrity.
Clean and inspect battery terminals	Ensures devices is not physically damaged. Report any damaged components.	Continuous power is available in the event of a power failure to protect memory.
Verify system database and modifications as approved by owner.	Update as built records and database storage files with owner approved changes and correct any non-approved changes.	Ensures programs are accurately maintained and documented.
Check temperature sensors accuracy.	Verify that the operational accuracy of sensors is within +/- .5F.	Reduces downtime by having a current database available for replacement.
Check occupancy sensor operation.	Verify the controlled systems switch from unoccupied to occupied modes.	Provides accurate and efficient control of equipment for safety, comfort, and system reliability.
Points Input/Output Check	Verify all input/outputs for operation and control.	Identify all faulty points.