

ITEM 13
MANAGER'S REPORT NO. 79
COUNCIL MEETING Dec. 8/75

Re: PETITION FROM MEMBERS OF EDMONDS HOUSE
REQUEST FOR AIR CONDITIONING
(Item 14, Report No. 63, October 6, 1975)

Council, at its meeting of October 6, 1975, received the above-noted petition requesting that air conditioning be installed at Edmonds House. At that meeting, Council delayed responding to the petition pending a report from Consultants and the Parks and Recreation Commission.

Following is the Parks and Recreation Administrator's report on this matter.

RECOMMENDATIONS:

1. THAT the request for air conditioning at Edmonds House be refused at this time and that a further review of the matter be made during warm weather conditions; and
2. THAT members of Edmonds House requesting the installation of air conditioning be sent a copy of this report.

* * * * *

TO: MANAGER December 4, 1975.
FROM: PARKS & RECREATION ADMINISTRATOR
RE: REQUEST BY PETITION FOR AIR CONDITIONING
AT EDMONDS HOUSE

Following receipt of the above petition by the Municipal Council on October 6, 1975, the Chief Building Inspector obtained a report from the Mechanical Engineering firm which was associated with the Architect in the design of Edmonds House. A copy of a letter from the Chief Building Inspector together with a copy of the report from Consultant Mechanical Engineering firm was submitted to the Parks and Recreation Commission at its meeting of December 3, 1975. (see attached)

The Commission feels that the request for air conditioning at Edmonds House be refused at this time, but that a further review of the matter be made during warm weather conditions. The Parks and Recreation staff have taken note of this and will check on the situation at the beginning of June, 1976.

RECOMMENDATION

THAT the request for air conditioning at Edmonds House be refused at this time and that a further review of the matter be made during warm weather conditions.



Dennis Gaunt,
ADMINISTRATOR.

ag
attachments

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October 29, 1975.

Mr. M.J. Shelley,
MUNICIPAL MANAGER.

Dear Sir:

Subject: Edmonds House Senior Citizens'
Recreation Centre - Request for
Installation of Air-Conditioning System

Municipal Council, at its meeting of October 6, 1975, received a petition from a group of members of Edmonds House requesting Council to have an air-conditioning system installed. Response to that petition was delayed pending a report from the Mechanical Engineering firm which was associated with the Architect in the design of the Edmonds House.

That report was received on October 28, 1975, and is attached hereto. The report confirms the writer's view that the addition of air-conditioning to the mechanical system presently in the Edmonds House would be economically impractical. Reasons for impracticality are set out in the Consultant report, namely:

- (a) The basic concept of the mechanical system provided only for heating and ventilating of various building spaces.

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- (b) The mechanical ventilating supply ducts in the building are sized for ventilation air standards only, not sized for cooling standards.
- (c) Ventilating supply ducts within the building are not insulated as would be needed for a designed air-conditioning system.
- (d) To overcome size and insulation limitations in present constructed ventilation system, to modify to an air-conditioning system, would necessitate taking down demountable ceiling systems, fixed ceiling systems, to permit installation of larger insulated ducts at great expense.

The Consultant Mechanical Engineer and the Architect make the recommendation that the Corporation reassess the need for cooling in the Edmonds House because of the significant high cost which would be incurred.

The writer is in agreement with the Consultant report which clearly sets forth the basic design concept for the mechanical system of the building, and concurs with the recommendation given.

If Council deems further investigation of this request is needed, we would respectfully suggest that during warm weather conditions, air volume measurements be taken along with inside room temperatures in order that actual room conditions can be measured against the variety of occupancy loads and activities within the building.

Respectfully submitted,



M. J. Jones,
CHIEF BUILDING INSPECTOR.

MJJ:lm
Enc.

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EDWARDS HOUSE SENIOR CITIZENS RECREATION CENTRE -
 REPORT ON HEATING AND VENTILATION SYSTEMS

RECEIVED
 OCT 20 1975

Description of Existing Heating and Ventilating Systems

The building mechanical supply ventilation systems comprise air handling units that introduce a mixture of outside and re-circulated air to occupied areas. The following table indicates how the various rooms are grouped on different fan systems. None of the supply ducts on these systems are insulated and air quantities are set at ventilation standards not cooling standards. Consequently, air quantities are short of normal cooling requirements.

Basement Floor

<u>System</u>	<u>Areas Served</u>	<u>Fan Location</u>	<u>Fan Duty (CFM)</u>
Fan System #1	Hobby Room B.5	Drop Ceilg. Corridor B3	600
Fan System #2	Games Room 9 Meeting Room 1 Hobby B.10	Mech Room 23	4000

Ground Floor

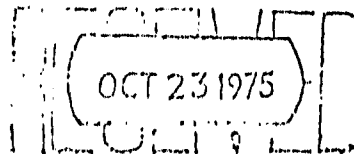
<u>System</u>	<u>Areas Served</u>	<u>Fan Location</u>	<u>Fan Duty (CFM)</u>
Fan System #3	Hall 6 Multi Use 7	Mech Room 23	4500
Fan System #4	Committee Rm. 3 Office 4	Drop Ceilg. Corridor 10	700

Lounge areas at ground floor level are natural ventilation only. All washroom and storage areas are mechanically exhausted. The building is heated with hot water from a gas fired hot water heating boiler in Mech. Room 23. This water is used to serve perimeter radiation and hot water heating coils in the air supply systems.

Upgrading of Existing Systems to Add Mechanical Cooling

The basic concept of the systems that have been installed was to provide only for heating and ventilating of various areas. No provision was built in for the addition of mechanical cooling.

MCKENZIE, SNOWBALL, SKALDANIA
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Consequently, it will be very expensive to upgrade these existing systems to add cooling since none of the ductwork was insulated or sized for cooling air quantities. As some runs occur in non-demountable ceilings this will preclude, without great expense, the addition of this insulation and the installation of larger ducts. If duct sweating is to be avoided lack of insulation will limit the minimum supply air temperature (to about 60°F.). Under-sized ducts will limit the amount of air handled by each system. These factors in turn will allow only partial cooling to be provided on all systems.

The simplest way to add partial cooling to the existing systems, on this basis, is to add Direct Expansion cooling coils in the supply air units which would be coupled with matched roof mounted air cooled condensing units. The fan systems #2 and #3 could, we estimate, be modified to incorporate this arrangement although pulley and motor sizes would likely need to be changed on the air handling units. The fans installed on systems #1 and #4 will not handle the static imposed by the addition of D.X. cooling coils and the whole fan unit will need to be replaced. Matched roof mounted condensing units would be hooked up to new small air handling units containing D.X. cooling coils. The lounge area which currently has only natural ventilation would most economically be served by small packaged window units. A more expensive but, perhaps, more desirable alternative would comprise a small central station air handling unit with distribution ducts and a remote roof mounted condensing unit.

Summary

We think it impractical to add cooling to the existing systems. Unless supply ducts are insulated plus circulated air quantities and duct sizes increased the systems will be limited to partial cooling capacity only; thus considerable expense is incurred for a system that still has shortcomings.

We suggest that the owner reassess the need for cooling and whether significant costs for a partial solution can be countenanced.

If it is still felt imperative to pursue cooling modifications we will be pleased to work up more specific costs and proposals.

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