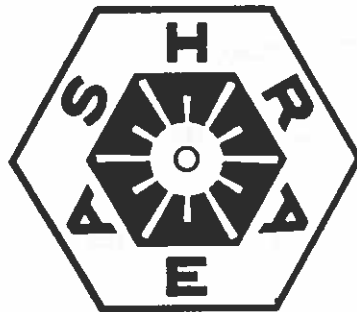


# REGION 2 HISTORICAL MANUAL



Prepared March 1991  
Revised March 1992

Regional Motions C.R.C. Windsor 1991

#91-2, Chapter 037 - Hamilton Chapter

Motion: Moved by hamilton Chapter that Bios be supplied by each of the Region II Chapters, 60 days in advance of CRC, of all those candidates who the chapter is proposing for various regional and society positions. This would be sent to the Regional Chairman for distribution to the chapter 30 days in advance to CRC.

Background Information:

- A) For better communications.
- B) Time saver at CRC.
- C) Ensure that ASHRAE goal is fulfilled. "Position Seeks The Man".

Second: Tom Drennan - London Chapter

Amendment: David Rasmussen - Hamilton Chapter  
Sent to Nominating Committee for Regional Chairman.

Second: Tom Drennan - London Chapter

REGIONAL MOTION

CARRIED

#91-3, Chapter 037 - Hamilton Chapter

Motion: Moved by Hamilton Chapter that guidelines be established for the disposition of the regional fund to which the Region II Chapters have contributed. These guidelines shall be subject to the approval of the delegates at the CRC in 1992. The Region II fund should be audited annually by the President Secretary, Treasurer of the preceding CRC Host Chapter.

Background Information:

- A) The auditing of company institutions or organized funds is an accepted practice and may be required by regulatory agencies.

Second: Magdi Assaad - Montreal Chapter

Amendment: Dalton McIntyre - DRC  
Change word "should" to "shall".

Second: David Rasmussen - Hamilton Chapter

REGIONAL MOTION

CARRIED

#91-2, Chapter 015 - Ottawa Valley Chapter

Motion: Moved by Ottawa Valley Chapter that the Regional Historian annually update the Region II Historical Manual and distribute to delegates four months prior to upcoming CRC.

Background Information:

A) To provide delegates with a historical record of previous CRC motions.

Second: Cedric Smith - Toronto Chapter

REGIONAL MOTION

CARRIED

#91-1, Chapter 141 - Windsor Chapter

Motion: Moved by Windsor Chapter that the Host Chapter include in their budget the cost of the CRC package for the Regional Chairman and his companion, at Region II CRC's.

Second: Cliff Thompson - Toronto Chapter

REGIONAL MOTION

CARRIED

C.R.C. Windsor 1991 Motions sent to Regions Council

#91-1, Chapter 015 - Ottawa Valley Chapter

Motion: Moved by Ottawa Valley Chapter that any member may submit a motion at a CRC, but it must be seconded by a delegate.

Background Information:

- A) At present, only a delegate may submit a motion. Motions can be developed through discussions at the workshops, in which case the member proposing it should have an opportunity of submitting it at the business session. Regional Officers may also wish to submit motions at the CRC, but they are not permitted to do at the present time.

NOT APPROVED

Second: Cedric Smith - Toronto Chapter

Amendment: Chris Frauley - Ottawa Valley Chapter  
Change word "member" to "member of CRC".

Second: Greg Black - Windsor Chapter

Routed to Regions Council, Operations Sub-Committee Meeting Oct. 1991.

CARRIED

#91-1, Chapter 016 - Toronto Chapter

Motion: Moved by Toronto Chapter that Society prepare & distribute by August 1994, a 15 minute Society History Centennial video for use at a chapter meeting with the focus directed to grass root chapter members, guests and students.

Background Information:

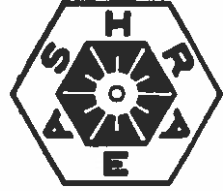
- A) 1994 is ASHRAE Centennial.  
B) Only Society has capability and information to do this.  
C) Project too expensive to attempt on a Regional or Chapter basis.

PENDING March 1992

Second: Chris Frauley - Ottawa Valley Chapter

ROUTING TO CENTENNIAL COMMITTEE CARRIED

## REGION 2 HISTORICAL MANUAL



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6	Director & Regional Chairmen - Region2
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	CRC Financial Statement (after CRC)



REGIONAL MOTIONS

REGION 2

The following motions (as of August '90) have been approved by the Delegates at the Chapters' Regional Conference (CRC) to guide Region 2 in its operation.

Many other motions were passed at CRCs which affected the operation of ASHRAE as a Society.

Each year, the Delegates at the CRC should review this document and update the motions as required.

If you have access to old Region 2 Minutes which have Regional Motions which are currently in effect, please forward this information to your Regional Chairman.

G.E. Menzies

Member - Historical Committee Region 2.

REGION 2 CHAPTER ASSESSMENTS

- 1986 - Moved by Donald Johnson and seconded by John Dugan

"THAT the Chapter membership levy, for support of CRC be invoiced by the host chapter by December 31 for payment not later than 30 days prior to the start of the CRC with a 10% penalty for non-payment by that date." CARRIED.

- 1987 - On motion by the Hamilton Chapter and duly seconded, it was moved

(a) "THAT \$4.00 per chapter member be approved as the Regional Assessment for the year 1988 based on a chapter's local membership on January 1, 1988." CARRIED.

(b) "That the chapter membership levy, for support of CRC be invoiced by the host chapter by December 31 for payment not later than 30 days prior to the start of the CRC with a 10% penalty for non-payment by that date".

On motion by the Hamilton Chapter and duly seconded, it was moved

"THAT the \$16,000.00 budget for the 1988 Region 2 CRC as presented by John Kenney, Conference General Chairman be approved.

NOTE: John Kenney indicated registration expenses for the 1988 CRC will be \$130.00 for ASHRAE member & companion.

- 1988 - On motion by New Brunswick Chapter and duly seconded it was moved

"THAT \$4.50 per Chapter Member be approved as the regional assessment for the year 1989 based on a Chapter's local membership on May 1, 1989. All Chapters within Region 2 must submit their Chapter Membership levy payment within 60 days prior to the start of the CRC with a 10% penalty for non-payment of that date.

- 1989 - On motion by the Montreal Chapter, duly seconded by Ottawa Valley Chapter, it was moved

"That Montreal Chapter host the 1990 CRC August 23 to 26, 1990 and that the assessment be \$5.00 per chapter member. CARRIED.

Full registration approximate cost to be \$180.00 for the three day conference.

- 1990 - On motion by the Windsor Chapter duly seconded, it was moved

"THAT the Windsor Chapter host the 1991 CRC August 21 to 23, and that the assessment be \$4.50 per chapter member.

Full registration approximate cost to be \$165.00 for member and \$220.00 for member & companion. See Appendix C



## CRC Financial Reports

- 1984 - Moved by Bob Morris and seconded by H. Maybank, that at each Region 2 CRC, the following year's host chapter submit a budget for approval which shall show the assessment, registration, and estimated expenses as outlined in "Manual for Conducting CRC Conference". The previous year's final report for CRC Income and Expenses shall be submitted to the delegates for guidance in approving, by a 2/3 majority, the submitted budget.

### Background Information:

1. Since Society provides \$1,000.00 financial assistance, ASHRAE Headquarters requires a complete financial report of the CRC after the CRC is completed. The report is sent to the Controller's office with a copy to the Regional Chairman.
  2. The cost effectiveness of Region 2 CRC should be scrutinized and alternate means of achieving the same aims examined before smaller chapters (less than 125 members) are buried in expenses.
- 1986 - Moved by Joe vassallo and seconded by Dave Cowan
- "THAT each year Region 2 Host Committee submit a complete financial statement as required by the Society Manual within 90 days of completion of the CRC. This statement shall provide all the information as shown in Appendix 1A in the Manual for Conducting a CRC.

### CRC FORMAT: REGION 2

- 1989 - On motion by Windsor Chapter, and duly seconded by Halifax chapter, it was moved

"That effective August 1990, the Region 2 CRC be limited to a two and one half day format, and that the host chapter's organizing committee co-ordinate the business and workshop programs with the Regional Chairman and Regional Vice-Chairmen to attain this goal.

## CHAPTER REPORTS

1985 - Moved by Ray Jacobs and seconded by Robin Craig

"Whereas Chapter Reports appear to be getting

1. longer and more detailed
2. more expensive to print
3. more copies are required each year

be it resolved that ASHRAE Region 2 agree on a reasonable and effective format for "Chapter Report to the CRC" for all Chapters to follow and this format be conveyed to all Chapters annually.

## MOTIONS

1985 - On recommendation by the Hamilton Chapter

THAT Chapter resolutions be submitted to the Regional Chairman before the CRC for distribution to the delegates.  
CARRIED.

## BOUNDARIES

1989 - On motion by Toronto Chapter, duly seconded by Halifax, it was moved

THAT Region 2 properly define territory boundaries of Chapters and summarize boundaries both in written form and in map form to be distributed to chapters and to Headquarters.

CARRIED.

## MINUTE BOOK

1986 - On motion by the Hamilton Chapter and duly seconded it was moved

THAT the Regional Chairman insert the 1986 Region 2 Minutes in the Region 2 CRC Minute Book, followed by the 1986 CRC Conference Expense Statement (Hamilton Chapter held May, 1986 at Park Hotel in Niagara Falls.  
CARRIED.

1987 - On motion by the Hamilton Chapter and duly seconded, it was moved

THAT the expenses incurred at the 1986 Region 2 CRC be approved as distributed and that this expense statement be inserted in the CRC Minute Book and that an approved copy be forwarded to the Society Headquarters in Atlanta.  
CARRIED.

NOTE: Surplus funds of \$31.11 were handed over to the Saguenay Lac St. Jean Chapter.

### CRC MINUTES

1990 On motion by the Hamilton Chapter and duly seconded by the Toronto Chapter, it was moved:

That the Minutes of the CRC be forwarded to Headquarters in Atlanta within sixty days from the conclusion of the CRC and that Headquarters will forward the final Minutes to the CRC delegates within ninety days of receipt of the Minutes from the Regional Chairman. CARRIED.

### REGIONAL CHAIRMAN'S CHAPTER VISITS

1985 On motion by the Hamilton Chapter and duly seconded, it was moved

THAT the respective chapter being visited by the Region 2 Chairman shall bear the expenses for a maximum of one visit a year to a Chapter meeting to include accommodation (1 night in a hotel arranged by Chapter) and 2 meals (1 dinner at the Chapter meeting and 1 breakfast."

### REGIONAL FUND

1988 - On motion by Toronto Chapter and seconded by Ottawa Valley Chapter, it was moved

THAT a regional fund be established, the details of which shall be determined by recommendation of a committee of three as appointed by the Regional Chairman.

1989 - On motion by Hamilton Chapter, and duly seconded by New Brunswick Chapter, it is moved:

THAT a Regional Fund be established in Region 2. The fund will be financed by each chapter of Region 2 with an assessment of \$.50 per chapter member plus 50% of the excess revenue over expenditures of each CRC. Administration of the fund will be by the Regional Executive Committee. CARRIED.

### REGIONAL MANUAL

1990 - On motion by Hamilton Chapter and duly seconded by Toronto Chapter it was moved:

That the Regional Historian assemble and distribute in manual form, historical Region 2 information encompassing

Regional Manual continued.....

- 1) active regional motions (from past CRC Minutes
- 2) regional awardees
- 3) CRC financial reports
- 4) Canadian Research Projects & chapter annual contributions
- 5) other key Region 2 information

to be issued to each Region 2 Chapter CRC Action Committee in the month of January following the fall CRC.

#### FUTURE CRC LOCATIONS

- 1987 - On motion by the Hamilton Chapter and duly seconded, it was moved

THAT London Canada Chapter host the 1988 meeting on May 18 19 & 20 and that the New Brunswick host the 1989 meeting on May 21, 22 and 23 and that the Montreal Chapter host the 1990 Region 2 CRC and that the Windsor Chapter host the 1991 Region 2 CRC.

#### REGIONAL RECOMMENDATIONS

- 1989 - A recommendation was made by Cliff Thompson of the Historical Committee

THAT Headquarters be directed to provide to the Region 2 Historian, a listing of all Society Honours & Awards recipients within Region 2, e.g. Fellows, DSA, etc.

- 1989 - A Recommendation by Cliff Thompson of the Historial Committee

THAT since Ottawa was the site of the 1st Region 2 CRC in 1959, that Ottawa be considered for the site of the 1994 CRC as this is ASHRAE's 100th Anniversary year.

- 1990 - A recommendation was made by the Hamilton Chapter that the Regional Chairman bring to the CRC, the Minute Book containing the minutes of previous CRCs and also the financial statements from previous CRCs.



**ASHRAE** American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

1791 Tullie Circle, NE • Atlanta, Georgia 30329 ☎(404) 636-8400 • Tlx 705343 ASHRAE • Fax (404) 321-5478

TO: George Menzies  
FROM: Debra Canady-Foster *DCS*  
DATE: August 2, 1990  
SUBJECT: Region II - Fellows, Life Members and Award Winners

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Attached is a listing of the above, as requested on July 9. I have also included a description of the grade codes. I hope this information will be helpful.

CODE	DESCRIPTION
A	MEMBER
C	LIFE MEMBER
G	LIFE ASSOCIATES MEMBER
K	LIFE AFFILIATE MEMBER
N	FELLOW
V	?
Q	PRESIDENTIAL MEMBER



## HONORS AND AWARDS

28 FEB 1992

Mem#	Name	Honors/Awards	Chapter
0048195	BEAUDOIN, GILLES	LIFE MEMBER	013 QUEBEC
0418743	L'ANGLAIS, FRANCOIS	LIFE MEMBER	013 QUEBEC
0667683	SERVANT, AZARIAS	REGIONAL AWARD OF MERIT REGIONAL AWARD OF MERIT	013 QUEBEC
0730890	TASSE, YVON R	LIFE MEMBER	013 QUEBEC
0752058	TRUCHON, LOUIS P	LIFE ASSOCIATE MEMBER	013 QUEBEC
0020115	ANGLIN, THOMAS G	LIFE MEMBER	014 MONTREAL
0025434	ARSENAULT, REAL J A	LIFE MEMBER	014 MONTREAL
0036207	BALLANTYNE, GEORGE L	LIFE ASSOCIATE MEMBER 50 YEAR MEMBER	014 MONTREAL
0062829	BILLICK, PAUL G	LIFE MEMBER	014 MONTREAL
0068094	BLATHERWICK, HOWARD E	LIFE MEMBER	014 MONTREAL
0078165	BOUTHILLETTE, ROLAND	LIFE MEMBER	014 MONTREAL
0083970	BRASLOFF, REUBEN I	LIFE MEMBER	014 MONTREAL
0088236	BRISSETTE, JACQUES L	LIFE MEMBER	014 MONTREAL
0114723	CARMICHAEL, RAY	LIFE ASSOCIATE MEMBER	014 MONTREAL
0147555	COOPER, HOWARD B	LIFE MEMBER	014 MONTREAL
0230904	FLANAGAN, JAMES B	LIFE ASSOCIATE MEMBER	014 MONTREAL
0235710	FORGET, GUY E	LIFE MEMBER	014 MONTREAL
0250182	GANS, NATHAN	LIFE MEMBER	014 MONTREAL
0260172	GILBERT, EDWARD J	LIFE MEMBER	014 MONTREAL
0274698	GRAVELSINS, JOHN	LIFE ASSOCIATE MEMBER	014 MONTREAL
0297378	HANLEY, ALLEN J	FELLOW/LIFE MEMBER	014 MONTREAL
0331344	HOLE, WILLIAM G	PRES/FELLOW/LIFE DISTINGUISHED SERVICE	014 MONTREAL
0352755	ISAAC, WILLIAM C	LIFE MEMBER	014 MONTREAL
0359613	JARVIS, WILLIAM E	LIFE MEMBER	014 MONTREAL
0386478	KERT, MONROE H	LIFE MEMBER	014 MONTREAL
0415206	LALONDE, BERNARD	LIFE MEMBER	014 MONTREAL
0415692	LAMARCHE, PHILIPPE J	LIFE MEMBER	014 MONTREAL
0418851	LANGSNER, LAWRENCE L	LIFE MEMBER	014 MONTREAL
0433323	LEVESQUE, LEO A	LIFE MEMBER	014 MONTREAL
0433674	LEVINE, SEYMOUR	LIFE MEMBER	014 MONTREAL
0434133	LEWIN, JACOB	LIFE ASSOCIATE MEMBER	014 MONTREAL
0453465	MACCANDLISH, DONALD	LIFE MEMBER	014 MONTREAL
0546210	OCONEILL, THOMAS D	LIFE ASSOCIATE MEMBER	014 MONTREAL
0591003	POULIN, ANDRE	LIFE MEMBER	014 MONTREAL
0612009	RENWICK, WALTER H	LIFE MEMBER	014 MONTREAL
0664875	SEGAL, SAMUEL S	LIFE ASSOCIATE MEMBER	014 MONTREAL
0678132	SIDLER, JOSEPH	LIFE MEMBER	014 MONTREAL
0682614	SINGER, GERALD G	LIFE MEMBER	014 MONTREAL
0686259	SLONE, MORTON R	REGIONAL AWARD OF MERIT DISTINGUISHED SERVICE REGIONAL AWARD OF MERIT	014 MONTREAL
0695682	SOICHER, JACK A	LIFE MEMBER	014 MONTREAL
0702999	SPRINGER, JAMES C	LIFE MEMBER	014 MONTREAL
0729027	TAMM, HAROLD L	LIFE MEMBER	014 MONTREAL
0746442	TONELLI, RALPH J	LIFE MEMBER	014 MONTREAL
0747414	TOSH, WILLIAM	LIFE AFFILIATE MEMBER	014 MONTREAL
0756243	TWIZELL, EDWIN W	LIFE MEMBER 50 YEAR MEMBER	014 MONTREAL
0760428	VALLIERES, RAYMOND H	LIFE MEMBER	014 MONTREAL
0819072	YANOFKY, HYMAN	LIFE MEMBER	014 MONTREAL
0116748	CARSCALLEN, GEORGE F	REGIONAL AWARD OF MERIT	015 OTTAWA VALLEY
0311904	HEARNDEN, GEORGE A	LIFE MEMBER	015 OTTAWA VALLEY
0393093	KIRBY, C NOEL	LIFE MEMBER	015 OTTAWA VALLEY
0395091	KLASSEN, JACOB	FELLOW/LIFE MEMBER DISTINGUISHED SERVICE REGIONAL AWARD OF MERIT	015 OTTAWA VALLEY
0425925	LECLERC, PETER F	LIFE ASSOCIATE MEMBER	015 OTTAWA VALLEY
0437292	LIM, LEONARD A	LIFE ASSOCIATE MEMBER	015 OTTAWA VALLEY
0472203	MATYNIA, JOHN L	LIFE MEMBER	015 OTTAWA VALLEY
0484434	MC INTYRE, DALTON J	LIFE MEMBER REGIONAL AWARD OF MERIT	015 OTTAWA VALLEY
0490077	MCRAE, GEORGE K	LIFE MEMBER	015 OTTAWA VALLEY
0506655	MITALAS, GINTAS P	FELLOW	015 OTTAWA VALLEY

HONORS AND AWARDS  
 REQUEST FOR ALL CHAPTERS  
 28 FEB 1992

Mem#	Name	Honors/Awards	Chapter
0564084	PARTINGTON, JOHN D	LIFE ASSOCIATE MEMBER	015 OTTAWA VALLEY
0627129	ROGERS, CLIFFORD	LIFE MEMBER	015 OTTAWA VALLEY
0656262	SCHOENHERR, EDGAR J	LIFE MEMBER	015 OTTAWA VALLEY
0680805	SIMMONDS, ALASTAIR G	LIFE MEMBER	015 OTTAWA VALLEY
0729081	TAMURA, GEORGE T	FELLOW CROSBY FIELD TECHNICAL PAPER DISTINGUISHED 50 YEAR MEMBER TECHNICAL PAPER	015 OTTAWA VALLEY
0747225	TORRENS, JOSEPH S	LIFE ASSOCIATE MEMBER	015 OTTAWA VALLEY
0747981	TOWNSEND, FRED	LIFE MEMBER	015 OTTAWA VALLEY
0779949	WARRING, G RALPH	LIFE MEMBER	015 OTTAWA VALLEY
0803520	WILSON, A GRANT	FELLOW/LIFE MEMBER DISTINGUISHED SERVICE	015 OTTAWA VALLEY
0822826	YOUNG, RAY G	REGIONAL AWARD OF MERIT REGIONAL AWARD OF MERIT	015 OTTAWA VALLEY
0004050	ADAMS, LAWRENCE	LIFE ASSOCIATE MEMBER	016 TORONTO
0012285	ALLINGHAM, JOHN F	LIFE MEMBER	016 TORONTO
0012636	ALLSOP, ROWLAND P	LIFE MEMBER	016 TORONTO
0020169	ANGUS, DONALD L	FELLOW/LIFE MEMBER	016 TORONTO
0021816	APPELTON, HARRY	LIFE MEMBER	016 TORONTO
0023949	ARMSTRONG, JAMES A C	LIFE MEMBER	016 TORONTO
0033480	BAIRD, ALEXANDER G	LIFE ASSOCIATE MEMBER	016 TORONTO
0036126	BALLAGH, A BRUCE	LIFE MEMBER	016 TORONTO
0041148	BARRAN, ARTHUR T W	LIFE MEMBER	016 TORONTO
0042660	BARTLETT, WILLIAM W	LIFE MEMBER	016 TORONTO
0051840	BELL, CHARLES E	LIFE MEMBER	016 TORONTO
0055080	BENNETT, L MAXWELL	LIFE MEMBER	016 TORONTO
0103707	BURRIDGE, LAURENCE E	LIFE MEMBER	016 TORONTO
0105003	BUSHNELL, HOWARD P	LIFE MEMBER	016 TORONTO
0106353	BUTTS, HARRY WILLIAM	LIFE MEMBER	016 TORONTO
0111078	CAMPBELL, ROBERT B	LIFE MEMBER	016 TORONTO
0116154	CARRIGAN, ROLAND B	LIFE MEMBER	016 TORONTO
0116964	CARTER, ALEXANDER W	LIFE MEMBER	016 TORONTO
0122067	CHADWICK, WILLIAM H	50 YEAR MEMBER REGIONAL AWARD OF MERIT	016 TORONTO
0124578	CHAPKIN, ARTHUR I	LIFE MEMBER	016 TORONTO
0127926	CHEUNG, CHING	LIFE MEMBER	016 TORONTO
0134190	CLARK, ALLAN M	LIFE MEMBER	016 TORONTO
0137916	COATES, WILLIAM J	LIFE MEMBER	016 TORONTO
0141021	COLES, EDGAR T	LIFE AFFILIATE MEMBER	016 TORONTO
0141831	COLLINS, JOSEPH J	LIFE MEMBER	016 TORONTO
0157302	CROSSEY, RICHARD E	LIFE MEMBER	016 TORONTO
0159921	CUMMINGS, ROBERT	LIFE MEMBER	016 TORONTO
0166671	DASCHUK, TONY	LIFE AFFILIATE MEMBER	016 TORONTO
0186057	DOBBIE, JOHN L	LIFE MEMBER	016 TORONTO
0196371	DUDLEY, LYNN M	LIFE MEMBER	016 TORONTO
0198720	DUNCAN, W T ERSKINE	LIFE MEMBER	016 TORONTO
0217917	FAIR, JOHN L	LIFE MEMBER	016 TORONTO
0238410	FOX, JOHN H	PRES/FELLOW/LIFE DISTINGUISHED SERVICE DISTINGUISHED 50 YEAR MEMBER	016 TORONTO
0241974	FRENCH, HOWARD S	LIFE MEMBER	016 TORONTO
0246483	FURSE, HENRY M	LIFE MEMBER	016 TORONTO
0254772	GEAKE, LLOYD W	LIFE MEMBER	016 TORONTO
0259902	GIFFIN, DONALD P	LIFE MEMBER	016 TORONTO
0265977	GOLD, HANS	LIFE MEMBER	016 TORONTO
0273483	GRANEK, GERHARD	LIFE MEMBER	016 TORONTO
0281340	GRITTANI, HOWARD R	LIFE MEMBER	016 TORONTO
0287847	HAAS, OTTO F	LIFE MEMBER	016 TORONTO
0336501	HORNSTEIN, SERGE	LIFE MEMBER	016 TORONTO
0337068	HORVATH, EUGENE	LIFE MEMBER	016 TORONTO
0346356	HUNT, FREDERICK G	LIFE MEMBER	016 TORONTO
0354888	JACKSON, GRIFFITH H	LIFE ASSOCIATE MEMBER	016 TORONTO
0368118	JONES, ALLAN T	LIFE MEMBER	016 TORONTO
0374382	KALLIS, WALTER	LIFE ASSOCIATE MEMBER	016 TORONTO
2010885	KAUFMAN, BERNARD	LIFE AFFILIATE MEMBER	016 TORONTO
0454923	MACKAY, ROBERT C	LINCOLN BOUILLON	016 TORONTO
0456462	MADIGAN, BASIL C	LIFE AFFILIATE MEMBER	016 TORONTO



HONORS AND AWARDS  
 REQUEST FOR ALL CHAPTERS  
 28 FEB 1992

Mem#	Name	Honors/Awards	Chapter
0467397	MARTIN, R J WESLEY	LIFE MEMBER	016 TORONTO
0471852	MATTOCKS, HENRY J	LIFE MEMBER	016 TORONTO
0473418	MAYBANK, HERB	LIFE MEMBER	016 TORONTO
0487323	MC LEESE, WILLIS S	LIFE MEMBER	016 TORONTO
0500499	MILLEN, CHARLES T	LIFE MEMBER	016 TORONTO
0532197	NEARINGBURG, ARTHUR	LIFE MEMBER	016 TORONTO
0541647	NOLAN, CHARLES J	LIFE MEMBER	016 TORONTO
0550395	OLSEN, JULIUS C	FELLOW/LIFE MEMBER DISTINGUISHED SERVICE	016 TORONTO
0552096	ONEILL, JOSEPH F	LIFE MEMBER	016 TORONTO
0578502	PETRINEC, JULES R	LIFE MEMBER	016 TORONTO
0583308	PILKEY, DENNIS H	LIFE MEMBER	016 TORONTO
0594081	PRICE, DOUGLAS A	LIFE MEMBER	016 TORONTO
0630288	ROSE, JAMES W.S.	LIFE MEMBER	016 TORONTO
0630477	ROSE, RONALD S	LIFE ASSOCIATE MEMBER	016 TORONTO
0631881	ROSS, EARL J	LIFE AFFILIATE MEMBER	016 TORONTO
0632232	ROSS, JOHN H	FELLOW/LIFE MEMBER DISTINGUISHED SERVICE	016 TORONTO
0633096	ROSSOFF, CLARENCE	LIFE MEMBER	016 TORONTO
0641628	SAGE, HERBERT C	REGIONAL AWARD OF MERIT	016 TORONTO
0676323	SHORE, M VICTOR	LIFE MEMBER	016 TORONTO
0676863	SHRODER, ROBERT	LIFE AFFILIATE MEMBER	016 TORONTO
0681669	SIMPKINS, ARTHUR C	LIFE MEMBER	016 TORONTO
0682425	SINCLAIR, ERNEST H	LIFE MEMBER	016 TORONTO
0699489	SPALL, EDWARD G	LIFE MEMBER	016 TORONTO
0718848	STUBLEY, REDVERS D	LIFE MEMBER	016 TORONTO
0725166	SWEENEY, DARCY J	LIFE MEMBER	016 TORONTO
0728001	TAIT, LESLIE J	LIFE MEMBER	016 TORONTO
0728946	TAMBLYN, ROBERT T	LIFE MEMBER	016 TORONTO
0731565	TAYLOR, ARTHUR R	LIFE MEMBER	016 TORONTO
0737721	THOMAS, DONALD B	LIFE MEMBER	016 TORONTO
0744012	TINDALL, GORDON W	LIFE ASSOCIATE MEMBER	016 TORONTO
0744552	TIRMAN, GEORGE	LIFE MEMBER	016 TORONTO
0746361	TOMS, GORDON C	LIFE MEMBER	016 TORONTO
0747306	TORRY, CHARLES L	LIFE MEMBER	016 TORONTO
0749979	TRELEAVEN, HERBERT M	LIFE MEMBER	016 TORONTO
0802251	WILLIAMS, W ERIC	LIFE MEMBER	016 TORONTO
0825768	ZARNETT, BERNARD H	LIFE MEMBER	016 TORONTO
0060399	BEVAN, JOHN H	LIFE MEMBER	037 HAMILTON
0064233	BIRSS, T KENNETH	LIFE MEMBER	037 HAMILTON
0192105	DOWLER, EDWARD A	LIFE MEMBER 50 YEAR MEMBER	037 HAMILTON
0217674	FAHEY, RICHARD J	LIFE ASSOCIATE MEMBER	037 HAMILTON
0487296	MCLEAN, WILLIAM J	LIFE MEMBER	037 HAMILTON
0488349	MC MILLEN, JOHN G	LIFE MEMBER	037 HAMILTON
0494937	MENZIES, GEORGE	DISTINGUISHED SERVICE REGIONAL AWARD OF MERIT	037 HAMILTON
0507222	MITCHELL, JAMES A	LIFE MEMBER	037 HAMILTON
0543564	NOYES, RICHARD R	LIFE MEMBER	037 HAMILTON
0582255	PIERCE, JAMES F	LIFE AFFILIATE MEMBER	037 HAMILTON
0602289	RAMMO, ERIK	LIFE MEMBER	037 HAMILTON
0652401	SCHIECK, ROBERT R	LIFE MEMBER	037 HAMILTON
0656046	SCHOCK, ROBERT E	LIFE MEMBER	037 HAMILTON
0667305	SENTESY, LOUIS	LIFE MEMBER	037 HAMILTON
0813672	WOODS, WALTER E	LIFE MEMBER	037 HAMILTON
0092043	BROWN, EDWARD DANIEL	LIFE AFFILIATE MEMBER	100 HALIFAX
0098280	BUCKLER, GEORGE W	DISTINGUISHED SERVICE REGIONAL AWARD OF MERIT	100 HALIFAX
0144774	CONRAD, PAUL R	REGIONAL AWARD OF MERIT DISTINGUISHED SERVICE	100 HALIFAX
0192726	DOYLE, M GERARD	REGIONAL AWARD OF MERIT	100 HALIFAX
0517050	MORRIS, DENIS J	FELLOW	100 HALIFAX
0662877	SCRIVEN, JAMES A	FELLOW	100 HALIFAX
0787995	WELD, GORDON B	FELLOW DISTINGUISHED SERVICE	100 HALIFAX

HONORS AND AWARDS  
 REQUEST FOR ALL CHAPTERS  
 28 FEB 1992

Mem#	Name	Honors/Awards	Chapter
0517860	MORRISON, CLIFTON R	LIFE MEMBER	116 LONDON
0384534	KENNEDY, JOHN A	LIFE MEMBER	117 NEW BRUNSWICK
0583011	PIKE, ALBERT J	LIFE MEMBER	117 NEW BRUNSWICK
0664605	SEELY, DELBERT F	LIFE MEMBER	117 NEW BRUNSWICK
0140076	COLBORNE, WILLIAM G	LIFE MEMBER	141 WINDSOR
0231876	FLENING, LYLE J	LIFE ASSOCIATE MEMBER	141 WINDSOR
0363933	JOHNSON, CLARENCE W	LIFE MEMBER	141 WINDSOR
0010206	ALGIE, W LLOYD	LIFE MEMBER DISTINGUISHED SERVICE REGIONAL AWARD OF MERIT	153 MISSISSAUGA
0122877	CHAMBERS, FRED W	LIFE MEMBER 50 YEAR MEMBER	153 MISSISSAUGA
0198504	DUNCAN, JAMES R	LIFE MEMBER	153 MISSISSAUGA
0369360	JONES, JAMES L	LIFE MEMBER	153 MISSISSAUGA
0489564	MCNINCH, DOUGLAS F	LIFE MEMBER	153 MISSISSAUGA
0546831	ODE, TADASHI	LIFE MEMBER	153 MISSISSAUGA

# ASHRAE HONORS AND AWARDS

## ASHRAE HONORARY MEMBERS

*ALLEN V. ASTIN . . . . . 1969	*A.C. FIELDNER . . . . . 1944	*RUDOLPH PLANK . . . . . 1954
*L.M.K. BOELTER . . . . . 1966	*HERBERT C. HOOVER . . . . . 1956	WILLIAM G. SCHNEIDER . . . . . 1970
ANDREW T. BOGGS . . . . . 1985	*F.G. KEYES . . . . . 1936	ROBERT E. SMYLIE . . . . . 1975
*MILTON S. EISENHOWER . . . . . 1956	*W.H. McADAMS . . . . . 1963	*THEODORE VON KARMAN . . . . . 1962
*CROSBY FIELD . . . . . 1951	*ALBERT J. NESBITT . . . . . 1972	ERIC A. WALKER . . . . . 1969

\*Deceased

## DISTINGUISHED 50-YEAR MEMBERS

The Distinguished 50-Year Member Award was initiated in 1967. In order to qualify for this award, "a member must have been a member of the Society for a minimum of 50 years, be a Past President, or have performed outstanding service to the Society."

	Year Received		
ARMSTRONG, RICHARD M. . . . .	1983	HERTZLER, JOHN R. . . . .	1978
ASHLEY, CARLYLE M. . . . .	1981	*HESSELSCHWERDT, AUGUST JR. . . . .	1986
*BAUM, ALBERT L. . . . .	1967	HIERS, CHARLES R. . . . .	1977
*BERGDOLL, JOHN G. . . . .	1974	HIGHTOWER, G.B. . . . .	1988
BISHOP, MARION W. . . . .	1985	HIRSCH, SYLVAN R. . . . .	1983
BLACKMORE, JOSEPH C. . . . .	1986	HOLLADAY, WILLIAM L. . . . .	1983
*BLANKIN, MERRILL . . . . .	1969	HUMPHREYS, CLARK M. . . . .	1981
BOEHMER, ANDREW P. . . . .	1985	HUNGERFORD, LEO . . . . .	1980
BOLING, CECIL . . . . .	1986	IBISON, J.L. . . . .	1988
BOTTUM, E.W. . . . .	1988	JAMES, JOHN W. . . . .	1983
BOYD, SPENCER W. . . . .	1986	JENNINGS, BURGESS H. . . . .	1984
BUEHLER, LEON . . . . .	1974	*JENNINGS, IRVING C. . . . .	1975
BUZZARD, FRANCIS H. . . . .	1989	JORDAN, RICHARD C. . . . .	1983
CAMPBELL, GEORGE S. . . . .	1986	KALISCHER, MILTON . . . . .	1979
CHERNE, REALTO E. . . . .	1979	KEARNEY, JOSEPH S. . . . .	1989
CHRISTENSEN, PAUL B. . . . .	1986	*KEYES, FREDERICK G. . . . .	1975
COOPER, D.S. . . . .	1988	KLEINKAUF, HENRY . . . . .	1986
CRIDER, THOMAS G. . . . .	1985	KONZO, SEICHI . . . . .	1982
*CROSS, ROBERT C. . . . .	1986	*KROEKER, DONALD J. . . . .	1986
*CUMMING, ROBERT W. . . . .	1978	LEECH, CYRIL . . . . .	1986
DAY, VINCENT S. . . . .	1976	LINSKIE, GEORGE A. . . . .	1989
*DIBBLE, S.E. . . . .	1967	MADISON, RICHARD D. . . . .	1976
ENGDAHL, R.B. . . . .	1988	MARSCHALL, PETER J. . . . .	1977
EVANS, BRUCE L. . . . .	1986	MAY, JAMES W. . . . .	1985
EVERETTS, JOHN JR. . . . .	1979	McELGIN, JOHN W. . . . .	1981
FHNESTOCK, MAURICE K. . . . .	1982	McFARLAN, ALDEN I. . . . .	1984
*FALK, DAVID S. . . . .	1986	McSHANE, JAMES P. . . . .	1989
FAUST, FRANK H. . . . .	1980	MILLS, DANIEL M. . . . .	1990
FOX, JOHN H. . . . .	1985	MOORE, R. EDWIN . . . . .	1978
*GANT, H.P. . . . .	1967	MORRISON, W. BRUCE . . . . .	1989
GRABER, ERNST . . . . .	1986	MURRAY, HAYWARD G.S. . . . .	1986
GRANT, WALTER A. . . . .	1979	MYERS, GEORGE W.F. . . . .	1974
GRANT, WALTER H. . . . .	1990	NAMAN, ISRAEL A. . . . .	1990
*HANSON, LARS C. . . . .	1986	*NELSON, RICHARD H. . . . .	1978
*HARRISON, HARRY . . . . .	1967	NESBITT, ALBERT J. . . . .	1975
		NUSSBAUM, OTTO J. . . . .	1990
		O'BANNON, LESTER S. . . . .	1980
		*OFFNER, ALFRED J. . . . .	1974
		PARK, J. FRANK . . . . .	1980
		PENNEY, G.W. . . . .	1988
		PHILLIPS, THOMAS J. . . . .	1990
		PRICE, ERNEST H. . . . .	1982
		PRIESTER, GAYLE B. . . . .	1984
		QUEER, ELMER R. . . . .	1983
		REED, FREDERICK J. . . . .	1989
		*ROLLER, LOUIS H. . . . .	1975
		ROTTMAYER, SAMUEL I. . . . .	1978
		RYAN, HAROLD J. . . . .	1990
		SANDFORT, J.F. . . . .	1988
		SCHENK, JOHN A. . . . .	1986
		SEGAL, S.C. . . . .	1988
		SILVERA, AMERICO . . . . .	1989
		*SIMONS, EDWARD . . . . .	1989
		*STACEY, ALFRED E. . . . .	1967
		STEINFELD, HANS K. . . . .	1984
		STRAHAN, ERNEST K., SR. . . . .	1985
		SUPPLE, GRAEME B. . . . .	1985
		*TAYLOR, REG. F. . . . .	1967
		VILTER, ERNEST F. . . . .	1980
		WALLACE, WILLIAM M., II . . . . .	1979
		WERDEN, ROBERT G. . . . .	1989
		*WERNER, PHILIP H. . . . .	1989
		WHITE, T.J. . . . .	1988
		WHITESEL, HARRY . . . . .	1980
		*WIGGS, G. LORNE . . . . .	1975
		*WILE, DANIEL D. . . . .	1984
		WOESE, CARL F. . . . .	1984
		WOODROOF, J.G. . . . .	1988
		*WOOLRICH, W.R. . . . .	1977

\*Deceased

### ANDREW T. BOGGS SERVICE AWARD

Established in 1986, this award annually recognizes a past recipient of the Distinguished Service Award for continuing unselfish, dedicated and distinguished work on behalf of the Society. The award honors Andrew T. Boggs, ASHRAE Executive Vice President Emeritus, for his 30 years of outstanding service and leadership.

- 1983-84 FREDERICK J. REED
- 1984-85 SAM P. SOLING
- 1985-86 HANS O. SPAUSCHUS
- 1986-87 MORRIS L. MARKEL

### WILLIAM J. COLLINS, JR. RESEARCH PROMOTION AWARD

"Given in recognition of the most outstanding work in raising funds for research promotion"

- 1983-84 RALPH M. MATTISON
- 1984-85 BOB A. McALISTER
- 1985-86 HERBERT L. BREGMAN
- 1986-87 ROBERT P. BARSCHEL
- 1988-89 RONALD W. KELLER
- 1989-90 ROBERT J. MEREDITH

## F. PAUL ANDERSON AWARD

Established in 1930 to honor the accomplishments of the late F. Paul Anderson, Past President of the Society, this award is presented annually for notable scientific achievement or outstanding services performed in the field of heating, ventilating or air conditioning. The award consists of a gold medal and a certificate.

1932	WILLIS H. CARRIER	1959	C.P. YAGLOU	1975	NEIL B. HUTCHEON
1936	ARTHUR C. WILLARD	1960	PETER BEN GORDON	1976	PAUL R. ACHENBACH
1939	FRANK B. ROWLEY	1961	J. DONALD KROEKER	1978	WILBERT F. STOECKER
1942	FREDERICK E. GIESECKE	1962	C.M. ASHLEY	1979	DANIEL D. WILE
1944	FERRY C. HOUGHTEN	1963	ARTHUR J. HESS	1980	HERBERT L. LAUBE
1946	ALFRED E. STACEY, JR.	1964	AXEL B. ALGREN	1981	BURGESS H. JENNINGS
1947	JAMES H. WALKER	1965	LOUIS N. HUNTER	1982	JOHN ENGALITCHEFF, JR.
1950	CHARLES-EDWARD A. WINSLOW	1966	RICHARD C. JORDAN	1983	WILLIAM P. CHAPMAN
1951	SAMUEL R. LEWIS	1967	WALTER A. GRANT	1984	NO AWARD GIVEN
1952	HOMER ADDAMS	1968	CROSBY FIELD	1985	WALTER F. SPIEGEL
1953	EVERETT N. McDONNELL	1969	DEAN W. R. WOOLRICH	1986	A. PHARO GAGGE
1954	WALTER I. FLEISHER, SR.	1970	GLENN MUFFLY	1987	EVERETT P. PALMATIER
1955	CHARLES S. LEOPOLD	1971	DONALD K. TRESSLER	1988	MILTON W. GARLAND
1956	ROBERT W. KEETON, M.D.	1972	ROBERT H. TULL	1989	GEORGE O.G. LÖF
1957	M.F. FAHNESTOCK	1973	SEICHI KONZO	1990	FRANK H. BRIDGERS
1958	GEORGE LEWIS TUVE	1974	WILLIAM L. McGRATH		

## ASHRAE ASHAE — HOMER ADDAMS AWARD

Initiated in 1956 to perpetuate the memory of Homer Addams, Charter Member and Past President of ASH&VE, this award consists of \$600 and a certificate to be presented annually to a graduate student working on an ASHRAE Research Project, "to advance his engineering education and knowledge gained through research in the field of the arts and sciences of heating, ventilating, cooling and air conditioning."

1957	PAUL M. CHUNG University of Minnesota	1969	JAMES E. SHAHAN University of Illinois	1981	CHARLES F. RHEIN University of Missouri-Rolla
1958	W.E. SPRINGER University of Illinois	1970	RAYMOND E. KNOTTS Ohio State University	1982	SHIMAO NI Concordia University
1959	JOHN Y. PAYTON University of California at Los Angeles	1971	DONALD R. WITT Pennsylvania State University	1983	MEAN SHANG CHEN Kansas State University
1960	FRANK D. FARRINGTON University of Arizona	1972	THOMAS E. BURSEY University of Saskatoon	1984	MICHAEL S. SHERBER Georgia Institute of Technology
1961	ALAN B. WAGNER Case Institute of Technology	1973	EDWARD C. SKUCHAS Duke University	1985	STEVEN M. HARRIS Oklahoma State University
1962	ALBERT C. KENT Kansas State University	1974	FERNANDO DURAN University of Pittsburgh	1986	POLYVIOSI ELEFTHERIOU Tennessee Technological University
1963	JOHN M. CRAIG University of Florida	1975	DOUGLAS C. HAMILTON Purdue University	1987	JAMES J. BAUSTIAN Iowa State University
1964	JOSEPH R. GARTNER University of Wisconsin	1976	KEVIN F. O'BRIEN Oklahoma State University	1988	JOHN S. SCHLIESING Texas A&M University
1965	ISAIAH KOPELMAN Michigan State University	1977	DOUGLAS R. BRYANT University of Manitoba	1989	MARC E. FOUNTAIN University of California-Berkeley
1966	EUGENE R. MICHAUD Purdue University	1978	SPIRAM SOMASUNDARAM Case Western Reserve University	1990	RALPH M. DIGUILIO Georgia Institute of Technology
1967	NORMAN G. ZIESSE Carnegie Institute of Technology	1979	GARY L. REYNOLDS Iowa State University		
1968	JON M. RUECK Kansas State University	1980	JOSEPH P. OLIVIERI Lawrence Institute of Technology		

## ASHRAE—ALCO MEDAL FOR DISTINGUISHED PUBLIC SERVICE

Initiated in 1965, proposed by Presidential Member John E. Dube and sponsored by the Alco Valve Company, this award consists of a medal and an inscribed scroll to be given annually to a member of the Society "who distinguished himself conspicuously, on a voluntary basis, in behalf of his community or his country." The first ASHRAE-Alco Medal for Distinguished Public Service was awarded to Albert J. Nesbitt, "Professional engineer, successful industrialist and businessman, prominent Philadelphian, educator, humanitarian and philanthropist. . . In acknowledgment of his many voluntary and distinguished services in behalf of his community and country."

1965	ALBERT J. NESBITT
1968	W.L. DAVIS
1969	GEORGE A. LINSKIE
1970	CARLYLE M. ASHLEY
1971	HARRY E. BOVAY, JR.
1972	ROBERT W. FLANAGAN
1973	BRUCE L. EVANS
1974	GEORGE B. HIGHTOWER
1975	EARLE K. WAGNER
1976	ALWIN B. NEWTON
1978	CULLEN E. PARMELEE
1979	HENRY J. CAMPBELL, JR.
1981	HOWELL E. ADAMS, JR.
1982	WARREN G. MOSES
1983	WILLIAM W. GAY, SR.
1985	REALTO E. CHERNE
1986	OTTO A. TENANT
1987	JOSEPH S. KEARNEY, SR.
1988	HOWARD O. WARD
1989	JOHN F. GERM
1990	JOHN I. LEVENHAGEN

## LINCOLN BOUILLON MEMBERSHIP AWARD

Established in 1967 to commemorate the late Presidential Member Lincoln Bouillon's effort in recruiting new members, this award is presented annually to the individual who performs the most outstanding work in increasing the membership of the Society. The award consists of an inscribed gold medal.

1968	WAYNE H. ALLEN
1970	THOMAS H. TOLER
1971	CLINT D. MILLER
1972	SAM R. FOGLEMAN
1973	JOHN F. COLLINS
1974	JOHN R. PATE
1975	ROBERT C. MacKAY
1976	JAY N. NELSON
1977	EDWARD M. NARETTO
1978	OLIVER K. LEWIS
1979	LEWIS E. SEAGRAVES
1980	GERALD F. MORROW
1981	FREDERICK E. STONE
1982	G. ALLAN GABORIC
1983	LYNN G. BELLENGER
1984	THOMAS A. GORMAN, III
1985	CRAIG M. GOODENOW KEVIN Y.F. CHONG
1986	ROSS D. MONTGOMERY
1987	WILLIAM C. BISSMEYER, II
1988	LOUIS E. SOLTYS
1989	JOHN P. GRATIOT
1990	DEAN S. BORGES

## E.K. CAMPBELL AWARD OF MERIT

The E. K. Campbell Award of Merit is presented by the Life Members Club to honor outstanding service and achievement in teaching. It consists of a plaque and honorarium.

1958	LYNN HELANDER
1959	DEAN MERL BAKER
1960	LESTER S. O'BANNON
1961	BURGESS H. JENNINGS
1963	MAURICE K. FAHNSTOCK
1964	CARL F. KAYAN
1965	C.O. MACKAY
1966	RICHARD C. JORDAN
1967	S. KONZO
1968	WALTER O. WALKER
1969	B.H. SPURLOCK, JR.
1970	JOHN EVERETTS, JR.
1971	JAMES M. McGRATH
1972	JACK B. CHADDOCK
1973	WILBERT F. STOECKER
1974	RALPH G. NEVINS
1975	HERBERT B. NOTTAGE
1976	JOHN F. SANDFORT
1977	RODNEY G. KEIF
1978	STANLEY F. GILMAN
1979	DONALD C. BRYANT, SR.
1980	F.C. HOOPER
1981	WILLIAM F. RUDDY
1982	RAYMOND COHEN
1983	HARRY J. SAUER, JR.
1984	BURGESS H. JENNINGS
1985	CHARLES F. SEPSY
1986	FAYE C. McQUISTON
1987	VICTOR W. GOLDSCHMIDT
1988	STANLEY A. MUMMA
1989	WILLIAM J. WEPFER
1990	DAVID J. WILSON

## RALPH G. NEVINS PHYSIOLOGY AND HUMAN ENVIRONMENT AWARD

Initiated in 1978, this award is presented annually to a promising investigator under 40 years of age for significant accomplishment in the general area of man's response to the environment, which may include thermal, moisture, visual, acoustical, toxic, allergic, olfactory, vibrational, and microbiological effects on man's health, comfort and well-being. The award consists of a certificate and an honorarium in the amount of \$200.

1978	JAMES E. WOODS	1986	LARS MOLHAVE
1979	LARRY G. BERGLUND	1987	RICHARD B. HAYTER
1980	YASUNOBI NISHI	1988	BYRON W. JONES
1981	DONALD A. MCINTYRE	1989	GAIL ELLEN SCHILLER
1982	BJARNE W. OLESEN	1990	SHIN-ICHI TANABE
1983	RICHARD R. GONZALEZ		
1984	DEANNA M. MUNSON		
1985	ELIZABETH McCULLOUGH		

## ASHRAE—WILLIS H. CARRIER AWARD

Originally approved in 1958 and initiated in 1960, the Willis H. Carrier Award, sponsored by the Carrier Corporation, is awarded for the best paper presented at a National Meeting of the Society for a calendar year by a member of any grade who is 32 years of age or less. The award consists of \$500 and a certificate.

1959-60	AARON L. BRODY
1960-61	CARL F. SPEICH
1961	J. RICHARD WRIGHT
1967	CHARLES E. BULLOCK
1968	GEORGE D. HUFFMAN
1969	RICHARD E. BARRETT
1970	YOSUNOBU NISHI
1971	DOUGLAS E. McDUFFIE, JR.
1973	STANLEY A. MUMMA
1975	DOUGLAS M. BURCH
1976	MERLE F. McBRIDE
1977	STEPHEN M. SESSLER
1978	A.F.M. ALI
1979	SUDHIR K. SASTRY
1980	STEPHEN E. SELKOWITZ
1981	AMIR L. ECKER
1982	FRANCESCO POMPEI
1983	VAN D. BAXTER
1984	NANCY J. MACDONALD BANKS
1985	FRANK E. JAKOB
1986	JOSEPH E. LAVIANA
1987	ROBERT W. RASMUSSEN
1988	ALAIN P. FOBELETS
1989	JOSEPH H. ETO
1990	ANIL K. TREHAN

## ASHRAE INTERNATIONAL ACTIVITIES AWARD

Established in 1963 to recognize ASHRAE members who enhance the international presence of the Society and contribute to international cooperation among technical societies, this award consists of a certificate and may be awarded to North American or overseas members.

1983	P. OLE FANGER
1985	WILBERT F. STOECKER
1986	RAYMOND COHEN
1987	RICHARD ROOLEY
1988	MARIO COSTANTINO
1989	DAVID RICKELTON
1990	ALVARO TAPIAS

## KLIXON AWARD

Presented from 1957 to 1968 to the author of the best paper published in full by the Society during a calendar year on a subject relating to electric motors or controls, the Klixon Award was sponsored by the Metals and Controls Division, Texas Instruments, Inc.

1957-58	RAYMOND T. DIVERS
1958-59	H.O. SPAUSCHUS, R.S. OLSEN
1959-60	C.B. SONNINO, JOHN F. HARRIS
1960-61	CV. DOWNING, JR.
1961-62	No Award
1962-63	No Award
1963-64	No Award
1964-65	J. MOWRY
1965-66	G.L. RODGERS
1968	DAVID B. DIBBLE, RUSSELL E. WOOD

## LOUISE AND BILL HOLLADAY DISTINGUISHED FELLOW AWARD

Initiated in 1979, this inscribed bronze medal and citation award honors a fellow of the Society and recognizes continuing preeminence in engineering or research work.

1979	CARLYLE M. ASHLEY	1986	JOHN H. FOX
1980	JOHN I. YELLOTT	1987	TAMAMI KUSUDA
1981	A. PHARO GAGGE	1988	DONALD G. RICH
1982	P. OLE FANGER	1989	WILLIAM J. COAD
1983	DANIEL D. WILE	1990	FREDERICK H. ROHLES, JR.
1984	FRANK H. FAUST		
1985	ALWIN B. NEWTON		

## JOSEPH F. CUBA AWARD FOR ENERGY RESEARCH

The Joseph F. Cuba Award for Energy Research is presented by the ASHRAE Research and Technical Committee to honor significant accomplishment by a graduate student in energy conservation or renewable energy research.

1985	MEINRAD MACHLER DANIEL L. EWERT
1987	LARRY W. KOSTIUK
1989	JAMES E. BRAUN

## Wolverine—ASHRAE Diamond Key Award

Presented annually from 1940 to 1970 by the Wolverine Tube Division, Calumet & Hecla, Inc., this award was given to the author of the best paper published in full by the Society during the previous calendar year.

### Recipients

1940	HENRY P. POWNALL
1941	PAUL F. McDERMOTT
1942	CHARLES N. DEVERALL
1943	JOHN G. BERGDOLL, JR.
1944	DAVID L. FISKE
1945	DANIEL D. WILE
1946	CLARENCE E. LUND
1947	RICHARD H. SWART
1948	LLOYD A. STAEBLER
1949	MIL M. BOLST and RICHARD C. JORDAN
1950	WILLIAM L. HOLLADAY
1951	DANIEL D. WILE
1952	DANIEL C. SCHIAVONE
1953	NEIL E. HOPKINS and JOHN J. SEELAUS
1954	FERRUCCIO RASORI
1955	No Award
1956	DALE J. MISSIMER
1957	JAMES L. THRELKELD and TAMAMI KUSUDA
1958	JACK B. CHADDOCK
1959	HAROLD M. HENDRICKSON
1960	PERRY H. ZIEL and JOHN S. BLOSSOM
1961	BRUNO MORABITO
1962	WILLIAM L. BRYAN
1963	CHARLES A. WHITEHURST
1964	WILLIAM F. KERKA
1965	T.J. CSERMELY and C.M. BOSWORTH
1966	G.P. MITALAS
1967	DR. HANS O. SPAUSCHUS and G.C. DODERER
1968	PETER K. BAADE
1969	COLIN G. GORDON
1970	FRANK R. BIANCARDI and D.P. DARROW

## DISTINGUISHED SERVICE AWARD

Initiated in 1962 and first given in 1963, this award is sponsored by ASHRAE and given to a member in "recognition for serving faithfully with distinction and giving freely of his time and talent on behalf of the Society." Recipient must have membership, other than Presidential, for ten years in the Society. The award is in the form of a certificate

- |                          |                         |                            |                          |
|--------------------------|-------------------------|----------------------------|--------------------------|
| Achenbach, P.R.—1967     | Cooper, K.W.—1984       | *Gragg, H.G.—1972          | Massa, D.—1975           |
| Albright, D.C.—1972      | Copeland, J.E.—1981     | Graham, J.B.—1969          | Massart, K.G.—1975       |
| Algie, W.L.—1988         | Coughlin, R.J.—1984     | Grant, W.A.—1983           | May, J.W.—1983           |
| *Allen, D.M.—1966        | Crider, T.G.—1968       | Grant, W.I.—1984           | McDonald, R.O.—1976      |
| Alvine, R.G.—1985        | Cross, R.C.—1967        | Green, W.M.—1983           | McDougall, M.—1984       |
| *Alyea, H.W.—1967        | *Decker, A.S.—1971      | Greenberg, A.—1973         | McGrath, J.M.—1976       |
| Appleby, L.V.—1972       | Decker, H.E.—1982       | Greenwald, R.—1972         | *McGrath, W.L.—1983      |
| Atwood, T.—1976          | Denton, D.H., Jr.—1979  | Grumman, D.L.—1990         | McMillan, H.D., Jr.—1976 |
| Baade, P.K.—1971         | Deverall, C.N.—1963     | Gupton, G.W., Jr.—1981     | McMinn, D.N.—1990        |
| Backer, M.—1976          | DeWerth, D.W.—1985      | Haines, R.W.—1971          | McNall, P.E., Jr.—1972   |
| Bahnfleth, D.R.—1976     | Diehl, H.C.—1964        | *Hall, C.L.—1964           | McQuiston, F.C.—1984     |
| Baker, M.—1971           | *Ditzler, J.L.—1970     | *Hall, J.R.—1976           | Meffert, G.H.—1967       |
| Barker, P.K.—1965        | Donley, Wallace L.—1986 | Harrick, B.A., Jr.—1984    | Menzies, G.E.—1981       |
| Bartholomew, R.W.—1980   | Donovan, W.J.—1972      | Harnack, J.L.—1987         | Meriwether, R.F.—1977    |
| Bennet, A.H.—1978        | Dowless, E.C.—1985      | *Harris, W.S.—1967         | Merrick, R.H.—1972       |
| Biehn, G.L.—1974         | Downs, J.H.—1967        | Heiman, J.L.—1985          | Millard, G.E., Jr.—1987  |
| *Bishop, M.W.—1968       | *Dube, J.E.—1983        | *Helander, L.—1967         | Milis, D.M.—1966         |
| Blossom, J.S.—1981       | Dugan, P.A.—1985        | *Hesselschwerdt, A.L.—1969 | Miner, S.M.—1976         |
| *Boester, C.F.—1972      | *Eichhorn, R.L.—1969    | Hightower, G.B.—1984       | Morabito, B.P.—1975      |
| Boling, C.—1983          | *Elsea, R.—1975         | Hoffman, J.E.—1985         | Morgenroth, D.E.—1984    |
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 Woods, J.E.—1981  
 \*Woolrich, W.R.—1963  
 \*Wyckoff, P.W.—1965  
 Yamamoto, G.S.—1988

\*Deceased

## ASHRAE FELLOWS

The grade of Fellow is conferred on that Member "who has attained unusual distinction in the arts relating to the sciences of heating, refrigeration, air conditioning or ventilation . . . for substantial contributions to said arts and sciences."

Achenbach, P.R.—1959  
 Adams, L.—1955  
 Akerman, J.R.—1981  
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 Altieri, J.L.—1986  
 Alvine, R.G.—1981  
 Amann, W.L.—1985  
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 Appling, E.B.—1983  
 Aramburu, V.B.—1975  
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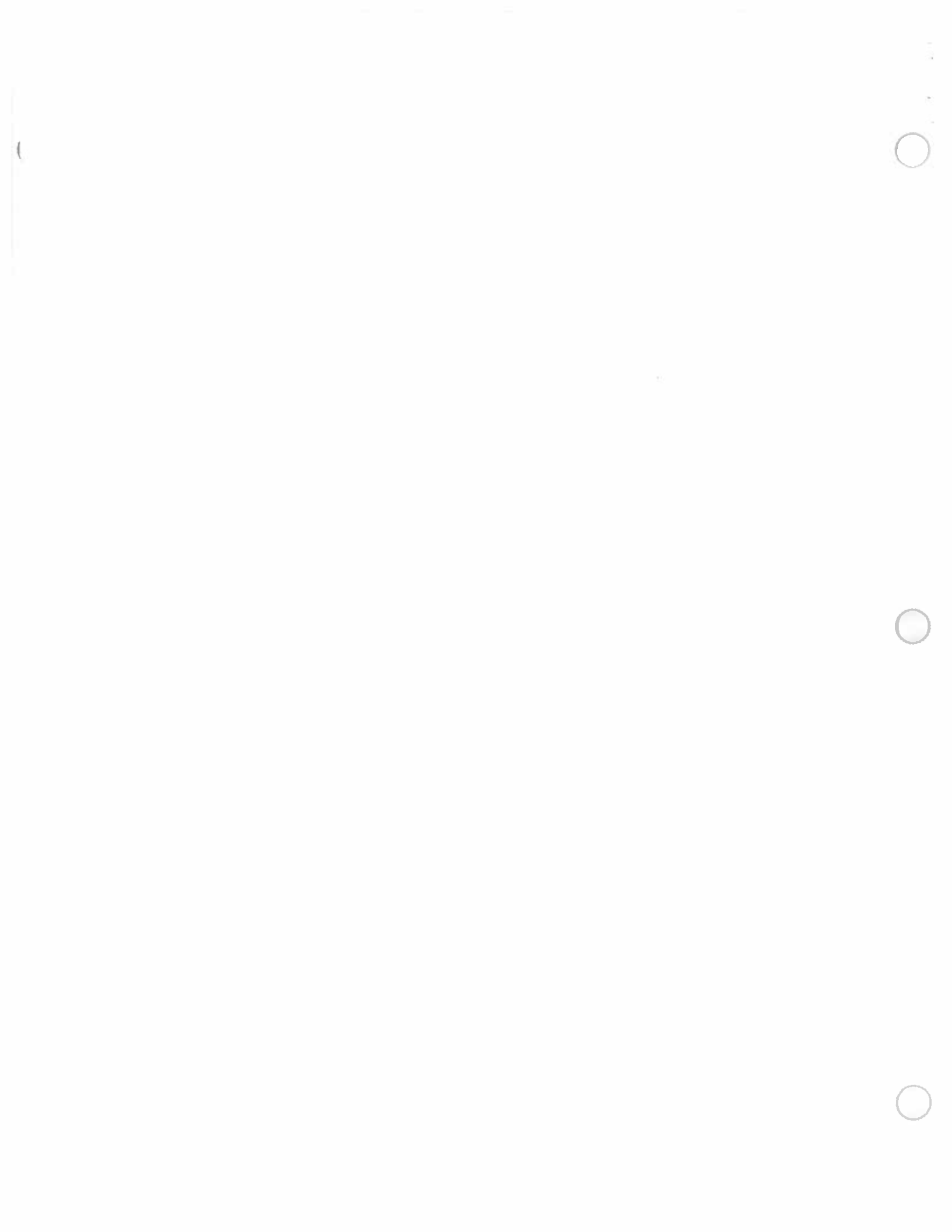
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 Yuill, G.K.—1990  
 Zanders, R.W.—1988



## Chapter Charter Dates

The charter dates of the Society's chapters are important to ASHRAE's heritage. Please check your chapter's charter date. If your records do not agree with this list, please send correct documentation to Membership Director Andi Abbott.

### CHAPTER CHARTER DATES

<u>Chapter Name</u>	<u>Chapter Number</u>	<u>Region</u>	<u>Charter Date</u>	<u>Comments</u>
Boston	01	I	1912	(Formerly Massachusetts)
Western Massachusetts	02	I	1955	
Rhode Island	03	I	1959	
Connecticut	04	I	1940	
Southwest Georgia	05	XII	09-30-76	
Long Island	06	I	1957	
North Jersey	07	I	1952	
New York	08	I	1911	
Northeastern New York	09	I	1951	(Formerly Empire State Capital)
Central New York	10	I	1944	
Rochester	11	I	1956	
Niagara Frontier	12	I	1919	(Formerly Western New York)
Quebec, La Ville de	13	II	1956	
Montreal	14	II	1936	
Ottawa Valley	15	II	1952	
Toronto	16	II	1922	(Formerly Ontario)
Manitoba	17	XI	1935	
Southern Alberta	18	XI	10-12-57	
Northern Alberta	19	XI	1956	
British Columbia	20	XI	1952	
Philadelphia	21	III	03-18-16	
Central Pennsylvania	22	III	1956	
Johnstown	23	III	1957	
Pittsburgh	24	III	1919	
Baltimore	25	III	1939	
National Capital	26	III	1935	(Formerly Washington DC)
Hampton Roads	27	III	1946	(Formerly Virginia)
Richmond	28	III	1940	
North Piedmont	29	IV	1952	(Formerly Northern Piedmont)
Southern Piedmont	30	IV	1952	
South Carolina	31	IV	1954	
Atlanta	32	IV	1937	
Savannah	33	IV	1958	
Jacksonville	34	XII	1957	
Florida West Coast	35	XII	2-56	
Miami	36	XII	1955	(Formerly South Florida)
Hamilton	37	II	10-22-59	(Formerly Niagara Peninsula)
Cleveland	38	V	1916	(Formerly Northern Ohio)
Columbus	39	V	1944	(Formerly Central Ohio)
Cincinnati	40	V	1932	
Dayton	41	V	1950	(Formerly Miami Valley)
Toledo	42	V	1954	

Central Indiana	43	V	1943	(Formerly Indiana)
Evansville	44	V	1947	
Detroit	45	V	1916	(Formerly Michigan--changed 6-82)
Central Michigan	46	V	3-58	
Western Michigan	47	V	1931	
Wisconsin	48	VI	1922	(ASHVE-1922--ASRE Chapter-1917)
Illinois	49	VI	1906	
Central Illinois	50	VI	1956	(Formerly Illinois-Iowa)
Iowa	51	VI	1940	
Minnesota	52	VI	1918	
Kansas City	53	IX	1917	
St. Louis	54	VI	1918	
Louisville	55	VII	1954	(Formerly Bluegrass)
Memphis	56	VII	1944	
Birmingham	57	VII	1959	(Formerly North Alabama)
Mobile	58	VII	1957	
New Orleans	59	VII	1939	(Formerly Delta)
Baton Rouge	60	VII	1955	
Mississippi	61	VII	1953	
Arkansas	62	VIII	1952	
Shreveport	63	VIII	1948	
Houston	64	VIII	1938	(Formerly South Texas)
Alamo	65	VIII	1946	(Formerly Southwest Texas)
Austin	66	VIII	1956	
Dallas	67	VIII	1938	(Formerly North Texas)
Central Oklahoma	68	VIII	10-03-35	(Formerly Oklahoma)
Northeastern Oklahoma	69	VIII	1948	
Fort Worth	70	VIII	1957	
West Texas	71	VIII	1953	
El Paso	72	IX	1956	
Rocky Mountain	73	IX	1944	
Utah	74	IX	1944	
Nebraska	75	IX	1940	
Wichita	76	IX	1951	(Formerly Kansas)
New Mexico	77	IX	1954	
Inland Empire	78	XI	05-05-50	
Puget Sound	79	XI	1928	
Oregon	80	XI	1939	
Sacramento Valley	81	X	1952	
Golden Gate	82	X	1937	
San Joaquin	83	X	12-20-55	
Southern California	84	X	10-17-30	
San Diego	85	X	1959	
Central Arizona	86	X	1953	(Formerly Arizona)
Tucson	87	X	1959	
Nashville	88	VII	1961	(Formerly Middle Tennessee)
Chicago	89	VI	1961	
Akron	90	V	11-02-61	
East Texas	91	VIII	10-24-61	
Southern Nevada	92	X	05-14-62	
South Dakota	93	IX	10-31-61	
Central Florida	94	XII	06-21-62	
Madison	95	VI	05-01-62	
Regina	96	XI	03-22-63	(Formerly Saskatchewan)
Greenville	97	IV	12-16-63	
Lehigh Valley	98	III	03-12-64	

CHAPTER CHARTER DATES

<u>Chapter Name</u>	<u>Chapter Number</u>	<u>Region</u>	<u>Charter Date</u>	<u>Comments</u>
East Tennessee	99	VII	11-05-64	
Halifax	100	II	03-15-65	
San Jose	101	X	11-01-65	
Saskatoon	102	XI	03-25-66	
Northern Indiana	103	V	09-16-66	
Gold Coast	104	XII	10-31-67	
Orange Empire	105	X	03-25-68	
Triangle	106	IV	10-14-68	
Northeast Wisconsin	107	VI	11-11-69	
Hawaii	108	X	01-24-70	
Spacecoast	109	XII	03-19-81	
Puerto Rico	110	XII	04-17-70	
Champlain Valley	111	I	10-02-70	
Delaware	112	III	11-18-70	
Charleston	113	IV	04-17-71	
Tennessee Valley	114	VII	03-26-71	
LaCrosse Area	115	VI	04-10-72	
London Canada	116	II	05-08-72	
New Brunswick	117	II	10-13-72	
Maine	118	I	09-23-72	
Rockford	119	VI	10-05-73	
Fort Wayne	120	V	05-22-74	
Eastern Michigan	121	V	05-24-74	
Alaska	122	XI	03-28-74	
Mississippi Valley	123	VI	11-22-74	
Montgomery	124	VII	10-09-74	
Roanoke	125	III	10-17-75	
Northern Nevada	126	X	10-04-75	
Black Hills Area	127	IX	09-22-76	
Central Kentucky	128	VII	09-30-77	
Twin Tiers	129	I	09-23-77	
Northwest Florida	130	VII	04-07-78	
Big Sky	131	IX	11-10-78	
Gulfstream	132	XII	01-11-79	
North Alabama	133	VII	06-14-79	
Anthracite	134	III	06-03-80	
Idaho	135	IX	09-12-80	
Mid-Columbia	136	XI	09-15-81	
East Central Illinois	137	VI	05-25-82	
Tri-Cities	138	VII	09-23-82	
Southwest Florida	139	XII	03-16-83	
Saguenay-Lac St. Jean	140	II	03-10-83	
Windsor	141	II	11-19-83	
Singapore	142	Int'l	01-30-84	
Hong Kong	143	Int'l	10-18-84	
Sierra Delta	144	X	09-17-84	
Mississauga	153	II	April 1988	

SECTION 5

CHAPTER REGIONAL CONFERENCES

1961	Quebec	1978	London Canada (Benmiller)
1962	Toronto	1979	Saskatoon
1963	Banff	1980	Moncton
1964	Ottawa	1981	Montreal
1965	Winnipeg	1982	Halifax
1966	Hamilton	1983	Quebec
1967	Montreal	1984	Toronto (Niagara-on-the Lake)
1968	Edmonton	1985	Ottawa
1969	Halifax	1986	Hamilton (Niagara Falls)
1970	Winnipeg	1987	Lac St. Jean
1971	Quebec	1988	London
1972	Toronto	1989	Moncton
1973	Regina	1990	Montreal
1974	Ottawa	1991	Windsor
1975	Calgary	1992	Halifax Aug. 27-29
1976	Hamilton	1993	Quebec Aug. 26-28
1977	Winnipeg	1994	Ottawa Aug. 25-27 (Centennial)
		1995	Toronto Aug. 24-26
		1996	Hamilton Aug. 22-24

Region 2 Chapters Before & After Regional Reorganization

# ASHRAE Regional & Chapter Officers 1978-'79

CHAPTER	PRESIDENT	PRESIDENT-ELECT	VICE-PRESIDENT	SECRETARY	TREASURER
<b>REGION II</b> George E. Menzies, Regional Chairman					
Halifax	Lloyd Scholfield	Ron Roberts*	Rod Hartlin	Gary Brown	James Lothian
Hamilton	Carl H. Ljungberg	Frank Spina	Jack E. Keon	Gerald W. Kowalyszyn	J. H. Bevan
London Canada	John J. Payne		William W. Mitchell	Charles L. Sharpe	William A. Rutherford
Manitoba	Edward J. Faraci	Dave E. Cross	Les F. Howard	Tom E. Patteson	Arthur M. McKenzie
Montreal	Joseph J. Paulin	Angelo Bozzer*	Gilles Rheault	Dennis J. Banning	Jean-Guy Lahaie
New Brunswick	Terry Steeves		Gary R. Hoadley	Derrick Palmer	Michael J. Mann
Nonhern Alberta	Roger K. Stagg	Edward A. Stumborg	Gordon J. Purvis	Robert L. Thorpe	Robert D. Wright
Ontario	John C. Pennyfather		Phil Landray	Frederick I. Smith	Donald H. McCurdy
Ottawa Valley	James Black		Robert J. McKee	James G. J. Bowie	Michael Acton
Regina	Kenneth R. Hamblin		John D. Scott	Allan J. Thomson	Ronald J. Butfel
Saskatoon	Stan Nakrayko		Brian Crowhurst	Lloyd Colborne	Jerry Boulanger
Southern Alberta	William G. Herr		Clifford Martinson	Allan M. Smith	Dale C. Andersen
Ville de Quebec	Paul Methot		Jean-Guy Roy	Jean Luc Roy	Roland Gillemette

## ASHRAE CHAPTER OFFICERS 1979-80

CHAPTER	PRESIDENT	PRESIDENT-ELECT	VICE-PRESIDENT	SECRETARY	TREASURER
<b>REGION II</b> Alan W. Oakes, Regional Chairman					
Halifax	Rod H. Hartlin	James D. Lothian	Gary R. Brown	James R. Ruffell	James E. Moar
Hamilton	Jack Keon	Gerald W. Kowalyszyn	J. George Takata	Walter Korolenchuk	John Hugh Bevan
London Canada	C. L. Sharp		William Rutherford	Earl Dawson	Bon Morton
Montreal	Gilles Rheault	Dennis Banning	Jean-Guy Lahaie	Joseph Cuccia	Pierre Turcotte
New Brunswick	Gary Hoadley	Mike Mann	Dave Potter	Dave Hoskin	John Hanusiak
Ontario	Philip B. Landray	Donald H. McCurdy	Norman W. Johnson	George W. Tonsend	W. Chadwick
Ottawa Valley	M. Acton		Ray G. Young	R. Beckman	D. McIntyre
Ville de Quebec	Jean Luc Roy		Roland Guillemette	Roch-Yves Rousseau	Denis Quimper





SECTION 6

DIRECTOR AND REGIONAL CHAIRMAN

1959-61	D.L. Angus - Toronto
1961-64	J.H. Ross - Toronto
1964-67	B.J. Horsburgh - Montreal
1967-70	P. Butler - Edmonton
1970-73	J. Klassen - Ottawa
1973-76	F.D. Ledgett - Toronto
1976-79	G.E. Menzies - Hamilton
1979-82	A. Oakes - Ottawa
1982-85	L. Algie - Toronto
1985-88	G. Buckler - Hamilton
1988-91	N. Johnson - Toronto
1991-94	D McIntyre - Ottawa

THE ADDRESSES FOR OFFICERS OF ASHRAE RESEARCH CANADA

7-328-6-387

President

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N S Dept. of Fisheries  
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Halifax, NS B3J 3C4 Canada

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Ottawa, ON K1V 7A1 Canada

McIntyre Engineering Service  
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Ottawa, ON K1A 7A1 Canada

Director

Holte, Donald E.  
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Visionwall Technologies Inc.  
12332-149th Street  
Edmonton, AB T5V 1G9 Canada

Director

Johnson, Norman W.  
276 Bay St.  
Orillia, ON L3V 3X1 Canada

Johnson Paterson Inc.  
210 Denison Street  
Markham, ON L3R 1B6 Canada

June 30, 1991

Reg	Chap	Chapter	Year End Total
#	#		Investments
2	13	Quebec	\$4,355.00
2	14	Montreal	\$4,450.00
2	15	Ottawa	\$6,860.00
2	16	Toronto	\$18,077.00
2	37	Hamilton	\$8,995.00
2	100	Halifax	\$6,663.00
2	116	London	\$5,180.00
2	117	New Brunswick	\$2,980.00
2	140	Saguenay	\$385.00
2	141	Windsor	\$3,405.00
2	153	Mississauga	\$269.00
11	17	Manitoba	\$3,068.00
11	18	Southern Alberta	\$8,395.00
11	19	Northern Alberta	\$5,775.00
11	20	British Columbia	\$19,074.00
11	96	Regina	\$ .00
11	102	Saskatoon	\$4,056.00
11	145	Vancouver Island	\$8,440.00
		TOTALS	\$110,427.00

*Title: Study of Methods of Over-Pressure Relief for Stairwell Pressurization*

This project developed design recommendations for the combined system of mechanical venting of the fire floor and over-pressure relief for stairwell pressurization systems.

- \$79,666 618-RP G. K. Yuill & Associates —  
September '89 to September '90. Investigator: Gren Yuill.  
Sponsored by TC 5.6, Control of Fire and Smoke.

*Title: Evaluation of Algorithms for Design of Smoke control Systems*

The objective of this project is to develop a reliable and efficient algorithm for smoke control systems based on experience with network pipe analysis which is mathematically similar.

- \$90,225 620-RP Caneta Research —  
December '89 to ~~Nov~~ Nov '91. Investigator: Douglas Cane.  
Sponsored by TC 9.4, Applied Heat Pump/Heat Recovery Systems

*Title: Validation of Heat Pump/Heat Recovery System Modeling*

The objective of this project is to conduct a survey to establish which publicly available commercial building energy-use analysis tools are commonly used to model heat pump/heat recovery systems.

- \$95,455 624-RP National Research Council Canada —  
September '89 to ~~Oct~~ '91. Investigator: W.T. Chu. Sponsored by  
TC 2.6, Sound and Vibration Control.

*Title: Laboratory Methods of Testing for Rating Low Frequency Sound Emissions of Air Conditioning Equipment*

The objective of this project is to develop authoritative data on the best achievable uncertainties of reverberation room methods of testing for sound power rating of typical equipment used in building air conditioning systems.

- \$26,156 660-RP National Research Council Canada —  
April '90 to September '90. *ASHRAE Transactions*, 1991, Vol. 97, Part 2: paper IN-91-05, #1. Investigator: George T. Tamura.  
Sponsored by TC 5.6, Control of Fire and Smoke.

*Title: Determination of Critical Air Velocities to Prevent Smoke Backflow at Stair Door Openings*

This research determined critical velocities at non-fire conditions that prevent smoke backflow at open stair door on the fire floor for various temperatures, exterior wall venting conditions and open stair door configurations.

- \$105,810 677-RP National Research Council Canada – April '91 to DEC '92. Investigator: J.R. Mawhinney. Sponsored by TC 5.6, Control of Fire and Smoke.

Title: *Effect of Automatic Sprinkler Protection on Smoke Control Systems*

The objective of this research is to measure the effect that water spray from automatic sprinklers has on the conditions of temperature, pressure, oxygen and carbon monoxide levels in a building under fire conditions and to assess the effect on the performance of a zoned smoke control system.

**\$1,477,877** Subtotal committed in Canada on ASHRAE Research from 1968 through 1991

## Research Grants-In-Aid

ASHRAE Canada Research has awarded the following grants-in-aid to graduate students in Canadian universities:

June '71 \$3,000  
University of Windsor  
C.J. Williams

June '75 \$5,000  
University of Windsor  
Rodger L. Reynolds

March '79 \$6,000  
Concordia University  
Andrew Yager

March '79 \$5,000  
University of Western  
Ontario  
Nick Saidi

June '80 \$6,000  
University of New  
Brunswick  
David Swan

July '83 \$5,000  
University of Alberta  
Darwin Kiel

July '84 \$5,000  
University of Windsor  
Frank A. Stauder

July '88 \$6,000  
University of Alberta  
Iain S. Walter

July '90 \$6,000  
University of Alberta  
Kent Nikel

*The Canadian Research In-Aid  
1,477,877*

# RESEARCH PROJECT WORK SHEET

07-Jan-92  
WWS

STATUS	TITLE	TC/TG	COST	PERIOD	CAT.	CONTRACT.NOTE	REMARKS
455-RP/A	INVESTIGATION OF DYNAMIC LATENT HEAT STORAGE EFFECTS OF BUILDING CONSTRUCTION AND FURNISHING MATERIALS	4.4	88,520	S91.01 E	EC	ONTARIO RESEARCH DAVID BAILEY	PMSC- PHILIP FAIREY
515-RP/A	DYNAMIC HEAT TRANSMISSION CHARACTERISTICS OF 7 GENERIC WALL TYPES	4.1	125,229 17,175 US\$	S89.04 E90.09	DT	NAT. RES. CNCL. CANADA	PMSC- TERRY SUN
578-RP/A	DETERMINATION OF WINDOW SYSTEM U-VALUES FOR TABLE 13 OF THE HANDBOOK OF FUNDAMENTALS	4.5	119,240	S91.09 E93.03	EC	ENTERMODAL S.C. CARPENTER	PMSC- MIKE MCCABE
618-RP/A	EVALUATION OF ALGORITHMS FOR ANALYSIS OF SMOKE CONTROL SYSTEMS	5.6	79,666	S89.09 E90.10	H & S	G.K. YUILL & ASSOC.	PMSC- GEORGE WALTON
620-RP/A	VALIDATION OF HEAT PUMP/HEAT RECOVERY SYSTEM MODELING	9.4	90,225	S89.12 E91.10	EC	CANETA RESEARCH	PMSC- MORTON BLATT
624-RP/A	LABORATORY METHODS OF TESTING FOR RATING LOW FREQUENCY SOUND EMISSION OF AIR-CONDITIONING EQUIPMENT	2.6	95,455	S89.09 E91.01	COM	NATL. RESEARCH COUNCIL OF CANADA	PMSC- PETER BAADE
656-RP/A	HEAT PUMP/HEAT RECOVERY OPERATING EXPERIENCE	9.4	64,500	S91.12 E92.12	EC	CANETA RESEARCH DOUG CANE	PMSC-
661-RP/A	FIELD VERIFICATION OF PROBLEMS CAUSED BY STACK EFFECT IN TALL BUILDINGS	TG9/TB 9	35,000	12M	DT	M. HERSCHFELD & ASSOC. A.G. WILSON	PMSC- ROBERT TAMBLYN RET. BY BOD. 91-01-24
677-RP/A	EFFECT OF AUTOMATIC SPRINKLER PROTECTION ON SMOKE CONTROL SYSTEMS	5.6	105,810	S91.04 E92.10	H&S	NRCC J.R. MAWHINNEY	PMSC- BILL SCHMIDT
713-RP/A	EVALUATION OF SOLAR HEAT GAIN TEST METHODS	4.5	96,620	S91.09 E92.10	DT	QUEEN'S U. S.J. HARRISON	PMSC- STEPHEN TREADO

For more detail see ASHRAE Journal October 1991

info since 1988

## Research Projects

During the past 23 years, ASHRAE Canada Research has conducted 25 research projects with the following Canadian Institutions:

- **\$8,000** 73-RP University of Saskatchewan —  
April '68 - June '70. *ASHRAE Transactions*, Volume 76, Part II as paper #2157. Investigators: Tom Bursey, Dr. George Green. Sponsored by TC 2.3, Ventilation Requirements and Infiltration.

*Title: Heat Loss Through Windows Under Combined Pressure and Temperature Difference*

This project developed test methods to determine the influence of infiltration or conductance of heat through combined prime and storm windows.

- **\$29,930** 133-RP University of Manitoba —  
September '72 - June '74. *ASHRAE Transactions*, Volume 80, Part I, page 322 and Volume 81, Part 2 as BO-75-1, BO-75-2 and BO-75-3. Investigators: D.R. Fisher, Professor H.N. Gawley, R.E. Chant. Sponsored by TC 5.5, Air-to-Air Heat Recovery.

*Title: Standard Procedures for Determining the Performance of Air-to-Air Heat Recovery Equipment*

This project developed a standard procedure for determining the beneficial capacities of equipment designed to transfer heat from one air stream to another.

- **\$9,800** 136-RP University of Alberta —  
December '72 - 1975. *ASHRAE Transactions*, Volume 82, Part I: DA-76-17, page 1024; Volume 83, Part I, paper #2439 and #2440; and Volume 88, paper #2695. Investigator: D.J. Wilson. Sponsored by TC 2.5, Industrial Environment, & NRC of Canada.

*Title: Contamination of Building Air Intakes from Nearby Exhaust Gas Vents*

The effect of intakes and exhaust locations on exhaust gas recirculation and the effect of gas vented from a nearby building on inlet contamination was studied and the results published as design criteria for various building configurations.

- \$29,960 140-RP University of Windsor --  
June '73 - January '76. *ASHRAE Transactions*, Volume 82, Part 1, Volume 83, Part 2, papers: #2467, #2469, and Volume 92, Part 2, papers #3005 and #3006. Investigators: T.W. McDonald, A.F.M. Ali. Sponsored by TC 5.5, Air-to-Air Heat Recovery.

*Title: Development of Performance Characteristics for Two-Phase Thermosiphon Loops*

This project established the parameters to evaluate the performance of this heat recovery concept - a thermosiphon loop.

- \$33,740 188-RP University of Windsor --  
September '75 - June '78. *ASHRAE Transactions*, Volume 84, Part 2 paper #2491, Volume 86, Part 2 paper #2588, Volume 90, Part 2 paper #2853, Volume 91, Part 2 paper #2901 and Volume 92, Part 2 paper #3005 and #3006. Sponsored by TC 5.5, Air-to-Air Heat Recovery and NRC of Canada.

*Title: Multiple Tube Evaporator and Condenser Thermosiphon Loops*

This project developed design criteria for the use of multiple tube evaporator and condenser thermosiphon loops.

- \$13,388 204-RP University of Alberta  
July '76 - June '79. *ASHRAE Transactions*, Volume 85, Part 2, paper #2546, Volume 88, Part 2 paper #2696 and Volume 89, Part 2 paper #2769. Investigator: Dr. D.J. Wilson. Sponsored by TC 5.8, Industrial Ventilation.

*Title: Design of Vent Stack Height and Efflux Velocity to Reduce Exhaust Gas Recirculation*

This was an extension of the information gained in 136-RP and assisted in the design and location of intakes and exhausts. NRC in Ottawa assisted the university in purchasing the wind tunnel, etc., involved in this project.

- \$6,000 205-RP UNIES Ltd., Winnipeg, Manitoba --  
October '78 - January '80. Investigator: Dr. G.K. Yuill. Sponsored by TC 4.7, Energy Calculations.

*Title: Development of a Simplified Energy Calculation Procedure for Use in ASHRAE 90-75, Energy Conservation Standards in New Building Design.*

Seven Contractors, six in United States and one in Canada, were selected to develop and verify a simplified energy calculation procedure.



- \$48,904 524-RP Ontario Research Foundation -- April '87 - June '88. *ASHRAE Transactions*, Volume 96, Part 2, paper 5L-90-11. Investigator: B. Sibbitt and P. Edwards. Sponsored by TC 5.8, Industrial Ventilation.

Title: *Development of Loss Coefficient Data for Compound Exhaust Hoods Using Slots for Air Distribution*

This project gathered data on slot loss, duct entry loss and velocity profiles for commonly used exhaust hoods and combined the loss factors into a single factor.

- \$69,915 530-RP G.K. Yuill & Associates - Winnipeg December '87 - January '89. *ASHRAE Transactions*, Volume 96, Part 1, paper #3311. Investigator: Dr. Gren Yuill. Sponsored by TC 4.7, Energy Calculations.

Title: *Preparation of an Annotated Guide to Models and Algorithms Related to HVAC Equipment*

The results of this project was a guide to the technical literature which identifies and characterizes publications containing algorithms, or information helpful in the development of algorithms, for models HVAC equipment.

- \$36,642 543-RP Unies, Ltd. - Winnipeg September '87 - January '89. *ASHRAE Transactions*, Volume 95, Part 2 papers VA-89-02, #3 and #4 and Volume 96, Part 1, paper #3351. Investigator: Bert Phillips. Sponsored by TC 5.5, Air-to-Air Energy Recovery.

Title: *An Investigation of Freezing Control Strategies for Residential Air-to-Air Heat Exchangers*

This study analyzed the freeze-control strategies used for residential air-to-air heat exchangers and evaluated their effect on the seasonal performance of the exchangers.

- \$42,210 544-RP Ontario Research Foundation - '87 - January '89. Investigator: Colin McCugan. Sponsored by TC 5.5, Air-to-Air Energy Recovery.

Title: *Investigation of Enthalpy Residential Air-to-Air Heat Exchangers*

This study developed guidelines for homeowners, contractors and designers to use in selecting and operating residential enthalpy heat recovery ventilation systems while maintaining indoor humidity.

- \$165,360 559-RP National Research Council Canada - April '88 to April '89. *ASHRAE Transactions*, Volume 95, Part 2 paper #3272, Volume 96, Part 1 paper AT-90-10 #1, and Volume 96, Part 2, paper SL-90-08. Investigator: George T. Tamura. Sponsored by TC 5.6, Control of Fire and Smoke.

**Title: *The Effect of Indoor Relative Humidity on Survival of Airborne Microorganisms and the Related Absenteeism in Schools and Hospitals***

The project tested the hypothesis that increasing or decreasing the indoor humidity in winter towards 50% in cold climates reduces the survival of airborne microorganisms and related the findings to absentee rates in 12 schools and 3 hospitals.

- \$44,357 421-RP McMaster University – Montreal  
October '83 - October '84. *ASHRAE Transactions*, Volume 92, Part 2 paper #2997. Investigator: Dr. Kris Cena. Sponsored by TC 2.1, Physiology and Human Environment.

**Title: *Thermal Comfort of the Elderly: Effects of Microclimate, Clothing, Activity Level and Socioeconomics***

A survey was conducted to determine the effects of indoor microclimate, clothing and activity level on the thermal comfort of elderly persons of different socioeconomic groups.

- \$31,207 430-RP Ontario Hydro Research –  
March '84 - December '84. *ASHRAE Transactions*, Volume 91, Part 2A paper #RP-430. Investigator: M. Perlman. Sponsored by TC 6.6 Service Water Heating.

**Title: *Development of Residential Hot Water Use Patterns***

The project developed typical residential hot water use patterns. Average hourly, daily and monthly profiles in tabular and graphic forms resulted.

- \$93,252 460-RP McMaster University – Montreal  
February '85 - October '86. *ASHRAE Transactions*, Volume 94, Part 1 paper #3117. Investigator: Dr. Kris Cena. Sponsored by TC 2.1, Physiology and Human Environment.

**Title: *Thermal Comfort of the Elderly: Behavioral Strategies and Effect of Activity***

This is an extension of the work begun in 421-RP to study the effect of activity and behavior on the thermal comfort of elderly persons.

- \$160,400 515-RP National Research Council Canada –  
April '89 - May '90. Investigator: D.G. Stephenson and S.A. Barakat. sponsored by TC 4.1, Load Calculation Data and Calculations.

**Title: *Dynamic Heat Transmission Characteristic of Seven Generic Wall Types***

This is a study to determine the coefficients of two transfer functions that incorporate the dynamic heat transmission characteristics of seven common wall constructions.

- \$95,650 241-RP University of Manitoba —  
July '79 - January '82. *ASHRAE Transactions*, Volume 89, Part 2B paper DC-83-06 #1, DC-83-06 #2 and DC-83-06 #3. Investigator: Professor H.N. Gawley. sponsored by TC 5.5, Air-to-Air Energy Recovery.

*Title: Condensible Gases in the Effluent Air for Moderate Temperatures up to 180°C*

The project identified condensible gases in moderate temperature waste heat exhaust from commercial/industrial processes to allow the evaluation of the potential for corrosion and the effects on the performance of air-to-air heat exchanges.

- \$63,750 247-RP Concordia University — Montreal  
January '79 - December '82. *ASHRAE Transactions*, Volume 88, Part 1 paper #2689; Volume 89, Part 2A papers #2797 and #2798; Volume 90, Part 2 paper #2834 and Volume 92, Part 1 paper #2972. Investigators: Professor K.I. Krakow, Dr. S. Lin. Sponsored by TC 6.7, Solar Energy Utilization.

*Title: A Solar Heat Pump Heating System with Latent Heat Storage for Cold Climates*

A refrigerant-cooled solar collector was constructed and evaluated. In phase one of the project, the thermal performance and characteristics of a refrigerant-cooled solar system as individual components were studied. A novel coated evaporator was used which reduced the adherence of ice, thereby minimizing defrosting.

- \$47,600 378-RP Concordia University — Montreal  
December '82 - December '86. *ASHRAE Transactions*, Volume 91, Part 2A paper #2902 and #2903 and Volume 95, Part 2 paper #3294. Investigator: Dr. J. Wang. Sponsored by TC 1.3, Heat Transfer and Fluid Flow.

*Title: An Experimental Investigation of the Effects of Refrigerant-Oil Mixture on the Condensation Heat Transfer Coefficient and Pressure Drop in Water Cooled Shell and Tube Condensers.*

The project investigated the mechanism of heat transfer during condensation of halogenated hydrocarbon refrigerant when mixed with a pre-determined amount of lubricant oil.

- \$50,500 397-RP University of Saskatchewan —  
March '83 - July '85. *ASHRAE Transactions*, Volume 91, Part 2 paper # CH-85-13 #3 and paper #2887. Investigator: Dr. George Green. Sponsored by TC 2.1, Physiology and Human Environment.

**Title: *Study of Methods of Over-Pressure Relief for Stairwell Pressurization***

This project developed design recommendations for the combined system of mechanical venting of the fire floor and over-pressure relief for stairwell pressurization systems.

- \$79,666 618-RP G. K. Yuill & Associates — September '89 to September '90. Investigator: Gren Yuill. Sponsored by TC 5.6, Control of Fire and Smoke.

**Title: *Evaluation of Algorithms for Design of Smoke control Systems***

The objective of this project is to develop a reliable and efficient algorithm for smoke control systems based on experience with network pipe analysis which is mathematically similar.

- \$90,225 620-RP Caneta Research — December '89 to October '91. Investigator: Douglas Cane. Sponsored by TC 9.4, Applied Heat Pump/Heat Recovery Systems

**Title: *Validation of Heat Pump/Heat Recovery System Modeling***

The objective of this project is to conduct a survey to establish which publicly available commercial building energy-use analysis tools are commonly used to model heat pump/heat recovery systems.

- \$95,455 624-RP National Research Council Canada — September '89 to July '91. Investigator: W.T. Chu. Sponsored by TC 2.6, Sound and Vibration Control.

**Title: *Laboratory Methods of Testing for Rating Low Frequency Sound Emissions of Air Conditioning Equipment***

The objective of this project is to develop authoritative data on the best achievable uncertainties of reverberation room methods of testing for sound power rating of typical equipment used in building air conditioning systems.

- \$26,156 660-RP National Research Council Canada — April '90 to September '90. *ASHRAE Transactions*, 1991, Vol. 97, Part 2: paper IN-91-05, # 1. Investigator: George T. Tamura. Sponsored by TC 5.6, Control of Fire and Smoke.

**Title: *Determination of Critical Air Velocities to Prevent Smoke Backflow at Stair Door Openings***

This research determined critical velocities at non-fire conditions that prevent smoke backflow at open stair door on the fire floor for various temperatures, exterior wall venting conditions and open stair door configurations.

- \$105,810 677-RP National Research Council Canada – April '91 to October '92. Investigator: J.R. Mawhinney. Sponsored by TC 5.6, Control of Fire and Smoke.

Title: *Effect of Automatic Sprinkler Protection on Smoke Control Systems*

The objective of this research is to measure the effect that water spray from automatic sprinklers has on the conditions of temperature, pressure, oxygen and carbon monoxide levels in a building under fire conditions and to assess the effect on the performance of a zoned smoke control system.

**\$1,477,877** Subtotal committed in Canada on ASHRAE Research from 1968 through 1991

## Research Grants-In-Aid

ASHRAE Canada Research has awarded the following grants-in-aid to graduate students in Canadian universities:

June '71 \$3,000  
University of Windsor  
C.J. Williams

June '75 \$5,000  
University of Windsor  
Rodger L. Reynolds

March '79 \$6,000  
Concordia University  
Andrew Yager

March '79 \$5,000  
University of Western  
Ontario  
Nick Saidi

June '80 \$6,000  
University of New  
Brunswick  
David Swan

July '83 \$5,000  
University of Alberta  
Darwin Kiel

July '84 \$5,000  
University of Windsor  
Frank A. Stauder

July '88 \$6,000  
University of Alberta  
Iain S. Walter

July '90 \$6,000  
University of Alberta  
Kent Nickel

# ASHRAE/ASHAE Homer Addams Award

A fellowship is awarded each year to one graduate student at a university in North America which is involved in cooperative research with ASHRAE.

June '72 \$600  
University of Saskatchewan  
Thomas E. Bursey

June '77 \$600  
University of Manitoba  
Douglas R. Bryant

June '82 \$600  
Concordia University  
Shimao Ni

**\$1,526.677** Total spent in Canada on ASHRAE research and related activities

ASHRAE  
Research  
Canada

A non-profit Canadian corporation  
Incorporated in Canada

*Summary of funds  
Spent in Canada  
since 1968*

# Investments In ASHRAE Research

## CHAPTER RESEARCH INVESTMENTS FIVE-YEAR HISTORY 1982-1987

REGION & CHAPTER	1982-83	1983-84	1984-85	1985-86	1986-87
<b>REGION II</b>					
HALIFAX	\$ 2,735.06	\$ 2,367.34	\$ 2,170.00	\$ 2,426.00	\$ 3,476.40
HAMILTON	3,187.50	3,468.95	2,010.90	6,674.20	3,195.92
LONDON CANADA	2,545.00	2,460.00	1,980.00	2,950.00	3,775.00
MISSISSAUGA					100.00
MONTREAL	1,999.69	4,019.70	4,861.19	3,396.78	3,371.50
NEW BRUNSWICK	166.25	1,355.00	2,510.00	2,020.00	1,825.00
OTTAWA VALLEY	7,610.12	9,436.00	6,513.65	13,595.65	11,300.36
QUEBEC	2,710.00	1,900.00	1,756.35	3,291.20	3,363.22
SAGUENAY-LAC ST. JEAN		1,100.00	1,225.00	1,015.00	659.50
TORONTO	9,085.57	6,641.45	8,907.53	6,316.90	17,789.28
WINDSOR			1,235.00	1,670.00	2,100.00
<b>TOTAL</b>	<b>\$30,009.19</b>	<b>\$32,746.44</b>	<b>\$33,166.62</b>	<b>\$49,355.73</b>	<b>\$50,976.16</b>
<b>REGION XI</b>					
ALASKA	\$ 3,153.08	4,358.36	\$ 3,275.00	\$ 4,660.00	\$ 3,130.00
BRITISH COLUMBIA	10,235.65	5,889.20	9,158.44	5,741.40	7,872.96
INLAND EMPIRE	185.00	995.00	2,151.00	1,425.00	1,274.65
MANITOBA	2,220.84	2,185.00	925.00	2,282.00	2,344.80
MID-COLUMBIA	710.00	425.00	555.00	345.00	746.86
NORTHERN ALBERTA	2,420.00	1,575.00	3,097.95	3,194.64	4,280.26
OREGON	8,453.00	11,050.00	7,337.00	8,597.00	7,954.30
PUGET SOUND	12,111.96	8,795.00	7,634.00	4,569.00	8,089.00
REGINA	3,279.00	2,940.00	1,528.00	935.00	4,235.00
SASKATOON	2,605.00	2,781.00	3,007.00	4,020.00	5,025.00
SOUTHERN ALBERTA	4,383.00	2,916.35	4,831.79	4,621.00	6,468.50
VANCOUVER ISLAND				1,554.76	198.50

**CHAPTER RESEARCH INVESTMENTS  
FIVE-YEAR HISTORY 1985-1990**

REGION & CHAPTER	1985-86	1986-87	1987-88	1988-89	1989-1990
<b>REGION III</b>					
HALIFAX	\$ 2,426.00	\$ 3,476.40	\$ 2,160.00	\$ 4,079.00	\$ 7,538.44
HAMILTON	6,674.20	3,195.92	5,109.95	6,380.70	5,045.00
LONDON CANADA	2,950.00	3,775.00	2,471.00	4,176.60	2,580.00
MISSISSAUGA	---	100.00	448.26	295.00	995.00
MONTREAL	3,396.78	3,371.50	4,943.53	2,681.74	6,854.06
NEW BRUNSWICK	2,020.00	1,825.00	945.00	2,502.70	2,250.00
OTTAWA VALLEY	13,595.65	11,300.36	11,789.37	14,635.00	13,041.18
QUEBEC	3,291.20	3,383.22	1,533.50	1,885.00	3,745.00
SAGUENAY-LAC ST. JEAN	1,015.00	659.50	660.00	1,625.00	1,385.00
TORONTO	6,316.90	17,789.26	17,172.90	34,425.65	22,555.00
WINDSOR	1,670.00	2,100.00	1,775.00	3,365.00	2,658.00
<b>TOTAL</b>	<b>\$43,555.73</b>	<b>\$50,978.18</b>	<b>\$49,008.51</b>	<b>\$78,081.38</b>	<b>\$68,644.87</b>
<b>REGION XI</b>					
ALASKA	\$ 4,690.00	\$ 3,130.00	\$ 2,210.00	2,185.00	\$ 3,280.00
BRITISH COLUMBIA	5,741.40	7,872.96	10,319.16	13,630.00	15,926.60
INLAND EMPIRE	1,425.00	1,274.65	1,106.08	485.00	555.00
MANITOBA	2,282.00	2,344.80	325.00	6,134.10	2,335.00
MID-COLUMBIA	345.00	746.86	355.00	480.00	755.00
NORTHERN ALBERTA	3,194.64	4,280.26	7,355.00	9,795.00	11,570.00
OREGON	8,597.00	7,954.30	10,254.00	8,733.16	11,137.00
PUGET SOUND	4,589.00	8,089.00	5,244.15	7,917.00	7,640.00
REGINA	935.00	4,255.00	5,720.00	2,895.00	7,056.00
SASKATOON	4,020.00	5,025.00	5,140.00	4,005.00	4,126.00
SOUTHERN ALBERTA	4,621.00	6,468.50	7,698.69	9,435.62	12,603.00
VANCOUVER ISLAND	1,554.76	198.50	1,100.00	6,284.00	7,970.00
<b>TOTAL</b>	<b>\$41,974.90</b>	<b>\$51,684.33</b>	<b>\$57,027.08</b>	<b>\$72,028.88</b>	<b>\$85,038.80</b>







## C.R.C. WINDSOR FINAL FINANCIAL REPORT

CRC'91 FINAL REPORT ON INCOME AND EXPENSES  
Showing a comparison of projected and actual values

	ESTIMATES	BUDGET	ACTUAL
<b>REVENUES</b>			
Chapter assess. (4.50/mem.)	1170 pers	5265.00	5328.00
Society Contribution	1500US	1800.00	1726.95
Corporate Sponsors		2400.00	3255.00
Registrations:			
Single @ \$ 165	20 pers	3300.00	3649.94
@ \$ 180	10 pers	1800.00	900.00
Double @ \$ 220	27 couples	5940.00	2640.00
@ \$ 250	5 couples	1250.00	428.26
Partial Registrations		700.00	3035.48
Bank interest & misc.		45.00	71.60
<b>TOTAL REVENUES</b>		<b>22500.00</b>	<b>21035.23</b>
 <b>EXPENSES</b>			
Hotel: (total expenses)			
Meeting rooms		800.00	664.12
Meals: Thurs. Break.	26 pers.	260.00	451.61
Thurs. Lunch	50 pers.	1500.00	515.20
Thurs. Banq.	100 pers.	7500.00	5662.56
Fri. Lunch	75 pers.	3000.00	1831.99
Reception (Wed.)	60 pers.	420.00	1194.29
Hospitality/Companion Room		240.00	102.08
Hospitality room food/drink		750.00	494.88
Guest rooms (2)		480.00	560.87
Printing/postage		1500.00	1868.05
Equipment rentals		600.00	0.00
Transportation		300.00	193.30
Coffee break beverages		900.00	628.90
Companion Events		1500.00	904.45
Technical Session		300.00	117.70
Gifts/flowers		800.00	324.00
Recording secretary		1100.00	592.86
Bank Service Charges		50	10.45
Committee exp's. (Meetings & Hosting)		0	707.07
Miscellaneous (Baseball game)		500.00	679.70
<b>TOTAL EXPENSES</b>		<b>22500</b>	<b>17504.08</b>
REBATE TO WINDSOR		0	1765.57
REBATE TO REGION II (Halifax)		0	1765.57



BUDGET-CRC-92 HALIFAX

**ASHRAE** American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.

Halifax Chapter, P.O. Box 8986, Station A, Halifax, Nova Scotia B3K 5M6

BUDGET - CRC-92 HALIFAX

REVENUES

1. CHAPTER ASSESSMENT (5.00 X 1180 MEMBER)	= 5900.00
2. SOCIETY CONTRIBUTION (1500.00 U.S.)	= 1700.00
3. REGISTRATION -DEL./ALT. (45.00 X 170.00)	= 7650.00
4. REGISTRATION -COMP.(A) (125.00 X 10)	= 1250.00
5. REGISTRATION -COMP.(B) (100.00 X 10)	= 1000.00
6. REGISTRATION -FULL CHAPTER MEM. (150.00 X 35)	= 5250.00
7. CORPORATE DONATIONS (CHECKING IT OUT)	= _____
<b>TOTAL REVENUE</b>	<b>= 22 750.00</b>

EXPENSES

1. HOTEL SPACE, MEETING ROOMS	= 2901.00
2. THUR. P.M. HARBOUR TOUR	= 1000.00
3. FRI. A.M. BREAKFAST (10.00 X 45)	= 450.00
4. FRI. P.M. PRESIDENTS LUNCH (30.00 X 80)	= 2400.00
5. FRI. P.M. HISTORIC FEAST (50.00 X 100)	= 5000.00
6. SAT. A.M. BREAKFAST (10.00 X 60)	= 600.00
7. SAT. P.M. LUNCH (20.00 X 60)	= 1200.00
8. FRI. A.M. PEGGY'S COVE TOUR	= 650.00
9. FRI. P.M. HALIFAX HISTORIC TOUR	= 625.00
10. COFFEE BREAKS (100.00 X 5)	= 500.00
11. HOSPITALITY ROOM SUPPLIES	= 1104.00
12. PRINTING, MAILING, POSTAGE, PHOTOCOPIES	= 2100.00
13. EQUIPMENT RENTALS	= 1120.00
14. AWARDS, TELEPHONE CALLS, REG. MATERIAL	= 2100.00
15. TRANSPORTATION/TECH SESSION	= 500.00
16. MISC.	= 500.00
<b>TOTAL EXPENSES</b>	<b>= 22 750.00</b>

REGISTRATION PACKAGE

PACKAGE (MEMBER/ALT.) - 170.00	PARTIAL (HARBOUR TOUR) - 20.00
PACKAGE (COMPANION -A) - 125.00	PARTIAL (FRI. BREAKFAST) - 15.00
PACKAGE (COMPANION -B) - 100.00	PARTIAL (FRI. PRES. LUNCH) - 40.00
PACKAGE (FULL CHAPTER MEMBERS) - 150.00	PARTIAL (FRI. HISTORIC FEAST) - 70.00
	PARTIAL (SAT. BREAKFAST) - 15.00
	PARTIAL (SAT. LUNCH) - 25.00
	PARTIAL (TECHNICAL TALK) - 10.00

The Windsor Chapter presents the following;

Windsor '91

## ASHRAE REGION II CRC '91 - BUDGET (preliminary)

Date: 05-Feb-90		
Revision No. 0		BUDGET
REVENUES		
Chapter Assessment (\$4.50 per member)	\$4.50 x 1170	\$5,265.00
Society Contribution	\$1500.00 US	\$1,800.00
Corporate Donations	-	\$1,000.00
REGISTRATION		
Package ( Member)	\$165.00 x 20	\$3,300.00
Package ( Spouse)	\$90.00 x 0	\$0.00
Package ( Spouse / Member)	\$220.00 x 32	\$7,040.00
Package ( Member) - late	\$180.00 x 10	\$1,800.00
Package ( Spouse) - late	\$100.00 x 2	\$200.00
Package ( Spouse / Member) - late	\$250.00 x 5	\$1,250.00
Host Reception	-	-
Thurs. Breakfast	-	-
Thurs. Lunch	\$25.00 x 4	\$100.00
Thurs. Dinner \ Entertainment	\$100.00 x 2	\$200.00
Fri. Breakfast	-	-
Fri. Lunch	\$25.00 x 4	\$100.00
Sponsors - Coffee Breaks	\$200.00 x 3	\$600.00
- Hospitality Suites	\$200.00 x 3	\$600.00
- Cocktail Reception	\$200.00 x 1	\$200.00
Bank Interest	-	\$45.00
TOTAL REVENUE		\$23,500.00
EXPENSES		
Hotel Space, Meeting Rooms		\$1,000.00
Hotel Meals - Thurs. Breakfast	30 x \$10.00	\$300.00
- Thurs. Lunch (cash bar)	75 x \$25.00	\$1,875.00
- Thurs. Dinner (cash bar)	100 x \$35.00	\$3,500.00
- Thurs. Entertainment	100 x \$50.00	\$5,000.00
- Fri. Breakfast	10 x \$10.00	\$100.00
- Fri. Lunch (Presidential)	100 x \$30.00	\$3,000.00
Cocktail Reception (cash bar)	90 x \$5.00	\$450.00
Hospitality Suite - Room	3 x \$120.00	\$360.00
- Food & Drink		\$150.00
- Alcohol & Mix		\$600.00
Gifts		\$500.00
Guest Rooms	6 x \$120.00	\$720.00
Printing, Mailing, Postage, Photocopies		\$1,500.00
Equipment Rentals		\$600.00
Transportation		\$300.00
Hotel Coffee Breaks	40 x \$7.50 x 3	\$900.00
Ladies Events		\$1,500.00
Technical Session		\$300.00
Bank Service Charges		\$45.00
Miscellaneous (flowers etc.)		\$300.00
Contingency (G.S.T.)		\$500.00
TOTAL EXPENSES		\$13,575.00

## ASHRAE REGION II CRC '91 - PROGRAM OF EVENTS (preliminary)

Revision No. 0

ILTON INTERNATIONAL  
WINDSOR, ONTARIO CANADA

DATE: 28-Jan-90

WEDNESDAY 21-Aug-91

TIME	EVENT	LOCATION	# OF GUESTS
09:00 AM - 08:00 PM	REGISTRATION	2nd FLOOR LOBBY	ALL GUESTS
01:00 PM - 02:00 PM	OFFICAL WELCOME & CRC ORIENTATION		CASH BAR 70
02:00 PM - 03:15 PM	FIRST BUSINESS SESSION		60
03:15 PM - 03:30 PM	COFFEE BREAK		60
03:30 PM - 06:30 PM	DEL / ALT CAUCUS		30
07:00 PM - 08:00 PM	HOST COCKTAIL RECEPTION		CASH BAR 90
08:00 PM - ?	DINNER @ RESTAURANT OF YOUR CHOICE		

HOSPITALITY SUITE ROOM - ???

THURSDAY 22-Aug-91

TIME	EVENT	LOCATION	# OF GUESTS
09:00 AM - 08:00 PM	REGISTRATION	2nd FLOOR LOBBY	ALL GUESTS
07:00 AM - 08:30 AM	BREAKFAST		
08:30 AM - 10:00 AM	SECOND BUSINESS SESSION		60
10:00 AM - 10:15 AM	COFFEE BREAK		60
10:15 AM - 12:30 PM	THIRD BUSINESS SESSION		60
12:30 PM - 02:00 PM	LUNCHEON	CASH BAR	75
02:00 PM - 03:30 PM	EXECUTIVE SESSION	DEL \ ALT	40
03:30 PM - 05:30 PM	CHAPTER ORIENTATION WORKSHOPS	ALL MEMBERS	60
05:30 PM - 06:30 PM	VISIT WITH FRIENDS		
06:30 PM - 07:30 PM	COCKTAILS	CASH BAR	100
07:30 PM - -	REGIONAL AWARDS BANQUET & ENTERTAINMENT	CASH BAR	100

HOSPITALITY SUITE ROOM - ???

FRIDAY 23-Aug-91

TIME	EVENT	LOCATION	# OF GUESTS
09:00 AM - 05:00 PM	REGISTRATION	2nd FLOOR LOBBY	ALL GUESTS
07:00 AM - 08:30 AM	BREAKFAST		
08:00 PM - 09:00 PM	ANNUAL MTG. - ASHRAE RESEARCH CANADA		1 DEL \ CHAPTER 15
09:00 PM - 12:30 PM	WORKSHOPS - EDUCATION		20
	- MEMBERSHIP		20
	- RESEARCH & PROMOTION		20
	- ENERGY & TECHNICAL AFFAIRS		20
	- REFRIGERATION		20
	- PROGRAM		20
	- HISTORIAN		20
10:30 AM - 10:45 AM	COFFEE BREAK		60
12:30 PM 02:30 PM	PRESIDENTIAL LUNCHEON	CASH BAR	100
02:30 PM 04:30 PM	TECHNICAL SESSION		75
04:30 PM 05:00 PM	CLOSING, SUMMARY & ADJOURMENT		75

HOSPITALITY SUITE ROOM - ???

ASHRAE REGION II CRC '91 - LADIES PROGRAM (preliminary)

Revision No. 0

DATE: 28-Jan-90

INTERNATIONAL  
FOR, ONTARIO CANADA

WEDNESDAY <sup>22</sup> 21-Aug-91

TIME	EVENT	LOCATION	# OF GUESTS
09:00 AM - 08:00 PM	REGISTRATION	2nd FLOOR LOBBY	ALL GUESTS
01:00 PM - 02:00 PM	OFFICIAL WELCOME & CRC ORIENTATION		CASH BAR
02:00 PM - 07:00 PM	YOUR OWN TIME		
07:00 PM - 08:00 PM	HOST COCKTAIL RECEPTION		CASH BAR
08:00 PM - ?	DINNER @ RESTAURANT OF YOUR CHOICE		

HOSPITALITY SUITE ROOM - ???

THURSDAY <sup>23</sup> 22-Aug-91

09:00 AM - 08:00 PM	REGISTRATION	2nd FLOOR LOBBY	ALL GUESTS
07:00 AM - 08:30 AM	BREAKFAST		
09:00 AM - 12:30 PM	-----LADIES EVENT-----		25
12:30 PM - 02:00 PM	LUNCHEON		CASH BAR
02:00 PM - 05:30 PM	-----LADIES EVENT-----		25
05:30 PM - 06:30 PM	VISIT WITH FRIENDS		
06:30 PM - 07:30 PM	COCKTAILS		CASH BAR
07:30 PM - -	REGIONAL AWARDS BANQUET & ENTERTAINMENT		CASH BAR

HOSPITALITY SUITE ROOM - ???

FRIDAY <sup>24</sup> 23-Aug-91

09:00 AM - 05:00 PM	REGISTRATION	2nd FLOOR LOBBY	ALL GUESTS
07:00 AM - 08:30 AM	BREAKFAST		
09:00 AM - 12:30 PM	-----LADIES EVENT-----		25
12:30 PM - 02:30 PM	PRESIDENTIAL LUNCHEON		CASH BAR
02:30 PM - 04:30 PM	TECHNICAL SESSION OR SHOPPING		
04:30 PM - 05:00 PM	CLOSING, SUMMARY & ADJOURNMENT		

HOSPITALITY SUITE ROOM - ???

## ASHRAE REGION II CRC '91

Date: 28-Jan-90  
 Revision No. 0

## REGISTRATION PACKAGE

EARLY

LATE  
after July 21,

Package ( Member )	\$165.00	\$180.00
Package ( Spouse )	\$90.00	\$100.00
Package ( Spouse / Member )	\$220.00	\$250.00

## PARTIAL COSTS

HOST RECEPTION & REGISTRATION	\$20.00	\$20.00
THURS. BREAKFAST	\$10.00	\$10.00
THURS. LUNCH	\$25.00	\$25.00
THURS. DINNER & ENTERTAINMENT	\$100.00	\$100.00
FRI. BREAKFAST	\$10.00	\$10.00
FRI. PRESIDENTIAL LUNCH	\$30.00	\$30.00
TECHNICAL SESSION	\$5.00	\$5.00
LADIES EVENTS - ***** 1 *****	?	?
- ***** 2 *****	?	?
- ***** 3 *****	?	?



Montreal Aug'90

## FINAL FINANCIAL REPORT

REVENUE		MAXIMUM	% TOTAL	TODATE	% MAX
R1	FULL REGISTRATION (DELEGATE)	7400	19.02%	7030	95.00%
R2	FULL REGISTRATION (COMPANION)	2175	5.59%	2175	100.00%
R3	LATE REGISTRATION	180	0.46%	750	416.67%
R4	PARTIAL REGISTRATION	450	1.16%	2680	595.56%
R5	TRUST FUND	1500	3.86%	0	0.00%
R6	PRESIDENT LUNCH	2850	7.33%	660	23.16%
R7	SOIREE A PARIS	13050	33.54%	3150	24.14%
R8	SPONSORS	3600	9.25%	1650	45.83%
R9	CHAPTERS ASSESSMENT	5900	15.17%	6219	105.41%
R10	SOCIETY CONTRIBUTION	1800	4.63%	1800	100.00%
TOTAL		\$38,905	100.00%	\$26,114	67.12%

EXPENSES					
E1	PUBLICITY	1600	4.30%	1948.52	121.78%
E2	PHOTOGRAPHY	500	1.34%	372.00	74.40%
E3	SECRETARIAL	1200	3.23%	1106.25	92.19%
E4	POSTAGE	150	0.40%	380.23	253.49%
E5	ADVERTISING	1000	2.69%	772.95	77.30%
E6	SPEAKER'S FEES	1000	2.69%	0.00	0.00%
E7	SPEAKER'S EXPENSES	600	1.61%	0.00	0.00%
E8	RENTAL (AV&TYPMRTS)	1000	2.69%	906.98	90.70%
E9	HOTEL ROOMS	3500	9.41%	3846.75	109.91%
E10	AWARDS	400	1.08%	0.00	0.00%
E11	BREAKFASTS	375	1.01%	1053.58	280.95%
E12	COFFEE	1100	2.96%	316.24	28.75%
E13	HOSPITALITY ROOM	1800	4.84%	961.94	54.55%
E14	COCKTAIL (WED)	750	2.02%	513.48	68.46%
E15	THURSDAY LUNCH	1200	3.23%	1137.50	94.79%
E16	PRESIDENT LUNCH	3600	9.68%	1534.50	42.63%
E17	SOIREE A PARIS	13200	35.50%	6930.00	52.50%
E18	FLOWERS & DECORATION	400	1.24%	0.00	0.00%
E19	TELEPHONE	600	1.61%	299.57	49.93%
E20	TOURS (VOLUNTEERS)	200	0.54%	0.00	0.00%
E21	TRANSPORTATION	600	1.61%	1316.61	219.44%
E22	COMM. EXPENSES	1000	2.69%	1314.10	131.41%
E23	REGISTRATION MATERIAL	850	2.29%	937.53	110.30%
E24	MISCELLANEOUS	500	1.34%	276.80	55.36%
TOTAL		\$37,185	100.00%	\$25,946	69.77%

EXCESS ( DEFICIT ) ..... \$168.47

By Magdi Assaad, eng.  
Treasurer CRC 90



CRC preliminary budget      by Nagdi Assaad, eng.

Montreal - 1990

<u>Proposed events ( to be finalized yet ) :</u>	Number of participants projected	total projec
<u>Day # 1</u>		
11 am to 6 pm : Registration .....	fully reg'd members & spouses +30	85
6 pm to 8 pm : Host Cocktail ( open bar ) .....	fully reg'd members & spouses	55
<u>Day # 2</u>		
9 am to noon : Workshops .....	fully reg'd members + 10	50
Noon to 1 pm : Lunch .....	fully reg'd members & spouses + 15	70
1 pm to 5 pm : workshops .....	fully reg'd members + 10	50
7 pm to 11 pm : Solree a Paris .....	fully reg'd members & spouses + 95	150
<u>Day # 3</u>		
9 am to noon : workshops .....	fully reg'd members + 10	50
Noon to 2 pm : President's lunch & regional awards distribution and technical seminar & closing.....	fully reg'd members & spouses + 45	100
 <u>Full registration fees :</u>		
Member ( includes all above ) .....	( 40 participants expected )	
Spouse ( includes all bove except workshops )	( 15 participants expected )	
Late Registration ( after July 15, 1990 ).....		

**REVENUE**

Full registration ( member )	40 @ \$ 180.....	7200
Full registration ( spouse )	15 @ \$ 150.....	2250
Late registration	6 @ \$ 30.....	180
Partial registration	20 @ \$ 25.....	500
Workshops	20 @ \$ 10.....	200
Lunch ( Thursday )	15 @ \$ 30.....	450
Soiree a Paris	95 @ \$ 75.....	7125
President's lunch ( Friday )	45 @ \$ 40.....	1800
Reimbursement by Society ( \$ 1500 US )	.....	1800
Tours & social events	.....	300
Sponsors ( 6 @ \$ 300 )	.....	1800
Table top display ( 4 @ \$ 250 )	.....	1000
Assessments from chapters : ( \$ 5 per member )		
-Quebec (90)	.....	450
-Moncton (78)	.....	350
-Toronto (300)	.....	1500
-London (50)	.....	250
-Ottawa (150)	.....	750
-Hamilton (100)	.....	500
-Windsor (35)	.....	175
-Lac St_Jean (20)	.....	100
-Halifax (70)	.....	350
-Montreal (330)	.....	
		-----
<b>TOTAL REVENUE ....</b>	<b>\$</b>	<b>29030</b>

**EXPENSES****Publicity :**

-Printing	.....	1400
-photography	.....	400
-Secretarial & Labor	.....	1200
-Postage (300 @ \$ 0.39)	.....	120
-Advertising	.....	500

**Program :**

-Speakers	.....	1400
-Speaker's expenses	.....	800
-Rental ( AV, Typewriters,.. etc)	.....	400
-Meeting rooms	.....	900
-Awards	.....	400

**Social :**

- Coffee & refreshment	.....	800
- Hospitality room	.....	1000
- Host Cocktail( Wed ) 55 @ \$20	.....	1100
- Lunch ( Thursday ) 70 @ \$25	.....	1750
- Soiree a Paris 150 @ \$60	.....	9000
- President's lunch 100 @ \$25	.....	2500
- Flowers & decorations	.....	460
- Telephone & message center	.....	600
- Tours & special events.....	.....	2200

**General :**

- Transportation	.....	600
- Committee expenses	.....	800
- Registration material	.....	700

-----

**TOTAL EXPENSES** ..... **29030**



FINANCIAL REPORT

Region II

Moncton, N.B.

RECEIVED REG - 5 1989  
Moncton '89

Revision 2  
07.19.89

CRC '89

Revenue

		Estimate	Actual
Assessment .....	\$ 4.50 x 1177 .....	\$ 5,310.00	\$ 5,296.50
Society .....	1500.00 U.S. ....	1,800.00	1,741.50
Package (member).....	145.00 x 10 .....	1,450.00	1,450.00
Package (spouse/member)	220.00 x 28 .....	6,600.00	6,160.00
Package (spouse/member)	255.00 x 4 .....		1,020.00
Package (late) .....	155.00 x 7 .....	775.00	1,085.00
Hosp. reception .....	15.00 x 2 .....	30.00	
Thursday lunch .....	15.00 x 5 .....	75.00	
Thursday entertainment..	50.00 x 32 .....	3,000.00	1,600.00
Friday lunch (pres.)..	25.00 x 8 .....	125.00	200.00
Friday supper .....	50.00 x 47 .....	3,000.00	2,450.00
Ladies' tours .....	40.00 x 2 .....	160.00	80.00
Sponsors (bottles, coffee, etc.).....		<u>1,000.00</u>	<u>1,561.81</u>
		\$22,325.00	\$ 22,644.81
N.B. Chapter Donation			<u>214.86</u>
			\$ 22,859.67

Member Only Per Person (Partial)

Host reception	\$15.00
Thursday lunch	15.00
Thursday Cocagne	50.00
Friday lunch (pres.)	25.00
Friday supper (Buddy)	50.00
Ladies' Tour (Thurs)	40.00
Technical Talk	10.00

*R. Williams* CRC CHAIRMAN  
20/Nov/89  
*James MacFarland*  
CRC tres  
Nov/29/89

CRC '89

**Expenses**

	Estimate	Actual
Host reception .....	\$ 500.00	325.50
Thursday lunch .....\$12.00 x 43 .....	516.00	866.26
Thursday Cocagne .....\$50.00 x 135 .....	6,750.00	7,445.20
Friday lunch (Pres.) ..\$20.00 x 85 .....	1,700.00	1,993.32
Friday supper .....\$51.00 x 135 .....	6,885.00	6,343.12
Ladies Tour .....	1,500.00	795.13
Printing, mailing, photocopies .....	800.00	1,068.07
Equipment rentals .....	350.00	413.36
Bank charges .....	20.00	25.00
Clerks .....	400.00	489.00
Gifts .....	400.00	211.00
Hospitality (food, alcohol, mix) .....	300.00	457.54
Hospitality suite .....\$90.00 x 3 .....	270.00	N/C
Misc. room rentals .....	550.00	737.81
Transportation .....	200.00	250.00
Tech session .....	500.00	240.00
Coffees .....5 x 60 x \$2.00 .....	600.00	749.40
Ladies coffees .....based on 30.....	<u>350.00</u>	<u>449.78</u>
	\$22,591.00	\$22,859.67

NOTES

- 1) Thursday supper: includes Don Canning @ \$900.00
- 2) Friday supper: includes Buddy What's His Name @ \$2,800.00

# ASHRAE REGION II CRC-88 FINAL REPORT

London '88

ASHRAE REGION II CRC - 1988

DATE: NOVEMBER 5, 1988

INCOME:	[***** BUDGET OF JUNE 15th, 1988 *****]	[***** ACTUAL REVENUE *****]
CHAPTER ASSESSMENT	( 4.00 x 1200 PEOPLE ) = \$4,800.00	( 4.00 x 1188 PEOPLE ) = \$4,752.00
SOCIETY DONATION	( 1500 U.S. DOLLAR ) = 1,942.50	( 1500 U.S. DOLLAR ) = 1,942.50
CORPORATION DONATIONS:		
ONTARIO HYDRO		1,000.00
UNION GAS LIMITED	*	500.00
TICKET SALES (net after refunds)		
PACKAGE - MEN (BEFORE SEP 15)	( 120.00 x 60 PEOPLE ) = 7,200.00	( 120.00 x 39 PEOPLE ) = 4,680.00
PACKAGE - LADIES	( 60.00 x 30 PEOPLE ) = 1,800.00	( 60.00 x 19 PEOPLE ) = 1,140.00
PACKAGE - MEN (AFTER SEP 15)	*	( 150.00 x 5 PEOPLE ) = 750.00
CURRENCY EXCHANGE	*	= 56.22
HOST RECEPTION	*	( 12.00 x 2 PEOPLE ) = 24.00
THURSDAY - BREAKFAST	( 10.00 x 3 PEOPLE ) = 30.00	( 10.00 x 0 PEOPLE ) = 0.00
THURSDAY - LUNCH	( 14.00 x 5 PEOPLE ) = 70.00	( 14.00 x 2 PEOPLE ) = 28.00
SECOND CITY	( 35.00 x 20 PEOPLE ) = 700.00	( 35.00 x 39 PEOPLE ) = 1,365.00
FRIDAY - BREAKFAST	( 10.00 x 3 PEOPLE ) = 30.00	( 10.00 x 0 PEOPLE ) = 0.00
FRIDAY - 3M TECHNICAL TOUR	*	( 10.00 x 4 PEOPLE ) = 40.00
FRIDAY - LUNCH	( 18.00 x 6 PEOPLE ) = 108.00	( 18.00 x 9 PEOPLE ) = 162.00
FRIDAY - DINNER	( 35.00 x 50 PEOPLE ) = 1,750.00	( 35.00 x 32 PEOPLE ) = 1,120.00
SATURDAY - BREAKFAST	( 10.00 x 3 PEOPLE ) = 30.00	( 10.00 x 0 PEOPLE ) = 0.00
LADIES TOUR	( 30.00 x 2 PEOPLE ) = 60.00	( 30.00 x 0 PEOPLE ) = 0.00
COFFEE SALES	( 150.00 x 6 TIMES ) = 900.00	( 150.00 x 7 TIMES ) = 1,050.00
HOSPITALITY SPONSER	*	( 310.00 x 1 TIMES ) = 310.00
SALE OF BUSINESS CARDS	*	( 10.00 x 27 TIMES ) = 270.00
BANK INTEREST EARNED	*	= 154.99
MISCELLANEOUS	*	= 43.05
	-----	-----
	\$20,420.50	\$19,387.76

EXPENSES:	ASSUMPTIONS	BUDGET	[***** ACTUAL EXPENSES *****]
WELCOME REGISTRATION		250.00	293.95
COCKTAIL RECEPTION	( 9.57 x 100 PEOPLE ) =	957.00	( 9.11 x 100 PEOPLE ) = 911.26
HOTEL MEALS:			
THURSDAY BREAKFAST	( 6.60 x 40 PEOPLE ) =	264.00	( 6.77 x 38 PEOPLE ) = 257.07
THURSDAY LUNCH	( 13.40 x 60 PEOPLE ) =	804.00	( 13.47 x 43 PEOPLE ) = 579.15
FRIDAY BREAKFAST	( 6.60 x 40 PEOPLE ) =	264.00	( 6.77 x 23 PEOPLE ) = 155.60
FRIDAY LUNCH	( 17.30 x 90 PEOPLE ) =	1,557.00	( 18.83 x 85 PEOPLE ) = 1,600.24
FRIDAY DINNER & ENT.	( 28.25 x 140 PEOPLE ) =	3,955.00	( 36.65 x 94 PEOPLE ) = 3,445.37
SATURDAY BREAKFAST	( 6.60 x 40 PEOPLE ) =	264.00	( 6.77 x 43 PEOPLE ) = 290.90
HOTEL COFFEE SERVICE	( 122.83 x 6 TIMES ) =	736.98	( 80.71 x 7 TIMES ) = 565.00
SECOND CITY	( 30.00 x 110 PEOPLE ) =	3,300.00	( 28.20 x 102 PEOPLE ) = 2,876.70
LADIES EVENTS		2,000.00	= 1,154.32
ROOM - REGIONAL CHAIRMAN	( FREE	=	( 120.75 x 3 DAYS ) = 362.25
HOSPITALITY SUITE:			
ROOM	( 305.00 x 3 DAYS ) =	915.00	( 290.00 x 3 DAYS ) = 870.00
FOOD & DRINK	( 200.00 x 3 DAYS ) =	600.00	( 95.68 x 3 DAYS ) = 287.04
ALCOHOL & MIX	( 175.00 x 3 DAYS ) =	525.00	( 265.35 x 3 DAYS ) = 796.05
GIFTS		400.00	439.20
COMMITTEE ROOMS	( 112.00 x 3 ROOMS ) =	336.00	( 0.00 x 3 ROOMS ) = 0.00
PRINTING, SIGNS, PHOTOCOPIES		1,000.00	804.66
EQUIPMENT RENTALS		200.00	386.00
BANK SERVICE CHARGES		50.00	16.77
COMMITTEE EXPENSES		200.00	150.56
STENOGRAPHIC COSTS		250.00	250.00
TRANSPORTATION		200.00	180.00
TECHNICAL TALK		100.00	0.00
MISCELLANEOUS		1,292.52	31.06
		-----	-----
		\$20,420.50	\$16,703.15
TOTAL REVENUE		20,420.50	19,387.76
TOTAL EXPENSES		20,420.50	16,703.15
		=====	=====
BALANCE IN ACCOUNT		0	\$2,684.61

\* = NOT PLANNED FOR IN JUNE 15 BUDGET

*[Signature]*  
DONALD H. P. VANHORN Treasurer





HAMILTON '86

CRC '86 Committee  
FINANCIAL REPORT

RECEIPTS

Full Registration - Members 64	3,758.29	
Spouses 35	1,622.62	
		5,380.91
Partial Registration - Reception	24.00	
Thursday Breakfast	6.00	
President's Luncheon	70.00	
Dinner/Entertainment	975.00	
Friday Breakfast	30.00	
Friday Lunch	60.00	
		1,165.00
Assessments - Ville de Quebec	577.50	
New Brunswick	270.00	
Toronto	1,200.00	
London	188.50	
Ottawa	555.00	
Montreal	1,215.00	
Hamilton	412.00	
Windsor	161.25	
Saguenay Lac St.Jean	000.00	
		4,579.75
Sponsors-		
Coffee Breaks - Joe Vassallo	60.00	
Hospitality Room - Johnson Controls	150.00	
		210.00
Advances - ASHRAE Hamilton Chapter	3,000.00	
Society " " "	2,053.83	
		5,053.83
Refund - Wine		5.00
Sponsors - RHEEM - Ladies Wine Tour		100.00
Sponsors - Carrier/Otis		500.00
		<u>16,994.49</u>
Balance owing chapter #140		140.00
Balance		<u>17,134.49</u>
Total Costs		<u>17,103.38</u>
Profit passed on to Chapter #140		31.11

HOTEL ACCOMMODATION

May 14 - 48 rooms/suites  
May 15 - 68 rooms/suites

DISBURSEMENTS

CHEQUE NO.	ACCOUNT NAME	DETAILS	
	Park Hotel	Deposit (Hasmilton)	200.00
1	Park Hotel	Executive Dinner	85.00
2	Acme Harpoon Co.	Advance	750.00
3	Suzy Menzies	Artwork for Program	200.00
4	Suzy Menzies	Questionnaire	46.92
5	David Rasmussen	Badges	19.42
6	Canadian Speedrite	Photocopies	75.40
7	Jack Keon	Advance on Wine	70.00
8	Acme Harpoon Co.	Balance of Payment	1,000.00
9	Refunds (Errors)	Ville de Quebec	303.75
10	"	Sonseng (J.W.English)	62.00
11	"	Dieter Heins	55.00
12	"	Dalton J. McIntyre	10.00
13	"	Cliff Schemmer	84.00
14	Hillebrand Estates	Wine Tour Refreshments	63.00
15	Double Deck Tours	2 days at \$250.00	500.00
16	The Great Canadian	Sign Company	107.00
17	G.E. Menzies	Photos	76.18
18	W. Gary Romagnoli	Hospitality Rm.Supplies	56.20
19	G.W. Buckler	Hotel Expenses	215.79 *
20	Niagara Plbg. Supplies	Stenographic Serv.	200.34
21	Hoco Ltd. Park Hotel	See Attached	5,543.74
22	G.W. Buckler	VIP Gifts	27.25
23	ASHRAE Hamilton Chapter	- repayment	3,000.00
24	Frank Spina	CRC Exec. Mtg. Expenses	304.75
25	Carl Ljungberg - Acme Harpoon,	Ultrastage,etc.	903.33
26	Gail Menzies - Stenographic	Services	25.00
27	MCC Powers (Ottawa)	Jill Dugan No Show Refund	45.00
28	Merit Mech (Halifax)	Gary Brown No Show "	100.00
29	Southn Mech. Windsor)	L. Panontin " "	55.00
30	Peter Bevan Limited	CRC'86 Comm. Treasurer Exp.	251.67
31	ASHRAE Hamilton Chapter	- Sponsors'Donations	810.00
32	ASHRAE Hamilton Chapter	- CRC Expenses	<u>1,857.64</u>
			<u>17,103.38</u>

ASHRAE CRC  
FINANCIAL REPORT

19th Annual Region II Conference, April 20, 21, 22, 1977,  
Winnipeg, Manitoba, Hosted By the Manitoba Chapter.

INCOME

REGISTRATIONS: Singles 22 @ \$55.00	\$1,210.00
Doubles 10 @ \$75.00	750.00
	<hr/>

TICKET SALES

\$1,960.0  
1,333.0

CHAPTER ASSESSMENTS:

HALIFAX	\$109.00
NEW BRUNSWICK	59.00
Quebec City	75.00
MONTREAL	322.00
OTTAWA	148.00
ONTARIO (Toronto)	396.00
LONDON	58.00
HAMILTON	79.00
MANITOBA	100.00
SASKATOON	34.00
REGINA	51.00
NORTHERN ALBERTA	100.00
SOUTHERN ALBERTA	105.00
	<hr/>

ADVANCE FROM MANITOBA CHAPTER  
CONFERENCE GRANT

\$1,636.00  
300.00  
100.00

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\$5,329.00

EXPENSES

Printing Tickets & Programs	\$ 286.35
Airfare Dr. Lawond	244.00
Refreshment Hospitality Room	37.40
Rooms	325.54
Flowers	71.35
Speaker	100.00
Ukranian Dancers	250.00
Gary Robertson	98.00
Hotel Dinner and Lunches	3,222.69
Ladies Lunches	225.09
Coffee Woodsworth Building	10.00
Postage	28.00
Freight (Display Case)	27.32
Secretary	100.00
	<hr/>

BALANCE IN BANK ACCOUNT

\$5,025.65  
303.35

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\$5,329.00

SIGNED:



FINANCIAL REPORT  
FOR  
ASHRAE  
19th ANNUAL REGION II CONFERENCE  
APRIL 21, 22, 23, 1976--HAMILTON, ONTARIO  
HOSTED BY HAMILTON CHAPTER

## INCOME:

Registrations

Singles	23 @ 55	\$1265.00
Doubles	18 @ 75	\$1350.00

\$ 2615.00

Thursday Luncheon	\$ 259.00
Friday Luncheon	161.00
Thursday Banquet	793.00
	<u>\$1213.00</u>

10 Hamilton Chapter Prepayments (Thursday Luncheon)	\$ 70.00
	<u>\$ 1283.00</u>

Chapter Assessments

Halifax	\$ 138.00
New Brunswick	72.00
Quebec City	61.00
Montreal	320.00
Ottawa	131.00
Ontario (Toronto)	410.00
London	48.00
Hamilton	71.00
Manitoba	80.00
Saskatoon	21.00
Regina	38.00
Northern Alta.	108.00
Southern Alta.	72.00

\$ 1570.00

Conference Grant	100.00
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TOTAL INCOME

\$ 5568.00

Expenses

## Printing

D.G.Seldon (1000 Programs)	\$ 124.64
D.G.Seldon (100 Memo Pads)	56.32
D.G.Seldon (Tickets)	91.00
Henry Ramsey (Name Tag Holders)	10.70
Jim Gordon, Printing, postage	39.35
Rental of Special Typewriter	10.70

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 \$ 332.79

## Hamilton Visitors &amp; Convention Bureau

Hats	\$ 50.00
Bottoms	20.00

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 \$ 70.00

## Gifts Etc.

Book Mart	\$ 29.85
Consumers Distributing	63.90
Wrapping Paper	2.48

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 \$ 96.23
Hotel Charges, Rooms, Luncheons  
Banquet, Refreshments

	\$4,101.14	\$4,101.14
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## Entertainment

Paul Hanover	\$ 150.00
Band	\$ 320.00
Dundurn Castle	\$ 161.00

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 \$ 631.00

## Secretarial Expense

100.00

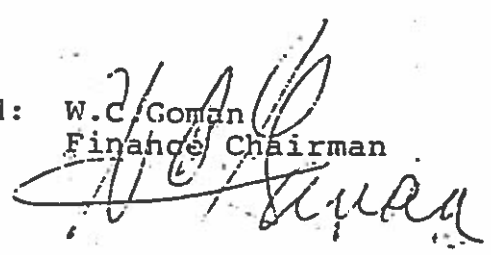
## Photographs

22.00

total expenses

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 \$5,353.16

 Signed: W.C. Gordon  
 Finance Chairman
 

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Mar 18 1992  
R.R.# 5  
Campbellford Ont.  
KOL-1L0

To All Region II C.R.C. Delegates

From Cliff Thompson Region II Historian

Re. Region II Historical Manual

By now you should have received your copy of the manual from last years Delegate (most likely your President), if not ask him for it. Attached is the 1991/92 updates. Unfortunately the manual's pages are not numbered but with the following instructions you should not have too much trouble. The first thing to do is to make sure your manual is filed according to the index. (mine was not).

- Cover Page -----Replace with updated March 1992
- Sec.1 Regional Motions CRC Windsor -----Add three pages at end of existing five pages.
- Sec.2 Regional Award Winners -----Replace four pages with new pages
- Sec.3 ASHRAE Honours & Awards -----Leave seven pages as is  
See Insight's Feb. 1991, June 1991 Feb. 1992  
for latest up dates
- Sec.4 Chapter Charter Dates -----Replace last page to add Mississauga
- Sec.5 CRC Locations -----Replace with new page to add 1992 to 1996
- Sec.6 Director and Regional Chairman -----Replace with new page to add D. McIntyre
- Sec.7 ASHRAE Research Canada-- ---Addresses for Officers of ASHRAE Research Canada. New page add after letter from Norm Johnson dated April 16 1991.  
----Contribution Summary for 1990/1991 New, add after Chapter Research Investments 1985 to 1990  
----- Research Projects Replace pages containing Projects 620RP and 677RP to extend dates (should be last two pages before Homer Adams Award)  
----- Research Project Worksheet dated 07-Jan-92 new sheet giving latest Canadian projects, add after previous two sheets.
- Sec.8 Budgets and Financial Statements-----File Windsor's final report after the Windsor budget and add Halifax's budget for CRC 1992.

Please make the time to properly file this up date, don't just stick them in the back of the book. Geo. Menzies of Hamilton put a lot of effort into it and unless it is maintained it will be of no use to future Delegates.

Regards

Cliff Thompson

C.C. Regional Chairman  
Regional Vice Chairman

