LBL-30401
UC-350
Part 2 of 2

Lawrence Berkeley Laboratory
UNIVERSITY OF CALIFORNIA

APPLIED SCIENCE DIVISION

Integrated Estimation of Commercial Sector End-Use Load Shapes and Energy Use Intensities, Phase II

Final Report

Appendices

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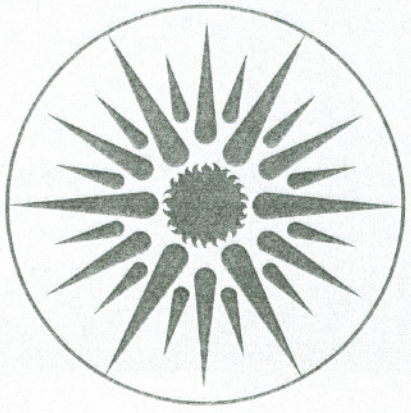
January 1991



APPLIED SCIENCE DIVISION

Prepared for the U.S. Department of Energy under Contract Number DE-AC03-76SF00098

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Integrated Estimation of Commercial Sector End-Use Load Shapes and Energy Use Intensities, Phase II

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January 1991

Prepared for

California Energy Commission

and

California Institute for Energy Efficiency

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Appendix A. Memo on Re-examination of Phase I EUIs for Large Office, Large Retail, and Small Retail and Replacement Tables for LBL-27512

CEC EUI/LS Phase II Project

Revised End Use EUIs and Load Shapes for:
Large Office, Large Retail, and Small Retail

Discussion Notes Prepared for CEC Review
(May 8, 1990)

One of the outstanding issues from the Phase I project was the validity of the resultant end-use EUIs and load shapes for small office, large office, large retail, and small retail buildings. Phase I resultant EUIs for these building categories were considered at variance compared to other utility data. The EUIs of the Phase I project was obtained from utility bills of a sample of 375 buildings in Southern California. The average whole-building electric EUIs calculated from the sample utility bills were different for these building types. A reanalysis of the end-use EUIs and LSs for these three buildings was postponed to Phase II (the current Phase) of the project.

As we have discussed in the Phase I Final Report, whole-building EUIs are "control" figures for the reconciliation process; they are used to estimate end-use EUIs and LSs subject to the condition that the total of all end-use EUIs for a building type would be the same as the controlling whole-building EUIs. The whole-building EUIs were calculated by weighting and averaging the electric bills for the on-site survey premises. Small sample sizes and uncertain weights may have led to whole-building EUIs for these building types that were different from other utility data sources.

In collaboration with CEC project staff, we have reviewed the available whole-buildings EUIs for these building categories in order to arrive at a set of acceptable whole-building EUIs for

the reconciliation process. These notes summarize our conclusions. We have also carried out the process of reconciliation for these buildings and obtained a new set of end-use EUIs and LSs.

Whole-Building EUIs

As we have stated in our February 23, 1990 memo to CEC, several sources for whole-building EUIs were considered including: LBL analysis of the SCE 1985 mail survey, CEC analysis of the SCE 1988 mail survey, CEC analysis of SCE 1987 and 1988 QFER data, and SCE analysis of its 1988 accounts by SIC code (provided by Tim Tutt on February 22, 1990). The following whole-building EUIs were adopted:

Small Retail	12.2 kWh/sf
Large Retail	18.2 kWh/sf

Although, initially, it was planned to reanalyze the small office buildings, at the February 23 meeting, it was decided not to proceed with the reanalysis. This decision was based on additional data supporting the Phase I whole-building EUI for small offices.

For large offices, LBL was charged to review the available data and prepare a memo proposing whole-building EUIs. This note is intended to replace that memo.

Available Data. SCE analysis of 1988 accounts (S1) estimates a whole-building EUI for large offices of 19.8 kWh/sf. (S1 also estimates a whole-building EUI for small offices of 12.6 kWh/sf; we will use this data later on to justify our conclusions.) CEC estimates whole-building EUIs for all offices from 1986 (S2) and 1987 (S3) data of 16.2 and 16.5 kWh/sf, respectively. CEC

preliminary analysis of 1988 SCE mail data (S4) has resulted in a whole-building EUI for large offices of 11.0 kWh/sf. (S4 also estimates a whole-building EUI for small offices of 15.9 kWh/sf; we will use this data later on to justify our conclusions.) The following table summarizes these data sources

Code	Description	Large Offices	Small Offices	All Offices
S1	SCE 1988 accounts	19.8	12.6	
S2	CEC 1986 analysis			16.2
S3	CEC 1987 analysis			16.5
S4	CEC 1988 analysis	11.0	15.9	

Review and Recommendation. If we calculate the whole-building EUIs for all office buildings from S1 and S4, using the estimates of floor areas for large offices (241 Msf) and small offices (125 Msf) in the SCE service area, the resulting EUIs will be 17.4 and 12.7 kWh/sf. A quick comparison of all-office EUIs from these sources indicate that difference between S1, S2, and S3 are less than 7%. However, the difference between S4 and all other sources is 20% - 27%. (S1 is used as the basis for estimating percent differences.)

To understand these differences better, we reviewed the S4 data in further details. Cumulative frequency plot of the floor areas for large offices in this data set indicated that close to 35% of records are buildings with less than 10,000 sf; 25% are less than 6,500 sf; and 50% less than 23,000 sf (See **Figure 1**). There appears to be some errors in the data base which need to be filtered. Cumulative frequency plots for the EUIs also indicated that about 25% of large offices have EUIs less than 6 kWh/sf and about 10% have unusually large EUIs (> 50 kWh/sf).

To preliminary check the impact of these possible data errors on EUIs, we **arbitrarily** dropped the lower and upper 25% of the data points and noticed that the average EUI increased to 14.6 kWh/sf. A step in the right direction!

In summary, it is obvious that data source S4 needs to be cleaned up and cannot be considered as reliable. Also, the differences between S1, S2, and S3 are fairly minimal. Therefore, to be consistent with sources for small and large retail whole-building EUIs, **we propose using S1, EUI = 19.8 kWh/sf, as the controlling whole-building EUI for reconciliation process.**

Results

We applied the EDA, discussed in detail in Phase I final report, to obtain individual end use EUIs and LSs. Since, the whole building EUIs reflect the energy intensity of the entire SCE service area, we needed to adjust these EUIs to estimate EUIs for each climate zones. We used adjustment factors derived from DOE-2 simulations as discussed in Phase I final report. The adjustment factors by climate zones are:

Building Type	LAX	BUR	NOR
Large Office	0.95	1.00	1.06
Large Retail	0.97	0.99	1.06
Small Retail	0.96	0.99	1.06

The adjusted whole-building EUIs are then used to estimate end-use EUIs and load shapes. **Table 1** summarizes the 'new' end-use EUIs and compares them with those report in Phase I report ('old'). The annual average daily load shapes for standard and non-standard days for these building types are estimated and

plotted on **Figures 2(a&b)** for large offices, **Figures 3(a&b)** for large retails, and **Figures 4(a&b)** for small retails.

Upon CEC's review and approval of the 'new' EUIs and load shapes, we will calculate THI matrixes for these building types and transfer the data electronically to CEC.

Table 1. Reconciled Electricity EUIs (kWh/ft^2-yr) for Large Offices, Large Retails, and Small Retails for Climate Zone 1 (LAX), Zone 2 (BUR) and Zone 3 (NOR). A comparison of 'new' and 'old' EUIs.

	Indoor Lighting	Outdoor Lighting	Misc. Equip.	Refrig.	Cooking	Water Heating	Ventilation[1]	Cooling[1]	Total	
Large Office (old)	11.93	2.11	4.28	0.10	0.00	0.16	3.09	3.93	24.54	LAX
							3.30	3.91	25.94	BUR
							3.45	5.11	27.58	NOR
(new)	9.05	1.61	3.21	0.10	0.00	0.12	2.45	3.01	18.75	LAX
							2.60	3.00	19.82	BUR
							2.72	3.91	21.07	NOR
Small Retail (old)	7.49	1.59	1.48	0.95	0.01	0.04	1.67	5.45	17.21	LAX
							1.82	6.54	17.40	BUR
							2.04	11.15	18.81	NOR
(new)	4.71	1.36	0.91	0.94	0.01	0.03	1.17	3.68	11.84	LAX
							1.26	4.40	11.97	BUR
							1.43	7.57	12.94	NOR
Large Retail (old)	12.21	1.47	1.12	0.61	0.19	0.02	3.41	5.79	22.50	LAX
							3.71	4.94	22.76	BUR
							3.61	7.65	24.48	NOR
(new)	9.44	1.14	0.87	0.61	0.17	0.02	2.65	4.52	17.64	LAX
							2.88	3.86	17.84	BUR
							2.81	5.97	19.19	NOR

1. Cooling and ventilation EUIs were estimated separately for the Coastal region (represented by Los Angeles Airport weather), the Inland region (represented by Hollywood-Burbank Airport weather), and the Desert region (represented by Norton Air Force Base weather), in descending order.

Table 1. Reconciled Electricity EUIs (kWh/ft^2-yr) for Large Offices, Large Retails, and Small Retails for Climate Zone 1 (LAX), Zone 2 (BUR) and Zone 3 (NOR). A comparison of 'new' and 'old' EUIs.

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							3.30	3.91	25.94	BUR
							3.45	5.11	27.58	NOR
(new)	8.67	1.44	3.06	0.10	0.00	0.12	2.45	3.01	18.75	LAX
	9.18	1.66	3.26	0.09	0.00	0.12	2.60	3.00	19.82	BUR
	9.29	1.72	3.32	0.10	0.00	0.13	2.72	3.91	21.07	NOR
Avg.	9.05	1.61	3.21	0.10	0.00	0.12				
Small Retail (old)	7.49	1.59	1.48	0.95	0.01	0.04	1.67	5.45	17.21	LAX
							1.82	6.54	17.40	BUR
							2.04	11.15	18.81	NOR
(new)	5.12	1.52	1.01	0.95	0.01	0.03	1.17	3.68	11.84	LAX
	4.88	1.43	0.95	0.94	0.01	0.03	1.26	4.40	11.97	BUR
	4.12	1.14	0.78	0.93	0.01	0.02	1.43	7.57	12.94	NOR
Avg.	4.71	1.36	0.91	0.94	0.01	0.03				
Large Retail (old)	12.21	1.47	1.12	0.61	0.19	0.02	3.41	5.79	22.50	LAX
							3.71	4.94	22.76	BUR
							3.61	7.65	24.48	NOR
(new)	9.25	1.08	0.85	0.61	0.17	0.02	2.65	4.52	17.64	LAX
	9.70	1.12	0.89	0.61	0.17	0.02	2.88	3.86	17.84	BUR
	9.37	1.21	0.87	0.61	0.18	0.02	2.81	5.97	19.19	NOR
Avg.	9.44	1.14	0.87	0.61	0.17	0.02				

1. Cooling and ventilation EUIs were estimated separately for the Coastal region (represented by Los Angeles Airport weather), the Inland region (represented by Hollywood-Burbank Airport weather), and the Desert region (represented by Norton Air Force Base weather), in descending order.

Fig 2a

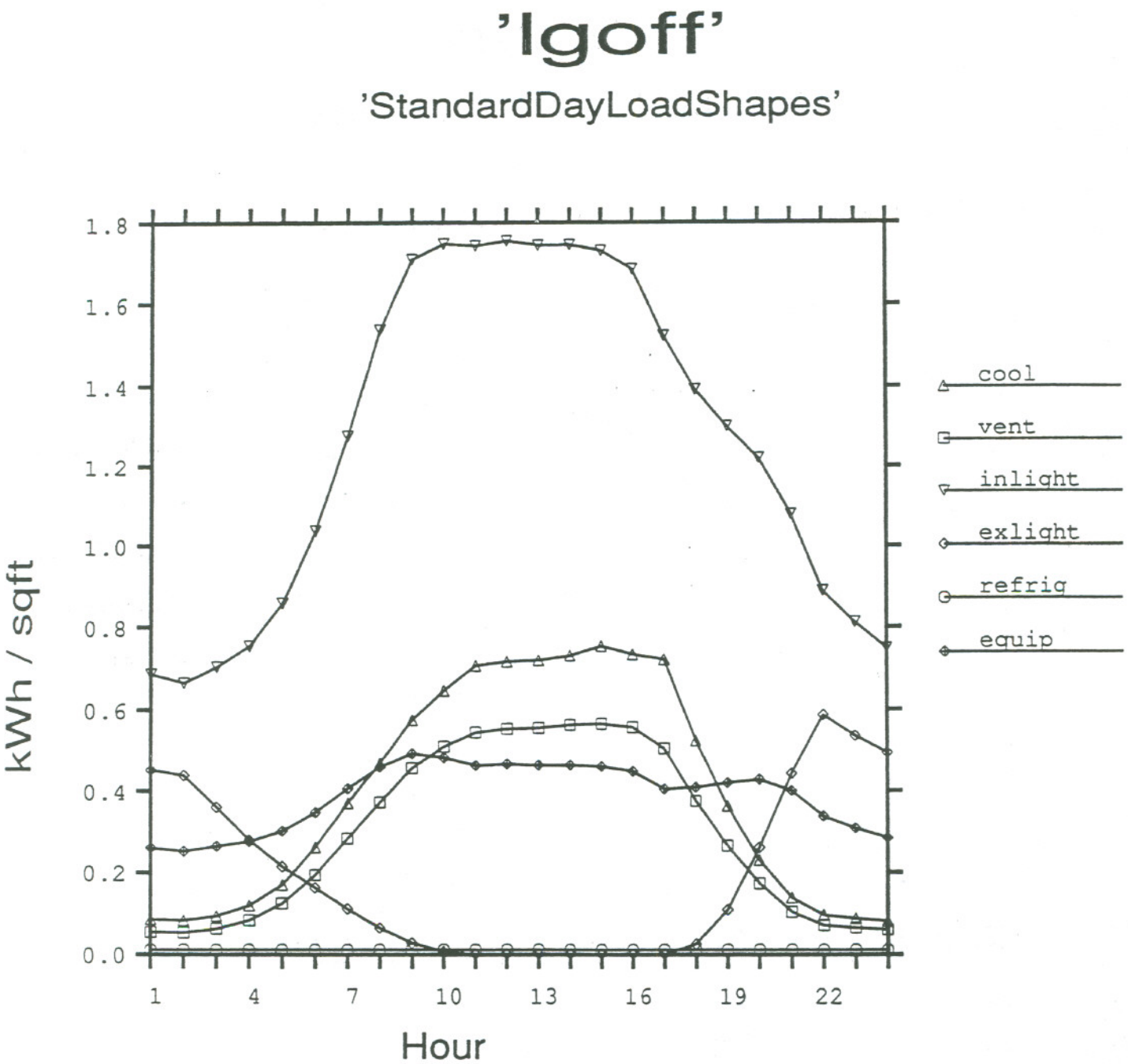
'lgoff'
'StandardDayLoadShapes'
kWh / sqft
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
1
4
7
10
13
16
19
22
Hour
cool
vent
inlight
exlight
refrig
equip

Fig 2b

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'NonstandardDayLoadShapes'

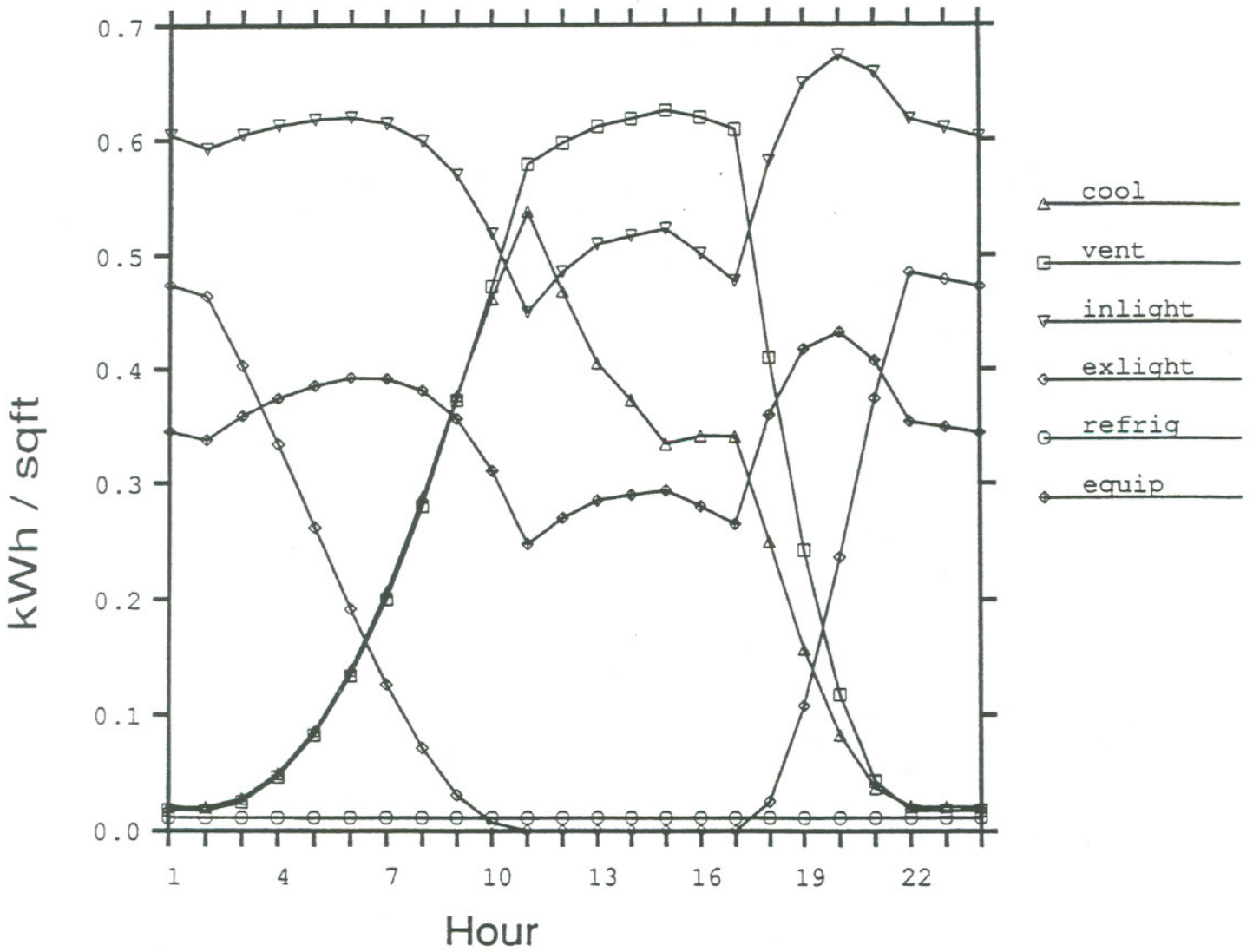


Fig 3a

'Igret'

'StandardDayLoadShapes'

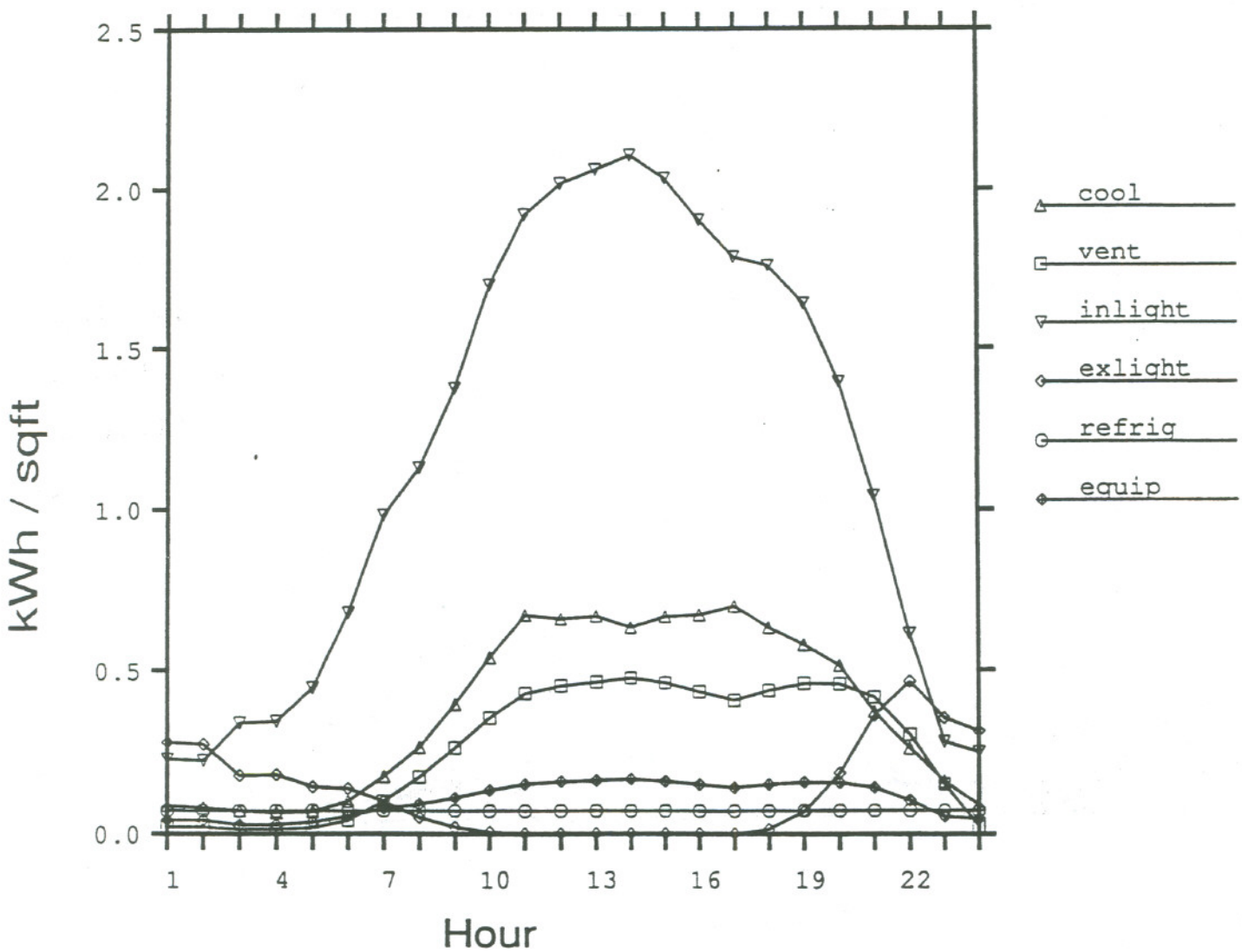


Fig 3b

'Igret'

'NonstandardDayLoadShapes'

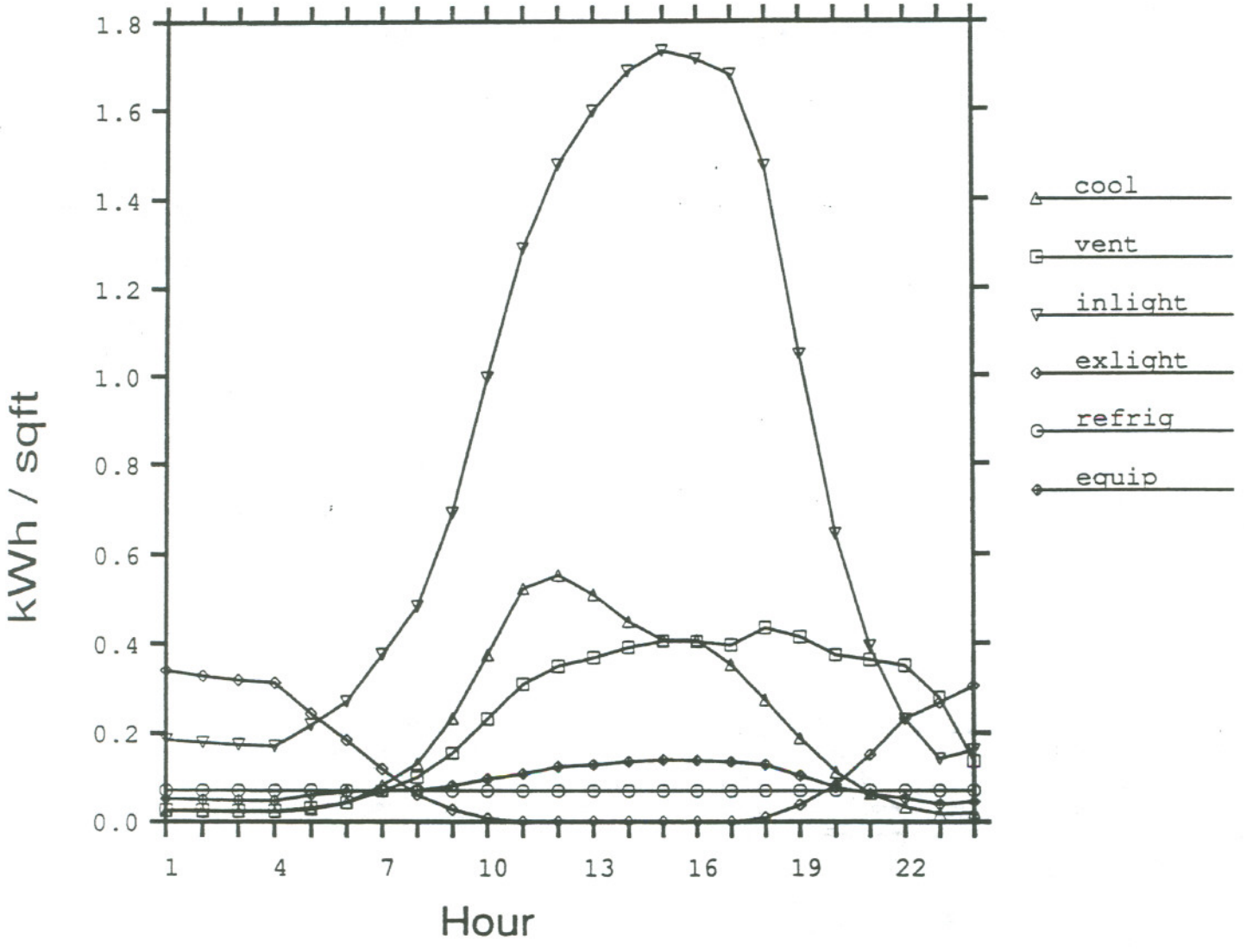


Fig 4.9

'smret'

'StandardDayLoadShapes'

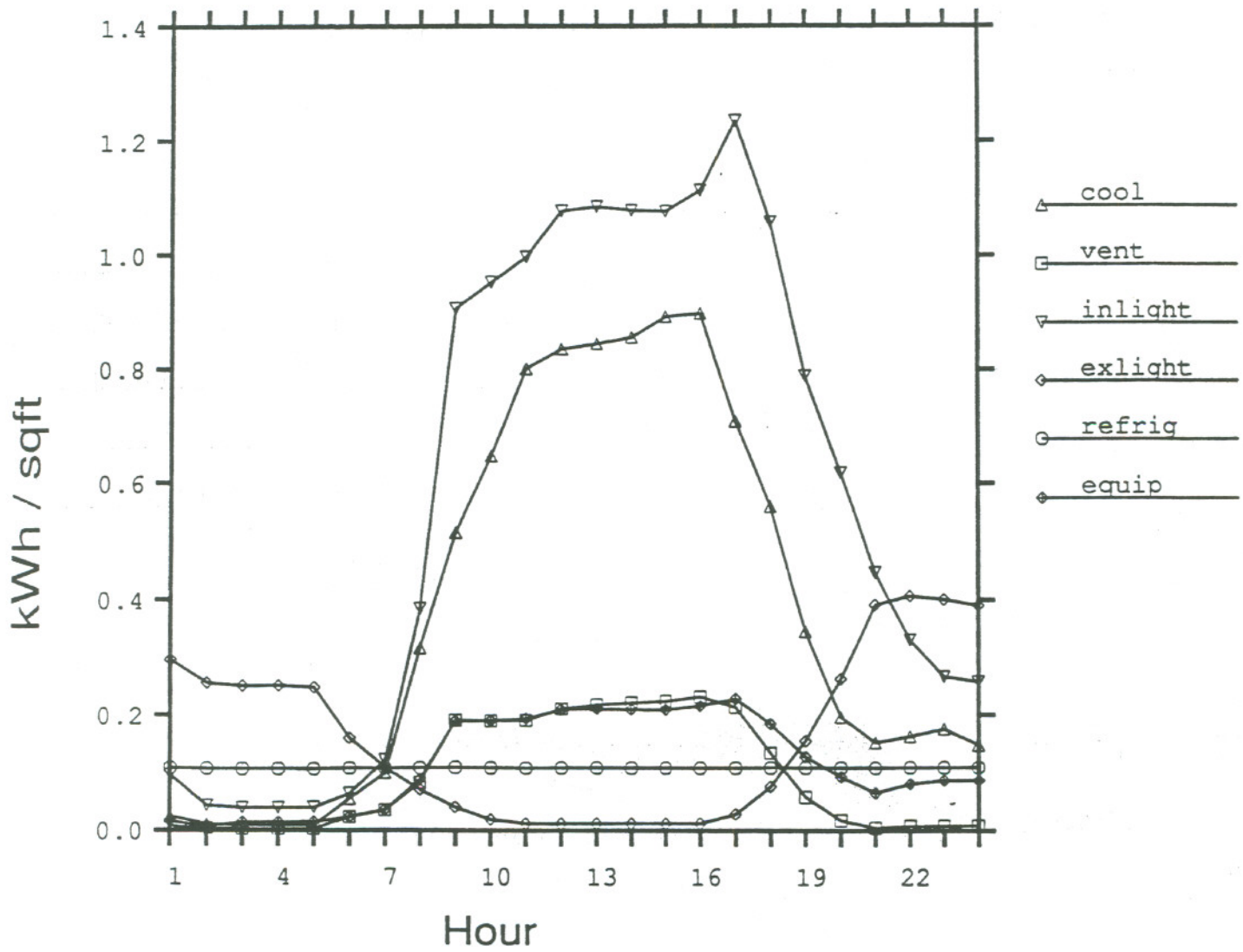
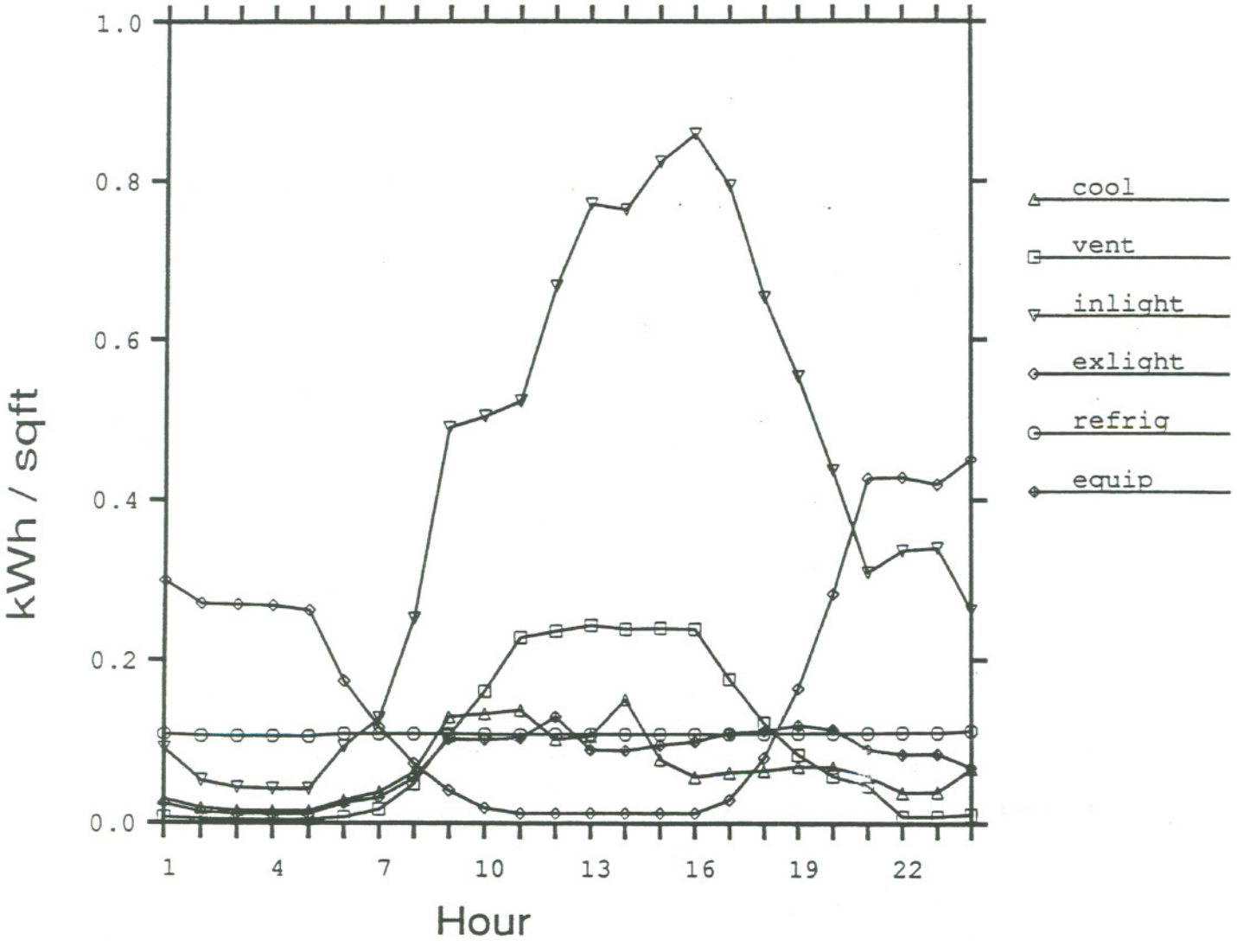


Fig 4b

'smret'

'NonstandardDayLoadShapes'



Guide to the Replacement Tables for LBL-27512 rev.

The following pages contain revised tables for the Phase I report, LBL-27512 rev. These tables are intended to be wholly substituted for those in the Phase I report. That is the table numbering corresponds exactly to that used in the Phase I report.

There are four replacement tables:

1. Table VIII-30 contains new reconciled cooling EUIs for large office, small retail, and large retail (based on the re-analysis reported in this Appendix). In addition, all U75 values have been re-expressed in kBtu/sqft.
2. Table VIII-31 contains new values for non-electric heating U75s for food store, non-refrigerated warehouse, and restaurant. This corrects a calculation error in the Pcontainse I report.
3. Table VIII-32 contains new reconciled ventilation EUIs for large office, small retail, and large retail (based on the re-analysis reported in this Appendix).
4. Table VIII-33 contains new reconciled indoor lighting, outdoor lighting, miscellaneous equipment, refrigeration, cooking, and water heating EUIs for large office, small retail, and large retail (based on the re-analysis reported in this Appendix).

Table VIII-30. Cooling EUIs for 1975 and 1980 Vintages
(changes from original in **boldface**)

	Recon EUI	$Load_{Proto}$/[1] EUI_{Proto}	$Load_{1975}$/[2] $Load_{Proto}$	Fuel Type	1975 $EUI^{3,4}$	$Load_{1980}$/[5] $Load_{1975}$
Sm Off LAX	2.77	2.48	0.94	Elec.	**6.76**	0.91
				Gas	**57.01**	
				Other	**37.40**	
Sm Off BUR	5.80	2.36	0.98	Elec.	**14.02**	0.84
				Gas	**118.16**	
				Other	**77.49**	
Sm Off NOR	8.92	2.19	0.97	Elec.	**19.86**	0.92
				Gas	**167.36**	
				Other	**109.76**	
Lg Off LAX	**3.01**	3.48	1.98	Elec.	**21.71**	0.38
				Gas	**182.86**	
				Other	**119.94**	
Lg Off BUR	**3.00**	3.41	1.82	Elec.	**19.49**	0.40
				Gas	**164.15**	
				Other	**107.67**	
Lg Off NOR	**3.91**	3.22	1.72	Elec.	**22.66**	0.47
				Gas	**190.92**	
				Other	**125.23**	
Sm Ret LAX	**3.68**	2.51	0.92	Elec.	**8.97**	0.97
				Gas	**62.62**	
				Other	**49.14**	
Sm Ret BUR	**4.40**	2.38	0.94	Elec.	**10.39**	0.87
				Gas	**72.54**	
				Other	**56.93**	
Sm Ret NOR	**7.57**	2.21	0.95	Elec.	**16.77**	0.90
				Gas	**117.12**	
				Other	**91.91**	
Lg Ret LAX	**4.52**	2.80	1.17	Elec.	**15.63**	0.75
				Gas	**109.12**	
				Other	**85.63**	
Lg Ret BUR	**3.86**	2.72	1.18	Elec.	**13.07**	0.72
				Gas	**91.30**	
				Other	**71.65**	
Lg Ret NOR	**5.97**	2.59	1.13	Elec.	**18.44**	0.84
				Gas	**128.76**	
				Other	**101.04**	

Table VIII-30. Cooling EUIs cont.[6]
(changes from original in **boldface**)

	Recon EUI	$Load_{Proto}$/ EUI_{Proto}[1]	$Load_{1975}$/ $Load_{Proto}$[2]	Fuel Type	1975 EUI[3,4]	$Load_{1980}$/ $Load_{1975}$[5]
NonRef Ware	1.16	2.56	0.85			
LAX			0.96[5]	Elec.	**2.87**	0.82
				Gas	**18.19**	
				Other	**13.96**	
BUR			1.01	Elec.	**3.04**	0.80
				Gas	**19.24**	
				Other	**14.77**	
NOR			1.04	Elec.	**3.07**	0.67
				Gas	**19.65**	
				Other	**15.08**	
Ref Ware	2.82	2.27	0.97			
LAX			0.79	Elec.	**5.77**	0.73
				Gas	**36.71**	
				Other	**28.18**	
BUR			0.85	Elec.	**6.24**	0.80
				Gas	**39.75**	
				Other	**30.50**	
NOR			1.19	Elec.	**8.73**	0.72
				Gas	**55.65**	
				Other	**42.72**	
Restaurant	12.25	2.55	0.88			
LAX			0.94	Elec.	**24.57**	0.96
				Gas	**177.01**	
				Other	**149.55**	
BUR			0.94	Elec.	**24.57**	0.93
				Gas	**177.01**	
				Other	**149.55**	
NOR			1.15	Elec.	**30.03**	1.04
				Gas	**216.32**	
				Other	**182.78**	

Notes for Table VIII-30

1. Developed from DOE-2 simulations of the NELDIG prototype.
2. Developed using an additional simulation of the prototype modified for the 1975 vintage.
3. Calculated using CEC weighted average energy conversion efficiencies by fuel type: electricity, gas, and other.
4. **Converted to kBtu/ft^{2}yr using a conversion factor of 3.412 kBtu/kWh.**
5. Because reconciliation was not performed separately for each climate region, climate variation is introduced by multiplying the 1975 EUI (one column to the right and above) by this ratio, which was developed using additional DOE-2 simulations of the prototype in each climate region.
6. Food stores showed no cooling load in the simulations of the NELDIG prototype; consequently, all temperature-sensitive load was assigned to refrigeration, and the cooling EUI was set to zero.

Table VIII-31. Heating EUIs cont.[5]
(changes to original in **boldface**)

	NELDIG EUI	$Load_{Proto}/EUI_{Proto}$	$Load_{1975}/Load_{Proto}$[1]	Fuel Type	1975 EUI	$Load_{1980}/Load_{1975}$[3]
Food Store	2.44	0.74	1.17			
LAX[4]			1.00	Elec.	3.90	1.00
				Gas	**10.93**	
				Other	**10.93**	
BUR			1.00	Elec.	3.90	1.00
				Gas	**10.93**	
				Other	**10.93**	
NOR			1.00	Elec.	3.90	1.00
				Gas	**10.93**	
				Other	**10.93**	
NonRef Ware	1.48	0.74	0.91			
LAX			1.00	Elec.	1.02	1.00
				Gas	**1.58**	
				Other	**1.58**	
BUR			1.00	Elec.	1.02	1.00
				Gas	**1.58**	
				Other	**1.58**	
NOR			1.00	Elec.	1.02	1.00
				Gas	**1.58**	
				Other	**1.58**	
Restaurant	5.47	0.74	1.58			
LAX			0.99	Elec.	6.92	1.02
				Gas	**11.36**	
				Other	**11.36**	
BUR			1.00	Elec.	6.94	1.08
				Gas	**11.39**	
				Other	**11.39**	
NOR			1.01	Elec.	6.98	1.05
				Gas	**11.45**	
				Other	**11.45**	

Table VIII-32. Ventilation EUIs for 1975 and 1980 Vintages
(changes to original in **boldface**)

	Reconciled EUI	1975/[1] Prototype	1975 EUI (kWh/ft^2yr)	1975 EUI ($kBtu/ft^2yr$)	1980/[2] 1975
Small Office LAX	0.97	0.93	0.90	3.08	1.02
Small Office BUR	1.38	0.97	1.34	4.58	0.97
Small Office NOR	1.23	0.98	1.20	4.09	0.98
Large Office LAX	**2.45**	1.52	**3.72**	**12.71**	0.36
Large Office BUR	**2.60**	1.49	**3.87**	**13.22**	0.37
Large Office NOR	**2.72**	1.47	**4.00**	**13.64**	0.38
Small Retail LAX	**1.17**	0.92	**1.08**	**3.67**	1.04
Small Retail BUR	**1.26**	0.94	**1.18**	**4.04**	1.01
Small Retail NOR	**1.43**	0.95	**1.36**	**4.64**	1.02
Large Retail LAX	**2.65**	1.05	**2.78**	**9.49**	0.97
Large Retail BUR	**2.88**	1.05	**3.02**	**10.32**	0.96
Large Retail NOR	**2.81**	1.05	**2.95**	**10.07**	0.96

1. Based on DOE-2 simulations of the NELDIG prototype and a prototype modified for the 1975 vintage.
2. Based on DOE-2 simulations of the 1975 vintage prototype and a prototype modified for the 1980 vintage.

Table VIII-33. Electric Non-HVAC EUIs for 1975 Vintage
(changes to original in **boldface**)

	In Light	Ex Light	Misc Eq	Refrig	Cook	Water Ht
Reconciled EUIs (kWh/ft^2)						
Small Office	5.47	1.24	3.59	0.23	0.04	0.12
Large Office	**9.05**	**1.61**	**3.21**	**0.10**	**0.00**	**0.12**
Small Retail	**4.71**	**1.36**	**0.91**	**0.94**	**0.01**	**0.03**
Large Retail	**9.44**	**1.14**	**0.87**	**0.61**	**0.17**	**0.02**
Food Store	11.96	2.01	1.77	23.17	0.24	0.03
Ref Ware	3.02	0.55	6.24	11.34	0.01	0.17
NonRef Ware	3.38	0.17	0.70	0.41	0.00	0.03
Restaurant	7.94	4.09	4.89	10.78	4.46	0.03
Saturation from on-site survey and sampling weights (%)[1]						
Small Office	1.00	1.00	1.00	0.77	0.16	0.42
Large Office	1.00	1.00	1.00	0.81	0.43	0.28
Small Retail	1.00	1.00	1.00	0.79	0.10	0.26
Large Retail	1.00	1.00	1.00	0.99	0.56	0.14
Food Store	1.00	1.00	1.00	1.00	0.27	0.13
Ref Ware	1.00	1.00	1.00	1.00	0.66	0.73
NonRef Ware	1.00	1.00	1.00	0.83	0.00	0.76
Restaurant	1.00	1.00	1.00	1.00	0.90	0.02
1975 EUIs (kBtu/ft^2)[2]						
Small Office	19.95	4.51	7.84	1.10	1.03	1.05
Large Office	**33.04**	**5.88**	**7.01**	**0.45**	**0.00**	**1.56**
Small Retail	**17.20**	**4.97**	**2.51**	**4.34**	**0.37**	**0.42**
Large Retail	**34.46**	**4.16**	**2.40**	**2.25**	**1.11**	**0.52**
Food Store	43.66	7.34	4.86	84.59	3.27	0.84
Ref Ware	11.03	2.01	17.14	41.40	0.06	0.86
NonRef Ware	12.34	0.62	1.92	1.81	0.00	0.14
Restaurant	28.99	14.93	13.43	39.36	18.11	6.44

1. Developed on a total floor area basis using the on-site survey and the same weighting factors used for prototype development.
2. Developed using CEC short-run price elasticities and SCE historic prices and, for miscellaneous equipment only, a CEC technology growth adjustment factor. For all end uses but miscellaneous equipment, the price effect increases the reconciled EUIs by 7%. For office miscellaneous equipment, the combined effect reduces the miscellaneous equipment EUI by 36%; for all other building types, the combined effect reduces the miscellaneous equipment EUI by 19%.

Appendix B. DOE-2 BDL Prototype Input Files

```
$ DOE-2.1D BDL Input for College
$ 1990 CEC LS/EUI Study


POST-PROCESSOR  PARTIAL  ..
INPUT LOADS  ..

TITLE LINE-1 *1990 CEC LS/EUI Study*
      LINE-2 *College*
      ..

RUN-PERIOD  JAN 1 1986 THRU DEC 31 1986  ..

   BUILDING-LOCATION  LAT 34.07  LON 118.25  ALT 50  T-Z 8
   AZIMUTH 0
   HOLIDAY YES
   DAYLIGHT-SAVINGS YES
   ..

ABORT ERRORS  ..
LIST WARNINGS  ..
PARAMETER  CREDIT-DAYLTG NO  ..


                  $ LOADS SCHEDULE DATA FOR $
                  $          COLLEGE          $

OCC-CLASS-WKD             = DAY-SCHEDULE
     (1,8)    ( .0, .0, .0, .0, .0, .1, .4, .6)
     (9,16)   ( .9, .9, .9, .6, .7, .8, .8, .8)
     (17,24)  ( .6, .4, .2, .5, .5, .3, .1, .0)
     ..
OCC-CLASS-WKE             = DAY-SCHEDULE
     (1,8)    ( .0)
     (9,16)   ( .1, .3, .3, .3, .3, .3, .1, .0)
     (17,24)  ( .0)
     ..
OCC-CLASS = SCHEDULE THRU DEC 31
     (WD) OCC-CLASS-WKD
     (WEH) OCC-CLASS-WKE
     ..
LIT-CLASS-WKD             = DAY-SCHEDULE
     (1,8)    ( .2, .2, .2, .2, .2, .4, .9, .9)
     (9,16)   ( .9, .9, .9, .9, .9, .9, .9, .9)
     (17,24)  ( .9, .9, .8, .8, .8, .8, .4, .2)
     ..
LIT-CLASS-WKE             = DAY-SCHEDULE
     (1,8)    ( .2)
     (9,16)   ( .4, .4, .4, .4, .4, .4, .2, .2)
     (17,24)  ( .2)
     ..
LIGHT-CLASS = SCHEDULE THRU DEC 31
     (WD) LIT-CLASS-WKD
     (WEH) LIT-CLASS-WKE
     ..



OCC-OFF-WKD               = DAY-SCHEDULE
     (1,8)    ( .0, .0, .0, .0, .0, .1, .3, .7)
     (9,16)   ( .8, .8, .8, .5, .5, .8, .8, .8)
     (17,24)  ( .7, .5, .4, .4, .4, .2, .2, .0)
     ..
OCC-OFF-WKE               = DAY-SCHEDULE
     (1,8)    ( .0 )
     (9,16)   ( .2, .4, .4, .2, .2, .1, .1, .1)
     (17,24)  ( .0 )
     ..
OCC-OFF = SCHEDULE THRU DEC 31
     (WD) OCC-OFF-WKD
     (WEH) OCC-OFF-WKE
     ..
LIGHT-OFF-WKD                = DAY-SCHEDULE
     (1,8)    ( .1, .1, .1, .1, .1, .1, .2, .4, .9)
     (9,16)   ( .9, .9, .9, .9, .9, .9, .9, .9)
     (17,24)  ( .8, .7, .7, .7, .6, .6, .6, .1)
     ..
LIGHT-OFF-WKE                = DAY-SCHEDULE
     (1,8)    ( .1 )
     (9,16)   ( .2, .5, .5, .4, .4, .4, .4, .4)
     (17,24)  ( .1 )
     ..
LIGHT-OFF = SCHEDULE THRU DEC 31
     (WD)  LIGHT-OFF-WKD
     (WEH) LIGHT-OFF-WKE
     ..
DHW-OFF-WKD               = DAY-SCHEDULE
     (1,8)    ( .21, .20, .20, .20, .22, .20, .51, .61)
     (9,16)   ( .59, .48, .42, .48, .45, .40, .35, .35)
     (17,24)  ( .33, .45, .60, .65, .55, .50, .48, .20)
     ..
DHW-OFF-WKE               = DAY-SCHEDULE
     (1,8)    ( .30, .25, .22, .22, .25, .31, .51, .55)
     (9,16)   ( .52, .57, .51, .51, .45, .42, .35, .32)
     (17,24)  ( .32, .42, .52, .52, .43, .52, .43, .25)
     ..
DHW = SCHEDULE THRU DEC 31
     (WD)  DHW-OFF-WKD
     (WEH) DHW-OFF-WKE
     ..

ALLWAYSON = SCHEDULE THRU DEC 31
     (ALL) (1,24) (1)  ..

                  $ LOADS DATA $

$ Exterior Surfaces
$ Wall - poured concrete,insulation,air-space,gyp-board
IN-W MATERIAL  RES = 2.6 ..
WALLR LAYERS   MAT = (CC06,IN-W,AL21,GP02) ..
WALL-1 CONSTRUCTION LAYERS = WALLR ..

$ Roof - built-up roofing,concrete,insulation,air-space,accoustic tile
IN-R MATERIAL  RES = 5.8 ..
ROOFR LAYERS   MAT = (BR01,CC25,IN-R,AL33,AC02) ..
ROOF-1 CONSTRUCTION  LAYERS = ROOFR ..

$ Floor - 4" light-weight conc., pad, carpet
FLOORR LAYERS MAT = (CC24,CP01) ..
FLOOR-1 CONSTRUCTION LAYERS = FLOORR ..

$ Slab - 6" heavy-weight conc., 2' soil
SOIL MATERIAL  THICKNESS = 2.0  SPECIFIC-HEAT = 0.26
               CONDUCTIVITY = 1.0  DENSITY = 115  ..
SLABL LAYERS  MAT = (SOIL,CC15)  ..
SLAB-1 CONSTRUCTION LAYERS = SLABL  ..

$ Single Glass
```

```
SINGLE GLASS-TYPE PANES = 1
       SHADING-COEF = 0.4
       GLASS-CONDUCTANCE = 1.0278
       ..


                      $ DEFAULT CONSTRUCTIONS $

SET-DEFAULT FOR EXTERIOR-WALL
        CONSTRUCTION = WALL-1
        HEIGHT       = 10.
        ..

SET-DEFAULT FOR WINDOW
        GLASS-TYPE = SINGLE
        ..

                      $ GENERAL SPACE CHARACTERISTICS $

CLASS-ROOM  SPACE-CONDITIONS
                      TEMPERATURE = (74)
                      P-SCH = OCC-CLASS
                      P-H-S = 230
                      P-H-L = 190
                      L-SCH = LIGHT-CLASS
                      L-T = SUS-FLUOR      L-W = 2.0
                      FLOOR-WEIGHT = 70
                      Z-TYPE = CONDITIONED                    ..

OFFICE      SPACE-CONDITIONS
                      TEMPERATURE = (74)
                      P-SCH = OCC-OFF
                      N-O-P = 2
                      P-H-S = 255
                      P-H-L = 255
                      E-SCH = LIGHT-OFF  E-W = 0.6
                      L-SCH = LIGHT-OFF
                      L-T = REC-FLUOR-RV      L-W = 1.0
                      FLOOR-WEIGHT = 70
                      Z-TYPE = CONDITIONED                    ..

BASE        SPACE-CONDITIONS  $ Basement
                      ZONE-TYPE = UNCONDITIONED
                      INF-METHOD = AIR-CHANGE
                      AIR-CHANGES/HR = 2            $ Combustion air
                      SOURCE-TYPE = PROCESS
                      SOURCE-BTU/HR =  140000       $ 5% Jacket loss
                      SOURCE-SCHEDULE = ALLWAYSON
                      FLOOR-WEIGHT = 130
                      ..


                      $ CLASS ROOMS $

CLASSRM  SPACE
         SPACE-CONDITIONS = CLASS-ROOM
         AREA             = 32500
         VOLUME           = 325000
         N-O-P            = 400
         ..
CEW-1    EXTERIOR-WALL
         WIDTH    = 180
         AZIMUTH = 0
         ..
CW-1     WINDOW
         HEIGHT   =  2
         WIDTH    = 180
         ..
         EXTERIOR-WALL LIKE CEW-1   AZIMUTH = 90 ..
         WINDOW LIKE CW-1 ..
         EXTERIOR-WALL LIKE CEW-1   AZIMUTH = 180 ..
         WINDOW LIKE CW-1 ..
         EXTERIOR-WALL LIKE CEW-1   AZIMUTH = 270 ..
         WINDOW LIKE CW-1 ..

CF-1     INTERIOR-WALL                 $ Floor to Basement
         CONSTRUCTION     = FLOOR-1
         AREA             = 32500
         NEXT-TO BASEMENT
         ..

                      $ OFFICES $

OFF-1    SPACE
         MULTIPLIER       = 32
         SPACE-CONDITIONS = OFFICE
         AREA             = 500
         VOLUME           = 5000
         ..
EW1      EXTERIOR-WALL
         WIDTH    = 25
         AZIMUTH = 0
         ..
W1       WINDOW
         HEIGHT   =  2
         WIDTH    = 25
         ..

OFF-2    SPACE LIKE OFF-1
         MULTIPLIER =  32
         ..
         EXTERIOR-WALL LIKE EW1  AZIMUTH = 90 ..
         WINDOW LIKE W1 ..

OFF-3    SPACE LIKE OFF-1
         MULTIPLIER =  32
         ..
         EXTERIOR-WALL LIKE EW1  AZIMUTH = 180 ..
         WINDOW LIKE W1 ..

OFF-4    SPACE LIKE OFF-1
         MULTIPLIER =  32
         ..
         EXTERIOR-WALL LIKE EW1  AZIMUTH = 270 ..
         WINDOW LIKE W1 ..

OFF-1T   SPACE LIKE OFF-1
         MULTIPLIER            = 16
         ..
         EXTERIOR-WALL LIKE EW1  AZIMUTH = 0 ..
         WINDOW LIKE W1 ..
R1       ROOF  CONSTRUCTION    = ROOF-1
         TILT                  = 0.0
         GND-REFLECTANCE       = 0.0
         HEIGHT                = 25
         WIDTH                 = 20
         ..
```

```
OFF-2T  SPACE LIKE OFF-1T
        MULTIPLIER = 16
        ..
        EXTERIOR-WALL LIKE EW1  AZIMUTH = 90  ..
        WINDOW LIKE W1  ..
        ROOF LIKE R1  ..

OFF-3T  SPACE LIKE OFF-1T
        MULTIPLIER = 16
        ..
        EXTERIOR-WALL LIKE EW1  AZIMUTH = 180  ..
        WINDOW LIKE W1  ..
        ROOF LIKE R1  ..

OFF-4T  SPACE LIKE OFF-1T
        MULTIPLIER = 16
        ..
        EXTERIOR-WALL LIKE EW1  AZIMUTH = 270  ..
        WINDOW LIKE W1  ..
        ROOF LIKE R1  ..

                        $ Basement

BASEMENT  SPACE
          SPACE-CONDITIONS = BASE
          AREA             = 32500
          VOLUME           = 260000
          ..

SLB-1     UNDERGROUND-FLOOR
          CONSTRUCTION     = SLAB-1
          AREA             = 32500
          U-EFFECTIVE      = 0.0414
          ..


                      $ BUILDING RESOURCES $

BUILDING-RESOURCE
          V-T-SCH          = OCC-OFF
          VERT-TRANS-KW    = 30
          HW-SCHEDULE      = DHW
          HOT-WATER        = 280000
          ..


                    $ LOADS REPORT DATA $

$ Space peak loads summary, Building peak load components
LOADS-REPORT    S (LS-C,LS-F)  ..

END  ..

COMPUTE LOADS  ..

                   $ SYSTEMS DATA $

INPUT SYSTEMS  ..

                 $ SYSTEM SCHEDULES $

 $  fan schedules $

ALWAYSON = SCH
             THRU DEC 31 (ALL)  (1,24)  (1) ..

 $  Heat-Temp and Cool-Temp schedules$

CLASSHT = SCH THRU DEC 31
          (ALL)  (1,8)  (65)  (9,23)  (72)  (24)  (65)  ..
CLASSCL = SCH THRU DEC 31
          (ALL)  (1,24)  (76) ..

OFFHT = SCH THRU DEC 31
          (ALL)  (1,24)  (72) ..
OFFCL = SCH THRU DEC 31
          (ALL)  (1,24)  (76) ..


SYS-AIR = ZONE-AIR  OA-CFM/PER = 15 ..

CNTRL-CLASS ZONE-CONTROL
            DESIGN-HEAT-T   72
            DESIGN-COOL-T   76
            HEAT-TEMP-SCH   CLASSHT
            COOL-TEMP-SCH   CLASSCL
            THERMOSTAT-TYPE PROPORTIONAL
            ..

CNTRL-OFFICE ZONE-CONTROL
            DESIGN-HEAT-T   72
            DESIGN-COOL-T   76
            HEAT-TEMP-SCH   OFFHT
            COOL-TEMP-SCH   OFFCL
            THERMOSTAT-TYPE PROPORTIONAL
            ..

CLASSRM  ZONE
         ZONE-TYPE CONDITIONED
         ZONE-AIR SYS-AIR
         ZONE-CONTROL CNTRL-CLASS ..
OFF-1    ZONE  LIKE CLASSRM
$          MULTIPLIER =  32
         ZONE-CONTROL CNTRL-OFFICE ..
OFF-2    ZONE  LIKE OFF-1 ..
OFF-3    ZONE  LIKE OFF-1 ..
OFF-4    ZONE  LIKE OFF-1 ..
OFF-1T   ZONE  LIKE OFF-1 ..
$          MULTIPLIER = 16   ..
OFF-2T   ZONE  LIKE OFF-1T ..
OFF-3T   ZONE  LIKE OFF-1T ..
OFF-4T   ZONE  LIKE OFF-1T ..
BASEMENT ZONE ZONE-TYPE UNCONDITIONED ..

NORM-CONT  SYSTEM-CONTROL
     MAX-S-T         110          MIN-S-T      52
     H-SCH           ALWAYSON
     C-SCH           ALWAYSON
     ..

SYS1 SYSTEM  $ class rooms
     SYSTEM-TYPE      SZRH
     OA-CONTROL       TEMP
     REHEAT-DELTA-T   50
     S-C              NORM-CONT
     F-SCH            ALWAYSON
     ZONE-NAMES       (CLASSRM,BASEMENT) ..
```

```
SYS2 SYSTEM  $ offices
     SYSTEM-TYPE       RHFS
     REHEAT-DELTA-T    50
     MIN-CFM-RATIO     1
     ECONO-LIMIT-T     68
     S-C               NORM-CONT
     ZONE-NAMES        (OFF-1,OFF-2,OFF-3,OFF-4
                        OFF-1T,OFF-2T,OFF-3T,OFF-4T) ..


PLT-1     PLANT-ASSIGNMENT
          SYSTEM-NAMES (SYS1,SYS2) ..

##defl sys_rep[| 2

                    $ SYSTEM REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/system_rep.inc

                      $ PLANT DATA $

INPUT PLANT  ..
PLT-1     PLANT-ASSIGNMENT  ..

DHW       P-E TYPE DHW-HEATER  SIZE -999  ..
HWG       P-E TYPE HW-BOILER  SIZE -999  I-N 2  ..
CLG       P-E TYPE HERM-CENT-CHLR  SIZE -999  I-N 2  ..
CTW       P-E TYPE COOLING-TWR  SIZE -999  I-N 2  ..

PLANT-PARAMETERS
          BOILER-FUEL NATURAL-GAS ..


                    $ PLANT REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc

STOP  ..
```

```
$ DOE-2.1D BDL Input for College Dorm
$ 1990 CEC LS/EUI Study


POST-PROCESSOR  PARTIAL  ..
INPUT LOADS  ..

TITLE LINE-1 *1990 CEC LS/EUI Study*
      LINE-2 *College Dorm*
      ..

RUN-PERIOD  JAN 1 1986 THRU DEC 31 1986  ..

   BUILDING-LOCATION  LAT 34.07  LON 118.25  ALT 50  T-Z 8
   AZIMUTH 0
   HOLIDAY YES
   DAYLIGHT-SAVINGS YES
   ..

ABORT ERRORS  ..
LIST WARNINGS  ..
PARAMETER  CREDIT-DAYLTG NO  ..


                  $ LOADS SCHEDULE DATA FOR $
                  $       COLLEGE DORM      $

OCC-COR-ALL             = DAY-SCHEDULE
     (1,8)    ( .1, .1, .1, .1, .1, .2, .4, .6)
     (9,16)   ( .6, .4, .2, .2, .2, .2, .2, .3)
     (17,24)  ( .3, .4, .8, .8, .7, .6, .3, .1)
     ..
OCC-COR = SCHEDULE THRU DEC 31
     (ALL) OCC-COR-ALL
     ..
LIGHT-COR = SCHEDULE THRU DEC 31
     (ALL) (1,24) (1) ..

OCC-KIT-ALL             = DAY-SCHEDULE
     (1,8)    ( .0, .0, .0, .0, .2, .2, .4, .8)
     (9,16)   ( .8, .4, .6, .8, .8, .4, .4, .4)
     (17,24)  ( .8, .9, .9, .4, .2, .1, .1, .0)
     ..
OCC-KIT = SCHEDULE THRU DEC 31
     (ALL) OCC-KIT-ALL
     ..
LIGHT-KIT = SCHEDULE THRU DEC 31
     (ALL) (1,5) (.2) (6,23) (.9) (24) (.2)
     ..
EQUIP-KIT = SCHEDULE THRU DEC 31
     (ALL) (1,6)(0.0) (7,10)(0.5) (11,17)(0.7) (18,24)(0.2) ..

OCC-DIN-ALL             = DAY-SCHEDULE
     (1,8)    ( .0, .0, .0, .0, .0, .0, .2, .4)
     (9,16)   ( .4, .0, .2, .6, .5, .1, .1, .1)
     (17,24)  ( .4, .8, .5, .1, .1, .0, .0, .0)
     ..
OCC-DIN = SCHEDULE THRU DEC 31
     (ALL) OCC-KIT-ALL
     ..
LIGHT-DIN = SCHEDULE THRU DEC 31
     (ALL) (1,6) (.1) (7,23) (.9) (24) (.1)
     ..
OCC-ROOM-ALL            = DAY-SCHEDULE
     (1,8)    ( .9, .9, .9, .9, .9, .8, .6, .4)
     (9,16)   ( .4, .2, .2, .2, .2, .2, .4, .4)
     (17,24)  ( .5, .5, .5, .6, .6, .8, .9, .9)
     ..
OCC-ROOM = SCHEDULE THRU DEC 31
     (ALL) OCC-ROOM-ALL
     ..
LIGHT-ROOM-ALL              = DAY-SCHEDULE
     (1,8)    ( .0, .0, .0, .0, .0, .2, .4, .4)
     (9,16)   ( .2, .0, .0, .0, .0, .0, .0, .2)
     (17,24)  ( .2, .2, .4, .4, .7, .8, .8, .4)
     ..
LIGHT-ROOM = SCHEDULE THRU DEC 31
     (ALL)  LIGHT-ROOM-ALL
     ..
DHW-ROOM-ALL            = DAY-SCHEDULE
     (1,8)    ( .21, .20, .20, .20, .22, .20, .51, .61)
     (9,16)   ( .59, .48, .42, .48, .45, .40, .35, .35)
     (17,24)  ( .33, .45, .60, .65, .55, .50, .48, .20)
     ..
DHW-ROOM = SCHEDULE THRU DEC 31
     (ALL)  DHW-ROOM-ALL
     ..

ALLWAYSON = SCHEDULE THRU DEC 31
     (ALL) (1,24) (1)  ..

                  $ LOADS DATA $

$ Exterior Surfaces
$ Wall - poured concrete,insulation,air-space,gyp-board
IN-W MATERIAL  RES = 2.6 ..
WALLR LAYERS   MAT = (CC06,IN-W,AL21,GP02) ..
WALL-1 CONSTRUCTION LAYERS = WALLR ..

$ Roof - built-up roofing,concrete,insulation
IN-R MATERIAL  RES = 5.8 ..
ROOFR LAYERS   MAT = (BR01,CC25,IN-R) ..
ROOF-1 CONSTRUCTION  LAYERS = ROOFR ..

$ Floor - 6" heavy-weight conc., pad, carpet
FLOORR LAYERS MAT = (CC15,CP01) ..
FLOOR-1 CONSTRUCTION LAYERS = FLOORR ..

$ Single Glass
SINGLE GLASS-TYPE PANES = 1
       SHADING-COEF = 0.6
       GLASS-CONDUCTANCE = 1.0278
       ..

$ Zone Calculations
$ Base area = 9,600 sqft, 5 floors
$ 4 floors of rooms, 50 rooms per floor, 200 sqft per room
$ 1st floor = 2,600 sqft kitchen, 7,000 sqft dinning

                        $ DEFAULT CONSTRUCTIONS $

SET-DEFAULT FOR EXTERIOR-WALL
        CONSTRUCTION = WALL-1
        HEIGHT       = 8.
        ..

SET-DEFAULT FOR WINDOW
```

```
        GLASS-TYPE = SINGLE
        ..

                        $ GENERAL SPACE CHARACTERISTICS $

CORRIDOR  SPACE-CONDITIONS
                        TEMPERATURE = (74)
                        P-SCH = OCC-COR
                        P-H-S = 315
                        P-H-L = 325
                        L-SCH = LIGHT-COR
                        L-T = REC-FLUOR-RV      L-W = 1.5
                        FLOOR-WEIGHT = 70
                        Z-TYPE = CONDITIONED                    ..

KITCHEN  SPACE-CONDITIONS
                        TEMPERATURE = (74)
                        P-SCH = OCC-KIT
                        P-H-S = 345
                        P-H-L = 435
                        E-SCH = EQUIP-KIT    E-W = 3.0
                        L-SCH = LIGHT-KIT
                        L-T = SUS-FLUOR      L-W = 2.0
                        SOURCE-TYPE HOT-WATER
                        SOURCE-SCHEDULE EQUIP-KIT
                        SOURCE-BTU/HR = 165400
                        S-L 0.1  S-S 0.1
                        FLOOR-WEIGHT = 70
                        Z-TYPE = CONDITIONED                    ..

DINNING      SPACE-CONDITIONS
                        TEMPERATURE = (74)
                        P-SCH = OCC-ROOM
                        P-H-S = 255
                        P-H-L = 325
                        L-SCH = LIGHT-DIN
                        L-T = INCAND         L-W = 1.5
                        FLOOR-WEIGHT = 70
                        Z-TYPE = CONDITIONED                    ..

ROOM      SPACE-CONDITIONS
                        TEMPERATURE = (74)
                        P-SCH = OCC-ROOM
                        P-H-S = 230
                        P-H-L = 190
                        E-SCH = LIGHT-ROOM  E-W = 0.6
                        L-SCH = LIGHT-ROOM
                        L-T = INCAND         L-W = 1.0
                        FLOOR-WEIGHT = 70
                        Z-TYPE = CONDITIONED                    ..


                         $ CORRIDOR $

CORR  SPACE
        SPACE-CONDITIONS = CORRIDOR
        AREA             = 2400
        VOLUME           = 19200
        N-O-P            = 10
        ..
CEW-1   EXTERIOR-WALL
        WIDTH    = 4
        AZIMUTH = 0
        ..
CW-1    WINDOW
        HEIGHT   = 2
        WIDTH    = 2
        ..
        EXTERIOR-WALL LIKE CEW-1   AZIMUTH = 90 ..
        WINDOW LIKE CW-1 ..
        EXTERIOR-WALL LIKE CEW-1   AZIMUTH = 180 ..
        WINDOW LIKE CW-1 ..
        EXTERIOR-WALL LIKE CEW-1   AZIMUTH = 270 ..
        WINDOW LIKE CW-1 ..


                        $ KITCHEN $

KIT     SPACE
        SPACE-CONDITIONS = KITCHEN
        AREA             = 2600
        VOLUME           = 20800
        N-O-P            = 10
        ..
KEW-1   EXTERIOR-WALL
        WIDTH    = 48
        AZIMUTH = 0
        ..
KW-1    WINDOW
        HEIGHT   = 0.5
        WIDTH    = 48
        ..
        EXTERIOR-WALL LIKE KEW-1   AZIMUTH = 90 ..
        WINDOW LIKE KW-1 ..
        EXTERIOR-WALL LIKE KEW-1   AZIMUTH = 180 ..
        WINDOW LIKE KW-1 ..
        EXTERIOR-WALL LIKE KEW-1   AZIMUTH = 270 ..
        WINDOW LIKE KW-1 ..

SLB-1   UNDERGROUND-FLOOR
        CONSTRUCTION     = FLOOR-1
        AREA             = 2600
        U-EFFECTIVE      = 0.0414  ..

                        $ DINNING ROOM $

DIN     SPACE
        SPACE-CONDITIONS = DINNING
        AREA             = 7000
        VOLUME           = 56000
        N-O-P            = 400
        ..
DEW-1   EXTERIOR-WALL
        WIDTH    = 118
        AZIMUTH = 0
        ..
DW-1    WINDOW
        HEIGHT   = 2
        WIDTH    = 118
        ..
        EXTERIOR-WALL LIKE DEW-1   AZIMUTH = 90 ..
        WINDOW LIKE DW-1 ..
        EXTERIOR-WALL LIKE DEW-1   AZIMUTH = 180 ..
        WINDOW LIKE DW-1 ..
        EXTERIOR-WALL LIKE DEW-1   AZIMUTH = 270 ..
        WINDOW LIKE DW-1 ..

SLB-2   UNDERGROUND-FLOOR
```

```
          CONSTRUCTION      = FLOOR-1
          AREA              = 7000
          U-EFFECTIVE       = 0.0414  ..

                          $ ROOMS $

ROOM-1    SPACE
          MULTIPLIER        = 40
          SPACE-CONDITIONS  = ROOM
          AREA              = 200
          VOLUME            = 1600
          N-O-P             = 2
          ..
EW1       EXTERIOR-WALL
          WIDTH    = 3
          AZIMUTH  = 0
          ..
W1        WINDOW
          HEIGHT   = 1.6
          WIDTH    = 3
          ..

ROOM-2    SPACE LIKE ROOM-1
          MULTIPLIER =  40
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 90 ..
          WINDOW LIKE W1 ..

ROOM-3    SPACE LIKE ROOM-1
          MULTIPLIER =  40
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 180 ..
          WINDOW LIKE W1 ..

ROOM-4    SPACE LIKE ROOM-1
          MULTIPLIER =  40
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 270 ..
          WINDOW LIKE W1 ..

ROOM-1T   SPACE LIKE ROOM-1
          MULTIPLIER             = 10
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 0 ..
          WINDOW LIKE W1 ..
R1        ROOF  CONSTRUCTION     = ROOF-1
          TILT                   = 0.0
          GND-REFLECTANCE        = 0.0
          HEIGHT                 = 12
          WIDTH                  = 16
          ..

ROOM-2T   SPACE LIKE ROOM-1T
          MULTIPLIER = 10
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 90  ..
          WINDOW LIKE W1  ..
          ROOF LIKE R1  ..

ROOM-3T   SPACE LIKE ROOM-1T
          MULTIPLIER = 10
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 180  ..
          WINDOW LIKE W1  ..
          ROOF LIKE R1  ..

ROOM-4T   SPACE LIKE ROOM-1T
          MULTIPLIER = 10
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 270  ..
          WINDOW LIKE W1  ..
          ROOF LIKE R1  ..


                       $ BUILDING RESOURCES $

BUILDING-RESOURCE
          V-T-SCH           = OCC-KIT
          VERT-TRANS-KW     = 54
          HW-SCHEDULE       = DHW-ROOM
          HOT-WATER         = 280000
          GAS-SCHEDULE      = EQUIP-KIT
          GAS-THERMS        = 2.6
          ..


                    $ LOADS REPORT DATA $

$ Space peak loads summary, Building peak load components
LOADS-REPORT     S (LS-C,LS-F)  ..

END  ..

COMPUTE LOADS  ..

                    $ SYSTEMS DATA $

INPUT SYSTEMS  ..

                  $ SYSTEM SCHEDULES $

 $  fan schedules $

FAN-KIT = SCH                        $ fan schedule for kitchen
             THRU DEC 31 (ALL)  (1,5) (0)  (6,24) (1)
             ..
ALWAYSON = SCH
             THRU DEC 31 (ALL)  (1,24)  (1) ..

 $  Heat-Temp and Cool-Temp schedules$

ROOMHT = SCH THRU DEC 31
          (ALL)  (1,8)  (72)  (9,18)  (65)  (19,24)  (72)  ..
ROOMCL = SCH THRU DEC 31
          (ALL)  (1,24)  (85) ..

KITHT = SCH THRU DEC 31
          (ALL)  (1,6)  (65)  (7,23)  (70)  (24)  (65)  ..
KITCL = SCH THRU DEC 31
          (ALL)  (1,6)  (85)  (7,23)  (78)  (24)  (85)  ..

CORHT = SCH THRU DEC 31
          (ALL)  (1,24)  (72) ..
CORCL = SCH THRU DEC 31
          (ALL)  (1,24)  (85) ..


KIT-AIR = ZONE-AIR  OA-CHANGES = 3.0 ..
```

```
COR-AIR = ZONE-AIR  OA-CFM/PER = 15 ..

CNTRL-COR  ZONE-CONTROL
           DESIGN-HEAT-T  72
           DESIGN-COOL-T  76
           HEAT-TEMP-SCH  CORHT
           COOL-TEMP-SCH  CORCL
           THERMOSTAT-TYPE PROPORTIONAL
           ..

CNTRL-KIT  ZONE-CONTROL
           DESIGN-HEAT-T  70
           DESIGN-COOL-T  78
           HEAT-TEMP-SCH  KITHT
           COOL-TEMP-SCH  KITCL
           THERMOSTAT-TYPE PROPORTIONAL
           ..

CNTRL-ROOM ZONE-CONTROL
           DESIGN-HEAT-T   72
           DESIGN-COOL-T   76
           HEAT-TEMP-SCH   ROOMHT
           COOL-TEMP-SCH   ROOMCL
           THERMOSTAT-TYPE PROPORTIONAL
           ..

KIT        ZONE
           ZONE-TYPE CONDITIONED
           ZONE-AIR KIT-AIR
           ZONE-CONTROL CNTRL-KIT
           ..
DIN        ZONE  LIKE KIT
           ZONE-AIR COR-AIR ..
CORR       ZONE  LIKE KIT
           ZONE-AIR COR-AIR
           ZONE-CONTROL CNTRL-COR ..
ROOM-1     ZONE  LIKE CORR
           MULTIPLIER =  40
           ZONE-CONTROL CNTRL-ROOM ..
ROOM-2     ZONE  LIKE ROOM-1 ..
ROOM-3     ZONE  LIKE ROOM-1 ..
ROOM-4     ZONE  LIKE ROOM-1 ..
ROOM-1T    ZONE  LIKE ROOM-1
           MULTIPLIER = 10   ..
ROOM-2T    ZONE  LIKE ROOM-1T ..
ROOM-3T    ZONE  LIKE ROOM-1T ..
ROOM-4T    ZONE  LIKE ROOM-1T ..

NORM-CONT  SYSTEM-CONTROL
     MAX-S-T         110          MIN-S-T      52
     H-SCH           ALWAYSON
     C-SCH           ALWAYSON
     ..

SYS1 SYSTEM  $ kitchen
     SYSTEM-TYPE       SZRH
     S-C               NORM-CONT
     REHEAT-DELTA-T    50
     F-SCH             FAN-KIT
     ZONE-NAMES        (KIT,DIN) ..

SYS2 SYSTEM  $ rooms
     SYSTEM-TYPE       TPFC
     S-C               NORM-CONT
     ZONE-NAMES        (CORR,ROOM-1,ROOM-2,ROOM-3,ROOM-4
                        ROOM-1T,ROOM-2T,ROOM-3T,ROOM-4T) ..


PLT-1     PLANT-ASSIGNMENT
          SYSTEM-NAMES (SYS1,SYS2) ..

##defl sys_rep[] 2

                    $ SYSTEM REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/system_rep.inc

                      $ PLANT DATA $

INPUT PLANT  ..
PLT-1      PLANT-ASSIGNMENT  ..

DHW        P-E TYPE DHW-HEATER  SIZE -999  ..
HWG        P-E TYPE HW-BOILER  SIZE -999  I-N 2  ..

PLANT-PARAMETERS
          BOILER-FUEL NATURAL-GAS ..


                    $ PLANT REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc

STOP  ..
```

```
$ DOE-2.1D BDL Input for Hospital
$ 1990 CEC LS/EUI Study


POST-PROCESSOR  PARTIAL  ..
INPUT LOADS  ..

TITLE LINE-1 *1990 CEC LS/EUI Study*
      LINE-2 *Hospital*
      ..

RUN-PERIOD  JAN 1 1986 THRU DEC 31 1986  ..

   BUILDING-LOCATION  LAT 34.07  LON 118.25  ALT 50  T-Z 8
   AZIMUTH 0
   HOLIDAY YES
   DAYLIGHT-SAVINGS YES
   ..

ABORT ERRORS  ..
LIST WARNINGS  ..
PARAMETER  CREDIT-DAYLTG NO  ..

                  $ LOADS SCHEDULES $

$ OCC $

OCC-SCHED-1=SCHEDULE THRU DEC 31
     (WD)  (1,7) (0.50)  (8,17) (1.00)  (18,24) (0.50)
     (WEH)  (1,24) (0.50)  ..
OCC-SCHED-2=SCHEDULE THRU DEC 31
     (WD)  (1,5) (0.26)  (6,7) (0.48)  (8) (0.86)  (9,11) (0.75)
           (12) (1.00)  (13) (0.96)  (14) (0.93)  (15,17) (0.75)
           (18) (0.62)  (19) (0.59)  (20) (0.55)  (21,24) (0.26)
     (WEH)  (1,5) (0.26)  (6,8) (0.48)  (9,11) (0.37)  (12) (0.62)
           (13) (0.59)  (14) (0.55)  (15,17) (0.37)
           (18) (0.62)  (19) (0.59)  (20) (0.55)  (21,24) (0.26)  ..
OCC-SCHED-3=SCHEDULE THRU DEC 31
     (WD)  (1,5) (0.18)  (6,7) (0.84)  (8,17) (1.00)  (18,19) (0.84)
           (20,24) (0.18)
     (WEH)  (1,5) (0.18)  (6,19) (0.84)  (20,24) (0.18)  ..
OCC-SCHED-4=SCHEDULE THRU DEC 31
     (ALL)  (1,24) (1.00)  ..
OCC-SCHED-5=SCHEDULE THRU DEC 31
     (WD)  (1,5) (0.50)  (6,7) (0.67)  (8,17) (1.00)  (18,19) (0.84)
           (20,22) (0.52)  (23,24) (0.50)
     (WEH)  (1,5) (0.50)  (6,7) (0.67)  (8,19) (0.84)  (20,22) (0.52)
           (23,24) (0.50)  ..

$ LIT $

LIT-SCHED-1=SCHEDULE THRU DEC 31
  (ALL)  (1,7) (0.30)  (8,19) (1.00)  (20,22) (0.50)  (23,24) (0.30)  ..
LIT-SCHED-2=SCHEDULE THRU DEC 31
     (ALL)  (1,5) (0.33)  (6,7) (0.35)  (8,19) (1.00)  (20,22) (0.41)
           (23,24) (0.33)  ..
LIT-SCHED-3=SCHEDULE THRU DEC 31
     (ALL)  (1,5) (0.20)  (6,7) (0.66)  (8,19) (1.00)  (20,22) (0.24)
           (23,24) (0.20)  ..
LIT-SCHED-4=SCHEDULE THRU DEC 31
  (ALL)  (1,7) (0.20)  (8,19) (1.00)  (20,22) (0.30)  (23,24) (0.20)  ..
LIT-SCHED-5=SCHEDULE THRU DEC 31
     (ALL)  (1,5) (0.61)  (6,7) (0.73)  (8,19) (1.00)  (20,22) (0.64)
           (23,24) (0.61)  ..

$ EQP $

EQP-SCHED-1=SCHEDULE THRU DEC 31
  (ALL)  (1,7) (0.30)  (8,19) (1.00)  (20,22) (0.50)  (23,24) (0.30)  ..
EQP-SCHED-2=SCHEDULE THRU DEC 31
     (ALL)  (1,5) (0.31)  (6,7) (0.35)  (8) (0.97)  (9,11) (0.95)
           (12) (1.00)  (13,14) (0.99)  (15,17) (0.95)
           (18) (1.00)  (19) (0.99)  (20) (0.44)  (21,22) (0.39)
           (23,24) (0.31)  ..
EQP-SCHED-3=SCHEDULE THRU DEC 31
     (ALL)  (1,5) (0.25)  (6,7) (0.93)  (8,12) (1.00)  (13,14) (0.66)
        (15,17) (1.00)  (18,19) (0.66)  (20) (0.60)  (21,24) (0.25)  ..
EQP-SCHED-4=SCHEDULE THRU DEC 31
  (ALL)  (1,7) (0.20)  (8,19) (1.00)  (20,22) (0.30)  (23,24) (0.20)  ..
EQP-SCHED-5=SCHEDULE THRU DEC 31
     (ALL)  (1,5) (0.69)  (6,7) (0.90)  (8,19) (1.00)  (20,22) (0.70)
           (23,24) (0.69)  ..

$ ELEC KITCHEN $
EKITCH=SCHEDULE   THRU DEC 31
     (ALL)  (1,5) (0.2)  (6,12) (0.8)  (13,14) (0.5)  (15,17) (0.8)
           (18,20) (0.5)  (21,24) (0.2)   ..

$ HOT WATER $
WAT-SCHED=SCHEDULE      THRU DEC 31
     (ALL)  (1,24) (0.18,0.18,0.18,0.25,0.25,0.65,1.0,0.86,
            0.8,0.69,0.69,0.73,0.73,0.57,0.69,0.84,0.73,0.66,
            0.5,0.48,0.46,0.42,0.43,0.33)   ..

$ EQUIPMENT $
EL1-SCHED=SCHEDULE      THRU DEC 31
     (ALL)  (1,7) (1.0)  (8,17) (0)  (18,24) (1.0)          ..

$ ELEVATOR $
ELEV-SCHED=SCHEDULE     THRU DEC 31
     (ALL)  (1,7) (0.1)  (8,22) (1.0)  (23,24) (0.1)          ..

$ BASEMENT PROCESS LOAD $
ALLWAYSON=SCHEDULE      THRU DEC 31
     (ALL)  (1,24) (1)  ..

                  $ LOADS DATA $

$ Exterior Surfaces
$ Wall - 12" cmu,insulation,air-space,gyp-board
IN-W MATERIAL  RES = 1.0 ..
WALLR LAYERS   MAT = (CB17,IN-W,AL21,GP02) ..
WALL-1 CONSTRUCTION LAYERS = WALLR ..

$ Roof - built-up roofing,6" conc., insulation,air-space,accoustic tile
IN-R MATERIAL  RES = 7.3 ..
ROOFR LAYERS   MAT = (BR01,CC25,IN-R,AL33,AC02) ..
ROOF-1 CONSTRUCTION  LAYERS = ROOFR ..

$ Floor - 4" light-weight conc., pad, carpet
FLOORR LAYERS MAT = (CC24,CP01) ..
FLOOR-1 CONSTRUCTION LAYERS = FLOORR ..
$ Slab - 6" heavy-weight conc., 2' soil
SOIL MATERIAL  THICKNESS = 2.0  SPECIFIC-HEAT = 0.26
               CONDUCTIVITY = 1.0  DENSITY = 115  ..
SLABL LAYERS  MAT = (SOIL,CC15)  ..
SLAB-1 CONSTRUCTION LAYERS = SLABL  ..
```

```
$ Single Glass
GT-1 GLASS-TYPE PANES = 1
     SHADING-COEF = 0.4
     GLASS-CONDUCTANCE = 1.0278
     ..


                    $ GENERAL SPACE CHARACTERISTICS $

$ E-W and L-W based on lumped 5 zone input file
$ infiltration not included

SPACE-1   SPACE-CONDITIONS  $ Perimeter spaces
          ZONE-TYPE         = CONDITIONED
          PEOPLE-SCHEDULE   = OCC-SCHED-1   P-H-G = 400
          LIGHTING-SCHEDULE = LIT-SCHED-1   L-W = 2.00
          EQUIP-SCHEDULE    = EQP-SCHED-1   E-W = 0.50
          FLOOR-WEIGHT      = 60
          ..
SPACE-2   SPACE-CONDITIONS  $ Core and public spaces
          LIKE SPACE-1
          PEOPLE-SCHEDULE   = OCC-SCHED-2   P-H-G = 400
          LIGHTING-SCHEDULE = LIT-SCHED-2   L-W = 2.00
          EQUIP-SCHEDULE    = EQP-SCHED-2   E-W = 0.50
          ..
SPACE-3   SPACE-CONDITIONS  $ Kitchen
          LIKE SPACE-1
          PEOPLE-SCHEDULE   = OCC-SCHED-3   P-H-G = 550
          LIGHTING-SCHEDULE = LIT-SCHED-3   L-W = 2.50
          EQUIP-SCHEDULE    = EQP-SCHED-3   E-W = 3.40
          ..
SPACE-4   SPACE-CONDITIONS  $ Hallways
          LIKE SPACE-1
          PEOPLE-SCHEDULE   = OCC-SCHED-4   P-H-G = 400
          LIGHTING-SCHEDULE = LIT-SCHED-4   L-W = 1.00
          EQUIP-SCHEDULE    = EQP-SCHED-4   E-W = 0.00
          ..
SPACE-5   SPACE-CONDITIONS  $ Clinic
          LIKE SPACE-1
          PEOPLE-SCHEDULE   = OCC-SCHED-5   P-H-G = 443
          LIGHTING-SCHEDULE = LIT-SCHED-5   L-W = 2.50
          EQUIP-SCHEDULE    = EQP-SCHED-5   E-W = 1.47
          ..

SPACE-6   SPACE-CONDITIONS  $ Basement
          ZONE-TYPE         = UNCONDITIONED
          INF-METHOD        = AIR-CHANGE
          AIR-CHANGES/HR    = 2             $ Combustion air
          SOURCE-TYPE       = PROCESS
          SOURCE-BTU/HR     = 320000        $ 5% Jacket loss
          SOURCE-SCHEDULE   = ALLWAYSON
          FLOOR-WEIGHT      = 130
          ..

        $ Perimeter Zone (assume patient rooms 12' wide, 25' deep)$

ZONE-1    SPACE
          SPACE-CONDITIONS = SPACE-1
          AREA             = 300
          VOLUME           = 3000
          N-O-P            = 2   $ based on average of 26-zone BDL
          MULTIPLIER       = 18
          ..

EW1-Z1    EXTERIOR-WALL CONSTRUCTION = WALL-1
          HEIGHT       = 10.
          WIDTH        = 12.
          AZIMUTH      = 0
          ..

W1-Z1     WINDOW GLASS-TYPE = GT-1
          HEIGHT =  3.5
          WIDTH  = 12.
          ..

          EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH  =  90 ..
          WINDOW LIKE W1-Z1 ..

          EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH  =  180 ..
          WINDOW LIKE W1-Z1 ..

          EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH  =  270 ..
          WINDOW LIKE W1-Z1 ..

RF1-Z1    ROOF  CONSTRUCTION = ROOF-1
          TILT             = 0.0
          GND-REFLECTANCE  = 0.0
          HEIGHT           = 12.
          WIDTH            = 25.
          ..

ZONE-1I   SPACE     $ Interior
          LIKE ZONE-1
          FLOOR-MULTIPLIER = 6
          ..
          EXTERIOR-WALL LIKE EW1-Z1 ..
          WINDOW LIKE W1-Z1 ..
          EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH  =  90 ..
          WINDOW LIKE W1-Z1 ..
          EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH  =  180 ..
          WINDOW LIKE W1-Z1 ..
          EXTERIOR-WALL LIKE EW1-Z1 AZIMUTH  =  270 ..
          WINDOW LIKE W1-Z1 ..

F-Z1      INTERIOR-WALL                  $ Floor to Basement
          CONSTRUCTION     = FLOOR-1
          AREA             = 300
          NEXT-TO ZONE-6
          ..

                        $ Core/Public Zone $

ZONE-2    SPACE
          SPACE-CONDITIONS = SPACE-2
          AREA             = 12425
          VOLUME           = 124250
          N-O-P            = 34
          ..

EW2-Z1    EXTERIOR-WALL LIKE EW1-Z1
          WIDTH        = 64
          ..

W2-Z1     WINDOW LIKE W1-Z1
          HEIGHT =  2
          WIDTH  = 64
          ..
```

```
        EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH  =  90 ..
        WINDOW LIKE W2-Z1 ..

        EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH  =  180 ..
        WINDOW LIKE W2-Z1 ..

        EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH  =  270 ..
        WINDOW LIKE W2-Z1 ..

RF2-Z1  ROOF  LIKE RF1-Z1
        HEIGHT          =  111
        WIDTH           =  111
        ..

ZONE-2I SPACE     $ Interior
        LIKE ZONE-2
        FLOOR-MULTIPLIER = 6
        ..
        EXTERIOR-WALL LIKE EW2-Z1 ..
        WINDOW LIKE W2-Z1 ..
        EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH  =  90 ..
        WINDOW LIKE W2-Z1 ..
        EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH  =  180 ..
        WINDOW LIKE W2-Z1 ..
        EXTERIOR-WALL LIKE EW2-Z1 AZIMUTH  =  270 ..
        WINDOW LIKE W2-Z1 ..

F-Z2    INTERIOR-WALL                $ Floor to Basement
        CONSTRUCTION    = FLOOR-1
        AREA            = 12425
        NEXT-TO ZONE-6
        ..

                     $ Kitchen

ZONE-3  SPACE
        SPACE-CONDITIONS = SPACE-3
        AREA             = 1775
        VOLUME           = 17750
        N-O-P            = 4       $avg from 26-2 bdl
        FLOOR-MULTIPLIER = 7.
        ..

EW3-Z1  EXTERIOR-WALL LIKE EW1-Z1
        WIDTH        = 10
        ..

W3-Z1   WINDOW LIKE W1-Z1
        HEIGHT =  1
        WIDTH  = 10
        ..

        EXTERIOR-WALL LIKE EW3-Z1 AZIMUTH  =  90 ..
        WINDOW LIKE W3-Z1 ..

        EXTERIOR-WALL LIKE EW3-Z1 AZIMUTH  =  180 ..
        WINDOW LIKE W3-Z1 ..

        EXTERIOR-WALL LIKE EW3-Z1 AZIMUTH  =  270 ..
        WINDOW LIKE W3-Z1 ..

F-Z3    INTERIOR-WALL                $ Floor to Basement
        CONSTRUCTION    = FLOOR-1
        AREA            = 1775
        NEXT-TO ZONE-6
        ..

                     $ Hallway

ZONE-4  SPACE
        SPACE-CONDITIONS = SPACE-4
        AREA             = 7100
        VOLUME           = 71000
        N-O-P            = 10
        ..

EW4-Z1  EXTERIOR-WALL LIKE EW1-Z1
        WIDTH        = 20
        ..

W4-Z1   WINDOW LIKE W1-Z1
        HEIGHT =  3.5
        WIDTH  = 20
        ..

        EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH  =  90 ..
        WINDOW LIKE W4-Z1 ..

        EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH  =  180 ..
        WINDOW LIKE W4-Z1 ..

        EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH  =  270 ..
        WINDOW LIKE W4-Z1 ..

RF4-Z1  ROOF  LIKE RF1-Z1
        HEIGHT          =  84
        WIDTH           =  84
        ..

ZONE-4I SPACE     $ Interior
        LIKE ZONE-4
        FLOOR-MULTIPLIER = 6
        ..
        EXTERIOR-WALL LIKE EW4-Z1 ..
        WINDOW LIKE W4-Z1 ..
        EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH  =  90 ..
        WINDOW LIKE W4-Z1 ..
        EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH  =  180 ..
        WINDOW LIKE W4-Z1 ..
        EXTERIOR-WALL LIKE EW4-Z1 AZIMUTH  =  270 ..
        WINDOW LIKE W4-Z1 ..

F-Z4    INTERIOR-WALL                $ Floor to Basement
        CONSTRUCTION    = FLOOR-1
        AREA            = 7100
        NEXT-TO ZONE-6
        ..

                     $ Clinic

ZONE-5  SPACE
        SPACE-CONDITIONS = SPACE-5
        AREA             = 8875
        VOLUME           = 88750
        N-O-P            = 25
        ..

EW5-Z1  EXTERIOR-WALL LIKE EW1-Z1
```

```
        WIDTH        = 36
        ..

W5-Z1   WINDOW LIKE W1-Z1
        HEIGHT = 1
        WIDTH  = 36
        ..

        EXTERIOR-WALL LIKE EW5-Z1 AZIMUTH  =  90 ..
        WINDOW LIKE W5-Z1 ..

        EXTERIOR-WALL LIKE EW5-Z1 AZIMUTH  =  180 ..
        WINDOW LIKE W5-Z1 ..

        EXTERIOR-WALL LIKE EW5-Z1 AZIMUTH  =  270 ..
        WINDOW LIKE W5-Z1 ..

RF5-Z1  ROOF  LIKE RF1-Z1
        HEIGHT          =  94
        WIDTH           =  94
        ..

ZONE-5I SPACE     $ Interior
        LIKE ZONE-5
        FLOOR-MULTIPLIER = 6
        ..
        EXTERIOR-WALL LIKE EW5-Z1 ..
        WINDOW LIKE W5-Z1 ..
        EXTERIOR-WALL LIKE EW5-Z1 AZIMUTH  =  90 ..
        WINDOW LIKE W5-Z1 ..
        EXTERIOR-WALL LIKE EW5-Z1 AZIMUTH  =  180 ..
        WINDOW LIKE W5-Z1 ..
        EXTERIOR-WALL LIKE EW5-Z1 AZIMUTH  =  270 ..
        WINDOW LIKE W5-Z1 ..

F-Z5    INTERIOR-WALL                $ Floor to Basement
        CONSTRUCTION    = FLOOR-1
        AREA            = 8875
        NEXT-TO ZONE-6
        ..

                        $ Basement

ZONE-6  SPACE
        SPACE-CONDITIONS = SPACE-6
        AREA             = 35500
        VOLUME           = 284000
        ..

SLB-1   UNDERGROUND-FLOOR
        CONSTRUCTION     = SLAB-1
        AREA             = 35500
        U-EFFECTIVE      = 0.0145
        ..

                    $ DOMESTIC HOT WATER AND MISCELLANEOUS $

BUILDING-RESOURCE
 $ schedule and intensity/sq ft. above ground floor from LBL hosp BDL
        V-T-SCH         =  ELEV-SCHED
        VERT-TRANS-KW   =  80
 $ schedule and intensity/sq ft. from LBL hospital BDL
        HW-SCHEDULE     =  WAT-SCHED
        HOT-WATER       =  1600000
        E-SCH           =  EL1-SCHED
        ELEC-KW         =  18
        GAS-SCHEDULE    =  EKITCH
        GAS-THERMS      =  4.5
        ..

                    $ LOADS REPORT DATA $

$ Space peak loads summary, Building peak load components
LOADS-REPORT    S (LS-C,LS-F)  ..

END  ..

COMPUTE LOADS  ..

                    $ SYSTEMS DATA $

INPUT SYSTEMS  ..

                  $ SYSTEM SCHEDULES $

ALWAYSON  SCHEDULE   THRU DEC 31 (ALL) (1,24) (1)          ..
HTG-STPT  SCHEDULE   THRU DEC 31 (ALL) (1,24) (72)         ..
CLG-STPT  SCHEDULE   THRU DEC 31 (ALL) (1,24) (76)         ..

CONTROL ZONE-CONTROL
        DESIGN-HEAT-T   72
        DESIGN-COOL-T   76
        HEAT-TEMP-SCH   HTG-STPT
        COOL-TEMP-SCH   CLG-STPT
        THERMOSTAT-TYPE PROPORTIONAL
        ..

ZONE-1 ZONE
        ZONE-CONTROL CONTROL
        A-C/HR       3
        ..

ZONE-1I ZONE  LIKE  ZONE-1   ..
ZONE-2  ZONE  LIKE  ZONE-1   ..
ZONE-2I ZONE  LIKE  ZONE-2   ..
ZONE-3  ZONE  LIKE  ZONE-1
        ..
ZONE-4  ZONE  LIKE  ZONE-1   ..
ZONE-4I ZONE  LIKE  ZONE-4   ..
ZONE-5  ZONE  LIKE  ZONE-1
        ..
ZONE-5I ZONE  LIKE  ZONE-5   ..
ZONE-6  ZONE
        ZONE-TYPE   UNCONDITIONED  ..


NORM-CONT  SYSTEM-CONTROL
     MAX-S-T        110          MIN-S-T       52
     H-SCH          ALWAYSON     C-SCH         ALWAYSON
     HEAT-CONTROL   CONSTANT     COOL-CONTROL  CONSTANT
     HEAT-SET-T     110          COOL-SET-T    52
     ECONO-LIMIT-T  68                                    ..

SYS1  SYSTEM  $ Perimeter spaces
     SYSTEM-TYPE      FPFC
     S-C              NORM-CONT
     M-O-A            0.20
```

```
     SUPPLY-STATIC     0.25
     SUPPLY-EFF        0.5
     ZONE-NAMES        (ZONE-1,ZONE-1I,ZONE-6) ..


SYS3  SYSTEM  $ Kitchen
     SYSTEM-TYPE       SZRH
     S-C               NORM-CONT
     M-O-A             1
     OA-CONTROL        TEMP
     F-SCH             ALWAYSON
     COOLING-SCHEDULE  ALWAYSON
     SUPPLY-STATIC     2.5
     SUPPLY-EFF        0.7
     REHEAT-DELTA-T    50
     ZONE-NAMES        (ZONE-3) ..

SYS4  SYSTEM  $ Clinic
     SYSTEM-TYPE       DDS
     S-C               NORM-CONT
     M-O-A             1
     OA-CONTROL        TEMP
     FAN-SCHEDULE      ALWAYSON
     SUPPLY-STATIC     4.25
     SUPPLY-EFF        0.7
     RETURN-STATIC     2
     RETURN-EFF        0.65
     MAX-HUMIDITY      50
     ZONE-NAMES        (ZONE-5,ZONE-5I)          ..


SYS2  SYSTEM  $ Core and public spaces
     SYSTEM-TYPE       VAVS
     S-C               NORM-CONT
     M-O-A             0.50
     REHEAT-DELTA-T    52
     OA-CONTROL        TEMP
     F-SCH             ALWAYSON
     SUPPLY-STATIC     4
     SUPPLY-EFF        0.7
     ZONE-NAMES        (ZONE-2,ZONE-2I,ZONE-4,ZONE-4I) ..


PLT-1 PLANT-ASSIGNMENT   SYSTEM-NAMES (SYS1,SYS2,SYS3,SYS4) ..

##def1 sys_rep[] 4

                    $ SYSTEM REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/system_rep.inc

                      $ PLANT DATA $

INPUT PLANT  ..
PLT-1     PLANT-ASSIGNMENT  ..

DHW       P-E TYPE DHW-HEATER  SIZE -999  ..
HWG       P-E TYPE HW-BOILER  SIZE -999  I-N 2  ..
CLG       P-E TYPE HERM-CENT-CHLR  SIZE -999  I-N 2  ..
CTW       P-E TYPE COOLING-TWR  SIZE -999  I-N 2  ..

PLANT-PARAMETERS
         BOILER-FUEL NATURAL-GAS ..
```

```
                    $ PLANT REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc

STOP  ..
```

```
$ DOE-2.1D BDL Input for Large_Hotel
$ 1990 CEC LS/EUI Study


POST-PROCESSOR  PARTIAL  ..
INPUT LOADS  ..

TITLE LINE-1 *1990 CEC LS/EUI Study*
      LINE-2 *Large Hotel*
      ..

RUN-PERIOD  JAN 1 1986 THRU DEC 31 1986  ..

   BUILDING-LOCATION  LAT 34.07  LON 118.25  ALT 50  T-Z 8
   AZIMUTH 0
   HOLIDAY YES
   DAYLIGHT-SAVINGS YES
   ..

ABORT ERRORS  ..
LIST WARNINGS  ..
PARAMETER  CREDIT-DAYLTG NO  ..


                  $ LOADS SCHEDULE DATA FOR $
                  $       LARGE HOTEL       $

OCC-LOB-ALL             = DAY-SCHEDULE
     (1,8)    ( .1, .1, .1, .1, .1, .2, .4, .6)
     (9,16)   ( .6, .4, .2, .2, .2, .2, .2, .3)
     (17,24)  ( .6, .8, .8, .7, .5, .3, .3, .1)
     ..
OCC-LOB = SCHEDULE THRU DEC 31
     (ALL) OCC-LOB-ALL
     ..
LIGHT-LOB = SCHEDULE THRU DEC 31
     (ALL)  (1,24)  (1) ..

OCC-KIT-ALL             = DAY-SCHEDULE
     (1,8)    ( .0, .0, .0, .0, .0, .0, .2, .4)
     (9,16)   ( .4, .4, .4, .4, .8, .8, .8, .8)
     (17,24)  ( .8, .8, .4, .4, .2, .2, .2, .2)
     ..
OCC-KIT = SCHEDULE THRU DEC 31
     (ALL) OCC-KIT-ALL
     ..
LIGHT-KIT = SCHEDULE THRU DEC 31
     (ALL)  (1,7) (.1)  (8,24)  (.9)
     ..
EQUIP-KIT = SCHEDULE THRU DEC 31
     (ALL)  (1,7) (0.0)  (8,12) (0.2)  (13,17) (0.8)  (18,24) (0.3) ..


OCC-ROOM-ALL            = DAY-SCHEDULE
     (1,8)    ( .8, .8, .8, .8, .8, .8, .6, .4)
     (9,16)   ( .4, .2, .2, .2, .2, .2, .2, .3)
     (17,24)  ( .5, .5, .5, .6, .6, .8, .8, .8)
     ..
OCC-ROOM = SCHEDULE THRU DEC 31
     (ALL) OCC-ROOM-ALL
     ..
LIGHT-ROOM-ALL              = DAY-SCHEDULE
     (1,8)    ( .3, .3, .3, .3, .3, .3, .4, .4)
     (9,16)   ( .5, .5, .5, .5, .5, .5, .5, .5)
     (17,24)  ( .5, .6, .7, .7, .7, .7, .6, .6)
     ..
LIGHT-ROOM = SCHEDULE THRU DEC 31
     (ALL)  LIGHT-ROOM-ALL
     ..
DHW-ROOM-ALL            = DAY-SCHEDULE
     (1,8)    ( .21, .20, .20, .20, .22, .20, .51, .61)
     (9,16)   ( .59, .48, .42, .48, .45, .40, .35, .35)
     (17,24)  ( .33, .45, .60, .65, .55, .50, .48, .20)
     ..
DHW-ROOM = SCHEDULE THRU DEC 31
     (ALL)  DHW-ROOM-ALL
     ..

ALLWAYSON = SCHEDULE THRU DEC 31
     (ALL)  (1,24)  (1)  ..

                  $ LOADS DATA $

$ Exterior Surfaces
$ Wall - poured concrete,insulation,air-space,gyp-board
IN-W MATERIAL  RES = 2.6 ..
WALLR LAYERS   MAT = (CC06,IN-W,AL21,GP02) ..
WALL-1 CONSTRUCTION LAYERS = WALLR ..

$ Roof - built-up roofing,concrete,insulation,air-space,accoustic tile
IN-R MATERIAL  RES = 5.8 ..
ROOFR LAYERS   MAT = (BR01,CC25,IN-R,AL33,AC02) ..
ROOF-1 CONSTRUCTION  LAYERS = ROOFR ..

$ Floor - 4" light-weight conc., pad, carpet
FLOORR LAYERS MAT = (CC24,CP01) ..
FLOOR-1 CONSTRUCTION LAYERS = FLOORR ..

$ Slab - 6" heavy-weight conc., 2' soil
SOIL MATERIAL  THICKNESS = 2.0  SPECIFIC-HEAT = 0.26
               CONDUCTIVITY = 1.0  DENSITY = 115  ..
SLABL LAYERS  MAT = (SOIL,CC15)  ..
SLAB-1 CONSTRUCTION LAYERS = SLABL  ..

$ Single Glass
SINGLE GLASS-TYPE PANES = 1
       SHADING-COEF = 0.4
       GLASS-CONDUCTANCE = 1.0278
       ..

$ Zone Calculations
$ 70% Room, 25% Lobby/Conf, 5% Kitchen/Laundry
$ Room calcs (1600 = 400 sqft per room * 4 orientations)
$ Wall calcs (lobby has three exterior walls, kitchen has one)

                        $ DEFAULT CONSTRUCTIONS $

SET-DEFAULT FOR EXTERIOR-WALL
        CONSTRUCTION = WALL-1
        HEIGHT       = 10.
        ..

SET-DEFAULT FOR WINDOW
        GLASS-TYPE = SINGLE
        ..

                        $ GENERAL SPACE CHARACTERISTICS $
```

```
LOBBY-CONF  SPACE-CONDITIONS
                    TEMPERATURE = (74)
                    P-SCH = OCC-LOB
                    P-H-S = 255
                    P-H-L = 255
                    L-SCH = LIGHT-LOB
                    L-T = REC-FLUOR-RV      L-W = 1.5
                    FLOOR-WEIGHT = 70
                    Z-TYPE = CONDITIONED                    ..

KITCH-LAUND   SPACE-CONDITIONS
                    TEMPERATURE = (74)
                    P-SCH = OCC-KIT
                    P-H-S = 345
                    P-H-L = 435
                    E-SCH = EQUIP-KIT    E-W = 3.0
                    L-SCH = LIGHT-KIT
                    L-T = SUS-FLUOR      L-W = 2.0
                    SOURCE-TYPE HOT-WATER
                    SOURCE-SCHEDULE EQUIP-KIT
                    SOURCE-BTU/HR = 165400
                    S-L 0.1  S-S 0.1
                    FLOOR-WEIGHT = 70
                    Z-TYPE = CONDITIONED                    ..

ROOM      SPACE-CONDITIONS
                    TEMPERATURE = (74)
                    P-SCH = OCC-ROOM
                    N-O-P = 2
                    P-H-S = 230
                    P-H-L = 190
                    E-SCH = LIGHT-ROOM  E-W = 0.6
                    L-SCH = LIGHT-ROOM
                    L-T = INCAND        L-W = 1.0
                    FLOOR-WEIGHT = 70
                    Z-TYPE = CONDITIONED                    ..

BASE      SPACE-CONDITIONS  $ Basement
                    ZONE-TYPE = UNCONDITIONED
                    INF-METHOD = AIR-CHANGE
                    AIR-CHANGES/HR = 2          $ Combustion air
                    SOURCE-TYPE = PROCESS
                    SOURCE-BTU/HR =  140000     $ 5% Jacket loss
                    SOURCE-SCHEDULE = ALLWAYSON
                    FLOOR-WEIGHT = 130
                    ..


                     $ LOBBY / CONFERENCE $

LOB-CON   SPACE
          SPACE-CONDITIONS = LOBBY-CONF
          AREA             = 51688
          VOLUME           = 516880
          N-O-P            = 258
          ..
LCEW-1    EXTERIOR-WALL
          WIDTH   = 170
          AZIMUTH = 0
          ..
LCW-1     WINDOW
          HEIGHT  =  2
          WIDTH   = 170
          ..
          EXTERIOR-WALL LIKE LCEW-1   AZIMUTH = 90 ..
          WINDOW LIKE LCW-1 ..
          EXTERIOR-WALL LIKE LCEW-1   AZIMUTH = 180 ..
          WINDOW LIKE LCW-1 ..
          EXTERIOR-WALL LIKE LCEW-1   AZIMUTH = 270 ..
          WINDOW LIKE LCW-1 ..

LCF-1     INTERIOR-WALL                $ Floor to Basement
          CONSTRUCTION    = FLOOR-1
          AREA            = 51688
          NEXT-TO BASEMENT
          ..

                     $ KITCHEN / LAUNDRY $

KIT-LND   SPACE
          SPACE-CONDITIONS = KITCH-LAUND
          AREA             = 10338
          VOLUME           = 103380
          N-O-P            = 26
          ..
KLEW-1    EXTERIOR-WALL
          WIDTH   = 25
          AZIMUTH = 0
          ..
KLW-1     WINDOW
          HEIGHT  =  0.5
          WIDTH   = 25
          ..
          EXTERIOR-WALL LIKE KLEW-1   AZIMUTH = 90 ..
          WINDOW LIKE KLW-1 ..
          EXTERIOR-WALL LIKE KLEW-1   AZIMUTH = 180 ..
          WINDOW LIKE KLW-1 ..
          EXTERIOR-WALL LIKE KLEW-1   AZIMUTH = 270 ..
          WINDOW LIKE KLW-1 ..

KLF-1     INTERIOR-WALL                $ Floor to Basement
          LIKE LCF-1
          AREA            = 10338
          NEXT-TO BASEMENT
          ..

                     $ ROOMS $

ROOM-1    SPACE
          MULTIPLIER       = 80
          SPACE-CONDITIONS = ROOM
          AREA             = 400
          VOLUME           = 4000
          ..
EW1       EXTERIOR-WALL
          WIDTH   = 20
          AZIMUTH = 0
          ..
W1        WINDOW
          HEIGHT  =  2.7
          WIDTH   = 20
          ..

ROOM-2    SPACE LIKE ROOM-1
          MULTIPLIER =  80
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 90 ..
          WINDOW LIKE W1 ..
```

```
ROOM-3   SPACE LIKE ROOM-1
         MULTIPLIER =  80
         ..
         EXTERIOR-WALL LIKE EW1  AZIMUTH = 180 ..
         WINDOW LIKE W1 ..

ROOM-4   SPACE LIKE ROOM-1
         MULTIPLIER =  80
         ..
         EXTERIOR-WALL LIKE EW1  AZIMUTH = 270 ..
         WINDOW LIKE W1 ..

ROOM-1T  SPACE LIKE ROOM-1
         MULTIPLIER            = 10
         ..
         EXTERIOR-WALL LIKE EW1  AZIMUTH = 0 ..
         WINDOW LIKE W1 ..
R1       ROOF  CONSTRUCTION    = ROOF-1
         TILT                  = 0.0
         GND-REFLECTANCE       = 0.0
         HEIGHT                = 20
         WIDTH                 = 20
         ..

ROOM-2T  SPACE LIKE ROOM-1T
         MULTIPLIER = 10
         ..
         EXTERIOR-WALL LIKE EW1  AZIMUTH = 90  ..
         WINDOW LIKE W1  ..
         ROOF LIKE R1  ..

ROOM-3T  SPACE LIKE ROOM-1T
         MULTIPLIER = 10
         ..
         EXTERIOR-WALL LIKE EW1  AZIMUTH = 180  ..
         WINDOW LIKE W1  ..
         ROOF LIKE R1  ..

ROOM-4T  SPACE LIKE ROOM-1T
         MULTIPLIER = 10
         ..
         EXTERIOR-WALL LIKE EW1  AZIMUTH = 270  ..
         WINDOW LIKE W1  ..
         ROOF LIKE R1  ..

                        $ Basement

BASEMENT  SPACE
          SPACE-CONDITIONS = BASE
          AREA             = 62026
          VOLUME           = 496200
          ..

SLB-1     UNDERGROUND-FLOOR
          CONSTRUCTION     = SLAB-1
          AREA             = 62026
          U-EFFECTIVE      = 0.0414
          ..

                      $ BUILDING RESOURCES $

BUILDING-RESOURCE
          V-T-SCH          = OCC-KIT
          VERT-TRANS-KW    = 54
          HW-SCHEDULE      = DHW-ROOM
          HOT-WATER        = 280000
          GAS-SCHEDULE     = EQUIP-KIT
          GAS-THERMS       = 3.72
          ..

                    $ LOADS REPORT DATA $

$ Space peak loads summary, Building peak load components
LOADS-REPORT     S (LS-C,LS-F)  ..

END  ..

COMPUTE LOADS  ..

                    $ SYSTEMS DATA $

INPUT SYSTEMS  ..

                  $ SYSTEM SCHEDULES $

 $  fan schedules $

FAN-KIT = SCH                        $ fan schedule for kitchen
             THRU DEC 31 (ALL) (1,7)(0) (8,24)(1)
             ..
ALWAYSON = SCH
             THRU DEC 31 (ALL) (1,24) (1) ..

 $  Heat-Temp and Cool-Temp schedules$

ROOMHT = SCH THRU DEC 31
         (ALL) (1,8) (72) (9,23) (65) (24) (72)  ..
ROOMCL = SCH THRU DEC 31
         (ALL) (1,24) (76) ..

KITHT = SCH THRU DEC 31
         (ALL) (1,7) (65) (8,24) (70)  ..
KITCL = SCH THRU DEC 31
         (ALL) (1,7) (85) (8,24) (78) ..

LOBHT = SCH THRU DEC 31
         (ALL) (1,24) (72) ..
LOBCL = SCH THRU DEC 31
         (ALL) (1,24) (76) ..


KIT-AIR = ZONE-AIR  OA-CHANGES = 3.0 ..

LOB-AIR = ZONE-AIR  OA-CFM/PER = 15 ..

CNTRL-LOB  ZONE-CONTROL
           DESIGN-HEAT-T  72
           DESIGN-COOL-T  76
           HEAT-TEMP-SCH  LOBHT
           COOL-TEMP-SCH  LOBCL
           THERMOSTAT-TYPE PROPORTIONAL
           ..

CNTRL-KIT  ZONE-CONTROL
           DESIGN-HEAT-T  70
```

```
          DESIGN-COOL-T  78
          HEAT-TEMP-SCH  KITHT
          COOL-TEMP-SCH  KITCL
          THERMOSTAT-TYPE PROPORTIONAL
          ..

CNTRL-ROOM ZONE-CONTROL
          DESIGN-HEAT-T   72
          DESIGN-COOL-T   76
          HEAT-TEMP-SCH   ROOMHT
          COOL-TEMP-SCH   ROOMCL
          THERMOSTAT-TYPE PROPORTIONAL
          ..

KIT-LND  ZONE
         ZONE-TYPE CONDITIONED
         ZONE-AIR KIT-AIR
         ZONE-CONTROL CNTRL-KIT
         ..
LOB-CON  ZONE  LIKE KIT-LND
         ZONE-AIR LOB-AIR
         ZONE-CONTROL CNTRL-LOB ..
ROOM-1   ZONE  LIKE LOB-CON
         MULTIPLIER =  80
         ZONE-CONTROL CNTRL-ROOM ..
ROOM-2   ZONE  LIKE ROOM-1 ..
ROOM-3   ZONE  LIKE ROOM-1 ..
ROOM-4   ZONE  LIKE ROOM-1 ..
ROOM-1T  ZONE  LIKE ROOM-1
         MULTIPLIER = 10   ..
ROOM-2T  ZONE  LIKE ROOM-1T ..
ROOM-3T  ZONE  LIKE ROOM-1T ..
ROOM-4T  ZONE  LIKE ROOM-1T ..
BASEMENT ZONE ZONE-TYPE UNCONDITIONED ..

NORM-CONT  SYSTEM-CONTROL
     MAX-S-T        110          MIN-S-T      52
     H-SCH          ALWAYSON
     C-SCH          ALWAYSON
     ..

SYS1 SYSTEM  $ lobby
     SYSTEM-TYPE      VAVS
     MIN-CFM-RATIO    0.1
     OA-CONTROL       TEMP
     ECONO-LIMIT-T    68
     REHEAT-DELTA-T   50
     S-C              NORM-CONT
     F-SCH            ALWAYSON
     ZONE-NAMES       (LOB-CON,BASEMENT) ..

SYS2 SYSTEM  $ kitchen
     SYSTEM-TYPE      SZRH
     S-C              NORM-CONT
     REHEAT-DELTA-T   50
     F-SCH            FAN-KIT
     ZONE-NAMES       (KIT-LND) ..

SYS3 SYSTEM  $ rooms
     SYSTEM-TYPE      FPFC
     S-C              NORM-CONT
     ZONE-NAMES       (ROOM-1,ROOM-2,ROOM-3,ROOM-4
                       ROOM-1T,ROOM-2T,ROOM-3T,ROOM-4T) ..
```

```
PLT-1    PLANT-ASSIGNMENT
         SYSTEM-NAMES (SYS1,SYS2,SYS3) ..

##defl sys_rep[] 3

                    $ SYSTEM REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/system_rep.inc

                         $ PLANT DATA $

INPUT PLANT  ..
PLT-1      PLANT-ASSIGNMENT  ..

DHW        P-E TYPE DHW-HEATER  SIZE -999  ..
HWG        P-E TYPE HW-BOILER  SIZE -999  I-N 2  ..
CLG        P-E TYPE HERM-CENT-CHLR  SIZE -999  I-N 2  ..
CTW        P-E TYPE COOLING-TWR  SIZE -999  I-N 2  ..

PLANT-PARAMETERS
         BOILER-FUEL NATURAL-GAS ..


                    $ PLANT REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc

STOP  ..
```

```
$ DOE-2.1D BDL Input for College Library
$ 1990 CEC LS/EUI Study


POST-PROCESSOR  PARTIAL  ..
INPUT LOADS  ..

TITLE LINE-1 *1990 CEC LS/EUI Study*
      LINE-2 *College Library*
      ..

RUN-PERIOD  JAN 1 1986 THRU DEC 31 1986  ..

   BUILDING-LOCATION  LAT 34.07  LON 118.25  ALT 50  T-Z 8
   AZIMUTH 0
   HOLIDAY YES
   DAYLIGHT-SAVINGS YES
   ..

ABORT ERRORS  ..
LIST WARNINGS  ..
PARAMETER  CREDIT-DAYLTG NO  ..


                  $ LOADS SCHEDULE DATA $

OCC-1    =    DAY-SCHEDULE
                (1,6)      (0)
                (7)        (.2)
                (8,11)     (.5)
                (12)       (.4)
                (13,17)    (.6)
                (18,19)    (.4)
                (20,23)    (.7)
                (24)       (.2)      ..
OCC-2    =    DAY-SCHEDULE
                (1,9)      (0)
                (10)       (.2)
                (11,12)    (.4)
                (13,16)    (.6)
                (17,18)    (.3)
                (19,24)    (0)      ..
OCC = SCHEDULE  THRU DEC 31 (WD) OCC-1 (WEH) OCC-2  ..

LTS-1    =    DAY-SCHEDULE
                (1,6)      (.2)
                (7)        (.5)
                (8,23)     (.9)
                (24)       (.2)      ..
LTS-2    =    DAY-SCHEDULE
                (1,9)      (.2)
                (10,18)    (.9)
                (19,24)    (.2)      ..
LTS = SCHEDULE  THRU DEC 31 (WD) LTS-1 (WEH) LTS-2  ..


                  $ LOADS DATA $

$ Exterior Surfaces
IN-W MATERIAL  RES = 1 ..
WA1  LAYERS  MATERIAL  =  (CB31,IN-W,GP02)          ..
IN-R MATERIAL  RES = 4.9 ..
RF1  LAYERS  MATERIAL  =  (BR01,PW04,IN-R,AL33,GP02)
                                        INSIDE-FILM-RES=.61   ..

TYP-WALL      =   CONSTRUCTION   LAYERS      =   WA1              ..
TYP-ROOF      =   CONSTRUCTION   LAYERS      =   RF1              ..
SINGLE        =   GLASS-TYPE     PANES       =   1
                                 SHADING-COEF        =   0.6
                                 GLASS-CONDUCTANCE   =   1.03  ..

$ Slab - 2'   1, 6" heavy-weight conc.
SOIL MATERIAL  THICKNESS = 2.0  SPECIFIC-HEAT = 0.26
               CONDUCTIVITY = 1.0  DENSITY = 115  ..
SLABL LAYERS  MAT = (SOIL,CC15)  ..
SLAB-1 CONSTRUCTION LAYERS = SLABL  ..


ROOM             SPACE-CONDITIONS
                 TEMPERATURE          = (74)
                 PEOPLE-SCHEDULE      = OCC
                 NUMBER-OF-PEOPLE     = 30
                 PEOPLE-HEAT-GAIN     = 420
                 LIGHTING-SCHEDULE    = LTS
                 LIGHTING-TYPE        = REC-FLUOR-NV
                 LIGHTING-W/SQFT      = 1.7
                 FLOOR-WEIGHT         = 70
                 ..

ROOM1    =       SPACE
                 SPACE-CONDITIONS  = ROOM
                 AREA              = 10000
                 VOLUME            = 100000
                 ..

EWALL    =       EXTERIOR-WALL
                 CONSTRUCTION  = TYP-WALL
                 WIDTH         = 250
                 HEIGHT        = 10
                 AZIMUTH       = 0
                 ..
WIND     =       WINDOW
                 GLASS-TYPE    = SINGLE
                 WIDTH         = 250
                 HEIGHT        = 1
                 ..
EROOF            ROOF
                 CONSTRUCTION     = TYP-ROOF
                 GND-REFLECTANCE  = 0
                 TILT             = 0
                 WIDTH            = 200
                 HEIGHT           = 200
                 ..
SLB              UNDERGROUND-FLOOR
                 CONSTRUCTION     = SLAB-1
                 AREA             = 40000
                 U-EFFECTIVE      = 0.0346
                 ..

ROOM2    =       SPACE LIKE ROOM1 ..
                 EXTERIOR-WALL LIKE EWALL   AZIMUTH = 90 ..
                 WINDOW LIKE WIND ..
                 ROOF LIKE EROOF ..
                 UNDERGROUND-FLOOR LIKE SLB ..
```

```
ROOM3   =       SPACE LIKE ROOM1 ..
                EXTERIOR-WALL LIKE EWALL   AZIMUTH = 180 ..
                WINDOW LIKE WIND ..
                ROOF LIKE EROOF ..
                UNDERGROUND-FLOOR LIKE SLB ..

ROOM4   =       SPACE LIKE ROOM1 ..
                EXTERIOR-WALL LIKE EWALL   AZIMUTH = 270 ..
                WINDOW LIKE WIND ..
                ROOF LIKE EROOF ..
                UNDERGROUND-FLOOR LIKE SLB ..


                    $ LOADS REPORT DATA $

$ Space peak loads summary, Building peak load components
LOADS-REPORT    $ (LS-C,LS-F)  ..

END  ..

COMPUTE LOADS  ..

                    $ SYSTEMS DATA $

INPUT SYSTEMS  ..

                $ SYSTEM SCHEDULES $

FAN = SCHEDULE THRU DEC 31 (ALL) (1,24) (1) ..

CLG1    =   DAY-SCHEDULE
                (1,5)     (85)
                (6,24)    (78)  ..
CLG2    =   DAY-SCHEDULE
                (1,8)     (85)
                (9,18)    (78)
                (19,24)   (85)  ..
COOLING = SCHEDULE THRU DEC 31 (WD) CLG1 (WEH) CLG2  ..

HTG1    =   DAY-SCHEDULE
                (1,5)     (65)
                (6,24)    (72)  ..
HTG2    =   DAY-SCHEDULE
                (1,8)     (65)
                (9,18)    (72)
                (19,24)   (65)  ..
HEATING = SCHEDULE THRU DEC 31 (WD) HTG1 (WEH) HTG2  ..


ZNAIR = ZONE-AIR  OA-CFM/PER 15.0 ..

ROOMCON  = ZONE-CONTROL
           DESIGN-HEAT-T 72
           DESIGN-COOL-T 78
           HEAT-TEMP-SCH HEATING
           COOL-TEMP-SCH COOLING
           THROTTLING-RANGE 3
           THERMOSTAT-TYPE PROPORTIONAL
           ..


ROOM1       ZONE
            ZONE-TYPE CONDITIONED
            ZONE-AIR ZNAIR
            ZONE-CONTROL ROOMCON  ..
ROOM2       ZONE LIKE ROOM1  ..
ROOM3       ZONE LIKE ROOM1  ..
ROOM4       ZONE LIKE ROOM1  ..


SYS1    SYSTEM
        SYSTEM-TYPE       RHFS
        REHEAT-DELTA-T    50
        COOL-SET-T        55
        MAX-SUPPLY-T      105
        MIN-SUPPLY-T      55
        MIN-CFM-RATIO     0.1
        ECONO-LIMIT-T     68
        OA-CONTROL        TEMP
        FAN-SCHEDULE      FAN
        ZONE-NAMES        (ROOM1,ROOM2,ROOM3,ROOM4)
        ..

PLT-1     PLANT-ASSIGNMENT   SYSTEM-NAMES (SYS1) ..

##def1 sys_rep[] 1

                    $ SYSTEM REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/system_rep.inc

                        $ PLANT DATA $

INPUT PLANT  ..
PLT-1     PLANT-ASSIGNMENT  ..

HWG       P-E TYPE HW-BOILER  SIZE -999  I-N 2  ..
CLG       P-E TYPE HERM-CENT-CHLR  SIZE -999  I-N 2  ..
CTW       P-E TYPE COOLING-TWR  SIZE -999  I-N 2  ..

PLANT-PARAMETERS
        BOILER-FUEL NATURAL-GAS ..


                    $ PLANT REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc

STOP  ..
```

```
$ DOE-2.1D BDL Input for Nursing Home
$ 1990 CEC LS/EUI Study


POST-PROCESSOR  PARTIAL  ..
INPUT LOADS  ..

TITLE LINE-1 *1990 CEC LS/EUI Study*
      LINE-2 *Nursing Home*
      ..

RUN-PERIOD  JAN 1 1986 THRU DEC 31 1986  ..

   BUILDING-LOCATION  LAT 34.07  LON 118.25  ALT 50  T-Z 8
   AZIMUTH 0
   HOLIDAY YES
   DAYLIGHT-SAVINGS YES
   ..

ABORT ERRORS  ..
LIST WARNINGS  ..
PARAMETER  CREDIT-DAYLTG NO  ..


                    $ LOADS SCHEDULE DATA $

OCC-MULT-ALL              = DAY-SCHEDULE
     (1,8)    ( 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.3, 0.4)
     (9,16)   ( 0.6, 0.4, 0.3, 0.3, 0.4, 0.5, 0.6, 0.6)
     (17,24)  ( 0.6, 0.5, 0.4, 0.2, 0.0, 0.0, 0.0, 0.0)
     ..
OCC-MULT = SCHEDULE THRU DEC 31
     (ALL) OCC-MULT-ALL
     ..
LIGHT-MULT = SCHEDULE THRU DEC 31
     (ALL) (1,6) (.3) (7,17) (.9) (18,20) (.6) (21,24) (.3) ..

OCC-KIT-ALL               = DAY-SCHEDULE
     (1,8)    ( 0.0, 0.0, 0.0, 0.0, 0.0, 0.5, 0.7, 0.9)
     (9,16)   ( 0.9, 0.7, 0.4, 0.7, 0.7, 0.3, 0.3, 0.5)
     (17,24)  ( 0.5, 0.2, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0)
     ..
OCC-KIT = SCHEDULE THRU DEC 31
     (ALL) OCC-KIT-ALL
     ..
LIGHT-KIT = SCHEDULE THRU DEC 31
     (ALL) (1,5) (.1) (6,18) (.9) (19,24) (.1)
     ..
EQUIP-KIT = SCHEDULE THRU DEC 31 (ALL)
     (1,8)    ( 0.0, 0.0, 0.0, 0.0, 0.0, 0.2, 0.2, 0.5)
     (9,16)   ( 0.6, 0.5, 0.5, 0.8, 0.8, 0.4, 0.4, 0.4)
     (17,24)  ( 0.2, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0)
     ..

OCC-ROOM-ALL              = DAY-SCHEDULE
     (1,8)    ( .9, .9, .9, .9, .9, .7, .4)
     (9,16)   ( .4, .4, .4, .6, .5, .4, .4, .4)
     (17,24)  ( .5, .5, .5, .7, .8, .9, .9, .9)
     ..
OCC-ROOM = SCHEDULE THRU DEC 31
     (ALL) OCC-ROOM-ALL
     ..
LIGHT-ROOM-ALL              = DAY-SCHEDULE
     (1,8)    ( .2, .2, .2, .2, .2, .2, .4, .5)
     (9,16)   ( .4, .4, .25, .25, .25, .25, .25, .25)
     (17,24)  ( .25, .25, .6, .7, .5, .2, .2, .2)
     ..
LIGHT-ROOM = SCHEDULE THRU DEC 31
     (ALL)  LIGHT-ROOM-ALL
     ..
DHW-ROOM-ALL              = DAY-SCHEDULE
     (1,8)    ( .21, .20, .20, .20, .22, .20, .51, .61)
     (9,16)   ( .59, .48, .42, .48, .45, .40, .35, .35)
     (17,24)  ( .33, .45, .60, .65, .55, .50, .48, .20)
     ..
DHW-ROOM = SCHEDULE THRU DEC 31
     (ALL)  DHW-ROOM-ALL
     ..

                    $ LOADS DATA $

$ Exterior Surfaces
$ Wall - plywood,insulation,gyp-board
IN-W MATERIAL  RES = 1.0 ..
WALLR LAYERS   MAT = (PW04,IN-W,GP02) ..
WALL-1 CONSTRUCTION LAYERS = WALLR ..

$ Roof - built-up roofing,plywood,insulation,air-space,accoustic tile
IN-R MATERIAL  RES = 8.0 ..
ROOFR LAYERS   MAT = (BR01,PW05,IN-R,AL33,AC02) ..
ROOF-1 CONSTRUCTION  LAYERS = ROOFR ..

$ Slab - 2' soil, 6" heavy-weight conc., pad, carpet
SOIL MATERIAL  THICKNESS = 2.0  SPECIFIC-HEAT = 0.26
               CONDUCTIVITY = 1.0  DENSITY = 115  ..
SLABL LAYERS  MAT = (SOIL,CC15,CP01)  ..
SLAB-1 CONSTRUCTION LAYERS = SLABL  ..

$ Single Glass
SINGLE GLASS-TYPE PANES = 1
       SHADING-COEF = 0.4
       GLASS-CONDUCTANCE = 1.0278
       ..

                    $ DEFAULT CONSTRUCTIONS $

SET-DEFAULT FOR EXTERIOR-WALL
        CONSTRUCTION = WALL-1
        HEIGHT       = 8.
        ..

SET-DEFAULT FOR WINDOW
        GLASS-TYPE = SINGLE
        ..

                    $ GENERAL SPACE CHARACTERISTICS $

MULT   SPACE-CONDITIONS
                    TEMPERATURE = (74)
                    P-SCH = OCC-MULT
                    P-H-S = 255
                    P-H-L = 255
                    L-SCH = LIGHT-MULT
                    L-T = REC-FLUOR-RV      L-W = 1.5
                    FLOOR-WEIGHT = 70
                    Z-TYPE = CONDITIONED                    ..

KIT    SPACE-CONDITIONS
```

```
                    TEMPERATURE = (74)
                    P-SCH = OCC-KIT
                    P-H-S = 345
                    P-H-L = 435
                    E-SCH = EQUIP-KIT   E-W = 3.0
                    L-SCH = LIGHT-KIT
                    L-T = SUS-FLUOR     L-W = 1.7
                    SOURCE-TYPE HOT-WATER
                    SOURCE-SCHEDULE EQUIP-KIT
                    SOURCE-BTU/HR = 21452
                    S-L 0.1  S-S 0.1
                    FLOOR-WEIGHT = 70
                    Z-TYPE = CONDITIONED                    ..

ROOM      SPACE-CONDITIONS
                    TEMPERATURE = (74)
                    P-SCH = OCC-ROOM
                    N-O-P = 2
                    P-H-S = 230
                    P-H-L = 190
                    E-SCH = LIGHT-ROOM  E-W = 0.6
                    L-SCH = LIGHT-ROOM
                    L-T = INCAND        L-W = 1.0
                    FLOOR-WEIGHT = 70
                    Z-TYPE = CONDITIONED                    ..


                     $ MULTIPURPOSE $

MULTIP    SPACE
          SPACE-CONDITIONS = MULT
          AREA             = 8000
          VOLUME           = 64000
          N-O-P            = 150
          ..
LBEW-1    EXTERIOR-WALL
          WIDTH   = 120
          AZIMUTH = 0
          ..
LBW-1     WINDOW
          HEIGHT  = 1.5
          WIDTH   = 120
          ..
          EXTERIOR-WALL LIKE LBEW-1   AZIMUTH = 90 ..
          WINDOW LIKE LBW-1 ..
          EXTERIOR-WALL LIKE LBEW-1   AZIMUTH = 180 ..
          WINDOW LIKE LBW-1 ..
          EXTERIOR-WALL LIKE LBEW-1   AZIMUTH = 270 ..
          WINDOW LIKE LBW-1 ..

SLB-1     UNDERGROUND-FLOOR
          CONSTRUCTION     = SLAB-1
          AREA             = 8000
          U-EFFECTIVE      = 0.0852
          ..

                     $ KITCHEN $

KITCHEN   SPACE
          SPACE-CONDITIONS = KIT
          AREA             = 2000
          VOLUME           = 16000
          N-O-P            = 5
          ..
```

```
LDEW-1    EXTERIOR-WALL
          WIDTH   = 180
          AZIMUTH = 0
          ..
          EXTERIOR-WALL LIKE LDEW-1   AZIMUTH = 90 ..
          EXTERIOR-WALL LIKE LDEW-1   AZIMUTH = 180 ..
          EXTERIOR-WALL LIKE LDEW-1   AZIMUTH = 270 ..

          UNDERGROUND-FLOOR
          LIKE SLB-1
          AREA             = 2000
          U-EFFECTIVE      = 0.0284
          ..

                     $ ROOMS $

ROOM-1    SPACE
          MULTIPLIER       = 12
          SPACE-CONDITIONS = ROOM
          AREA             = 400
          VOLUME           = 3200
          ..
EW1       EXTERIOR-WALL
          WIDTH   = 20
          AZIMUTH = 0
          ..
W1        WINDOW
          HEIGHT  = 1.5
          WIDTH   = 20
          ..
R1        ROOF  CONSTRUCTION    = ROOF-1
          TILT                  = 0.0
          GND-REFLECTANCE       = 0.0
          HEIGHT                = 20
          WIDTH                 = 20
          ..
SL1       UNDERGROUND-FLOOR
          LIKE SLB-1
          AREA             = 400
          U-EFFECTIVE      = 0.104
          ..

ROOM-2    SPACE LIKE ROOM-1
          MULTIPLIER =  12
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 90 ..
          WINDOW LIKE W1 ..
          ROOF LIKE R1  ..
          UNDERGROUND-FLOOR LIKE SL1 ..

ROOM-3    SPACE LIKE ROOM-1
          MULTIPLIER =  12
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 180 ..
          WINDOW LIKE W1 ..
          ROOF LIKE R1  ..
          UNDERGROUND-FLOOR LIKE SL1 ..

ROOM-4    SPACE LIKE ROOM-1
          MULTIPLIER =  12
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 270 ..
          WINDOW LIKE W1 ..
          ROOF LIKE R1  ..
```

```
        UNDERGROUND-FLOOR LIKE SL1 ..


                        $ BUILDING RESOURCES $

BUILDING-RESOURCE
        HW-SCHEDULE     = DHW-ROOM
        HOT-WATER       = 85824
        ..


                    $ LOADS REPORT DATA $

$ Space peak loads summary, Building peak load components
LOADS-REPORT    S (LS-C,LS-F)  ..

END ..

COMPUTE LOADS  ..

                    $ SYSTEMS DATA $

INPUT SYSTEMS  ..

                $ SYSTEM SCHEDULES $

 $  fan schedules $

ALWAYSON = SCH
            THRU DEC 31 (ALL) (1,24) (1) ..

 $  Heat-Temp and Cool-Temp schedules$

ROOMHT = SCH THRU DEC 31
        (ALL) (1,24) (70) ..
ROOMCL = SCH THRU DEC 31
        (ALL) (1,24) (76) ..

KITHT = SCH THRU DEC 31
        (ALL) (1,4) (65) (5,21) (70) (22,24) (65)  ..
KITCL = SCH THRU DEC 31
        (ALL) (1,4) (85) (5,21) (80) (22,24) (85)  ..

MULHT = SCH THRU DEC 31
        (ALL) (1,7) (65) (8,20) (70) (21,24) (65)  ..
MULCL = SCH THRU DEC 31
        (ALL) (1,7) (85) (8,20) (80) (21,24) (85)  ..

KIT-AIR = ZONE-AIR  OA-CHANGES = 3.0 ..

MUL-AIR = ZONE-AIR  OA-CFM/PER = 15 ..

CNTRL-MUL  ZONE-CONTROL
           DESIGN-HEAT-T  70
           DESIGN-COOL-T  78
           HEAT-TEMP-SCH  MULHT
           COOL-TEMP-SCH  MULCL
           THERMOSTAT-TYPE PROPORTIONAL
           ..

CNTRL-KIT  ZONE-CONTROL
           DESIGN-HEAT-T  70
           DESIGN-COOL-T  80
           HEAT-TEMP-SCH  KITHT
           COOL-TEMP-SCH  KITCL
           THERMOSTAT-TYPE PROPORTIONAL
           ..

CNTRL-ROOM ZONE-CONTROL
           DESIGN-HEAT-T   70
           DESIGN-COOL-T   78
           HEAT-TEMP-SCH   ROOMHT
           COOL-TEMP-SCH   ROOMCL
           THERMOSTAT-TYPE PROPORTIONAL
           ..

MULTIP   ZONE
         ZONE-TYPE CONDITIONED
         ZONE-AIR MUL-AIR
         ZONE-CONTROL CNTRL-MUL
         ..
KITCHEN  ZONE  LIKE MULTIP
         ZONE-AIR KIT-AIR
         ZONE-CONTROL CNTRL-KIT ..
ROOM-1   ZONE  LIKE MULTIP
         MULTIPLIER =  12
         ZONE-CONTROL CNTRL-ROOM ..
ROOM-2   ZONE  LIKE ROOM-1 ..
ROOM-3   ZONE  LIKE ROOM-1 ..
ROOM-4   ZONE  LIKE ROOM-1 ..

NORM-CONT  SYSTEM-CONTROL
     MAX-S-T        110         MIN-S-T      52
     H-SCH          ALWAYSON
     C-SCH          ALWAYSON
     ..

SYS1 SYSTEM  $ multipurpose
     SYSTEM-TYPE       PSZ
     OA-CONTROL        FIXED
     S-C               NORM-CONT
     F-SCH             ALWAYSON
     ZONE-NAMES        (MULTIP) ..

SYS2 SYSTEM  $ kitchen
     LIKE SYS1
     ZONE-NAMES        (KITCHEN) ..

SYS3  SYSTEM  $ rooms
     SYSTEM-TYPE       PTAC
     S-C               NORM-CONT
     HEAT-SOURCE       GAS-FURNACE
     ZONE-NAMES        (ROOM-1,ROOM-2,ROOM-3,ROOM-4) ..


PLT-1    PLANT-ASSIGNMENT
         SYSTEM-NAMES (SYS1,SYS2,SYS3) ..

##defl sys_rep[] 3

                    $ SYSTEM REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/system_rep.inc

                        $ PLANT DATA $

INPUT PLANT  ..
PLT-1     PLANT-ASSIGNMENT  ..
```

```
DHW       P-E TYPE DHW-HEATER  SIZE -999  ..
                    $ PLANT REPORT DATA $
##include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc
STOP  ..
```

```
$ DOE-2.1D BDL Input for Primary School
$ 1990 CEC LS/EUI Study


POST-PROCESSOR  PARTIAL  ..
INPUT LOADS  ..

TITLE LINE-1 *1990 CEC LS/EUI Study*
      LINE-2 *Primary School*
      ..

RUN-PERIOD  JAN 1 1986 THRU DEC 31 1986  ..

   BUILDING-LOCATION  LAT 34.07  LON 118.25  ALT 50  T-Z 8
   AZIMUTH 0
   HOLIDAY YES
   DAYLIGHT-SAVINGS YES
   ..

ABORT ERRORS  ..
LIST WARNINGS  ..
PARAMETER  CREDIT-DAYLTG NO  ..


                  $ LOADS SCHEDULE DATA $

OCC-CLASS1 =   DAY-SCHEDULE
               (1,6)      (0)
               (7)        (.1)
               (8,11)     (.9)
               (12)       (.2)
               (13,15)    (.8)
               (16,18)    (.2)
               (19,24)    (0)      ..
OCC-CLASS2 =   DAY-SCHEDULE
               (1,24)     (0)      ..
OC-CLASS =   WEEK-SCHEDULE (WD) OCC-CLASS1 (WEH) OCC-CLASS2 ..
UNOC-CLASS =   WEEK-SCHEDULE (ALL) OCC-CLASS2                 ..
OCC-CLASS = SCHEDULE      THRU JUN 1   OC-CLASS
                          THRU SEP 1   UNOC-CLASS
                          THRU DEC 20  OC-CLASS
                          THRU DEC 31  UNOC-CLASS    ..


LTS-CLASS1 =   DAY-SCHEDULE
               (1,6)      (.1)
               (7)        (.2)
               (8,15)     (.9)
               (16,18)    (.3)
               (19,24)    (.1)  ..
LTS-CLASS2 =   DAY-SCHEDULE
               (1,24)     (.1)      ..
LT-CLASS =   WEEK-SCHEDULE (WD) LTS-CLASS1 (WEH) LTS-CLASS2 ..
UNLT-CLASS =   WEEK-SCHEDULE (ALL) LTS-CLASS2                 ..
LTS-CLASS = SCHEDULE      THRU JUN 1   LT-CLASS
                          THRU SEP 1   UNLT-CLASS
                          THRU DEC 20  LT-CLASS
                          THRU DEC 31  UNLT-CLASS    ..


OCC-KIT1 =   DAY-SCHEDULE
               (1,9)    (0)
               (10)     (.7)
               (11,13)  (1)
               (14)     (.7)
               (15,24)  (0)  ..
OCC-KIT2 =   DAY-SCHEDULE
               (1,24)     (0)      ..
OC-KIT =   WEEK-SCHEDULE (WD) OCC-KIT1 (WEH) OCC-KIT2   ..
UNOC-KIT =   WEEK-SCHEDULE (ALL) OCC-KIT2                     ..
OCC-KIT = SCHEDULE    THRU JUN 1   OC-KIT
                      THRU SEP 1   UNOC-KIT
                      THRU DEC 20  OC-KIT
                      THRU DEC 31  UNOC-KIT    ..


LTS-KIT1 =   DAY-SCHEDULE
               (1,9)    (.1)
               (10)     (.5)
               (11,13)  (1)
               (14,24)  (.1)  ..
LTS-KIT2 =   DAY-SCHEDULE
               (1,24)     (0)      ..
LT-KIT =   WEEK-SCHEDULE (WD) LTS-KIT1 (WEH) LTS-KIT2   ..
UNLT-KIT =   WEEK-SCHEDULE (ALL) LTS-KIT2                     ..
LTS-KIT = SCHEDULE    THRU JUN 1   LT-KIT
                      THRU SEP 1   UNLT-KIT
                      THRU DEC 20  LT-KIT
                      THRU DEC 31  UNLT-KIT    ..


EQP-KITCHEN1 =   DAY-SCHEDULE
               (1,9)      (0)
               (10)       (.25)
               (11)       (.3)
               (12)       (.9)
               (13)       (.8)
               (14,24)    (0)      ..
EQP-KITCHEN2     DAY-SCHEDULE
               (1,24)     (0)      ..
EQ-KITCHEN =   WEEK-SCHEDULE (WD) EQP-KITCHEN1 (WEH) EQP-KITCHEN2
                                  ..
UNEQ-KITCHEN =   WEEK-SCHEDULE (ALL) EQP-KITCHEN2                 ..
EQP-KIT    = SCHEDULE    THRU JUN 1   EQ-KITCHEN
                         THRU SEP 1   UNEQ-KITCHEN
                         THRU DEC 20  EQ-KITCHEN
                         THRU DEC 31  UNEQ-KITCHEN   ..


INFIL1     =    DAY-SCHEDULE
                  (1,7)      (1)
                  (8,18)     (0)
                  (19,24)    (1)  ..
INFIL2     =    DAY-SCHEDULE
                  (1,24)     (1)  ..
INF =   WEEK-SCHEDULE (WD) INFIL1 (WEH) INFIL2 ..
UNINF =   WEEK-SCHEDULE (ALL) INFIL2  ..
   INFIL = SCHEDULE     THRU JUN 1  INF
                        THRU SEP 1  UNINF
                        THRU DEC 20  INF
                        THRU DEC 31  UNINF    ..


SERVICE-HW1 =   DAY-SCHEDULE
               (1,7)      (0)
               (8)        (.05)
               (9)        (.3)
               (10)       (.55)
               (11)       (.6)
               (12)       (.7)
               (13)       (.75)
```

```
               (14)      (.5)
               (15,16)   (.2)
               (17,24)   (0)    ..
SERVICE-HW2 =   DAY-SCHEDULE
               (1,24)    (0)      ..
SRC-HW =   WEEK-SCHEDULE (WD) SERVICE-HW1 (WEH) SERVICE-HW2   ..
UNSRC-HW =   WEEK-SCHEDULE (ALL) SERVICE-HW2                  ..
SERVICE-HW = SCHEDULE    THRU JUN 1   SRC-HW
                         THRU SEP 1   UNSRC-HW
                         THRU DEC 20  SRC-HW
                         THRU DEC 31  UNSRC-HW  ..


                  $ LOADS DATA $

$ Exterior Surfaces
IN-W MATERIAL  RES = 1 ..
WA1  LAYERS  MATERIAL  =  (CB31,IN-W,GP02)          ..
IN-R MATERIAL  RES = 4.9 ..
RF1  LAYERS  MATERIAL  =  (BR01,PW04,IN-R,AL33,GP02)
                                        INSIDE-FILM-RES=.61   ..

TYP-WALL       =    CONSTRUCTION   LAYERS     =    WA1              ..
TYP-ROOF       =    CONSTRUCTION   LAYERS     =    RF1              ..
GLASS1         =    GLASS-TYPE     PANES      =    1
                                   SHADING-COEF        =    0.85
                                   GLASS-CONDUCTANCE   =    1.03  ..

$ Slab - 2' soil, 6" heavy-weight conc.
SOIL MATERIAL  THICKNESS = 2.0  SPECIFIC-HEAT = 0.26
               CONDUCTIVITY = 1.0  DENSITY = 115  ..
SLABL LAYERS  MAT = (SOIL,CC15)  ..
SLAB-1 CONSTRUCTION LAYERS = SLABL  ..

SET-DEFAULT FOR WINDOW        GLASS-TYPE          =    GLASS1  ..



SP-CLASS          SPACE-CONDITIONS
                  TEMPERATURE         = (75)
                  PEOPLE-SCHEDULE     = OCC-CLASS
                  NUMBER-OF-PEOPLE    = 20
                  PEOPLE-HEAT-GAIN    = 450
                  EQUIP-SCHEDULE      = LTS-CLASS
                  EQUIPMENT-W/SQFT    = .5
                  LIGHTING-SCHEDULE   = LTS-CLASS
                  LIGHTING-TYPE       = REC-FLUOR-NV
                  LIGHTING-W/SQFT     = 2.2
                  INF-SCHEDULE        = INFIL
                  INF-METHOD          = AIR-CHANGE
                  INF-CFM/SQFT        = .083
                  FLOOR-WEIGHT        = 70
                  ..

SP-LIB            SPACE-CONDITIONS
                  TEMPERATURE         = (75)
                  PEOPLE-SCHEDULE     = OCC-CLASS
                  NUMBER-OF-PEOPLE    = 80
                  PEOPLE-HEAT-GAIN    = 550
                  EQUIP-SCHEDULE      = LTS-CLASS
                  EQUIPMENT-W/SQFT    = .5
                  LIGHTING-SCHEDULE   = LTS-CLASS
                  LIGHTING-TYPE       = REC-FLUOR-NV
                  LIGHTING-W/SQFT     = 1.5
                  INF-SCHEDULE        = INFIL
                  INF-METHOD          = AIR-CHANGE
                  INF-CFM/SQFT        = .083
                  FLOOR-WEIGHT        = 70
                  ..


SP-KIT            SPACE-CONDITIONS
                  TEMPERATURE         = (75)
                  PEOPLE-SCHEDULE     = OCC-KIT
                  NUMBER-OF-PEOPLE    = 10
                  PEOPLE-HEAT-GAIN    = 640
                  EQUIP-SCHEDULE      = EQP-KIT
                  EQUIPMENT-W/SQFT    = 50
                  LIGHTING-SCHEDULE   = LTS-KIT
                  LIGHTING-TYPE       = REC-FLUOR-NV
                  LIGHTING-W/SQFT     = 1.7
                  SOURCE-BTU/HR       = 300000
                  SOURCE-SCHEDULE     = EQP-KIT
                  SOURCE-TYPE         = HOT-WATER
                  SOURCE-SENSIBLE     = .3
                  SOURCE-LATENT       = .7
                  INF-SCHEDULE        = INFIL
                  INF-METHOD          = AIR-CHANGE
                  INF-CFM/SQFT        = .333
                  FLOOR-WEIGHT        = 70
                  ..

CLASS     =       SPACE
                  SPACE-CONDITIONS  = SP-CLASS
                  AREA              = 1800
                  VOLUME            = 18000
                  MULTIPLIER        = 15
                  ..

EWALLC    =       EXTERIOR-WALL
                  CONSTRUCTION  = TYP-WALL
                  WIDTH         = 15        $ 60 ft 4 ways
                  HEIGHT        = 10
                  AZIMUTH       = 0
                  ..
WINDC     =       WINDOW
                  WIDTH         = 15
                  HEIGHT        = 2.5
                  ..
                  EXTERIOR-WALL LIKE EWALLC   AZIMUTH = 90 ..
                  WINDOW LIKE WINDC ..
                  EXTERIOR-WALL LIKE EWALLC   AZIMUTH = 180 ..
                  WINDOW LIKE WINDC ..
                  EXTERIOR-WALL LIKE EWALLC   AZIMUTH = 270 ..
                  WINDOW LIKE WINDC ..
EROOFC            ROOF
                  CONSTRUCTION     = TYP-ROOF
                  GND-REFLECTANCE  = 0
                  TILT             = 0
                  WIDTH            = 60
                  HEIGHT           = 30
                  ..
SLBC              UNDERGROUND-FLOOR
                  CONSTRUCTION     = SLAB-1
                  AREA             = 1800
                  U-EFFECTIVE      = 0.0346
                  ..
```

```
LIBRARY=        SPACE
                SPACE-CONDITIONS  = SP-LIB
                AREA              = 6000
                VOLUME            = 60000
                ..
EWALLL          EXTERIOR-WALL LIKE EWALLC  WIDTH = 80 ..
WINDL           WINDOW LIKE WINDC   WIDTH = 80 ..
                EXTERIOR-WALL LIKE EWALLL   AZIMUTH = 90 ..
                WINDOW LIKE WINDL ..
                EXTERIOR-WALL LIKE EWALLL   AZIMUTH = 180 ..
                WINDOW LIKE WINDL ..
                EXTERIOR-WALL LIKE EWALLL   AZIMUTH = 270 ..
                WINDOW LIKE WINDL ..
                ROOF    LIKE EROOFC
                        WIDTH = 60
                        HEIGHT = 100
                        ..
                UNDERGROUND-FLOOR LIKE SLBC
                AREA              = 6000
                U-EFFECTIVE       = 0.0586
                ..


KITCHEN       =  SPACE
                SPACE-CONDITIONS = SP-KIT
                AREA              = 2000
                VOLUME            = 20000
                ..
EWALLK          EXTERIOR-WALL LIKE EWALLC
                WIDTH = 60  ..
                EXTERIOR-WALL LIKE EWALLK   AZIMUTH = 90 ..
                EXTERIOR-WALL LIKE EWALLK   AZIMUTH = 180 ..
                EXTERIOR-WALL LIKE EWALLK   AZIMUTH = 270 ..
                ROOF    LIKE EROOFC
                        WIDTH = 20
                        HEIGHT = 100
                        ..
                UNDERGROUND-FLOOR LIKE SLBC
                AREA              = 2000
                U-EFFECTIVE       = 0.00586
                ..


BUILDING-RESOURCE   HOT-WATER           =    34000
                    HW-SCHEDULE         =    SERVICE-HW                ..


                    $ LOADS REPORT DATA $

$ Space peak loads summary, Building peak load components
LOADS-REPORT    S (LS-C,LS-F)  ..

END  ..

COMPUTE LOADS  ..

                  $ SYSTEMS DATA $

INPUT SYSTEMS  ..

                $ SYSTEM SCHEDULES $
```

```
FANC        =    DAY-SCHEDULE
                      (1,7)      (0)
                      (8,18)     (1)
                      (19,24)    (0)  ..
FAN2        =    DAY-SCHEDULE
                      (1,24)     (0)  ..
FANCLASS = WEEK-SCHEDULE (WD) FANC (WEH) FAN2 ..
FANOFF =   WEEK-SCHEDULE (ALL) FAN2  ..
FAN-CLASS = SCHEDULE THRU JUN 1  FANCLASS
                     THRU SEP 1  FANOFF
                     THRU DEC 20  FANCLASS
                     THRU DEC 31  FANOFF    ..

CLGC        =    DAY-SCHEDULE
                      (1,6)      (85)
                      (7,15)     (78)
                      (16,24)    (85)  ..
CLG2        =    DAY-SCHEDULE
                      (1,24)     (90)  ..
CLGCLASS =   WEEK-SCHEDULE (WD) CLGC (WEH) CLG2 ..
CLGOFF =   WEEK-SCHEDULE (ALL) CLG2  ..
CLG-CLASS = SCHEDULE THRU JUN 1 CLGCLASS
                     THRU SEP 1  CLGOFF
                     THRU DEC 20  CLGCLASS
                     THRU DEC 31  CLGOFF    ..

HTGC        =    DAY-SCHEDULE
                      (1,6)      (65)
                      (7,15)     (75)
                      (16,24)    (65)  ..
HTG2        =    DAY-SCHEDULE
                      (1,24)     (55)  ..
HTGCLASS = WEEK-SCHEDULE (WD) HTGC (WEH) HTG2  ..
HTGOFF =   WEEK-SCHEDULE (ALL) HTG2  ..
HTG-CLASS = SCHEDULE THRU JUN 1  HTGCLASS
                     THRU SEP 1  HTGOFF
                     THRU DEC 20  HTGCLASS
                     THRU DEC 31  HTGOFF    ..


ZNAIR = ZONE-AIR  OA-CFM/PER 15.0 ..

CLASSCON = ZONE-CONTROL
           DESIGN-HEAT-T 75
           DESIGN-COOL-T 78
           HEAT-TEMP-SCH HTG-CLASS
           COOL-TEMP-SCH CLG-CLASS
           THROTTLING-RANGE 2
           THERMOSTAT-TYPE PROPORTIONAL
           ..

LIBRARY ZONE
              ZONE-TYPE CONDITIONED
              ZONE-AIR ZNAIR
              ZONE-CONTROL CLASSCON
              ..

KITCHEN     ZONE  LIKE  LIBRARY ..
CLASS       ZONE  LIKE  LIBRARY
            ZONE-CONTROL CLASSCON
            MULTIPLIER 40  ..
```

```
SYS1     SYSTEM
         SYSTEM-TYPE       PMZS
         COOL-SET-T        55
         MAX-SUPPLY-T      105
         MIN-SUPPLY-T      55
         REHEAT-DELTA-T    50
         OA-CONTROL        TEMP
         MIN-CFM-RATIO     0.5
         ECONO-LIMIT-T     68
         FAN-SCHEDULE      FAN-CLASS
         RETURN-STATIC     1.0
         RETURN-EFF        0.66
         HEAT-SOURCE       GAS-FURNACE
         RETURN-AIR-PATH   DUCT
         ZONE-NAMES        (LIBRARY)
         ..

SYS2 SYSTEM  LIKE  SYS1 ZONE-NAMES (KITCHEN) ..
SYS3 SYSTEM  LIKE  SYS1 ZONE-NAMES (CLASS) ..


PLT-1     PLANT-ASSIGNMENT   SYSTEM-NAMES (SYS1,SYS2,SYS3) ..

##defl sys_rep[] 3

                    $ SYSTEM REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/system_rep.inc

                       $  PLANT DATA $

INPUT PLANT  ..
PLT-1     PLANT-ASSIGNMENT  ..

DHW       P-E TYPE DHW-HEATER  SIZE -999  ..

                    $ PLANT REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc

STOP  ..
```

```
$ DOE-2.1D BDL Input for Secondary School
$ 1990 CEC LS/EUI Study


POST-PROCESSOR  PARTIAL  ..
INPUT LOADS  ..

TITLE LINE-1 *1990 CEC LS/EUI Study*
      LINE-2 *Secondary School*
      ..

RUN-PERIOD  JAN 1 1986 THRU DEC 31 1986  ..

   BUILDING-LOCATION  LAT 34.07  LON 118.25  ALT 50  T-Z 8
   AZIMUTH 0
   HOLIDAY YES
   DAYLIGHT-SAVINGS YES
   ..

ABORT ERRORS  ..
LIST WARNINGS  ..
PARAMETER  CREDIT-DAYLTG NO  ..


                    $ LOADS SCHEDULE DATA $

OCC-CLASS1 =   DAY-SCHEDULE
               (1,6)      (0)
               (7)        (.1)
               (8,11)     (.9)
               (12,15)    (.8)
               (16)       (.45)
               (17,21)    (.33)
               (22,24)    (.1)      ..
OCC-CLASS2 =   DAY-SCHEDULE
               (1,24)     (0)       ..
OC-CLASS =   WEEK-SCHEDULE (WD) OCC-CLASS1 (WEH) OCC-CLASS2 ..
UNOC-CLASS =   WEEK-SCHEDULE (ALL) OCC-CLASS2                ..
OCC-CLASS = SCHEDULE      THRU JUN 1   OC-CLASS
                          THRU SEP 1   UNOC-CLASS
                          THRU DEC 20  OC-CLASS
                          THRU DEC 31  UNOC-CLASS    ..


LTS-CLASS1 =   DAY-SCHEDULE
               (1,6)      (.1)
               (7)        (.2)
               (8,12)     (.9)
               (13,16)    (.8)
               (17,23)    (.6)
               (24)       (.1)  ..
LTS-CLASS2 =   DAY-SCHEDULE
               (1,24)     (.1)      ..
LT-CLASS =   WEEK-SCHEDULE (WD) LTS-CLASS1 (WEH) LTS-CLASS2  ..
UNLT-CLASS =   WEEK-SCHEDULE (ALL) LTS-CLASS2                ..
LTS-CLASS = SCHEDULE      THRU JUN 1   LT-CLASS
                          THRU SEP 1   UNLT-CLASS
                          THRU DEC 20  LT-CLASS
                          THRU DEC 31  UNLT-CLASS    ..


OCC-GYM1  =  DAY-SCHEDULE
               (1,7)      (0)
               (8,15)     (1)
               (16,20)    (.4)
               (21,24)    (0)  ..
OCC-GYM2  =  DAY-SCHEDULE
               (1,24)     (0)  ..
OC-GYM =   WEEK-SCHEDULE (WD) OCC-GYM1 (WEH) OCC-GYM2   ..
UNOC-GYM =   WEEK-SCHEDULE (ALL) OCC-GYM2  ..
OCC-GYM = SCHEDULE        THRU JUN 1   OC-GYM
                          THRU SEP 1   UNOC-GYM
                          THRU DEC 20  OC-GYM
                          THRU DEC 31  UNOC-GYM    ..

LTS-GYM1  =  DAY-SCHEDULE
               (1,7)      (0)
               (8,20)     (0.9)
               (21,24)    (0)  ..
LTS-GYM2  =  DAY-SCHEDULE
               (1,24)     (0)  ..
LT-GYM =   WEEK-SCHEDULE (WD) LTS-GYM1 (WEH) LTS-GYM2   ..
UNLT-GYM =   WEEK-SCHEDULE (ALL) LTS-GYM2  ..
LTS-GYM = SCHEDULE        THRU JUN 1   LT-GYM
                          THRU SEP 1   UNLT-GYM
                          THRU DEC 20  LT-GYM
                          THRU DEC 31  UNLT-GYM    ..

OCC-AUD1 =   DAY-SCHEDULE
               (1,9)    (0)
               (10,11)  (0.75)
               (12)     (0.2)
               (13,14)  (0.75)
               (15,24)  (0)  ..
OCC-AUD2 =   DAY-SCHEDULE
               (1,24)     (0)       ..
OC-AUD =   WEEK-SCHEDULE (WD) OCC-AUD1 (WEH) OCC-AUD2   ..
UNOC-AUD =   WEEK-SCHEDULE (ALL) OCC-AUD2                        ..
OCC-AUD = SCHEDULE    THRU JUN 1   OC-AUD
                      THRU SEP 1   UNOC-AUD
                      THRU DEC 20  OC-AUD
                      THRU DEC 31  UNOC-AUD    ..

LTS-AUD1 =   DAY-SCHEDULE
               (1,9)    (0)
               (10,14)  (0.9)
               (15,24)  (0)  ..
LTS-AUD2 =   DAY-SCHEDULE
               (1,24)     (0)       ..
LT-AUD =   WEEK-SCHEDULE (WD) LTS-AUD1 (WEH) LTS-AUD2   ..
UNLT-AUD =   WEEK-SCHEDULE (ALL) LTS-AUD2                        ..
LTS-AUD = SCHEDULE    THRU JUN 1   LT-AUD
                      THRU SEP 1   UNLT-AUD
                      THRU DEC 20  LT-AUD
                      THRU DEC 31  UNLT-AUD    ..


OCC-KIT1 =   DAY-SCHEDULE
               (1,8)    (0)
               (9,10)   (.7)
               (11,12)  (1)
               (13,18)  (.4)
               (19,24)  (0)  ..
OCC-KIT2 =   DAY-SCHEDULE
               (1,24)     (0)       ..
OC-KIT =   WEEK-SCHEDULE (WD) OCC-KIT1 (WEH) OCC-KIT2   ..
UNOC-KIT =   WEEK-SCHEDULE (ALL) OCC-KIT2                        ..
OCC-KIT = SCHEDULE    THRU JUN 1   OC-KIT
```

```
                        THRU SEP 1   UNOC-KIT
                        THRU DEC 20  OC-KIT
                        THRU DEC 31  UNOC-KIT    ..

LTS-KIT1 =   DAY-SCHEDULE
               (1,9)    (.1)
               (10)     (.7)
               (11,18)  (1)
               (19,24)  (.1)  ..
LTS-KIT2 =   DAY-SCHEDULE
               (1,24)     (0)       ..
LT-KIT =   WEEK-SCHEDULE (WD) LTS-KIT1 (WEH) LTS-KIT2   ..
UNLT-KIT =   WEEK-SCHEDULE (ALL) LTS-KIT2                        ..
LTS-KIT = SCHEDULE     THRU JUN 1   LT-KIT
                        THRU SEP 1   UNLT-KIT
                        THRU DEC 20  LT-KIT
                        THRU DEC 31  UNLT-KIT    ..

EQP-KITCHEN1 =   DAY-SCHEDULE
                  (1,9)      (0)
                  (10)       (.1)
                  (11)       (.4)
                  (12)       (.3)
                  (13)       (.2)
                  (14)       (.1)
                  (15)       (.1)
                  (16,24)    (0)        ..
EQP-KITCHEN2 =   DAY-SCHEDULE
                 (1,24)     (0)       ..
EQ-KITCHEN =   WEEK-SCHEDULE (WD) EQP-KITCHEN1 (WEH) EQP-KITCHEN2
                          ..
UNEQ-KITCHEN =   WEEK-SCHEDULE (ALL) EQP-KITCHEN2                ..
EQP-KIT    = SCHEDULE    THRU JUN 1   EQ-KITCHEN
                         THRU SEP 1   UNEQ-KITCHEN
                         THRU DEC 20  EQ-KITCHEN
                         THRU DEC 31  UNEQ-KITCHEN   ..

OCC-DIN1 =   DAY-SCHEDULE
               (1,10)     (0)
               (11,13)    (1)
               (14,15)    (.2)
               (16,24)    (0)  ..
OCC-DIN2 =   DAY-SCHEDULE
               (1,24)     (0)       ..
OC-DIN =   WEEK-SCHEDULE (WD) OCC-DIN1 (WEH) OCC-DIN2   ..
UNOC-DIN =   WEEK-SCHEDULE (ALL) OCC-DIN2                        ..
OCC-DIN = SCHEDULE     THRU JUN 1   OC-DIN
                        THRU SEP 1   UNOC-DIN
                        THRU DEC 20  OC-DIN
                        THRU DEC 31  UNOC-DIN    ..

LTS-DIN1 =   DAY-SCHEDULE
               (1,9)      (0)
               (10)       (.4)
               (11,13)    (1)
               (14,15)    (.4)
               (16,24)    (0)  ..
LTS-DIN2 =   DAY-SCHEDULE
               (1,24)     (0)       ..
LT-DIN =   WEEK-SCHEDULE (WD) LTS-DIN1 (WEH) LTS-DIN2   ..
UNLT-DIN =   WEEK-SCHEDULE (ALL) LTS-DIN2                        ..
LTS-DIN = SCHEDULE        THRU JUN 1   LT-DIN
                        THRU SEP 1   UNLT-DIN
                        THRU DEC 20  LT-DIN
                        THRU DEC 31  UNLT-DIN    ..

INFIL1     =    DAY-SCHEDULE
                  (1,7)      (1)
                  (8,23)     (0)
                  (24)       (1)  ..
INFIL2     =    DAY-SCHEDULE
                  (1,24)     (1)  ..
INF =   WEEK-SCHEDULE (WD) INFIL1 (WEH) INFIL2 ..
UNINF =   WEEK-SCHEDULE (ALL) INFIL2  ..
   INFIL = SCHEDULE     THRU JUN 1  INF
                        THRU SEP 1  UNINF
                        THRU DEC 20  INF
                        THRU DEC 31  UNINF    ..


SERVICE-HW1 =   DAY-SCHEDULE
                (1,7)      (0)
                (8)        (.05)
                (9)        (.3)
                (10)       (.55)
                (11)       (.6)
                (12)       (.7)
                (13)       (.75)
                (14)       (.8)
                (15,16)    (.6)
                (17,18)    (.5)
                (19)       (.15)
                (20,22)    (.2)
                (23,24)    (0)    ..
SERVICE-HW2 =   DAY-SCHEDULE
               (1,24)     (0)       ..
SRC-HW =   WEEK-SCHEDULE (WD) SERVICE-HW1 (WEH) SERVICE-HW2   ..
UNSRC-HW =   WEEK-SCHEDULE (ALL) SERVICE-HW2                     ..
SERVICE-HW = SCHEDULE     THRU JUN 1   SRC-HW
                        THRU SEP 1   UNSRC-HW
                        THRU DEC 20  SRC-HW
                        THRU DEC 31  UNSRC-HW  ..


PULL-SHADE     =    SCHEDULE THRU DEC 31 (ALL)     (1,24)     (40)          ..
SHADE-MULT     =    SCHEDULE THRU DEC 31 (ALL)     (1,24)     (.5)          ..


                  $ LOADS DATA $

$ Exterior Surfaces
IN-W MATERIAL  RES = 1 ..
WA1  LAYERS  MATERIAL  =  (CB31,IN-W,GP02)          ..
IN-R MATERIAL  RES = 4.9 ..
RF1  LAYERS  MATERIAL  =  (BR01,PW04,IN-R,AL33,GP02)
                                          INSIDE-FILM-RES=.61   ..

TYP-WALL       =    CONSTRUCTION   LAYERS    =    WA1              ..
TYP-ROOF       =    CONSTRUCTION   LAYERS    =    RF1              ..
GLASS1         =    GLASS-TYPE     PANES     =    1
                                   SHADING-COEF          =    0.85
                                   GLASS-CONDUCTANCE     =    1.03  ..

$ Slab - 2' soil, 6" heavy-weight conc.
SOIL MATERIAL  THICKNESS = 2.0  SPECIFIC-HEAT = 0.26
               CONDUCTIVITY = 1.0  DENSITY = 115  ..
SLAB1 LAYERS  MAT = (SOIL,CC15)  ..
SLAB-1 CONSTRUCTION LAYERS = SLAB1  ..
```

```
SET-DEFAULT FOR WINDOW      GLASS-TYPE       =  GLASS1
                            WIN-SHADE-TYPE   =  MOVABLE-INTERIOR
                            MAX-SOLAR-SCH    =  PULL-SHADE
                            SHADING-SCHEDULE =  SHADE-MULT        ..

SP-CLASS        SPACE-CONDITIONS
                TEMPERATURE          = (75)
                PEOPLE-SCHEDULE      = OCC-CLASS
                NUMBER-OF-PEOPLE     = 20
                PEOPLE-HEAT-GAIN     = 450
                EQUIP-SCHEDULE       = LTS-CLASS
                EQUIPMENT-W/SQFT     = .5
                LIGHTING-SCHEDULE    = LTS-CLASS
                LIGHTING-TYPE        = REC-FLUOR-NV
                LIGHTING-W/SQFT      = 2.2
                INF-SCHEDULE         = INFIL
                INF-METHOD           = AIR-CHANGE
                INF-CFM/SQFT         = .083
                FLOOR-WEIGHT         = 70
                ..

SP-LIB          SPACE-CONDITIONS
                TEMPERATURE          = (75)
                PEOPLE-SCHEDULE      = OCC-CLASS
                NUMBER-OF-PEOPLE     = 315
                PEOPLE-HEAT-GAIN     = 550
                EQUIP-SCHEDULE       = LTS-CLASS
                EQUIPMENT-W/SQFT     = .5
                LIGHTING-SCHEDULE    = LTS-CLASS
                LIGHTING-TYPE        = REC-FLUOR-NV
                LIGHTING-W/SQFT      = 1.5
                INF-SCHEDULE         = INFIL
                INF-METHOD           = AIR-CHANGE
                INF-CFM/SQFT         = .083
                FLOOR-WEIGHT         = 70
                ..

SP-GYM          SPACE-CONDITIONS
                TEMPERATURE          = (75)
                PEOPLE-SCHEDULE      = OCC-GYM
                NUMBER-OF-PEOPLE     = 175
                PEOPLE-HEAT-GAIN     = 800
                EQUIP-SCHEDULE       = LTS-GYM
                EQUIPMENT-W/SQFT     = .5
                LIGHTING-SCHEDULE    = LTS-GYM
                LIGHTING-TYPE        = SUS-FLUOR
                LIGHTING-W/SQFT      = 0.65
                INF-SCHEDULE         = INFIL
                INF-METHOD           = AIR-CHANGE
                INF-CFM/SQFT         = .333
                FLOOR-WEIGHT         = 70
                ..

SP-AUD          SPACE-CONDITIONS
                TEMPERATURE          = (75)
                PEOPLE-SCHEDULE      = OCC-AUD
                NUMBER-OF-PEOPLE     = 194
                PEOPLE-HEAT-GAIN     = 450
                EQUIP-SCHEDULE       = LTS-AUD
                EQUIPMENT-W/SQFT     = .5
                LIGHTING-SCHEDULE    = LTS-AUD
                LIGHTING-TYPE        = REC-FLUOR-NV
                LIGHTING-W/SQFT      = 0.80
                INF-SCHEDULE         = INFIL
                INF-METHOD           = AIR-CHANGE
                INF-CFM/SQFT         = .083
                FLOOR-WEIGHT         = 70
                ..

SP-KIT          SPACE-CONDITIONS
                TEMPERATURE          = (75)
                PEOPLE-SCHEDULE      = OCC-KIT
                NUMBER-OF-PEOPLE     = 16
                PEOPLE-HEAT-GAIN     = 640
                EQUIP-SCHEDULE       = EQP-KIT
                EQUIPMENT-W/SQFT     = 50
                LIGHTING-SCHEDULE    = LTS-KIT
                LIGHTING-TYPE        = REC-FLUOR-NV
                LIGHTING-W/SQFT      = 1.7
                SOURCE-BTU/HR        = 688000
                SOURCE-SCHEDULE      = EQP-KIT
                SOURCE-TYPE          = HOT-WATER
                SOURCE-SENSIBLE      = .3
                SOURCE-LATENT        = .7
                INF-SCHEDULE         = INFIL
                INF-METHOD           = AIR-CHANGE
                INF-CFM/SQFT         = .333
                FLOOR-WEIGHT         = 70
                ..

SP-DIN          SPACE-CONDITIONS
                TEMPERATURE          = (75)
                PEOPLE-SCHEDULE      = OCC-DIN
                NUMBER-OF-PEOPLE     = 484
                PEOPLE-HEAT-GAIN     = 580
                EQUIP-SCHEDULE       = LTS-DIN
                EQUIPMENT-W/SQFT     = 0.5
                LIGHTING-SCHEDULE    = LTS-DIN
                LIGHTING-TYPE        = REC-FLUOR-NV
                LIGHTING-W/SQFT      = 1.7
                INF-SCHEDULE         = INFIL
                INF-METHOD           = AIR-CHANGE
                INF-CFM/SQFT         = .333
                FLOOR-WEIGHT         = 70
                ..

CLASSB  =       SPACE
                SPACE-CONDITIONS  = SP-CLASS
                AREA              = 1800
                VOLUME            = 18000
                MULTIPLIER        = 40
                ..

EWALLC  =       EXTERIOR-WALL
                CONSTRUCTION  = TYP-WALL
                WIDTH         = 15        $ 60 ft 4 ways
                HEIGHT        = 10
                AZIMUTH       = 0
                ..

WINDC   =       WINDOW
                WIDTH         = 15
                HEIGHT        =  2.9
                ..
                EXTERIOR-WALL LIKE EWALLC   AZIMUTH = 90 ..
```

```
                WINDOW LIKE WINDC ..
                EXTERIOR-WALL LIKE EWALLC   AZIMUTH = 180 ..
                WINDOW LIKE WINDC ..
                EXTERIOR-WALL LIKE EWALLC   AZIMUTH = 270 ..
                WINDOW LIKE WINDC ..
SLBC            UNDERGROUND-FLOOR
                CONSTRUCTION      = SLAB-1
                AREA              = 1800
                U-EFFECTIVE       = 0.0346
                ..

CLASST    =     SPACE LIKE CLASSB
                MULTIPLIER      =    40
                ..
                EXTERIOR-WALL LIKE EWALLC ..
                WINDOW LIKE WINDC ..
                EXTERIOR-WALL LIKE EWALLC   AZIMUTH = 90 ..
                WINDOW LIKE WINDC ..
                EXTERIOR-WALL LIKE EWALLC   AZIMUTH = 180 ..
                WINDOW LIKE WINDC ..
                EXTERIOR-WALL LIKE EWALLC   AZIMUTH = 270 ..
                WINDOW LIKE WINDC
EROOFC          ROOF   CONSTRUCTION = TYP-ROOF
                       GND-REFLECTANCE = 0
                       TILT = 0
                       WIDTH = 60
                       HEIGHT = 30
                       ..

LIBRARY=        SPACE
                SPACE-CONDITIONS  =    SP-LIB
                AREA              =    31495
                VOLUME            =    314950
                ..
EWALLL          EXTERIOR-WALL LIKE EWALLC  WIDTH = 177 ..
WINDL           WINDOW LIKE WINDC   WIDTH = 177 ..
                EXTERIOR-WALL LIKE EWALLL   AZIMUTH = 90 ..
                WINDOW LIKE WINDL ..
                EXTERIOR-WALL LIKE EWALLL   AZIMUTH = 180 ..
                WINDOW LIKE WINDL ..
                EXTERIOR-WALL LIKE EWALLL   AZIMUTH = 270 ..
                WINDOW LIKE WINDL ..
                UNDERGROUND-FLOOR LIKE SLBC
                AREA              = 31495
                U-EFFECTIVE       = 0.00586
                ..

GYM       =     SPACE
                SPACE-CONDITIONS = SP-GYM
                AREA              = 31495
                VOLUME            = 1007850
                ..
EWALLG          EXTERIOR-WALL LIKE EWALLC
                WIDTH = 177   HEIGHT = 32  ..
WINDG           WINDOW LIKE WINDC
                WIDTH = 177   HEIGHT = 4  ..
                EXTERIOR-WALL LIKE EWALLG   AZIMUTH = 90 ..
                WINDOW LIKE WINDG ..
                EXTERIOR-WALL LIKE EWALLG   AZIMUTH = 180 ..
                WINDOW LIKE WINDG ..
                EXTERIOR-WALL LIKE EWALLG   AZIMUTH = 270 ..
                WINDOW LIKE WINDG ..
                UNDERGROUND-FLOOR LIKE SLBC
                AREA              = 31495
                U-EFFECTIVE       = 0.00586
                ..
                ROOF   LIKE EROOFC
                       WIDTH = 177
                       HEIGHT = 177
                       ..

AUDITORIM =     SPACE
                SPACE-CONDITIONS    = SP-AUD
                AREA                = 19380
                VOLUME              = 620210
                ..
EWALLA          EXTERIOR-WALL LIKE EWALLC
                WIDTH = 139   HEIGHT = 32  ..
                EXTERIOR-WALL LIKE EWALLA   AZIMUTH = 90 ..
                EXTERIOR-WALL LIKE EWALLA   AZIMUTH = 180 ..
                EXTERIOR-WALL LIKE EWALLA   AZIMUTH = 270 ..
                UNDERGROUND-FLOOR LIKE SLBC
                AREA              = 19380
                U-EFFECTIVE       =   0.00747
                ..
                ROOF   LIKE EROOFC
                       WIDTH = 139
                       HEIGHT = 139
                       ..

KITCHEN   =     SPACE
                SPACE-CONDITIONS = SP-KIT
                AREA              = 4845
                VOLUME            = 48450
                ..
EWALLK          EXTERIOR-WALL LIKE EWALLC
                WIDTH = 52  ..
                EXTERIOR-WALL LIKE EWALLK   AZIMUTH = 90 ..
                EXTERIOR-WALL LIKE EWALLK   AZIMUTH = 180 ..
                EXTERIOR-WALL LIKE EWALLK   AZIMUTH = 270 ..
                ROOF   LIKE EROOFC
                       WIDTH = 52
                       HEIGHT = 52
                       ..

DINNING   =     SPACE
                SPACE-CONDITIONS = SP-DIN
                AREA              = 9690
                VOLUME            = 96900
                ..
EWALLD          EXTERIOR-WALL LIKE EWALLC
                WIDTH = 74 ..
WINDD           WINDOW LIKE WINDC
                WIDTH = 74   HEIGHT = 4  ..
                EXTERIOR-WALL LIKE EWALLD   AZIMUTH = 90 ..
                WINDOW LIKE WINDD ..
                EXTERIOR-WALL LIKE EWALLD   AZIMUTH = 180 ..
                WINDOW LIKE WINDD ..
                EXTERIOR-WALL LIKE EWALLD   AZIMUTH = 270 ..
                WINDOW LIKE WINDD ..
                ROOF   LIKE EROOFC
                       WIDTH = 74
                       HEIGHT = 74
                       ..


BUILDING-RESOURCE   HOT-WATER          =    339180
```

```
                    HW-SCHEDULE          =     SERVICE-HW


                    $ LOADS REPORT DATA $

$ Space peak loads summary, Building peak load components
LOADS-REPORT     S (LS-C,LS-F)  ..

END  ..

COMPUTE LOADS  ..

                    $ SYSTEMS DATA $

INPUT SYSTEMS  ..

                  $ SYSTEM SCHEDULES $

FANC       =     DAY-SCHEDULE
                      (1,7)       (0)
                      (8,23)      (1)
                      (24)        (0)  ..
FANO       =     DAY-SCHEDULE
                      (1,7)       (0)
                      (8,15)      (1)
                      (16,24)     (0)  ..
FAN2       =     DAY-SCHEDULE
                      (1,24)      (0)  ..
FANCLASS = WEEK-SCHEDULE (WD) FANC (WEH) FAN2 ..
FANOTHER = WEEK-SCHEDULE (WD) FANO (WEH) FAN2 ..
FANOFF =   WEEK-SCHEDULE (ALL) FAN2  ..
FAN-CLASS = SCHEDULE THRU JUN 1  FANCLASS
                     THRU SEP 1  FANOFF
                     THRU DEC 20  FANCLASS
                     THRU DEC 31  FANOFF     ..
FAN-OTHER = SCHEDULE THRU JUN 1  FANOTHER
                     THRU SEP 1  FANOFF
                     THRU DEC 20  FANOTHER
                     THRU DEC 31  FANOFF     ..

CLGC       =     DAY-SCHEDULE
                      (1,6)       (85)
                      (7,21)      (78)
                      (22,24)     (85)  ..
CLGO       =     DAY-SCHEDULE
                      (1,6)       (85)
                      (7,15)      (78)
                      (16,24)     (85)  ..
CLG2       =     DAY-SCHEDULE
                      (1,24)      (90)  ..
CLGCLASS =   WEEK-SCHEDULE (WD) CLGC (WEH) CLG2 ..
CLGOTHER =   WEEK-SCHEDULE (WD) CLGO (WEH) CLG2 ..
CLGOFF =   WEEK-SCHEDULE (ALL) CLG2  ..
CLG-CLASS = SCHEDULE THRU JUN 1 CLGCLASS
                     THRU SEP 1  CLGOFF
                     THRU DEC 20  CLGCLASS
                     THRU DEC 31  CLGOFF     ..
CLG-OTHER = SCHEDULE THRU JUN 1 CLGOTHER
                     THRU SEP 1  CLGOFF
                     THRU DEC 20  CLGOTHER
                     THRU DEC 31  CLGOFF     ..

HTGC       =     DAY-SCHEDULE
                      (1,6)       (65)
..
                      (7,21)      (75)
                      (22,24)     (65)  ..
HTGO       =     DAY-SCHEDULE
                      (1,6)       (65)
                      (7,15)      (75)
                      (16,24)     (65)  ..
HTG2       =     DAY-SCHEDULE
                      (1,24)      (55)  ..
HTGCLASS = WEEK-SCHEDULE (WD) HTGC (WEH) HTG2 ..
HTGOTHER = WEEK-SCHEDULE (WD) HTGO (WEH) HTG2 ..
HTGOFF =   WEEK-SCHEDULE (ALL) HTG2  ..
HTG-CLASS = SCHEDULE THRU JUN 1  HTGCLASS
                     THRU SEP 1  HTGOFF
                     THRU DEC 20  HTGCLASS
                     THRU DEC 31  HTGOFF     ..
HTG-OTHER = SCHEDULE THRU JUN 1  HTGOTHER
                     THRU SEP 1  HTGOFF
                     THRU DEC 20  HTGOTHER
                     THRU DEC 31  HTGOFF     ..


ZNAIR = ZONE-AIR  OA-CFM/PER 15.0 ..

CLASSCON = ZONE-CONTROL
           DESIGN-HEAT-T 75
           DESIGN-COOL-T 78
           HEAT-TEMP-SCH HTG-CLASS
           COOL-TEMP-SCH CLG-CLASS
           THROTTLING-RANGE 2
           THERMOSTAT-TYPE PROPORTIONAL
           ..
OTHERCON = ZONE-CONTROL
           LIKE CLASSCON
           HEAT-TEMP-SCH HTG-OTHER
           COOL-TEMP-SCH CLG-OTHER
           ..


LIBRARY ZONE
                ZONE-TYPE CONDITIONED
                ZONE-AIR ZNAIR
                ZONE-CONTROL OTHERCON
                ..

GYM          ZONE  LIKE  LIBRARY ..
AUDITORIM    ZONE  LIKE  LIBRARY ..
KITCHEN      ZONE  LIKE  LIBRARY ..
DINNING      ZONE  LIKE  LIBRARY ..
CLASSB       ZONE  LIKE  LIBRARY
             ZONE-CONTROL CLASSCON
             MULTIPLIER 40  ..
CLASST       ZONE  LIKE  CLASSB
             MULTIPLIER 40  ..


SYS1      SYSTEM
          SYSTEM-TYPE       PMZS
          COOL-SET-T        55
          MAX-SUPPLY-T      105
          MIN-SUPPLY-T      55
          REHEAT-DELTA-T    50
          OA-CONTROL        TEMP
          MIN-CFM-RATIO     0.5
          ECONO-LIMIT-T     68
```

```
        FAN-SCHEDULE      FAN-OTHER
        RETURN-STATIC     1.0
        RETURN-EFF        0.66
        HEAT-SOURCE       GAS-FURNACE
        RETURN-AIR-PATH   DUCT
        ZONE-NAMES        (LIBRARY)
        ..

SYS2 SYSTEM  LIKE  SYS1 ZONE-NAMES (GYM) ..
SYS3 SYSTEM  LIKE  SYS1 ZONE-NAMES (AUDITORIM) ..
SYS4 SYSTEM  LIKE  SYS1 ZONE-NAMES (KITCHEN) ..
SYS5 SYSTEM  LIKE  SYS1 ZONE-NAMES (DINNING) ..
SYS6 SYSTEM  LIKE  SYS1
             FAN-SCHEDULE FAN-CLASS
             ZONE-NAMES (CLASSB) ..
SYS7 SYSTEM  LIKE  SYS6 ZONE-NAMES (CLASST) ..


PLT-1     PLANT-ASSIGNMENT   SYSTEM-NAMES (SYS1,SYS2,SYS3,
                                            SYS4,SYS5,SYS6,SYS7)  ..

##def1 sys_rep[] 7

                    $ SYSTEM REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/system_rep.inc

                       $  PLANT DATA $

INPUT PLANT  ..
PLT-1     PLANT-ASSIGNMENT  ..

DHW       P-E TYPE DHW-HEATER  SIZE -999  ..
HWG       P-E TYPE HW-BOILER  SIZE -999  I-N 2  ..

PLANT-PARAMETERS
          BOILER-FUEL NATURAL-GAS ..


                    $ PLANT REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc

STOP  ..
```

```
$ DOE-2.1D BDL Input for Small Hotel/Motel
$ 1990 CEC LS/EUI Study


POST-PROCESSOR  PARTIAL  ..
INPUT LOADS  ..

TITLE LINE-1 *1990 CEC LS/EUI Study*
      LINE-2 *Small Hotel/Motel*
      ..

RUN-PERIOD  JAN 1 1986 THRU DEC 31 1986  ..

   BUILDING-LOCATION  LAT 34.07  LON 118.25  ALT 50  T-Z 8
   AZIMUTH 0
   HOLIDAY YES
   DAYLIGHT-SAVINGS YES
   ..

ABORT ERRORS  ..
LIST WARNINGS  ..
PARAMETER  CREDIT-DAYLTG NO  ..


                  $ LOADS SCHEDULE DATA $

OCC-LOB-ALL             = DAY-SCHEDULE
     (1,8)    ( .1, .1, .1, .1, .1, .2, .4, .6)
     (9,16)   ( .6, .4, .2, .2, .2, .2, .2, .3)
     (17,24)  ( .6, .8, .8, .7, .5, .3, .3, .1)
     ..
OCC-LOB = SCHEDULE THRU DEC 31
     (ALL) OCC-LOB-ALL
     ..
LIGHT-LOB = SCHEDULE THRU DEC 31
     (ALL) (1,24) (1) ..

OCC-LND-ALL             = DAY-SCHEDULE
     (1,8)    ( .0, .0, .0, .0, .0, .0, .0, .2)
     (9,16)   ( .9, .9, .9, .7, .9, .9, .9, .9)
     (17,24)  ( .2, .0, .0, .0, .0, .0, .0, .0)
     ..
OCC-LND = SCHEDULE THRU DEC 31
     (ALL) OCC-LND-ALL
     ..
LIGHT-LND = SCHEDULE THRU DEC 31
     (ALL) (1,7) (.1) (8,17) (.9) (18,24) (.1)
     ..
EQUIP-LND = SCHEDULE THRU DEC 31
     (ALL) (1,7) (0) (8,17) (.8) (18,24) (0)
     ..

OCC-ROOM-ALL            = DAY-SCHEDULE
     (1,8)    ( .8, .8, .8, .8, .8, .8, .6, .4)
     (9,16)   ( .4, .2, .2, .2, .2, .2, .2, .3)
     (17,24)  ( .5, .5, .5, .6, .6, .7, .8, .8)
     ..
OCC-ROOM = SCHEDULE THRU DEC 31
     (ALL) OCC-ROOM-ALL
     ..
LIGHT-ROOM-ALL              = DAY-SCHEDULE
     (1,8)    ( .2, .15, .1, .1, .1, .2, .4, .5)
     (9,16)   ( .4, .4, .25, .25, .25, .25, .25, .25)
     (17,24)  ( .25, .25, .6, .7, .8, .7, .6, .3)
     ..
LIGHT-ROOM = SCHEDULE THRU DEC 31
     (ALL)  LIGHT-ROOM-ALL
     ..
DHW-ROOM-ALL            = DAY-SCHEDULE
     (1,8)    ( .21, .20, .20, .20, .22, .20, .51, .61)
     (9,16)   ( .59, .48, .42, .48, .45, .40, .35, .35)
     (17,24)  ( .33, .45, .60, .65, .55, .50, .48, .20)
     ..
DHW-ROOM = SCHEDULE THRU DEC 31
     (ALL)  DHW-ROOM-ALL
     ..

                  $ LOADS DATA $

$ Exterior Surfaces
$ Wall - plywood,insulation,gyp-board
IN-W MATERIAL  RES = 1.0 ..
WALLR LAYERS   MAT = (PW04,IN-W,GP02) ..
WALL-1 CONSTRUCTION LAYERS = WALLR ..

$ Roof - built-up roofing,plywood,insulation,air-space,accoustic tile
IN-R MATERIAL  RES = 8.0 ..
ROOFR LAYERS   MAT = (BR01,PW05,IN-R,AL33,AC02) ..
ROOF-1 CONSTRUCTION  LAYERS = ROOFR ..

$ Slab - 2' soil, 6" heavy-weight conc., pad, carpet
SOIL MATERIAL  THICKNESS = 2.0  SPECIFIC-HEAT = 0.26
               CONDUCTIVITY = 1.0  DENSITY = 115  ..
SLABL LAYERS  MAT = (SOIL,CC15,CP01)  ..
SLAB-1 CONSTRUCTION LAYERS = SLABL  ..

$ Single Glass
SINGLE GLASS-TYPE PANES = 1
       SHADING-COEF = 0.4
       GLASS-CONDUCTANCE = 1.0278
       ..

$ Zone Calculations
$ 90% Room, 5% Lobby, 5% Laundry
$ Room calcs (800 = 200 sqft per room * 4 orientations)
$ Wall calcs (lobby has three exterior walls, laundry has one)

                  $ DEFAULT CONSTRUCTIONS $

SET-DEFAULT FOR EXTERIOR-WALL
        CONSTRUCTION = WALL-1
        HEIGHT       = 8.
        ..

SET-DEFAULT FOR WINDOW
        GLASS-TYPE = SINGLE
        ..

                  $ GENERAL SPACE CHARACTERISTICS $

LOBB   SPACE-CONDITIONS
                  TEMPERATURE = (73)
                  P-SCH = OCC-LOB
                  P-H-S = 255
                  P-H-L = 255
                  L-SCH = LIGHT-LOB
                  L-T = REC-FLUOR-RV     L-W = 1.5
                  FLOOR-WEIGHT = 70
```

```
                    Z-TYPE = CONDITIONED                    ..

LAUND   SPACE-CONDITIONS
                    TEMPERATURE = (73)
                    P-SCH = OCC-LND
                    P-H-S = 345
                    P-H-L = 435
                    E-SCH = EQUIP-LND    E-W = 3.0
                    L-SCH = LIGHT-LND
                    L-T = SUS-FLUOR      L-W = 1.7
                    SOURCE-TYPE HOT-WATER
                    SOURCE-SCHEDULE EQUIP-LND
                    SOURCE-BTU/HR = 21452
                    S-L 0.1  S-S 0.1
                    FLOOR-WEIGHT = 70
                    Z-TYPE = CONDITIONED                    ..

ROOM    SPACE-CONDITIONS
                    TEMPERATURE = (73)
                    P-SCH = OCC-ROOM
                    N-O-P = 2
                    P-H-S = 230
                    P-H-L = 190
                    E-SCH = LIGHT-ROOM  E-W = 0.6
                    L-SCH = LIGHT-ROOM
                    L-T = INCAND        L-W = 1.0
                    FLOOR-WEIGHT = 70
                    Z-TYPE = CONDITIONED                    ..


                     $ LOBBY $

LOBBY   SPACE
        SPACE-CONDITIONS = LOBB
        AREA             = 1340
        VOLUME           = 10720
        N-O-P            = 7
        ..
LBEW-1  EXTERIOR-WALL
        WIDTH    = 27
        AZIMUTH = 0
        ..
LBW-1   WINDOW
        HEIGHT   = 0.8
        WIDTH    = 27
        ..
        EXTERIOR-WALL LIKE LBEW-1   AZIMUTH = 90 ..
        WINDOW LIKE LBW-1 ..
        EXTERIOR-WALL LIKE LBEW-1   AZIMUTH = 180 ..
        WINDOW LIKE LBW-1 ..
        EXTERIOR-WALL LIKE LBEW-1   AZIMUTH = 270 ..
        WINDOW LIKE LBW-1 ..

SLB-1   UNDERGROUND-FLOOR
        CONSTRUCTION     = SLAB-1
        AREA             = 1340
        U-EFFECTIVE      = 0.0852
        ..

                     $ LAUNDRY $

LAUNDRY SPACE
        SPACE-CONDITIONS = LAUND
        AREA             = 1340
        VOLUME           = 10720
        N-O-P            = 3
        ..
LDEW-1  EXTERIOR-WALL
        WIDTH    = 9
        AZIMUTH = 0
        ..
        EXTERIOR-WALL LIKE LDEW-1   AZIMUTH = 90 ..
        EXTERIOR-WALL LIKE LDEW-1   AZIMUTH = 180 ..
        EXTERIOR-WALL LIKE LDEW-1   AZIMUTH = 270 ..

        UNDERGROUND-FLOOR
        LIKE SLB-1
        AREA             = 1340
        U-EFFECTIVE      = 0.0284
        ..

                          $ ROOMS $

ROOM-1  SPACE
        MULTIPLIER       =  15
        SPACE-CONDITIONS = ROOM
        AREA             = 200
        VOLUME           = 1600
        ..
EW1     EXTERIOR-WALL
        WIDTH    = 20
        AZIMUTH = 0
        ..
W1      WINDOW
        HEIGHT   = 2
        WIDTH    = 20
        ..
SL1     UNDERGROUND-FLOOR
        LIKE SLB-1
        AREA             = 200
        U-EFFECTIVE      = 0.104
        ..

ROOM-2  SPACE LIKE ROOM-1
        MULTIPLIER =  15
        ..
        EXTERIOR-WALL LIKE EW1  AZIMUTH = 90 ..
        WINDOW LIKE W1 ..
        UNDERGROUND-FLOOR LIKE SL1 ..

ROOM-3  SPACE LIKE ROOM-1
        MULTIPLIER =  15
        ..
        EXTERIOR-WALL LIKE EW1  AZIMUTH = 180 ..
        WINDOW LIKE W1 ..
        UNDERGROUND-FLOOR LIKE SL1 ..

ROOM-4  SPACE LIKE ROOM-1
        MULTIPLIER =  15
        ..
        EXTERIOR-WALL LIKE EW1  AZIMUTH = 270 ..
        WINDOW LIKE W1 ..
        UNDERGROUND-FLOOR LIKE SL1 ..

ROOM-1T SPACE LIKE ROOM-1
        MULTIPLIER           = 15
        ..
        EXTERIOR-WALL LIKE EW1  AZIMUTH = 0 ..
```

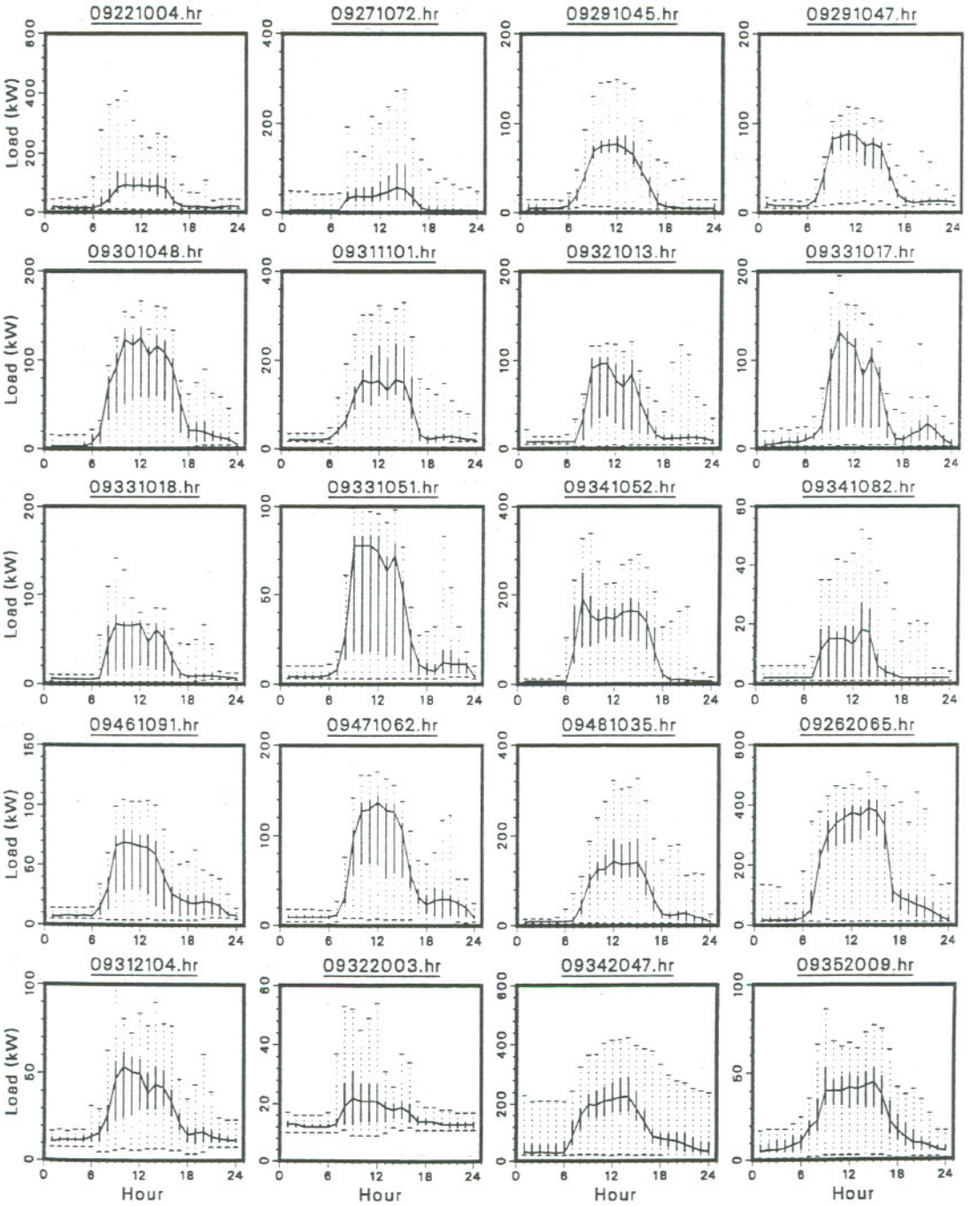
```
          WINDOW LIKE W1 ..
R1        ROOF  CONSTRUCTION     = ROOF-1
          TILT                   = 0.0
          GND-REFLECTANCE        = 0.0
          HEIGHT                 = 10
          WIDTH                  = 20
          ..

ROOM-2T   SPACE LIKE ROOM-1T
          MULTIPLIER = 15
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 90  ..
          WINDOW LIKE W1  ..
          ROOF LIKE R1  ..

ROOM-3T   SPACE LIKE ROOM-1T
          MULTIPLIER = 15
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 180  ..
          WINDOW LIKE W1  ..
          ROOF LIKE R1  ..

ROOM-4T   SPACE LIKE ROOM-1T
          MULTIPLIER = 15
          ..
          EXTERIOR-WALL LIKE EW1  AZIMUTH = 270  ..
          WINDOW LIKE W1  ..
          ROOF LIKE R1  ..


                        $ BUILDING RESOURCES $

BUILDING-RESOURCE
$ schedule and intensity/sq ft. above ground floor from LBL hosp BDL
          HW-SCHEDULE      = DHW-ROOM
          HOT-WATER        = 85824
          GAS-SCHEDULE     = EQUIP-LND
          GAS-THERMS       = 0.5
          ..


                     $ LOADS REPORT DATA $

$ Space peak loads summary, Building peak load components
LOADS-REPORT     S (LS-C,LS-F)  ..

END  ..

COMPUTE LOADS  ..

                    $ SYSTEMS DATA $

INPUT SYSTEMS  ..

                  $ SYSTEM SCHEDULES $

 $  fan schedules $

FAN-LND = SCH                          $ fan schedule for laundry
             THRU DEC 31 (ALL) (1,4) (0) (5,23) (1)  (24) (0)
             ..
ALWAYSON = SCH
             THRU DEC 31 (ALL) (1,24) (1) ..
```

```
 $  Heat-Temp and Cool-Temp schedules$

ROOMHT = SCH THRU DEC 31
          (ALL) (1,8) (70) (9,20) (65) (21,24) (70)  ..
ROOMCL = SCH THRU DEC 31
          (ALL) (1,24) (75) ..

LNDHT = SCH THRU DEC 31
          (ALL) (1,4) (65) (5,23) (70) (24) (65)  ..
LNDCL = SCH THRU DEC 31
          (ALL) (1,4) (85) (5,23) (80) (24) (85)  ..

LOBHT = SCH THRU DEC 31
          (ALL) (1,24) (70) ..
LOBCL = SCH THRU DEC 31
          (ALL) (1,24) (75) ..


LND-AIR = ZONE-AIR  OA-CHANGES = 3.0 ..

LOB-AIR = ZONE-AIR  OA-CFM/PER = 15 ..

CNTRL-LOB  ZONE-CONTROL
           DESIGN-HEAT-T  70
           DESIGN-COOL-T  75
           HEAT-TEMP-SCH  LOBHT
           COOL-TEMP-SCH  LOBCL
           THERMOSTAT-TYPE PROPORTIONAL
           ..

CNTRL-LND  ZONE-CONTROL
           DESIGN-HEAT-T  70
           DESIGN-COOL-T  80
           HEAT-TEMP-SCH  LNDHT
           COOL-TEMP-SCH  LNDCL
           THERMOSTAT-TYPE PROPORTIONAL
           ..

CNTRL-ROOM ZONE-CONTROL
           DESIGN-HEAT-T   70
           DESIGN-COOL-T   75
           HEAT-TEMP-SCH   ROOMHT
           COOL-TEMP-SCH   ROOMCL
           THERMOSTAT-TYPE PROPORTIONAL
           ..

LAUNDRY  ZONE
         ZONE-TYPE CONDITIONED
         ZONE-AIR LND-AIR
         ZONE-CONTROL CNTRL-LND
         ..
LOBBY    ZONE  LIKE LAUNDRY
         ZONE-AIR LOB-AIR
         ZONE-CONTROL CNTRL-L
ROOM-1   ZONE  LIKE LOBBY
         MULTIPLIER =  15
         ZONE-CONTROL CNTRL-ROOM ..
ROOM-2   ZONE  LIKE ROOM-1 ..
ROOM-3   ZONE  LIKE ROOM-1 ..
ROOM-4   ZONE  LIKE ROOM-1 ..
ROOM-1T  ZONE  LIKE ROOM-1
         MULTIPLIER = 15.083437920  ..
ROOM-2T  ZONE  LIKE ROOM-1T ..
ROOM-3T  ZONE  LIKE ROOM-1T ..
```

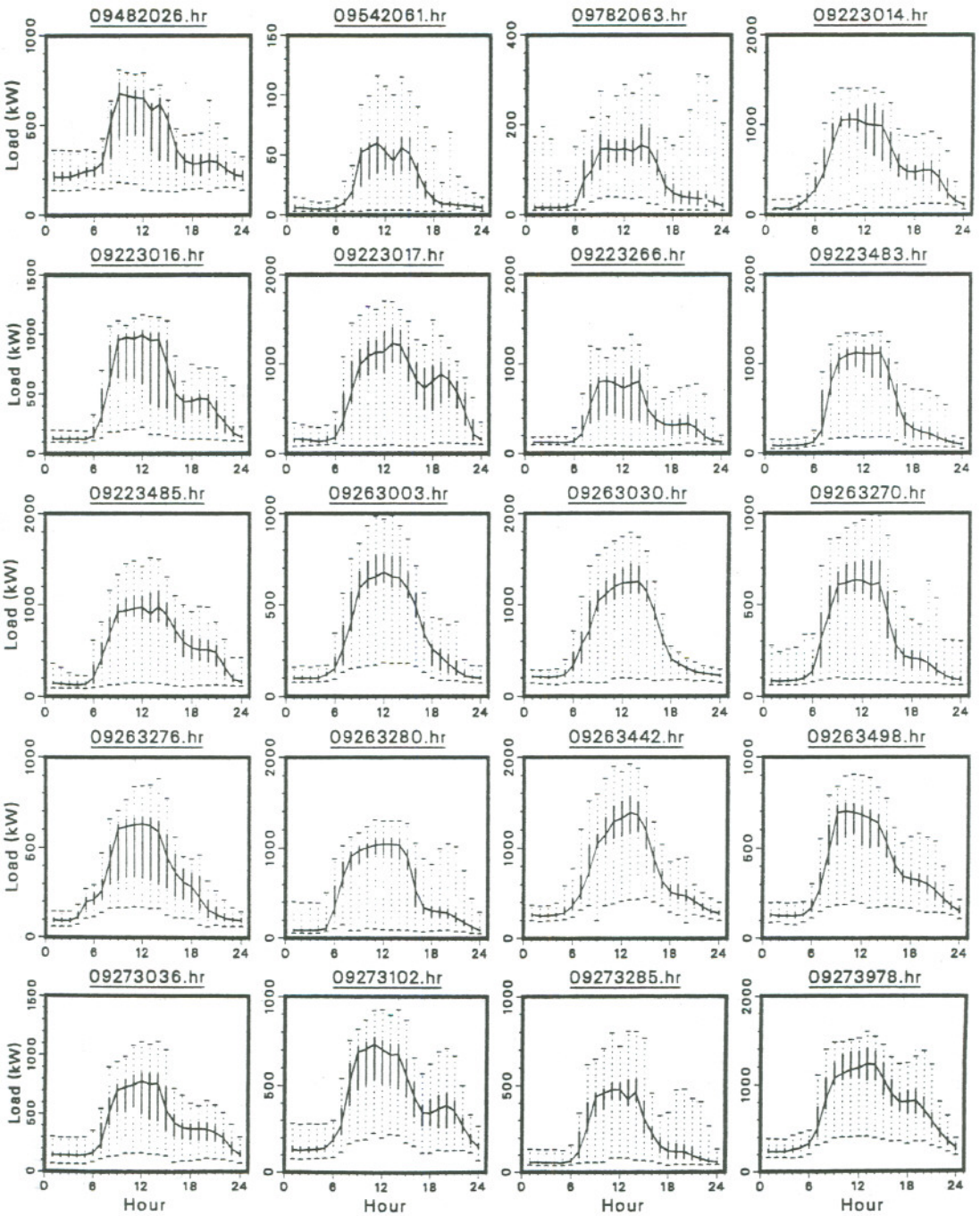
```
ROOM-4T  ZONE  LIKE ROOM-1T ..

NORM-CONT  SYSTEM-CONTROL
     MAX-S-T         110          MIN-S-T       52
     H-SCH           ALWAYSON
     C-SCH           ALWAYSON
     ..

SYS1 SYSTEM  $ lobby
     SYSTEM-TYPE       PSZ
     OA-CONTROL        FIXED
     S-C               NORM-CONT
     F-SCH             ALWAYSON
     ZONE-NAMES        (LOBBY) ..

SYS2 SYSTEM  $ laundry
     LIKE SYS1
     F-SCH             FAN-LND
     ZONE-NAMES        (LAUNDRY) ..

SYS3  SYSTEM  $ rooms
     SYSTEM-TYPE       PTAC
     S-C               NORM-CONT
     HEAT-SOURCE       GAS-FURNACE
     ZONE-NAMES        (ROOM-1,ROOM-2,ROOM-3,ROOM-4
                        ROOM-1T,ROOM-2T,ROOM-3T,ROOM-4T) ..


PLT-1    PLANT-ASSIGNMENT
         SYSTEM-NAMES (SYS1,SYS2,SYS3) ..

##def1 sys_rep[] 3

                    $ SYSTEM REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/system_rep.inc

                      $ PLANT DATA $

INPUT PLANT  ..
PLT-1     PLANT-ASSIGNMENT  ..

DHW       P-E TYPE DHW-HEATER  SIZE -999  ..

PLANT-PARAMETERS
          BOILER-FUEL NATURAL-GAS ..


                    $ PLANT REPORT DATA $

##include /user2/bed/lirsce/DOE2/Proto/plant_rep.inc

STOP  ..
```

Appendix C. Summaries of LRD

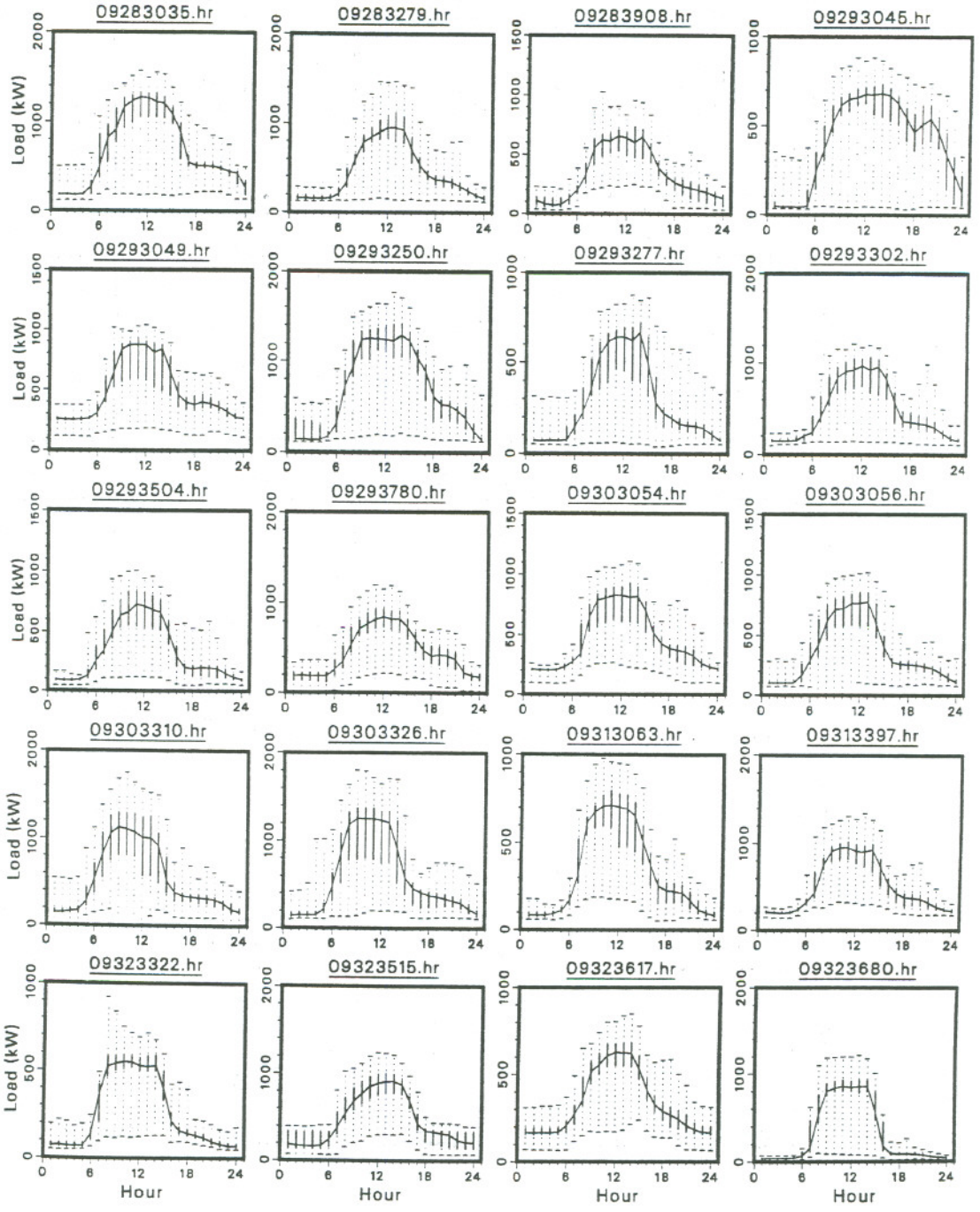
Average Weekday Profiles for Schools



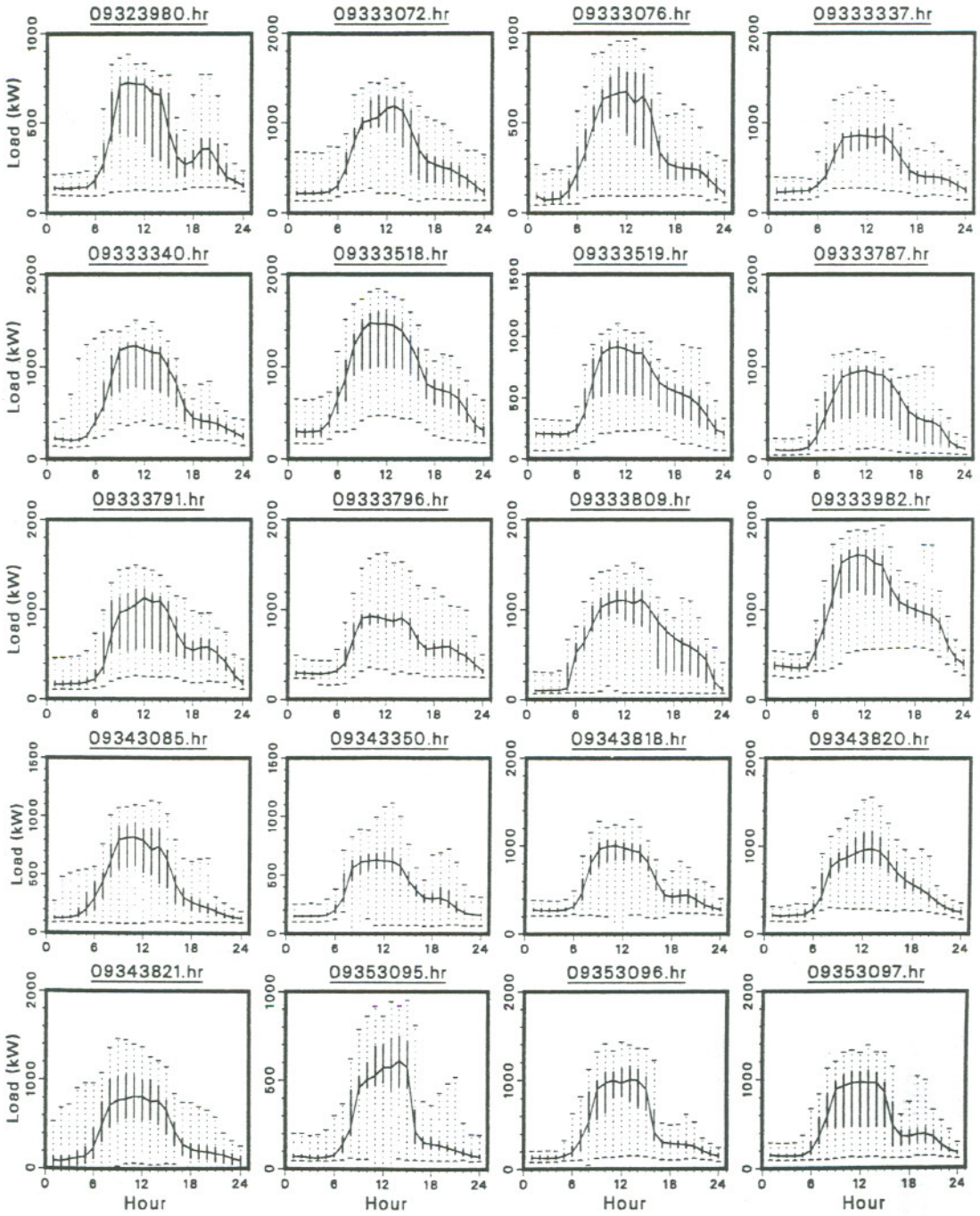
Average Weekday Profiles for Schools



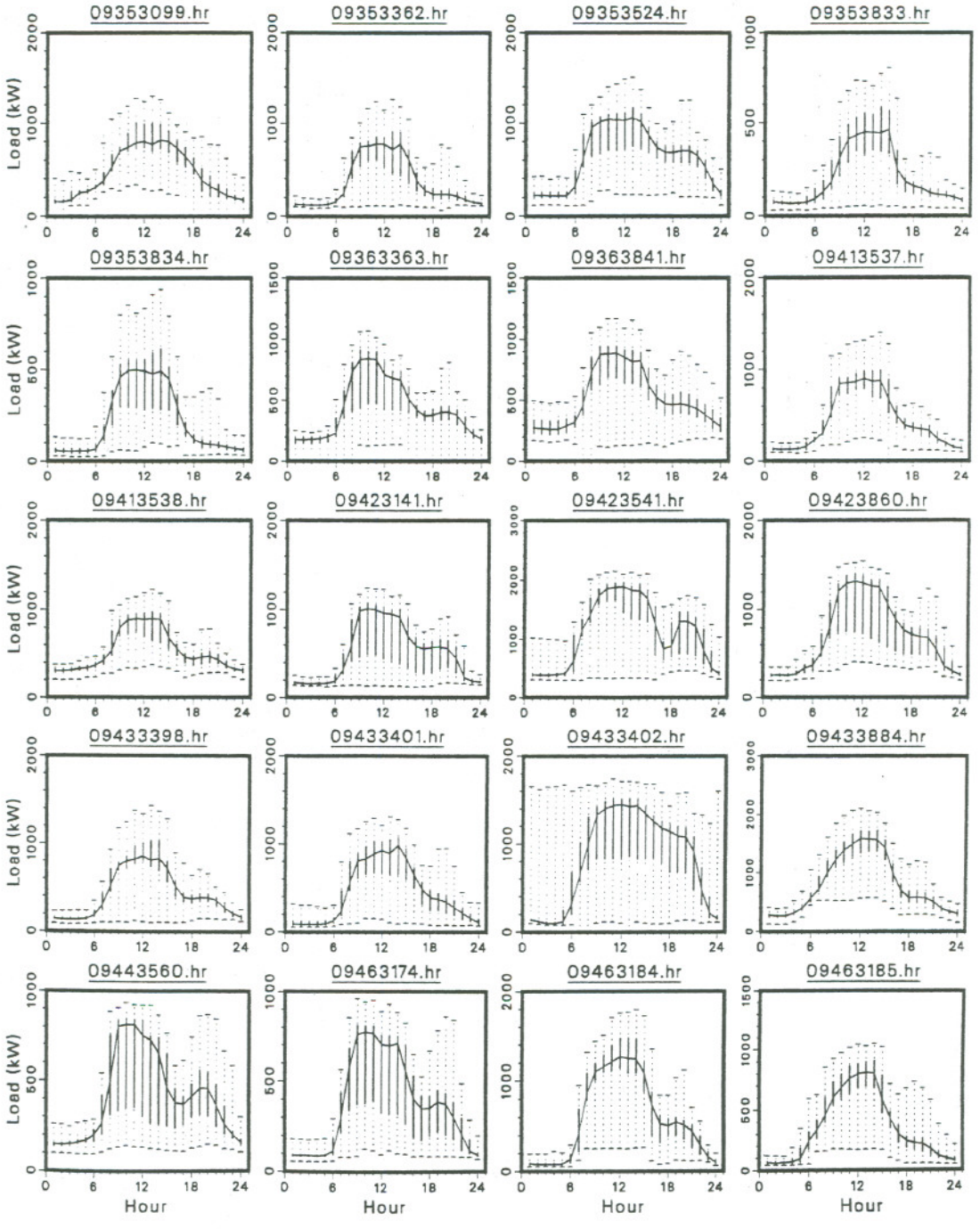
Average Weekday Profiles for Schools



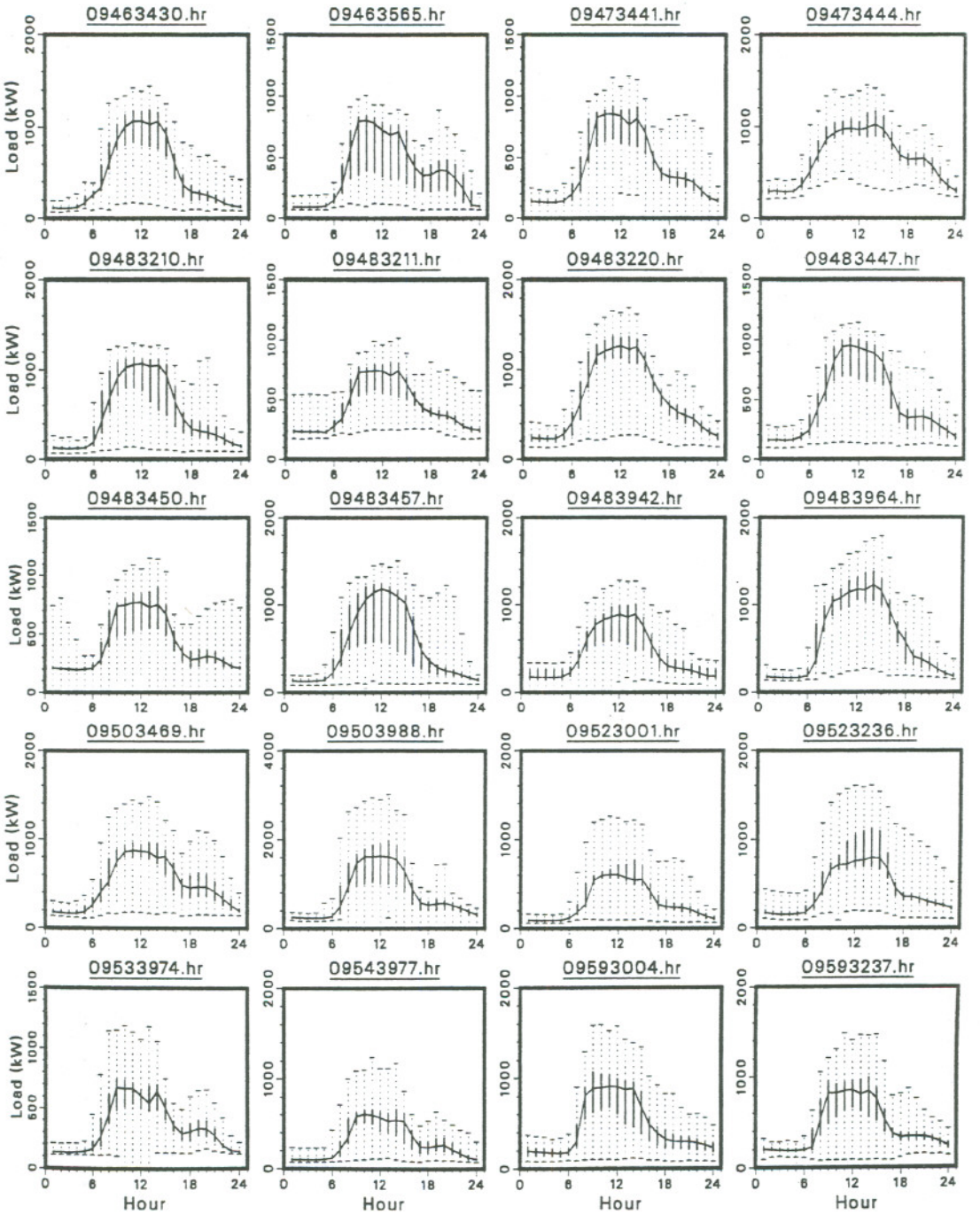
Average Weekday Profiles for Schools



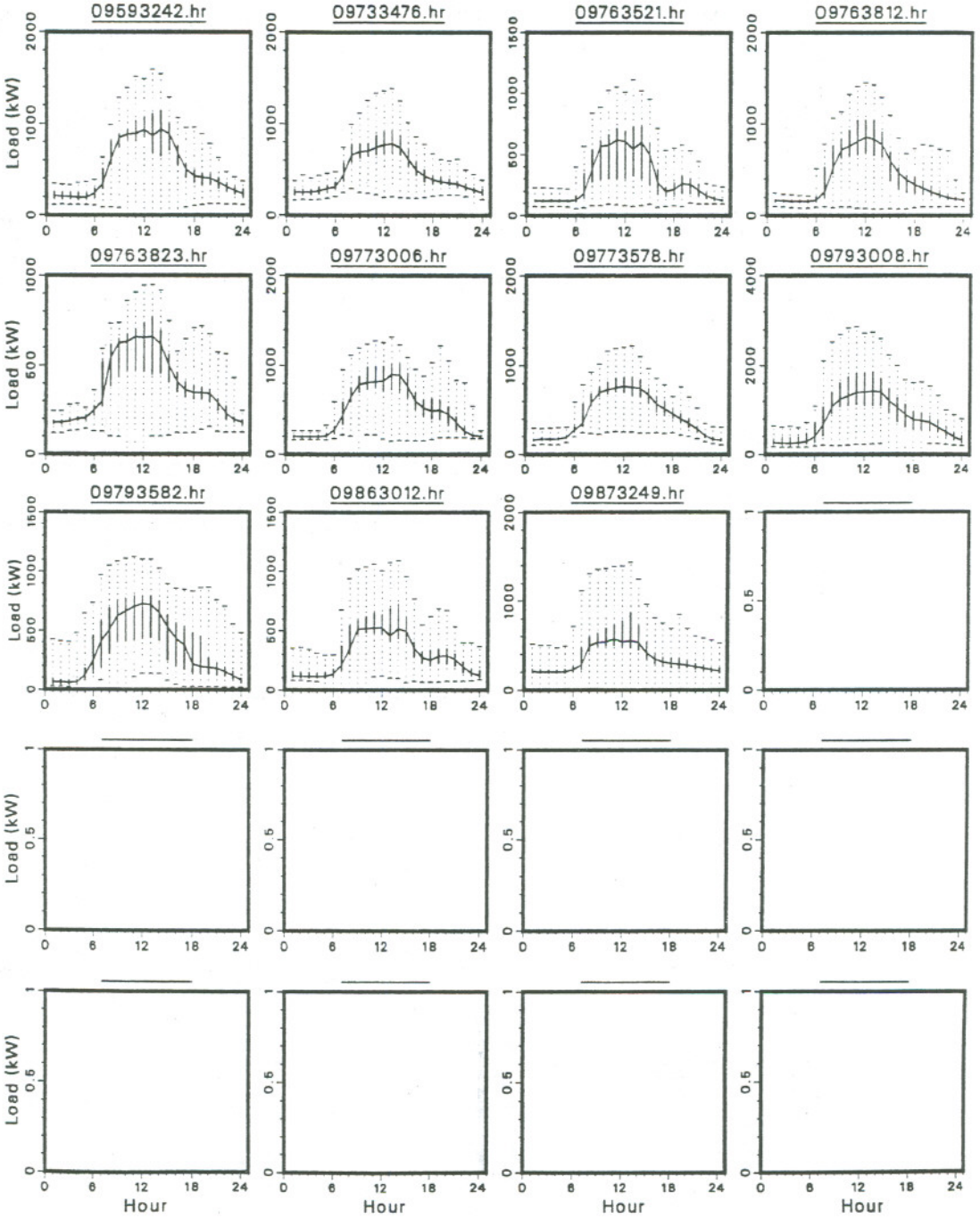
Average Weekday Profiles for Schools



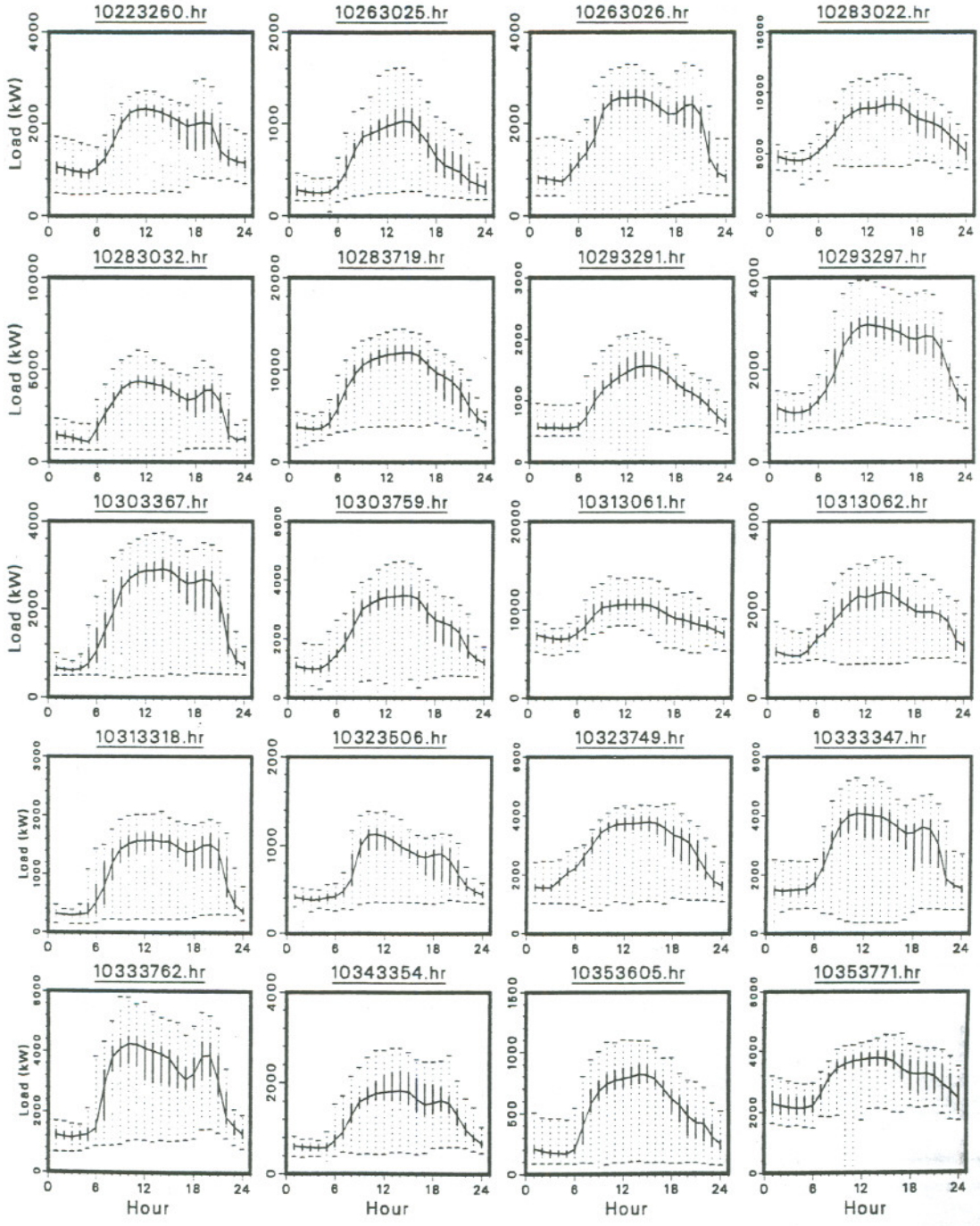
Average Weekday Profiles for Schools



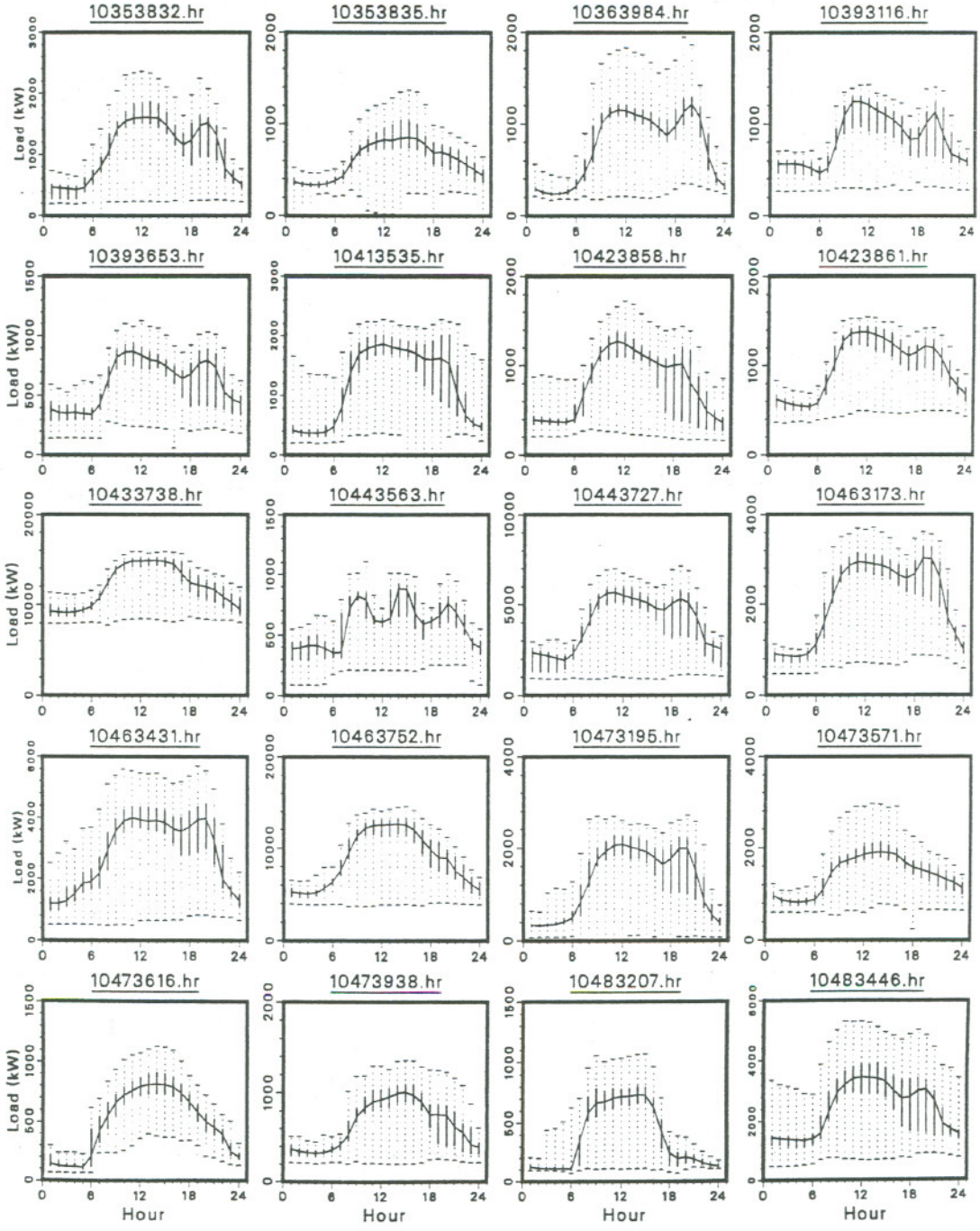
Average Weekday Profiles for Schools



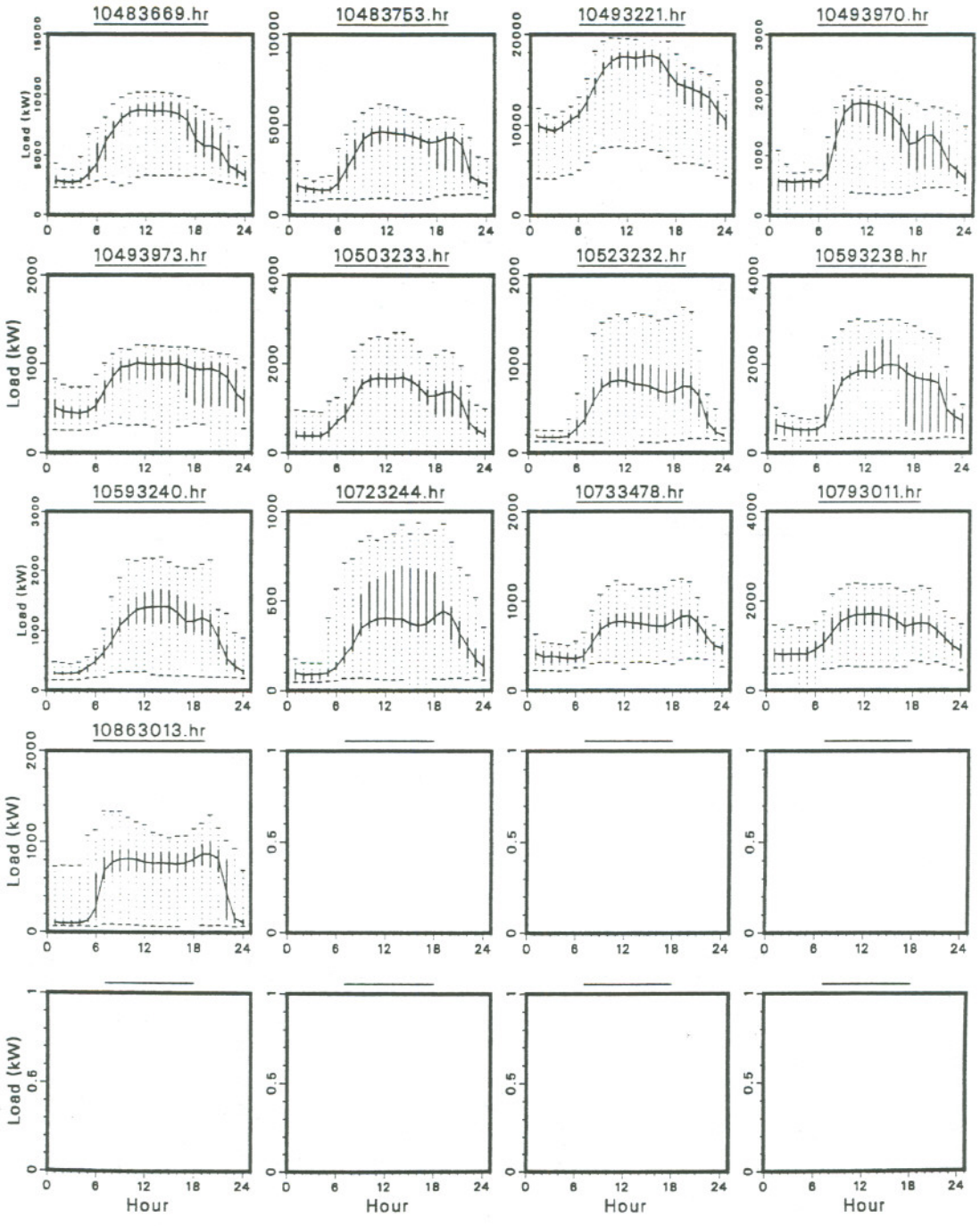
Average Weekday Profiles for Colleges



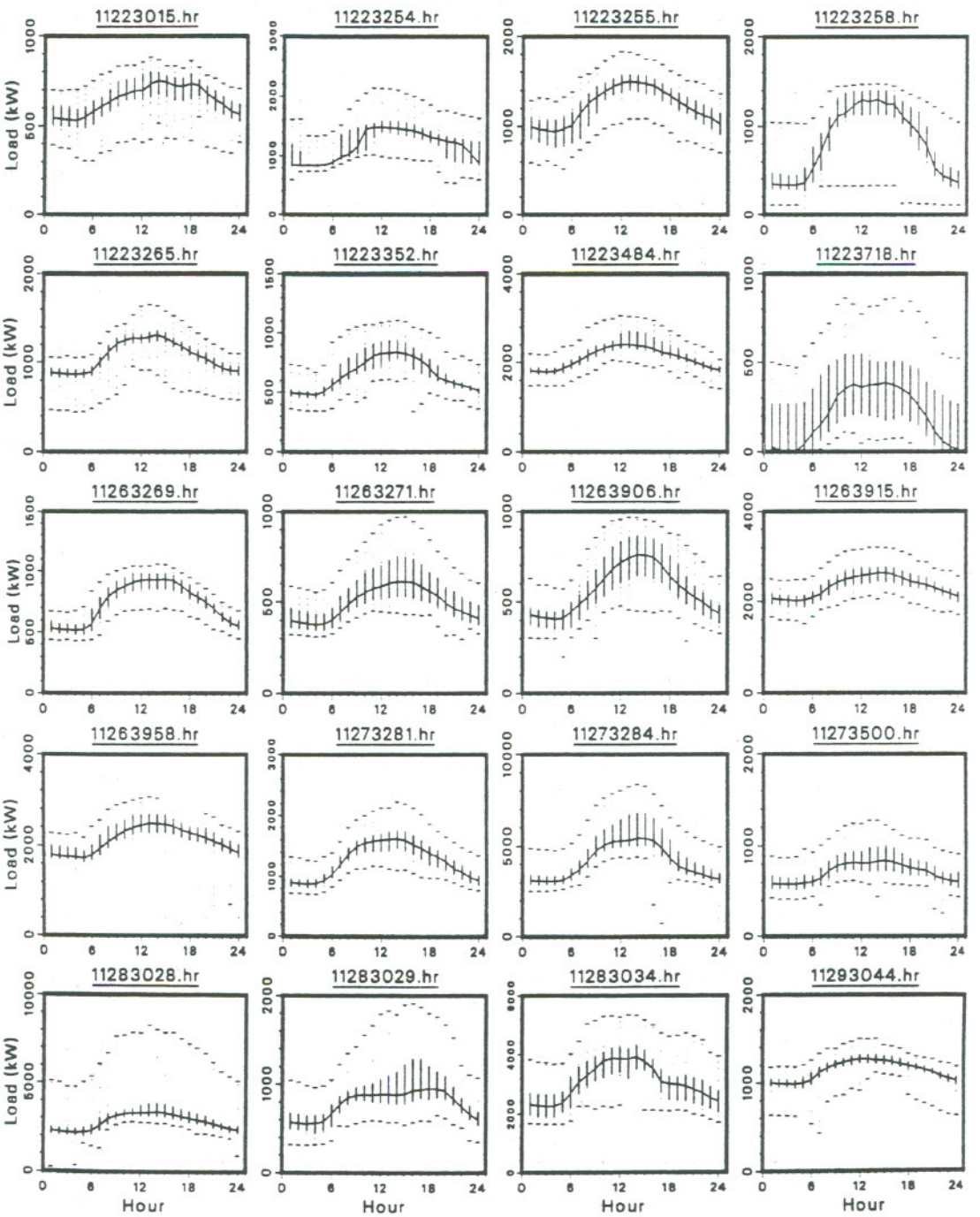
Average Weekday Profiles for Colleges



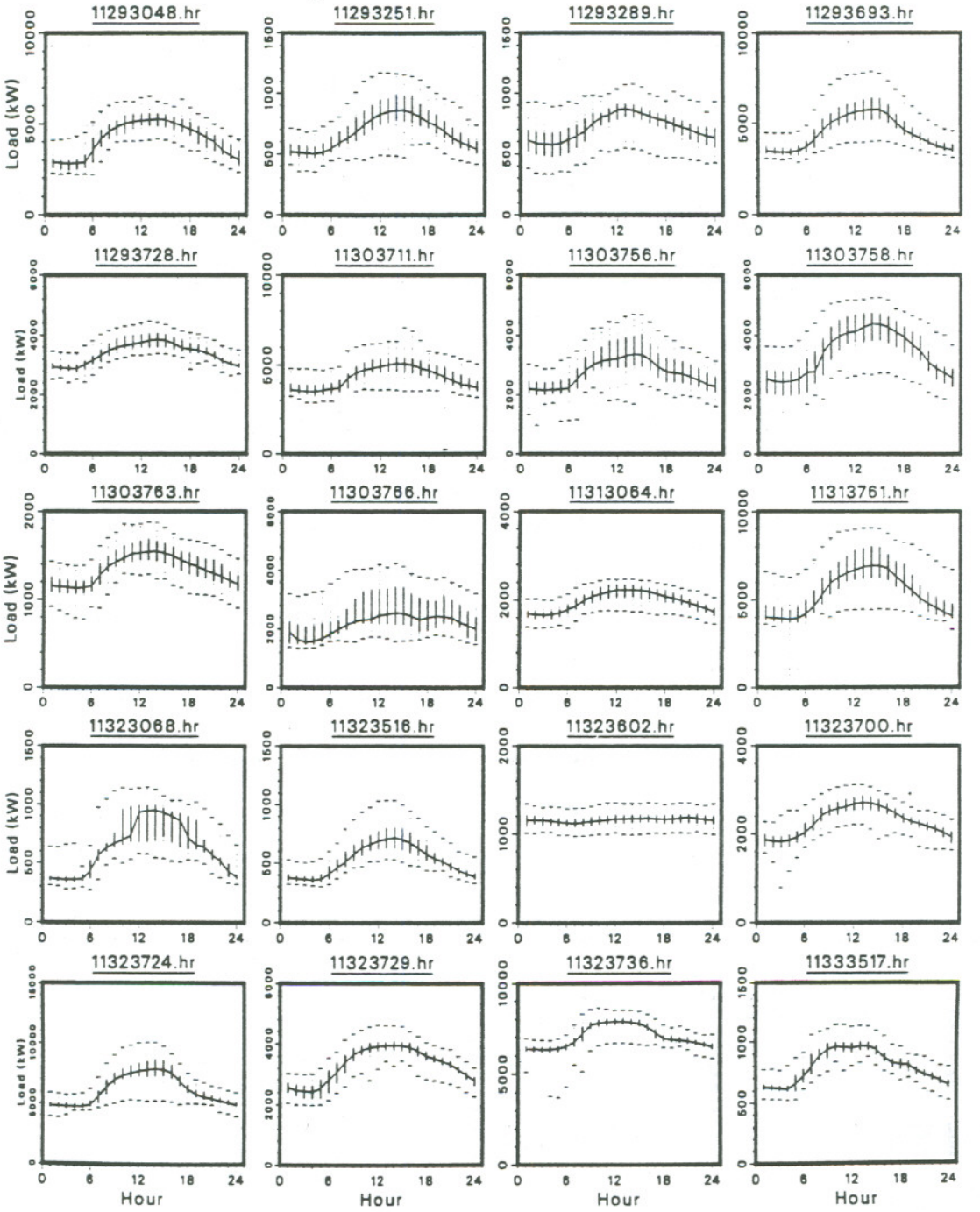
Average Weekday Profiles for Colleges



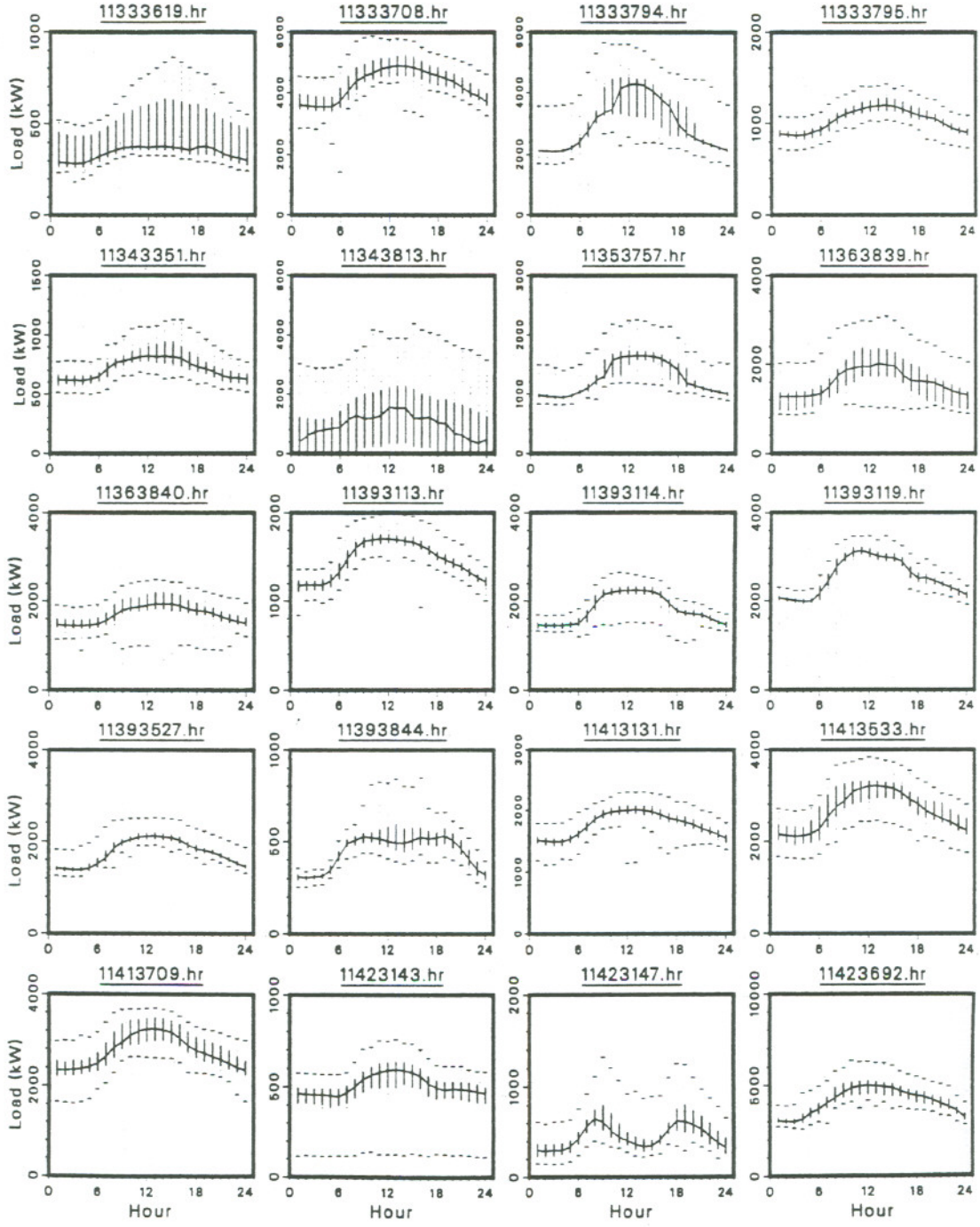
Average Weekday Profiles for Hospitals



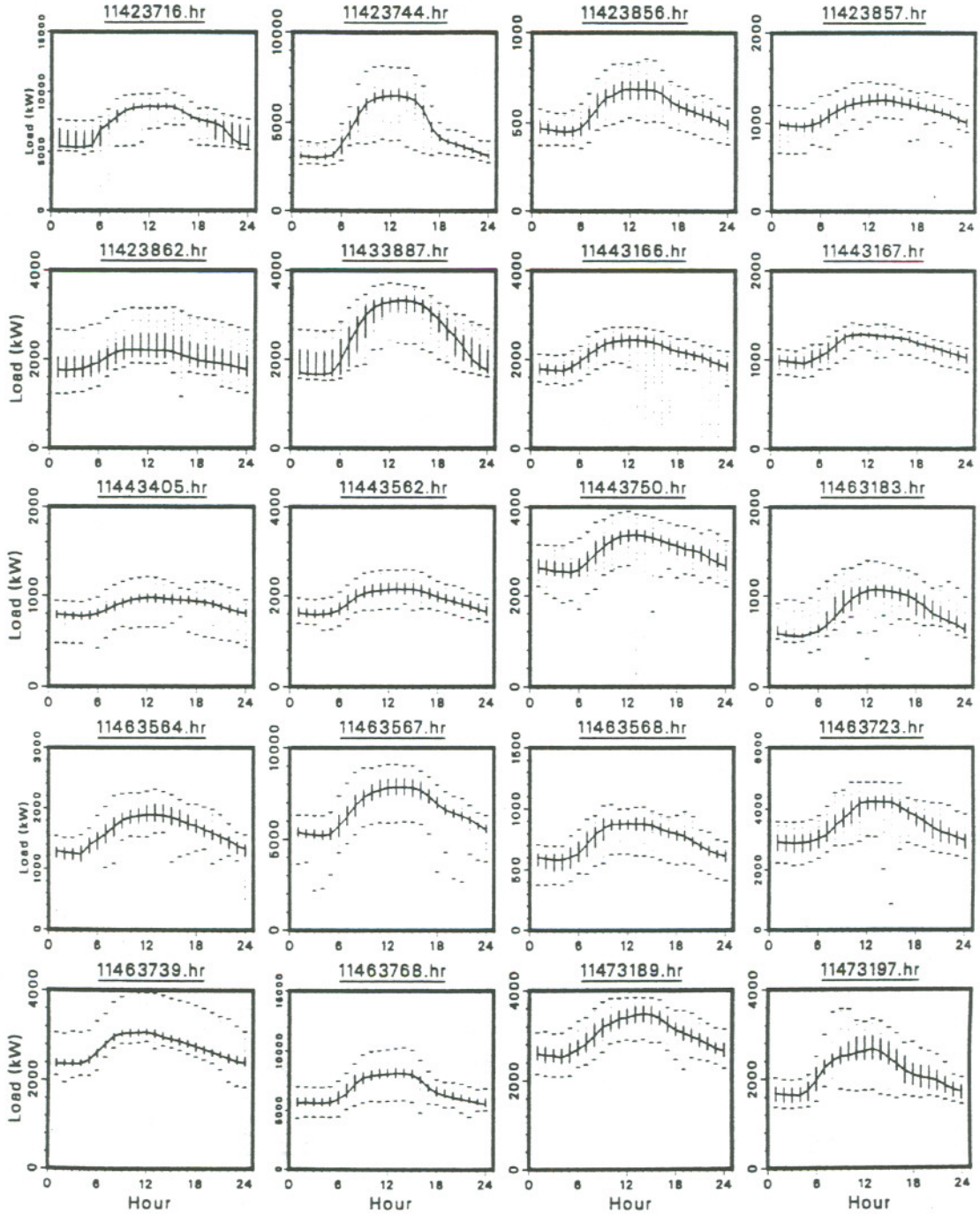
Average Weekday Profiles for Hospitals



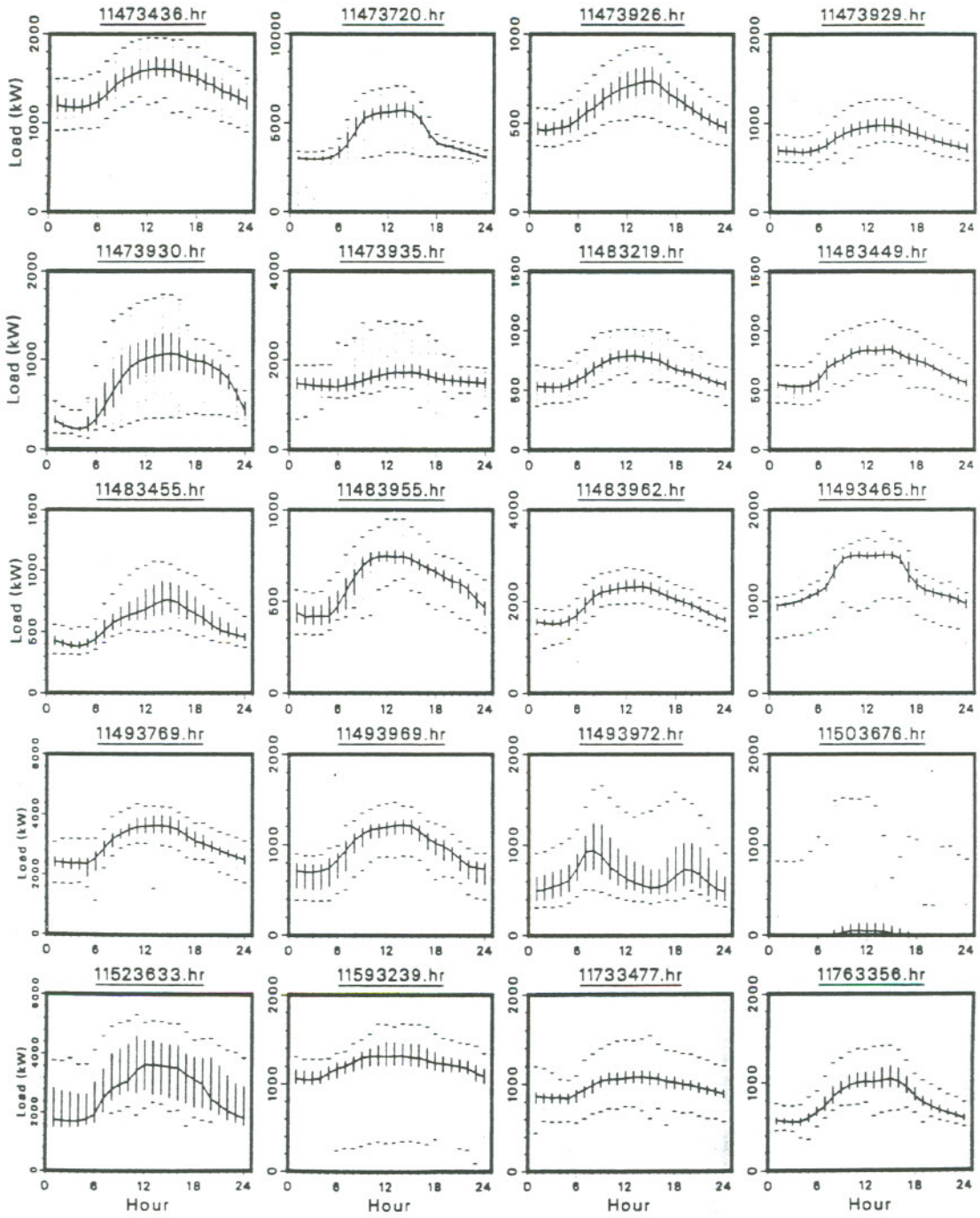
Average Weekday Profiles for Hospitals



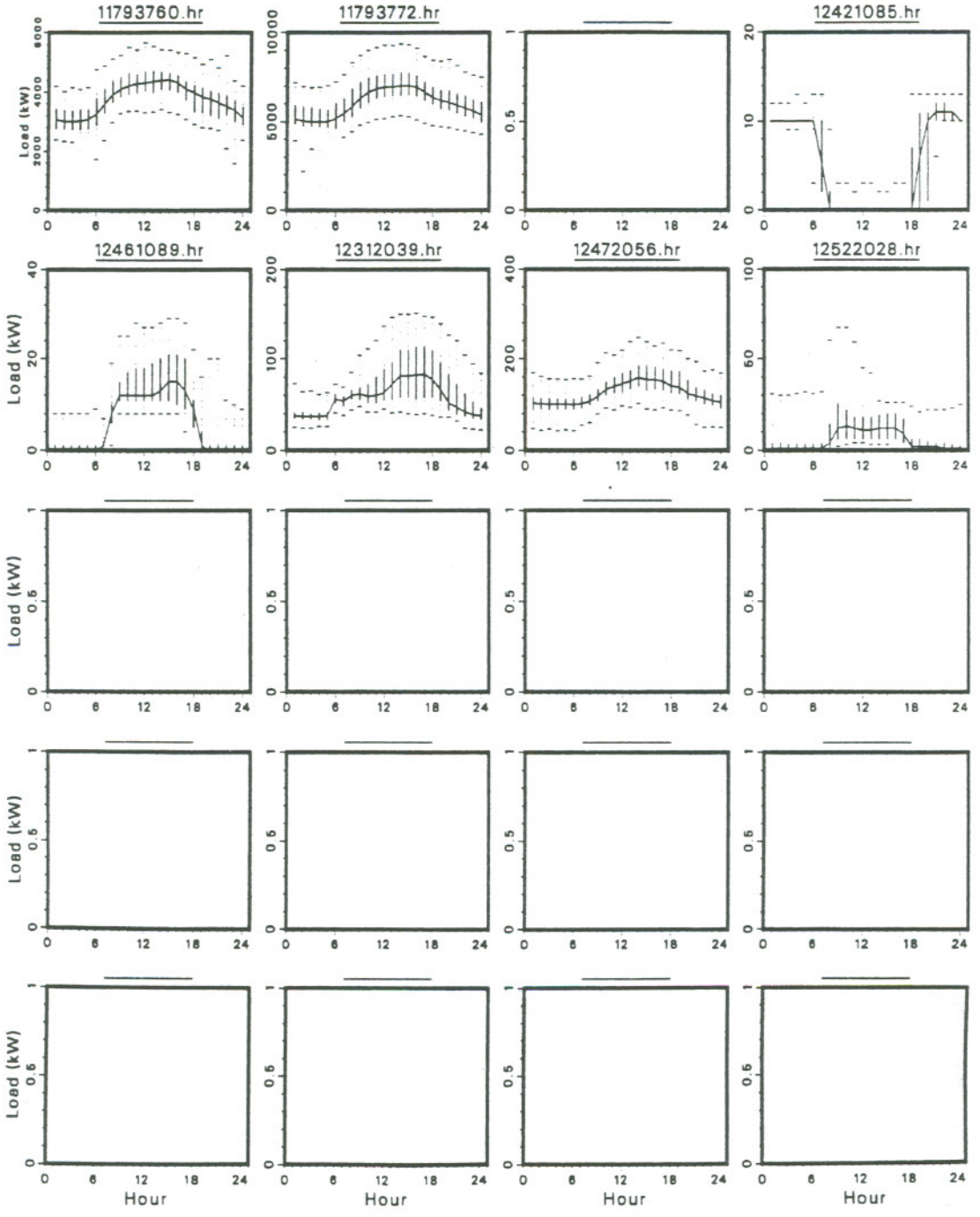
Average Weekday Profiles for Hospitals



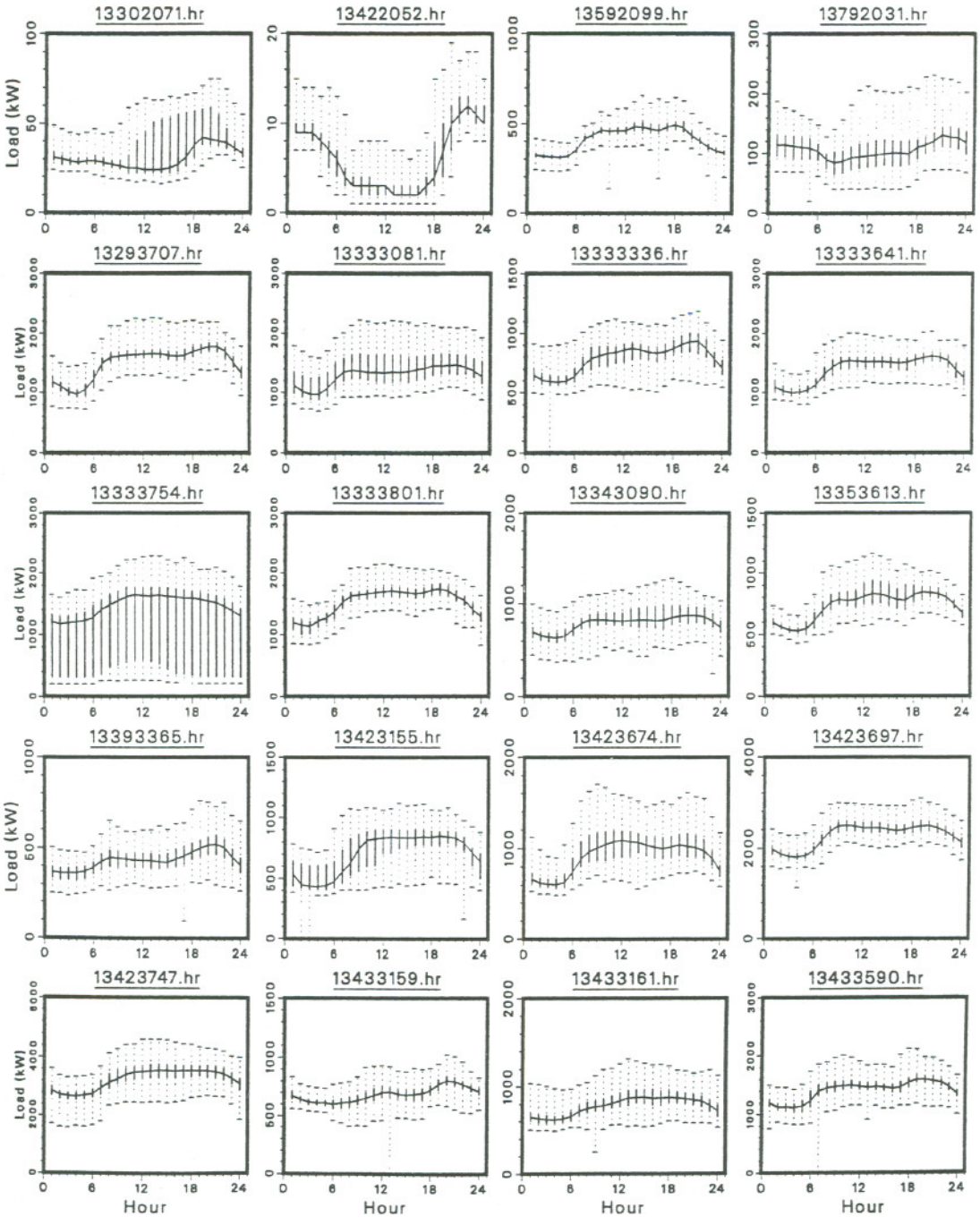
Average Weekday Profiles for Hospitals



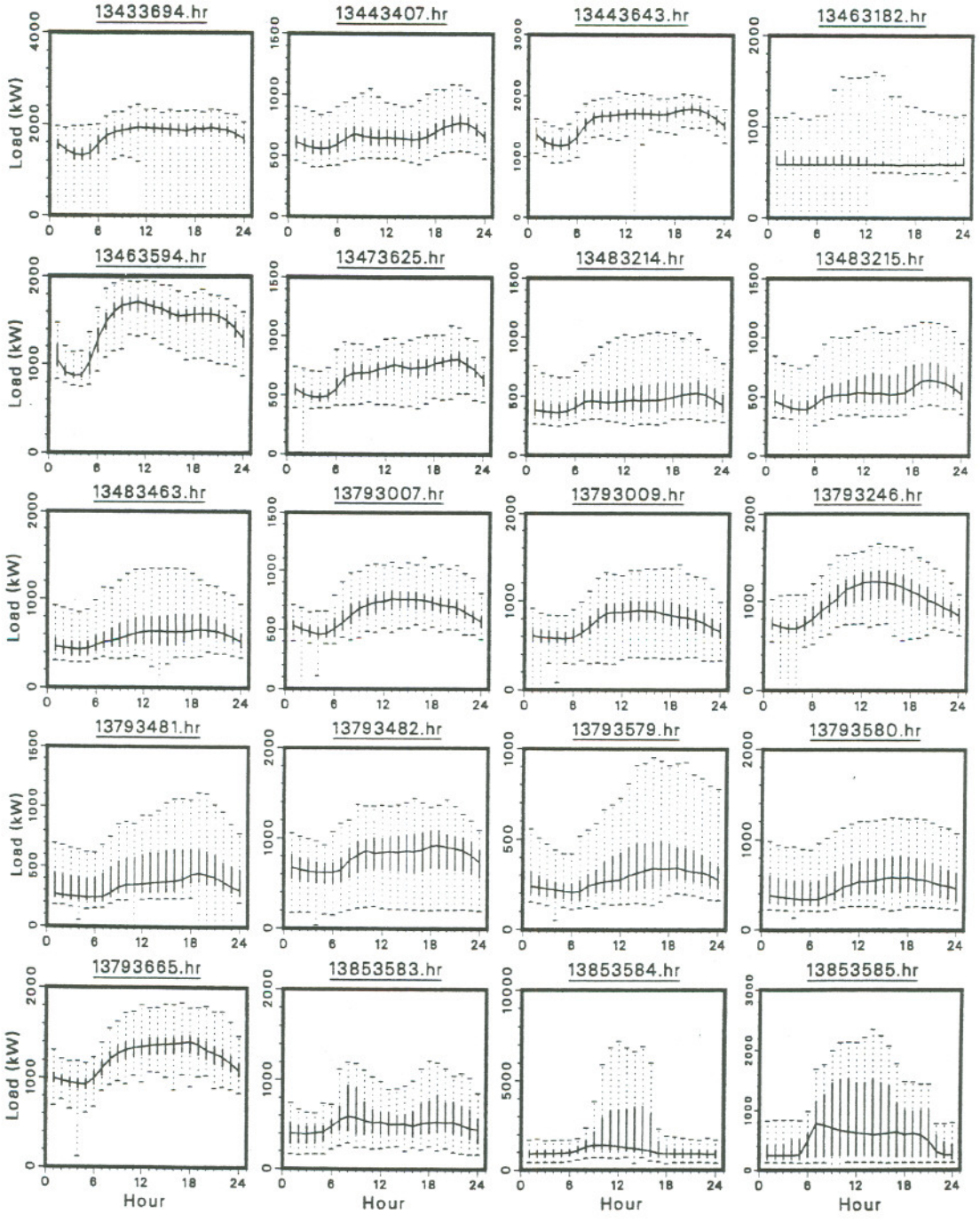
Average Weekday Profiles for Hospitals (and Health)



Average Weekday Profiles for Hotels & Motels



Average Weekday Profiles for Hotels & Motels



Appendix D. Results from Load-Temperature Regressions

LRD Regression Coefficients for Coastal Health - Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	2.233	0.009	0.043	0.79	0.000	102
2	2.214	0.009	0.041	0.79	0.000	102
3	2.215	0.008	0.042	0.77	0.000	98
4	2.199	0.011	0.040	0.75	0.000	96
5	2.287	0.009	0.040	0.73	0.000	93
6	2.429	0.009	0.040	0.66	0.000	93
7	2.590	0.012	0.046	0.67	0.000	96
8	2.758	0.015	0.043	0.87	0.000	114
9	2.842	0.023	0.035	0.85	0.000	124
10	2.913	0.025	0.031	0.83	0.000	125
11	2.940	0.025	0.033	0.84	0.000	126
12	2.931	0.023	0.037	0.81	0.000	126
13	2.958	0.022	0.037	0.76	0.000	126
14	3.022	0.017	0.034	0.75	0.000	126
15	3.004	0.016	0.031	0.73	0.000	126
16	2.854	0.021	0.031	0.76	0.000	126
17	2.712	0.020	0.034	0.78	0.000	126
18	2.575	0.026	0.038	0.81	0.000	125
19	2.554	0.024	0.040	0.83	0.000	124
20	2.468	0.024	0.044	0.86	0.000	124
21	2.407	0.024	0.044	0.80	0.000	119
22	2.358	0.020	0.042	0.80	0.000	118
23	2.271	0.019	0.040	0.81	0.000	118
24	2.208	0.017	0.041	0.82	0.000	115

LRD Regression Coefficients for Coastal Health - Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	2.135	0.020	0.046	0.70	0.001	14
2	2.156	0.016	0.032	0.50	0.086	9
3	2.049	0.032	0.051	0.84	0.010	7
4	2.174	0.000	0.070	0.97	0.033	4
5	2.320	-0.020	0.050	0.98	0.017	4
6	2.470	-0.021	0.008	0.71	0.155	5
7	2.555	-0.006	0.045	0.87	0.017	6
8	2.689	0.005	0.047	0.42	0.029	15
9	2.903	-0.000	0.024	0.22	0.013	37
10	3.032	0.002	0.025	0.44	0.000	65
11	3.039	0.002	0.026	0.60	0.000	96
12	3.017	0.006	0.032	0.71	0.000	112
13	2.995	0.008	0.033	0.71	0.000	116
14	3.034	0.009	0.032	0.68	0.000	115
15	2.980	0.008	0.032	0.66	0.000	115
16	2.945	0.007	0.030	0.59	0.000	116
17	2.816	0.007	0.031	0.64	0.000	117
18	2.734	0.005	0.030	0.58	0.000	105
19	2.696	0.005	0.031	0.50	0.000	79
20	2.603	0.004	0.038	0.60	0.000	63
21	2.552	0.004	0.032	0.53	0.000	43
22	2.484	0.003	0.034	0.49	0.000	29
23	2.370	0.005	0.037	0.53	0.001	21
24	2.250	0.007	0.061	0.69	0.000	16

LRD Regression Coefficients for Coastal Health - Non-Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	2.182	0.008	0.051	0.77	0.000	47
2	2.183	0.005	0.053	0.78	0.000	44
3	2.229	0.003	0.043	0.64	0.000	41
4	2.184	0.010	0.043	0.69	0.000	39
5	2.243	0.011	0.038	0.62	0.000	36
6	2.255	0.016	0.038	0.68	0.000	37
7	2.328	0.015	0.037	0.63	0.000	40
8	2.384	0.008	0.043	0.66	0.000	47
9	2.439	0.015	0.030	0.66	0.000	55
10	2.500	0.019	0.026	0.57	0.000	55
11	2.421	0.022	0.032	0.62	0.000	55
12	2.528	0.019	0.029	0.52	0.000	55
13	2.496	0.017	0.034	0.55	0.000	55
14	2.548	0.018	0.034	0.53	0.000	55
15	2.540	0.015	0.031	0.58	0.000	55
16	2.521	0.020	0.028	0.65	0.000	55
17	2.523	0.019	0.028	0.67	0.000	55
18	2.422	0.020	0.035	0.77	0.000	55
19	2.429	0.021	0.037	0.82	0.000	55
20	2.306	0.024	0.044	0.83	0.000	55
21	2.246	0.025	0.047	0.80	0.000	53
22	2.221	0.020	0.046	0.64	0.000	52
23	2.230	0.010	0.048	0.66	0.000	52
24	2.136	0.013	0.051	0.78	0.000	50

LRD Regression Coefficients for Coastal Health - Non-Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	2.199	0.010	0.024	0.95	0.010	5
2	15.835	0.006	0.259	1.00	2.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	2.370	0.003	0.027	0.66	0.342	4
9	2.579	-0.010	-0.008	0.54	0.045	10
10	2.556	-0.005	0.018	0.54	0.000	32
11	2.525	-0.003	0.021	0.64	0.000	42
12	2.470	0.003	0.028	0.72	0.000	51
13	2.462	0.003	0.027	0.75	0.000	52
14	2.493	0.005	0.028	0.76	0.000	52
15	2.446	0.005	0.030	0.80	0.000	54
16	2.432	0.006	0.030	0.75	0.000	51
17	2.410	0.004	0.030	0.73	0.000	49
18	2.449	0.001	0.026	0.73	0.000	47
19	2.482	0.004	0.031	0.72	0.000	39
20	2.468	0.002	0.023	0.66	0.000	31
21	2.402	0.000	0.022	0.68	0.000	25
22	2.342	0.001	0.020	0.45	0.002	23
23	2.319	0.001	0.012	0.41	0.053	13
24	2.262	0.002	0.006	0.23	0.352	10

LRD Regression Coefficients for Non-Coastal Health - Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	2.335	0.015	0.035	0.73	0.000	104
2	2.280	0.016	0.036	0.64	0.000	101
3	2.298	0.011	0.032	0.62	0.000	97
4	2.306	0.011	0.031	0.60	0.000	92
5	2.354	0.012	0.030	0.61	0.000	87
6	2.613	0.014	0.034	0.67	0.000	81
7	2.858	0.014	0.035	0.69	0.000	85
8	3.038	0.021	0.039	0.79	0.000	95
9	3.170	0.019	0.039	0.81	0.000	117
10	3.149	0.026	0.039	0.85	0.000	124
11	3.134	0.024	0.039	0.87	0.000	124
12	3.070	0.028	0.039	0.89	0.000	125
13	3.017	0.025	0.041	0.89	0.000	124
14	3.041	0.024	0.042	0.88	0.000	125
15	2.948	0.026	0.045	0.89	0.000	125
16	2.885	0.022	0.046	0.88	0.000	123
17	2.800	0.022	0.046	0.89	0.000	125
18	2.789	0.021	0.043	0.88	0.000	126
19	2.750	0.027	0.042	0.90	0.000	124
20	2.688	0.020	0.047	0.84	0.000	123
21	2.597	0.025	0.046	0.84	0.000	123
22	2.486	0.024	0.045	0.82	0.000	121
23	2.419	0.020	0.042	0.80	0.000	114
24	2.364	0.015	0.041	0.74	0.000	109

LRD Regression Coefficients for Non-Coastal Health - Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	2.213	0.002	0.007	0.20	0.190	17
2	2.281	0.006	-0.007	0.05	0.707	16
3	2.280	0.005	-0.008	0.03	0.829	13
4	2.335	0.000	-0.017	0.03	0.890	10
5	2.445	-0.002	-0.052	0.09	0.689	10
6	2.605	0.012	-0.024	0.13	0.506	12
7	2.986	0.008	-0.085	0.20	0.467	9
8	3.168	0.014	-0.010	0.11	0.639	10
9	3.127	0.009	0.022	0.09	0.186	36
10	3.146	0.007	0.027	0.20	0.001	62
11	3.128	0.008	0.024	0.33	0.000	93
12	3.087	0.007	0.025	0.41	0.000	111
13	3.026	0.009	0.029	0.47	0.000	112
14	2.972	0.012	0.033	0.54	0.000	116
15	2.932	0.010	0.032	0.75	0.000	113
16	2.875	0.010	0.033	0.73	0.000	112
17	2.819	0.009	0.030	0.71	0.000	111
18	2.750	0.007	0.027	0.72	0.000	110
19	2.729	0.007	0.024	0.72	0.000	91
20	2.650	0.005	0.020	0.56	0.000	77
21	2.551	0.005	0.019	0.50	0.000	57
22	2.453	0.005	0.014	0.44	0.000	42
23	2.373	0.005	0.008	0.45	0.000	34
24	2.255	0.004	0.010	0.29	0.016	26

LRD Regression Coefficients for Non-Coastal Health - Non-Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	2.294	0.020	0.031	0.72	0.000	45
2	2.267	0.019	0.027	0.67	0.000	43
3	2.261	0.018	0.022	0.59	0.000	41
4	2.285	0.016	0.019	0.55	0.000	40
5	2.338	0.016	0.017	0.56	0.000	37
6	2.500	0.017	0.022	0.60	0.000	37
7	2.600	0.017	0.025	0.53	0.000	40
8	2.579	0.020	0.038	0.71	0.000	43
9	2.701	0.021	0.025	0.58	0.000	53
10	2.654	0.022	0.031	0.68	0.000	55
11	2.662	0.025	0.032	0.74	0.000	55
12	2.582	0.020	0.036	0.80	0.000	55
13	2.628	0.022	0.035	0.84	0.000	55
14	2.573	0.022	0.037	0.86	0.000	54
15	2.556	0.022	0.037	0.86	0.000	55
16	2.511	0.023	0.040	0.87	0.000	54
17	2.553	0.024	0.039	0.88	0.000	55
18	2.654	0.026	0.036	0.83	0.000	55
19	2.630	0.023	0.036	0.82	0.000	55
20	2.587	0.028	0.036	0.87	0.000	55
21	2.554	0.026	0.033	0.79	0.000	54
22	2.485	0.023	0.029	0.72	0.000	52
23	2.408	0.019	0.029	0.72	0.000	48
24	2.400	0.013	0.025	0.65	0.000	45

LRD Regression Coefficients for Non-Coastal Health - Non-Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	2.193	0.002	0.006	0.07	0.746	10
2	2.033	-0.008	0.040	0.44	0.745	3
3	4.539	-0.000	0.040	0.00	0.952	4
4	4.410	-0.007	0.040	0.55	0.258	4
5	4.382	-0.009	0.040	0.69	0.171	4
6	2.018	-0.015	0.041	0.83	0.167	4
7	2.020	-0.017	-0.004	0.94	0.243	3
8	2.613	0.005	-0.005	0.20	0.647	6
9	2.597	-0.002	0.003	0.06	0.677	14
10	2.566	0.004	0.021	0.52	0.000	28
11	2.500	0.001	0.022	0.55	0.000	36
12	2.522	0.003	0.023	0.68	0.000	43
13	2.526	0.005	0.025	0.71	0.000	47
14	2.490	0.004	0.025	0.67	0.000	48
15	2.448	0.004	0.027	0.69	0.000	49
16	2.388	0.006	0.030	0.77	0.000	48
17	2.417	0.005	0.027	0.74	0.000	49
18	2.508	0.003	0.023	0.73	0.000	47
19	2.533	0.004	0.021	0.76	0.000	41
20	2.492	0.001	0.015	0.36	0.002	31
21	2.381	-0.001	0.012	0.30	0.013	26
22	2.322	-0.002	0.005	0.12	0.273	22
23	2.246	-0.002	0.004	0.17	0.170	21
24	2.172	-0.001	0.005	0.12	0.380	17

LRD Regression Coefficients for Coastal Lodging - Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.925	-0.000	0.013	0.34	0.000	150
2	0.870	0.000	0.013	0.42	0.000	147
3	0.855	0.000	0.012	0.44	0.000	140
4	0.854	0.001	0.012	0.46	0.000	136
5	0.892	0.002	0.012	0.40	0.000	130
6	0.970	0.004	0.013	0.32	0.000	131
7	1.052	0.005	0.013	0.25	0.000	137
8	1.095	0.006	0.012	0.47	0.000	162
9	1.097	0.007	0.011	0.62	0.000	180
10	1.092	0.007	0.011	0.67	0.000	181
11	1.092	0.008	0.010	0.66	0.000	182
12	1.082	0.007	0.010	0.64	0.000	182
13	1.078	0.006	0.011	0.61	0.000	182
14	1.084	0.005	0.010	0.57	0.000	182
15	1.076	0.005	0.009	0.58	0.000	182
16	1.074	0.005	0.009	0.54	0.000	182
17	1.078	0.005	0.010	0.51	0.000	182
18	1.098	0.006	0.010	0.40	0.000	181
19	1.143	0.006	0.009	0.30	0.000	180
20	1.153	0.006	0.012	0.43	0.000	180
21	1.162	0.005	0.014	0.40	0.000	173
22	1.128	0.004	0.014	0.40	0.000	171
23	1.060	0.002	0.014	0.38	0.000	171
24	0.991	0.001	0.013	0.34	0.000	166

LRD Regression Coefficients for Coastal Lodging - Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.906	0.003	0.006	0.07	0.516	20
2	0.803	0.006	0.019	0.51	0.041	11
3	0.765	0.011	0.010	0.52	0.113	8
4	0.895	-0.020	0.007	0.81	0.084	5
5	0.945	-0.023	-0.021	0.90	0.034	5
6	0.959	-0.014	-0.015	0.27	0.536	6
7	1.016	-0.009	0.015	0.33	0.366	7
8	1.023	0.005	0.010	0.09	0.418	20
9	1.083	-0.000	0.003	0.02	0.676	48
10	1.077	0.003	0.007	0.24	0.000	98
11	1.069	0.003	0.007	0.28	0.000	139
12	1.055	0.003	0.008	0.30	0.000	164
13	1.047	0.003	0.008	0.31	0.000	169
14	1.043	0.004	0.008	0.34	0.000	168
15	1.037	0.004	0.007	0.31	0.000	170
16	1.028	0.003	0.007	0.29	0.000	168
17	1.047	0.003	0.007	0.21	0.000	167
18	1.118	0.002	0.005	0.06	0.008	153
19	1.145	0.003	0.007	0.12	0.001	119
20	1.159	0.004	0.009	0.16	0.000	95
21	1.158	0.003	0.006	0.16	0.003	69
22	1.147	0.003	0.003	0.09	0.096	53
23	1.094	0.003	-0.000	0.11	0.142	35
24	1.011	0.001	-0.003	0.03	0.672	27

LRD Regression Coefficients for Coastal Lodging - Non-Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.000	0.000	0.000	0.00	1.000	0
2	0.000	0.000	0.000	0.00	1.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.000	0.000	0.000	0.00	1.000	0
9	0.000	0.000	0.000	0.00	1.000	0
10	0.000	0.000	0.000	0.00	1.000	0
11	0.000	0.000	0.000	0.00	1.000	0
12	0.000	0.000	0.000	0.00	1.000	0
13	0.000	0.000	0.000	0.00	1.000	0
14	0.000	0.000	0.000	0.00	1.000	0
15	0.000	0.000	0.000	0.00	1.000	0
16	0.000	0.000	0.000	0.00	1.000	0
17	0.000	0.000	0.000	0.00	1.000	0
18	0.000	0.000	0.000	0.00	1.000	0
19	0.000	0.000	0.000	0.00	1.000	0
20	0.000	0.000	0.000	0.00	1.000	0
21	0.000	0.000	0.000	0.00	1.000	0
22	0.000	0.000	0.000	0.00	1.000	0
23	0.000	0.000	0.000	0.00	1.000	0
24	0.000	0.000	0.000	0.00	1.000	0

LRD Regression Coefficients for Coastal Lodging - Non-Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.000	0.000	0.000	0.00	1.000	0
2	0.000	0.000	0.000	0.00	1.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.000	0.000	0.000	0.00	1.000	0
9	0.000	0.000	0.000	0.00	1.000	0
10	0.000	0.000	0.000	0.00	1.000	0
11	0.000	0.000	0.000	0.00	1.000	0
12	0.000	0.000	0.000	0.00	1.000	0
13	0.000	0.000	0.000	0.00	1.000	0
14	0.000	0.000	0.000	0.00	1.000	0
15	0.000	0.000	0.000	0.00	1.000	0
16	0.000	0.000	0.000	0.00	1.000	0
17	0.000	0.000	0.000	0.00	1.000	0
18	0.000	0.000	0.000	0.00	1.000	0
19	0.000	0.000	0.000	0.00	1.000	0
20	0.000	0.000	0.000	0.00	1.000	0
21	0.000	0.000	0.000	0.00	1.000	0
22	0.000	0.000	0.000	0.00	1.000	0
23	0.000	0.000	0.000	0.00	1.000	0
24	0.000	0.000	0.000	0.00	1.000	0

LRD Regression Coefficients for Non-Coastal Lodging - Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	1.179	0.006	0.014	0.45	0.000	150
2	1.154	0.005	0.013	0.38	0.000	145
3	1.133	0.005	0.013	0.49	0.000	139
4	1.127	0.006	0.012	0.42	0.000	133
5	1.136	0.006	0.011	0.38	0.000	125
6	1.215	0.004	0.011	0.39	0.000	119
7	1.316	0.003	0.008	0.22	0.000	126
8	1.343	0.007	0.007	0.34	0.000	139
9	1.383	0.008	0.009	0.58	0.000	171
10	1.338	0.011	0.011	0.47	0.000	180
11	1.321	0.011	0.012	0.62	0.000	180
12	1.321	0.010	0.012	0.75	0.000	181
13	1.329	0.011	0.013	0.77	0.000	180
14	1.318	0.011	0.014	0.75	0.000	180
15	1.272	0.012	0.015	0.76	0.000	181
16	1.249	0.010	0.016	0.73	0.000	178
17	1.321	0.010	0.016	0.74	0.000	181
18	1.375	0.013	0.016	0.76	0.000	182
19	1.417	0.014	0.016	0.77	0.000	180
20	1.410	0.009	0.015	0.66	0.000	179
21	1.385	0.009	0.015	0.62	0.000	178
22	1.297	0.010	0.016	0.51	0.000	174
23	1.248	0.008	0.015	0.49	0.000	163
24	1.219	0.005	0.014	0.44	0.000	155

LRD Regression Coefficients for Non-Coastal Lodging - Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	1.221	0.002	0.000	0.05	0.492	28
2	1.164	0.001	0.001	0.01	0.898	20
3	1.145	0.001	-0.003	0.04	0.763	17
4	1.126	-0.001	-0.004	0.08	0.602	14
5	1.137	-0.000	-0.004	0.04	0.776	14
6	1.215	0.001	0.005	0.08	0.527	17
7	1.332	0.002	0.001	0.39	0.065	13
8	1.355	0.004	0.005	0.28	0.085	17
9	1.459	0.005	0.002	0.30	0.000	51
10	1.443	0.006	0.007	0.31	0.000	91
11	1.411	0.006	0.008	0.31	0.000	130
12	1.386	0.006	0.009	0.38	0.000	155
13	1.398	0.006	0.009	0.39	0.000	160
14	1.397	0.006	0.008	0.37	0.000	165
15	1.353	0.005	0.008	0.36	0.000	163
16	1.343	0.006	0.009	0.36	0.000	161
17	1.428	0.004	0.006	0.26	0.000	161
18	1.533	0.002	0.004	0.12	0.000	158
19	1.555	0.003	0.007	0.18	0.000	133
20	1.463	0.004	0.011	0.29	0.000	109
21	1.409	0.004	0.012	0.30	0.000	84
22	1.342	0.004	0.011	0.25	0.000	65
23	1.298	0.003	0.007	0.14	0.015	56
24	1.236	0.003	0.008	0.14	0.047	44

LRD Regression Coefficients for Non-Coastal Lodging - Non-Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.000	0.000	0.000	0.00	1.000	0
2	0.000	0.000	0.000	0.00	1.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.000	0.000	0.000	0.00	1.000	0
9	0.000	0.000	0.000	0.00	1.000	0
10	0.000	0.000	0.000	0.00	1.000	0
11	0.000	0.000	0.000	0.00	1.000	0
12	0.000	0.000	0.000	0.00	1.000	0
13	0.000	0.000	0.000	0.00	1.000	0
14	0.000	0.000	0.000	0.00	1.000	0
15	0.000	0.000	0.000	0.00	1.000	0
16	0.000	0.000	0.000	0.00	1.000	0
17	0.000	0.000	0.000	0.00	1.000	0
18	0.000	0.000	0.000	0.00	1.000	0
19	0.000	0.000	0.000	0.00	1.000	0
20	0.000	0.000	0.000	0.00	1.000	0
21	0.000	0.000	0.000	0.00	1.000	0
22	0.000	0.000	0.000	0.00	1.000	0
23	0.000	0.000	0.000	0.00	1.000	0
24	0.000	0.000	0.000	0.00	1.000	0

LRD Regression Coefficients for Non-Coastal Lodging - Non-Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.000	0.000	0.000	0.00	1.000	0
2	0.000	0.000	0.000	0.00	1.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.000	0.000	0.000	0.00	1.000	0
9	0.000	0.000	0.000	0.00	1.000	0
10	0.000	0.000	0.000	0.00	1.000	0
11	0.000	0.000	0.000	0.00	1.000	0
12	0.000	0.000	0.000	0.00	1.000	0
13	0.000	0.000	0.000	0.00	1.000	0
14	0.000	0.000	0.000	0.00	1.000	0
15	0.000	0.000	0.000	0.00	1.000	0
16	0.000	0.000	0.000	0.00	1.000	0
17	0.000	0.000	0.000	0.00	1.000	0
18	0.000	0.000	0.000	0.00	1.000	0
19	0.000	0.000	0.000	0.00	1.000	0
20	0.000	0.000	0.000	0.00	1.000	0
21	0.000	0.000	0.000	0.00	1.000	0
22	0.000	0.000	0.000	0.00	1.000	0
23	0.000	0.000	0.000	0.00	1.000	0
24	0.000	0.000	0.000	0.00	1.000	0

LRD Regression Coefficients for Coastal School - Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.422	0.003	0.001	0.05	0.377	38
2	0.412	0.004	0.001	0.08	0.235	38
3	0.421	0.002	0.002	0.04	0.520	34
4	0.425	0.003	-0.000	0.03	0.675	32
5	0.421	0.007	-0.006	0.20	0.043	30
6	0.482	0.005	-0.005	0.10	0.233	30
7	0.678	0.002	-0.009	0.06	0.422	32
8	1.257	0.004	-0.029	0.14	0.026	50
9	1.873	0.003	-0.038	0.22	0.001	60
10	1.869	-0.002	-0.012	0.06	0.178	61
11	1.839	0.001	-0.006	0.02	0.569	62
12	1.819	0.000	-0.000	0.00	0.997	62
13	1.629	0.001	0.002	0.00	0.933	62
14	1.782	0.000	-0.005	0.02	0.619	62
15	1.474	0.004	0.000	0.03	0.349	62
16	0.973	0.004	0.005	0.19	0.002	62
17	0.732	0.004	0.005	0.12	0.025	62
18	0.664	0.007	-0.003	0.10	0.046	61
19	0.683	0.013	-0.013	0.24	0.000	60
20	0.667	0.011	-0.003	0.11	0.036	60
21	0.684	0.005	-0.004	0.03	0.462	55
22	0.587	0.001	-0.000	0.00	0.900	54
23	0.468	0.003	0.001	0.06	0.184	54
24	0.423	0.006	-0.002	0.09	0.092	51

LRD Regression Coefficients for Coastal School - Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.339	0.012	0.028	0.54	0.009	14
2	0.352	0.010	0.047	0.85	0.001	9
3	0.419	0.004	0.038	0.66	0.068	7
4	0.170	0.061	0.064	0.99	0.005	4
5	0.399	0.014	0.055	0.84	0.159	4
6	0.515	-0.002	0.020	0.42	0.444	5
7	0.648	-0.006	0.019	0.40	0.361	6
8	1.057	0.011	0.011	0.02	0.851	15
9	1.620	-0.003	-0.015	0.01	0.789	37
10	1.619	0.000	-0.001	0.00	0.996	65
11	1.669	0.004	-0.005	0.01	0.521	96
12	1.541	0.005	0.011	0.01	0.437	112
13	1.381	0.005	0.010	0.02	0.325	116
14	1.437	0.007	0.012	0.03	0.210	115
15	1.275	0.003	0.008	0.01	0.430	115
16	0.903	0.001	0.006	0.03	0.227	116
17	0.715	0.000	0.003	0.01	0.559	117
18	0.715	0.000	-0.002	0.01	0.733	105
19	0.720	0.000	-0.001	0.00	0.971	79
20	0.774	-0.001	-0.006	0.02	0.574	63
21	0.715	0.001	0.001	0.01	0.835	43
22	0.622	-0.000	0.001	0.00	0.993	29
23	0.499	0.001	0.003	0.02	0.787	21
24	0.441	0.002	-0.003	0.08	0.559	16

LRD Regression Coefficients for Coastal School - Non-Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.445	-0.003	0.000	0.02	0.298	111
2	0.435	-0.002	0.001	0.01	0.527	108
3	0.444	-0.003	0.000	0.02	0.317	105
4	0.443	-0.002	-0.000	0.01	0.473	103
5	0.435	-0.001	-0.000	0.00	0.851	99
6	0.386	0.005	-0.000	0.04	0.121	100
7	0.341	0.011	0.003	0.09	0.010	104
8	0.406	0.021	0.001	0.06	0.030	111
9	0.588	0.023	-0.005	0.03	0.154	119
10	0.646	0.014	0.002	0.02	0.345	119
11	0.679	0.011	0.003	0.01	0.490	119
12	0.693	0.009	0.002	0.01	0.556	119
13	0.687	-0.000	0.003	0.00	0.926	119
14	0.664	0.000	0.002	0.00	0.943	119
15	0.647	-0.002	0.001	0.00	0.862	119
16	0.502	0.004	0.002	0.01	0.580	119
17	0.427	0.001	0.003	0.02	0.369	119
18	0.413	0.002	0.001	0.01	0.516	119
19	0.448	-0.001	-0.000	0.00	0.934	119
20	0.485	-0.002	-0.002	0.01	0.519	119
21	0.564	-0.007	-0.004	0.08	0.008	117
22	0.545	-0.005	-0.004	0.08	0.010	116
23	0.474	-0.003	-0.001	0.04	0.091	116
24	0.439	-0.002	0.001	0.01	0.450	114

LRD Regression Coefficients for Coastal School - Non-Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.441	-0.004	-0.023	0.10	0.850	5
2	85.191	0.689	0.846	1.00	2.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.356	-0.004	0.018	0.81	0.190	4
9	0.702	-0.034	-0.065	0.61	0.024	10
10	0.398	-0.008	0.010	0.14	0.098	32
11	0.426	-0.008	0.001	0.12	0.079	42
12	0.398	-0.005	0.004	0.12	0.046	51
13	0.393	-0.004	0.003	0.12	0.044	52
14	0.384	-0.001	0.005	0.07	0.186	52
15	0.383	-0.001	0.005	0.07	0.138	54
16	0.388	-0.000	0.004	0.07	0.157	51
17	0.446	-0.003	-0.002	0.06	0.215	49
18	0.492	-0.005	-0.004	0.10	0.085	47
19	0.500	-0.003	-0.001	0.05	0.365	39
20	0.516	-0.002	0.001	0.02	0.739	31
21	0.518	-0.001	0.002	0.01	0.897	25
22	0.494	-0.001	0.003	0.01	0.886	23
23	0.389	0.004	0.014	0.16	0.396	13
24	0.404	-0.005	0.007	0.30	0.245	10

LRD Regression Coefficients for Non-Coastal School - Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.290	0.005	0.004	0.07	0.236	40
2	0.263	0.005	0.011	0.09	0.183	37
3	0.249	0.004	0.022	0.15	0.081	33
4	0.273	0.003	0.017	0.06	0.415	29
5	0.335	0.003	0.001	0.01	0.840	26
6	0.387	0.004	0.015	0.04	0.622	24
7	0.815	-0.008	0.033	0.10	0.336	22
8	1.624	0.001	0.042	0.22	0.027	31
9	2.103	0.003	0.020	0.12	0.041	53
10	2.144	0.007	0.028	0.30	0.000	61
11	2.053	0.012	0.037	0.48	0.000	61
12	1.991	0.019	0.042	0.57	0.000	61
13	1.915	0.016	0.042	0.61	0.000	60
14	2.010	0.012	0.044	0.60	0.000	61
15	1.736	0.021	0.048	0.71	0.000	61
16	1.449	0.016	0.037	0.50	0.000	59
17	0.907	0.010	0.013	0.17	0.005	61
18	0.747	0.009	0.005	0.09	0.060	62
19	0.694	0.006	0.001	0.04	0.335	61
20	0.620	-0.000	0.004	0.01	0.840	59
21	0.548	0.005	0.005	0.03	0.370	59
22	0.469	0.006	0.003	0.08	0.107	57
23	0.344	0.006	0.015	0.15	0.020	51
24	0.301	0.003	0.019	0.14	0.043	45

LRD Regression Coefficients for Non-Coastal School - Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.256	0.000	-0.003	0.02	0.851	17
2	0.270	-0.001	-0.008	0.11	0.438	16
3	0.252	-0.001	-0.005	0.20	0.295	13
4	0.234	0.002	0.001	0.14	0.539	10
5	0.228	0.002	0.006	0.29	0.260	10
6	0.310	-0.005	0.012	0.26	0.229	12
7	0.707	-0.012	0.013	0.49	0.097	9
8	1.501	-0.008	0.024	0.49	0.069	10
9	1.770	-0.009	0.027	0.08	0.256	36
10	2.005	-0.003	-0.003	0.00	0.866	62
11	2.006	0.003	0.006	0.01	0.652	93
12	1.873	0.012	0.025	0.11	0.001	111
13	1.719	0.012	0.028	0.15	0.000	112
14	1.836	0.014	0.028	0.14	0.000	116
15	1.598	0.012	0.031	0.20	0.000	113
16	1.264	0.009	0.023	0.17	0.000	112
17	0.727	0.002	0.008	0.09	0.007	111
18	0.632	0.000	0.002	0.01	0.734	110
19	0.615	0.000	-0.002	0.00	0.855	91
20	0.567	-0.001	0.000	0.00	0.942	77
21	0.496	-0.001	0.002	0.01	0.678	57
22	0.406	-0.001	0.004	0.02	0.629	42
23	0.315	-0.001	0.004	0.03	0.567	34
24	0.267	-0.001	0.003	0.03	0.706	26

LRD Regression Coefficients for Non-Coastal School - Non-Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.250	0.003	0.006	0.07	0.021	109
2	0.240	0.002	0.007	0.07	0.023	107
3	0.246	0.002	0.006	0.06	0.039	105
4	0.249	0.002	0.005	0.05	0.063	103
5	0.250	0.002	0.007	0.09	0.009	98
6	0.252	0.004	0.015	0.22	0.000	94
7	0.288	0.017	0.021	0.22	0.000	103
8	0.404	0.040	0.017	0.12	0.002	107
9	0.561	0.037	0.013	0.08	0.007	117
10	0.549	0.036	0.017	0.10	0.003	118
11	0.530	0.035	0.017	0.10	0.002	118
12	0.565	0.036	0.014	0.09	0.004	119
13	0.668	0.044	0.007	0.11	0.001	119
14	0.655	0.048	0.007	0.10	0.002	118
15	0.503	0.040	0.014	0.09	0.004	119
16	0.352	0.030	0.017	0.10	0.003	118
17	0.282	0.012	0.010	0.09	0.003	119
18	0.322	0.005	0.004	0.04	0.091	119
19	0.341	0.003	0.002	0.01	0.416	118
20	0.333	0.004	0.002	0.03	0.205	119
21	0.334	0.004	0.002	0.03	0.225	118
22	0.336	0.003	0.000	0.02	0.390	116
23	0.299	0.003	0.002	0.02	0.358	111
24	0.262	0.002	0.005	0.06	0.039	109

LRD Regression Coefficients for Non-Coastal School - Non-Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.225	-0.000	0.002	0.01	0.942	10
2	0.254	0.000	-0.004	0.28	0.848	3
3	0.001	0.000	-0.004	0.00	0.941	4
4	0.026	0.002	-0.004	0.11	0.672	4
5	0.043	0.002	-0.004	0.25	0.499	4
6	0.307	0.003	0.055	0.90	0.096	4
7	0.503	0.012	0.019	1.00	0.070	3
8	0.192	-0.001	0.005	0.32	0.458	6
9	0.338	-0.041	-0.084	0.46	0.024	14
10	0.220	-0.009	0.003	0.06	0.431	28
11	0.237	-0.010	-0.000	0.08	0.265	36
12	0.254	-0.009	-0.001	0.06	0.297	43
13	0.251	-0.006	0.001	0.04	0.395	47
14	0.229	-0.005	0.003	0.04	0.383	48
15	0.211	-0.003	0.006	0.04	0.355	49
16	0.236	-0.004	0.002	0.05	0.322	48
17	0.252	-0.003	-0.000	0.05	0.297	49
18	0.276	-0.003	-0.002	0.09	0.134	47
19	0.276	-0.003	-0.003	0.12	0.081	41
20	0.261	-0.003	-0.004	0.23	0.023	31
21	0.262	-0.003	-0.006	0.27	0.024	26
22	0.265	-0.002	-0.008	0.32	0.020	22
23	0.244	-0.001	-0.005	0.22	0.099	21
24	0.235	-0.001	-0.004	0.15	0.307	17

LRD Regression Coefficients for Coastal College - Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.774	-0.003	0.001	0.02	0.458	102
2	0.757	-0.003	0.001	0.02	0.376	102
3	0.758	-0.003	0.001	0.02	0.318	98
4	0.782	-0.002	0.002	0.03	0.299	96
5	0.818	0.001	0.006	0.17	0.000	93
6	0.942	0.001	0.009	0.27	0.000	93
7	1.212	-0.001	0.013	0.19	0.000	96
8	1.558	-0.005	0.008	0.06	0.037	114
9	1.732	-0.006	0.002	0.04	0.088	124
10	1.803	-0.006	0.001	0.04	0.076	125
11	1.811	-0.005	0.003	0.04	0.061	126
12	1.792	-0.005	0.003	0.05	0.030	126
13	1.800	-0.006	0.003	0.07	0.011	126
14	1.790	-0.003	0.002	0.02	0.229	126
15	1.771	-0.003	0.000	0.02	0.310	126
16	1.684	-0.003	-0.001	0.02	0.391	126
17	1.538	-0.005	-0.002	0.02	0.275	126
18	1.535	-0.002	-0.008	0.03	0.117	125
19	1.523	0.001	-0.013	0.06	0.028	124
20	1.424	0.002	-0.009	0.03	0.195	124
21	1.208	0.004	-0.003	0.01	0.633	119
22	1.001	0.001	-0.004	0.01	0.486	118
23	0.865	0.003	-0.004	0.02	0.276	118
24	0.780	0.003	-0.003	0.03	0.218	115

LRD Regression Coefficients for Coastal College - Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.760	0.015	-0.006	0.49	0.018	14
2	0.740	0.013	-0.007	0.40	0.164	9
3	0.700	0.017	-0.001	0.30	0.412	7
4	1.366	-0.133	-0.049	1.00	0.004	4
5	0.974	-0.031	-0.030	0.23	0.769	4
6	0.815	0.012	0.050	0.12	0.830	5
7	0.916	0.018	0.105	0.33	0.451	6
8	1.311	-0.001	0.071	0.35	0.061	15
9	1.607	-0.004	0.021	0.14	0.068	37
10	1.677	0.005	0.017	0.12	0.017	65
11	1.711	0.009	0.013	0.13	0.001	96
12	1.627	0.011	0.021	0.17	0.000	112
13	1.606	0.010	0.018	0.14	0.000	116
14	1.611	0.011	0.018	0.14	0.000	115
15	1.604	0.008	0.016	0.10	0.002	115
16	1.558	0.005	0.015	0.09	0.004	116
17	1.479	0.005	0.016	0.09	0.005	117
18	1.432	0.005	0.014	0.05	0.072	105
19	1.479	0.008	0.013	0.06	0.079	79
20	1.471	0.005	0.011	0.03	0.448	63
21	1.343	0.004	0.024	0.06	0.304	43
22	1.203	0.004	0.017	0.04	0.554	29
23	1.006	0.003	0.015	0.11	0.339	21
24	0.868	0.002	0.030	0.20	0.207	16

LRD Regression Coefficients for Coastal College - Non-Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.687	-0.000	-0.002	0.02	0.689	47
2	0.674	-0.002	0.001	0.02	0.608	44
3	0.666	-0.001	0.001	0.01	0.795	41
4	0.665	-0.001	0.000	0.01	0.874	39
5	0.660	-0.002	0.002	0.04	0.521	36
6	0.634	-0.001	0.004	0.08	0.253	37
7	0.660	0.003	0.001	0.03	0.593	40
8	0.803	-0.001	-0.005	0.02	0.601	47
9	0.956	-0.008	-0.008	0.07	0.159	55
10	0.993	-0.011	-0.002	0.08	0.120	55
11	0.969	-0.014	0.004	0.14	0.016	55
12	0.991	-0.015	0.003	0.22	0.001	55
13	0.945	-0.015	0.007	0.35	0.000	55
14	0.971	-0.016	0.006	0.30	0.000	55
15	0.955	-0.016	0.006	0.33	0.000	55
16	0.903	-0.010	0.005	0.15	0.014	55
17	0.874	-0.014	0.005	0.21	0.002	55
18	0.892	-0.007	-0.001	0.05	0.250	55
19	0.927	-0.009	-0.003	0.09	0.075	55
20	0.907	-0.005	-0.004	0.04	0.378	55
21	0.868	-0.004	-0.002	0.02	0.558	53
22	0.828	-0.002	-0.008	0.08	0.130	52
23	0.751	-0.001	-0.006	0.05	0.247	52
24	0.673	0.002	-0.002	0.02	0.688	50

LRD Regression Coefficients for Coastal College - Non-Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.718	-0.001	-0.033	0.11	0.842	5
2	83.998	0.907	0.644	1.00	2.000	0
3	0.000	0.000	0.000	0.00	1.000	0
4	0.000	0.000	0.000	0.00	1.000	0
5	0.000	0.000	0.000	0.00	1.000	0
6	0.000	0.000	0.000	0.00	1.000	0
7	0.000	0.000	0.000	0.00	1.000	0
8	0.780	-0.002	-0.050	0.94	0.057	4
9	1.026	-0.019	-0.039	0.49	0.066	10
10	0.846	-0.002	0.011	0.08	0.272	32
11	0.863	-0.003	0.007	0.08	0.181	42
12	0.837	-0.001	0.009	0.12	0.041	51
13	0.862	-0.001	0.006	0.09	0.083	52
14	0.862	0.001	0.007	0.08	0.111	52
15	0.876	0.001	0.006	0.07	0.168	54
16	0.845	0.001	0.007	0.10	0.084	51
17	0.869	-0.004	0.003	0.09	0.108	49
18	0.899	-0.007	-0.002	0.12	0.053	47
19	0.902	-0.003	0.002	0.04	0.455	39
20	0.883	-0.000	0.009	0.05	0.473	31
21	0.875	-0.000	0.010	0.04	0.602	25
22	0.890	-0.001	-0.002	0.01	0.929	23
23	0.802	-0.000	0.004	0.06	0.717	13
24	0.751	-0.002	0.001	0.09	0.681	10

LRD Regression Coefficients for Non-Coastal College - Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.770	0.000	0.004	0.17	0.000	104
2	0.735	0.000	0.006	0.29	0.000	101
3	0.723	0.001	0.006	0.35	0.000	97
4	0.732	0.001	0.007	0.41	0.000	92
5	0.842	0.002	0.010	0.41	0.000	87
6	1.045	0.005	0.017	0.50	0.000	81
7	1.309	0.004	0.020	0.54	0.000	85
8	1.598	0.001	0.016	0.35	0.000	95
9	1.730	0.000	0.012	0.32	0.000	117
10	1.796	0.001	0.010	0.32	0.000	124
11	1.830	0.001	0.009	0.28	0.000	124
12	1.820	0.001	0.008	0.25	0.000	125
13	1.829	0.000	0.009	0.25	0.000	124
14	1.812	0.002	0.009	0.26	0.000	125
15	1.750	0.004	0.010	0.30	0.000	125
16	1.662	0.003	0.009	0.19	0.000	123
17	1.524	0.003	0.006	0.07	0.012	125
18	1.560	0.003	0.002	0.01	0.421	126
19	1.594	0.001	-0.001	0.00	0.944	124
20	1.509	0.002	0.001	0.01	0.737	123
21	1.334	0.003	0.001	0.01	0.429	123
22	1.042	0.000	0.001	0.00	0.756	121
23	0.880	0.000	0.004	0.06	0.023	114
24	0.810	0.000	0.003	0.10	0.003	109

LRD Regression Coefficients for Non-Coastal College - Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.782	0.003	0.004	0.35	0.040	17
2	0.750	0.003	0.004	0.52	0.006	16
3	0.733	0.002	0.002	0.53	0.015	13
4	0.732	0.002	0.001	0.30	0.238	10
5	0.825	-0.000	-0.015	0.28	0.269	10
6	0.923	0.003	-0.002	0.17	0.383	12
7	1.193	0.004	-0.008	0.19	0.476	9
8	1.506	0.008	0.019	0.31	0.233	10
9	1.632	0.005	0.019	0.26	0.005	36
10	1.764	0.005	0.006	0.10	0.045	62
11	1.769	0.006	0.010	0.13	0.001	93
12	1.710	0.010	0.017	0.27	0.000	111
13	1.659	0.010	0.016	0.28	0.000	112
14	1.667	0.011	0.016	0.28	0.000	116
15	1.642	0.011	0.016	0.29	0.000	113
16	1.570	0.011	0.017	0.29	0.000	112
17	1.496	0.009	0.017	0.27	0.000	111
18	1.432	0.007	0.015	0.18	0.000	110
19	1.515	0.008	0.012	0.13	0.002	91
20	1.495	0.006	0.011	0.06	0.081	77
21	1.526	0.008	-0.007	0.09	0.067	57
22	1.335	0.007	-0.008	0.12	0.082	42
23	1.048	0.004	-0.009	0.23	0.016	34
24	0.868	0.004	-0.001	0.32	0.009	26

LRD Regression Coefficients for Non-Coastal College - Non-Standard Day - Summer

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.717	0.001	0.003	0.09	0.126	45
2	0.695	0.001	0.003	0.09	0.149	43
3	0.684	0.001	0.004	0.11	0.094	41
4	0.678	0.001	0.004	0.12	0.080	40
5	0.679	0.003	0.004	0.20	0.019	37
6	0.681	0.005	0.008	0.30	0.002	37
7	0.730	0.004	0.010	0.24	0.006	40
8	0.790	0.005	0.009	0.17	0.022	43
9	0.962	-0.005	-0.000	0.04	0.395	53
10	0.989	-0.005	0.004	0.07	0.160	55
11	1.004	-0.007	0.005	0.15	0.012	55
12	0.999	-0.008	0.006	0.23	0.001	55
13	0.988	-0.009	0.007	0.24	0.001	55
14	0.996	-0.009	0.006	0.25	0.001	54
15	1.030	-0.007	0.004	0.19	0.004	55
16	0.999	-0.007	0.004	0.22	0.001	54
17	0.942	-0.006	0.004	0.22	0.002	55
18	0.975	-0.010	0.002	0.32	0.000	55
19	1.007	-0.010	0.000	0.32	0.000	55
20	0.987	-0.005	0.002	0.12	0.039	55
21	0.942	-0.004	0.002	0.13	0.027	54
22	0.857	-0.001	0.003	0.13	0.034	52
23	0.798	-0.001	0.003	0.10	0.092	48
24	0.748	-0.002	0.003	0.10	0.095	45

LRD Regression Coefficients for Non-Coastal College - Non-Standard Day - Winter

Hour	Regression Parameters			Statistics		
	Base Load Intercept (W/ft^2)	Dew Point Coefficeint ($W/ft^2/°F$)	Dry Bulb Coefficient ($W/ft^2/°F$)	R^2	Significance of F-Statistic	N
1	0.707	-0.000	0.011	0.19	0.429	10
2	0.660	-0.003	0.015	0.74	0.507	3
3	1.569	-0.001	0.015	0.13	0.638	4
4	1.578	-0.000	0.015	0.00	0.984	4
5	1.568	-0.001	0.015	0.01	0.880	4
6	0.678	-0.001	0.005	0.06	0.938	4
7	0.752	0.002	0.003	0.70	0.546	3
8	0.775	-0.000	-0.003	0.09	0.827	6
9	0.876	-0.009	-0.020	0.27	0.147	14
10	0.915	0.002	0.005	0.03	0.633	28
11	0.872	0.000	0.009	0.10	0.176	36
12	0.863	0.001	0.010	0.16	0.031	43
13	0.868	0.002	0.010	0.21	0.005	47
14	0.874	0.002	0.009	0.18	0.010	48
15	0.872	0.002	0.010	0.21	0.004	49
16	0.870	0.003	0.010	0.22	0.003	48
17	0.876	0.002	0.008	0.17	0.012	49
18	0.907	-0.001	0.004	0.09	0.126	47
19	0.917	-0.000	0.006	0.10	0.142	41
20	0.940	-0.000	0.002	0.01	0.874	31
21	0.925	-0.001	-0.001	0.01	0.923	26
22	0.910	0.000	-0.004	0.01	0.894	22
23	0.824	0.001	0.003	0.02	0.828	21
24	0.748	0.002	0.013	0.34	0.043	17

Appendix E. THI Matrices for Cooling

Coastal College

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
44	nd	nd	nd	nd	nd	0.01	0.01	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
45	nd	nd	nd	0.01	0.01	nd	nd	0.01	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
46	nd	nd	0.01	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
47	nd	0.01	0.01	nd	nd	nd	0.01	0.01	0.01	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
48	nd	0.01	nd	nd	0.01	0.01	0.01	0.01	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.01
49	0.04	0.01	nd	0.01	0.01	0.01	0.01	0.02	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
50	0.01	nd	0.01	0.04	0.01	0.01	0.03	0.03	0.05	0.10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.08	nd
51	0.06	0.11	0.06	0.11	0.11	0.07	0.05	0.05	0.06	0.12	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.12	nd	nd	0.01	0.04
52	0.11	0.12	0.11	0.06	0.09	0.09	0.05	0.05	0.10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.09	0.08	0.08	nd
53	0.13	0.11	0.11	0.12	0.12	0.10	0.07	0.08	0.12	0.13	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.07	nd	0.09	0.08	0.12
54	0.14	0.12	0.12	0.13	0.14	0.11	0.09	0.09	0.11	nd	0.16	nd	nd	nd	nd	nd	nd	nd	0.15	0.13	0.11	0.10	0.08	0.13
55	0.14	0.14	0.15	0.14	0.14	0.13	0.10	0.09	0.12	0.12	0.15	nd	nd	nd	nd	nd	nd	0.13	0.12	0.13	0.10	0.09	0.09	0.13
56	0.16	0.15	0.15	0.14	0.16	0.13	0.11	0.11	0.12	0.15	0.15	nd	nd	nd	nd	nd	0.13	0.16	0.14	0.11	0.11	0.11	0.09	0.15
57	0.17	0.15	0.15	0.15	0.16	0.15	0.12	0.12	0.15	0.16	0.17	0.18	0.16	0.16	0.16	0.15	0.15	0.14	0.14	0.13	0.13	0.11	0.10	0.16
58	0.18	0.15	nd	0.16	nd	0.17	0.14	0.12	0.15	0.17	0.20	0.18	0.19	0.15	0.15	0.16	nd	0.14	0.15	0.14	0.15	0.11	0.11	0.16
59	0.21	0.19	0.18	0.19	0.19	0.18	0.15	0.16	0.20	0.20	0.18	0.20	0.19	0.20	0.20	0.19	0.18	0.20	0.17	0.16	0.16	0.13	0.12	0.19
60	0.24	0.23	0.20	0.24	0.24	0.21	0.17	0.17	0.20	0.24	0.23	0.19	0.20	0.21	0.21	0.23	0.24	0.18	0.18	0.20	0.18	0.17	0.14	0.21
61	0.22	0.20	nd	nd	0.24	0.24	0.20	0.19	0.22	0.24	0.24	0.25	0.23	0.23	0.24	0.25	0.21	0.22	0.21	0.21	0.20	0.17	0.14	0.21
62	0.26	nd	nd	nd	nd	0.25	0.24	0.24	0.24	0.26	0.26	0.27	0.25	0.26	0.27	0.24	0.22	0.22	0.23	0.24	0.20	0.16	0.15	0.24
63	0.30	nd	nd	nd	nd	0.29	0.28	0.26	0.29	0.27	0.31	0.29	0.30	0.29	0.29	0.29	0.26	0.28	0.28	0.25	0.23	0.19	0.17	0.26
64	nd	nd	nd	nd	nd	0.30	0.30	0.30	0.32	0.36	0.32	0.33	0.33	0.32	0.31	0.32	0.29	0.28	0.25	0.25	0.25	0.21	0.18	0.25
65	0.37	nd	nd	nd	nd	0.33	0.32	0.31	0.34	0.35	0.37	0.36	0.36	0.36	0.37	0.36	0.31	0.31	0.29	0.30	0.27	0.20	0.18	0.26
66	nd	nd	nd	nd	nd	0.36	0.35	0.33	0.37	0.39	0.39	0.39	0.38	0.39	0.39	0.36	0.32	0.30	0.32	0.33	0.29	0.20	0.20	0.29
67	0.33	nd	0.28	nd	nd	0.38	0.38	0.33	0.33	0.38	0.37	0.39	0.39	0.39	0.38	0.36	0.34	0.35	0.33	0.30	0.29	0.23	0.20	0.29
68	nd	nd	nd	nd	nd	nd	0.37	0.35	0.33	0.36	0.38	0.38	0.38	0.40	0.39	0.36	0.33	0.33	0.32	0.27	0.26	0.21	0.18	0.29
69	nd	nd	nd	nd	nd	0.36	0.36	0.34	0.35	0.37	0.38	0.39	0.40	0.41	0.41	0.38	0.33	0.32	0.28	0.33	0.27	0.21	0.20	0.30
70	nd	nd	nd	nd	nd	nd	0.40	0.36	nd	0.37	0.38	0.39	0.41	0.40	0.41	0.39	0.34	0.35	0.28	0.31	nd	0.20	0.19	0.28
71	nd	nd	nd	nd	nd	nd	nd	0.37	0.41	0.41	0.41	0.41	0.42	0.42	0.41	0.38	0.35	0.30	0.32	0.34	0.28	nd	nd	0.30
72	nd	nd	nd	nd	nd	nd	nd	0.36	0.41	0.43	0.41	0.41	0.42	0.43	0.39	0.37	0.34	0.39	0.35	0.31	nd	nd	nd	nd
73	nd	nd	nd	nd	nd	nd	nd	nd	0.42	0.44	0.43	0.43	0.44	0.43	0.43	0.40	0.33	0.35	0.35	nd	nd	nd	nd	nd
74	nd	nd	nd	nd	nd	nd	nd	nd	0.42	nd	nd	0.47	0.44	0.44	0.42	0.39	0.38	0.40	nd	nd	nd	nd	nd	nd
75	nd	nd	nd	nd	nd	nd	nd	nd	0.41	0.45	0.47	0.46	0.48	0.44	0.45	0.42	0.38	0.38	nd	nd	nd	nd	nd	nd
76	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.47	0.47	0.49	0.49	0.49	0.47	0.42	0.41	nd	nd	nd	nd	nd	nd	nd
77	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.47	0.47	0.48	0.47	0.50	0.47	0.45	0.38	nd	nd	nd	nd	nd	nd	nd
78	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.52	0.49	0.52	0.52	0.48	0.43	nd	nd	nd	nd	nd	nd	nd	nd
79	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.48	0.49	nd	0.50	0.51	0.48	nd	nd	nd	nd	nd	nd	nd	nd
80	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.42	nd	nd	nd	nd	nd	nd	nd	nd
81	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.50	0.51	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
82	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.54	nd	nd	nd	nd	nd	nd	nd	nd	nd

Non-Coastal College

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
43	nd	nd	nd	nd	nd	nd	nd	0.14	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
44	0.16	nd	nd	nd	nd	nd	0.15	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
45	nd	0.12	0.15	0.15	0.19	0.15	0.19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
46	nd	nd	0.07	0.13	nd	0.02	0.05	0.09	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
47	nd	nd	0.13	0.10	0.09	0.22	0.13	0.19	0.17	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
48	nd	0.16	0.11	0.12	0.13	0.16	0.17	nd	0.15	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
49	0.02	0.08	0.09	0.12	0.20	0.16	0.19	0.17	0.02	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.15
50	0.16	0.15	0.23	0.14	0.16	0.19	0.18	0.17	0.13	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.09	0.02
51	0.10	0.17	0.15	0.17	0.17	0.14	0.15	0.16	0.24	0.16	nd	nd	nd	nd	0.15	nd	nd	nd	nd	nd	0.08	0.06	0.04	0.02
52	0.15	0.14	0.14	0.19	0.17	0.14	0.16	0.15	0.23	0.19	0.13	nd	nd	nd	nd	nd	nd	nd	nd	0.07	0.12	0.07	0.06	0.13
53	0.19	0.20	0.20	0.18	0.19	0.19	0.19	0.16	0.22	0.17	0.14	nd	nd	nd	nd	nd	nd	0.02	0.11	0.09	0.06	0.11	0.09	0.15
54	0.18	0.15	0.14	0.19	0.19	0.19	0.18	0.15	0.13	0.20	nd	0.11	nd	nd	nd	nd	nd	0.06	0.20	0.12	0.10	0.13	0.12	0.16
55	0.19	0.20	0.20	0.19	0.19	0.22	0.17	0.16	0.16	0.16	0.21	nd	0.15	nd	nd	0.02	0.09	0.14	0.14	0.12	0.14	0.16	0.13	0.17
56	0.21	0.21	0.18	0.20	0.23	0.21	0.19	0.22	0.18	0.20	0.14	nd	0.02	0.11	0.07	0.09	0.09	0.17	0.12	0.16	0.15	0.14	0.11	0.24
57	0.20	0.20	0.18	0.19	0.21	0.21	0.20	0.19	0.22	0.20	0.19	0.19	0.12	0.10	0.14	0.16	0.12	0.13	0.10	0.16	0.17	0.15	0.14	0.19
58	0.21	0.20	0.20	0.19	0.22	0.23	0.25	0.23	0.19	0.20	0.16	0.15	0.16	0.16	0.16	0.12	0.14	0.12	0.17	0.15	0.17	0.17	0.13	0.22
59	0.22	0.21	0.20	0.21	0.23	0.24	0.24	0.26	0.26	0.24	0.22	0.21	0.19	0.19	0.16	0.17	0.19	0.15	0.16	0.20	0.18	0.18	0.13	0.18
60	0.22	0.21	0.22	0.23	0.28	0.30	0.25	0.22	0.24	0.24	0.21	0.20	0.19	0.32	0.17	0.13	0.15	0.17	0.20	0.20	0.19	0.13	0.13	0.21
61	0.24	0.24	0.24	0.25	0.28	0.31	0.31	0.26	0.28	0.26	0.23	0.18	0.20	0.20	0.19	0.20	0.18	0.18	0.21	0.21	0.21	0.20	0.16	0.23
62	0.26	0.26	0.25	0.27	0.31	0.31	0.34	0.27	0.27	0.36	0.27	0.24	0.20	0.18	0.18	0.17	0.22	0.22	0.23	0.24	0.25	0.17	0.17	0.24
63	0.30	0.28	0.27	0.28	0.32	0.37	0.37	0.34	0.33	0.30	0.28	0.27	0.19	0.22	0.20	0.22	0.23	0.24	0.21	0.25	0.26	0.19	0.17	0.27
64	0.30	0.29	0.30	0.30	0.35	0.42	0.41	0.36	0.38	0.36	0.34	0.28	0.23	0.22	0.20	0.24	0.27	0.24	0.28	0.27	0.27	0.22	0.20	0.27
65	0.31	0.30	0.30	0.31	0.38	0.45	0.44	0.40	0.39	0.34	0.37	0.32	0.29	0.26	0.26	0.26	0.27	0.27	0.26	0.33	0.31	0.23	0.20	0.29
66	0.32	0.30	0.31	0.33	0.41	0.50	0.45	0.42	0.40	0.43	0.40	0.29	0.32	0.29	0.27	0.27	0.23	0.28	0.30	0.33	0.28	0.22	0.20	0.30
67	0.33	0.33	0.31	0.33	0.38	0.48	0.50	0.47	0.45	0.42	0.38	0.39	0.33	0.30	0.28	0.33	0.31	0.30	0.41	0.35	0.31	0.23	0.21	0.31
68	0.35	0.32	0.34	0.33	0.39	0.51	0.48	0.47	0.46	0.43	0.40	0.40	0.43	0.32	0.30	0.29	0.26	0.39	0.37	0.35	0.34	0.23	0.23	0.33
69	0.34	0.36	0.35	0.36	0.43	0.24	0.48	0.49	0.46	0.48	0.48	0.43	0.40	0.41	0.39	0.38	0.32	0.38	0.37	0.35	0.29	0.25	0.22	0.34
70	nd	nd	0.35	nd	nd	0.57	0.60	0.51	nd	0.50	0.42	0.45	0.37	0.39	0.38	0.41	0.33	0.41	0.37	0.36	0.35	0.25	0.23	0.29
71	0.36	0.35	nd	nd	nd	nd	nd	0.53	0.53	0.51	0.45	0.45	0.47	0.43	0.41	0.41	0.39	0.39	0.38	0.36	0.34	0.24	0.23	0.33
72	nd	nd	nd	nd	nd	nd	nd	0.50	0.52	0.43	0.47	0.44	0.49	0.47	0.49	0.41	0.41	0.39	0.34	0.37	0.30	nd	nd	nd
73	0.37	nd	0.36	0.37	0.45	0.53	0.57	0.57	0.51	0.54	0.52	0.46	0.48	0.52	0.52	0.50	0.40	0.40	0.40	0.36	nd	0.24	0.22	0.33
74	nd	nd	nd	nd	nd	nd	nd	nd	0.65	0.58	0.59	0.53	0.47	0.46	0.54	0.48	0.40	0.40	0.37	nd	nd	nd	nd	nd
75	nd	nd	nd	nd	nd	nd	nd	nd	0.58	0.57	0.53	0.54	0.52	0.54	0.53	0.51	0.40	0.40	0.36	0.40	0.37	0.24	nd	nd
76	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.67	0.55	0.49	0.50	0.47	0.51	0.50	0.44	0.45	0.38	0.41	0.32	nd	nd	nd
77	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.60	0.60	0.55	0.54	0.51	0.52	0.53	0.41	0.36	0.30	nd	nd	nd	nd	nd
78	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.57	0.56	0.54	0.49	0.58	0.55	0.54	0.41	0.46	0.43	nd	nd	nd	nd	nd
79	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.64	0.62	0.59	0.59	0.60	0.56	0.47	0.49	nd	nd	nd	nd	nd	nd
80	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.68	0.63	0.65	0.62	0.61	0.49	nd	nd	nd	nd	nd	nd	nd
81	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.65	nd	0.69	0.68	0.67	0.63	nd	0.45	nd	nd	nd	nd	nd	nd
82	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.59	nd	0.64	0.69	nd	nd	nd	nd	nd	nd	nd	nd	nd
83	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.67	0.64	0.66	0.68	nd	nd	nd	nd	nd	nd	nd	nd	nd

Coastal Health

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
44	nd	nd	nd	nd	nd	0.00	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
45	nd	nd	nd	0.00	0.00	nd	nd	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
46	nd	nd	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
47	nd	0.00	0.00	nd	nd	nd	0.00	0.00	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
48	nd	0.00	nd	nd	0.00	0.00	0.00	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00
49	0.00	0.00	nd	0.00	0.00	0.00	0.00	0.00	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
50	0.00	nd	0.00	0.00	0.00	0.00	0.03	0.04	0.04	0.12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.15	nd
51	0.09	0.08	0.06	0.12	0.09	0.00	0.07	0.09	0.09	0.23	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.17	nd	nd	0.00	0.00
52	0.08	0.12	0.20	0.06	0.10	0.16	0.06	0.05	0.12	0.14	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.12	0.18	0.24	0.12
53	0.15	0.15	0.14	0.19	0.18	0.14	0.07	0.17	0.23	0.25	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.15	nd	0.21	0.15	0.14
54	0.15	0.21	0.16	0.18	0.18	0.21	0.18	0.21	0.22	nd	0.28	nd	nd	nd	nd	nd	nd	nd	0.30	0.24	0.23	0.20	0.19	0.18
55	0.22	0.22	0.22	0.22	0.22	0.25	0.23	0.25	0.26	0.27	0.28	nd	nd	nd	nd	nd	nd	0.25	0.26	0.25	0.26	0.22	0.23	0.22
56	0.22	0.23	0.22	0.22	0.24	0.23	0.25	0.26	0.27	0.28	0.27	nd	nd	nd	nd	nd	0.25	0.29	0.28	0.26	0.25	0.26	0.24	0.23
57	0.23	0.23	0.24	0.25	0.23	0.26	0.26	0.28	0.28	0.31	0.31	0.31	0.32	0.29	0.28	0.27	0.28	0.26	0.31	0.27	0.25	0.26	0.25	0.24
58	0.25	0.27	nd	0.26	0.26	0.28	0.29	0.29	0.30	0.31	0.30	0.30	0.31	0.30	0.29	0.31	nd	0.29	0.31	0.29	0.29	0.27	0.26	0.25
59	0.27	0.27	0.26	0.27	0.27	0.28	0.30	0.32	0.32	0.34	0.33	0.34	0.31	0.32	0.32	0.35	0.33	0.34	0.33	0.30	0.30	0.29	0.29	0.28
60	0.30	0.31	0.30	0.34	0.35	0.32	0.32	0.33	0.33	0.36	0.36	0.34	0.33	0.36	0.37	0.36	0.37	0.33	0.35	0.33	0.33	0.32	0.31	0.30
61	0.32	0.34	nd	nd	0.34	0.36	0.37	0.38	0.37	0.37	0.39	0.39	0.38	0.41	0.41	0.41	0.36	0.38	0.41	0.35	0.36	0.35	0.34	0.33
62	0.37	nd	nd	nd	nd	0.41	0.44	0.45	0.39	0.41	0.41	0.41	0.40	0.41	0.42	0.42	0.40	0.41	0.43	0.41	0.41	0.40	0.39	0.37
63	0.45	nd	nd	nd	nd	0.48	0.53	0.49	0.47	0.43	0.46	0.46	0.47	0.48	0.49	0.49	0.47	0.49	0.49	0.46	0.46	0.46	0.45	0.45
64	nd	nd	nd	nd	nd	0.52	0.59	0.60	0.52	0.56	0.51	0.50	0.50	0.52	0.51	0.51	0.53	0.52	0.53	0.50	0.53	0.52	0.52	0.50
65	0.59	nd	nd	nd	nd	0.58	0.66	0.65	0.62	0.61	0.59	0.56	0.56	0.58	0.60	0.62	0.60	0.59	0.60	0.59	0.63	0.60	0.57	0.57
66	nd	nd	nd	nd	nd	0.65	0.73	0.72	0.70	0.69	0.68	0.66	0.64	0.65	0.68	0.65	0.64	0.67	0.65	0.70	0.67	0.64	0.63	0.62
67	0.61	nd	0.70	nd	nd	0.72	0.82	0.77	0.75	0.71	0.70	0.73	0.71	0.73	0.72	0.73	0.72	0.75	0.77	0.74	0.72	0.72	0.70	0.71
68	nd	nd	nd	nd	nd	nd	0.89	0.91	0.79	0.78	0.78	0.74	0.77	0.78	0.81	0.79	0.79	0.81	0.81	0.77	0.78	0.76	0.72	0.75
69	nd	nd	nd	nd	nd	0.78	0.89	0.96	0.87	0.84	0.83	0.85	0.85	0.86	0.89	0.87	0.87	0.93	0.86	0.88	0.86	0.87	0.91	0.81
70	nd	nd	nd	nd	nd	nd	0.97	0.98	nd	0.88	0.91	0.94	0.92	0.94	0.93	0.91	0.98	0.97	0.93	0.97	nd	0.83	0.81	0.80
71	nd	nd	nd	nd	nd	nd	nd	1.00	1.02	0.97	0.95	0.99	0.98	0.98	1.00	0.99	0.97	1.05	1.01	0.98	0.91	nd	nd	0.84
72	nd	nd	nd	nd	nd	nd	nd	0.98	1.03	1.08	1.02	1.07	1.11	1.10	1.07	1.06	1.08	1.10	1.10	0.99	nd	nd	nd	nd
73	nd	nd	nd	nd	nd	nd	nd	nd	1.11	1.13	1.16	1.18	1.11	1.13	1.13	1.10	1.13	1.21	1.12	nd	nd	nd	nd	nd
74	nd	nd	nd	nd	nd	nd	nd	nd	1.15	nd	nd	1.13	1.16	1.20	1.14	1.19	1.22	1.22	nd	nd	nd	nd	nd	nd
75	nd	nd	nd	nd	nd	nd	nd	nd	1.13	1.21	1.23	1.24	1.27	1.18	1.26	1.26	1.30	1.27	nd	nd	nd	nd	nd	nd
76	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.28	1.32	1.34	1.32	1.38	1.24	1.35	1.31	nd	nd	nd	nd	nd	nd	nd
77	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.30	1.33	1.28	1.40	1.37	1.41	1.43	1.44	nd	nd	nd	nd	nd	nd	nd
78	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.59	1.46	1.46	1.45	1.53	1.48	nd	nd	nd	nd	nd	nd	nd	nd
79	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.40	1.43	nd	1.52	1.59	1.58	nd	nd	nd	nd	nd	nd	nd	nd
80	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.53	nd	nd	nd	nd	nd	nd	nd	nd
81	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.52	1.58	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
82	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.76	nd	nd	nd	nd	nd	nd	nd	nd	nd

Non-Coastal Health

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
43	nd	nd	nd	nd	nd	nd	nd	0.39	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
44	0.30	nd	nd	nd	nd	nd	0.37	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
45	0.32	0.22	0.31	0.31	0.33	0.33	0.41	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
46	nd	nd	0.00	0.25	nd	0.00	0.12	0.27	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
47	nd	nd	0.16	0.16	0.13	0.46	0.31	0.30	0.37	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
48	nd	0.25	0.17	0.21	0.09	0.26	0.22	nd	0.38	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
49	0.00	0.11	0.16	0.17	0.32	0.26	0.36	0.41	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.29
50	0.27	0.21	0.38	0.30	0.26	0.38	0.37	0.42	0.38	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.20	0.00
51	0.13	0.18	0.23	0.25	0.30	0.29	0.36	0.37	0.45	0.34	nd	nd	nd	nd	0.35	nd	nd	nd	nd	nd	0.15	0.11	0.06	0.04
52	0.21	0.25	0.22	0.35	0.29	0.28	0.38	0.44	0.47	0.37	0.17	nd	nd	nd	nd	nd	nd	nd	nd	0.10	0.20	0.13	0.10	0.19
53	0.28	0.31	0.35	0.33	0.35	0.39	0.44	0.39	0.43	0.36	0.18	nd	nd	nd	nd	nd	nd	0.15	0.23	0.19	0.11	0.19	0.26	0.23
54	0.30	0.25	0.27	0.34	0.34	0.39	0.40	0.39	0.30	0.38	nd	0.17	nd	nd	nd	nd	nd	0.14	0.39	0.21	0.20	0.29	0.31	0.27
55	0.31	0.34	0.34	0.35	0.34	0.39	0.39	0.43	0.37	0.31	0.37	nd	0.33	nd	nd	0.14	0.23	0.31	0.30	0.27	0.31	0.35	0.31	0.28
56	0.35	0.35	0.33	0.37	0.39	0.38	0.42	0.50	0.40	0.40	0.34	nd	0.00	0.23	0.22	0.23	0.24	0.37	0.30	0.28	0.32	0.33	0.30	0.38
57	0.35	0.36	0.35	0.35	0.37	0.42	0.44	0.46	0.48	0.40	0.41	0.43	0.27	0.18	0.28	0.37	0.20	0.21	0.25	0.31	0.36	0.32	0.36	0.32
58	0.37	0.34	0.38	0.35	0.39	0.41	0.53	0.53	0.41	0.44	0.28	0.35	0.38	0.34	0.37	0.21	0.29	0.27	0.38	0.33	0.34	0.36	0.35	0.38
59	0.39	0.39	0.37	0.39	0.39	0.46	0.53	0.61	0.51	0.44	0.43	0.43	0.44	0.50	0.33	0.38	0.40	0.36	0.38	0.40	0.38	0.39	0.36	0.34
60	0.38	0.38	0.41	0.43	0.52	0.58	0.50	0.53	0.50	0.48	0.43	0.40	0.40	0.53	0.41	0.31	0.34	0.36	0.42	0.40	0.37	0.34	0.35	0.40
61	0.42	0.46	0.47	0.48	0.49	0.58	0.67	0.57	0.58	0.50	0.44	0.41	0.42	0.41	0.43	0.46	0.40	0.38	0.44	0.42	0.43	0.50	0.46	0.44
62	0.50	0.53	0.54	0.55	0.57	0.59	0.71	0.56	0.53	0.64	0.48	0.46	0.39	0.36	0.40	0.41	0.41	0.43	0.47	0.47	0.56	0.46	0.55	0.44
63	0.65	0.61	0.60	0.60	0.61	0.69	0.80	0.77	0.64	0.56	0.54	0.52	0.40	0.42	0.40	0.42	0.44	0.49	0.46	0.55	0.55	0.52	0.56	0.65
64	0.66	0.65	0.70	0.69	0.76	0.89	0.96	0.76	0.79	0.68	0.59	0.52	0.48	0.43	0.44	0.49	0.51	0.49	0.64	0.58	0.60	0.64	0.66	0.62
65	0.76	0.77	0.75	0.75	0.81	0.87	0.97	1.00	0.76	0.63	0.65	0.57	0.53	0.48	0.49	0.47	0.56	0.59	0.56	0.63	0.76	0.79	0.77	0.75
66	0.85	0.84	0.83	0.86	0.92	1.22	0.95	1.05	0.93	0.84	0.76	0.50	0.57	0.54	0.50	0.53	0.50	0.59	0.62	0.75	0.69	0.74	0.77	0.82
67	0.91	0.89	0.78	0.83	0.85	0.95	1.15	1.29	1.08	0.90	0.70	0.72	0.57	0.54	0.56	0.63	0.67	0.65	0.89	0.79	0.88	0.82	0.94	0.93
68	0.90	0.86	0.91	0.81	0.84	0.79	1.08	1.02	1.09	0.83	0.77	0.71	0.87	0.60	0.55	0.61	0.59	0.81	0.83	0.90	0.94	1.01	1.03	1.01
69	0.83	0.84	0.87	0.82	0.88	0.54	0.92	1.20	1.06	1.10	0.90	0.84	0.74	0.77	0.76	0.78	0.71	0.82	0.87	1.02	1.00	1.20	1.02	0.98
70	nd	nd	0.73	nd	nd	1.29	1.49	1.37	nd	1.11	0.89	0.88	0.70	0.74	0.77	0.84	0.74	0.96	0.94	1.03	1.25	1.12	1.02	0.64
71	0.79	0.76	nd	nd	nd	nd	nd	1.33	1.29	1.08	0.92	0.91	0.92	0.83	0.84	0.86	0.88	0.97	1.04	1.05	1.14	0.97	1.06	0.94
72	nd	nd	nd	nd	nd	nd	nd	0.89	1.06	0.87	1.05	0.96	0.92	0.94	0.95	0.87	1.11	1.06	1.01	1.34	1.04	nd	nd	nd
73	0.83	nd	0.80	0.81	0.91	1.04	1.31	1.49	1.23	1.32	1.19	1.01	1.05	1.08	1.14	1.12	1.14	1.15	1.20	1.10	nd	1.06	0.95	0.91
74	nd	nd	nd	nd	nd	nd	nd	nd	1.83	1.32	1.65	1.25	1.07	0.99	1.20	1.19	1.12	1.10	1.11	nd	nd	nd	nd	nd
75	nd	nd	nd	nd	nd	nd	nd	nd	1.45	1.41	1.17	1.23	1.26	1.27	1.28	1.32	1.24	1.29	1.24	1.28	1.23	1.17	nd	nd
76	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.96	1.33	1.21	1.24	1.20	1.25	1.35	1.11	1.34	1.38	1.34	1.29	nd	nd	nd
77	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.56	1.52	1.41	1.43	1.40	1.45	1.33	1.50	1.36	1.34	nd	nd	nd	nd	nd
78	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.39	1.44	1.45	1.43	1.47	1.54	1.58	1.52	1.51	1.36	nd	nd	nd	nd	nd
79	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.74	1.63	1.56	1.57	1.63	1.60	1.56	1.52	nd	nd	nd	nd	nd	nd
80	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.91	1.67	1.71	1.66	1.69	1.69	nd	nd	nd	nd	nd	nd	nd
81	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.67	nd	1.82	1.74	1.75	1.78	nd	1.57	nd	nd	nd	nd	nd	nd
82	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.60	nd	1.68	1.74	nd	nd	nd	nd	nd	nd	nd	nd	nd
83	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.77	1.78	1.76	1.86	nd	nd	nd	nd	nd	nd	nd	nd	nd

Coastal Hotel

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
44	nd	nd	nd	nd	nd	0.00	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
45	nd	nd	nd	0.00	0.00	nd	nd	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
46	nd	nd	0.00	nd	nd	nd	nd	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
47	nd	0.00	0.00	nd	nd	0.00	0.00	0.00	0.02	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
48	nd	0.08	nd	nd	0.00	0.04	0.04	0.01	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.06
49	0.05	0.00	0.00	0.04	0.07	0.05	0.03	0.03	0.02	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
50	0.00	0.08	0.04	0.06	0.07	0.08	0.06	0.08	0.03	0.08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.08	0.06
51	0.09	0.08	0.08	0.08	0.08	0.08	0.10	0.08	0.06	0.08	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.08	nd	0.07	0.07	0.07
52	0.09	0.09	0.09	0.08	0.08	0.09	0.10	0.09	0.08	0.08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.07	0.07	0.08	0.06
53	0.10	0.09	0.08	0.08	0.09	0.10	0.11	0.10	0.11	0.10	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.07	0.08	0.08	0.08	0.08
54	0.11	0.10	0.10	0.09	0.09	0.11	0.11	0.11	0.09	0.09	0.11	nd	nd	nd	nd	nd	nd	nd	0.11	0.08	0.08	0.09	0.09	0.09
55	0.12	0.11	0.10	0.09	0.10	0.12	0.13	0.12	0.11	0.10	0.10	nd	nd	nd	0.10	nd	nd	0.10	0.08	0.09	0.10	0.10	0.10	0.09
56	0.13	0.13	0.12	0.12	0.12	0.13	0.15	0.14	0.13	0.13	0.12	0.10	nd	nd	nd	nd	0.11	0.11	0.09	0.11	0.11	0.11	0.12	0.10
57	0.16	0.14	0.12	0.13	0.13	0.16	0.18	0.16	0.15	0.14	0.15	0.13	0.13	0.13	0.15	0.13	0.13	0.10	0.12	0.11	0.12	0.12	0.13	0.12
58	0.17	0.15	0.14	0.13	0.13	0.18	0.19	0.17	0.16	0.15	0.14	0.15	0.14	0.13	0.13	0.14	nd	0.13	0.12	0.13	0.13	0.13	0.14	0.13
59	0.17	0.15	0.14	0.14	0.13	0.17	0.18	0.17	0.16	0.15	0.15	0.16	0.14	0.14	0.15	0.15	0.15	0.16	0.13	0.12	0.13	0.13	0.14	0.13
60	0.18	0.19	0.14	0.16	0.16	0.18	0.18	0.17	0.17	0.16	0.16	0.15	0.15	0.15	0.16	0.15	0.14	0.15	0.13	0.13	0.13	0.13	0.14	0.13
61	0.18	0.16	0.16	nd	0.16	0.19	0.20	0.18	0.18	0.16	0.16	0.16	0.15	0.16	0.15	0.16	0.16	0.15	0.14	0.13	0.14	0.14	0.14	0.13
62	0.18	0.15	nd	nd	nd	0.20	0.22	0.20	0.18	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.16	0.14	0.15	0.15	0.15	0.15	0.14
63	0.20	nd	nd	nd	nd	0.21	0.24	0.21	0.21	0.18	0.19	0.18	0.19	0.20	0.19	0.19	0.19	0.20	0.17	0.18	0.18	0.18	0.17	0.16
64	nd	nd	nd	nd	nd	0.22	0.24	0.23	0.22	0.22	0.20	0.20	0.21	0.21	0.20	0.21	0.22	0.21	0.19	0.21	0.22	0.20	0.20	0.17
65	0.21	nd	nd	nd	nd	0.22	0.24	0.25	0.24	0.24	0.23	0.23	0.23	0.23	0.25	0.26	0.27	0.24	0.26	0.28	0.30	0.26	0.24	0.19
66	nd	nd	nd	nd	nd	0.23	0.27	0.28	0.27	0.28	0.28	0.28	0.28	0.29	0.30	0.32	0.32	0.28	0.33	0.36	0.36	0.34	0.28	0.21
67	0.20	nd	0.21	nd	nd	0.26	0.32	0.32	0.31	0.30	0.32	0.34	0.32	0.36	0.36	0.36	0.38	0.37	0.38	0.44	0.44	0.41	0.36	0.32
68	nd	nd	nd	nd	nd	nd	0.40	0.44	0.34	0.36	0.37	0.37	0.39	0.39	0.42	0.44	0.47	0.42	0.46	0.50	0.53	0.50	0.45	0.39
69	nd	nd	nd	nd	nd	0.56	0.58	0.49	0.42	0.39	0.43	0.45	0.46	0.47	0.48	0.50	0.52	0.52	0.53	0.56	0.61	0.61	0.60	0.47
70	nd	nd	nd	nd	nd	nd	0.78	0.60	nd	0.42	0.48	0.54	0.53	0.54	0.55	0.55	0.60	0.57	0.57	0.65	nd	0.67	0.65	0.57
71	nd	nd	nd	nd	nd	nd	nd	0.62	0.58	0.53	0.56	0.58	0.56	0.59	0.61	0.61	0.63	0.64	0.62	0.75	0.68	nd	nd	0.61
72	nd	nd	nd	nd	nd	nd	nd	0.81	0.64	0.68	0.64	0.63	0.69	0.66	0.65	0.69	0.71	0.70	0.73	0.73	nd	nd	nd	nd
73	nd	nd	nd	nd	nd	nd	nd	nd	0.78	0.78	0.75	0.75	0.72	0.68	0.69	0.72	0.78	0.75	0.75	nd	nd	nd	nd	nd
74	nd	nd	nd	nd	nd	nd	nd	nd	0.92	nd	nd	0.73	0.71	0.78	0.74	0.75	0.81	0.85	nd	nd	nd	nd	nd	nd
75	nd	nd	nd	nd	nd	nd	nd	nd	0.91	0.89	0.86	0.83	0.83	0.74	0.79	0.83	0.88	0.82	nd	nd	nd	nd	nd	nd
76	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.03	0.91	0.91	0.90	0.81	0.80	0.84	0.90	nd	nd	nd	nd	nd	nd	nd
77	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.00	0.93	0.91	0.87	0.91	0.92	0.93	0.97	nd	nd	nd	nd	nd	nd	nd
78	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.13	1.02	1.04	0.96	0.95	0.93	nd	nd	nd	nd	nd	nd	nd	nd
79	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.06	1.06	nd	0.96	1.11	1.11	nd	nd	nd	nd	nd	nd	nd	nd
80	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.00	nd	nd	nd	nd	nd	nd	nd	nd
81	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.11	1.12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
82	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.18	nd	nd	nd	nd	nd	nd	nd	nd	nd

Non-Coastal Hotel

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
43	nd	nd	nd	nd	nd	nd	nd	0.23	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
44	0.15	0.14	nd	nd	nd	nd	0.22	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.10
45	0.20	0.14	0.16	0.15	0.19	0.20	0.27	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
46	nd	nd	0.12	0.13	nd	0.08	0.12	0.16	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
47	0.14	nd	0.14	0.10	0.15	0.23	0.24	0.21	0.16	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.10	0.10
48	nd	0.15	0.12	0.15	0.14	0.19	0.16	0.18	0.19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
49	0.12	0.11	0.14	0.14	0.18	0.17	0.22	0.19	0.13	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.11
50	0.14	0.15	0.16	0.16	0.15	0.22	0.24	0.21	0.19	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00	0.05	0.09
51	0.11	0.15	0.14	0.16	0.21	0.20	0.26	0.22	0.21	0.17	nd	nd	nd	nd	0.15	nd	nd	nd	nd	0.11	0.05	0.05	0.11	0.08
52	0.15	0.13	0.16	0.19	0.16	0.20	0.24	0.27	0.23	0.18	0.13	nd	nd	nd	nd	nd	nd	nd	nd	0.10	0.06	0.10	0.09	0.09
53	0.17	0.19	0.20	0.19	0.20	0.23	0.28	0.23	0.23	0.19	0.15	nd	0.12	nd	nd	nd	nd	0.03	0.12	0.09	0.11	0.12	0.11	0.11
54	0.18	0.18	0.20	0.21	0.21	0.24	0.25	0.21	0.16	0.20	0.15	0.15	nd	0.13	0.11	0.11	0.14	0.12	0.17	0.11	0.11	0.12	0.13	0.13
55	0.20	0.20	0.19	0.20	0.20	0.23	0.25	0.21	0.20	0.18	0.20	0.14	0.15	0.11	nd	0.00	0.12	0.13	0.11	0.15	0.12	0.13	0.15	0.14
56	0.22	0.22	0.21	0.22	0.24	0.23	0.27	0.28	0.23	0.22	0.18	0.13	0.12	0.13	0.08	0.09	0.09	0.15	0.14	0.13	0.14	0.14	0.14	0.17
57	0.22	0.22	0.22	0.22	0.21	0.24	0.27	0.26	0.26	0.19	0.19	0.22	0.15	0.14	0.14	0.41	0.14	0.13	0.12	0.14	0.16	0.15	0.17	0.16
58	0.23	0.22	0.24	0.22	0.23	0.25	0.33	0.25	0.23	0.22	0.18	0.19	0.22	0.17	0.17	0.13	0.20	0.18	0.14	0.16	0.16	0.17	0.18	0.17
59	0.25	0.26	0.24	0.24	0.25	0.28	0.33	0.33	0.27	0.22	0.23	0.20	0.24	0.25	0.15	0.16	0.20	0.16	0.17	0.17	0.18	0.18	0.18	0.17
60	0.25	0.24	0.25	0.29	0.32	0.38	0.36	0.29	0.29	0.27	0.21	0.21	0.21	0.23	0.23	0.16	0.19	0.20	0.18	0.18	0.18	0.16	0.17	0.21
61	0.28	0.31	0.31	0.32	0.35	0.40	0.40	0.32	0.33	0.28	0.23	0.21	0.22	0.21	0.21	0.23	0.21	0.21	0.20	0.18	0.19	0.23	0.23	0.22
62	0.33	0.35	0.36	0.34	0.33	0.33	0.45	0.34	0.30	0.30	0.26	0.23	0.21	0.20	0.21	0.21	0.27	0.21	0.20	0.19	0.27	0.24	0.30	0.24
63	0.40	0.38	0.37	0.35	0.34	0.40	0.46	0.41	0.35	0.29	0.31	0.26	0.21	0.23	0.20	0.21	0.23	0.25	0.18	0.26	0.30	0.29	0.32	0.36
64	0.44	0.44	0.43	0.41	0.45	0.60	0.58	0.38	0.39	0.41	0.28	0.28	0.28	0.22	0.22	0.23	0.27	0.21	0.29	0.26	0.32	0.30	0.30	0.30
65	0.50	0.48	0.48	0.49	0.54	0.55	0.63	0.57	0.41	0.30	0.33	0.30	0.28	0.24	0.21	0.23	0.27	0.27	0.22	0.34	0.39	0.42	0.40	0.43
66	0.56	0.59	0.55	0.54	0.51	0.62	0.48	0.62	0.51	0.41	0.36	0.26	0.29	0.29	0.27	0.27	0.26	0.30	0.27	0.39	0.39	0.41	0.45	0.48
67	0.62	0.59	0.49	0.51	0.52	0.61	0.73	0.67	0.63	0.49	0.34	0.36	0.31	0.29	0.28	0.33	0.36	0.27	0.46	0.40	0.51	0.47	0.60	0.51
68	0.58	0.55	0.56	0.39	0.46	0.29	0.64	0.62	0.65	0.48	0.42	0.31	0.41	0.29	0.32	0.28	0.30	0.44	0.50	0.51	0.58	0.60	0.65	0.62
69	0.52	0.60	0.61	0.49	0.49	0.16	0.32	0.74	0.62	0.58	0.49	0.45	0.36	0.37	0.34	0.40	0.36	0.44	0.48	0.55	0.55	0.71	0.68	0.55
70	nd	nd	0.25	nd	nd	0.86	1.00	0.88	0.64	0.59	0.53	0.49	0.38	0.38	0.34	0.39	0.37	0.50	0.52	0.54	0.74	0.75	0.65	0.43
71	0.55	0.52	nd	nd	nd	nd	nd	0.84	0.81	0.62	0.50	0.42	0.55	0.43	0.45	0.48	0.52	0.54	0.57	0.62	0.75	0.69	0.65	0.62
72	nd	nd	nd	nd	nd	nd	nd	0.57	0.71	0.61	0.64	0.53	0.49	0.52	0.51	0.43	0.60	0.54	0.53	0.78	0.73	0.62	nd	nd
73	0.66	nd	0.64	0.62	0.73	0.83	0.97	0.99	0.76	0.79	0.69	0.57	0.52	0.58	0.60	0.59	0.60	0.61	0.73	0.76	0.73	0.63	0.71	0.63
74	nd	nd	nd	nd	nd	nd	nd	nd	1.15	0.89	0.97	0.71	0.57	0.58	0.63	0.65	0.64	0.60	0.66	0.73	nd	nd	nd	nd
75	nd	nd	nd	nd	nd	nd	nd	nd	0.96	0.92	0.60	0.69	0.65	0.63	0.65	0.68	0.70	0.71	0.71	0.89	0.90	0.70	nd	nd
76	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.21	0.89	0.69	0.70	0.52	0.59	0.68	0.59	0.93	0.89	0.86	0.76	nd	nd	nd
77	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.02	1.00	0.81	0.78	0.77	0.75	0.76	0.86	0.87	1.09	nd	nd	nd	nd	nd
78	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.97	1.02	0.99	0.59	0.75	0.69	0.86	0.86	1.01	0.92	nd	nd	nd	nd	nd
79	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.15	1.05	0.95	0.93	0.92	0.84	0.98	1.14	nd	nd	nd	nd	nd	nd
80	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.25	1.15	1.05	0.91	1.17	1.06	nd	nd	nd	nd	nd	nd	nd
81	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.11	nd	1.27	1.26	1.22	1.27	nd	1.06	nd	nd	nd	nd	nd	nd
82	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.19	nd	1.23	1.24	nd	nd	nd	nd	nd	nd	nd	nd	nd
83	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.27	1.25	1.36	1.33	nd	nd	nd	nd	nd	nd	nd	nd	nd

Coastal School

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
44	nd	nd	nd	nd	nd	0.01	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
45	nd	nd	nd	0.01	0.01	nd	nd	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
46	nd	nd	0.01	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
47	nd	0.01	0.01	nd	nd	nd	0.00	0.00	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
48	nd	0.01	nd	nd	0.01	0.01	0.00	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.01
49	0.01	0.01	nd	0.01	0.01	0.01	0.00	0.01	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
50	0.01	nd	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00	nd
51	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.00	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00	nd	nd	0.00	0.01
52	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.00	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.01	0.01	0.00	0.01
53	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.01	0.02	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00	nd	0.00	0.00	0.01
54	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.05	0.00	nd	0.01	nd	nd	nd	nd	nd	nd	nd	0.06	0.01	0.00	0.00	0.00	0.01
55	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.05	0.02	0.01	0.03	nd	nd	nd	nd	nd	nd	0.02	0.02	0.02	0.02	0.01	0.01	0.01
56	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.05	0.03	0.04	0.01	nd	nd	nd	nd	nd	0.03	0.05	0.03	0.01	0.02	0.04	0.03	0.01
57	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.10	0.06	0.09	0.11	0.08	0.12	0.11	0.09	0.07	0.06	0.04	0.07	0.04	0.02	0.03	0.02	0.01
58	0.01	0.01	nd	0.01	0.01	0.01	0.04	0.08	0.09	0.09	0.09	0.10	0.09	0.14	0.08	0.06	nd	0.06	0.06	0.05	0.05	0.05	0.04	0.01
59	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.09	0.10	0.14	0.10	0.12	0.12	0.09	0.10	0.13	0.10	0.06	0.06	0.05	0.06	0.05	0.04	0.01
60	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.13	0.15	0.14	0.16	0.11	0.18	0.19	0.20	0.11	0.09	0.06	0.06	0.07	0.06	0.07	0.05	0.01
61	0.01	0.01	nd	nd	0.01	0.01	0.05	0.13	0.14	0.20	0.19	0.22	0.11	0.20	0.16	0.14	0.11	0.09	0.09	0.08	0.08	0.08	0.04	0.01
62	0.01	nd	nd	nd	nd	0.01	0.07	0.22	0.19	0.20	0.25	0.21	0.23	0.18	0.16	0.12	0.11	0.10	0.10	0.11	0.09	0.09	0.04	0.01
63	0.01	nd	nd	nd	nd	0.01	0.07	0.22	0.28	0.25	0.29	0.27	0.26	0.25	0.22	0.16	0.14	0.14	0.12	0.12	0.12	0.12	0.02	0.01
64	nd	nd	nd	nd	nd	0.01	0.09	0.27	0.31	0.37	0.35	0.33	0.32	0.34	0.28	0.18	0.16	0.13	0.13	0.14	0.14	0.14	0.07	0.01
65	0.01	nd	nd	nd	nd	0.01	0.09	0.31	0.38	0.39	0.41	0.41	0.33	0.36	0.32	0.21	0.18	0.15	0.15	0.16	0.15	0.14	0.00	0.01
66	nd	nd	nd	nd	nd	0.01	0.08	0.24	0.46	0.54	0.50	0.53	0.44	0.42	0.35	0.24	0.21	0.16	0.17	0.19	0.17	0.15	0.05	0.01
67	0.01	nd	nd	nd	nd	nd	0.07	0.23	0.36	0.54	0.58	0.59	0.50	0.52	0.40	0.27	0.23	0.20	0.20	0.20	0.19	0.17	0.00	0.01
68	nd	nd	nd	nd	nd	nd	nd	nd	0.59	0.53	0.57	0.58	0.55	0.58	0.42	0.29	0.24	0.19	0.19	0.21	nd	nd	nd	nd
69	nd	nd	nd	nd	nd	nd	nd	nd	0.41	0.57	0.63	0.63	0.55	0.61	0.47	0.30	0.26	0.22	0.19	0.26	nd	nd	nd	nd
70	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.45	0.68	0.62	0.56	0.50	0.31	0.28	0.22	nd	nd	nd	nd	nd	nd
71	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.51	0.67	0.59	0.58	0.69	0.48	0.33	0.27	0.19	nd	nd	nd	nd	nd	nd
72	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.55	0.82	0.54	0.60	0.47	0.37	0.32	0.24	nd	nd	nd	nd	nd	nd
73	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.54	0.81	0.41	0.29	nd	nd	nd	nd	nd	nd	nd	nd
74	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.68	nd	0.59	0.52	0.38	0.32	nd	nd	nd	nd	nd	nd	nd
75	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.63	0.59	0.41	0.46	0.39	nd	nd	nd	nd	nd	nd	nd	nd
76	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.70	0.58	0.47	nd	nd	nd	nd	nd	nd	nd	nd	nd
77	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.77	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd

Non-Coastal School

THI	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
43	nd	nd	nd	nd	nd	nd	nd	0.02	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
44	0.00	nd	nd	nd	nd	nd	0.02	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
45	0.00	0.00	0.01	0.01	0.01	0.01	0.14	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
46	nd	nd	0.01	0.01	nd	0.03	0.03	0.06	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
47	nd	nd	0.00	0.00	0.01	0.05	0.07	0.14	0.09	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
48	nd	0.00	0.00	0.00	0.00	0.02	0.07	nd	0.09	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
49	0.00	0.00	0.01	0.01	0.01	0.02	0.08	0.11	0.00	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00
50	0.00	0.01	0.01	0.01	0.00	0.01	0.04	0.19	0.01	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00	0.00
51	0.01	0.00	0.01	0.01	0.00	0.02	0.08	0.11	0.21	0.09	nd	nd	nd	nd	0.04	nd	nd	nd	nd	nd	0.00	0.00	0.00	0.01
52	0.00	0.00	0.00	0.00	0.01	0.02	0.07	0.18	0.09	0.10	0.00	nd	nd	nd	nd	nd	nd	nd	nd	0.00	0.03	0.01	0.00	0.00
53	0.00	0.00	0.00	0.00	0.00	0.02	0.11	0.16	0.24	0.07	0.07	nd	nd	nd	nd	nd	nd	0.00	0.02	0.03	0.00	0.00	0.01	0.00
54	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.11	0.02	0.18	nd	0.04	nd	nd	nd	nd	nd	0.00	0.07	0.00	0.00	0.02	0.03	0.00
55	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.15	0.10	0.14	0.14	nd	0.07	nd	nd	0.00	0.01	0.07	0.00	0.02	0.01	0.05	0.04	0.00
56	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.20	0.12	0.14	0.04	nd	0.00	0.01	0.00	0.01	0.02	0.05	0.01	0.01	0.03	0.04	0.03	0.00
57	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.16	0.18	0.14	0.10	0.14	0.04	0.05	0.03	0.09	0.00	0.00	0.00	0.03	0.04	0.05	0.04	0.00
58	0.00	0.00	0.00	0.00	0.00	0.02	0.12	0.20	0.16	0.14	0.11	0.08	0.11	0.05	0.12	0.00	0.00	0.00	0.04	0.04	0.04	0.06	0.03	0.00
59	0.00	0.00	0.00	0.00	0.00	0.02	0.08	0.28	0.28	0.20	0.18	0.14	0.17	0.09	0.07	0.10	0.07	0.05	0.03	0.06	0.05	0.05	0.03	0.00
60	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.19	0.23	0.22	0.16	0.13	0.08	0.45	0.11	0.04	0.06	0.07	0.05	0.05	0.03	0.04	0.01	0.00
61	0.00	0.00	0.00	0.00	0.00	0.03	0.15	0.27	0.32	0.27	0.18	0.10	0.14	0.14	0.10	0.15	0.05	0.06	0.06	0.06	0.06	0.08	0.02	0.00
62	0.00	0.00	0.00	0.00	0.00	0.03	0.15	0.29	0.26	0.52	0.25	0.18	0.15	0.13	0.16	0.12	0.07	0.09	0.07	0.06	0.10	0.06	0.02	0.00
63	0.00	0.00	0.00	0.00	0.00	0.05	0.17	0.35	0.41	0.37	0.33	0.34	0.18	0.21	0.18	0.14	0.08	0.11	0.06	0.10	0.08	0.07	0.02	0.00
64	0.00	0.01	0.01	0.01	0.01	0.05	0.20	0.37	0.53	0.43	0.46	0.36	0.23	0.19	0.18	0.23	0.13	0.10	0.13	0.11	0.10	0.09	0.03	0.00
65	0.00	0.00	0.01	0.00	0.00	0.09	0.27	0.56	0.54	0.50	0.54	0.49	0.43	0.29	0.30	0.24	0.15	0.14	0.09	0.13	0.12	0.12	0.01	0.00
66	0.00	nd	nd	nd	nd	nd	nd	0.75	nd	0.72	0.70	0.43	0.55	0.40	0.40	0.29	0.13	0.15	0.12	0.14	0.10	0.15	0.08	0.00
67	nd	nd	nd	nd	nd	nd	nd	0.68	0.78	0.66	0.63	0.62	0.51	0.47	0.44	0.44	0.21	0.15	0.19	0.12	0.12	0.07	0.00	0.00
68	nd	nd	nd	nd	nd	nd	nd	nd	0.77	0.58	0.71	0.80	0.78	0.55	0.58	0.48	0.13	0.20	0.15	0.15	0.14	nd	nd	nd
69	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.63	0.98	0.77	0.68	0.77	0.74	0.55	0.18	0.22	0.19	0.17	0.05	nd	nd	nd
70	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.17	0.74	0.99	0.85	0.87	0.76	0.60	0.19	0.26	0.12	0.08	nd	nd	nd	nd
71	nd	nd	nd	nd	nd	nd	nd	nd	0.92	1.14	0.63	1.01	1.06	0.89	0.83	0.70	0.28	0.22	0.13	0.03	nd	nd	nd	nd
72	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.69	0.89	0.98	0.98	1.05	0.75	0.39	0.27	0.06	nd	nd	nd	nd	nd
73	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.29	0.79	0.98	1.20	1.17	0.87	0.31	0.19	0.13	nd	nd	nd	nd	nd
74	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.24	nd	0.98	0.89	1.09	1.27	0.90	0.16	0.17	0.16	nd	nd	nd	nd	nd
75	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.40	1.37	1.10	1.35	1.25	0.90	0.08	0.07	nd	nd	nd	nd	nd	nd
76	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.85	0.71	0.96	0.65	0.14	nd	nd	nd	nd	nd	nd	nd
77	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.51	1.36	1.10	1.28	0.59	0.31	nd	nd	nd	nd	nd	nd	nd
78	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.26	nd	1.14	0.50	nd	nd	nd	nd	nd	nd	nd
79	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.28	1.34	1.59	1.19	nd	nd	nd	nd	nd	nd	nd	nd
80	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.55	nd	nd	nd	nd	nd	nd	nd	nd	nd