Contents

	Preface Preface	ix
1	LET NATURE HEAT YOUR HOME	2
2	THE PASSIVE SOLAR CONCEPT	14
3	THE SOLAR SLAB AND BASIC SOLAR DESIGN	26
4	INSULATION, VENTING, AND FRESH AIR	44
5	BASIC LAYOUTS AND FLOOR PLANS	56
6	HOW TO DO THE SOLAR DESIGN CALCULATIONS	64
7	THE FOUNDATION PLAN, AND BACKUP HEATING AND COOLING	94
8	A SIDEHILL VARIATION, AND SOLAR DESIGN WORKSHEETS	116
9	SUNSPACES AND SPECIAL DESIGN CONSIDERATIONS	140
10	INTERIOR DESIGN FOR YEAR-ROUND COMFORT (by Cornelia C. Kachadorian)	152

11 THREE PROJECTS	164
12 USING THE CSOL COMPUTER PROGRAM	170
APPENDICES	
APPENDIX 1 Solar Design Worksheets	174
APPENDIX 2 Solar Intensity and Solar Heat Gain	
Factors for 16 to 64 degrees North Latitude	189
APPENDIX 3 Thermal Properties of Typical Building and Insulating Materials (Design Values)	197
APPENDIX 4 North Latitude, Elevation, and Outside Winter Design Temperatures for Selected Cities in the U.S. and Canada	200
APPENDIX 5 Average Monthly and Yearly Degree Days for Cities in the U.S. and Canada	206
APPENDIX 6 Mean Percentage of Possible Sunshine	
for Selected Cities in the U.S. and Canada	213
Isogonic Chart (Magnetic Declination)	219
Index OMNEDOD GRAD DISTRIBUTIONS COM	221