FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

FORM 600A-01 **Residential Whole Building Performance Method A** **NORTH 1 2 3**

PROJECT NAME: **AND ADDRESS:**		**BUILDER:**	
		PERMITTING OFFICE:	**CLIMATE ZONE:** 1 ☐ 2 ☐ 3 ☐
OWNER:		**PERMIT NO.:** ☐☐☐☐☐☐☐☐	**JURISDICTION NO.:** ☐☐☐☐☐☐

	Please Type	CK
1. New construction or addition	**1.** _____	_____
2. Single family detached or Multifamily attached	**2.** _____	_____
3. If Multifamily—No. of units covered by this submission	**3.** _____	_____
4. Is this a worst case? (yes / no)	**4.** _____	_____
5. Conditioned floor area (sq. ft.)	**5.** _____ sq. ft.	_____
6. Predominant eave overhang (ft.)	**6.** _____ ft.	_____
7. Glass type and area:	Single Pane Double Pane	
a. Clear glass	**7a.** _____ sq. ft. _____ sq. ft.	_____
b. Tint, film or solar screen	**7b.** _____ sq. ft. _____ sq. ft.	_____
8. Floor type and insulation:		
a. Slab-on-grade (R-value + perimeter)	**8a. R=** _____ , _____ l. ft.	_____
b. Wood, raised (R-value + sq. ft.)	**8b. R=** _____ , _____ sq. ft.	_____
c. Concrete, raised (R-value)	**8c. R=** _____ , _____ sq. ft.	_____
9. Net Wall type, area and insulation:		
a. Exterior: 1. Concrete block (Insulation R-value)	**9a**-1 **R=** _____ _____ sq. ft.	_____
2. Wood frame (Insulation R-value)	**9a**-2 **R=** _____ _____ sq. ft.	_____
3. Steel frame (Insulation R-value)	**9a**-3 **R=** _____ _____ sq. ft.	_____
4. Log (Insulation R-value)	**9a**-4 **R=** _____ _____ sq. ft.	_____
5. Other: _____		
b. Adjacent: 1. Concrete block (Insulation R-value)	**9b**-1 **R=** _____ _____ sq. ft.	_____
2. Wood frame (Insulation R-value)	**9b**-2 **R=** _____ _____ sq. ft.	_____
3. Steel frame (Insulation R-value)	**9b**-3 **R=** _____ _____ sq. ft.	_____
4. Log (Insulation R-value)	**9b**-4 **R=** _____ _____ sq. ft.	_____
10. Ceiling type, area and insulation:		
a. Under attic (Insulation R-value)	**10a. R=** _____ _____ sq. ft.	_____
b. Single assembly (Insulation R-value)	**10b. R=** _____ _____ sq. ft.	_____
c. Radiant barrier, IRCC or white roof installed?	**10c.** _____	_____
11. Air distribution system:		
a. Ducts (Insulation + Location)	**11a. R=** _____ , _____ (cond./uncond.)	_____
b. Air Handler (Location)	**11b.** _____ (cond./uncond.)	_____
12. Cooling system:	**12a. Type:** _____	_____
(Types: central-split, central-single pkg., room unit, PTAC., gas, none)	**12b. SEER/EER/COP:** _____	_____
	12c. Capacity: _____	_____
13. Heating system:	**13a. Type:** _____	_____
(Types: heat pump, elec. strip, nat. gas, L.P. gas, gas h.p., room or PTAC, none)	**13b. HSPF/COP/AFUE:** _____	_____
14. Hot water system:	**13c. Capacity:** _____	_____
(Types: elec., natural gas, solar, L.P. gas, none)	**14a. Type:** _____	_____
15. Hot Water Credits:	**14b. EF:** _____	_____
a. Heat Recovery (HR)	**15a.** _____	_____
b. Dedicated Heat Pump(DHP)	**15b.** _____	_____
c. Solar	**15c.** _____	_____
16. HVAC Credits		
(Use: CF-Ceiling Fan, CV-Cross vent, PT-Programmable thermostat, HF-Whole house fan, MZ-Multizone)	**16.** _____	_____
17. COMPLIANCE STATUS: (PASS if As-Built Pts. are less than Base Pts.)	**17.** _____	_____
a. Total As-Built points b. Total Base points	**17a.** _____ **17b.** _____	_____

I hereby certify that the plans and specifications covered by the calculation are in compliance with the Florida Energy Code.

PREPARED BY: _____ **DATE:** _____

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER AGENT: _____ **DATE:** _____

Review of plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed, this building will be inspected for compliance in accordance with Section 553.908, F.S.

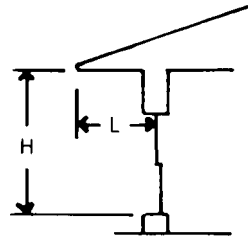
BUILDING OFFICIAL: _____

DATE: _____

SUMMER CALCULATIONS

CLIMATE ZONES 1 2 3

GLASS



OVERHANG RATIO = $\frac{\text{OH LENGTH}}{\text{OH HEIGHT}}$

ORIENTATION	OVERHANG LENGTH OH (FEET)	GLASS AREA (SQ. FT.)	SINGLE-PANE SUMMER POINT MULTIPLIER CLEAR	SINGLE-PANE SUMMER POINT MULTIPLIER TINT[2]	DOUBLE-PANE SUMMER POINT MULTIPLIER CLEAR	DOUBLE-PANE SUMMER POINT MULTIPLIER TINT[2]	SUMMER OH FACTOR (from 6A-1)	AS-BUILT GLASS SUMMER PTS
N			20.36	16.45	19.22	15.78		
NE			31.37	25.94	28.72	23.92		
E			44.69	37.38	40.22	33.76		
SE			45.41	38.01	40.86	34.32		
S			38.10	31.72	34.50	28.87		
SW			42.67	35.65	38.46	32.25		
W			40.92	34.13	36.99	30.98		
NW			27.55	22.64	25.46	21.12		
H[1]			79.26	65.61	72.73	60.66		

GLASS	.18 x COND FLOOR AREA	x WEIGHTED GLASS MULTIPLIER	= BASE GLASS SUBTOTAL
	.18	20.04	

AS-BUILT GLASS SUBTOTAL

	COMPONENT DESCRIPTION	AREA	x BASE SUMMER POINT. MULT.	= BASE SUMMER POINTS
WALL	EXTERIOR		1.7	
	ADJACENT		.7	
DOORS	EXTERIOR		6.1	
	ADJACENT		2.4	
CEILING	UNDER ATTIC OR SINGLE ASSEMBLY		1.73	
FLOOR	SLAB (PERIMETER)		-37.0	
	RAISED (AREA)		-3.99	
INFILTRATION & INTERNAL GAINS			10.21	

BASE CEILING AREA EQUALS FLOOR AREA DIRECTLY UNDER CEILING, AS-BUILT CEILING AREA EQUALS ACTUAL CEILING SQUARE FOOTAGE.

FOR SLAB ON GRADE USE PERIMETER LENGTH AROUND CONDITIONED FLOOR. FOR RAISED FLOORS USE AREA OVER UNCONDITIONED SPACE.

USE TOTAL FLOOR AREA OF CONDITIONED SPACE.

COMPONENT DESCRIPTION	AREA	x SUMMER POINT. MULT. (6A-2 THRU 6A-6)	= AS-BUILT SUMMER POINTS
RBS/IRCC/white roof[3]		x ___	
		10.21	

TOTAL COMPONENT BASE SUMMER POINTS

TOTAL COMPONENT AS-BUILT SUMMER POINTS

COOLING SYSTEM	Base Cooling System Multiplier	x Total Base Summer Points	= BASE COOLING POINTS
	.43		

TOTAL AS-BUILT SUM. PTS.	x As-Built DM (6A-8)	x As-Built DSM (6A-20)	x As-Built AHU (6A-7)	x As-Built CSM (6A-9)	x As-Built CCM (6A-19)	= AS-BUILT COOLING COINTS
		1.15 or 1.0				

HOT WATER SYSTEM	Number of bedrooms	x Base Hot Water Multiplier	= BASE HOT WATER POINTS
		2746	

AS-BUILT HOT WATER SYSTEM DESC.	Number of bedrooms	x As-Built HWM (6A-22)	x As-Built HWCM (6A-23)	= AS-BUILT HOT WATER POINTS

[1]H = HORIZONTAL GLASS (SKYLIGHTS) [2]FOR GLASS WITH KNOWN SHGC, SEE SECTION 2.1.1 APPENDIX C. TINT MULTIPLIERS MAY BE USED FOR GLASS WITH SOLAR SCREENS, FILM, OR TINT. [3]MUST MEET CRITERIA OF S. 607.1.A.

SUMMER POINT MULTIPLIERS (SPM)

CLIMATE ZONES 1 2 3

6A-1 SUMMER OVERHANG FACTORS (SOF) FOR SINGLE AND DOUBLE PANE GLASS.

SELECT BY OR	OH Ratio	.00-.11	.12-.17	.18-.26	.27-.35	.36-.46	.47-.57	.58-.70	.71-.83	.84-1.18	1.19-1.72	1.73-2.73	2.74 & up
▶	North	1.00	0.993	0.971	0.930	0.888	0.842	0.803	0.766	0.736	0.681	0.634	0.593
	Northeast	1.00	0.996	0.967	0.907	0.845	0.775	0.717	0.662	0.619	0.545	0.487	0.441
	East	1.00	0.994	0.963	0.898	0.827	0.745	0.675	0.609	0.558	0.470	0.405	0.357
	Southeast	1.00	0.998	0.952	0.864	0.777	0.689	0.623	0.566	0.525	0.459	0.413	0.379
	South	1.00	0.989	0.931	0.835	0.751	0.675	0.620	0.575	0.543	0.493	0.458	0.432
	Southwest	1.00	0.998	0.953	0.866	0.779	0.691	0.623	0.565	0.522	0.453	0.404	0.368
	West	1.00	0.994	0.963	0.899	0.828	0.748	0.681	0.617	0.569	0.485	0.422	0.375
▶	Northwest	1.00	0.996	0.968	0.913	0.858	0.797	0.748	0.702	0.667	0.605	0.556	0.516
	OH Length	0.0'	1.0'	1.5'	2.0'	3.0'	3.5'	4.5'	5.5'	6.5'	9.5'	14.0'	20.0'

6A-2 WALL SUMMER POINT MULTIPLIERS (SPM)

FRAME					CONCRETE BLOCK (NORMAL WT)				FACE BRICK				LOG		
	WOOD		STEEL			INTERIOR INSULATION		EXT. INSUL.	R-VALUE	WOOD FR	R-VALUE	BLOCK		6 INCH	8 INCH
R-VALUE	EXT	ADJ	EXT	ADJ	R-VALUE	EXT	ADJ	EXT	0-6.9	2.4	0-2.9	1.0	R-VALUE	EXT	EXT
0-6.9	5.5	2.2	7.6	2.8	0-2.9	2.2	1.1	2.2	7-10.9	.6	3-6.9	.6	0-2.9	1.5	1.0
7-10.9	2.1	.8	3.5	1.3	3-4.9	1.3	.8	.8	11-18.9	.4	7-9.9	.4	3-6.9	1.0	.7
11-12.9	1.7	.7	2.7	1.0	5-6.9	1.0	.7	.5	19-25.9	.2	10 & UP	.2	7 & Up	.8	.6
13-18.9	1.5	.6	2.5	0.9	7-10.9	.7	.5	.3	26 & Up	.1					
19-25.9	.9	.4	2.2	0.8	11-18.9	.4	.4	0							
26& Up	.6	.2	1.2	0.4	19-25.9	.2	.2								
					26 & Up	.1	.1								

NOTE: SEE SECTION 2.0 OF APPENDIX C FOR MULTIPLIERS OF ENVELOPE COMPONENTS NOT ON THIS FORM.

6A-3 DOOR SUMMER POINT MULTIPLIERS (SPM)

DOOR TYPE	EXTERIOR	ADJACENT
WOOD	6.1	2.4
INSULATED	4.1	1.6

6A-4 CEILING SUMMER POINT MULTIPLIERS (SPM)

UNDER ATTIC		SINGLE ASSEMBLY		CONCRETE DECK ROOF		
R-VALUE	SPM	R-VALUE	SPM		CEILING TYPE	
19-21.9	2.34	10-10.9	8.49	R-VALUE	EXPOSED	DROPPED
22-25.9	2.11	11-12.9	7.97	10-13.9	9.13	8.47
26-29.9	1.89	13-18.9	7.14	14-20.9	6.80	6.45
30-37.9	1.73	19-25.9	5.64	21 & Up	4.92	4.63
38 & Up	1.52	26-29.9	4.75			
RBS Credit	0.700	30 & Up	4.40			
IRCC Credit	0.849					
White Roof Credit	0.550					

6A-5 FLOOR SUMMER POINT MULTIPLIERS (SPM)

SLAB-0N-GRADE EDGE INSULATION		RAISED CONCRETE		RAISED WOOD			
					POST OR PIER CONSTRUCTION	STEM WALL w/ UNDER FLOOR INSULATION	ADJACENT
R-VALUE	SPM	R-VALUE	SPM	R-VALUE	SPM	SPM	SPM
0-2.9	-41.2	0-2.9	-.8	0-6.9	2.80	-4.7	2.2
3-4.9	-37.2	3-4.9	-1.3	7-10.9	1.34	-2.3	.8
5-6.9	-36.2	5-6.9	-1.3	11-18.9	1.06	-1.9	.7
7 & Up	-35.7	7 & Up	-1.3	19 & Up	.77	-1.5	.4

6A-6 INFILTRATION & INTERNAL GAINS (SPM)

Air Infiltration	3.44
Internal Gains	+ 6.77
Infiltration/Internal Gains (Combined)	10.21

6A-7 AIR HANDLER MULTIPLIERS (SPM)

Located in garage	1.00
Located in conditioned area	0.91
Located on exterior of building	1.02
Located in attic	1.11

6A-8 DUCT MULTIPLIERS (DM) See Table 6-10 for Code minimums.

SUPPLY DUCTS IN:	DUCT R-Value	RETURN DUCTS In:				
		Unconditioned space	Attic/ RBS	Attic/ IRCC	Attic/ White roof	Conditioned space
Unconditioned Space	4.2	1.118	1.111	1.112	1.089	1.107
	6.0	1.090	1.084	1.085	1.066	1.081
	8.0	1.071	1.066	1.067	1.051	1.064
Attic/Radiant Barrier (RBS)	4.2	1.072	1.066	---	---	1.061
	6.0	1.056	1.051	---	---	1.047
	8.0	1.045	1.041	---	---	1.037
Attic/Interior Radiation Control Coatings (IRCC)	4.2	1.099	---	1.092	---	1.084
	6.0	1.076	---	1.071	---	1.065
	8.0	1.061	---	1.057	---	1.052
Attic/White Roof	4.2	1.068	---	---	1.096	1.057
	6.0	1.051	---	---	1.071	1.043
	8.0	1.040	---	---	1.055	1.034
Conditioned Space	4.2	1.006	1.005	1.007	1.008	1.000
	6.0	1.005	1.004	1.005	1.006	1.000
	8.0	1.004	1.003	1.004	1.005	1.000

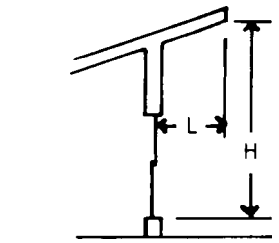
6A-9 COOLING SYSTEM MULTIPLIERS (CSM)

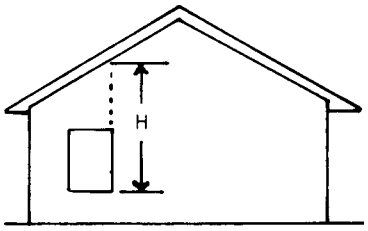
SYSTEM TYPE See Table 6-3 for Code minimums		COOLING SYSTEM MULTIPLIERS (CSM)										
Central Units (SEER)	Rating		7.5-7.9	8.0-8.4	8.5-8.8	8.9-9.4	9.5-9.9	10.0-10.4	10.5-10.9	11.0-11.4	11.5-11.9	12.0-12.4
	CSM		.45	.43	.40	.38	.36	.34	.32	.31	.30	.28
PTAC & Room Units (EER)	Rating	12.5-12.9	13.0-13.4	13.5-13.9	14.0-14.4	14.5-14.9	15.0-15.4	15.5-15.9	16.0-16.4	16.5-16.9	17.0-17.4	17.5 & Up
	CSM	.27	.26	.25	.24	.24	.23	.22	.21	.21	.20	.19

WINTER CALCULATIONS

CLIMATE ZONES 1 2 3

GLASS





ORIENTATION	OVERHANG LENGTH OH (FEET)	GLASS AREA (SQ. FT.)	x SINGLE-PANE WINTER POINT MULTIPLIER CLEAR	SINGLE-PANE WINTER POINT MULTIPLIER TINT[2]	OR DOUBLE-PANE WINTER POINT MULTIPLIER CLEAR	DOUBLE-PANE WINTER POINT MULTIPLIER TINT[2]	x WINTER OH FACTOR (from 6A-10)	= AS-BUILT GLASS WINTER PTS
N			27.44	28.16	14.30	14.91		
NE			26.36	27.23	13.40	14.13		
E			21.24	22.78	9.09	10.43		
SE			16.92	19.03	5.33	7.18		
S			15.42	17.73	4.03	6.05		
SW			19.06	20.91	7.17	8.77		
W			23.35	24.63	10.76	11.87		
NW			27.15	27.91	14.03	14.68		
H[1]			22.78	24.78	8.45	10.23		

GLASS	.18 x COND FLOOR AREA	x WEIGHTED GLASS MULTIPLIER	= BASE GLASS SUBTOTAL
	.18	12.74	

AS-BUILT GLASS SUBTOTAL

	COMPONENT DESCRIPTION	AREA	x BASE WINTER POINT. MULT.	= BASE WINTER POINTS	COMPONENT DESCRIPTION	AREA	x WINTER POINT. MULT. (6A-11THRU 6A-15)	= AS-BUILT WINTER POINTS
WALL	EXTERIOR		3.7					
	ADJACENT		3.6					
DOORS	EXTERIOR		12.3					
	ADJACENT		11.5					
CEILING	UNDER ATTIC OR SINGLE ASSEMBLY		2.05					
					RBS/IRCC/white roof[3]		x	
	BASE CEILING AREA EQUALS FLOOR AREA DIRECTLY UNDER CEILING, AS-BUILT CEILING AREA EQUALS ACTUAL CEILING SQUARE FOOTAGE.							
FLOOR	SLAB (PERIMETER)		8.9					
	RAISED (AREA)		.96					
	FOR SLAB ON GRADE USE PERIMETER LENGTH AROUND CONDITIONED FLOOR. FOR RAISED FLOORS USE AREA OVER UNCONDITIONED SPACE.							
INFILTRATION & INTERNAL GAINS			-0.58				-0.58	
	USE TOTAL FLOOR AREA OF CONDITIONED SPACE.							

TOTAL COMPONENT BASE WINTER POINTS		TOTAL COMPONENT AS-BUILT WINTER POINTS	

HEATING SYSTEM	Base Heating System Multiplier	x Total Base Summer Points	= BASE HEATING POINTS
	.63		

TOTAL AS-BUILT SUM. PTS.	x As-Built DM (6A-17)	x As-Built DSM (6A-20)	x As-Built AHU (6A-16)	x As-Built HSM (6A-18)	x As-Built HCM (6A-21)	= AS-BUILT HEATING POINTS
		1.17 or 1.0				

TOTAL	BASE COOLING POINTS (From P. 2)	+ BASE HEATING POINTS	+ BASE HOT WATER POINTS (From P. 2)	= TOTAL BASE POINTS (Enter on P. 1)	AS-BUILT COOLING POINTS (From P. 2)	+ AS-BUILT HEATING POINTS	+ AS-BUILT HOT WATER POINTS (From P. 2)	= TOTAL AS-BUILT POINTS (Enter on P. 1)

[1]H = HORIZONTAL GLASS (SKYLIGHTS) [2]FOR GLASS WITH KNOWN SHGC, SEE SECTION 2.1.1 APPENDIX C. [3]MUST MEET CRITERIA OF S. 607.1.A.
TINT MULTIPLIERS MAY BE USED FOR GLASS WITH SOLAR SCREENS, FILM, OR TINT.

WINTER POINT MULTIPLIERS (WPM)

CLIMATE ZONES 1 2 3

6A-10 WINTER OVERHANG FACTORS (WOF)

SELECT BY OR	OH Ratio	.00-.11	.12-.17	.18-.26	.27-.35	.36-.46	.47-.57	.58-.70	.71-.83	.84-1.18	1.19-1.72	1.73-2.73	2.74 & up
	North	1.00	1.000	1.001	1.003	1.005	1.009	1.011	1.014	1.016	1.021	1.024	1.027
	Northeast	1.00	0.998	1.001	1.008	1.015	1.023	1.029	1.035	1.040	1.049	1.056	1.061
	East	1.00	1.007	1.018	1.040	1.069	1.109	1.150	1.198	1.242	1.338	1.429	1.507
	Southeast	1.00	1.014	1.043	1.111	1.202	1.332	1.472	1.635	1.787	2.113	2.412	2.650
	South	1.00	0.994	1.032	1.142	1.308	1.563	1.845	2.175	2.471	3.042	3.450	3.661
	Southwest	1.00	1.006	1.025	1.070	1.131	1.217	1.308	1.413	1.508	1.708	1.888	2.031
	West	1.00	1.002	1.010	1.027	1.049	1.077	1.102	1.128	1.149	1.187	1.217	1.238
	Northwest	1.00	0.999	1.000	1.004	1.008	1.012	1.016	1.019	1.022	1.028	1.032	1.036
	OH Length	0.0'	1.0'	1.5'	2.0'	3.0'	3.5'	4.5'	5.5'	6.5'	9.5'	14.0'	20.0'

6A-11 WALL WINTER POINT MULTIPLIERS (WPM)

FRAME					CONCRETE BLOCK (NORMAL WT)				FACE BRICK				LOG		
	WOOD		STEEL			INTERIOR INSULATION		EXT. INSUL.	R-VALUE	WOOD FR	R-VALUE	BLOCK		6 INCH	8 INCH
R-VALUE	EXT	ADJ	EXT	ADJ	R-VALUE	EXT	ADJ	EXT	0-6.9	12.6	0-2.9	7.9			
0-6.9	11.1	10.4	15.1	13.1	0-2.9	11.2	6.8	11.2	7-10.9	4.2	3-6.9	5.7	R-VALUE	EXT	EXT
7-10.9	4.4	4.4	7.3	6.6	3-4.9	7.3	5.1	5.6	11-18.9	3.5	7-9.9	3.8	0-2.9	4.5	3.0
11-12.9	3.7	3.6	5.7	5.2	5-6.9	5.7	4.2	4.3	19-25.9	2.2	10 & UP	3.0	3-6.9	2.8	2.2
13-18.9	3.4	3.3	5.2	4.9	7-10.9	4.6	3.5	3.3	26 & Up	1.4			7 & Up	2.1	1.7
19-25.9	2.2	2.2	4.6	4.4	11-18.9	3.0	2.6	2.2							
26& Up	1.5	1.5	2.7	2.6	19-25.9	1.9	1.7								
					26 & Up	1.3	1.2								

NOTE: SEE SECTION 2.0 OF APPENDIX C FOR MULTIPLIERS OF ENVELOPE COMPONENTS NOT ON THIS FORM.

6A-12 DOOR WINTER POINT MULTIPLIERS (WPM)

DOOR TYPE	EXTERIOR	ADJACENT
WOOD	12.3	11.5
INSULATED	8.4	8.0

6A-13 CEILING WINTER POINT MULTIPLIERS (WPM)

UNDER ATTIC		SINGLE ASSEMBLY		CONCRETE DECK ROOF		
R-VALUE	WPM	R-VALUE	WPM		CEILING TYPE	
19-21.9	2.70	10-10.9	2.87	R-VALUE	EXPOSED	DROPPED
22-25.9	2.45	11-12.9	2.70	10-13.9	3.16	2.91
26-29.9	2.22	13-18.9	2.40	14-20.9	2.31	2.14
30-37.9	2.05	19-25.9	1.86	21 & Up	1.47	1.47
38 & Up	1.81	26-29.9	1.54			
RBS Credit	0.850	30 & Up	1.43			
IRCC Credit	0.912					
White Roof Credit	1.044					

6A-14 FLOOR WINTER POINT MULTIPLIERS (WPM)

SLAB-0N-GRADE EDGE INSULATION		RAISED CONCRETE		RAISED WOOD			
					POST OR PIER CONSTRUCTION	STEM WALL w/ UNDER FLOOR INSULATION	ADJACENT
R-VALUE	WPM	R-VALUE	WPM	R-VALUE	WPM	WPM	WPM
0-2.9	18.8	0-2.9	9.9	0-6.9	5.77	3.5	10.4
3-4.9	9.3	3-4.9	5.1	7-10.9	2.20	1.6	4.4
5-6.9	7.6	5-6.9	3.6	11-18.9	1.55	1.2	3.6
7 & Up	7.0	7 & Up	2.9	19 & Up	0.88	.8	2.2

6A-15 INFILTRATION & INTERNAL GAINS (WPM)

Air Infiltration	2.13
Internal Gains	- 2.72
Infiltration/Internal Gains (Combined)	-0.58

6A-16 AIR HANDLER MULTIPLIERS (WPM)

Located in garage	1.00
Located in conditioned area	0.93
Located on exterior of building	1.07
Located in attic	1.10

6A-17 DUCT MULTIPLIERS (DM) See Table 6-10 for Code minimums.

SUPPLY DUCTS IN:	DUCT R-Value	RETURN DUCTS In:				
		Unconditioned space	Attic/ RBS	Attic/ IRCC	Attic/ White roof	Conditioned space
Unconditioned Space	4.2	1.093	1.086	1.088	1.089	1.081
	6.0	1.069	1.064	1.065	1.066	1.060
	8.0	1.053	1.049	1.051	1.051	1.046
Attic/Radiant Barrier (RBS)	4.2	1.067	1.059	---	---	1.052
	6.0	1.051	1.045	---	---	1.040
	8.0	1.040	1.036	---	---	1.032
Attic/Interior Radiation Control Coatings (IRCC)	4.2	1.096	---	1.088	---	1.077
	6.0	1.072	---	1.066	---	1.057
	8.0	1.056	---	1.052	---	1.045
Attic/White Roof	4.2	1.104	---	---	1.096	1.083
	6.0	1.076	---	---	1.071	1.061
	8.0	1.059	---	---	1.055	1.048
Conditioned Space	4.2	1.008	1.007	1.010	1.008	1.000
	6.0	1.006	1.005	1.007	1.006	1.000
	8.0	1.005	1.004	1.006	1.005	1.000

6A-18 HEATING SYSTEM MULTIPLIERS (HSM)

SYSTEM TYPE See Tables 6-6 to 6-8 for code minimums		HEATING SYSTEM MULTIPLIERS (HSM)							
Central Heat Pump Units	HSPF	6.40-6.79	6.80-6.89	6.90-7.39	7.40-7.89	7.90-8.39	8.40-8.89	8.9-9.39	9.4-9.89
	HSM	.53	.50	.49	.46	.43	.41	.38	.36
	HSPF	9.90-10.39	10.40-10.89	10.90-11.39	11.40-11.89	11.90-12.39	12.40 & up		
	HSM	.34	.33	.31	.30	.29	.28		
PTHP	COP	2.50-2.69	2.70-2.89	2.90-3.09	3.10-3.29	3.30-3.49	3.50-3.69	3.70-3.89	3.90-4.19
	HSM	.40	.37	.34	.32	.30	.29	.27	.26
Electric Strip & Gas	1.0 (for gas credit multipliers, see Table 6A-21)								

ADDITIONAL TABLES

6A-19 COOLING CREDIT MULTIPLIERS (CCM)

SYSTEM TYPE	Cooling credit multipliers (CCM)
Ceiling Fans	.95*
Cross Ventilation	.95*
Whole House Fan	.95*
Multizone	.95
Programmable Thermostat	.95

**Credit may be taken for only one system type concurrently.*

6A-20 AIR DISTRIBUTION SYSTEM CREDIT MULTIPLIERS

TYPE CREDIT	Prescriptive requirements	Multiplier
Airtight Duct credit[1]	610.1.A.1	1.00
Factory-sealed AHU credit[2]	610.2.A.2.1	0.95

[1]Duct Sealing Multiplier (DSM) shall be 1.15 (summer) or 1.17 (winter) unless Airtight Duct credit is demonstrated by test report.

[2]Multiply Factory-sealed AHU credit by summer (Table 6A-7) or winter (Table 6A-16) AHU multiplier. Insert total in the "AS-Built AHU" box on page 2 or 4.

6A-21 HEATING CREDIT MULTIPLIERS (HCM)

SYSTEM TYPE		HEATING CREDIT MULTIPLIERS (HCM)					
Programmable Thermostat	HCM	.95					
Multizone	HCM	.95					
Natural Gas	AFUE	.68-.72	.73-.77	.78-.82	.83-.87	.88-.92	.93 & Up
	HCM	.59	.55	.51	.48	.45	.43
LP Gas	HCM	.79	.74	.69	.65	.61	.58

6A-22 HOT WATER MULTIPLIERS (HWM)

SYSTEM TYPE See Table 6-12 for Code minimums		HOT WATER MULTIPLIERS (HWM)										
Electric Resistance	EF				.80-.81	.82-.83	.84-.85	.86-.87	.88-.90	.91-.93	.94-.96	.97 & Up
	HWM				3020	2946	2876	2809	2746	2655	2571	2491
Natural Gas	EF	.43-.47	.48-.49	.50-.51	.52-.53	.54-.55	.56-.57	.58-.59	.60-.61	.62-.63	.64-.65	.66 & Up
	HWM	2231	1998	1918	1844	1776	1713	1654	1599	1547	1498	1453
LP Gas	HWM	3029	2713	2605	2505	2411	2326	2245	2171	2101	2035	1973
Ded. HP or Solar System with Tank	EF	1.0-1.49	1.5-1.99	2.0-2.49	2.5-2.99	3.0-3.49	3.5-3.99	4.0-4.49	4.5-4.99	5.0-Up		
	HWM	2416	1611	1208	966	805	690	604	537	483		

6A-23 HOT WATER CREDIT MULTIPLIERS (HWCM)

SYSTEM TYPE	HOT WATER CREDIT MULTIPLIERS (HWCM)					
Heat Recovery Unit	With	Air Conditioner		Heat Pump		
	HWCM	.84		.78		
Add-on Dedicated Heat Pump (without tank)	EF	2.0-2.49	2.5-2.99	3.0-3.49		3.5 & Up
	HWCM	.44	.35	.29		.25
Add-on Solar Water Heater (without tank)	EF	1.0-1.9	2.0-2.9	3.0-3.9	4.0-4.9	5.0 & Up
	HWCM	.84	.42	.28	.21	.17

NOTE: A HWM must be used in conjunction with all HWCM. See Table 6A-22. EF Means Energy Factor.

6A-24 INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	606.1.ABC.1.1	Max: .3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	
Exterior & Adjacent Walls	606.1.ABC.1.2.1	Caulk, gasket, weatherstrip or seal between: windows/doors & frames, surrounding wall; foundation & wall sole or sill plate; joints between exterior wall panels at corners; utility penetrations; between wall panels & top/bottom plates; between walls & floor. EXCEPTION: Frame walls where a continuous infiltration barrier is installed that extends from, and is sealed to, the foundation to the top plate.	
Floors	606.1.ABC.1.2.2	Penetrations/openings >1/8" sealed unless backed by truss or joint members. EXCEPTION: Frame floors where a continuous infiltration barrier is installed that is sealed to the perimeter, penetrations and seams.	
Ceilings	606.1.ABC.1.2.3	Seal: Between walls & ceilings; penetrations of ceiling plane of top floor; around shafts, chases, soffits, chimneys, cabinets sealed to continuous air barrier; gaps in gyp board & top plate; attic access. EXCEPTION: Frame ceilings where a continuous infiltration barrier is installed that is sealed at the perimeter, at penetrations and seams.	
Recessed Lighting Fixtures	606.1.ABC.1.2.4	Type IC rated with no penetrations, sealed; or Type IC or non-IC rated, installed inside a sealed box with 1/2" clearance & 3" from insulation; or Type IC rated with <2.0 cfm from conditioned space, tested.	
Multi-story Houses	606.1.ABC.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	606.1.ABC.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	

6A-25 OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	612.1	Comply with efficiency requirements in Table 6-12. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required for vertical pipe risers.	
Swimming Pools & Spas	612.1	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%.	
Shower Heads	612.1	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	610.1	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated, and installed in accordance with the criteria of Section 610. Ducts in unconditioned attics: R-6 minimum insulation.	
HVAC Controls	607.1	Separate readily accessible manual or automatic thermostat for each system.	
Insulation	604.1, 602.1	Ceilings–Min. R-19. Common walls–Frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	