

ASHRAE/IES 90.1 COMPLIANCE SUMMARY	Form 90.1sm
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Project Name:	Project Address:	
Designer Name:	Designer Signature:	Date:

Basic Requirements

The building design complies with the Basic Requirements of the following sections:		
Section Reference	Compliance Column	Additional Forms
5.4 ELECTRIC POWER	<input type="checkbox"/> Yes	
6.4 LIGHTING	<input type="checkbox"/> Yes	
7.4 AUXILIARY SYSTEMS & EQUIPMENT	<input type="checkbox"/> Yes	
8.4 BUILDING ENVELOPE	<input type="checkbox"/> Yes	
9.4 HVAC SYSTEMS	<input type="checkbox"/> Yes	
10.4 HVAC EQUIPMENT	<input type="checkbox"/> Yes	
11.4 SERVICE WATER HEATING SYSTEMS AND EQUIPMENT	<input type="checkbox"/> Yes	
12.4 ENERGY MANAGEMENT	<input type="checkbox"/> Yes	

Method of Additional Compliance:	<input type="checkbox"/> System/Component Method <input type="checkbox"/> Building Energy Cost Budget Method
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System/Component Method

The building design complies with the requirements of:		
Section 6 LIGHTING	Prescriptive Criteria (6.5) System Performance Criteria (6.6)	<input type="checkbox"/> Yes
Section 8 ENVELOPE	Prescriptive Criteria (8.5) System Performance Criteria (8.6)	<input type="checkbox"/> Yes
Section 9 HVAC SYSTEMS	Prescriptive Criteria (9.5)	<input type="checkbox"/> Yes
Section 11 SERVICE WATER HEATING	Prescriptive Criteria (11.5)	<input type="checkbox"/> Yes

Building Energy Cost Budget Method

The building design complies with the requirements of Section 13 of the Standard because the Design Energy Cost is equal to, or less than, the Energy Cost Budget as calculated in accordance with the requirements of ASHRAE/IES 90.1	<input type="checkbox"/> Yes
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Notes:

Building design must comply with all Basic Requirements.
 Building design must comply with either the System/Component Method or the Building Energy Cost Budget Method. Indicate which method was selected.
 Within the System/Component Method, indicate whether the Prescriptive Criteria or the System Performance Criteria was used for Lighting and Envelope compliance.

ASHRAE/IES 90.1 COMPLIANCE INFORMATION FOR Form 90.1ci
PLANS AND INSPECTION

NOTICE TO BUILDING PERMIT APPLICANTS

The following information must be detailed on the building plans, where the pertinent section of **Standard 90.1** applies to the building design.

Section Reference	Description	Compliance Column	Inspection Column
5.4.1	Single line drawing of electrical distribution system c/w locations of provision for check metering	_____	_____
5.4.2	Transformer schedule, including maximum losses permitted	_____	_____
5.4.3	Electric motor schedule, including maximum losses permitted	_____	_____
6.4.1	Exterior lighting fixture, lamp and ballast schedule Interior lighting fixture, lamp and ballast schedule	_____	_____
6.4.2	Lighting controls schedule	_____	_____
7.4.2	Freeze protection boiler schedule, including rating and minimum efficiency	_____	_____
8.4.1	Insulation levels required in walls, roof, and floor Window schedule, including type, U-value, shading coefficient, and VLT	_____	_____
8.4.5	Door schedule, including type, U-value and maximum air leakage	_____	_____
8.4.8	Skylight schedule, including U-value of fenestration and curb, shading coefficient, and VLT	_____	_____
9.4.3	Temperature control schedule, including maximum/minimum setpoints, and deadband	_____	_____
9.4.4	Off-hour control schedule c/w provision for closing exhaust/outdoor air	_____	_____
9.4.7	Outdoor/exhaust air schedule	_____	_____
9.4.8	Pipe insulation schedule, including R-value and thickness Duct insulation, sealing, and leak testing schedule	_____	_____
9.5 & 10.4.1	HVAC equipment schedule, including rated capacities, minimum efficiencies, economizer ratings, fan ratings, and pump ratings	_____	_____
9.5.2	System temperature reset control schedule	_____	_____
11.4.1 11.4.2	SWH equipment schedule, including rated capacities and minimum efficiencies	_____	_____
11.4.3	SWH pipe insulation schedule, including R-value and thickness	_____	_____
11.4.5	Fixture schedule for showerheads, and lavatories in public washrooms, including flow rates and total flow	_____	_____
11.4.6	Pool heater schedule, including equipment ratings and minimum efficiencies	_____	_____

ASHRAE/IES 90.1 PRESCRIPTIVE ENVELOPE CRITERIA WORKSHEET FORM F - 1

Location: TORONTO	Location No. 333	ACP Table No. 8A-32
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Internal Load Density (ILD) Typical Building Occupancies	0.00 - 1.50 Multi-family, hotel/motel, warehouse	1.51 - 3.00 Office, some institutional	3.01 - 3.50 Retail, restaurant, school
Parameter			
Projection Factor	0.00	0.00	0.00
Maximum Shading Coefficient, SCx	0.80	0.80	0.80
Maximum Thermal Transmittance of Fenestration, Uof	0.52	0.52	0.52
Fenestration Reference No. (see Table F-1)			
- Option 1	CS3	CS3	CS3
- Option 2	CP3	CP3	CP3
- Option 3	RP1	RP1	RP1
Maximum Percent Fenestration (window-to-wall ratio, %)	29%	24%	22%
Maximum Wall U-value, Uow (heat capacity < 5)	0.07	0.07	0.07
Minimum Wall R-value (R=1/U)	13.89	13.89	13.89
Maximum Roof U-value, Uor	0.05	0.05	0.05
Minimum Roof R-value (R=1/U)	20.41	20.41	20.41
Maximum U-value, Wall Adjacent to Unconditioned Space	0.11	0.11	0.11
Minimum R-value (R=1/U)	9.09	9.09	9.09
Maximum U-value, Floor Over Unconditioned Space	0.04	0.04	0.04
Minimum R-value (R=1/U)	25.00	25.00	25.00
Minimum R-value, Wall Below Grade	11.00	11.00	11.00
Minimum R-value, Unheated Slab on Grade			
- insulation horizontal: 24 in.	18.00	18.00	18.00
36 in.	15.00	15.00	15.00
48 in.	11.00	11.00	11.00
- insulation vertical 24 in.	8.00	8.00	8.00
36 in.	6.00	6.00	6.00
48 in.	4.00	4.00	4.00

ASHRAE/IES 90.1 REFERENCE WINDOWS FORM RW-1
Residential Casement Windows

Reference Number	U-Value		SC	Frame	Spacer	Window Type	Coatings	Fills
	Btu/hr-F-ft ²	(W/m ² -C)						
RC1	0.53	(2.54)	0.53	vinyl		double		air
RC2	0.52	(2.01)	0.52	vinyl		double	low-e	air
RC3	0.52	(1.88)	0.52	vinyl		double	low-e	argon
RC4	0.54	(1.77)	0.54	vinyl	insulated	double	low-e	argon
RC5	0.52	(1.61)	0.52	FFV	insulated	double	1 low-e	argon
RC6	0.47	(1.25)	0.47	FFV	insulated	triple	1 low-e	1 argon
RC7	0.43	(1.06)	0.43	FFV	insulated	triple	2 low-e	2 argon
RC8	0.46	(1.06)	0.46	FG	insulated	triple	2 low-e	2 argon

Residential Picture Windows

Reference Number	U-Value		SC	Frame	Spacer	Window Type	Coatings	Fills
	Btu/hr-F-ft ²	(W/m ² -C)						
RP1	0.48	(2.75)	0.74	vinyl		double		air
RP2	0.38	(2.14)	0.71	vinyl		double	low-e	air
RP3	0.34	(1.92)	0.68	vinyl		double	low-e	argon
RP4	0.25	(1.41)	0.64	vinyl		triple	1 low-e	1 argon
RP5	0.23	(1.30)	0.64	FFV	insulated	triple	1 low-e	1 argon
RP6	0.18	(1.02)	0.57	FFV	insulated	triple	2 low-e	2 argon
RP7	0.16	(0.93)	0.56	FG	insulated	triple	2 low-e	2 argon

Commercial Sliding Windows

Reference Number	U-Value		SC	Frame	Spacer	Window Type	Panels	Fills
	Btu/hr-F-ft ²	(W/m ² -C)						
CS1	0.59	(3.33)	0.75	TBA	one metal	double	clear, clear	air
CS2	0.58	(3.32)	0.30	TBA	one metal	double	grey, clear	air
CS3	0.47	(2.69)	0.55	TBA	one metal	double	bronze, low-e	air
CS4	0.44	(2.52)	0.67	TBA	two metal	triple	clear, clear, clear	air, air
CS5	0.39	(2.20)	0.25	TBA	two metal	triple	grey, clear, low-e	air, air
CS6	0.33	(1.87)	0.49	TBA	insulating and metal	triple	bronze, clear, low-e	air, argon
CS7	0.33	(1.86)	0.23	FFV	insulating	triple	grey, clear, low-e	air, air
CS8	0.29	(1.66)	0.59	FFV	insulating and metal	triple	clear, clear, low-e	air, air
CS9	0.29	(1.66)	0.23	FFV	insulating and metal	triple	grey, clear, low-e	air, air
CS10	0.27	(1.54)	0.23	FFV	insulating and metal	triple	grey, clear, low-e	air, argon

Commercial Picture Windows

Reference Number	U-Value		SC	Frame	Spacer	Window Type	Panels	Fills
	Btu/hr-F-ft ²	(W/m ² -C)						
CP1	0.56	(3.17)	0.82	TBA	one metal	double	clear, clear	air
CP2	0.56	(3.16)	0.32	TBA	one metal	double	grey, clear	air
CP3	0.47	(2.67)	0.53	FFV	one metal	double	green, green	air
CP4	0.40	(2.27)	0.74	TBA	two metal	triple	clear, clear, clear	air, air
CP5	0.33	(1.90)	0.28	TBA	two metal	triple	grey, clear, low-e	air, air
CP6	0.32	(1.82)	0.69	FFV	two metal	triple	clear, clear, clear	air, air
CP7	0.29	(1.63)	0.72	FFV	one insulating	double	clear, low-e	argon
CP8	0.26	(1.47)	0.66	FFV	two metal	triple	clear, clear, low-e	air, air
CP10	0.26	(1.47)	0.40	FFV	two metal	triple	green, clear, low-e	air, air
CP11	0.21	(1.17)	0.66	FFV	insulating and metal	triple	clear, clear, low-e	air, argon
CP12	0.20	(1.16)	0.25	FFV	two metal	triple	grey, clear, low-e	air, argon

Notes:

Frame: TBA - thermally broken aluminum; FFV - foam filled vinyl; FG - fibreglass
 Spacer, Panels & Fills: - notes reference from outermost space inwards

Part of TABLE 6-5
Prescriptive Unit Power Allowance (ULPA), W/ft²
Gross Lighted Area of Total Building

Building Type Or Space Activity	0 to 2,000 ft ²	2001 to 6,458 ft ²
Food Service	1.50	1.38
Fast Food Cafeteria	2.00	1.91
Leisure Dining / Bar		
Offices	1.90	1.81
Retail ^a	3.30	3.08
Mall Concourse multi-store service	1.60	1.58
Service Establishment	2.70	2.37
Garages	0.30	0.28
Warehouses / Storage	0.80	0.66

Notes:

^a Includes general merchandising and display lighting.

This prescriptive table is for use in conjunction with Section 8 and is for compliance only. Its use is intended primarily of core and shell (ie. speculative) buildings or during the preliminary design phase (ie. when the space uses are less than 80% defined). The values in this table are not intended to represent the needs of all buildings within the types listed. This table shall not be used without the option of using the System Performance method in 6.6.