Checklist Set for F280-12 Formset version 24.07

This set of checklists consists of three checklists as follows:

A. Intake Review: Basic checks prior to a more comprehensive review or filing.
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C. Room x Room Review of Room x Room Results

Key Values are highlighted in Yellow

A. Intake Review: Basic checks prior to a more comprehensive review or filing.

Field	Title	Description	Example	
BUILDING LOCATION		**Project location & identifying information**		
3	Model	Code or name designated to a plan set	Consistent w/other documents i/e. Arch, Dwgs?	☐
4	Address	Municipal designated location of the project	Consistent w/other documents i/e. Arch, Dwgs?	☐
5	City & Province	City (county, township, etc.) and province the project is located in	Consistent w/other documents i/e. Arch, Dwgs?	☐
6	Site	Name of the development area the project is located in	Consistent w/other documents i/e. Arch, Dwgs?	☐
7	Lot	Numbered land parcel within the site	Consistent w/other documents i/e. Arch, Dwgs?	☐
8	Postal Code	Canada Post assigned postal code for the address	Consistent w/other documents i/e. Arch, Dwgs?	☐
COMPLIANCE		**Key Results for Code Compliance**		
a	Type	Room x Room or Whole House	check box	☐
b	Units	Imperial or metric	check box	☐
c	Minimum Heating Capacity	Minimum Heating Capacity as per F280-12 Sentences 5.3.1. and 5.3.2.	e.g. 34,962 btuh or 10.25 KW	☐
d	Nominal Cooling Capacity	Nominal Cooling Capacity as per F280-12 Sentence 6.3.1.	e.g. 26, 412 btuh or 7.74 KW	☐
e	Minimum Cooling Capacity	Minimum Cooling capacity as per F280-12 sentences 6.3.2 and 6.3.5.	e.g. 21,130 btuh or 6.19 KW	☐
f	Maximum Cooling Capacity	Maximum Cooling Capacity as per F280-12 sentence 6.3.3 and 6.3.4.	e.g. 33,016 btuh or 9.68 KW	☐
ATTACHED DOCUMENTS		**Description of documents which make up the full package**		
g	Design Summary	The Design Summary (1 page) attached as page 2.	Always Complete & Attached	☐
h	Room x Room Results	The Rooms by Room results, Page 3	Only required for Room x Room, not required for Whole House	☐
i	Other Attached Documents	A list of documents which are referenced by and support the F280-12 Calculation	Plans, Window & Door Schedules & specifications, insulation details, effective insulation value calculations etc. Some F280 Submittals refer to the Architectural plans prepared by others. Some F280 submittals refer to "Reference plans" prepared only for reference to the F280 calculation.	☐
j	Notes	Notes relevant to the project submittal	e.g. Assumed Bonus Room is unconditioned	☐
CALCULATIONS PERFORMED BY		**Individual/Company performing the calculations**		

55	Name	The individual who performed the calculation	e.g. Joe Smith	☐
56	Company	Company associated with individual who performed the calculation	e.g. Smith HLG Corp.	☐
57	Address	Street/Postal address of the company/ individual performing the calculation	e.g. 42 Imaginary Street	☐
58	City & Province	City (county township etc.) and province of company/ individual	e.g. Somewhere, Saskatchewan	☐
59	Postal code	Postal code for the company/ individual address	e.g. B4L 2Z1	☐
60	Phone	Telephone number for company/ individual	e.g. (888) 555-4321	☐
61	Fax	Fax number for company/ individual	e.g. (888) 555-1234	☐
62	E-mail	e-mail address for company/ individual	e.g. Joe@SmithHLG.ca	☐
ATTESTATION		**Attestation by Individual taking responsibility for calculations**		
63	Attestation	Attestation by person who takes responsibility for the work	e.g. Joe Smith	☐
64	Accreditation ref. #1	Number Reference to an accreditation for the responsible person	e.g. BCIN # 6921 www.search.quarts.mah.gov.on.ca/en	☐
65	Accreditation ref. #2	Number Reference to an accreditation for the responsible person	e.g. HVAC-DC # 2401 www.hvacdc.ca/?page_id=2668	☐
66	Issued Date & Purpose	The date that the documents are issued and the purpose of issuance	e.g. 21 Feb/24, Permit	☐
67	Re-Issued Date & Purpose	The date that the documents are re-issued and the purpose of issuance	26 Feb/24, revision #1	☐
68	Stamp	Stamp, or other mark & signature (may be digital) of responsible person.	e.g. *Signature*	☐

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B. Detail Review:		*Key parameters check and cross reference to other submittals*		
Field	**Title**	**Description**	**Example**	
CALCULATIONS BASED ON		**The assumptions and data the heat loss gain calculation is based on**		
9	Dimensional information based on	Source of the component sizing data for the heat loss gain calculation	e.g. Anybody Design. Dwgs Dated 21/Feb/2024	☐
10	Attachment	Building connection to another building's conditioned space	e.g. Detached, left/right/mid, top/bottom/mid	☐
11	Number of stories	Floor levels in the building -- Indicate if basement is included	e.g. 2 + basement	☐
12	Weather location	Weather data location selected in the heat loss gain calculations	e.g. Toronto	☐
13	Ventilated?	Was the building's ventilation included in the heat loss gain calculation	e.g. Yes or No	☐
14	HRV/ERV	Is an HRV or ERV used for the ventilation of the building?	e.g. Yes or No	☐
15	HRV/ERV ASE %	Apparent Sensible Recovery efficiency % of the HRV or ERV at -25 °C	e.g. 55%	☐
15a	HRV/ERV ATRE %	Adjusted Total Recovery Efficiency % of the HRV or ERV if an HRV or ERV is used	e.g. 23%	☐
16	Front facing	Direction the front of the building faces	e.g. Northeast	☐
17	Front Facing Assumed?	Front facing direction indicated is based on plans or worst case scenario	e.g. Yes or No	☐
18	Air tightness	Air leakage rate from a test (ACH50 and ELA10) or one of the standard Air-Tightness Categories	Test= ACH50 & ELA10 Loose (Pre 1945) ACH50 = 10.35 Average (1946-1960) ACH50 = 4.55 Present (1961-) ACH50 = 3.57 Energy tight ACH50 = 1.5	☐
19	Assumed?	Actual test results are preferred over assumptions	e.g. Yes or No	☐
20	Wind exposure, Site	Site Wind Exposure based on standard categories	Open sea, fetch > 5 km, Mud flats, no vegetation, Open flat terrain, grass, Low crops, x/H > 20, High crops-scattered obstacles, Parkland-bushes, x/H ~ 10, Suburban-forest, City centre	☐
20a	Wind sheltering	Wind sheltering based on standard categories	e.g. None, Light, Heavy, Very heavy, or Complete (by large buildings)	☐
21	Internal shading	Window coverings based on the standard shading categories	e.g. None, Light-translucent, or Opaque-Reflective	☐
22	Occupants	Number of persons that the calculations accounts as being in the building on a	e.g. 4	☐

22a	Assumed?	Whether or not the number of occupants is assumed	e.g. Yes or No	☐
23	Units	Measurement system used for results reporting	Check-Box, Imperial or metric Also occurs on Cover page , cel b	☐
HEATING DESIGN CONDITIONS		**Data used for winter (heating season) calculations**		
24	Outdoor temperature	Design data for exterior winter conditions	e.g. -18 °C (0 °F) Should Match Location	☐
25	Indoor temperature	Design data for interior winter conditions	22°C (71.6 °F) Pre-set in F280, may be 18°C (64.4°F) in basement if Local Code Allows	☐
26	Mean soil temperature	Design data for exterior soil 1.5 m below grade in winter conditions	e.g. 10 °C (50 °F) Should match Location	☐
26a	Soil Conductivity	Soil Conductivity based on standard categories	Normal = dry sand, loam, clay, High = moist or wet soils or perma-frost	☐
26b	Water Table Depth	Local Conditions	Shallow: 5-7m (16-23ft), Normal: 7-10m (23-33ft), Deep: >10m (>33ft)	☐
26c	Slab Fluid Temperature	Average temperature of the Slab	40-45°C (104-113 °F) if heated, blank if not heated	☐
COOLING DESIGN CONDITIONS		**Data used for summer (cooling season) calculations**		
27	Outdoor temperature	Design data for exterior summer conditions	e.g. 31 °C (87 °F) Should match location	☐
28	Indoor temperature	Design data for interior summer conditions	24 °C (75.2 °F) pre-set in F280, Sometimes set to 22°C (71.6 °F)	☐
29	ST_{range}	Summer mean daily temperature range	e.g. 7 °C (45 °F) Should match location	☐
30	Latitude	Degrees north of the equator	e.g. 43.65° Should match location	☐
ABOVE GRADE WALLS		**All walls dividing exterior and interior space above ground level**		
31,32,33	Style A, B & C	Framing elements w/spacing, Cavity & continuous insulation, interior & exterior	Can be cross-checked to Arch. Dwgs and Energy Submittal if provided	☐
BELOW GRADE WALLS		**Walls dividing exterior and interior space below ground level**		
34,35,36	Style A, B & C	Framing elements w/spacing, Cavity & continuous insul. Int. & ext. finish	Can be cross-checked to Arch. Dwgs and Energy Submittal if provided	☐
FLOORS ON SOIL		**Below-grade floor dividing interior and exterior**		
37,38,39	Style A, B & C	Floor Structure, Insul. Value & Position, perimeter Thermal break status	Can be cross-checked to Arch. Dwgs and Energy Submittal if provided	☐
CEILINGS		**Ceiling area above conditioned space dividing interior and exterior**		
40,41,42	Style A, B & C	Framing elements w/spacing, Cavity & continuous insulation, interior finish	Can be cross-checked to Arch. Dwgs and Energy Submittal if provided	☐
EXPOSED FLOORS		**Floor below conditioned space dividing interior and exterior**		
43,44,45	Style A, B & C	Framing elements w/spacing, Cavity & continuous insulation, interior finish	Can be cross-checked to Arch. Dwgs and Energy Submittal if provided	☐
DOORS		**Areas within walls to allow passage to/from interior**		
46,47,48	Style A, B & C	Type, thickness & insulation. Report glazing as Window type	Can be cross-checked to Arch. Dwgs and Energy Submittal if provided	☐

WINDOWS		**Glass within walls & doors (including sliding patio doors)**		
49,50,51	Style A, B & C	# of panes, frame, spacing, fill, spacer, R-value, U-value, and SHGC.	Can be cross-checked to Arch. Dwgs and Energy Submittal if provided	☐
SKYLIGHTS		**Glass within ceiling and other upward facing glass**		
52,53,54	Style A, B & C	Facing, angle, frame, size, glazing type, R-value, U-value, and SHGC.	Can be cross-checked to Arch. Dwgs and Energy Submittal if provided	☐
SOFTWARE		**Information & Verification Statement buy Software Author**		
69	Software Info	Verification Statement plus identification of the software author including contact info, web site etc	*This software has been verified by HVAC Designers of Canada in accordance with CSA F280-12 section 8 revised March 2023.*	☐

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C. Room x Room		*Review of Room x Room Results*		
ROOM by ROOM		**Calculation results**		
70	Room Number	Sequential Number of the unique room for which a loss and gain is calculated.	Number of rooms should match the number of rooms on the Architectural plans or the refence plans if provided. Some refence plans have these numbers marked on the plans.	☐
71	Room name	Name of Unique room/space for which a loss and gain is calculated	Names of rooms/spaces should correspond to the Architectural Plans or the reference plans if provided. Sometimes rooms are combined with adjacent rooms, e.g. walk-in closets and adjacent bedrooms or hallways and adjacent rooms.	☐
72	Heating	Total room heat loss for the room/space as per CSA F280-12 sentence 5.2.6.	The only rooms without a heat loss will be rooms that are entirely surrounded by conditioned space, e.g. a powder room on the main floor of a 2-Storey home that has no outside walls.	☐
73	Cooling	Total room heat gain for the room/space as per CSA F280-12 sentence 6.2.9.. If the value does not include latent gain, then the latent gain is to be shown in cell 76	The only rooms without a heat gain will be rooms that are entirely surrounded by conditioned space and which do not have an internal gain attributed to them;, e.g. a powder room on the main floor of a 2-Storey home that has no outside walls.	☐
74	Ventilation Loss	if the Ventilation loss is calculated separately and not included in the individual room losses, then it is to listed here	If the ventilation system is central, then the ventilation loss may be reported here and if not, then it is assumed to be included in each of the room heat loss & gain values. Ventilation gain (sensible) is always included in the individual room values.	☐
75	Latent gain	if the latent heat gain is calculated separately and not included in the individual room gains, then it is to be included here.	The latent gain may be reported here and if it is not, then it is assumed to be included in each of the room heat gain values.	☐
c	Total Building Loss	This is also called "Minimum Heating Capacity" and is reported on page 1	the two values should be the same	☐
d	Nominal Cooling Capacity	This value also appears on page 1	the two values should be the same	☐
76	Issued	The most recent date of issue for the documents	26-Feb-24	☐