



180 Technology Parkway
Peachtree Corners, GA 30092
404-636-8400

DRAFT

TC/TG/MTG/TRG MINUTES COVER SHEET

(Minutes of all Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/MTG/TRG No. _____ TC 4.1 _____ DATE _____ 6/29/2023 _____

TC/TG/MTG/TRG TITLE _____ Load Calculation Data & Procedures _____

DATE OF MEETING _____ Monday 6/26/2023 _____ LOCATION JW Marriott Tampa, Kennedy (3), Tampa, FL _____

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Brian Rock		Chris Wilkins		Jim Pegues
Rolando Legarreta		Som Shrestha		Mark Malkin
Glenn Friedman				Russell Taylor
Robert Doeffinger				Dennis Landsburg
Chip Barnaby				Jeff Spitler
Suzanne LeViseur				Danielle Monfet
Larry Sun				Steve Bruning
Stephen Roth				Ardi Moftalchan
				Matt Atkins
				Rachel Spitler
				Ed Janowiak
				Atila Novoselal
				Michael Roth
DISTRIBUTION: All Members of TC/TG/MTG/TRG plus the following:				
TAC Section Head: Patrick C. Marks			SH4@ashrae.net	

All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	Staff: shammerling@ashrae.org
Mike Vaughn, Manager Of Research & Technical Services	MORTS@ashrae.net

Note: These draft minutes have not been approved and not the official, approved record until approved by the TC.



ASHRAE Technical Committee 4.1

ASHRAE TC 4.1 Load Calculation Data & Procedures

Full Committee Agenda

2023 ASHRAE Summer Meeting
Hybrid Conference

In-Person: JW Marriott Tampa, Kennedy (3)

1. **Call to order [2:15 PM EDT]** Rolando Legarreta
2. **ASHRAE Code of Ethics Commitment** Rolando Legarreta
"In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interests." (See full ASHRAE Code of Ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>)

3. **Roll call – Determination of a Quorum**

Rachel Spitler

Suzanne LeViseur	06/30/2024	Robert Doeffinger	06/30/2023
Stephen Roth	06/30/2024	Brian Rock	06/30/2024
Rolando Legarreta	06/30/2025	Chris Wilkins	06/30/2025
Glenn Friedman	06/30/2023	Larry Sun	06/30/2024
Chip Barnaby	06/30/2024	Som Shrestha	06/30/2024

Quorum was determined with 7 of 10 present (Stephen Roth will be late)

4. **Introductions** All

- a. In Person Sign-In sheet

5. **Scope, Mission Statement** Rolando Legarreta
Scope: TC 4.1 is concerned with the identification and compilation of engineering data and the development of procedures for calculating heating, cooling, refrigeration, and ventilating loads of structures.

Mission Statement: To serve practitioners by advancing the data and procedures of load calculations.

6. **Agenda additions** All

7. **Liaison reports (as they arrive)**
 - a. **Section Head** **Liaisons**
NA Patrick C. Marks
 - b. **Research** Dennis Landsberg
No announcements from him. Research chair confirmed that the next step on the RTAR about updating people heat gains is to vote on it in the full committee.



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8. Chair's Report

Rolando Legarreta

a. Announcement from TC Chairs Breakfast Meeting

- i. Report from TC Chair Breakfast: The Decarbonization task force is looking for volunteers; TC 4.1 already has a representative in Som Shrestha, and Glenn Friedman was also involved in the development of their first publication.

9. Approval of minutes from 2023 Winter Meeting

Rolando Legarreta

Voting on Atlanta Meeting Minutes: Suzanne LeViseur motioned, Brian Rock seconded. Vote passes 6-0-3-0-CNV.

10. Subcommittee reports

- a. Programs: Rachel Spitler
Programs ran 6/26-6/29. No actions required, refer to the Programs report. The Chicago meeting will not be at the Palmer House but will be at the Convention Center and Marriott Marquis.

- b. Research: Glenn Friedman

- i. Glenn gave an update on MRI research project: they have gathered data and are working on processing it; there are no summaries of the data yet; how the data will be presented in a table is still being determined.

- ii. RP-1923 – Climatic Design for ASHRAE Handbook: Project is on-track. There will be a 25-year period of record.

- iii. Chris Wilkins working on RTAR for updating people loads in the commercial chapter. Send it to RAC.

Motion to approve RTAR: 1st. Suzanne L., 2nd – Chip Barnaby

- iv. Jim Pegues brought up a research idea: Develop an RTAR for load calc procedures in preparation for the Residential chapter in the 2029 Handbook of Fundamentals.

There is the ongoing debate on whether to even include a Residential chapter in the HoF. This discussion began in Atlanta. The consensus was basically affirmative to continue. Chip mentioned that ACCA is considering updating the ACCA Manual J8 to J9. There have been lots of updates in construction technology since J8 came out in 2003. Of course, weather data has changed too. Also, there have been lots of personnel changes at ACCA. Ed Janowiak from ACCA reiterated. He added that infiltration methodologies have been updated; IAQ ventilation; Possibly better internationalize MJ9.

RAC deadline for the next batch of research proposals is August 15th. The deadline after that is December.

- v. Chip B. and Jim P. are working together on an RTAR:

A potential RP for cooling load calcs for tall spaces. Steve and Chris will also look into it.

Steve: also look into stadiums and industrial plants. Will do something before the Chicago meeting.



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RP Chair Meeting: Getting back to budgets from pre-COVID. Research has over \$5.5M this year. Upping the per research amount to max. to \$250/\$350.

Ardi will take over as Research Chair July 1, 2023. Som will continue until June 30, 2023. Copy both Som and Ardi on all research emails to Som in the meantime.

c. Handbook:

Jim Pegues

i. July 2024 is the submission deadline for our chapters for the 2025 HoF. Working on 2 chapters: Non-Residential and Residential.

For the Non-Residential, most of the updates will deal with updated construction types.

ii. In Atlanta, Brian Rock talked about reconfiguring the Non-Residential handbook chapter to better serve consulting engineers/talk about fundamental concept of loads; steady-state terms.; Then, have a 2nd chapter talk about the calcs: RTS method, heat-balance and other methods.

This would be a longer-range project possibly for the 2029 HoF. Proceed with current method for the 2025 HoF. Later on, have a 2nd chapter on transient loads; for design cooling and heating.

Therefore, 3 chapters total in 2029 HoF and beyond:

- 1: Basic concepts including heating
- 2: Residential - cooling only
- 3: Non-Residential - cooling only

iii. A couple of activities happening at this meeting: As heat pumps become thing, do we need to update the loads. Do we need to update warm-up loads? Design heat calcs using heat balance? Brian Rock working with AJ to discuss this and will share draft in a future committee meeting.

What happens when no heating/cooling for 5 days due to power outage? Any warm-up or heat down? This is becoming more of an issue as the grid goes down due to extreme heat, fires, etc.

The other activity: Make a strawman outline of reorganized the chapters: What will they look like?

For Residential chapter: Chip will search for any editorial changes that need to be made. Need to redo the chapter with data from the weather TC. They are updating the solar-radiation data that will affect the chapter. One additional thing: Updating the daily temperature profiles. Much more realistic profile. May consider for the 2029 HoF. The daily temperature profiles in the current chapter are pretty dated.

d. Standards:

Glenn Friedman

ASHRAE Standard 183 reaffirmation: Deals w/standard for HVAC load calculations. It is not overly prescriptive. It still stands as far as Glenn is concerned. He moves to reaffirm that standard without changes and wants to take a vote from TC.

Chip asked: Is it too generic? Will we want to eventually update it?

Glenn says: Industry has accepted it. Nobody has commented on it since it was last published.

The standard is very generic and doesn't address a specific HVAC load calc method.

TC 4.1 Web Site: <https://tc0401.ashraetcs.org/>



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Any comments from ACCA? No, nothing to object.

Final vote was: Unanimous to reaffirm ASHRAE Std. 183

e. Web site:

Jim Pegues

There was no update.

11. Old Business

Rolando Legarreta

a. NA

12. New Business

Rolando Legarreta

a. NA

13. Adjourn [4:05: PM EDT]

Rolando Legarreta

Larry motioned, Rolando/Chris seconded.