



180 Technology Parkway NW, Peachtree Corners, GA 30092

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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 9.11 DATE June 30, 2026

TC/TG/MTG/TRG TITLE Large Building Air-Conditioning Systems

DATE OF MEETING June 30, 2026 LOCATION Austin, TX

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Ken Warren (V 6/2027, Chair)	2023			
Madison Shultz (V 6/2030, Vice Chair	2026			
Dennis Wessel (V, 6/2027)	2023			
Doug Cochrane				
Mark Fly (V, 6/2029)	2025			
Phil Trafton, CM				
Danny McGrail (Secretary, CM)				
Kevin Muldoon - Section Head 9				
Lee Millies V/6/2027	2023			
Steve Duda, CM				
Charlie Henck CM				
Steve Kavanaugh – Guest. Author of HVAC Simplified				
Nicolas Lemire - Handbook Committee				
David Sinclair, PCM				
John Sustar, PCM				

Online				
Ken Warren				
Suzan Sun-Yuan, CM				
Thomas Yeh, CM		New York State Energy Development Authority		
Omid Atayi, CM				
DISTRIBUTION: All Members of TC/TG/MTG/TRG plus the following:				
TAC Section Head: Joy Altweis			SH9@ashrae.net Where 9 is the section number	
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)			See ASHRAE email alias list for needed addresses.	
Steve Hammerling, Assistant Manager of Research & Technical Services			AMORTS@ashrae.net	

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

CALL TO ORDER

Ken called the meeting to order at 1:30 PM PST

CODE OF ETHICS

In ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and shall avoid all real or perceived conflicts of interest. Our culture is one of inclusiveness, acknowledging the inherent value and dignity of each individual. We celebrate diverse and inclusive communities, understanding that doing so fuels better, more creative and more thoughtful ideas, solutions and strategies for the Society and the communities our Society serves. We respect and welcome all.

<https://www.ashrae.org/about/governance/code-of-ethics>

TITLE, PURPOSE, SCOPE for TC9.1

TC 9.1 is concerned with the general design concepts of the HVAC systems that are utilized for the conditioning of large buildings, including the integration of components into centralized and decentralized systems.

INTRODUCTIONS

The group did not do self-introductions in the interest of time.
Ken Warren called roll call for voting members.

Quorum has been established (5 of 7 members present)

Kelley Cramm and Jay Eldridge not present.

MEETING MINUTES

Mark Fly **moved** and Phil Trafton seconded to approve the minutes from the last meeting as distributed. The minutes were **approved unanimously**. Minutes will be revised to note in person and virtual attendance. The motion was passed unanimously (4,0,0,2) CNV

MEMBERSHIP

Danny McGrail reported Quorum achieved.

SECTION HEAD REPORT

Kevin Muldoon –

- This is Kevin's last meeting as Section 9. Corey Metzger is taking over Section 9 for the next 3 years.
- TAC is starting shadowing program beginning with the Chicago meeting targeted at YEA.
- The Hightower award is available for TC involvement based on nominations from the TCs. TC chair to sponsor.
- Roster updates are due in Chicago.

Kevin sent the activity form to Ken. Activity form due this evening. Chairs breakfast –

- ASHRAE formed a Future of ASHRAE Conferences Ad Hoc Committee. We should provide any feedback on Annual Conference being eliminated. 2030 conference is moved to March in Vegas.
- Discussion of elimination of annual conference – recommendation was to connect/convene. TC would be virtual. Councils and Standing Committees would meet in person.
- Discussion was that it will be detrimental to TC participation.
 - Dennis Wessel will draft a position statement for Ken to issue to the committee.
- Winter Meeting in Chicago has a new track.
- 2027 Annual Conference in New Orleans from June 12-16. –Requests to sponsor a minitrack can be submitted.

ASHRAE is launching a master calendar on July 15 through ASHRAE 365. This document will list all ASHRAE activities for coordination purposes.

Phil to share document from TC 9.12 Tall Building Committee for comment/review on elimination of Annual Committee.

You can contact our section head at: SH9@ashrae.net

For general questions email: AskTAC@ashrae.net

ASHRAE LIASON REPORTS

- **TAC**
 - See above.
 -

Handbook – Nicholas Lemier provided the dates by which each chapter is due to be submitted, complete and approved by the TC. Since nothing seems to have been done to date, we are under a severe time constraint.

- Need to submit final chapters with and approval checklist between Jan-March 2027.
- Need to be prepared to vote by the Winter Meeting. Voting may be the hardest part. Need to assign editor of each chapter. Need to set up monthly meeting – Chair, Vice-Chair, Secretary, and Handbook Subcommittee Chair. Nicolas to confirm if there are any open comments on chapters.
- Nicolas shared they are moving chapters from applications to other handbooks to balance out the handbook sizes.
- The Bluebook will be Refrigeration and “_____”
- Moli Kenedy can add people to the editing portal.

- See below for additional information and comments.
- **Research**
 - See below.
- **TC 4.3 - Ventilation and Filtration**
 - Steve shared heavy on research. No updates for 9.1
- **TC 5.1 - Fans**
 - No updates
- **TC 5.7 – Evap Cooling**
 - No updates
- **TC 7.9 – Building Commissioning**
 - No updates
- **TC 9.3 – Transportation Air Conditioning**
 - No updates
- **TC 9.8 – Large Building Applications**
 - No updates
- **TC 9.9 Mission Critical**
- **TC 9.10 Laboratory Systems (Danny McGrail)**
- **TC 9.12 Tall Building Systems (Dennis Wessel)**
 - Trying to submit on minitrack for Chicago.
- **Standards**
 - 9.1 is assigned
 - SSPC 300
 - Guideline 0 – this should go to the commissioning TC 7.9.
 - Guideline 16 – issued in 2025. No action.
 - Guideline 22 – issued in 2025. No action
 - Guideline 34, drop TC 9.1 as it doesn't match title, purpose scope of TC 9.1.
 - SSPC 15, drop TC 9.1 as it doesn't match title, purpose, scope TC 9.1.
 - No other report from Lee
- **Guideline 36**
 - Phil Trafton shared they are very busy on updates with Data Centers.
- **CEBD (Doug Cochrane)**
 - Roadmap to 2050.
 - Developing some more courses.
 - Some delay to publications.
 - Grocery Guide published hopefully in August.
 - More money from board.
 - CEIDQ and CEBD had joint retreat so working.
 - CEBEQ – sell or sunset by July 1st next year.
- **Decarb**
 - DOE has issues with informative appendices of 90.1. Looking at issuing it a different way.
- **Society Planning Committee (Madison Schultz)**
 - Vision 2035 – pretty cool graphic.
 - Membership model was approved.

SUBCOMMITTEE REPORTS

HANDBOOK SUBCOMMITTEE (Jay Eldridge)/

TC 9.1 is responsible for the first 5 chapters of the 2028 Systems and Equipment Handbook.

Dennis Wessel took on the task of coordinating the Handbook update process

Chapter 1: System Analysis and Selection – Due March 7, 2027

Reviser - Doug Cochrane, Reviewer - Omid Atayi

Chapter 2: Decentralized Cooling and Heating – Due May 2, 2027

Reviser - Suzan Yuan-Sun, Reviewer Mark Fly

Chapter 3: Central Cooling and Heating Plants – Due April 18, 2027

Reviser - Dennis Wessel, Reviewer Danny McGrail

Chapter 4: Air Handling and Distribution – Due March 21, 2027

Reviser - Madison Schultz, Reviewer Ken Warren

Chapter 5: In Room Terminal Systems – Due April 4, 2027

Reviser - Phil Trafton, Reviewer Charlie Henck

Need significant meeting in November to review on red lines. Need to be completed by November 1st.

RESEARCH SUBCOMMITTEE REPORT (Open)

Dennis to be monitor of 6 chapters of the HVAC Simplified. URP 1989 – 9039 – Dennis Wessel Chair, Ken Warren, Mark Fly, and Charlie Henck are also helping.

Dennis subsequently was advised that the Project Monitoring Subcommittee (PMS) has been approved by RAC as follows: Chair - Dennis Wessel, Members – Phil Trafton, Ken Warren, Mark Fly.

Also interested in reviewing the project are: Lee Milles, Charlie Henck and Gary Shamshoian (ibdengineering@yahoo.com)

PROGRAM SUBCOMMITTEE REPORT (Open)

See attached for subcommittee meeting minutes.

Dennis Wessel resubmitted the seminar on Rightsizing.

Phil Trafton – Forum – need to get resubmitted for Chicago.

COF has offered to co-sponsor the multifamily seminar that Dennis Wessel has submitted.

Need to determine tracks for each program.

Danny to post subcommittee meeting minutes to basecamp for review and approval in Chicago.

STANDARDS SUBCOMMITTEE (Lee)

No updates.

HONORS AND AWARD SUBCOMMITTEE (Mark)

Ken to determine who he wants to nominate for Hightower honor/award. Mark to help with the paperwork. Dennis, Mark, Charlie, Doug, and Phil should be considered.

WEBSITE (Elizabeth)

NEW BUSINESS

Danny suggested establishing a Membership Subcommittee. Danny volunteered to be Subcommittee chair.

John Sustar expressed interest in getting promoted to voting member

YEA will promote 9 TC-9.1 at Student Activities Committee.

Phil Trafton offered to help.

Can add to chapter notes, a brief write up in insights might generate some interest

DRC/RMCR – meet monthly. All the people in charge of grassroots.

Steve recommended to post individual comments on Future of ASHRAE Conference.

CLOSING THOUGHTS

Next Meeting – 1:30pm in Chicago, Illinois on Tuesday Jan 26th, 2027

ACTION ITEMS

1. Danny to post subcommittee meeting minutes to basecamp.
2. Need to set up process for review of handbook committee.
3. Need to set up monthly meeting – Chair, Vice-Chair, Secretary, and Handbook Subcommittee
Chair. 5 revisers. Set up doodle poll.
 - a. Madison to set up doodle poll
4. Dennis Wessel to email Moli with reviser/reviewer assignments for Handbook.
5. Need to update roster for voting members.
 - a. Need to convert Jay and Kelley to CM.
 - b. Danny, Phil, Suzan, and John to move to voting members.
 - c. Confirm Madison is voting member.
6. Ken to determine who he wants to nominate for honor/award. Mark to help with the paperwork.

ADJOURN It was moved and seconded to adjourn at 3:38 PM CST