



November 2021

THE LONG ISLAND SOUNDER



ASHRAE Long Island Chapter, Region I...Founded in 1957

www.ashraeli.com

American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.

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President's Message

Welcome, everyone, to the November ASHRAE LI meeting. Thank you all for coming out and supporting your ASHRAE chapter. This month we are pairing up with SMACNA for our annual joint meeting. The presentation is something that has been more relevant than ever since the pandemic, and I think even experienced engineers will take something away from it.



The ASHRAE winter conference and AHR expo is happening Jan 29-Feb 2, 2022 in Las Vegas. Don't forget to register if you are planning to go! Registration is open on the ASHRAE website.

We are in the middle of our Membership Battle! See details below in our membership promotion segment and help the chapter by promoting membership in your company.

Please be sure to visit our chapter website, www.ashraeli.com, for the most up to date information on monthly presentations, upcoming events, etc.

If anyone is interested in volunteering with us, please come say hi at the meeting. We are always looking for volunteers!

CHAPTER MONTHLY MEETING

DATE:	Tuesday, November 9, 2021
TIME:	6:00 PM - Cocktails/Dinner 7:00 PM - Dinner Presentation 8:45 PM - Conclusion
LOCATION:	Westbury Manor 1100 Jericho Tpke. Westbury, NY 11590
FEES:	
Members -	\$50.00
Guest -	\$60.00
Student -	\$15.00

Regards,

Matthew Vitrano
President - Long Island Chapter

Check the ASHRAE Website for Society news and to join/renew membership!
<http://www.ashraeli.com>

Long Island Chapter Officers & Committees

ASHRAE 2020/2021 OFFICERS



POSITION	NAME	PHONE	EMAIL
President	Matthew Vitrano	516.319.9325	c006@ashrae.net
President-Elect	Murat Bayramoglu	631.312.8818	c006pe@ashrae.net
Vice President	Michael Nigro	212.643.9055	c006vp@ashrae.net
Treasurer	Elizabeth Jedrlnic	516.490.1621	c006tr@ashrae.net
Secretary	Matthew Catan	407.489.6684	c006sec@ashrae.net
Board of Governors	Michael Razzano	516.805.3084	c006bog1@ashrae.net
Board of Governors	Zhigang Xu		c006bog2@ashrae.net
Board of Governors	Rich Smith		c006bog3@ashrae.net
Board of Governors	Michael S. Gerazounis	212.643.9055	c006bog4@ashrae.net
Board of Governors	James Hanna	718.269.3768	c006bog5@ashrae.net

ASHRAE 2020/2021 COMMITTEES

COMMITTEE	NAME	PHONE	EMAIL
Programs & Special Events	Murat Bayramoglu	631.312.8818	c006pe@ashrae.net
Membership (MP)	Michael Razzano	516.805.3084	c006mep@ashrae.net
Refrigeration	Andrew Dubel		c006ref@ashrae.net
Chapter Technology Transfer (CTTC)	Murat Bayramoglu	631.312.8818	c006cttc@ashrae.net
Grassroots Government	James Hanna	718.269.3768	c006ggac@ashrae.net
Newsletter Editor	Liset Cordero	212.643.9055	c006ne@ashrae.net
Research Promotion (RP)	Michael Nigro	212.643.9055	c006rp@ashrae.net
Historian	Elizabeth Jedrlnic	516.490.1621	c006his@ashrae.net
Student Activities (SA)	Matthew Catan	407.489.6684	c006sa@ashrae.net
Young Engineers in ASHRAE (YEA)	Michael S. Gerazounis	212.643.9055	c006yea@ashrae.net
Webmaster	Frank Paradiso	631.632.2792	c006web@ashrae.net
Nominating	Michael Gerazounis, PE, LEED AP	212.643.9055	nominating@ashraeli.org
Reception & Attendance	Zhigang Xu / Matt Catan / Michael S. Gerazounis		reception@ashraeli.org
PR & Engineering Joint	Andrew Manos, LEED AP	631.632.2792	pr@ashraeli.org
Golf Outing	Peter Gerazounis, PE LEED AP	212.643.9055	golf@ashraeli.org
Awards	Brian Simkins	203.261.8100	c006ha@ashrae.net
ASHRAE LI, P.O. Box 79, Commack, NY 11725			

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Chapter Monthly Meeting - Program for 2021/2022

September 14, 2021 * At Westbury Manor  Dinner Presentation – Fan Fundamentals Presenter: Andy Siegelson Refrigeration Night **1 PDH**	March 8, 2022 * At Westbury Manor Dinner Presentation— TBD Presenter: TBD Student Activities Night YEA Night **1 PDH**
October 12, 2021 * At Westbury Manor  Dinner Presentation — PPRCT Pipe and Fitting Systems for HVAC Water Distribution and Compressed Air Distribution Presenter: Jordan Stern **1 PDH**	April 12, 2022 Dinner Presentation— TBD Presenter: TBD **1 PDH**
November 9, 2021 * At Westbury Manor Dinner Presentation— Critical Environment Air Distribution Applications Presenter: Larry Scholl, CEM, LEED AP BD+C Membership Promotion Student Activities Night and YEA Night Resource Promotion Night **1 PDH**	May 2, 2022 * Cherry Valley Club, Garden City, NY ANNUAL GOLF OUTING
December 14, 2021 * At Westbury Manor Dinner Presentation— TBD Presenter: TBD **1 PDH**	May 10, 2022 Annual Field Trip
January 11, 2022 * At Westbury Manor Dinner Presentation— TBD Presenter: TBD **1 PDH**	June 14, 2022 * At Westbury Manor Free Buffet Dinner for Members PAST PRESIDENTS NIGHT & OFFICER INSTALLATION STUDENT SCHOLARSHIPS TO BE AWARDED ASHRAE History Quiz and prize Give-A-Ways
January 29 - February 2, 2022 ASHRAE Winter Conference	June 2022 - TBD (4pm-8pm) * Dixie II @ Captree State Park Boat Basin, NY ANNUAL FISHING TRIP
February 8, 2022 * At Westbury Manor Dinner Presentation— TBD Presenter: TBD Membership Promotion Night Resource Promotion Night **1 PDH**	August 2022 CHAPTERS' REGIONAL CONFERENCE (CRC) REGION I GRANIT STATE
February 20-26, 2022 NATIONAL ENGINEERS WEEK	

Meeting Program



Dinner Presentation

Critical Environment Air Distribution Applications

Presented by

**Larry Scholl, CEM, LEED AP BD+C
Engineering Specialist
Mechanical Technologies, LLC**

**Attendees
Will Earn
1 PDH!**

DATE:	TUESDAY, NOVEMBER 9, 2021		
Time:	6:00 PM - Cocktails and Hors D'oeuvres 7:00 PM - Dinner Presentations 8:45 PM - Conclusion	Fee:	\$ 50.00 Member \$ 60.00 Guest \$ 15.00 Student
Location:	WESTBURY MANOR (516) 333-7117 1100 Jericho Tpke., Westbury, NY 11590 Directions are posted at @ www.ashraeli.org		
Presentation:	<p>This month's seminar discusses the design considerations for air distribution within hospital operating rooms focusing on the ASHRAE 170 standards and equipment that can be installed to meet the standard.</p> <p>We will also discuss HEPA filter applications within hospitals and similar spaces.</p> <p>All attendees will receive 1 PDH.</p>		
About our Speaker:	<p>Larry Scholl is an electrical engineer who graduated from the University of Pittsburgh. His experience includes working as a consulting engineer, commissioning agent, business development engineer, regional sales manager and technical sales engineer. Larry is a Certified Energy Manager and LEED Accredited Professional and is an active member in ASHRAE both locally and as part of Technical Committee 1.4. He has over 18 years of experience with engineering, building automation and mechanical systems. Larry has created and delivered many educational seminars throughout his career including over 100 in the New York City area as well as at various industry conferences such as the ASHRAE Summer and Winter Conferences.</p>		

CHAPTER MAY NOT ACT FOR SOCIETY

An International Organization

**The Long Island Chapter is looking for presenters for the remainder of the year.
Please contact us if you are interested in presenting to our membership.**

Long Island Chapter - Past Presidents

1958	H. Campbell, Jr. PE	1990	Robert Rabell
1959	Clyde Alston, PE	1991	Gerald Berman
1960	Sidney Walzer, PE	1992	Donald Stahl
1961	Sidney Gayle	1993	Ronald Kilcarr
1962	William Kane	1994	Jerald Griliches
1963	Louis Bloom	1995	Walter Stark
1964	Milton Maxwell	1996	Joe Marino
1965	Will Reichenback	1997	Norm Maxwell, PE
1966	Joseph Minton, PE	1998	Alan Goerke, PE
1967	Irwin Miller	1999	Frank Morgigno
1968	Walter Gilroy	2000	Michael Gerazounis, PE, LEED AP
1969	Charles Henry	2001	Ray Schmitt
1970	William Wright	2002	Steven M. Stein, PE
1971	Louis Lenz	2003	Andrew Braum, PE
1972	Ronald Levine	2004	Claudio Darras, P.E.
1973	Henry Schulman	2005	Craig D. Marshall, P.E.
1974	Myron Goldberg	2006	John Nally
1975	John N. Haarhaus	2007	Peter Gerazounis, PE, LEED AP
1976	Richard K. Ennis	2008	Steven Friedman, PE, HFDP, LEED AP
1977	Kenneth A. Graff	2009	Steven Giammona, P.E., LEED AP
1978	Evans Lizardos, PE, LEED AP	2010	Nancy Román
1979	Albert Edelstein	2011	Carolyn Arote
1980	Ralph Butler	2012	Brian Simkins, LEED AP
1981	Robert Rose, PE	2013	Andrew Manos, LEED AP BD+C
1982	Timothy Murphy, PE	2014	Richard L. Rosner, P.E.
1983	Leon Taub, PE	2015	Thomas J. Fields, P.E., LEED AP
1984	Raymond Combs	2016	Donald Kane, P.E.
1985	Edward W. Hoffmann	2017	Andrew Dubel, P.E., LEED AP
1986	Jerome T. Norris, PE	2018	Richard Halley
1987	Abe Rubenstein, PE	2019	Frank Paradiso
1988	Michael O'Rourke	2020	James Hanna
1989	Mel Deimel		

PAOE POINTS FOR 2021/2022

Chapter Members	Chapter Operations	CTTC	Communi-cations	GGAC	History	Member-ship	Research Promotion	Student Activities	YEA	Chapter PAOE Totals
282	445	650	0	0	120	600	190	50	1,075	3,130

Student Activities

Overview

We hope everyone had a fun and spooky Halloween! Thanksgiving is right around the corner with the November meeting on 11/9!

We have the big annual AHR conference in Vegas coming up at the end of January. The Long Island Chapter receives credit for every student that attends! ASHRAE will also pay for most to all of the travel and hotel accommodations! If there are any students that are interested in attending the Vegas conference, please let me know!

Also, I have volunteered to attend YEA Leadership Weekend November 10th. Very excited to be traveling to Denver to represent the chapter.

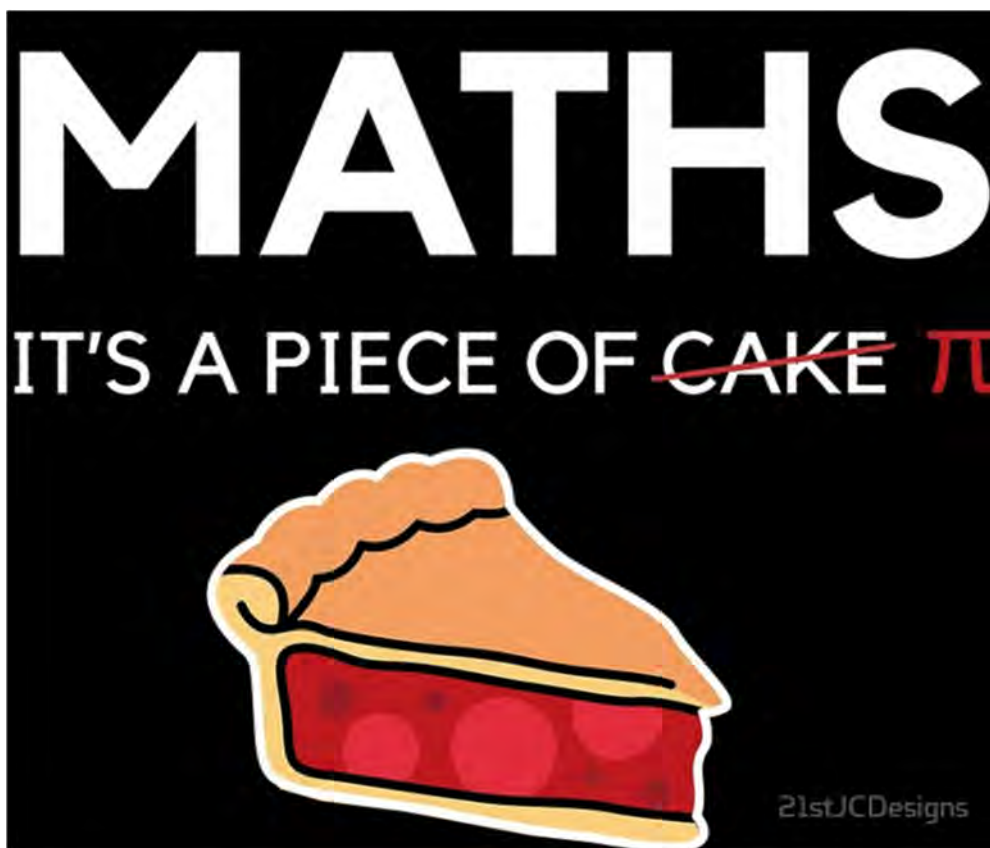
If you are interested in attending a meeting, please reach out and I would be happy to provide all meeting information!

Article Structure: In this Edition the sections we have are:

1. Joke of the Month | 2. Show me the Money (Scholarship Grants) | 3. #Winning (Competitions)

1 - Joke of the Month

Thanksgiving Pie!



Student Activities

[2 - Show me the Money Zone-For Student Scholarship and Grant Information](#)

2022 ASHRAE Winter Conference Student Program

GET READY FOR VEGAS!!! FREE TRAVEL!!! SEE BELOW!!!!



The 2022 ASHRAE Winter Conference is scheduled for **January 29–February 2, 2022**. The Winter Conference will be a hybrid experience, offering both in-person and virtual options for participation for attendees. The in-person conference will be held in Las Vegas, Nevada at Caesars Palace. The conference will be an opportunity for students and other HVAC professionals from around the world to share industry ideas and learn more about ASHRAE. Students must register to attend the conference, which will open later this fall.

46 Society Scholarships Available for 2022-23!

Applications due December 1, 2021

Through its scholarship program, ASHRAE seeks to motivate students worldwide to pursue an engineering or technology career in the HVAC&R field that will further promote sustainable technology for the built environment. Scholarships range from \$3,000 to \$10,000 and are awarded for the academic year following the application deadline beginning with the fall semester. Qualified students are encouraged to apply at ashrae.org/scholarships. Now accepting applications for our Undergraduate Engineering, Engineering Technology, Regional/Chapter, & University-specific Scholarships.



Undergraduate Program Equipment Grants

Applications due December 15, 2021

The ASHRAE Undergraduate Program Equipment Grants provide funding to engineering, technical and architectural schools worldwide with the goal of increasing student knowledge, learning and awareness of the HVAC&R industry through the design and construction of equipment. Grants are to be used to fund equipment and supplies for senior projects and 2-year technical school projects that focus on ASHRAE-related topics. Grants may cover projects lasting from one academic term up to one year. [Learn More.](#)

Student Activities

3. #Winning Zone | For Student Competition Information:

2022 Design Competition

The 2022 student competition focuses on a new performing arts building on a university campus located in Sydney, New South Wales, Australia. ASHRAE sponsors these competitions to encourage students to become involved in a profession that is crucial to ensuring a sustainable future for our Earth – the design of energy-efficient HVAC systems.

Link: <https://www.ashrae.org/communities/student-zone/competitions/2022-design-competition>

2022 Applied Engineering Challenge

As the global pandemic rages on, the need for climate-controlled transport containers for vaccine delivery has become a top priority. The 2022 Setty Family Foundation Applied Engineering Challenge (AEC) is focused on designing an ultra-cold refrigeration system that is capable of being transported to all global locations.

Link: <https://www.ashrae.org/communities/student-zone/competitions/2022-applied-engineering-challenge>

2022 Building EQ (Building Energy Quotient) Competition

The Student Activities Committee and Building EQ Committee have collaborated to create a new Building EQ competition. Students will have the opportunity to work evaluate and audit building energy consumption for buildings in operation to give the building a Building EQ score using the ASHRAE Building EQ online tools.

Link: <https://www.ashrae.org/communities/student-zone/competitions/2022-building-eq-building-energy-quotient-competition>

Solar Decathlon

The Solar Decathlon is a collegiate competition that challenges student teams to design and build highly efficient and innovative buildings powered by renewable energy. The combined competition features two tracks, the Design Challenge and the Build Challenge.

Link: <https://www.ashrae.org/communities/student-zone/competitions/solar-decathlon-competition>

Please reach out for more information If you are interested in participating of any of the above competitions!

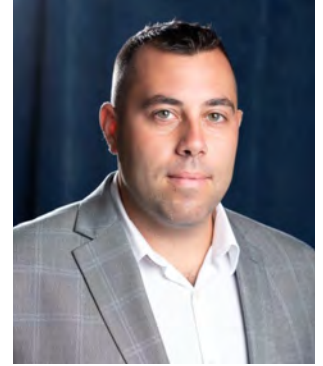
Matthew K. Catan
Student Activities Chairman

Zhigang Xu
Student Activities Co-Chairman

Research Promotion

I would like to thank the companies who have participated in the annual Product Directory of Manufacturers and their Representatives. The product Directory has been prepared as a service to all its members and as a service to the local HVAC industry. It will be made available to all ASHRAE and non-ASHRAE members at no-cost and can be obtained from our monthly meetings or directly from our website.

This year's overall research promotion goal is \$2,593,341 with many research projects on board. Our chapter is expected to raise \$20,400 towards the overall goal. The chapter is off to a good start and has already raised \$2,000! I am hoping that I can count on the continued support of all our past contributors who have generously supported us over the years. I also look forward to gaining the support of new contributors this coming year. Last year we were successful in beating our goal by over \$8,000 and am hopeful that this year we can continuously raise the bar.



CONTRIBUTIONS CAN BE MADE IN THE FOLLOWING WAYS:

- 1) You can mail your checks, made out to ASHRAE Research Promotion:
Michael Nigro
ASHRAE Research Promotion Chair
PO BOX 79
Commack, NY 11725
- 2) You can bring your check to any of the meetings and hand to myself or Elizabeth.
- 3) You can contribute via PayPal from the ASHRAE LONG ISLAND web site, just click on the donate button.
- 4) You can contribute directly on-line. www.ashrae.org

**** Please make sure you accredit your contribution to the LONG ISLAND CHAPTER 006 ****

Thank you again for all of your support!

Michael Nigro
Research Promotion Chair

Membership Promotion

For this month's meeting, we would like to thank each one of our Long Island Chapter's members for their consistent sacrifices to support our great organization. YOUR membership and continued involvement in ASHRAE are our highest priorities. During times like this, we value your input & your experience. Having your input, it is our responsibility to notify you when your account is delinquent. We understand that it can be a hassle when your membership expiration approaches, so we would like to make every effort to ensure our membership stay aware of their status. This status could be if you're membership is past due & we try to offer frequent reminders.

Here's how it works:

When someone joins ASHRAE & Society has received their dues payment, their annual membership year begins and continues on a 12-month billing cycle.



1. Three (3) months prior to the one-year anniversary of the original billing, we contact you to renew your dues for the following year. If you choose not to renew, you become "unpaid" the first day after the expiration date.
2. For the first three (3) months (0-90 days past due) after the anniversary date, we will continue to send friendly reminders while your membership remains active.
3. After the three (3) months following the expiration date (91-180 days past due), your membership expires, and you enter into a "grace" period. At this point we can no longer offer member benefits.
4. Six (6) months after the expiration date (181 days past due), we "cancel" your membership, and subsequently remove you from our member roster.

Fortunately, even cancelled members can reinstate their membership and keep their original election dates by catching up on their dues or you can rejoin as a new member. From our understanding, reinstatements must be processed manually by staff. "Renewals" and "Rejoins" can be done anytime on the website by re-applying as a "new" member.

If you would like, you can check on your membership status and renew online at www.ashrae.org.

This month's meeting is our chapter's first membership promotion night and we're teaming up with YEA night for our 1st Student Activates Night. This is an excellent opportunity for all to network and make acquaintances.

Being its Student Activates Night, please let all students know that it is **FREE** and to have them attend. Please also let each of our students know about the Smart Start Program. This is a great way for ASHRAE student members to continue receiving the many member benefits of ASHRAE after finishing college. The Smart Start is a 3-year program that allows Student members to transfer to Associate grade membership at a rate that is recent-graduate friendly. This program allows new graduates to pay only \$25 for the first year of associate membership after college, \$85 for the second and \$115 for the third. When moving from student to associate member, the participant is allowed access to all ASHRAE has to offer, including annual copies of the ASHARE Handbook, the ASHRAE Journal, and various other publications and services.

Please contact me with any questions regarding the Smart Start Program and/or ASHRAE membership needs.

Speaking of membership and as mentioned in last month's Membership article, we have a "Membership Battle" going on! This is based on your percentage growth at the end of the year. The three (3) categories are:

- Small Firms - 15 employees or less
- Medium Firms - 16 to 50 employees
- Large Firms - over 51 employees

Currently, we have the following companies enrolled in their respective categories:

- Small Firms - 15 employees or less
NONE
- Medium Firms - 16 to 50 employees
Rathe Associates
Klima NY
Stony Brook Engineering

Membership Promotion

- Large Firms - over 51 employees
H2M
MG Engineering
Trane

If you would like to enroll your company into the "Membership Battle," please contact me and ask your colleagues to update their profile information & RESPECTIVE EMPLOYER.

I would like to informally welcome our new members this month:

1. Arthur DAntonio
2. Daniel Gordon

Looking forward to another great month and thank you in advance for your support, time & guidance.

Michael H. Razzano
Membership Promotion Chair

Richard Smith
Membership Promotion Co-Chair



History

See below for the Constitution and Bylaws of the Long Island Chapter of ASHRAE:

Elizabeth Jedrlinic
History Chair

Michael Razzano
History Co-Chair



CONSTITUTION AND BYLAWS OF THE LONG ISLAND CHAPTER OF ASHRAE

Approved by the Society: 8-November-2016

ARTICLE I – NAME AND AREA SERVED

The name of the organization is the Long Island Chapter (herein "Chapter") of ASHRAE (herein "Society"). The principal area(s) served by the Chapter are the counties of Nassau and Suffolk in the state of New York. The principal city where regular meetings will be held is Westbury, New York.

ARTICLE II – OBJECTS

The objects of the Chapter are exclusively scientific and educational and include, but are not limited to: (a) the advancement of the sciences of heating, refrigerating and air-conditioning engineering and related sciences; (b) the continuing education of the members and other interested persons in said sciences, through lectures, demonstrations, and publications; (c) the rendering of career guidance and financial assistance to students of the sciences; and (d) the encouragement of scientific research.

ARTICLE III – POWERS

The Chapter shall have the power to perform all lawful acts which may be deemed necessary for the proper and successful prosecution of the objects and purposes for which it is organized and operated, consistent with the Certificate of Consolidation, Bylaws, and Rules of the Board of Directors of the Society, and applicable tax regulations for non-profit organizations or corresponding provisions of tax laws.

3.1 The Chapter is not operated for the pecuniary profit of its members. No part of the net income of the Chapter shall be payable to or shall otherwise be available for the personal benefit of any proprietor, employee or shareholder. No salary emolument or compensation shall be paid to any member, and no part of the activities of the Chapter shall consist of the performance of particular services for individual members.

3.2 The Chapter shall not have the authority to act for or in the name of the Society and notice to such effect shall be imprinted on the Chapter stationery; the Chapter shall not use the name of the Society except as a part of its own name; the Chapter may use the emblem of the Society in accordance with the Rules of the Board; and the Chapter shall not incur any financial liability or contractual obligation in the name of the Society.

3.3 The Chapter may issue publications and/or websites/downloads/documents in accordance with the Rules of the Board. Certain publications for members such as a chapter newsletter or chapter membership roster/product directory may be distributed to persons other than members provided it clearly complies with paragraph 3.2. Certain designated ASHRAE documents may be translated in accordance with the Rules of the Board.

3.4 The Chapter may contribute to, affiliate with, or hold membership in any society, association, council, or other organization in accordance with the Rules of the Board.

3.5 The Chapter shall not recommend, endorse or approve any product, service, publication, person or entity for the promotion of private or public interests.

History

ARTICLE IV – MEMBERSHIP, DUES AND FINANCE

4.1 Qualification. The membership of the Chapter shall consist of all members of the Society in good standing and residing in the geographic area of the Chapter, as prescribed by the Board of Directors of the Society, who have properly joined the chapter.

4.2 Non-Residents. Notwithstanding the foregoing, a member of the Society residing in the geographic area of a Chapter may elect to be a member of another Chapter. A member may elect to belong to more than one Chapter.

4.3 Grade. Each member shall hold the same grade of membership in the Chapter as in the Society.

4.4 Rights and Privileges. All Chapter members shall be entitled to the same rights and privileges, except that anyone who has not paid Chapter fees, dues, assessments or other charges within ninety (90) days of their due date shall not be entitled to voting privileges or the right to election or appointment as an officer, governor, or committee chair of the Chapter. All rights and privileges of a member are vested solely in the member and may not be delegated or transferred, except as provided in Article VI, paragraph 6.7 hereof.

4.5 Suspension. In the event that a member does not pay all the Chapter fees, dues, assessments or other charges within six (6) months of their due date, all rights and privileges of membership in the Chapter shall be suspended. Such membership rights and privileges shall be restored to the member upon full payment thereof. Delinquency in payment of Chapter dues or other Chapter charges will not affect a member's standing in the Society.

4.6 Termination. Membership in the Chapter shall terminate upon the death of any member, the removal of a member's principal place of residence to the geographic area of another Chapter except as provided in Article IV, paragraph 4.2 hereof, or the receipt of written notice by the member of termination of membership. In the event of such termination, neither the former member, nor his/her personal representatives, heirs or devisees shall have any right, title or interest in the Chapter or its assets.

4.7 Expulsion. A member may be expelled from the Society and the Chapter only upon action taken by the Board of Directors of the Society. Such action may be initiated by the Board of Governors of the Chapter by the filing of written charges and supporting evidence with the Secretary of the Society.

4.8 Society Dues. The annual dues for membership in the Society, as prescribed from time to time by the Society, shall be paid to the Society.

4.9 Chapter Dues. The Board of Governors, in its discretion and subject to the approval by a vote of members, may levy such dues, fees, charges or other assessments as are reasonable and necessary to meet the current operating expenses of the Chapter. The due date of such payments shall be as prescribed by the Board of Governors.

4.10 Fiscal Year. The fiscal year of the Chapter shall end on June 30 of each year.

ARTICLE V – OFFICERS, NOMINATIONS, ELECTIONS, VACANCIES, REMOVAL AND CHAPTER REGIONAL COMMITTEE

5.1 Titles. The officers of the Chapter shall be a President, a President-Elect, a Vice President, a Secretary, a Treasurer, and a Financial Secretary. Consult the current version of the Manual for Chapter Operations (MCO) for updates.

5.2 Multiple Offices. With the exception of the office of President, any number of offices may be held by the same member.

5.3 The President. The President shall be the chief executive officer of the Chapter and shall provide general direction of the affairs of the Chapter and provide general supervision over its several officers, subject to the control of the Board of Governors. The President shall, from time to time, report to the members and to the Board all matters within the President's knowledge which the interest of the Chapter may require to be brought to the Chapter's notice; shall preside at all meetings of the members and at all meetings of the Board; shall sign and execute in the name of the Chapter all contracts, or other instruments authorized by the Board, except in cases where the signing and execution thereof shall be expressly delegated or permitted by the Board or by these Bylaws to some other officer or agent of the Chapter.

History

5.4 The President-Elect. The President-Elect shall automatically succeed to the office of the President at the conclusion of the President's term of office. In the absence of the President, the President-Elect shall exercise the powers and perform the duties of the President. In addition, the President-Elect shall make the committee chair appointments sufficiently far in advance of the Chapters Regional Conference (CRC), as to permit attendance by the appointees at CRC workshops in the period prior to appointees' active participation as chairs of the Chapter Committees. Chair designees of such committees as Student Activities; Membership Promotion; Research Promotion; Chapter Technology Transfer, Grassroots Government Advocacy and Historical should be especially encouraged to attend CRC meetings. Prior to the annual meeting, the President-Elect shall complete the appointments by naming at least two (2) committee members to each of the standing committees of the Chapter.

5.5 The Vice President. In the absence of the President and the President-Elect, the Vice President shall exercise the powers and perform the duties of the President.

5.6 The Secretary. The Secretary shall send notices of meetings to the members and to the Board of Governors as prescribed in these Bylaws, and to Committee Chairs as requested by the President. The Secretary shall keep the minutes of the meetings of the Chapter and of the Board of Governors and shall promptly file a copy of the minutes of each meeting of the Chapter with the Regional Chair and Regional Vice Chair (RVC) for Chapter Technology Transfer, or in the case of the (RAL) the Sub Regional Chair (SRC) for the Chapter, and shall send advance notices and minutes of meetings of the Board of Governors to the Regional Chair. In addition, the Secretary shall send the Chapter newsletter to the Editor of the official publication of the Society. The Secretary shall maintain a membership roster, a roll of membership attendance, and such books, papers, and records as the Chapter or Board of Governors may direct, which shall be open to the inspection of any member of the Board of Governors. The Secretary shall promptly notify members of their nomination, election, or appointment to office.

5.7 Treasurer and Financial Secretary. The Treasurer shall receive all funds, including dues, fees, charges and other assessments, and shall deposit such funds in the name of the Chapter in banks or other depositories. The Treasurer shall disburse funds only as authorized by the Chapter's Board of Governors and shall keep appropriate records of receipts and expenses and shall exhibit such records at all reasonable times to any member of the Board of Governors. The Treasurer shall make a full financial report at the annual meeting of the Chapter, a copy of which shall be forwarded to the Regional Chair. In addition, in the absence of contrary written instructions from the Society, the Treasurer shall complete, execute and file any statements or returns incidental to federal or local taxation.

The Financial Secretary shall be responsible for the collection and recording of the chapter dues and for notifying the members of their status. He shall also serve as coordinating officer of the Membership Promotion Committee and be responsible for membership applications and meeting attendance. He shall promptly notify and advise new applicants on all matters pertaining to their application for membership. Collected dues shall be turned over to the custody of the Treasurer promptly.

5.8 Additional Duties. All officers shall perform all duties incident to their respective offices and such other duties as are prescribed by these Bylaws or as are assigned by the Board of Governors.

5.9 Eligibility for Re-election. Officers and Board members are elected for one-year terms, but may be re-elected to consecutive terms. The president may be re-elected to the same office for one additional consecutive term. If the president is re-elected for an additional consecutive term, the president-elect will also need to be re-elected in accordance with the election procedure set forth in Section V.

5.10 Duties of Nominating Committee. The Nominating Committee shall select from the members eligible to hold office one candidate for each office except President, and for each member to be elected to the Board of Governors and shall obtain from each candidate a written statement that the candidate is a member in good standing in the Society and consents to stand for election. Not less than thirty (30) days before the April meeting the Nominating Committee shall present to the Secretary the names of the candidates selected, together with their statements.

5.11 Duties of Secretary. Upon receipt of these names from the Nominating Committee, the Secretary shall prepare a list of the candidates and shall forward such list to all members with voting rights at least ten (10) days prior to such meeting.

5.12 Nomination by Members. Additional nominations of members in good standing who consent orally or in writing to be candidates may be made from the floor at such meeting. If at this meeting more than one

History

such nomination from the floor is made for any one office or membership on the Board of Governors, a vote shall be taken to select the name of the opposition candidate to be placed on the ballot.

5.13 Voting and Election. Not less than ten (10) days prior to the next meeting, the Secretary shall send a mail ballot, in the case of elections by mail, or a proxy statement, in the case of elections at meetings, to all members with voting rights. In the case of elections at meetings, the President shall appoint three (3) tellers to assist in conducting the election. The Board of Governors or the tellers, if any, shall promptly tally all votes. The candidate receiving a majority of the votes cast for each respective office shall be declared elected. If there is a tie vote, there shall be a run-off election.

5.14 Installation. Officers and members of the Board of Governors shall be installed at the annual meeting of the chapter and shall assume their duties at the start of the next Society year.

5.15 Vacancies. Whenever there shall be a vacancy in any office except President-Elect or a member of the Board of Governors by resignation or otherwise, the Board of Governors shall have the power to fill such office until the next annual election and installation, and such officer shall have the duties, rights, and privileges of the predecessor.

If the President dies, resigns, or is removed from office, the President-Elect shall immediately become President and shall serve for the remainder of the term of the immediate predecessor. If the time served by the President-Elect as President is less than six months, he/she shall continue to serve as President for the next Society year; therefore the office of President-Elect shall remain vacant until the next annual chapter election. If the President-Elect dies, resigns, is removed from office, or becomes President for more than six months in accordance with the foregoing provisions, a special election shall be held to fill the vacancy.

5.16 Removal. Any officer or member of the Board of Governors may be removed by at least a 2/3 vote of voting members present at a regular meeting, whenever in the judgment of the members, the best interests of the Chapter will be served thereby. The notice of this Chapter meeting shall contain the statement that an urgent item of importance to the Chapter will be presented for member vote and subsequent action.

5.17 Election of Delegates. The Board of Governors-elect shall elect from among its members one delegate and one alternate to the Chapters Regional Committee. At least one of said delegates shall be an officer-elect of the Chapter. The delegates shall be announced at the annual meeting of the Chapter. The names of such delegates shall be certified in writing by the Secretary to the Secretary of the Society and the Regional Chair by the first day of the following June.

5.18 Term. The delegate and alternate delegate shall serve for a term of one (1) year, commencing on the first day of July following their election. No member may be elected to serve as the delegate for more than two (2) consecutive terms; no member may be elected to serve as the alternate delegate for more than two (2) consecutive terms; and no member may be elected to serve in either capacity for more than four (4) consecutive terms.

5.19 Duties. The duties of the delegate and alternate delegate shall be as prescribed from time to time by the Society. They shall transmit recommendations concerning policies, procedures, and operations of the Society, its Chapter and its Student Branches to the Regional Chair in advance of the Chapters Regional Committee Meeting; shall attend such meeting; shall suggest candidates for the Board of Directors of the Society, Society committees, and miscellaneous Society honors and awards; shall participate in the election of one (1) member and one (1) alternate member to serve on the Society Nominating Committee; and shall report to the Board of Governors of the Chapter regarding the business transacted at the Chapters Regional Committee meeting, together with any recommendations for Chapter action.

5.20 Vacancies and Removal. Whenever either delegate is unable to fulfill this office, the Board of Governors shall appoint another delegate. Either delegate may be removed by the Board of Governors whenever, in its judgment, the best interests of the Chapter will be served thereby.

ARTICLE VI – MEETINGS OF MEMBERS

6.1 Regular Meetings. Meetings of the Chapter shall be held on at least a monthly basis from September through June, at such time and place as is prescribed by the Board of Governors.

History

6.2 Annual Meeting. The annual meeting of the chapter for the installation of officers and the Board of Governors and the announcement of committee appointments shall be held in the month of June, at such time and place as is prescribed by the Board of Governors.

6.3 Special Meetings. Special meetings of the Chapter may be called by the President at the President's discretion, or at the request of the Board of Governors or 15 percent of the members with voting rights.

6.4 Notice of Meetings. Timely written notice of all meetings shall be sent by the Secretary to all members setting forth the place, date and hour of the meeting and, in the case of a special meeting, the purpose thereof.

6.5 Quorum. A quorum for the transaction of business at a meeting of the Chapter shall consist of 15 percent of the members having voting rights, except that no business may be transacted unless a majority of the Board of Governors is also in attendance.

6.6 Majority Vote. A majority of the number of votes cast in person or by proxy shall be necessary for the adoption of any matter, except as otherwise provided in these Bylaws.

6.7 Proxies. A member may vote on any matter by a written proxy executed and dated by the member. No proxy shall be valid after ninety (90) days from the date of its execution, unless otherwise provided in the proxy.

ARTICLE VII – BOARD OF GOVERNORS

7.1 Duties. The property and affairs of the Chapter shall be managed by the Board of Governors. The Board of Governors may execute all business of the Chapter that does not require action by the full membership of the Chapter. The presiding officer shall report briefly on these actions at the next Chapter meeting.

7.2 Composition. The Board of Governors of the Chapter shall consist of the officers, the most recent available past president, and a minimum of two members elected pursuant to Article V hereof.

7.3 Meetings. The time and place of regular meetings of the Board of Governors shall be at the discretion of the Board. A special meeting of the Board of Governors may be called by the President, at the President's discretion, or at the written request of two (2) members of the Board.

7.4 Quorum and Majority Vote. A quorum for the transaction of business shall consist of a majority of the Board present in person, and the majority vote of the members present in person or by proxy shall be necessary for the adoption of any matter, except as otherwise provided in these Bylaws. The form of proxies shall be governed by Article VI, paragraph 6.7 hereof.

7.5 Notice of Meetings. Timely written notice of all meetings shall be sent by the Secretary to all members setting forth the place, date and hour of the meeting and, in the case of a special meeting, the purpose thereof.

7.6 Appointments to Auditing Committee. The Board of Governors-elect shall appoint members to the Auditing Committee, pursuant to paragraph 8.3.2.1 hereof, at a meeting of the Board of Governors-elect held prior to the annual meeting of the Chapter. Appointments shall be announced at such annual meeting.

ARTICLE VIII – COMMITTEES

8.1 General. All Chapter Committees shall be designated as Standing Committees or Special Committees. Standing Committees are mandatory and are of a continuing nature, while Special Committees are created for a specific purpose and may be dissolved when their functions have been completed.

8.2 Appointments. Except as noted herein, all Standing Committee members and respective Chairs thereof shall be appointed by the President-Elect pursuant to Article 5.4.

8.3 Standing Committees. Standing Committees primarily essential to chapter, regional and Society activities are broken into two categories: those that are mandatory and those that are optional, but whose functions are essential to the Chapter operation.

History

8.3.1 Mandatory standing committees are the Chapter Nominating; CRC Action; Student Activities; Membership Promotion; Research Promotion; Chapter Technology Transfer; Grassroots Government Advocacy and Historical.

8.3.1.1 Chapter Nominating Committee. The Nominating Committee shall consist of five (5) members in good standing. One member of the Board of Governors may serve on the Nominating Committee, but not as its chair. The Committee shall be elected by the Chapter at the March meeting.

At the preceding meeting, the Board of Governors shall submit to the members their nominations for the committee. Additional nominations may be made by members from the floor at said meeting.

Nominees receiving the five highest number of votes shall be elected. In the case of a tie, there shall be a runoff election which shall be held at the same meeting. The Nominating Committee shall elect its own chair.

8.3.1.2 CRC Action Committee. The CRC Action Committee shall determine major items of concern to the Chapter; obtain biographies on possible candidates for Society and regional offices, committees, and various regional and Society honors and awards; provide direction to the delegate and alternate delegate on actions to be presented on the Chapter's behalf at the CRC. The Chair of this Committee should be a past president of the Chapter.

8.3.1.3 Student Activities Committee. The Student Activities Committee shall assist and cooperate with other technical and scientific organizations to influence pre-college (K-12) education in math and science; shall assist in the formation and/or continuing operation of student branches of the chapter; and shall assist with chapter participation in continuing education courses and related activities. The Chair of this Committee is expected to attend the CRC Meeting (for spring CRCs, the incoming chair).

8.3.1.4 Membership Promotion Committee. The Membership Promotion Committee shall encourage applications by persons qualified for membership in the Society; shall encourage increased member participation in Chapter affairs; and shall encourage members to advance in their membership grade in the Society. The Chair of this Committee is expected to attend the CRC Meeting (for spring CRCs, the incoming chair).

8.3.1.5 Research Promotion Committee. The Research Promotion Committee shall conduct an annual campaign to obtain investments in ASHRAE Research, The ASHRAE Foundation and Education through the ASHRAE Learning Institute. The Chair of this Committee is expected to attend the RP Centralized Training Workshop and Special Regional Committee Meeting when called by the Regional Vice Chair for Research Promotion.

8.3.1.6 Chapter Technology Transfer Committee. The Chapter Technology Transfer Committee shall develop liaison on programs, make arrangements for speakers for programs and technical sessions at chapter meetings, including speaker's requirements for equipment, accommodations and travel arrangements and act as host throughout the meetings. The committee shall coordinate the efforts of the chapter by making arrangements with area educational institutions for continuing education courses, and develop an active "Speakers Bureau" to present talks and seminars to chapters and regions. The committee shall submit PAOE points related to chapter programs. The committee shall provide timely reports to the regional vice chair. The Chair of this Committee is expected to attend the CRC Meeting (for spring CRCs, the incoming chair).

8.3.1.7 Grassroots Government Advocacy Committee. The Grassroots Government Advocacy Committee shall provide current and relevant information to ASHRAE members regarding Government Advocacy in their communities in areas of interest to ASHRAE members. Subsequently, members so engaged should then help keep their chapters, regions and Society Government Advocacy staff informed on governmental activities of interest to ASHRAE. The committee shall coordinate dissemination of grassroots-level governmental activities-related information to members and obtain feedback from chapter and individual member Government Advocacy. Maintain high-quality and readily available tools to train and enable chapter members to effect positive interactions with government entities in their communities, especially in the use of ASHRAE documents and the advancement of the ASHRAE public policy agenda. Serve as a clearinghouse of grassroots government adoptions of ASHRAE-developed and endorsed standards, guidelines and positions. Encourage an active, informed membership by keeping local, provincial and state governments updated on technical issues. The Chair of this committee is expected to attend the CRC Meeting.

History

8.3.1.8 Historical Committee. The Historical Committee shall collect and safeguard facts, photographs, records and other memorabilia pertinent to the history of the Chapter. The Chair of this Committee is expected to attend the CRC Meeting (for spring CRCs, the incoming chair).

8.3.2 Optional Committees, whose functions are essential to the Chapter operation, are Auditing; Refrigeration; Reception; Publicity; Attendance; Publication (or Newsletter); Honors and Awards; Special Events; and Chapter Section (if appropriate). The duties and functions of each Optional Committee (several of which may be combined under a single chair) are as follows:

8.3.2.1 Auditing Committee. The Auditing Committee shall consist of three (3) members, none of whom shall be members of the Board of Governors, and shall elect its own chair.

8.3.2.2 Refrigeration Committee. The Refrigeration Committee shall promote the refrigeration activities of the Society by promoting the interests and endeavours of those members whose primary concern is refrigeration; shall provide or arrange technical talks on refrigeration to the members at regular chapter meetings; shall promote chapter-sponsored seminars on refrigeration and shall arrange for continuing education in the refrigeration field. The activities of the Refrigeration Committee shall be coordinated with the Chapter Technology Transfer Committee, and if there is no Refrigeration Committee the activities described above shall be handled by the Chapter Technology Transfer Committee.

8.3.2.3 Reception Committee. The Reception Committee shall encourage fellowship among members and shall extend cordial greetings to guests and new members of the Society.

8.3.2.4 Publicity Committee. The Publicity Committee shall publicize the name, purposes and activities of the Chapter in an effort to obtain qualified members; and shall report Chapter activities of public interest to the news media.

8.3.2.5 Honors and Awards Committee. The Honors and Awards Committee shall consist of a chair and at least two (2) additional members, preferably past chapter presidents. The Honors and Awards Committee shall promote the recognition of outstanding chapter members within the chapter, region, Society, associated societies and the community. The committee shall submit names of qualified chapter members to the Chapter CRC Action Committee.

8.3.2.6 Attendance Committee. The Attendance Committee shall be responsible for contacting each member of the Chapter prior to each scheduled meeting or event to ensure that they have received notice of that meeting or event, and to ascertain the expected attendance.

8.3.2.7 Publications or Newsletter Committee. The Publications Committee shall obtain news of interest to the Chapter members and supervise the publishing of the Chapter newsletter.

8.3.2.8 Special Events Committee. The Special Events Committee shall handle the arrangements for any special events to be sponsored by the Chapter, or for other events to which the Chapter membership has been invited.

8.3.2.9 Chapter Section Committee. When a chapter area is defined that is not being provided chapter services, the chapter may form a Chapter Section Committee to start and maintain chapter sections within the chapter area. The chapter president shall name a section representative for each section who will maintain liaison with the chapter.

8.4 Other Committees. Additional committees shall be termed as Special Committees and may be appointed at any time by the President, with the advice and approval of the Board of Governors, and shall be announced at the next meeting of the Chapter.

8.5 Vacancies. Whenever any member refuses an appointment to a committee or whenever there is a vacancy on any committee by resignation or otherwise, the President shall, with the advice and approval of the Board of Governors, appoint another member to such committee.

8.6 Removal. Any committee member appointed or elected may be removed by the person or persons authorized to appoint or elect such member whenever, in their judgment, the best interests of the Chapter will be served thereby, except that the President shall remove a member only with the advice and approval of the Board of Governors.

8.7 Attendance at Board Meetings. Committee Chairs shall attend the meetings of the Board of Governors when so requested by the presiding officer, but shall not be entitled to voting rights at such meetings.

History

ARTICLE IX – RULES OF ORDER

Rules of Order. Except as otherwise provided in these Bylaws, the conduct of meetings of the members shall be governed by the rules of procedure set forth in the current edition of Robert's Rules of Order Newly Revised.

ARTICLE X – AMENDMENTS

10.1 Powers and Limitations. All Articles of these Bylaws shall be subject to alteration or repeal, consistent with the Certificate of Consolidation, Bylaws, and Rules of the Board of Directors of the Society and applicable tax regulations for non-profit organizations or corresponding provisions of applicable tax laws.

10.2 By Society. Amendments to these Bylaws set forth in written directives of the Secretary of the Society shall be adopted by a majority of the Board of Governors. Written copies of said amendments shall be sent by the chapter secretary to all members, or an officer of the Chapter shall read said amendments at the next succeeding chapter meeting.

10.3 By Chapter. Amendments to these Bylaws may also be initiated by a written resolution of a majority of the Board of Governors or by not less than five (5) members in good standing with voting privileges and may be presented at any meeting of the Chapter. If approved by a majority of the members present, the chapter secretary shall send copies of the proposed amendments to all members not less than seven (7) days before the next succeeding meeting. If approved by a two-thirds (2/3) vote at such meeting, the chapter secretary shall forward such proposed amendments to the Secretary of the Society for approval by the Members Council of the Society and review by the Regional Chair. Any amendments shall become effective only upon receipt of written notice of approval by the Members Council or its authorized representative of the Society.

ARTICLE XI – DISSOLUTION

11.1 The chapter may be dissolved:

- a. with the consent of not less than sixty (60) percent of the members in good standing of the chapter with voting rights expressed, either in person or by proxy, at a special meeting called for that purpose, or
- b. by a two-thirds vote of the ASHRAE Board of Directors after written preferment of charges, sixty (60) days written notice of hearing sent by registered mail to the President of the Chapter, and an adequate opportunity for the chapter representative to be heard before the Board of Directors or a committee of three (3) or more members designated by the Board of Directors.

11.2 In the event of dissolution, all debts and liabilities legally incurred on behalf of the chapter shall be fully discharged. The remaining funds shall be disposed of in accordance with paragraph 11.3 thereof.

11.3 Upon the dissolution of the Chapter, any assets remaining thereafter shall be conveyed to the Society.

11.4 In the event that the Society is not then in existence or is not then exempt under applicable tax regulations for non-profit organizations or corresponding provisions of tax laws, the assets shall be conveyed to such organization then existent, dedicated to the perpetuation of objectives similar to those of the Society and exempt.

History

ARTICLE XII – ADOPTION

These Bylaws shall be completed and adopted by a majority of the Board of Governors. Written copies of said Bylaws shall be sent by the Secretary to all members and shall be sent, as amended, to such persons as shall, from time to time, become members of the Chapter.

Adopted by the LONG ISLAND Chapter

11-7-16
Date

Ronald W. Ida
Chapter President

YEA

YEA Leadership Weekend 1.0

Registration is now closed and the event is right around the corner on November 12th! Thank you to everyone who registered. Details can still be found under the events and programs tab.

<https://www.ashrae.org/communities/young-engineers-in-ashrae-yea/yea-events-and-programs/yea-leadership-weekend>

Leadership U

There is still time to register for the Leadership U program but don't delay as applications stop on November 14th. You can apply using the "apply now" tab under the program requirements.

<https://www.ashrae.org/communities/young-engineers-in-ashrae-yea/yea-events-and-programs/leadership-u>

If you have any questions regarding this program you can contact YEA at youngengineers@ashrae.com or by phone at 678-539-1178.

LeaDRS

This program is still available to all ASHRAE members who wish to shadow their Director and Regional Chair at an ASHRAE conference. Anyone interested should reach out to their region's DRC.



Region	DRC	Email
Region I	Mr. Steven C Sill	r01drc@ashrae.net
Region II	Mr. Ronald Gagnon	r02drc@ashrae.net
Region III	Mr. Mark A Tome, PE	r03drc@ashrae.net
Region IV	Mr. Steven Marek	r04drc@ashrae.net
Region V	Mr. Douglas F Zentz	r05drc@ashrae.net
Region VI	Mr. Richard D Hermans PE	r06drc@ashrae.net
Region VII	Mr. Chris M Gray PE	r07drc@ashrae.net
Region VIII	Mr. Randy C Schrecengost, PE	r08drc@ashrae.net
Region IX	Mr. Tyler J Glesne	r09drc@ashrae.net
Region X	Mr. Devin A Abellon, PE	r10drc@ashrae.net
Region XI	Mr. N Eileen Jensen, PE	r11drc@ashrae.net
Region XII	Mrs. Robin Bryant	r12drc@ashrae.net
Region XIII	Mr. Apichit Lumlertpongpana	r13drc@ashrae.net
Region XIV	Mr. Andres J Sepulveda	r14drc@ashrae.net
Region-at-Large	Dr. Richie Mittal	raldrc@ashrae.net

Michael S. Gerazounis
YEA Chair

Rich Smith
YEA Co-Chair

Grassroots Government Activities Committee (GGAC)

For those that are interested, please reach out to me directly for a copy of ASHRAE's draft letter in support for Senate Bill S.7176. This bill looks to elevate the State Energy Code to "the most recently published ASHRAE 90.1". The intent of this letter is to show support by ASHRAE NY Chapters.

As mentioned, if your interested in obtaining a copy of this letter (see copy on next page), my ask of you is as follows:

- Review the draft.
- Respond either to support or not support this measure.
- Have all confirmations back to me by Nov. 19th.

If there are any other questions or comments, please reach out to me.

James Hanna
Membership Promotion Chair

Rich Smith
Membership Promotion Co-Chair



Grassroots Government Activities Committee (GGAC)



DATE¶

¶

The Honorable Michael Cusick¶

Chair¶

Assembly Committee on Energy¶

New York State Assembly¶

198 State Street Room 715¶

Albany, NY 12210¶

¶

Letter sent via email to: CusickM@nyassembly.gov¶

¶

Re: NY A. 8143 (S. 7176), *Advanced Building Codes, Appliance and Equipment Efficiency Standards Act of 2021*¶

¶

Dear Chair Cusick:¶

¶

The [CHAPTER-NAME(S)] of ASHRAE are writing to you regarding Assembly Bill 8143, the *Advanced Building Codes, Appliance and Equipment Efficiency Standards Act of 2021*. ASHRAE supports adoption of the most up-to-date energy standards. Specifically, we support the provision in A. 8143 that proposes to update the state code to include the "most recently published" edition of ASHRAE Standard 90.1 (which is currently the 2019 edition)¶

¶

ASHRAE Standard 90.1-2019 is the alternative compliance pathway for the 2021 IECC according to section C401.2 (Application). Adopting Standard 90.1-2019 statewide will result in energy savings and lower operational costs. For buildings in New York, this would amount to estimated energy cost savings of \$2.24 million in the first year, and \$1.1 billion over 30 years. These savings are calculated based on the present value of energy savings for a building built under the updated code as compared to the previous code. Adopting the latest energy standard in New York is also estimated to reduce statewide carbon dioxide emissions by 6.7 million metric tons over 30 years, equivalent to the emissions of 1,450,000 cars driven for one year¶

¶

ANSI/ASHRAE/IES Standard 90.1, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, has been the benchmark for commercial building energy codes in the United States and a key basis for codes and standards around the world for more than 35 years. It is an indispensable reference for engineers and other professionals involved in design of buildings and building systems. The 2019 edition of Standard 90.1 includes significant updates and clarifications to previous editions. These include changes to the requirements for administration and enforcement, the building envelope, the lighting, mechanical, and energy cost budget sections, and the performance rating method.¶

¶

ASHRAE, founded in 1894, is a technical and professional society of more than 50,000 members, including over 2,500 in New York, that focus on building systems, energy efficiency, indoor air quality, refrigeration, and sustainability. Through research, standards writing, publishing, certification and continuing education, ASHRAE shapes tomorrow's built environment today.¶

¶

Again, we appreciate your support of Assembly Bill 8143 and its proposed inclusion of the most recent edition of ASHRAE Standard 90.1 in the State of New York's building energy codes. This update would benefit the people of New York and result in a more sustainable built environment. If you have any questions or need additional information, please feel free to contact GovAffairs@ashrae.org. Thank you for your work to improve building performance and improve the lives of New York residents.¶

¶

Sincerely,¶

¶

SIGNATURE LINE¶

¶

NAME¶

ASHRAE TITLE¶

PHONE NUMBER¶

EMAIL¶

¶

_____¶

Cost Effectiveness of ANSI/ASHRAE/IES Standard 90.1-2019 for New York, Pacific Northwest National Laboratory, July 2021: [https://www.energycodes.gov/sites/default/files/2021-07/Cost-effectiveness of ASHRAE Standard 90-1-2019-NewYork.pdf](https://www.energycodes.gov/sites/default/files/2021-07/Cost-effectiveness%20of%20ASHRAE%20Standard%2090-1-2019-NewYork.pdf)¶

CTTC

The ASHRAE Society recently updated its website with including unlimited content. The reports by ASHRAE volunteers are full of extensive content for engineers from all levels. This month, I would like to share ASHRAE BACnet Secure Connect “A Secure Infrastructure for Building Automation” by SSPC 135 IT Working Group comprised of David Fisher, Bernhard Isler, and Michael Osborne.



In the meantime, follow upcoming events on Long Island Sounder Newsletter and on social media link: <https://www.linkedin.com/in/ashraeli/>

We are excited to see all our Chapter members on November 9th, 2021, Tuesday 6:00 PM at Westbury Manor.

Murat Bayramoglu
CTTC Chairman

Thomas DiBenedetto
CTTC Co-Chairman



BACnet Secure Connect

A Secure Infrastructure for Building Automation

David Fisher
Bernhard Isler
Michael Osborne
SSPC 135 IT Working Group



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Disclaimer

The information contained in this document represents the current view of the ASHRAE SSPC 135 IT Working Group (IT-WG) regarding the issues discussed as of the date of publication. Because BACnet is under continuous maintenance, this document should not be interpreted as a commitment on the part of ASHRAE or SSPC 135. The IT-WG cannot guarantee the accuracy of any information presented after the date of publication.

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Executive Summary

BACnet, an international standard, has been in widespread use in building automation (BA) systems since its publication in 1995. Decades of use, and deployment of more than 25 million devices worldwide, has generated a wealth of knowledge about the benefits and issues related this technology. During this period, information technology (IT) professionals have had increasing exposure to BACnet. The confluence of accepted best practices in the IT world and in BACnet has exposed opportunities for improvement. To this end, SSPC-135 IT-WG has worked over the past five years to define new mechanisms for BACnet that mesh more naturally with evolving IT best practices.

A key concern among all parties is network and information security and infrastructure integrity. With a sharply increasing interest in cloud-based applications, owners, managers, BA, and IT professionals have a strong desire to create BA infrastructures that provide very high levels of security. At the same time, on the IT side there is a mature set of best practices for implementing and managing secure communications infrastructure. Previous attempts by BACnet to address these concerns went in a different direction than the IT community, ultimately frustrating efforts to gain acceptance.

Recognizing these concerns, the IT-WG has developed a new proposal centered on secure communications exclusively using accepted IT best practices. The new technology is called "BACnet Secure Connect (BACnet/SC)" and is the subject of this white paper. Simply put, BACnet/SC provides the means to create secure communications connections between BA devices both across the cloud, and within facilities. BACnet/SC uses the latest techniques for security and integrates easily with IT infrastructure. At the same time, BACnet/SC preserves 100% of the capabilities and is backward-compatible with all existing BACnet deployments and devices. Aligning BACnet/SC with existing IT standards and best practices allows your organization to create very secure BA infrastructure and unlock new cloud-based applications. It will also future-proof your organization's investment in BA as new security innovations become available.

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Introduction

BACnet today provides all the capabilities to interconnect BACnet devices within a BA system, including:

- Widespread interoperability among over 1000 vendors
- Support for multiple application domains including HVAC, lighting, access control, elevators, and more
- Backwards compatibility between older and newer versions of BACnet
- System scalability from low-cost devices to advanced devices and workstations
- An open and free-to-use standard that continues to evolve to meet the changing needs of BA systems

BA systems are becoming increasingly more sophisticated and often need to be integrated with other IT infrastructures. Owners are demanding more information about building operations and costs, resulting in Facility Managers tasking the BA system to provide more data more often from more devices on the network. IT departments, already burdened with regular IT infrastructure work, have little capacity to learn and manage BA systems that have nonstandard requirements.

BACnet Secure Connect (BACnet/SC) provides BA infrastructure that uses standard internet protocol and standard, widely used security methods, eliminating much of the concern and work for an IT department. Because BACnet/SC is capable of traversing the entire network, it provides the Facility Manager with a secure and efficient path to obtain the data the Owner needs.

Why is BACnet/SC needed? In simple terms, there are some aspects of existing BACnet systems that are sometimes problematic because they deviate from common IT policies and practices, although these vary from one situation to another. From an IT perspective, BACnet/SC solves many common problems:

- BACnet/SC provides a sophisticated network security solution that uses standards widely accepted by the IT community.
- BACnet/SC eliminates the need for static IP addresses, reducing the burden on IT groups, and may decrease lease costs to users.
- BACnet/SC is not dependent on network broadcast messaging.
- BACnet/SC eliminates BACnet/IP Broadcast Management Devices (BBMDs) and their configuration and is tolerant of changes in network topology.
- BACnet/SC works easily with firewall devices that are common in IT infrastructure.

BACnet Secure Connect

BACnet/SC is a new BACnet datalink that eliminates many of the concerns Owners, Facility Managers, and IT professionals have with BACnet today. It is based on standard TLS 1.3 security with options for 128-bit and 256-bit elliptic curve cryptography. It eliminates the need for static IP addresses and network broadcasts. It simplifies configuration by eliminating BBMD devices along with the need to keep them configured to match the network topology.

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The BACnet/SC proposal extends beyond these key features to support other capabilities, including:

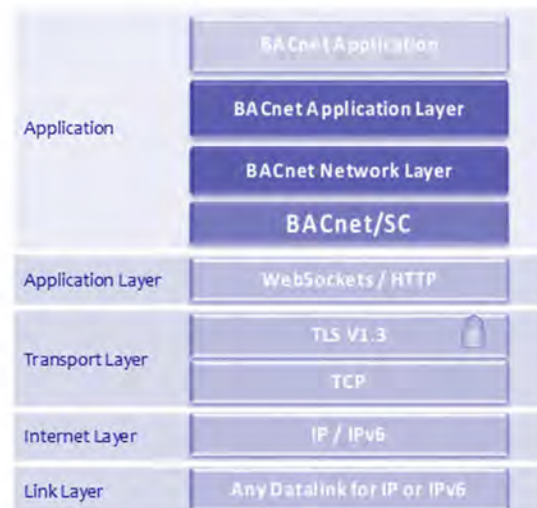
- Using shared IP networks with no virtual private network (VPN) setup required
- Allowing seamless traversal of simple-to-complex and local-to-global IP network configurations without compromising the existing security mechanisms, such as firewalls and supporting NATs
- Provides secure message transport using the standard IP application protocol, Secure WebSockets, which is an extension to HTTPS and runs over Transport Layer Security (TLS)
- Allowing communications independent of the network's configuration, including IPv4, IPv6, WiFi, and cellular
- Full compatibility with all existing BACnet systems and devices through normal BACnet routing

BACnet/SC provides a secure mechanism to allow a device to be authenticated and authorized to use the network.

BACnet Secure Connect Virtual Datalink

IP Centric View:

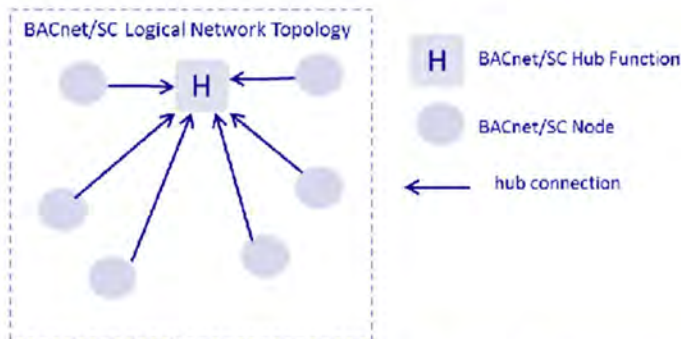
- All of BACnet is an "Application", including the BACnet/SC BACnet Datalink
- WebSockets is the "Application Layer"
- TLS & TCP build the "Transport Layer"
- IP or IPv6 is the "Internet Layer"
- At "Link Layer", any datalink technology possible that supports IP or IPv6: Ethernet, WLAN, 4G/5G, ...



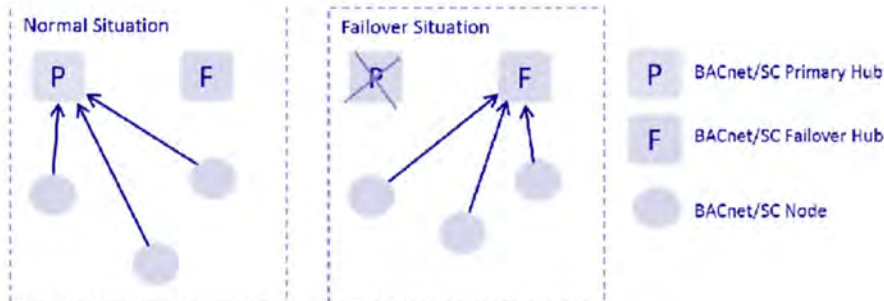
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Topology

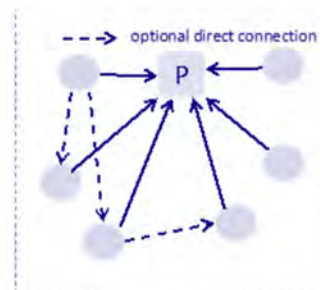
BACnet/SC uses a hub-and-spoke topology where a single central *hub function* directs traffic between any number of connected nodes. The hub analyzes the traffic to determine whether it should be directed to another node or forwarded to all connected nodes. A node can be a simple device, such as a thermostat, or a more sophisticated device that routes to an existing BACnet system, or it could be the main workstation for the entire facility. BACnet/SC defines a dedicated and simple BACnet/SC hub function but is architected to allow future extensions for use of standard messaging protocols and services such as MQTT.



Because a hub is single point of failure, BACnet/SC nodes support a failover mechanism to ensure the system remains viable if the hub fails or is taken offline for maintenance or upgrade. All BACnet/SC nodes are mandated to support connecting to the BACnet/SC failover hub if the primary hub cannot be connected.



Nodes have the option of performing direct connections to other nodes in addition to going through a hub.



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Implementation Scenarios

There are many ways BACnet/SC could be deployed. Below are a few of the possible scenarios.

Scenario #1

A building with an existing BACnet system where the Facilities Manager needs to access the system remotely across the public Internet and cannot allow inbound connections through the building network's firewall

In this case, a single BACnet/SC node that includes a BACnet router for routing to the legacy BACnet system is added to the building, a cloud-based BACnet/SC hub is deployed, and BACnet/SC node workstation software is used. The building BACnet/SC node initiates a connection to the BACnet/SC hub in the cloud, and because the building node is initiating the connection from inside the building, no specific configuration is required in the building's firewall except for outbound HTTPS connections, which are typically already enabled. The facility manager uses the workstation software to initiate a connection to the hub in the cloud, and, once connected, is able to manage the building's system.

New Equipment

- BACnet router that supports BACnet/SC
- BACnet/SC hub ("P" in Figure 1) outside of the facility
- (Optional) BACnet/SC failover hub ("F" in Figure 1) also outside of the facility
- BACnet operator workstation that supports BACnet/SC

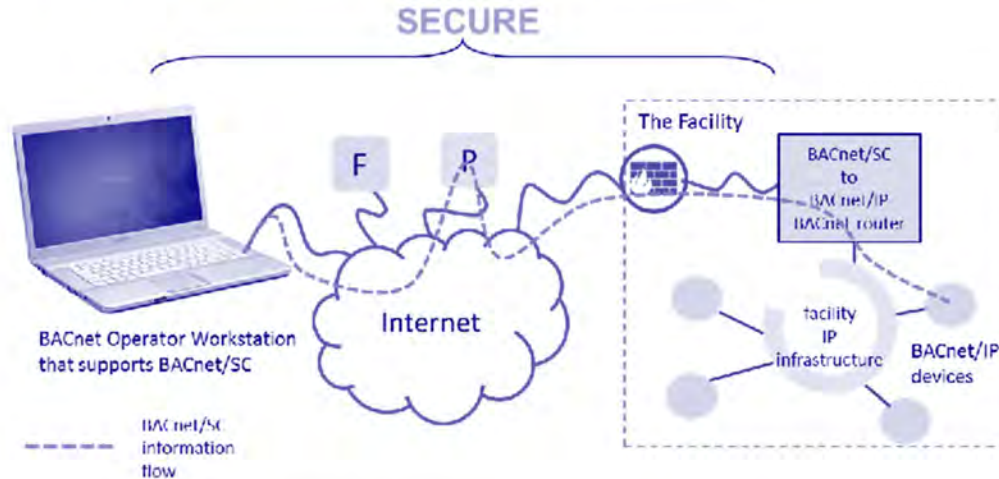


Figure 1: Secure Access from Outside the Facility

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Scenario #2

A new building where IT policies do not allow unsecured BACnet traffic on a shared IP network

In this case, all IP-based BACnet devices will need to support BACnet/SC. A BACnet/SC primary and failover hub will need to be installed as part of the network.

New Equipment

- BACnet devices that support BACnet/SC
- BACnet/SC hub ("P" in Figure 2)
- BACnet/SC failover hub ("F" in Figure 2)
- BACnet operator workstation that supports BACnet/SC

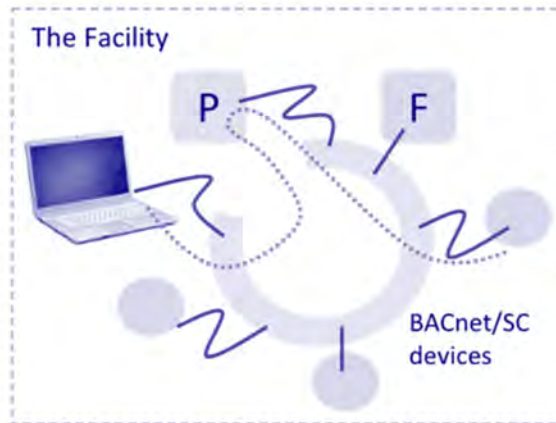


Figure 2: Secure Access within the Facility

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Scenario #3

A building using mixed secure and insecure/legacy devices

In this example the primary and failover hubs are *inside* the firewall and are used to secure BACnet/SC devices within the facility. A BACnet/SC-to-BACnet/IP router is included to allow connectivity between the BACnet/SC secure network and legacy BACnet networks. Although a traditional BACnet/IP-to-MS/TP router could be used, the example also shows a BACnet/SC-to-MS/TP router that extends secure access to the edge of a given MS/TP trunk. Note that this does *not* secure the MS/TP trunk itself from actors with physical access to the trunk but *does* secure the trunk against outside access from the IP infrastructure and from the Internet. In this example, outside (remote) access is provided by enabling the firewall to forward the BACnet/SC port using a public DNS name or public static IP address.

New Equipment

- BACnet devices that support BACnet/SC
- BACnet/SC hub ("P" in Figure 3)
- (Optional) BACnet/SC failover hub ("F" in Figure 3)
- BACnet/SC to BACnet/IP and/or MS/TP router(s) for legacy connections
- BACnet operator workstation that supports BACnet/SC

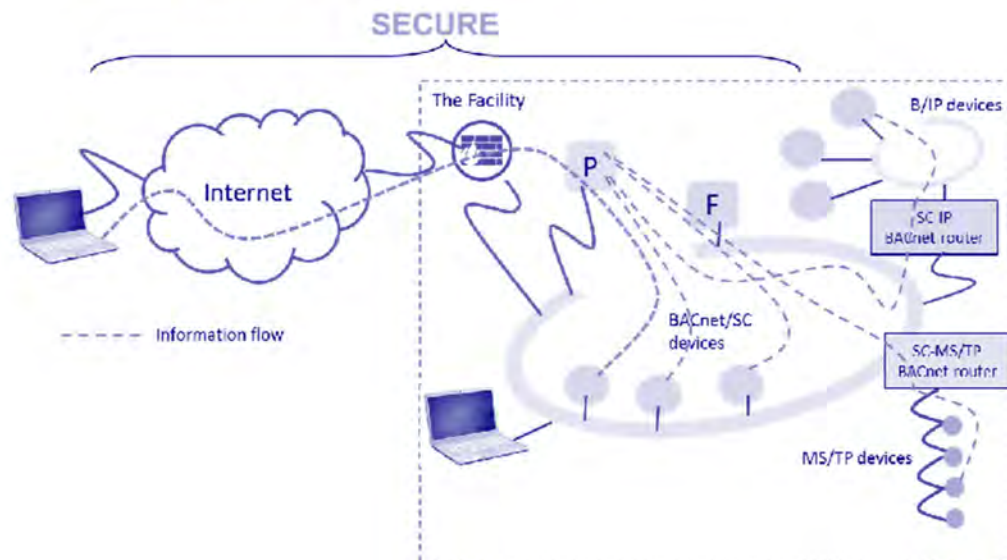


Figure 3: Mixed Scenario—Secure Access Outside and within the Facility with Isolated Areas

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Scenario #4

A regional chain of big-box stores managed from a regional management center with connectivity via public Internet or WAN

In this example the primary and failover hubs are located in the cloud, and each store has its own collection of BACnet/SC devices or a BACnet/SC-to-some other BACnet router. The diagram shows an SC-to-MS/TP router but it could be an SC-to-BIP router or just BACnet/SC devices.

New Equipment

- BACnet devices that support BACnet/SC and/or BACnet routers from SC to MS/TP or IP
- BACnet/SC hub ("P" in Figure 4)
- (Optional) BACnet/SC failover hub ("F" in Figure 4)
- BACnet operator workstation that supports BACnet/SC

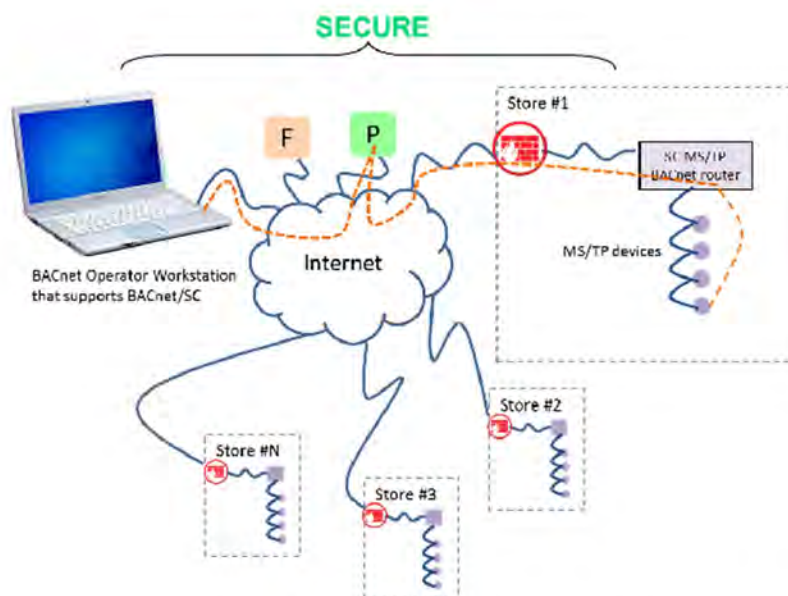


Figure 4: Secure Access to Multiple Facilities across the Internet

Conclusion

Today various approaches are used to secure BACnet infrastructure, but these solutions can be difficult to setup, and they place a burden on IT groups. BACnet/SC will make it much easier to create secure and standardized BA infrastructure that is fully compatible with existing BACnet deployments, friendly to IT best practices, and that enables cloud-based applications.

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