



**Date:** July 24, 2023  
**To:** Byron King, Building Code Official, City of Houston  
**From:** Jason Johnson, CFPS  
**Subject:** TECHNICAL MEMO 2  
Houston Construction Code Modernization – Low Voltage/Power Over Ethernet (POE)

---

The following memo provides information on the current City of Houston amendment for the requirements of low voltage/POE (Power Over Ethernet) installation and the decisions made concerning the proposed amendment proposal by Task Force Group 4 (TFG-4) consisting of 17 community and 20 City subject matter experts (Exhibit A), the 100+ community stakeholders in the Construction Code Modernization Committee (CCMC) (Exhibit A), and the Resolution Committee (RC) consisting of three (3) subject matter experts (Exhibit A).

#### THE CODE:

**The existing City of Houston amendment, Section 302.1 of Houston Administrative Amendments to the National Electric Code (NEC), provides the following low voltage wiring permit exemptions:**

**301.2 Exempt Work.** *Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in violation of the provisions of this code or any other laws or ordinances.*

*An electrical permit shall not be required for the following:*

- 8. Electrical wiring, devices, appliances, apparatus, or equipment operating at less than 50 volts and not capable of supplying or controlling more than 50 watts of power.*
- 9. Sound equipment, private or public telephone system, thermostat wiring or burglar alarm system, provided, however, a permit shall be required to wire any such system to the source of electricity.*

The City of Houston has historically provided low voltage permit exemptions within the NEC amendments adopted in the jurisdiction. These limits are in line with other major jurisdictions in Texas which provide similar exemptions to low voltage wiring, of which, Houston is the least restrictive amongst exemptions found in other cities. No other jurisdiction in Texas specifically exempts Class 2 and Class 3 wiring applications from permit requirements.

**The proposed amendment as brought forth by the proponents (Exhibit B):**

Strike #8 and #9 and replace as follows:

*8. Installation, maintenance, repair, or alteration of class 2 and class 3 remote-control, signaling, and power-limited circuits, as defined by the National Electrical Code. However, a permit shall be required to wire any such system to a non-power limited source of electricity.*

[See Exhibit B for this amendment proposal and 4 other amendment proposals also rejected.]

**memo.**

## JUSTIFICATION FOR THE REJECTION OF THE PROPOSED AMENDMENT:

**The proposed low voltage amendment was rejected by TFG-4 community stakeholders and City staff for the following reasons:**

- Adopting this amendment would be a violation of state requirements that follow the National Electrical Code (NEC).
- The amendment proposal falls below base code requirements to ensure work is permitted and code compliant, and would ultimately reduce life safety.
- The Texas Electrical and Safety Licensing Act does not exempt Class 2 and Class 3 wiring from permit or code requirements, therefore they shouldn't be exempt in Houston.
- The low voltage issue can only be addressed at the state since it's state law that creates the confusion/inconsistencies in requirements.

**Texas Electrical Safety and Licensing Act does not exempt Class 1, Class 2, or Class 3 wiring from permit requirements, nor the requirements of the NEC. This work needs a permit to ensure compliance with the provisions of the NEC.**

Currently the state language presents somewhat of a loophole: Class 2 and Class 3 wiring is exempt from state licensure requirements of the Occupations Code, yet the state requires work being performed under the NEC to be conducted by a licensed electrician. Since the City is incapable of issuing a Class 2 or Class 3 wiring license (prohibited by state law) or creating a registration process for low voltage/POE work that is exempted from state licensure (questionable under state law), it is our recommendation, along with the majority of the community subject matter expert stakeholders, that the changes take place at the state level. There needs to be an update to the Occupations Code that provides a licensing and training mechanism for these types of low voltage/POE installations so that municipalities can ensure that the work being performed under the NEC is done by a licensed and properly educated professional and so that state law requirements for licensed individuals working under the NEC is maintained.

We are in agreement with the findings of the community stakeholders and the City of Houston that to adopt this amendment would be a violation of state requirements that follow the National Electrical Code (NEC) and would fall below base code requirements, a firm commitment that Director Haddock stated as an important requirement of all Houston amendments. It was clearly stated on the CCM website and all communication materials that when a proponent desires to submit an amendment proposal the following guideline must be adhered to.

**The Houston Public Works mandate for this code adoption is to adopt the 2021 Code Editions as a base code with local amendments that:**

- Help strengthen and ensure long term sustainability and resilience in Houston;
- Do not reduce the fire- or life-safety provisions without providing an equivalency to what's found in the base code; and
- Comply with the intent of the code in quality, strength, effectiveness, fire-resistance, durability, and safety for the purpose intended.

## HISTORY AND TFG-4/RC/CCM TIMELINE:

During the 2015 Construction Code adoption cycle, it was the recommendation of the Construction Industry Council's (CIC) Electrical Committee, and City of Houston staff, to remove item #8 from the permit exemption to require permits for all wiring types. While presenting the updated Construction Code recommendations during the Transportation, Technology, and Infrastructure (TTI) Committee many stakeholders voiced their concerns with this change to the Houston Administrative



Amendments to the National Electrical Code (NEC). Due to these concerns, City of Houston staff agreed to remove its recommended deletion of Section 301.2, Item #8 so that low-voltage wiring operating at less than 50 volts and 50 watts would continue to be exempt from permitting. However, there were still concerns expressed by stakeholders during City Council adoption of the 2015 Construction Code about low-voltage permitting in Houston, and ultimately it was agreed that further deliberations regarding how low-voltage is permitted was necessary. The 2015 building codes were adopted in December 2021 and became effective April 1, 2022. Upon the final hiring of the Construction Code Modernization (CCM) staff, responsible for overseeing the 2021 Building Code Adoption process, meetings began in November with internal staff to review the low voltage/POE codes. The decision was made to have the Mechanical, Electrical and Plumbing Task Force Group review the concerns addressed in 2015. Two (2) of the 14 members of the Task Force Group represent the interest of the proponents.

During the 2021 Construction Code adoption cycle, the CCM members have met with the proponents of these amendment six (6) times to discuss the proposed amendment. These meetings included three (3) meetings with TFG-4, one (1) Special Meeting with Proponent and COH Electrical Divisions Leaders, one (1) Resolution Committee meeting, and one (1) meeting with the CCMC Committee. During each meeting votes were taken, and the proposed amendment was rejected each time. (See Exhibit C for Meeting Minutes).

1. April 6, 2023, TFG-4 held its second meeting where they reviewed on the proponent's amendment proposals TFG-4 04A and TFG-4 05A. Both amendment proposals were rejected due to 'changes will fall below the base codes and reduce life safety'. Rejected 4 to 2 (with the two members being the proponents)
2. April 13, 2023, the City held a special meeting with the amendment proponents. The City and the City and the Proponents did not reach a resolve. The City will move these amendments proposals to the Resolution Committee.
3. April 20, 2023, TFG-4 review modified amendment proposals TFG-4 007A, 008A and 009A. All amendments were rejected for 'changes will fall below the base codes and reduce life safety' and 'there is not an avenue for the City of Houston to provide any type of licensure for this or for some type of registration the way the state law'. Rejected 4 to 2 (with the two members being the proponents)
4. May 5, 2023, the RC heard the proponent's arguments in support of their amendment proposals. The RC members had questions and recommended this move back to TFG-4 for further discussion.
5. May 11, 2023, TFG-4 met for a 3<sup>rd</sup> time joined by 1 of the members of the RC to hear the proponents speak to some of the questions posed by the RC committee. The amendments were rejected. Rejected 6 to 3 (with the two members being the proponents)
6. May 19, 2023, the CCMC heard the proponents appeal, and the amendments were rejected. Rejected 11 to 9 with 3 abstentions. ***\*Only community stakeholders on the CCMC are eligible to vote\****

**Subject Matter Expert Comments:**

- In a letter on June 29, 2023, by the Helene Webster, Executive Director of Independent Electrical Contractors Association Texas Gulf Coast, representing over 215 electrical contractor companies, and serving as a member of the CCMC she states, *"We have discussed (with the proponents) that this issue is one that needs to be addressed at the State level to adapt a change for this NEC requirement. Please note: The City of Houston is being asked to be the first major city to go against-the requirements set forth in this code cycle and allow an exemption that could impact public safety. We ask that you do NOT allow these amendments to be approved."* (Exhibit D)



- Robert Jones, currently serving his third term as Chairman of National Electrical Code Panel 3, previously as Chairman of National Electrical Code Panel 14, and over 15 years as Principal member National Electrical Code Panel 12, Robert, who currently serves on the Houston Electrical Board and participated as a TFG-4 member, stated this during the CCMC #6 meeting held on 5/19/2023, *“The Class 2 and Class 3 is the wiring method for POE which is limited energy. What hasn’t been made clear to everybody at this point, is how is it to become safe? We don’t know, I don’t know, so I’m stuck with the 50 volts, **the city of Houston is in total alignment with NFPA 70 (NEC), 70 E and OSHA, to accept this amendment would be lessening the code at this point.** Sometime in the future we might all understand limited energy and it be considered safe. Remember, Edison said distributing DC power to homes was safe, 17 years after you started distributing, we had the National Electrical Code. It’s got to be determined, Houston can’t do that, we are stuck with 50 Volts.”*
- Merle Nevill, Division Manager Electrical Inspection, City of Houston, reached out to the Chief Electrical Inspectors with the cities of Dallas, Fort Worth, and Austin. All are in agreement with Houston’s decision. An example is Trey Kneggs, Chief Electrical Inspector, City of Dallas. He states in his email, *“**Yes, we are of the opinion that these circuits need to be installed by qualified electricians and permitted. There are too many issues that could arise if we didn’t.** Top of mind are pools, article 411, and the 2023 addition of class 2 lighting in emergency systems. If given time I’m sure I could come up with a few dozen others.” (Exhibit E)*

EXHIBIT A: TFG-4, CCMC AND RC MEMBERS

EXHIBIT B: PROPONENT AMENDMENT PROPOSALS

EXHIBIT C: MEETING MINUTES

EXHIBIT D: INDEPENDENT ELECTRICAL CONTRACTORS LETTER

EXHIBIT E: TEXAS CITIES IN AGREEMENT WITH HOUSTON

**memo.**



# Construction Code Modernization Project

## TECHNICAL MEMO Low Voltage/Power Over Ethernet (POE) EXHIBIT A

### City of Houston Code Modernization Task Force Group 4 (TFG) Mechanical, Electrical and Plumbing Codes FINAL AS OF June 30, 2023

#### CO-CHAIRS:

- Mechanical Codes: City of Houston, Roel Garcia, Division Manager, Mechanical Inspections
- Mechanical: International Assoc of Plumbing & Mechanical Officials (IAPMO), Joshua Hollub, Vice-Chair and alternate, Christina Kaeini, Director of Government Relations
- Electrical Codes: City of Houston, Merle Nevill, Division Manager, Elec. Inspections
- Electrical: National Electrical Contractors Associations (NECA), Don Rabel, Delegate
- Plumbing Codes: City of Houston, Carlos Flores, Division Manager, Plumbing
- Plumbing: International Code Council, Rich Anderson, Director, PMG Technical Resources

#### CONTACT LISTING:

##### External Stakeholders by Organization:

1. American Society of Plumbing Engineers (ASPE), David Cropper, VP Legislative, [dave@millermays.com](mailto:dave@millermays.com)
2. ASHRAE, Joshua Vanlandingham, Past President 2021-2022, [jvanlandingham@aeieng.com](mailto:jvanlandingham@aeieng.com)
3. Association of Builders & Contractors (ABC), Peyton Hill, Delegate, [Peyton.hill@tdindustries.com](mailto:Peyton.hill@tdindustries.com)
4. CEDIA, Darren Reaman, Director of Government Affairs, [dreaman@cedia.org](mailto:dreaman@cedia.org)
5. Houston Contractors Association (HCA), Blake Wehmeyer, Board Member, [BWehmeyer@boyerinc.com](mailto:BWehmeyer@boyerinc.com)
6. Independent Electrical Contractor (IEC), Armando Lozano, Past President, [alozano@msfelectric.com](mailto:alozano@msfelectric.com) and Alternate NEC, Robert Jones, Panel 3 Chair, NEC Code Changes, [robert@pappyjones.com](mailto:robert@pappyjones.com)
7. International Association of Plumbing & Mechanical Officials (IAPMO), Joshua Hollub, Vice Chair, [josh@modernplumbing.com](mailto:josh@modernplumbing.com) and alternate, Christina Kaeini, Director of Government Relations, [Christina.Kaeini@iapmo.org](mailto:Christina.Kaeini@iapmo.org)
8. International Code Council, Rich Anderson, Director, PMG Technical Resources, [randerson@iccsafe.org](mailto:randerson@iccsafe.org)
9. Mechanical Contractors Association of Houston (MCAA), Josh Jordan, Delegate, [jjordan@dsi.us](mailto:jjordan@dsi.us)
10. National Electrical Contractors Association (NECA), Don Rabel, Delegate, [donr@mid-westelectric.com](mailto:donr@mid-westelectric.com)
11. National Systems Contractors Association (NSCA), Chad Jones, Delegate, [cmjones@cisco.com](mailto:cmjones@cisco.com)
12. Southwest Pipe Trades Association (SPTA), Ron Lord, Political Director, [ronlord.swpta@gmail.com](mailto:ronlord.swpta@gmail.com)
13. Texas Water Quality Association (TWQA), Shane King, Delegate, [sking@abacusplumbing.net](mailto:sking@abacusplumbing.net)
14. University of Houston D.T., Kris Zimmerman, Director M.E.P, [zimmermank@uhd.edu](mailto:zimmermank@uhd.edu)
15. Water Quality Association (WQA), Bob Ruhstorfer, Delegate, [Bruhstorfer@culligantx.net](mailto:Bruhstorfer@culligantx.net)

##### City of Houston by First Name:

1. Billy Dardia, Sr. Inspector, Elevator. Mech., [william.dardia@houstontx.gov](mailto:william.dardia@houstontx.gov)
2. Carlos Flores, Division Manager, CoH, Plumbing Charles Rodriquez, Asst. Chief Inspections, Plumbing, [carlos.flores@houstontx.gov](mailto:carlos.flores@houstontx.gov)
3. Charles Rodriquez, Assistant Chief Inspector, Plumbing, [charles.rodriquez@houstontx.gov](mailto:charles.rodriquez@houstontx.gov)
4. Geoffrey Conner, Division Manager Plan Review, [geoffrey.conner@houstontx.gov](mailto:geoffrey.conner@houstontx.gov)
5. Jamie Cortes, Asst. Ch Inspect. Elect., [jaimie.cortes@houstontx.gov](mailto:jaimie.cortes@houstontx.gov)
6. Jesse Mendoza, Supervisor Elect Plan Review, [jesse.mendoza@houstontx.gov](mailto:jesse.mendoza@houstontx.gov)
7. Le Van Ly, Supervisor. Mech Plan Rev., [levan.ly@houstontx.gov](mailto:levan.ly@houstontx.gov)
8. Merle Nevill, Division Manager, CoH, Elec. Inspections, [merle.nevill@houstontx.gov](mailto:merle.nevill@houstontx.gov)
9. Robert Montanez, Asst. Chief Insp. Mech. Rev., [robert.montanez@houstontx.gov](mailto:robert.montanez@houstontx.gov)
10. Roel Garcia, Division Manager, CoH, Mech Inspections, [roel.garcia2@houstontx.gov](mailto:roel.garcia2@houstontx.gov)
11. Steve Spilman, Supervisor, Plumbing P.R., [steve.spilman@houstontx.gov](mailto:steve.spilman@houstontx.gov)

**City of Houston CACD/CCM by First Name:**

1. Alexander McCray, Staff Analyst, CCM Project, [alex.mccray@houstontx.gov](mailto:alex.mccray@houstontx.gov)
2. Avani Mehta, Staff Analyst, CCM Project, [avani.mehta@houstontx.gov](mailto:avani.mehta@houstontx.gov)
3. Carlos Rubiano, Staff Analyst, [carlos.rubiano@houstontx.gov](mailto:carlos.rubiano@houstontx.gov)
4. Heath Wierck, Staff Analyst, [heath.wierck@houstontx.gov](mailto:heath.wierck@houstontx.gov)
5. Lewis Bennett, Division Manager, CCM Project, [lewis.bennett@houstontx.gov](mailto:lewis.bennett@houstontx.gov)
6. Lucia Chavarria, Staff Analyst, [lucia.chavarria@houstontx.gov](mailto:lucia.chavarria@houstontx.gov)
7. Soledad Saenz, Sr. Staff Analyst, [soledad.saenz@houstontx.gov](mailto:soledad.saenz@houstontx.gov)

**City of Houston Consultant by First Name:**

1. Jason Johnson, Jensen Hughes, Vice President, [jjohnson@jensenhughes.com](mailto:jjohnson@jensenhughes.com)
2. Todd Oliver, Jensen Hughes, Manager [toliver@jensenhughes.com](mailto:toliver@jensenhughes.com)

# agenda

**City of Houston Code Modernization  
Resolution Committee  
Low Voltage/Power Over Ethernet (POE)  
Mechanical, Electrical and Plumbing Codes**

The Resolution Committee members include:

- Jason Johnson, Jensen Hughes, City's consultant
- Rob Hicks, TFG-1 (Commercial) Co-Chair representing Society of Fire Protection Engineers (SFPE), National Director, Fire & Life Safety and Board of Directors - WSP USA
- Josh Vanlandingham, CCMC member, PAST PRESIDENT 2021-2022 ASHRAE and Managing Director at AEI/Affiliated Engineers, Inc
- Keith Reihl, TFG-3 (Energy Conservation) Co-Chair, President/Owner at Reihl Engineering, LLC

Proponents:

Chad Jones, TFG-4-007, 008 and 009 amendment proposals, Principal Engineer, Cisco Systems, Chair, IEEE P802.3da Task Force, Principal, NFPA 70 CMP3

Darren Reaman, TFG-4-005 amendment proposal, Director of Public Affairs, CEDIA

Douglas Bassett, TFG-4-004 amendment proposal, \

Joseph Lee (joseple2). Cisco, [joseple2@cisco.com](mailto:joseple2@cisco.com)

Jason Potterf (jpotterf), Cisco, [jpotterf@cisco.com](mailto:jpotterf@cisco.com)

# agenda

**City of Houston Code Modernization  
 Resolution Committee  
 Low Voltage/Power Over Ethernet (POE)  
 Mechanical, Electrical and Plumbing Codes**

<b>Stakeholder Organization</b>	<b>Contact person First Name</b>	<b>Contact Person Last Name</b>	<b>Agency/Place of Work</b>
AIA Houston / TX Society of Architects / IBI Group	Chudi	Abajue	ARCADIS
AIA Houston / TX Society of Architects / IBI Group	Genesis	Morales	Pagethink
AIA Houston, USGBC, and CIC	Rusty	Bienvenue	AIA
American Fire Sprinkler Association (AFSA) and CIC	Chris	Kachura	Southeast Fire Protection
American Fire Sprinkler Association (AFSA) and CIC	Roland	Huggins	American Fire Sprinkler Association
American Fire Sprinkler Association (AFSA) and CIC	Scott	Cunliffe	Capital Fire Protection
American Fire Systems, Inc	David	Stone	American Fire Systems, Inc
American Society of Civil Engineers (ASCE)	Babak	Pourazarm	Arup
American Society of Civil Engineers (ASCE)	Dirk	Kestner	Walter P. Moore
American Society of Civil Engineers (ASCE)	Heather	Guillen	Walter P. Moore
American Society of Civil Engineers (ASCE)	Mehedy	Mashnad, Ph.D., P.E.	Arup
American Society of Civil Engineers (ASCE)	Uttam	Karmaker	Atkins Global

# agenda

American Society of Plumbing Engineers - ASPE	Jeff	Miller	Miller Mays & Associates
American Society of Plumbing Engineers ASPE -	David	Cropper	Miller Mays & Associates
American Society of Plumbing Engineers ASPE -	Donelle	Gull	WSP USA
ASHRAE , CIC , AGC Assoc. of Gen. Contractors	Joshua	Vanlandingham, PE, CEM, LEED BD+C	Affiliated Engineers
ASHRAE and CIC	Catherine	Tinkler	ASHRAE
ASHRAE and CIC	John (Garrett)	Neubauer	Page Southerland Page LLP
Associated Builders and Contractors of Greater Houston (ABC) CIC	Jeffery	Neilsen	Associated Builders and Contractors of Texas (ABC) CIC
Associated Builders and Contractors of Texas (ABC)	Geoffrey	Tahuahua	Associated Builders and Contractors of Texas (ABC)
Associated Builders and Contractors of Texas (ABC) - Houston Chapter	Austin	Vaughn	Associated Builders and Contractors of Texas (ABC)
Associated General Contractors (AGC) - Houston	Kyle	Holland	Associated General Contractors of America (AGC)   Houston Chapter
Association of Chief Operating Engineers, and CIC	Jack	Hollis	JLL
Avenue Community Development Corporation (Avenue CDC)	Mary	Lawler	Avenue Community Development Corporation (Avenue CDC)
Avenue Community Development Corporation (Avenue CDC)	Michael 'Tate'	Barkley	Avenue Community Development Corporation (Avenue CDC)
BASF	Monica	Enamorado, Ph.D	BASF

BRW Architects	Lawrence	Watkins, AIA, LEED AP BD+C	BRW Architects
CB Richard Ellis	Scott	Becker	CBRE
CBRE	Shannon	Roberts	CBRE, Shannon Roberts Director of Communications and Marketing Main: 713-266-5691   Direct: 713-255-9183   Mobile: 281-381-467 Houston Building Owners and Managers Association 9 Greenway Plaza, Suite 100, Houston, TX 77046
Cedia	Darren	Reaman	Cedia
CenterPoint (2022 EnergyStar Winner)	Jason	Ryan	Centerpoint (2022 EnergyStar Winner)
CenterPoint (2022 EnergyStar Winner)	Jason	Fabre	Centerpoint (2022 EnergyStar Winner)
CenterPoint (2022 EnergyStar Winner)	Jeff	Stones	Centerpoint (2022 EnergyStar Winner)
CenterPoint (2022 EnergyStar Winner)	Paul	Lock	Centerpoint (2022 EnergyStar Winner)
CIC and AIA and Texas Society of Architect TSA and member of USGBC	Matthew	Duggan	BRW Architects
Citizens Climate Lobby (CCL) / Texas Progressive Executive Council (TPEC)	German	Ibanez	Ibanez Consulting LLC
Coalition for Environmental Equity and Resilience (CEER)	STEFANIA	TOMASKOVIC	Coalition for Environmental Equity and Resilience (CEER)
Coffman Engineers and Society of Fire Protection Engineers (SFPE)	Michael	Crowley	Coffman Engineers
Comprehensive Code Compliance Counseling	Hal	Canton	Code Consultant - Prev. Chief Building Official for the City of Houston
David Weekley Homes	John	Burchfield	David Weekley Homes
David Weekley Homes	Mike	Humphrey	David Weekley Homes

David Weekley Homes	Ralph	Brown	David Weekley Homes
David Weekley Homes	Todd	Morgan	David Weekley Homes
David Weekley Homes	Warren	Waskow	David Weekley Homes
Elron Construction	Rona	Milbauer	Elron Construction
Gage Architecture	Craig	Garcia	Gage Architecture
Greater East End District	Joel	Meppelink	Greater East End District
Greater Houston Builders Association (GHBA)	Jennifer	Boggs	GHBA
Greater Houston Builders Association (GHBA)	John	Williams	K Hovnanian
Greater Houston Builders Association (GHBA)	Troy	Allen	GHBA
Greater Houston Builders Association (GHBA), GENERAL APPEALS BOARD	Michael	Dishberger	Sandcastle Homes
Greater Houston Restaurant Assoc	Melissa	Stewart	Texas Restaurant Association
GreenTown Labs	Lara	Cottingham	GreenTown Labs
Griffin - NAOIP			
Harris County Flood Control District	Ryan	Slattery	Harris County Flood Control District
Heights Venture Architecture + Design	Jerry	Tipps	Heights Venture Architecture + Design
Hines	Michael	Horvath	Hines
Historic Buildings	Kerry	Goelzer	

# agenda

Hotel & Lodging Association of Greater Houston (H&LAGH)	Stephanie	Haynes	Hotel & Lodging Association of Greater Houston
Hotel & Lodging Association of Greater Houston (H&LAGH)			Hotel & Lodging Association of Greater Houston
Houston Apartment Association (HAA)	Bradley	Pepper	Houston Apartment Association (HAA)
Houston Building Owners & Managers Association (BOMA)	Bradley	Elliott	BOMA
Houston Building Owners & Managers Association (BOMA)	David	Cheairs	JLL
Houston Contractors Association (HCA)	Casey (She/Her)	Christman	HCA
Houston Habitat	Allison	Hay	Houston Habitat for Humanity
Houston Habitat	Kevin	Vargas	Houston Habitat for Humanity
Houston Heights Association	Bill	Baldwin	Houston Heights Association
Houston Housing Collaborative	Alan	Watkins	Houston Housing Collaborative
Houston Housing Collaborative	Ann	Rosenwinkel	GSM Architects
IAPMO	Christina	Kaeini	IAPMO
IAPMO	John	Mata	IAPMO
IAPMO	Joshua	Hollub	IAPMO
Independent Electrical Contractor (IEC), and NEC Panel	Robert	Jones	Robert Jones, Chair for a panel for NEC that manages the code changes
Independent Electrical Contractor (IEC)	Armando	Lozano	MSF Electric
Independent Electrical Contractors (IEC) and CIC	Helene	Webster	IEC TX Gulf Coast Chapter

Independent Electrical Contractors (IEC) and CIC	Sarah	Sampson	IEC TX Gulf Coast Chapter
Institute of Real Estate Management (IREM)	Kaci	Hancock	REIS Associates
Institute of Real Estate Management (IREM)	Sheryl	Green	Camden Property Trust
International Code Council (ICC)	Kevin	McOsker	ICC
International Code Council (ICC)	Lesley	Garland	International Code Council, Inc.
International Code Council (ICC)	Mark	Roberts	International Code Council, Inc.
International Code Council (ICC)	Richard	Anderson	ICC
International Code Council (ICC)	Rick	Bluntzer	ICC
Jenergy Inspections (ICC Houston Chapter)	Jeff	Ybarra	Jenergy Inspections
Kinetic Design Lab, LLC (AIA, NCARB)	DEVIN	ROBINSON	<i>Kinetic Design Lab, LLC (AIA, NCARB)</i>
Kirksey Arrchitecture	Jon	Ward	Kirksey Arrchitecture
Lovette Commercial	Stephen	Klimas	Lovett Commercial
Mechanical Contractors Association of Houston (MCAA)	Glenn	Rex	Rex Association Management LLC
Mechanical Contractors Association of Houston (MCAA)	Josh	Jordan	Mechanical Contractors Association of Houston (MCAA)
Memorial Hermann Health System	Michael	Hatton	Memorial Hermann
National Association of Manufacturers (NAM)	Mark	Curry	
National Electrical Contracctors Associations NECA (also CIC)	Troy	Hernandez	National Electrical Contracctors Associations

# agenda

National Electrical Contractors Associations NECA (also CIC)	A	Grainey	National Electrical Contractors Associations
National Electrical Contractors Associations NECA (also CIC)	Don	Rabel	National Electrical Contractors Associations
National Fire Sprinkler Association (NFSA)	Cindy	Giedraitis	National Fire Sprinkler Association (NFSA)
National Fire Sprinkler Association (NFSA)	Jacob	Bandura	Brigade Fire Solutions
National Fire Sprinkler Association (NFSA)	Paul	McKenna	Brigade Fire Solutions
National Systems Contractors Association (NSCA)	Ashley	Baird	National Systems Contractors Association's (NSCA)
National Systems Contractors Association(NSCA)	Chad	Jones	National Systems Contractors Association's (NSCA)
New Hope Housing	Heather	Hinzie	New Hope Housing
New Hope Housing	Joy	Horak-Brown	New Hope Housing
New Hope Housing	Ron	Lastimosa	New Hope Housing
Philip Ewald Architects	Philip	Ewald	Philip Ewald Architects
Planning Design Research Corporation (AIA)	Garth	Williams	Planning Design Research Corporation
Plumbers Local 68	Rick	Lord	Plumbers Local 68
Pool and Hot Tub Alliance	Paul	Oman	Texas Pools
Preservation Houston	David	Bush	President/ED
Refined Systems	Ryan	Miller	Refined Systems

# agenda

Roman Law Firm, P.C.	Stephanie	Roman	Roman Law Firm, P.C.
Senterra Real Estate Group (BOMA)	Bill	Carey	Senterra Real Estate Group
Sheila Blake Consulting	Sheila	Blake	Sheila Blake Consulting
Sierra Club	Carol	Woronow	Sierra Club
Sierra Club	Cyrus	Reed	Sierra Club
Sierra Club	Linda	Mundwiller	Sierra Club
Society of Fire Protection Engineers (SFPE)	Peter	Rollinger	Rollinger Engineering
Society of Fire Protection Engineers (SFPE)	Rob	Hicks	WSP USA
South Belt-Ellington Chamber	Kay	Barbour	
Southwest Pipe Trades Association	Ron	Lord	Southwest Pipe Trades Association
Speer, (recommended by Steve Stezler)	Elizabeth (Liz)	John	South Central Partnership for Energy Efficiency as a Resource
Speer, (recommended by Steve Stezler)	Kelly	Herbert	Managing Director
Speer, (recommended by Steve Stezler)	Randy	Plumlee	Speer, (recommended by Steve Stezler)
Speer, (recommended by Steve Stezler)	Todd	McAlister	Executive Director
Stiver Engineering	John	Stiver	Stiver Engineering
Target	Thomas	Phillips	Target
TDI Industries	Rich	Fanning	
Tellepsen (ASHRAE)	Jonathan	Shaw	Tellepsen

# agenda

Texas Association of Builders (TAB)	Kathy	Howard	
Texas Water Quality Association (TWQA)	David	Davies	Aqua General Inc
Texas Water Quality Association (TWQA)	Diana	Grace	TEXAS WATER QUALITY ASSOCIATION
Texas Water Quality Association (TWQA)	Shane	King	Abacus Plumbing of Houston
TONER Home Matters	Ryan	Atlee	TONER Home Matters
University of Houston Downtown	Kris	Zimmerman, M.S., C.E.F.P., LEED AP O&M	
Urban Land Institute (ULI)	David	Kim	Urban Land Institute (ULI)
Urban Land Institute (ULI)	Justin	Levine	LEVCOR's Senior Vice President and Chief Investment Officer
Urban Land Institute (ULI) (TMC)	Abbey	Roberson	Texas Medical Center
USGBC / City of Houston CoH	Keith	Reihl	Houston Airport System
USGBC, AIA, Gensler	Maria	Perez	Genzler
USGBC, ASHRAE, CIC	Kimberly	Thompson	HTS Engineering - Heat Transfer Solutions
Water Quality Association (WQA)	Bob	Ruhstorfer	Water Quality Association (WQA)
Water Quality Association (WQA)	Jeremy	Pollack	Water Quality Association (WQA)
Water Quality Association (WQA)	Jordan	Kari	Water Quality Association (WQA)
Westbury Civic Club	Becky	Edmundson	Westbury Civic Club
WS Bellows and (AGC - Houston and CIC)	Tony	Mansoorian	WS Bellows
Texas Water Development Board (TWDB)			Texas Water Development Board (TWDB)

# agenda

City Code Girl Consulting	Lisa	Brown	City Code Girl Consulting
------------------------------	------	-------	---------------------------

# agenda

**TECHNICAL MEMO**  
**Low Voltage/Power Over Ethernet (POE)**  
**EXHIBIT B**  
**TFG-4 005A Proposed Amendment**  
**Submitted to Resolution Committee**

**CEDIA**  
**Communications Cable & Connectivity Association (CCCA)**  
**National Systems Contractors Association (NCSA)**

**Proposed amendment for 301.2(8), (9):**

~~8. Electrical wiring, devices, appliances, apparatus or equipment operating at less than 50 volts and not capable of supplying or controlling more than 50 watts of power.~~

~~9. Sound equipment, private or public telephone system, thermostat wiring or burglar alarm system, provided, however, a permit shall be required to wire any such system to the source of electricity.~~

8. Installation, maintenance, repair, or alteration of class 2 and class 3 remote-control, signaling, and power-limited circuits, as defined by the National Electrical Code. However, a permit shall be required to wire any such system to a non-power limited source of electricity.

**TFG-4 005A Contact Information**

Nintex Service Account

4/2/2023 4:52 PM

**First Name:** Darren

**Last Name:** Reaman

**Org Name:** CEDIA

**Job Title:** Director of Government Affairs

**Street Address:** 8475 Nightfall Lane

**City:** Fishers

**State:** IN

**Zip Code:** 46037

**Email:** [dreaman@cedia.org](mailto:dreaman@cedia.org)

**Work Phone Number:** 1 (317) 328-4336 x144

**Cell Phone Number:** (317) 363-5743

**Area of Familiarity / Expertise:** Residential technology systems / National Electrical Code

**Which specific Construction Code would you like to amend?:** National electrical Code (NEC)

**What Code Chapter are you wanting to amend?:** Chapter 3

**What Code section are you wanting to amend?:** 301.2

**What Code subsection are you wanting to amend?:** 301.2(8), (9)

**Would you like to upload a document that will technically justify for your proposal?:** Yes

**Confirm that your proposal is written in Legislative Format. If not, your proposal will be rejected.:** Yes

**Confirm that the code amendment you are submitting is not covered in the Proposed 2021 Code. If not, your proposal will be rejected.:** Yes

**Please confirm the proposed code change does not reduce any Fire or life-safety provision. If not, your proposal will be rejected.:** Yes

**The justification addresses safety impact, enforceability, cost effectiveness, or unique local conditions.:** Yes

**Please provide justification for your Construction Code Amendment Submittal.:**

Justification: 50 Volts (V) and 50 Watts (W) are arbitrary safety limits that have no basis in the National Electrical Code (NEC) nor any safety justification. The NEC does define Class 2 and Class 3 circuits which have significant safety science supporting them and an extensive safety record. These definitions are used both at the Texas state level for low voltage exceptions, and at several other municipalities. Many useful and safe systems operate above the Houston 50 Volt / 50 Watt limits but under the NEC Class 2 / Class 3 limits. The Houston exception criteria creates confusion and results in inconsistent enforcement of permitting and licensure requirements.

Class 2 circuits have been defined as extending beyond 50 Volts and up to 100 Watts in the NEC dating back to at least 1933, giving this a 90+ year track record of safety. At that time, Class 2 covered what today is defined by Class 2 and Class 3. Class 3 was present in the 1993 version, and there is not enough information on when the original Class 2 was split into the two classes.

The NEC definition of Class 2 includes the statement: "Due to its power limitations, a Class 2 circuit considers safety from a fire initiation standpoint and provides acceptable protection from electric shock", while Class 3 states: "Due to its power limitations, a Class 3 circuit considers safety from a fire initiation standpoint. Since higher levels of voltage and current for Class 2 are permitted, additional safeguards are specified to provide protection from an electric shock hazard that could be encountered." Tables 11a and 11b provide the voltage and current definitions for Class 2 and 3, and the tables cover no less than 17 different permutations of voltages and currents that are deemed safe by the NEC. They all result in a 100 Watt limit, not a 50 watt limit, and none of the NEC defined permutations conform to both the 50V and 50W limit.

At the state level, Texas provides an exemption for Class 2 and Class 3 work. The amended exemption provided for 301.2(8) aligns the Houston code with the NEC and the Texas State Code with no reduction in safety. Limiting the voltage to 50 V and the power to 50 W is an unjustified restriction of the NEC Classes while providing no additional safety over Class 2 and Class 3.

The proposed amendment to the Houston Administrative Provisions for the National Electrical Code seeks to modify Item 301.2(8) and Item 301.2(9). Since Item 301.2(9) is a small subset of Class 2 or Class 3 systems, it's ambiguous as to why a list is provided when Class 2 or Class 3 definitions would provide a future-proof criteria. All Class 2 and Class 3 systems are considered safe by the NEC regardless of the purpose due to the extensive safety requirements placed on such devices. Therefore we believe it is in Houston's best interest to align their exception language with the

state law and the other major municipalities in Texas who chose to follow the NEC instead of inventing arbitrary limits with no technical or safety justification.

**If you are not submitting a code amendment but would like to submit a comment concerning a code, please enter the information below; Please also enter above the code chapter, section and sub-section along with your contact information:**

## TECHNICAL MEMO

### Low Voltage/Power Over Ethernet (POE)

#### EXHIBIT B

#### Additional Proposed Amendments

##### TFG-4 007A Proposed Amendment

###### Amendment:

301.2, item 8: Electrical wiring, devices, appliances, apparatus, or equipment operating at less than 50 60 Volts DC or 30 Volts AC and not capable of supplying or controlling more than 50 60 Watts or 60 Volt-Amperes of power.

###### Justification:

The previously submitted Class 2 / Class 3 based definitions were rejected and Dallas's exemption language was referred to as an example. This amendment proposes a Dallas-style exception which is closer to the current exception adopted by Houston and may be more acceptable to the task force group.

The proposed change from 50V to 60V DC aligns with Dallas, as well as Austin and Fort Worth who have exceptions for Class 2 / Class 3 circuits. Referring to Table 11b of the NEC which sets the limits for Class 2 and Class 3 circuits, 60V is the maximum voltage that allows 100W for inherently power limited power source. Over 60V has a 0.005A current limit. The 60W was chosen to align with NEC Article 725 which excepts Class 2 / Class 3 circuits from compliance to Table 725.144 for systems where the per conductor current does not exceed 0.3A. This translates to 60W for 50V minimum voltage PoE systems, which are the target of Table 725.144.

While it is true that many other requirements in the NEC apply to these circuits, they apply equally to circuits under 50 V / 50 Watts, which are exempt from permitting, as well as sound equipment, telephone systems, and thermostat wiring as these are all considered Class 2 / Class 3 circuits by the NEC. No credible rationale has been provided for why a 50 V / 50 W system is safe but a 60 V / 60 W or even a 60 V / 100 W system is dangerous. The NEC treats them all equally, but Houston has chosen to draw a line through the NEC rules, which serves only to single out PoE systems.

This is misguided, since PoE systems are actually safer than all other Class 2 / Class 3 systems. PoE only rises above 15V DC when a device is detected, which occurs after all connectors have mated and the circuit is fully guarded from human contact. Further, power is removed when devices are unplugged, and power is also removed very quickly in the event of any overcurrent or short-circuit event. This is not true of most sound equipment, telephone, or thermostat circuits which are once again, fully exempt from permitting.

For reference, here are the applicable ordinances for cities previously mentioned. While we have been informed that private conversations between HPC and inspectors from these other cities have resulted in HPC drawing their own differing conclusions, the municipal codes of the cities plainly state that their exemptions which all would apply to a Class 2 PoE circuit.

CLIFF NOTES for those that don't want to read the ordinances below: Fort Worth and Austin have both a voltage / power limit exception AND a Class 2 / Class 3 exception. Dallas has fixed

not provide the corresponding DC voltage limit). Dallas is now exempt for work above 30VAC or 60VDC. This leaves Houston with the most restrictive limits by requiring a master electrician's license to receive a permit for Class 2 / Class 3 circuits.

### **Dallas**

82.16 (2) "Certain Work Exempt from Registration... "The installation, alteration, or repairing of any wiring or equipment where such wiring or equipment operates at a voltage not exceeding 30 volts AC or **60 volts DC** and does not include generating or transforming equipment."

[https://dallascityhall.com/departments/sustainabledevelopment/buildinginspection/DCH%20documents/pdf/BI\\_Chapter%2056-Dallas%20Electrical%20Code.pdf](https://dallascityhall.com/departments/sustainabledevelopment/buildinginspection/DCH%20documents/pdf/BI_Chapter%2056-Dallas%20Electrical%20Code.pdf)

### **Austin**

<https://austintexas.gov/page/work-exempt-building-permits>

[https://library.municode.com/tx/austin/codes/code\\_of\\_ordinances?nodeId=TIT25LADE\\_CH25-12TECO\\_ART4ELCO\\_S25-12-113LOAM2020ELCODMTREN](https://library.municode.com/tx/austin/codes/code_of_ordinances?nodeId=TIT25LADE_CH25-12TECO_ART4ELCO_S25-12-113LOAM2020ELCODMTREN)

§ 25-12-113 - LOCAL AMENDMENTS TO THE 2020 ELECTRICAL CODE - ADMINISTRATION AND ENFORCEMENT.

(3) Exempt work. Work that may be performed without an electrical permit must comply with all applicable federal, state, and local requirements. An electrical permit is not required:

...

(l) to install or repair an electrical device, appliance, apparatus, equipment, or electrical wiring operating at less than 25 volts and not capable of supplying more than 50 watts of energy;

(m) to install or repair a low-energy power, control and signal circuit of **Class II or Class III** as defined in the 2020 Electrical Code;

### **Fort Worth**

Fort Worth matches Austin with minor variances.

[https://codelibrary.amlegal.com/codes/ftworth/latest/ftworth\\_tx/0-0-0-5697](https://codelibrary.amlegal.com/codes/ftworth/latest/ftworth_tx/0-0-0-5697)

105.2 Work exempt from permit. Exemptions from permit requirements of this Code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of the Technical Codes or any other laws or ordinances of this jurisdiction.

Permits shall not be required for the following:

Electrical:

...

8. Electrical wiring, devices, appliances, apparatus or equipment, other than signs, operating at less than 25 volts and not capable of supplying more than 50 watts of energy.

9. Low-energy power, control and signal circuits of **Classes II and III** as defined in this Code.

**TFG-4 007A**

Nintex Service Account

4/17/2023 5:51 PM

**First Name:** Chad

**Last Name:** Jones

**Org Name:** NSCA (National System Contractors Association)

**Job Title:** Principal Engineer

**Street Address:** 4125 Highlander Pkwy

**City:** Richfield

**State:** OH

**Zip Code:** 44230

**Email:** [cmjones@cisco.com](mailto:cmjones@cisco.com)

**Work Phone Number:** 330-523-2146

**Cell Phone Number:** 330-861-8521

**Area of Familiarity / Expertise:** NEC, PoE, Limited Energy Systems

**Which specific Construction Code would you like to amend?:** National electrical Code (NEC)

**What Code Chapter are you wanting to amend?:** Chapter 3

**What Code section are you wanting to amend?:** 301

**What Code subsection are you wanting to amend?:** 301.2, item 8

**Would you like to upload a document that will technically justify for your proposal?:** Yes

**Confirm that your proposal is written in Legislative Format. If not, your proposal will be rejected.:** Yes

**Confirm that the code amendment you are submitting is not covered in the Proposed 2021 Code. If not, your proposal will be rejected.:** Yes

**Please confirm the proposed code change does not reduce any Fire or life-safety provision. If not, your proposal will be rejected.:** Yes

**The justification addresses safety impact, enforceability, cost effectiveness, or unique local conditions.:** Yes

**Please provide justification for your** The previously submitted Class 2 / Class 3 based definitions were rejected and Dallas’s exemption language was referred to as an example. This amendment proposes a Dallas-style exception which is closer to the current exception adopted by Houston and may be more acceptable to the task force group.

**Constructi on Code Amendme nt Submittal.** The proposed change from 50V to 60V DC aligns with Dallas, as well as Austin and Fort Worth who have exceptions for Class 2 / Class 3 circuits. Referring to Table 11b of the NEC which sets the limits for Class 2 and Class 3 circuits, 60V is the maximum voltage that allows 100W for inherently power limited power source. Over 60V has a 0.005A current limit. The 60W was chosen to align with NEC Article 725 which excepts Class 2 / Class 3 circuits from compliance to Table 725.144 for systems where the per conductor current does not exceed 0.3A. This translates to 60W for 50V minimum voltage PoE systems, which are the target of Table 725.144.

While it is true that many other requirements in the NEC apply to these circuits, they apply equally to circuits under 50 V / 50 Watts, which are exempt from permitting, as well as sound equipment, telephone systems, and thermostat wiring as these are all considered Class 2 / Class 3 circuits by the NEC. No credible rationale has been provided for why a 50 V / 50 W system is safe but a 60 V / 60 W or even a 60 V / 100 W system is dangerous. The NEC treats them all equally, but Houston has chosen to draw a line through the NEC rules, which serves only to single out PoE systems.

This is misguided, since PoE systems are actually safer than all other Class 2 / Class 3 systems. PoE only rises above 15V DC when a device is detected, which occurs after all connectors have mated and the circuit is fully guarded from human contact. Further, power is removed when devices are unplugged, and power is also removed very quickly in the event of any overcurrent or short-circuit event. This is not true of most sound equipment, telephone, or thermostat circuits which are once again, fully exempt from permitting.

For reference, here are the applicable ordinances for cities previously mentioned. While we have been informed that private conversations between HPC and inspectors from these other cities have resulted in HPC drawing their own differing conclusions, the municipal codes of the cities plainly state that their exemptions which all would apply to a Class 2 PoE circuit.

CLIFF NOTES for those that don't want to read the ordinances below: Fort Worth and Austin have both a voltage / power limit exception AND a Class 2 / Class 3 exception. Dallas has fixed the error in their voltage exception (it did not specify that the limit was an AC voltage and did not provide the corresponding DC voltage limit). Dallas is now exempt for work above 30VAC or 60VDC. This leaves Houston with the most restrictive limits by requiring a master electrician's license to receive a permit for Class 2 / Class 3 circuits.

Dallas

82.16 (2) "Certain Work Exempt from Registration... "The installation, alteration, or repairing of any wiring or equipment where such wiring or equipment operates at a voltage not exceeding 30 volts AC or 60 volts DC and does not include generating or transforming equipment."

[https://dallascityhall.com/departments/sustainabledevelopment/buildinginspection/DCH%20documents/pdf/BI\\_Chapter%2056-Dallas%20Electrical%20Code.pdf](https://dallascityhall.com/departments/sustainabledevelopment/buildinginspection/DCH%20documents/pdf/BI_Chapter%2056-Dallas%20Electrical%20Code.pdf)

Austin

<https://austintexas.gov/page/work-exempt-building-permits>

[https://library.municode.com/tx/austin/codes/code\\_of\\_ordinances?nodeId=TIT25LADE\\_CH25-12TECO\\_ART4ELCO\\_S25-12-113LOAM2020ELCODMTREN](https://library.municode.com/tx/austin/codes/code_of_ordinances?nodeId=TIT25LADE_CH25-12TECO_ART4ELCO_S25-12-113LOAM2020ELCODMTREN)

§ 25-12-113 - LOCAL AMENDMENTS TO THE 2020 ELECTRICAL CODE - ADMINISTRATION AND ENFORCEMENT.

(3) Exempt work. Work that may be performed without an electrical permit must comply with all applicable federal, state, and local requirements. An electrical permit is not required:

...

(l) to install or repair an electrical device, appliance, apparatus, equipment, or electrical wiring operating at less than 25 volts and not capable of supplying more than 50 watts of energy;

(m) to install or repair a low-energy power, control and signal circuit of Class II or Class III as defined in the 2020 Electrical Code;

Fort Worth

Fort Worth matches Austin with minor variances.

[https://codelibrary.amlegal.com/codes/ftworth/latest/ftworth\\_tx/0-0-0-5697](https://codelibrary.amlegal.com/codes/ftworth/latest/ftworth_tx/0-0-0-5697)

105.2 Work exempt from permit. Exemptions from permit requirements of this Code shall not be

deemed to grant authorization for any work to be done in any manner in violation of the provisions of the Technical Codes or any other laws or ordinances of this jurisdiction.

Permits shall not be required for the following:

Electrical:

...

8. Electrical wiring, devices, appliances, apparatus or equipment, other than signs, operating at less than 25 volts and not capable of supplying more than 50 watts of energy.

9. Low-energy power, control and signal circuits of Classes II and III as defined in this Code.

**If you are not submitting a code amendment but would like to submit a comment concerning a code, please enter the information below; Please also enter above the code chapter, section and sub-section along with your contact information:**

## TFG-4 008A Proposed Amendment

### Amendment:

301.2, NEW item 9a: Design, installation, erection, repair, or alteration of Class 2 or Class 3 remote control, signaling, power-limited circuits, or communications circuits as defined by the National Electrical Code which are not subject to Table 725.144 of the National Electrical Code.

301.2, NEW SECTION: 301.2.1 Specially Permitted Work. Issuance of a special permit shall not be deemed to grant authorization for any work to be done in violation of the provisions of this code or any other laws or ordinances.

An electrical permit shall be issued without licensure requirements to facilitate inspection for the following:

The design, installation, erection, repair, or alteration of Class 2 or Class 3 remote control, signaling, power-limited circuits, or communication circuits as defined by the National Electrical Code which are subject to Table 725.144 of the National Electrical Code.

### Justification:

This amendment establishes a method to register Limited Energy Integrators with the City of Houston and designate individuals to pull permits for these limited energy systems. The new item 9a exempts systems that fall under the exception in 725.144 (A) of the 2023 NEC. The new section 301.2.1 establishes the special permit, states that this special permit does not lessen any Code compliance requirements, and designates that these special permits are for systems subject to Table 725.144. This is a way to identify PoE systems with NEC language.

It has been stated in previous meetings that any new licensure can only be enacted at the state level. Careful analysis of the relevant statutes reveals that if this is indeed true due to some relevant case law, then that also prevents the City of Houston from requiring permitting or inspection of Class 2 / Class 3 circuits.

As worded, it is unclear if the Texas Electrical Safety and License Act, aka Chapter 1305 of the Occupations Code, allows municipalities to require a license for work on Class 2 / Class 3 circuits. It is clearly stated in Chapter 1305:

Sec. 1305.003. EXEMPTIONS; APPLICATION OF CHAPTER. (a) This chapter does not apply to:

...

(12) the design, installation, erection, repair, or alteration of Class 1, Class 2, or Class 3 remote control, signaling, or power-limited circuits, fire alarm circuits, optical fiber cables, or communications circuits, including raceways, as defined by the National Electrical Code;

Stating the “this chapter does not apply to” means that any part of 1305 does not apply. It is in fact in Sec. 1305.201 that HPC derives its power in regards to...

- (1) enacting an ordinance requiring inspections;
- (2) offering examinations;
- (3) issuing municipal or regional licenses; or
- (4) collecting permit fees for municipal or regional licenses and examinations from appliance installers for work performed in the municipality or region.

What is 100% clear is that the Texas statute does not differentiate between permitting, inspection, and issuing municipal or regional licenses. Therefore, if Houston has the authority to issue permits and inspect work for Class 2 / Class 3 work, then they also have the authority to issue a municipal license for Class 2 / Class 3 work which is more appropriate than requiring a Master Electrician’s license to obtain a permit. What the statute does say is that Houston may not require a municipal license from the holder of a state license, but in this case no state license exists. Further, nothing states that Houston may not issue a permit without requiring such a license, or if the license could be a simple business license / contractor registration. The latter is what this amendment seeks to implement.

Additionally, a proposed registration form is included with the submission. A clean electronic version can be provided as needed. I would have uploaded it separately but the system only allows one attachment.

#### TFG-4 008A

Nintex Service Account

4/17/2023 6:24 PM

**First Name:** Chad

**Last Name:** Jones

**Org Name:** NSCA

**Job Title:** Principal Engineer

**Street Address:** 4125 Highlander Pkwy

**City:** Richfield

**State:** OH

**Zip Code:** 44286

**Email:** [cmjones@cisco.com](mailto:cmjones@cisco.com)

**Work Phone Number:** 330-523-2146

**Cell Phone Number:** 330-861-8521

**Area of Familiarity / Expertise:** NEC, PoE, Limited Energy Systems

**Which specific Construction Code would you like to amend?:** National electrical Code (NEC)

**What Code Chapter are you wanting to amend?:** Chapter 3

**What Code section are you wanting to amend?:** 301

**What Code subsection are you wanting to amend?:** 301.2

**Would you like to upload a document that will technically justify for your proposal?:** Yes

**Confirm that your proposal is written in Legislative Format. If not, your proposal will be rejected.:** Yes

**Confirm that the code amendment you are submitting is not covered in the Proposed 2021 Code. If not, your proposal will be rejected.:** Yes

**Please confirm the proposed code change does not reduce any Fire or life-safety provision. If not, your proposal will be rejected.:** Yes

**The justification addresses safety impact, enforceability, cost effectiveness, or unique local conditions.:** Yes

**Please provide justification for your Construction Code Amendment Submittal.:** This amendment establishes a method to register Limited Energy Integrators with the City of Houston and designate individuals to pull permits for these limited energy systems. The new item 9a exempts systems that fall under the exception in 725.144 (A) of the 2023 NEC. The new section 301.2.1 establishes the special permit, states that this special permit does not lessen any Code compliance requirements, and designates that these special permits are for systems subject to Table 725.144. This is a way to identify PoE systems with NEC language.

It has been stated in previous meetings that any new licensure can only be enacted at the state level. Careful analysis of the relevant statutes reveals that if this is indeed true due to some relevant case law, then that also prevents the City of Houston from requiring permitting or inspection of Class 2 / Class 3 circuits.

As worded, it is unclear if the Texas Electrical Safety and License Act, aka Chapter 1305 of the Occupations Code, allows municipalities to require a license for work on Class 2 / Class 3 circuits. It is clearly stated in Chapter 1305:

Sec. 1305.003. EXEMPTIONS; APPLICATION OF CHAPTER. (a) This chapter does not apply to:

...

(12) the design, installation, erection, repair, or alteration of Class 1, Class 2, or Class 3 remote control, signaling, or power-limited circuits, fire alarm circuits, optical fiber cables, or communications circuits, including raceways, as defined by the National Electrical Code;

Stating the "this chapter does not apply to" means that any part of 1305 does not apply. It is in fact in Sec. 1305.201 that HPC derives its power in regards to...

- (1) enacting an ordinance requiring inspections;
- (2) offering examinations;
- (3) issuing municipal or regional licenses; or
- (4) collecting permit fees for municipal or regional licenses and examinations from appliance installers for work performed in the municipality or region.

What is 100% clear is that the Texas statute does not differentiate between permitting, inspection, and issuing municipal or regional licenses. Therefore, if

Houston has the authority to issue permits and inspect work for Class 2 / Class 3 work, then they also have the authority to issue a municipal license for Class 2 / Class 3 work which is more appropriate than requiring a Master Electrician's license to obtain a permit. What the statute does say is that Houston may not require a municipal license from the holder of a state license, but in this case no state license exists. Further, nothing states that Houston may not issue a permit without requiring such a license, or if the license could be a simple business license / contractor registration. The latter is what this amendment seeks to implement.

**If you are not submitting a code amendment but would like to submit a comment concerning a code, please enter the information below; Please also enter above the code chapter, section and sub-section along with your contact information:**



**LIMITED ENERGY INTEGRATOR REGISTRATION**

**ANNUAL FEE OF \$25.00**

Name of Company:	Primary Permit Employee:
Company Mailing Address:	Mailing Address of Employee:
City/State/Zip Code:	City/State/Zip Code:
Company E-mail Address:	Employee E-mail Address:
Telephone Number:	Cell Phone Number:

**THE CITY OF HOUSTON HAS ADOPTED THE FOLLOWING CODES:**

2012 International Building Code (IBC) W/Houston Amendments	2015 International Fire Code (IFC) Houston Amendments	2015 National Electrical Code W/Houston Amendments
--	--	---

**IF YOUR INFORMATION IS NOT COMPLETE YOUR REGISTRATION WILL NOT BE PROCESSED  
PLEASE SUBMIT THE FOLLOWING to**

	OFFICE √	APPLICANT √	
			<b>New registration or renewal provide 1-3</b>
1			Copy of State License (if applicable)
2			Certificate of Insurance
3			Names of additional Employees Authorized to Sign for and Pick-up Permits
			1. _____ 3. _____
			2. _____ 4. _____

Pursuant to the requirements of the Code of Ordinances adopted by the City of Houston, Texas any individual, person firm or corporation, engaging in an Integrator installation business within the corporate limits shall be registered with the City of Houston and shall be delegated full responsibility for code compliance and safety in performing all related work for which a permit may be issued as a result of this application.

Name (print): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor Registration Number: \_\_\_\_\_

Assigned after approval

Houston Public Works  
611 Walker St., Houston, Texas 77002

houston.permittingcenter@houstontx.gov  
Phone: (832) 394.9000

## TFG-4 009A Proposed Amendment

Amendment:

NEW SECTION: 301.2.1 Specially Permitted Work. Issuance of a special permit shall not be deemed to grant authorization for any work to be done in violation of the provisions of this code or any other laws or ordinances.

An electrical permit shall be issued without licensure requirements to facilitate inspection for the following:

The design, installation, erection, repair, or alteration of Class 2 or Class 3 remote control, signaling, power-limited circuits, or communication circuits as defined by the National Electrical Code which are subject to Table 725.144 of the National Electrical Code.

Justification:

This amendment is similar to another proposed, but without a new exception. It's been stated in the past that the TFG does not have the ability to modify the proposals, so this is being offered in case there is push back to a new exception.

This amendment establishes a method to register Limited Energy Integrators with the City of Houston and designate individuals to pull permits for these limited energy systems. The new section 301.2.1 establishes the special permit, states that this special permit does not lessen any Code compliance requirements, and designates that these special permits are for systems subject to Table 725.144. This is a way to identify PoE systems with NEC language.

It has been stated in previous meetings that any new licensure can only be enacted at the state level. Careful analysis of the relevant statutes reveals that if this is indeed true due to some relevant case law, then that also prevents the City of Houston from requiring permitting or inspection of Class 2 / Class 3 circuits.

As worded, it is unclear if the Texas Electrical Safety and License Act, aka Chapter 1305 of the Occupations Code, allows municipalities to require a license for work on Class 2 / Class 3 circuits. It is clearly stated in Chapter 1305:

Sec. 1305.003. EXEMPTIONS; APPLICATION OF CHAPTER. (a) This chapter does not apply to:

...

(12) the design, installation, erection, repair, or alteration of Class 1, Class 2, or Class 3 remote control, signaling, or power-limited circuits, fire alarm circuits, optical fiber cables, or communications circuits, including raceways, as defined by the National Electrical Code;

Stating the "this chapter does not apply to" means that any part of 1305 does not apply. It is in fact in Sec. 1305.201 that HPC derives its power in regards to...

- (1) enacting an ordinance requiring inspections;
- (2) offering examinations;
- (3) issuing municipal or regional licenses; or
- (4) collecting permit fees for municipal or regional licenses and examinations from appliance installers for work performed in the municipality or region.

What is 100% clear is that the Texas statute does not differentiate between permitting, inspection, and issuing municipal or regional licenses. Therefore, if Houston has the authority to issue permits and inspect work for Class 2 / Class 3 work, then they also have the authority to issue a municipal license for Class 2 / Class 3 work which is more appropriate than requiring a Master Electrician's license to obtain a permit. What the statute does say is that Houston may not require a municipal license from the holder of a state license, but in this case no state license exists. Further, nothing states that Houston may not issue a permit without requiring such a license, or if the license could be a simple business license / contractor registration. The latter is what this amendment seeks to implement.

Additionally, a proposed registration form is included with the submission. A clean electronic version can be provided as needed. I would have uploaded it separately but the system only allows one attachment.

#### TFG-4 009A

Nintex Service Account

4/17/2023 6:32 PM

**First Name:** Chad

**Last Name:** Jones

**Org Name:** NSCA

**Job Title:** Principal Engineer

**Street Address:** 4125 Highlander Pkwy

**City:** Richfield

**State:** OH

**Zip Code:** 44286

**Email:** [cmjones@cisco.com](mailto:cmjones@cisco.com)

**Work Phone Number:** 330-523-2146

**Cell Phone Number:** 330-861-8521

**Area of Familiarity / Expertise:** NEC, PoE, Limited Energy Systems

**Which specific Construction Code would you like to amend?:** National electrical Code (NEC)

**What Code Chapter are you wanting to amend?:** Chapter 3

**What Code section are you wanting to amend?:** 301

**What Code subsection are you wanting to amend?:** 301.2

**Would you like to upload a document that will technically justify for your proposal?:** Yes

**Confirm that your proposal is written in Legislative Format. If not, your proposal will be rejected.:** Yes

**Confirm that the code amendment you are submitting is not covered in the Proposed 2021 Code. If not, your proposal will be rejected.:** Yes

**Please confirm the proposed code change does not reduce any Fire or life-safety provision. If not, your proposal will be rejected.:** Yes

**The justification addresses safety impact, enforceability, cost effectiveness, or unique local conditions.:** Yes

**Please provide justification for your Construction Code Amendment Submittal.:**

This amendment is similar to another proposed, but without a new exception. It's been stated in the past that the TFG does not have the ability to modify the proposals, so this is being offered in case there is push back to a new exception.

This amendment establishes a method to register Limited Energy Integrators with the City of Houston and designate individuals to pull permits for these limited energy systems. The new section 301.2.1 establishes the special permit, states that this special permit does not lessen any Code compliance requirements, and designates that these special permits are for systems subject to Table 725.144. This is a way to identify PoE systems with NEC language.

It has been stated in previous meetings that any new licensure can only be enacted at the state level. Careful analysis of the relevant statutes reveals that if this is indeed true due to some relevant case law, then that also prevents the City of Houston from requiring permitting or inspection of Class 2 / Class 3 circuits.

As worded, it is unclear if the Texas Electrical Safety and License Act, aka Chapter 1305 of the Occupations Code, allows municipalities to require a license for work on Class 2 / Class 3 circuits. It is clearly stated in Chapter 1305:

Sec. 1305.003. EXEMPTIONS; APPLICATION OF CHAPTER. (a) This chapter does not apply to:

...

(12) the design, installation, erection, repair, or alteration of Class 1, Class 2, or Class 3 remote control, signaling, or power-limited circuits, fire alarm circuits, optical fiber cables, or communications circuits, including raceways, as defined by the National Electrical Code;

Stating the "this chapter does not apply to" means that any part of 1305 does not apply. It is in fact in Sec. 1305.201 that HPC derives its power in regards to...

- (1) enacting an ordinance requiring inspections;
- (2) offering examinations;
- (3) issuing municipal or regional licenses; or
- (4) collecting permit fees for municipal or regional licenses and examinations from appliance installers for work performed in the municipality or region.

What is 100% clear is that the Texas statute does not differentiate between permitting, inspection, and issuing municipal or regional licenses. Therefore, if Houston has the authority to issue permits and inspect work for Class 2 / Class 3 work, then they also have the authority to issue a municipal license for Class 2 / Class 3 work which is more

appropriate than requiring a Master Electrician's license to obtain a permit. What the statute does say is that Houston may not require a municipal license from the holder of a state license, but in this case no state license exists. Further, nothing states that Houston may not issue a permit without requiring such a license, or if the license could be a simple business license / contractor registration. The latter is what this amendment seeks to implement.

Additionally, a proposed registration form is included with the submission. A clean electronic version can be provided as needed. I would have uploaded it separately but the system only allows one attachment.

**If you are not submitting a code amendment but would like to submit a comment concerning a code, please enter the information below; Please also enter above the code chapter, section and sub-section along with your contact information:**



### LIMITED ENERGY INTEGRATOR REGISTRATION

ANNUAL FEE OF \$25.00

Name of Company:	Primary Permit Employee:
Company Mailing Address:	Mailing Address of Employee:
City/State/Zip Code:	City/State/Zip Code:
Company E-mail Address:	Employee E-mail Address:
Telephone Number:	Cell Phone Number:

**THE CITY OF HOUSTON HAS ADOPTED THE FOLLOWING CODES:**

2012 International Building Code (IBC) W/Houston Amendments	2015 International Fire Code (IFC) Houston Amendments	2015 National Electrical Code W/Houston Amendments
--	--	---

**IF YOUR INFORMATION IS NOT COMPLETE YOUR REGISTRATION WILL NOT BE PROCESSED  
PLEASE SUBMIT THE FOLLOWING to**

	OFFICE √	APPLICANT √	
			<b>New registration or renewal provide 1-3</b>
1			Copy of State License (if applicable)
2			Certificate of Insurance
3			Names of additional Employees Authorized to Sign for and Pick-up Permits
			1. _____ 3. _____
			2. _____ 4. _____

Pursuant to the requirements of the Code of Ordinances adopted by the City of Houston, Texas any individual, person firm or corporation, engaging in an Integrator installation business within the corporate limits shall be registered with the City of Houston and shall be delegated full responsibility for code compliance and safety in performing all related work for which a permit may be issued as a result of this application.

Name (print): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor Registration Number: \_\_\_\_\_

Assigned after approval

Houston Public Works  
611 Walker St., Houston, Texas 77002

houston.permittingcenter@houstontx.gov  
Phone: (832) 394.9000

## Meeting Minutes

Meeting Title:	City of Houston Code Modernization Project Task Force Group 4 (TFG-4)		
Date/Time	April 06, 2023 9:30 am CDT	Chair/Leader	
		Facilitator	Jason Johnson, JH
Meeting Location:	Conference Room B1; and MS Teams	Recorder	Jason Johnson, JH

ATTENDEES: (P-PRESENT A-ABSENT)		ATTENDEES:	
Roel Garcia, CoH Mechanical Inspections – Co-Chair	A	Joshua Hollub, Modern Plumbing / IAPMO – Vice-Chair	P
Merle Neville, CoH Electrical Inspections – Co-Chair	P	Christina Kaeni, IAPMO – Alternate Vice Chair	P
Don Rabel, NECA – Delegate	A	Carlos Flores, CoH Plumbing Inspections – Co-Chair	P
Richard Anderson, PMG Technical Resources / ICCS – Co-Chair	P	Alex McCray, CoH CCM	P
Avani Mehta, CoH CCM	P	Heath Wierck, CoH CACD	P
Soledad Saenz, HPC CACD	A	Lucia Chavarria, CoH Code Development	P
Carlos Rubiano, CoH HPC CACD	P	Bruce Lambright, CoH	A
Charles Rodriguez, CoH Plumbing Inspections	P	Jason Johnson, JH	P
Lewis Bennett, CoH CCM Division Manager	A	Nikeshia Smith, JH	P
Robin Tomlin, JH	A	Geoffrey Conner, CoH Plan Review	P
Chad Jones, NSCA	P	Peyton Hill, ABC Greater Houston	P
Darren Reman	P	Robert Montanez, CoH Assist. Chief Mechanical	A
Kris Zimmerman	A	Bruce Lambright, HPC-CACD	P
Christon Butler	A	Robert Jones, IEC	P
Josh Vanlandingham	A	Lucia Chavarria, CoH CACD	P
Josh Jordan, MCA Houston	P	Armando Lozano, IEC	P
John Mata, IAPMO	P	Ron Lord, Southwest Pipe Trades Association	P
Robert Bolton, CoH Mechanical	P	Helen Webster, CIC	P

1. Jason convened the second meeting of TFG-4 at 9:30 am
  - 1.1. Introductions were made, with those joining by MS Teams asked to identify themselves with their organization in the Chat.
  - 1.2. Jason reviewed the Houston Public Works mandate for this code adoption, which is to adopt the 2021 Code Editions as a base code with local amendments that:
    - Help strengthen and ensure long term sustainability and resiliency in Houston.
    - Do not reduce the fire- or life-safety provisions without providing an equivalency to what is found in the base code; and
    - Comply with the intent of the code in quality, strength, effectiveness, fire-resistance, durability, and safety for the purpose intended.
    - Chapter One is for the Legal Department only. Amendments are excluded from submission.
2. Meeting minutes from 04.06.23 were brought forward for review.
  - 2.1 Richard Anderson made Motion to accept the minutes as submitted, second by Josh.
    - 2.1.1 With no comments, 04.06.23 Meeting Minutes are approved as distributed.
3. Discussion on Proposed Amendments:
  - 3.1. TFG-4 -001A – Proposed changes to strike sections 603.5.18.2
    - 3.1.1. Richard asked if Carlos Flores could give the committee some background on this historical Houston Code Amendment.
      - 3.1.1.1. Carlos stated the Proposed Amendment is to eliminate this specific amendment, charging that is not in the code, he identified that it is not in the base code verbatim. However, Sections 602.2 and 602.3 talk about cross contamination and back-flow prevention, and mention tanks. The basis for this Proposed Amendment is potential for pollutants or contaminants to enter the City water supply. Carlos continued with the definition of pollution, according to the Code, it is an impairment of the quality of the potable water to the degree that does not create a hazard to public health, but adversely and unreasonably affect the aesthetic qualities of such potable water for domestic use and is also defined as a low hazard. Recognizing the low-hazard element to the issue regarding the double check and noted that Cross Connection Control Group along with the City of Houston backs and supports this Amendment that they have expressed this in past meetings. He noted, to the point that is redundant, because air gap for discharge is provided, which is one aspect of the cross-contamination aspect of this installation. When it back-washes and rinses out the beads and the resin discharges into the sanitary so yes there is an air gap requirement.
        - (1) Richard asked for clarification as to whether this is speaking to water softeners or reverse osmosis, to which Carlos and Heath responded this delas with both.
      - 3.1.1.2. Carlos went on to detail why the City requires a double-check, which requires an expansion tank installed at the water heater, citing testing ability.
      - 3.1.1.3. After further discussion,
    - 3.1.2. Carlos made a motion to Reject Proposed Amendment TFG-4-001A, which was seconded by Ron.
    - 3.1.3. **VOTE TO REJECT TFG-4-001A – PASSED WITH NO EXCEPTIONS**

**3.2. TFG-4-002A and TFG-4-003 - REJECTED AS DUPLICATE TO TFG-4-001A**

**3.3. TFG-4-004A – Modification to section 301.2 of the NEC**

3.3.1. Heath made a Motion to reject, noting the reasoning as the way it has been written. He identified this as a State law but it is being misrepresented, noting it is not an exemption from the work permitting of the class 2 and 3 wiring, rather an exemption from the licensure requirements of the State law. This would be a reduction and is not what is intended in the NEC, . Occupations Code, which governs the electrical contractors, gives this exception for having to get a state license for this work, it does not exempt this work from a permit. It does not line up with what the state intends or other major jurisdictions in Texas are doing.

3.3.2. Heath made a motion to Reject Proposed Amendment TFG-4-004A, second by Josh.

3.3.3. Vote was called for

3.3.3.1. Chad questioned the rejection stating that this has not been discussed, to which Heath made the point that there was an opportunity of discussion made, and Richard pointed out, according to Roberts Rules of Orders, a motion is made, seconded, and then it is open to discussion so now is the appropriate time before we call the vote for that discussion just to clarify.

3.3.3.2. Chad stated he has been working with the City for 4 years on the requirements for inspection and he doesn't disagree that when something ends up in the NEC it should be inspected. He stated the complaints of the organizations he represents have to do with the requirements for a permit and the requirement for a master electrician. The work covered under this section relates to IT work. He noted POE Systems that are IT systems that have specific installation and assembly requirements that a typical electrician does not know how to do, so requiring these companies to employ a master electrician to specifically only pull permits only is an undue burden on these companies. He noted working with Houston on a way to get permits pulled without the requirement for a master electrician and there has been zero movement. The only other option is to request an exemption from it. He suggested that perhaps the State code has been misrepresented, but there are other cities inside Texas that have found ways to work this out without requiring a master electrician pull the permit. What the inspection boils down to for a POE is how many cables are in a bundle for the inspection, and he questioned the need a master electrician to pull a permit for that inspection?

3.3.3.3. Darren pointed out that this amendment is supported by The Communications Cable and Connectivity Association( CVA) and The National Systems Contractors Association. Other municipalities in Texas, including Austin and Fort Worth, support a Class 2 and a Class 3 exemption and noted this by no means misrepresents what is at the State level. It is a way for the city of Houston to support technology and technology adoption safely. He encouraged a yes vote for this amendment.

3.3.3.4. Merle noted his agreement with rejection of the proposed amendment. He pointed out items in the Proposed Amendment to which he disagrees;

- (1) The 50 Volt 50-Watt limitation that aligns with OSHA section 1910.3.03 G2I and explains why OSHA considers voltages above 50 to be hazardous.
- (2) These voltages also align NFPA 70 2023 edition, 110.27 A, NFPA 70E 2021 Edition, 110.3 and 110.4.

- (3) Class 2 circuits have been in the Code for a long time, which has been instrumental in it being done by licensed electrician.
  - (4) The City of Houston is less restrictive than all the major cities in Texas. Dallas has a 30 Volt limitation with other restrictions. Fort Worth has a 25 Volt and 50-Watt limitations. and Austin has 25 Volt, 50-Watt limitation. We go by the NEC, but IRC, matches up with 25 volts, 50 watts. Regarding not needing an electrician (citing it is just IT), other concerns with Article 725 Class 2 and 3, it refers back numerous sections and articles of the National Electrical Code. These are all articles licensed electricians and contractors are required to take classes yearly to stay up to date with this code, it's not just an IT thing. Merle states his concerns of someone not having the knowledge of this soon-to-be adopted Section 700.11 having to do with Class 2 Emergency Lighting, noting this could be a real safety problem.
- 3.3.3.5. Merle disagrees with the 2 Amendments proposed and believes that keeping 301.2 of our electrical code to protect persons and property from hazards arising from the use of electricity and making these changes will fall below the base codes and reduce life safety.
- 3.3.3.6. Chad asked for clarification on Merle's statement relative to Section 110.27A and noted it is 50 watts (not 50 volts), to which Merle agreed. He also has an additional comment stating he is here pushing POE Circuits he mentions he doesn't know how to go about separating from these Class 2 Circuits. He has been trying for 4 years and is not finding a solution.
- 3.3.3.7. Richard made a comment of wanting to make sure anything that has been done today will not adversely effect other trades that are allowed to do electrical for this voltage such as HVAC controls, to which Merle confirmed that it will stay the same.
- 3.3.3.8. Richard agreed the work should be permitted and supports the City of Houston wanting permits for this because it is in the NEC. He concluded that he supports the motion to disapprove this Amendment, noting the TFG's goal of limiting the amount of unnecessary Amendments.
- 3.3.3.9. Chris questioned what will the effects and expenses be to the building owners for commercial, private, or public real estate?
- 3.3.3.9.1 Merle stated he doesn't see where the added expense would be that there are electrician doing wiring now and is not sure what he is asking.
    - 3.3.3.9.1.1. Chris clarified his question as asking for confirmation that we have a code now that requires permitting of this wiring, to which Merle confirmed.
- 3.3.4. Richard had a follow-up comment wanting to get clarification on resubmission opportunity. He noted understanding that nothing prevents the proponent from resubmitting something else later, mentioning the Committee is not empowered to make "floor modifications", desiring confirmation of the process.
- 3.3.4.1. Jason clarified the submitter has opportunity to change the language and resubmit within the required timeframe.
- 3.3.5. Motion put forth by Heath to Reject TFG-4-004A Stands
- 3.3.6. **VOTE WAS TAKEN TO REJECT TFG-4-004A – PASSED, NOTING 4 AYES (RICHARD, JOSHUA, CHRIS, AND PEYTON) AND 2 NAYS ( DARREN REMAN AND CHAD JONES)**
- 3.4. **TFG-4-005A – REJECTED - IS A DUPLICATE OF TFG-4-004A.**

4. Discussion on Proposed Amendments

4.1. Task Force Group Members should have received an e-mail showing that there is additional information that was uploaded to the Construction Modernization website. Updated document identifies the City of Houston 2015 Amendments and the comparison to the 2021 Uniform Plumbing Code.

This was discussed last week, and the request is that TFG-4 members will download the documents, review them as organization sub-groups and each organization appoint one individual to submit any proposed amendments online through the website for TFG-4. The timeline is tight, so the ask is that everyone review and be ready to discuss at the meetings.

5. Jason reviewed the schedule

5.1. Next TFG-4 meeting is April 13 with another April 20.

5.1.1. The hope is that all Proposed Amendments are submitted prior to the April 20th meeting so that TFG-4 can complete the reviews and have things ready for the CCMC Meeting to be voted on and put into the running documents for the 2021 Code Amendments that will be voted on by the CCMC.

6. Jason asked if there were any other questions or comments, hearing none.

6.1. Chad asked if a link to the recording of this meeting will be shared, to which Jason responded affirmatively. The recording link will be shared with TFG-4 members.

Meeting Adjourned 10:09 am

## Meeting Minutes

Meeting Title:	City of Houston Code Modernization Project - Low Voltage POE		
Date/Time	April 13, 2023 11:00 a.m. CDT	Chair/Leader	Lewis Bennett, HPW
		Facilitator	Alex McCray
Meeting Location:	Conference Room B2 MS Teams	Recorder	Jason Johnson, JH

ATTENDEES: ( P-PRESENT A-ABSENT)		ATTENDEES:	
Roel Garcia, CoH Mechanical Inspections TFG-4 Co-Chair	P	Joshua Hollub, Modern Plumbing Delegate IAPMO – TFG-4 Co Chair	P
Merle Neville, CoH Electrical Inspections TFG-4 Co-Chair	P	Christina Kaeni IAPMO – Alternate Vice Chair	A
Don Rabel, NECA – Delegate, TFG-4 Co-Chair	P	Carlos Flores, CoH Plumbing Inspections TFG-4 Co-Chair	P
Richard Anderson, PMG Technical Resources / ICC – TFG-4 Co-Chair	P	Alex McCray, CoH CCM	P
Avani Mehta, CoH CCM	P	Heath Wierck, CoH CACD	P
Soledad Saenz, HPC CACD	P	Lucia Chavarria, CoH CACD	P
Carlos Rubiano, CoH HPC CACD	P	Bruce Lambright, Deputy Building Official, CoH	P
Charles Rodriguez, CoH Plumbing Inspections (Alternate TFG-4 Co-Chair)	P	Jason Johnson, Jensen Hughes, CoH Consultant	P
Lewis Bennett, CoH CCM Division Manager	P	Nikeshia Smith, Jensen Hughes, CoH Consultant	P
Nick Jimenez, Comcast	P	Geoffrey Conner, CoH Division Manager Plan Review	P
Chad Jones, National Systems Contractors Association (NSCA), Principal Engineer, Cisco Systems Chair, IEEE P802.3da Task Force Principal, NFPA 70 CMP3	P	Doug Bassett, Comcast, Regulator from the State of Florida, National Electrical Contractors licensing Board (NEC) Panel 3 Chair	P
Darren Reaman, CEDIA, Director of Government Affairs	A	Robert Montanez, CoH Assist. Chief Inspector, Mechanical	P
Kris Zimmerman, Director M.E.P, University of Houston D.T	P	Robert Jones, NEC Panel 3 Chair, NEC Code Changes	

Christon Butler, Deputy Director, Houston Public Works, CoH	P	Robert Jones, IEC Alternate NEC, Robert Jones, Panel 3 Chair, NEC Code Changes	P
Josh Vanlandingham, ASHRAE, Past President	P	Lucia Chavarria, CoH CACD	P
Josh Jordan, Delegate, Mechanical Contractors Association of Houston (MCAA)	P	Armando Lozano, Independent Electrical Contractor (IEC), Past President	P
Helen Webster - Independent Electrical Contractors (IEC), Executive Director	P	Ron Lord, Southwest Pipe Trades Association, Political Director	P
Byron King -COH Building Official, HPD	P	Joanne Frazier, Chief of Staff, Councilmember Sally Acorn, At-Large Position 5, and Vice-Chair CCI Committee	P

The Meeting commenced at 11:00 a.m. CDT

1. Alex convened the meeting
  - 1.1. Introductions were made, and those joining online were asked to identify their name and organization in the Chat.
2. Lewis identified this meeting is to discuss Task Force Group 4 Proposed Amendment TFG-4-004A.
3. Discussion on Proposed Amendment TFG-4-004A
  - 3.1. Doug opened the discussion stating that he is here today to speak to the group by trying to understand where we are trying to go with this and what is the goal of the entire process. So, he can better understand how to explain it to the industries. He noted his role and expertise in this field, and questioned the intention and agenda of the City in terms of how they want to move forward? He stated that he understands moving away from the current process, which has been 50 watts 50 volts, as well as that the Class 2 and 3 circuits are defined on how that addresses the voltage requirements and the limitations around that.
  - 3.2. Robert stated that he is also on Code Panel 3 with Chad and Doug, that he is the Chairman of Code Panel 3 . He stated the issue of contractors, permitting, and what qualifies is known in the industry, as well as what qualifies as Limited Energy Contractor. There have been several changes with article 725, which was the Article for Class 2, Class 3 and Class 1 circuits, which was split up this cycle. Article 724 is Class 1 only, 725 is Class 2 and 3. Article 722 is a new, strictly addressing cabling and a new Article for wiring. He noted the State of Texas has complicated this by exempting Class 1, Class 2, Class 3 from licensing, which causes a difficult situation, stating that Houston cannot make a requirement that is not in State law.
    - 3.2.1. He mentioned the Master of Electricians and Contractor exam and understands it will cover multiple states. Doug believes this has been adopted in full in 18 states along with a few others that have adopted in certain levels of licensure. He noted here are different approaches that we see for licensers in each state and gave examples.

- 3.3. Doug reiterated his desire to better understand and communicate the City's intent on the ability for contractors to pull a Limited Energy Permit, should the requirement be adopted.
- 3.4. Lewis acknowledged the Houston Building Official, Byron King, is in attendance today.
- 3.5. Robert stated this a state issue; Texas would have to have a limited energy license, and that not at our state level, there is no license.
- 3.6. Doug cited his experience in permitting, noting he holds over a dozen state licenses and hundreds of municipal licenses. He does not see how we can qualify multiple companies and still perform the duties that are required by statute, which is to supervise and manage the work from start to finish. He then questioned Merle on how many jobs a City Inspector can do in a day, to which Merle replied 15 to 20. Doug questioned how many inspectors it would take to complete 500 inspections per day, to which Merle replied the city has 30 plus.
- 3.7. Doug asked if it is a similar number for limited energy, to which Merle responded not necessarily ~ it would be less then what my inspectors are going to be doing right now with higher voltage should work out even on that. Merle does not envision 1000 inspections per day.
- 3.8. Don posed the idea of Electrical Inspectors being cross-training, so that they conduct multiple inspections while on a site. Merle noted inspectors would already be doing that.
  - 3.8.1. Merle stated if we go with limited energy, it is the same people, same number of fixtures and same number of inspection forms. He thinks it will all cancel each other out, rather than add to it.
- 3.9. After further discussion, Doug stated he does not understand how one would pull a permit as a limited energy contractor without hiring an electrician.
- 3.10. Robert noted the State does not require a licensed electrician to work, and there is no reason electrical contractor could not hire cable installers; further, there is no prohibition against an electrical contractor subcontracting the limited energy. He does not see it as a licensing issue and does not see any more need for more inspections.
- 3.11. Chad noted disagreement Robert statement that it is not a licensing issue. He stated it does come down to a licensing issue in Houston because he is required to have a master electrician pull the permit so, therefore it requires a license. He cited organizations doing this work for a long time without a master electrician, which are now required to go either partner with a company or hire an electrician to get this work done. He also noted, as far as he can tell, most of the POE work is not getting inspected inside of Houston, which only become problematic when lights were installed on the end.
  - 3.11.1. To this, Merle stated there have been jobs that are POE that have been inspected that are known, and that he knows of none that have not been permitted. The City is not changing the ordinance, no additional licensing, or restrictions. Lewis noted that the State has the final say on licensing. Merle stated the city is bound to use an electrical contractor to be involved so they can make sure this has been put in per the NEC.
  - 3.11.2. Chad noted they have been doing that for years, but the difference is an electrician expected to know the 900 Plus pages of the NEC where the power limiting folks needs to know the specific sections. Therefore, their rates are commensurate with that, so they do not cost as much. Referring to the emergency lighting, Chad noted Class 2 power, which does not change any of the other requirements. So, someone coming in to pull emergency lighting – a Class 2 permit for emergency lighting system – could be trying to skirt the

rules, so we would have to figure out a way to make sure that's not happening. What he is hearing here is that Houston is not able to do that, so it needs to come from the State level. Merle agreed with this.

3.11.3. Chad continued that his point is that a network can be installed and not have any POE devices. Then after the inspections all over, POE devices can be added retroactively. The fact is we've engineered these systems so that there will not be problems with it, with worse case being a bundle overheating ruining the data capabilities of the cable, but nothing is going to catch on fire, nothing is going to shock, there is no property or life hazards that arise from these things. With 20 years of experience and over a billion ports of these out in the field, he has seen zero records of loss.

3.11.4. Merle mentioned there are so many things that need to be looked at. It's not as simple as just throwing a cable up there and plugging it in a form though.

3.12. Robert discussed the history of Chapter 8 as stand-alone, when there was no POE. Over the last 15 years there has been a transitional period, and it is possible in the next couple of cycles of the NEC Chapter 8 may go away. The key issue is permitting, and he thinks it must go with our State.

3.13. Doug stated he does not disagree that a State exam in State limited energy classification would be very helpful to install a lot of these issues with the State take on that burden and responsibility to do it. I don't know how City of Houston is going to require a limited energy individuals to pull a permit.

3.14. Lewis noted it still comes down to the State dictating to the city. The position of the city to make sure safety is first and foremost for every citizen in the City of Houston. We as a City have got to protect the citizens of the city; life safety is ahead of everything else. He further noted if there are mandates from the State, we must obey them unless it contradicts the law. Lewis then opened the floor to any further discussions about it because it's important that everybody has an opportunity to voice their opinion.

3.15. Robert talked about the ultimate responsibility of a Master Contractor and noted again that the State does not require licensing for class 1 class 2 class 3 circuits. Because of this, he does not see any legal problem with subcontracting to unlicensed people. So, we as contractors know that we are going to have to abide by the rules, and, when permitting, you're showing commitment to doing it right.

3.16. Merle stated he agrees with Robert and Jason Potter sent him an email late Tuesday questioning the other cities in their ordinances, thinking a couple of them were wrong. He clarified that the Dallas local exemption, showed a 30-volt AC and is now 30 volts AC, 60 volts DC, and you can't transform equipment; for Fort Worth in San Antonio, he talked about the exemption for the class 2 and 3 but Carol Spangler and Marty Skirred both agreed in their code talks about a low energy power class 2 and 3 control; for San Antonio, Chief Valerie Gleason will be sending information, but provided reference showing a 50-volt exemption. In further review, Merle found nothing for Waco, except exempting telephone, telegraph or district messenger services, and Arlington as 25 volts or less limitation and does not address class 2 and 3. 1,2,3. It's not just Houston issues and Merle agrees wholeheartedly it needs to go to the State for correction.

3.16.1. Chad asked that Merle reply to Jason, to which he responded affirmatively..

3.17. Lewis asked if there was any other discussion that we would like to have on this subject.

3.17.1. Doug came back to his original question on what is the end goal for the city? To this, Merle responded, "safety".

- 3.17.1.1. To this, Doug questioned how a limited energy contractor that is doing work today require a permit for this work for electricity department, noting that it will add expense to a company.
  - 3.17.1.1.1. To this, Merle noted they're already doing it, so disagreed on the added expense.
  - 3.17.1.1.2. Doug stated this is asking contractor to take on the expense of hiring a master electrician when it's unclear if the statutes allow for a contractor to work under another contractor for whom he is not employed. There would seem to be legal logistics on this, but the easier way, as pointed out, would be if the State of Texas develops classification for limited energy.
- 3.17.1.2. Nick submitted that it sounds like we all agree that licensing and safety is important. The challenge on permitting is that the folks that are doing work, can't permit today without taking on a significant additional expense. He further submitted that the only safety issue that can be pointed to (the incident in Maryland) is ambiguous is best.
  - 3.17.1.2.1. To this, Lewis noted that that what happened in Maryland is the only incident that has been brought to this table but is sure it is not the only one. It is one that we know about where the installer was unlicensed. The position of safety must be paramount.
- 3.17.1.3. Nick stated we agree on safety but to bring a permitting regime that will create a burden on City staff. It is going to need to be resourced right and existing staff can handle it great but sounds to me like you're going to be more City resources that you're going to jeopardize the ability for small businesses to do business in the City of Houston. Realistically, some of these things just they have to be tied to something that we can point to and say we're creating a new regulatory regime for this reason.
- 3.17.1.4. Merle reiterated that nothing new is being added.
- 3.17.1.5. Doug stated a requirement is being added to have an electrician pull permits for a limited energy project, to which Merle replied that requirement has always been there.
- 3.17.1.6. Doug reiterated that he is simply trying to understand ~ if an electrician has to be hired to pull permits (for work that technically require permitting), that is an added expense. He pointed out that, for a small independent company, these additional costs are concerning.
- 3.17.1.7. Merle agreed it's a fine line but does not see why it could not be subbed out.
- 3.17.1.8. Nick made a distinction that, what he believes Robert is saying is an electrician could sub out to a low voltage; while Doug has pointed out the inverse is not also true ~ that a low voltage cannot sub to an electrician.
  - 3.17.1.8.1. Doug confirmed, noting not if the electrician is not licensed.
- 3.17.1.9. Robert pointed out that, in Texas, the electrical contractor does not do the fire alarm. In a lot of other states, they do the fire alarm. In Texas, typically the electrician will sub out the fire alarm work to a fire alarm contractor. The electrician puts in all the back boxes, conduit, pulls the cable, etc., but the fire alarm technicians come in to do the installation, pointing out they are not on the electricians – or anyone except the fire alarm contractor's – payroll.

- 3.17.1.9.1. Doug noted the fire alarm company has licenses as a fire alarm contractor in the State of Texas. “Smarts and parts” have always been the right approach when working with electricians but, again, it’s a licensed fire alarm.
- 3.17.1.10. Doug stated he needs method that I can communicate back to the industry how we are going to pull a permit by a low voltage contractor without having to employ a master electrician while the State figures out where they want to go from either testing or pre-exemption.
- 3.17.1.11. Merle stated nothing has been changed. There is no new requirement for unlimited energy. It was supposed to be permitted by electrician before and it still should be permitted. Until something changes with the State, nothing is changing.
- 3.17.1.12. Lewis confirmed that this is staying status quo, until the State changes it. Noting appreciation for what industry is going through, and the economics of it, the position of the State, being the agency to control the authority, and our needs as a city to combine safety, security, and economics.
- 3.18. Lewis asked if there are any other comments coming from the team members listening in. Hearing none, he noted the need to elevate this discussion to the resolution committee so that we can have a discussion at that level. The resolution committee will then report to the CCMC for final determination on what we should do.
- 3.19. Lewis Motioned for TFG-4004A to be elevated in the resolution committee for discussion and move on to CCMC, seconded by Don.
- 3.20. Lewis clarified the discussion on TFG-4 004A will go to reconciliation Committee, which will be announced in the upcoming TFG-4 Meeting and/or TFG-4 Meeting Agenda .
- 3.21. **VOTE TO MOVE TFG-4-004A TO RESOLUTION COMMITTEE – PASSED WITH NO EXCEPTIONS**
- 3.22. Lewis made the commitment to get back in contact with everyone here, so that what has been resolved, and next steps are known.
- 3.23. Lewis asked if there were any other items to discuss today?
- 3.23.1. Doug thanked the group for the opportunity to visit with everyone today, noting productive conversations
- 3.23.2. Lewis reciprocated appreciation and agreed today’s conversations were robust, while recognizing the outcome was not necessarily what anybody wanted.
- 3.24. Lewis noted there will be a response from the resolution committee as soon as possible so we can look forward to a written response.
- 3.25. Motion made by Robert to adjourn the Meeting, seconded by Chad

Meeting Adjourned at 12:10 p.m.

## Meeting Minutes

Meeting Title:	City of Houston Code Modernization Project Task Force Group 4 (TFG-4)		
Date/Time	April 27, 2023 9:30 am CDT	Chair/Leader	
		Facilitator	Todd Oliver , JH
Meeting Location:	Conference Room B1; and MS Teams	Recorder	Todd Oliver , JH

ATTENDEES: ( P-PRESENT A-ABSENT)		ATTENDEES:	
Roel Garcia, CoH Code Enforcement	P	Joshua Hollub, Modern Plumbing Delegate IAPMO – TFG-4 Co Chair	P
Merle Neville, CoH Building Code Enforcement (BCE)	P	Christina Kaeni IAPMO – Alternate Vice Chair	P
Don Rabel, NECA – Delegate, TFG-4 Co-Chair	P	Carlos Flores, CoH Plumbing Inspections TFG-4 Co-Chair	P
Richard Anderson, PMG Technical Resources / ICCS – Co-Chair	P	Alex McCray, CoH-CCM	P
Avani Mehta, CoH CCM	P	Heath Wierck, CoH-CACD	P
Armando Lozano, IEC	P	Lucia Chavarria, CoH-CACD	P
Carlos Rubiano, CoH HPC CACD	P	Bruce Lambright, HPC-CACD	P
Charles Rodriguez, CoH Plumbing Inspections (Alternate TFG-4 Co-Chair)	P	Todd Oliver, Jensen Hughes	P
Lewis Bennett, CoH CCM Division Manager	P	Nikeshia Smith, Jensen Hughes	P
Ron Lord, Southwest Pipe Trades Association	P	Geoffrey Conner, CoH Plan Review Div. Mgr.	P
Darren Reman CEDIA, Director of Government Affairs	P	Peyton Hill, ABC Greater Houston	P
Kris Zimmerman, Director M.E.P, University of Houston D.T	P	Robert Montanez, CoH Assist. Chief Inspector, Mechanical	P
Josh Jordan, MCA Houston	P		
Chad Jones, National Systems Contractors Association (NSCA), Principal Engineer, Cisco Systems Chair, IEEE P802.3da Task Force Principal, NFPA 70 CMP3	P		

1. Todd convened the second meeting of TFG-4 at 9:30 am
  - 1.1. Introductions were made, with those joining by MS Teams asked to identify themselves with their organization in the Chat.
2. Todd reviewed the Houston Public Works mandate for this code adoption, which is to adopt the 2021 Code Editions as a base code with local amendments that:

Help strengthen and ensure long term sustainability and resiliency in Houston.

Do not reduce the fire- or life-safety provisions without providing an equivalency to what is found in the base code; and

Comply with the intent of the code in quality, strength, effectiveness, fire-resistance, durability, and safety for the purpose intended.

Chapter One is for the Legal Department only. Amendments are excluded from submission.

3. Meeting minutes from 04.20.23 were brought forward for review

**3.1. Josh made Motion to accept the minutes as submitted, second by Rich Anderson**

**With no comments, 04.20.23 Meeting Minutes are approved as distributed.**

4. Discussion on Proposed Amendments:

4.1. TFG-4-010A

- 4.2. Heath made a motion to discuss all three Proposed Amendments TFG-4-010A, TFG-4-011A and TFG-4-012A at the same time

- 4.3. Heath states that all three are the same proposal dealing with updating refrigerates throughout each section of the code.1) TFG-4-010A deals with section 1103.1 that adds the refrigerate safety group classifications.2) TFG-4-011A deals with section 1104.4 that has the verbiage. The verbiage changes, the new section for the refrigerant requirements.3) TFG-4-012A is the update to the Chapter 17 reference standards that coincide with all the information.

- 4.4. Heath mentions the proponent who submitted these states that these are based on changes that are going into the 2024 Uniform Mechanical Code (UMC) He noted that he spoke to IAMPO, and they confirmed that these are going into the 2024 Mechanical Code. He said that Roe and Robert he doesn't think have any issues, they are welcomed to say anything about it if they like

- 4.5. **Roe** states that this is correct, there are some new refrigerates out in the market. He said we are going to have to learn what they are about and why we are having to meet certain requirements. Basically, all this new information is for is to cover these new refrigerates out there

- 4.6. Ron stated he would like to 2<sup>nd</sup> the motion to combine these three proposals. He noted this is simply updating to the most current language and it is out of the 2024 UMC. He thinks this would make everything go quicker on updating to current language. Ron states he appreciates the work proposer Jed put together, he thinks it will help the City of Houston be at the cutting edge of code language and that it's a great step moving forward.

**4.7. HEATH PUTS FORWARD A MOTION TO APPROVE ALL THREE PROPOSALS TFG-4-010A, TFG4-011A, AND TFG-4012A 2<sup>ND</sup> BY ROEL GARCIA**

4.8. Todd asked if there are any discussions, hearing none

**4.9. VOTE TO FOR THE PROPOSED AMENDMENTS TFG-4-010A, TFG4-011A, AND TFG-4012A PASSED; NON-OPPOSED**

5. TFG-4-013A

5.1. Heath states this is more of a question and less of an actual proposal. The proponents are asking where this section is, it is a base code section that has been in the code and still is, it's in the 2021 UMC. Heath states we don't amend that section, we don't strike it, we don't have a Houston amendment for it, for all intents and purposes that section will be going forward as is as a base code section. He noted that it says where is section 315 of the UMC? "Louvers in hurricane prone regions" its apart of the base code, we don't have an Amendment for it, so whatever we do and eventually adopt the 2021 UMC it would be part of the UMC 2021.

5.2. Heath states he thinks the proposer might be confused since he's not seeing it in the documentation that WE have online, but we're not posting the entirety of the base code, especially if we're not making a change to this.

5.3. Todd recommends rather than voting for approval or a denial that we treat this as an amendment since it's a question and they haven't provided any change and maybe give a formal response to the provider

5.4. Rich mentions if the proponent is online and so they can explain why they submitted before we move forward. He would like to give them a chance to speak on behalf of this

5.5. Todd asked if Mr. Ken Shifflett was online? Alex stated he is not. Todd questioned if anyone happens to have knowledge of this submittal.

5.6. Rich mentions that he was confused reading it, he wasn't sure if they were asking us to strike this section when they questioned where is 315 located

5.7. Heath states that doing a formal response or maybe reach out to him or find out what the break down might be

5.8. Alex noted that he does not see the amendment, are they showing only Houston amendments and where's the base code? a lot of people have been confused since the beginning

5.9. Todd states the original documents only showed changes to the base code and Houston amendments I didn't show anything in the base code that had been there from previous years. He stated that he can understand there being confusion, so no need to vote on this, Todd asked if we have a motion

**5.10. RON PUT FORTH A MOTION TO STRIKE THE PROPOSED AMENDMENT TFG-4-013A 2<sup>ND</sup> BY JOSH HOLLUB**

**5.11. VOTE TAKEN TO STRIKE TFG-4-013A - PASSED ; NONE OPPOSED**

5.12. Todd noted that the city will send a response to the submitter and provide a little direction for them.

5.13. Todd asked if there are any further discussions

6. Alex stated that he wants to go over the schedule, the last CCMC meeting was suppose be April 28, 2023, due to some delays we will have to meet on **May 5, 2023**, to review this TFG-4 Amendments. We also may have to meet on **May 12, 2023**, and **May 19, 2023**, for any item that's has come in from the last minute extra Public 30-day notice periods for TFG-1 so we will have to add that in at some point. Alex noted that we have to Amendments we know that are going to go through Resolution, one of them will be the Low Voltage, so we will have to possible hold **May 12, 2023**, or **May 19, 2023**, to give them an opportunity to speak. This TFG will also have to meet again after the Resolution Committee has had time to review the Low Voltage. They will come back to the task for group which will give the proponent time to speak directly about it and ask the group any questions. There are procedures we will go over for this when the time comes. We will have at least one or two more meetings for this group and possibly one or two more CCMC meetings. Alex asked for there are any questions regarding the timeline

- **April 28, 2023: 3:00 – 5:00 pm, CCMC #4 – Final Vote on TFG-2 & Review TFG-3**
- **May 5, 2023, 2:00 – 4:00 pm, CCMC #5, - Final Vote on TFG 3 & First Review TFG-4, Location**
- **May 12, 2023, 2:00 – 4:00 pm, CCMC #6, 2<sup>nd</sup> Review and Vote TFG-4, Location TBD**
- **May 19, 2023, 2:00 – 4:00 pm, CCMC #7, Final Vote TFG-4, Location TBD**

6.1. Todd stated with no other remarks, hearing none

Meeting Adjourned 10:06 a.m.

*Meeting Minutes*

Meeting Title:	Resolution Committee - Low Voltage POE		
Date/Time	May 05, 2023 9:00 a.m. CDT	Chair/Leader	Lewis Bennett, HPW
		Facilitator	
Meeting Location:	Conference Room B2 MS Teams	Recorder	Jason Johnson, JH

ATTENDEES: ( P-PRESENT A-ABSENT)		ATTENDEES:	
Alex McCray, CoH-CCM	P	Chad Jones, NSCA	P
Avani Mehta, CoH-CCM	P	Darren Reman, Cedia	P
Lewis Bennett, COH-CCM	P	Rob Hicks, SFPE	P
Jason Johnson, JH	P	Josh Vanlandingham,	P
Nikeshia Smith, JH	P	Douglas Basset, ESA	P
Bruce Lambright, HPC CACD	P	Jason Potterf, NSCA	P
Keith Reihl, USGBC	P		

1. Jason the meeting commenced at 9:00 a.m.
  - 1.1. Introductions were made and those joining online were asked to identify their name and organization in the Chat
  - 1.2. Jason Johnson called the meeting to order and reviewed the request that was sent to the Resolution Committee to review for the proposed amendments set forth by the Task Force Groups. We've also had verbose discussions on hearing both sides last month. Is there anything further you would like to bring forward to the Resolution Committee.
2. Darren explained his Proposed Amendment TFG-4-005A to the group along with thanking the group on allowing him the opportunity to appeal Cedia's Class 2 and Class three Amendment. Cedia represents Residential integrators who specialize in providing entertainment, networking, control automation, lighting, and all audio video systems throughout the home.
  - 2.1. Jason asked if anyone else had anything to discuss
  - 2.2. Kevin asked for a synopsis on what the amendment does or doesn't do. He said he just wants some brief information on what this is about is its low voltage cabling
  - 2.3. Darren answered by saying that his amendment was a Class 1 and Class 2 power limit circuits as defined by the National Electrical Code that it would align with the State of Texas. Its work that is safely done by the integrator throughout Houston.
  - 2.4. Keith needed clarification on if this type of electrical work if it could be done by anybody, so basically you don't need to have an electrician to do this low voltage cabling, and so this is what the amendment is about
  - 2.5. Jason Potterf stated these are exempt in Austin and Fort Worth with similar exemptions, worded in different ways in Dallas, this is to bring Houston in line with the rest of the state
  - 2.6. Keith states he knows where he is at with this, but he doesn't know how the electricians may be about it

- 2.7. Josh asked there are five documents that were attached to the invite and a couple proposed amendments they both reference section 301.2 in the Electrical Code. Would you mind explaining what the difference between these three, are they all related with the one section
- 2.8. Chad stated Darren's amendment is TFG-4-005A, Doug's had an identical proposed amendment but with different defense to it that one is TFG-4-004A. He said he think Doug and Darren's have the same language
- 2.9. Doug stated from the electronic security association we hope the city will adopt 2023 NEC including the specific references to Class 2 and to Class 3 circuits as well as alignment with the state of Texas with regards to licensing along with the practice and use of work that falls under those categories. I did meet with the Group a couple of weeks back, one of the biggest challenges that we're still facing is that the state of Texas does not offer the type of licensing for limited energy contractors. In absence of accepting the NEC and the classifications request from Class 2 and Class 3 circuits and aligning with the state of Texas, we are requesting some method that these individuals would be licensed and able to pull permits to perform this work with the city gained it was required. He currently said the state of Texas does not offer that so that's the dilemma we're facing from an industry standpoint is the ability to acquire permits to perform this work, if the city does not do something for exemption or aligning with the state.
- 2.10. Rob mentioned he is a little confused on what's progressed or what we're trying to do here. So, the current amendment that's in the current version of the code exempts a level of cabling and equipment devices up to a certain threshold.
- 2.11. Chad questions which code are you talking about Houston or the state of Texas
- 2.12. Rob noted Houston we are talking about correcting codes here
- 2.13. Chad replied with Houston gives no exemption
- 2.14. Rob stated no it does, it gives an exemption to permitting of the process. They've proposed additional language to change the exemption for permitting. Now, I am hearing we are talking about licensing, and I'm really confused about what has transpired in the Task Force Group that rejected this on why we're here today.
- 2.15. Jason stated let me clarify my understanding of that layman's terms is to pull a permit here in Houston you need to have a master electricians license as of right now. What there intending is to hope for a low voltage license. However, the state of Texas does not offer a low voltage license currently right now. The issue is they're asking the city of Houston to produce some licensure for low voltage or some exceptions for low voltage certification license to pull permits instead of having a master electrician pull the permit.
- 2.16. Chad stated he wanted to further clarify so , these two amendments we're talking about asking for exemptions, which would mean no permit at all. We took this in steps, this was this first proposed amendment, and it was shot down by the group, we listened to what they said. We came back with other proposals that's what my next three amendments are. He said we're not talking about the licensing aspect right now; we are talking about a straight exemption that would match the state code and several other large cities.
- 2.17. Rob noted let me go back to my question, why is the city's take on this that we need a permit for this work and that's why it was rejected ? Further on to your other amendments, is the city willing to do some of licensing acceptance beyond a master electrician license and don't to want to exempt the work from permitting.
- 2.18. Jason stated not at this time, they don't want to take on the responsibility to come up with some kind of training class and engineering certification and they don't want to exempt the work from permitting.
- 2.19. Josh with ASHRAE, what has been the requirement prior to low voltage installations in the City of Houston regarding permitting and licensure. Jason responded that it has not changed
- 2.20. Rob currently noted the exemption for permanent must be less than 50v and less than 50w anything more than that requires a permit, and that exemption would stay the way I'm reading this process.
- 2.21. Darren based on Cedias amendment, it would replace the Class 2 and Class 3 exemption language would replace the 50v and 50w
- 2.22. Rob mentions that is not what I am asking, if everything stands as it is before you brought this to the resolution committee if they didn't except your proposed amendment the current exemption would stay in place Chad replied correct

- 2.23. Rob stated this is administrative code provision not an NEC provision. The reference to the NEC is here is how you do the details. We are talking about the Houston administrative provisions for the Electrical Code, I don't see why you would get rid of this
- 2.24. Jason stated to clarify the City of Houston adopts the NEC in according to the State of Texas and all the following rules, your correct with the NEC but this is an administrative thing
- 2.25. Rob mentioned its more about Houston's process and when and where they require a permits
- 2.26. Chad stated it doesn't have a 50v 50w restriction they have Class 2 Class 3 exemption, Class 2 and Class 3 go beyond 50v and 50w. It's this table of like 17 permutations of voltage and current combinations that are designed as safe, tested, and listed as safe from the point of human shock and fire initiation. So, the 50v cuts right in the middle of some of the Class 2 settings, Class 2 is allowed to go up to 60v and 100w Class 3 as well. The complaint brought forward over four years ago was that the city of Houston's code makes the NEC harder to understand because you're cutting in the middle of things that NEC defines as safe
- 2.27. Rob stated he is not understanding why the TFG and maybe the city staff did not want to except this new definition of exemption since this is technical terms and the city picked a technical data point to list out there exemptions and in layman's terms the bar has changed a little bit and city did not make the change, what was the push back on why they did not want to accept. When we are talking about a technical reference point in terms of how we apply the administrative code.
- 2.28. Chad mentioned they point to OSHA, which has 50v and section 1910.3(g)(2) the title of that is guarding live parts means once it powered up you can't have access to the voltage. No where in OSHA can he find something that says if cabling is going to support over 50v it must be under the guidance of a master electrician. They also are pointing to the NEC that has a 50v limit which mirrors OSHA. What you do with these systems is when you install them the voltage isn't there when cabling in a building, but if you work on live parts the voltage is different then you want to below 50v if you touch live voltage. He said they point to 70(e) which electrically safe work conditions means energized work and guarding of work, that's also a 50v limit. He states that there are other class of power supplies that aren't live unless you put a load there and are still below the threshold when energized
- 2.29. Jason Potterf, Chads alternate from the NSCA stated that Dallas recently fixed their exemption language. He said if you look at the safety science rather than the numbers there is a distinct difference AC shock hazard and DC shock hazard, saying 50 volts without saying DC or AC leaves a lot of gray area. This is why the Class 2 definitions exist, if you go look at that table it says if you're using AC the limit is 30v if you're using AC in a wet environment the limit is lower. If you're using DC, the limit is 60v if you're using DC in a wet environment, it's lower. The waveform is more likely to cause shock the threshold is lower. The safety lines that are being defended here in Houston are safe for DC and they need the guarding requirements of OSHA, but they're not actually safe from a shock hazard perspective for AC they're considered harmful. It's all these problems that come up when you pick a number versus relying on the NEC which has hundreds of experts looking at every little detail of how these safety limits are set and relying on that instead. That's what we are asking in a nutshell is if we're going to define how is low voltage low is and the NEC says low voltage is below the 1000v, so this is considered a safety extra low voltage. In those cases, we should be using any NEC definitions not random numbers
- 2.30. Chad stated that's a good point from Jason, if you look at tables 11 (a) and (b) in the NEC those are the Class 2 tables 11a is for AC 11b is for DC. Jason's right the fact that AC voltage can change direction is more dangerous to your heart and therefore has much lower voltage thresholds than DC
- 2.31. Rob asked if that in the Class 2 and Class 3 definition, I want to understand where we are pointing at
- 2.32. Doug mentioned the National Electrical Code is comprised as everyone knows of a multitude of individuals experts in their fields that have worked to design these codes for decades. It just makes the most sense to follow their guidance instead of picking a random target as you know Chad has walked us through. This is something that is updated we have a code cycle that publishes a new version every three years and it's always based on new data changes involved with all the different applications, products, and services. They continue to mature and innovate the products and services for every industry that's affected by these items, he thinks it has always been the smartest approach to follow this guidance that the experts have provided information, on deciding which path makes the most sense and letting them make those recommendations whether it's through the International Code Council through in NFPA or any of the other institutions that are there to do exactly that for all of the members in the trade

- 2.33. Chad mentioned we neglected to add this up-front Doug and I both sit on the code making panel for the NEC, which is the panel that manages this limited lunar energy stuff and the Class 2 and Class 3 definitions. Our chair is your Houston's own Robert Jones, if you have any more questions Roberts a great resource
- 2.34. Rob asked Alex what the process would
- 2.35. Alex stated the process would be once you asked your question and submitted your comments back to The Task Force Group. They would also be able to go to the TFG-4 meeting next Thursday were they can make a 3-minute comments they would ask again on any kind of results or comments that you must provide, then they also could take it to the CCMC and the TFG still stands in their position
- 2.36. Keith stated I'm just going to cut to the chase it allows this kind of work to be done without permit and without a licensed individual. What the amendment was, that was done by the electrical contractors made it were you had to be an electrical contractor licensed electrician to do this kind of work over the limits am I cutting to the chase easily here Chad
- 2.37. Chad replied with no, what happens is the electrical contractor doesn't do the work, they have to these limited energy integrators to go hire a master electrician to simply and solely to pull permits. The electricians don't ever do this work this is always done by a limited energy contractor who have a specific set of training that doesn't match what electricians do in most cases
- 2.38. Keith questioned if their licensures for this work in other states
- 2.39. Chad replied by saying there are limited energy licenses in some other states
- 2.40. Keith stated that would be something you have to do at the state level, in general it is adding a layer of work. What he is understanding is they would have to higher master electrician; he thinks they should show up to the site to supervise the work, but they don't have to. It lags the level of cost to everything. The work that their doing in general like they said it is DC so it's safe work. Unless something came about that started to be an issue with fires or people getting shocked there would be an accession and an emergency change to the code
- 2.41. Chad stated that main technology that is an issue here is POE and there hadn't been any complaints about Class 2 and Class 3 work in Houston until POE started powering lots of things. What that means is every IT install should be permitted and inspected and he has a tough time believing that's happening
- 2.42. Rob mentioned the part he is struggling with is not understanding what the city's take is on whether this work at base level should be permitted or not. He said on an experience level he thinks it should, only because when it comes to Fire Protection and life safety, this type of work is usually the biggest culprit in making penetrations and not maintaining the integrity of the penetrations and fire rated openings, the permit process would catch that. On the other hand, he's with NEC definitions as a marker as a standard and to decide whether there's a level to it. He doesn't think it needs to be a master electrician to do this to work because NEC has set the standard. OSHA has a different agenda and a different take, we're trying to talk about from a code perspective. He said on that hand I would recommend we accept this proposal, but I really would like to understand what's the city is wanting to do on the permitting side. Now it seems like the permitting process forces the Master Electrician license and he doesn't think that's necessary, but he doesn't know how else they would understand. Jason replied it's under the state.
- 2.43. Lewis questioned Chad if they have lobbied the state with these issues
- 2.44. Chad asked on which issues licensing or exemption
- 2.45. Lewis answered with licensing with electrical mechanical contractor or just committee process, have you approached the state and lobbied the state as you're lobbying us to make these changes
- 2.46. Jason Potterf stated that they had some engagement with the state, that there was a change to the state electrical license act that was put forward about five years ago by the Independent Electrical Contractors Association. They sought to completely strike or otherwise kind of mangle the statewide exemption, that the committee did not favorably accept bill. It was seen as additional unnecessary regulation and it did not advance out of committee. He said if you're paying attention to what's going on in the Texas Capitol these last couple of months there's a major push against local regulation in excess of state exemptions, so he think they would be unsuccessful in lobbying that at the state level at this time
- 2.47. Lewis asked if we were to go with the electrical contractors depending on them on accountability and have those guys go out do work as your saying, what accountability can you expect from the city to make sure that you are doing what you're doing in spite of the master electrician not no longer being able to over see

- 2.48. Chad stated that currently there's the exception for 50 volts 50 watts that they say nothing changes, it doesn't get inspected, permitted and there are no issues. He pointed out that it cuts in the middle of Class 2 and Class 3. They are adding a little bit more to the voltage and the wattage to cover all of Class 2 and Class 3 installation practices of the professionals that do this. He stated the people who do this work get lots of training. He supports the desire to want to inspect this is why the amendments that he has next are to set up a way to get a registration to pull permit so they can be inspected but not need to employ a master electrician.
- 2.49. Darren noted the Class 2 and Class 3 power limited circuits being defined in the National Electrical code is constantly updated the UL safety standards also align with Class 2 and Class 3 circuits as well. There's multitude of industry certifications that integrators or limited energy contractors go through along with continuing education to support these systems and the work they do in the field for their customers whether that's on the residential side or the commercial side
- 2.50. Lewis asked what the economic benefits to Cisco would be if we would except your proposal
- 2.51. Chad stated he doesn't think there are any economic benefits to us as we sell a lot of POE regardless of what Houston does the damage would be in Houston. He stated that it has already happened with the Occidental Petroleum headquarters that moved out to one of the lands and they would have to hire a master electrician to come watch the work to be done it was going to raise the installation bill over a million dollars
- 2.52. Lewis mentioned he thought he heard earlier in the conversation that they did not necessarily need to be overlooked
- 2.53. Rob stated what he thinks Chad is trying to say is on a technical standpoint it doesn't need to be oversight so now we're getting into administrative issues of oversight. He said the issue is more about the permitting process and how that gets managed right now, there's a disconnect between what City of Houston will allow and what the technical needs of the exemption. They are out of alignment and if we get rid of it, we change the definition to NFPA that means all goes away from a permitting standpoint. I don't know where the city stands on that because with the technical pointed not based on OSHA standards which is for that other work but for the actual fire hazard and other power has electrical hazard of the workers doing the install of the work and it to the people that are exposed to it because it's installed
- 2.54. Alex noted we put everybody together because all these proposals have similar content it sounds like you wanted to break them up and we've got 20 more minutes left we're going to have to move this forward to the committee next week
- 2.55. Jason questioned Chad if there are other amendments
- 2.56. Chad stated he would withdraw his appeal if we were pushing this one forward. He feels everything they have done has been denied there's no give or there's not even an offer of discussion from the City of Houston side on how we can resolve this the answer is our hands are tied all we can do is enforce to use a master
- 2.57. Doug mentioned he had a meeting with the TFG a couple of weeks back on one of the items that he tried to bring to their attention in order for him to hire a master electrician. He said that he would have to find one that's looking for work and he must disassociate himself with his current job. The way the statutes are written is that he cannot qualify my company which means he cannot pull a permit for my company unless he is a full-time employee of the organization. The only way he can qualify a second business and pull permits other than under the company he's currently registered with is if he owns 50% or more of that second company. Doug stated he works for Comcast and we're not giving up half of the company for permit. What he suspects is there is going to be a burden placed on a lot of organizations to comply with this. Again, the statutes do not allow this, I did encourage them to please go back and look carefully at the rules and regulations. He said that an electrician cannot go just pull a permit for somebody and say good luck and let me know how it works out. They must follow the entire responsibility, which is to be responsible for the work, the contract, the workers on the job site, product of delivery and everything from start to finish. For them just to pull a permit for another company that they're not legally associated with and to allow other people that are unsupervised to perform work is in direct conflict with the intention behind a qualified agent qualifying the company for a scope of work. That's where I have a challenge because the group actually believes that an electrician could just go pull a permit for another low voltage contractor or now the low voltage contractor would now subcontract the whole work to them and then be subcontracted back from the contractor which you can't do because we're not licensed in in that capacity, the state doesn't require it. One thing I will add to what Chad did mention is that depending on what discipline of work you're providing some of these aren't licensed. I don't like to say that some of this work in some regard is not currently licensed or regulated in some regard from the state because it depends on

what you're doing. There are certain things that are clearly defined in the statutes that they are not concerned with regulating at this point of time.

- 2.58. Chad stated Houston does not allow permits to be pulled without a master electrician license, members of the task group claims it can only be remedied by changing Texas Electrical Safety Licensing Act. This act does not actually say who can pull a permanent nor does it say a license is required to pull a permit. Further it promotes municipality to issue a license when an appropriate state license does not exist. He sees no factual basis in the statement the city can't enact the registration or special license to allow integrators to pull permits. We are aware of specialties that don't have the expertise to go inspect these solutions and this was a proposal showed to us by the Chief Inspector of Houston. Chad stated they do have ways to get permits pulled without a master and to get inspected, so this is further negated by the fact that a homeowner can pull a permit with absolutely no credentials for extensive electrical work and then sell that home to someone else at any time. Chads amendment only seeks to formalize method for energy integrators to pull permits without the unnecessary additional expense of employing a master electrician, who has little or no training with Class 2 circuits merely to pull permits. His amendment would ensure that Houston stays competitive with the other Texas cities. He mentioned the other Texas cities don't have permitting they just exempt Class 2 and Class 3 work. Dallas Austin and Fort Worth are the ones he's thinking of that have exemptions for Class 2 and Class 3 work.
- 2.59. Jason questioned when did Dallas change their language, how recent was that change
- 2.60. Jason Potterf answered it was a year and they were adopting the new NEC they had a 30v stop exemption. They had some partners doing installations in the city. They approached the inspection staff, and they agreed that 30 volts was meant to correspond to AC voltage not DC voltage. They were also permitting on a case-by-case basis up to 60v DC. We approached council to codify that, so everyone gets treated consistently and that's where the edit came from
- 2.61. Jason asked if there were any further questions on our side
- 2.62. Rob asked when you said we have to give comments back to the TGG-4, how do we do that? Do we do it verbal here, or do we write it down? What are the next steps here, I have a lot of thoughts on where this should go.
- 2.63. Alex noted next Thursday the TFG is meeting. If they you guys are available to speak to your questions or concerns that would be great. Today we were here for a fresh perspective without hearing the cities. Couldn't you have Jason to answer all questions of the city's perspective?
- 2.64. Rob stated I think do, Doug made a really good point, I totally understand having to go through a process when it comes to licensure at the state level. How the registration must be tied to a company, that's a big deal. He said their two aspects here, there's the technical aspect which I agree with we should point to the technical aspect the second is the administrative aspect of the city wanting to have oversight of this work maybe that's what the issue is, but by doing it they're forcing a process that is completely out of line with the way the state licenses people and businesses. Its causing a huge conflict from an economic standpoint and I don't think that's what the city wants to do, he thinks the city may not understand the bigger context on how the process would work. He is leaning towards excepting the first amendment and to bring it back to the committee that this is technically correct as far as exempt it at the based Class 2 and Class 3
- 2.65. Josh mentioned he agrees with what Rob was saying, he wouldn't have a problem. Being a PE, if somebody comes and asks me to sign their drawing, I consider this similar and there's a good chance I'm not going to do it, I am going to charge a fee. If other cities define this, he believes they are exempting permits and he doesn't mind if its permitted or not, but to him it does seem a bit onerous to require a master electrician to pull a permit. I'm sure Comcast and companies like that have one on staff but not the smaller companies. He agrees with defining systems in a way that consistent with NEC and not having two different definitions that may be consistent in one cycle and then become out of sync again. He thinks having an extra code to define those things saved would allow the city to grow with them as a city. The technical side of it the city can revenue from permits.
- 2.66. Doug stated just to add to this thank you, both gentleman for your thoughts on that, because that's been my biggest struggle with this is that I can't go ask another license electrician to do something knowing the statutes. I can hire somebody sure, but can any other company do that no and certainly regardless that's going to pass through to the consumer if I am adding a cost to my overhead per work that must be reflected in my upfront economics to the consumer. Trying to employ someone statue standpoint the only way he can do this is hire a master electrician, put them on staff and then he's going to be supervising work that he may not even understand

but that's a different story with a few years of training that can be worked through. He said we have the expertise in our group we just don't have a way to pull a permit under the way they proposed it.

- 2.67. Keith stated in general he's in favor of this and he thinks that we need to investigate with the state at some point you know produce some kind of licensure for work maybe if it is worth half a million dollars or is commercial, they would need a permit. Residential I mean it should be done I would speak in favor of it.
- 2.68. Jason concludes the meeting by asking if anyone had any other remarks and stated he thinks everyone has had a chance to speak that wanted to speak . everyone's going to change the chance to speak they wanted to speak. Thank you for your time, we appreciate it. He noted one more time that the TFG-4 will be meeting on Thursday at 10:30 a.m. CST. We will be discussing what we talked about in here with them on Thursday, May 11, 2023.
- 2.69. Meeting Adjourned at 9:52 a.m.

Statement of Confidentiality

## Meeting Minutes

Meeting Title:	City of Houston Code Modernization Project Task Force Group 4 (TFG-4)		
Date/Time	May 11, 2023 10:30 am CDT	Chair/Leader	
		Facilitator	Jason Johnson, JH
Meeting Location:	Conference Room B2; and MS Teams	Recorder	Jason Johnson, JH

ATTENDEES: (P-PRESENT A-ABSENT)		ATTENDEES:	
Roel Garcia, CoH Code Enforcement	P	Joshua Hollub, Modern Plumbing Delegate IAPMO – TFG-4 Co Chair	P
Merle Neville, CoH Building Code Enforcement (BCE)	P	Christina Kaeni IAPMO – Alternate Vice Chair	P
Don Rabel, NECA – Delegate, TFG-4 Co-Chair	P	Carlos Flores, CoH Plumbing Inspections TFG-4 Co-Chair	P
Richard Anderson, PMG Technical Resources / ICCS – Co-Chair	P	Alex McCray, CoH-CCM	P
Avani Mehta, CoH CCM	P	Heath Wierck, CoH-CACD	P
Armando Lozano, IEC	P	Lucia Chavarria, CoH-CACD	P
Carlos Rubiano, CoH HPC CACD	P	Bruce Lambright, HPC-CACD	A
Charles Rodriguez, CoH Plumbing Inspections (Alternate TFG-4 Co-Chair)	A	Jason Johnson, Jensen Hughes	P
Lewis Bennett, CoH CCM Division Manager	A	Nikeshia Smith, Jensen Hughes	P
Ron Lord, Southwest Pipe Trades Association	P	Geoffrey Conner, CoH Plan Review Div. Mgr.	P
Darren Reman CEDIA, Director of Government Affairs	P	Peyton Hill, ABC Greater Houston	A
Kris Zimmerman, Director M.E.P, University of Houston D.T	P	Robert Montanez, CoH Assist. Chief Inspector, Mechanical	P
Josh Jordan, MCA Houston	P	Bradley Elliott, Houston BOMA	P
Chad Jones, National Systems Contractors Association (NSCA), Principal Engineer, Cisco Systems Chair, IEEE P802.3da Task Force Principal, NFPA 70 CMP3	P	Jesse Mendoza, CoH Plan Review	P
Joplin Ford, CoH Electrical Review	P	Helene Weiss, CIC-IEC	P
Robert Jones, IEC	P	Robert Hicks, SFPE	P
Soledad Saenz, HPC-HPW	P	Douglas Bassett, Electronic Security Association	P

ATTENDEES: ( P-PRESENT A-ABSENT)		ATTENDEES:	
Jason Potterf, NSCA	P	Josh Jordan, MCA Houston	P
Joseph Lee, CISCO	P	Keith Reihl, USGBC / Energy Code Co-Chair	P

1. Jason convened the sixth meeting of TFG-4 at 10:30 am
  - 1.1. Introductions were made, with those joining by MS Teams asked to identify themselves with their organization in the Chat.
2. Jason reviewed the Houston Public Works mandate for this code adoption, which is to adopt the 2021 Code Editions as a base code with local amendments that:
  - Help strengthen and ensure long term sustainability and resiliency in Houston.
  - Do not reduce the fire- or life-safety provisions without providing an equivalency to what is found in the base code; and
  - Comply with the intent of the code in quality, strength, effectiveness, fire-resistance, durability, and safety for the purpose intended.
  - Chapter One is for the Legal Department only. Amendments are excluded from submission.
3. Jason noted the minutes from the 04.27.23 have not been finalized but will be distributed shortly.
4. Discussion on Proposed Amendments:
  - 4.1. TFG-1-053A
    - 4.1.1. Jason noted the Proposed Amendment was distributed in the Meeting Invitation and is related to drinking fountain requirements; and identified Brad Elliott with BOMA is in attendance to discuss the proposed changes stemming from the Resolution Committee Meeting.
      - 4.1.1.1. Brad introduced himself and BOMA, the trade association representing Commercial Real Estate Building Owners and Managers. He detailed the history of the exemption permitting the removal of drinking fountains in these spaces and noted that, with the change from “or” to “and” in the Code, there is a requirement to include drinking fountains in renovated construction, which BOMA feels is unnecessary, and would like other potable water choices. He shared the options that were presented to TFG-1 including language from IPC Section 410.
    - 4.1.2. Keith motioned to Approve TFG-1-053A, seconded by Kris Zimmerman
      - 4.1.2.1. Heath clarified that the CoH is amenable but needs to figure out where the language should go, with a recommendation to likely add to Section 29 of the Building Code Amendments
        - 4.1.2.1.1. Rich Anderson suggested 2902.5 – perhaps 2902.5.1
        - 4.1.2.1.2. Keith questioned the need to address health and safety issues having to do with public drinking fountains; to which Rich responded with 2024 IPC code development committee denied proposals put forth dealing with lessening the number of drinking fountains for public access due to COVID / Pandemic response.

- 4.1.2.1.2.1. Keith asked if there is an option for a potable water fixture for lessening the transmission of infectious diseases? The suggestion of bottled water dispensers was mentioned, which was noted as included in the options, and that it would be plumbed into the system (not a stand-alone / contract water system).
- 4.1.2.1.3. Heath noted Section 2905 of the IPC may not be the appropriate section to add language; with a recommendation to add a new Section 2904 and add the language from 2021 IPC Sections 410.1, 410.3, subsections, 410.4, and 410.5. 410.2 would not be included as this is covered in IPC Section 2906, and footnote in Table G would not be included. New Section will be renumbered as IPC Section 2904.
- 4.1.2.1.4. There was clarification among attendees as to what language would be added to the IPC; and the exception desired by BOMA. It was clarified that a substitution is being proposed, not an exception, that is still plumbing into the building, as TFG-1 desired.
- 4.1.2.1.5. Carlos Rubiano confirmed that drinking fountains are still required in existing high-rise buildings, per base code, to comply with accessibility requirements, making the minimum amount of drinking fountains per floor 2.
  - 4.1.2.1.5.1. Carlos Flores further clarified that typically in the planning part of high-rise construction, bi-level drinking fountains are included in the core plumbing plans, along with restrooms; so the requirement mentioned in 4.1.2.1.5 would be satisfied.
  - 4.1.2.1.5.2. Brad raised the question of whether the requirement for drinking fountain(s) stands if tenant space(s) offer potable drinking water? After discussion, it was resolved that, because of accessibility requirements, the drinking fountain(s) requirement would stand; however, Rich Anderson noted travel distances in the IBC and drinking fountains, based on the occupant load, could be served by one-floor-above and one-floor-below requirement; and Carlos Flores agreed UPC also notes this arrangement.
    - 4.1.2.1.5.2.1. Rich further identified that Chapter 11 of the IBC can be used for reference to number of accessible drinking fountains required, which is 50%.
- 4.1.2.1.6. Heath commented that, if the multiple-story resolution in 4.1.2.1.5.2 above, satisfies BOMA, it would be resolved to move forward with moving 2021 IPC Sections 410.1, 410.3, subsections, 410.5, and 410.5, and the definitions to new IPC Section 2904.
- 4.1.2.1.7. Rob pointed out that, based on these discussions, he understands that water fountains are going to be required; while Brad clarified substitutions are acceptable and the floor-above and floor-below requirements for drinking fountains may suffice.
- 4.1.2.2. Jason identified Motion on the Floor to APPROVE TFG-1-053A to include IPC 2021 edition Sections 410.1, 410.3, subsections, 410.4, and 410.5, and the definitions to new IPC Section 2904.
  - 4.1.2.2.1. Rich posed a question to Carlos Flores related to Section 415.0 of the UPC additional language pointing to IPC Chapter 29? Carlos Flores responded that this would be a good idea; and Heath agreed 415.0 of the UPC should be amended to clarify and reference the new language in IPC Section 2904.

4.1.2.2.2. Alex noted this modification to the Proposed Amendment and Jason agreed.

**4.1.2.3. VOTE TO APPROVE TFG-1-053A TO INCLUDE AMENDMENT TO UPC SECTION 415.0 – PASSED WITH NO OBJECTIONS**

4.1.3. TFG-4-007A, TFG-4-008A, TFG-4-009A, TFG-4-004A, AND TFG-4-005A

4.1.3.1. Jason noted Resolution Committee with proponents of these Proposed Amendments, made up the electrical community. Following the meeting, Resolution Committee further researched and it was resolved that the Committee agrees with Proposals.

4.1.3.1.1. Rob noted the remaining question (was) the argument for having the permit for the work identified; as long as it meets the technical requirements of NFPA 70.

4.1.3.1.2. Rich posed a question as to Proposal Proponents, as to which Proposed Amendment would be kept for consideration. Rob responded that, if the issue on the permitting side, Resolution Committee is amenable to accepted the first Proposed Amendment, which was the exemption language for the permit. If the first Proposed Amendment is approved, the rest would be withdrawn.

4.1.3.1.2.1. Chad clarified TFG-4-004A and TFG-4-005A are the same proposal, so if TFG-4-004A is accepted, the rest would go away.

4.1.3.1.2.2. Merle noted a desire to clarify a few issues:

4.1.3.1.2.2.1. The suggestion of adding another layer to the permitting process by having to hire a Master; which Merle does not agree with, as electrical contractors are currently doing this work have a Master and are registered electrical contractors with the State of Texas ~ this is not a required addition.

4.1.3.1.2.2.2. Noting the suggestion that a Master License should not be required because that individual would just be standing around, not really knowing what (s)he is “mastering”, without years of training; Merle made the point that, by virtue of holding a Master license, the Master Electrician should know what (s)he is overseeing, and it would not make sense for the City to exempt the work from being done by less qualified contractor(s).

4.1.3.1.2.2.3. Regarding the project that was moved to the Woodlands with the reasoning being the ability to utilize less-skilled or cheaper labor, it was suggested that project has not been properly inspected (by The Woodlands), rather the Builder’s Insurance Company and/or Third Party have inspected.

4.1.3.1.2.2.4. Merle agrees with the statement that an electrician cannot purchase a permit for another company, and that this does not occur in the City.

4.1.3.1.2.2.5. State Law does allow for an Individual Master Electrician to pull a permit to oversee work done by his/her unlicensed employees, which aligns with State Law.

4.1.3.1.2.2.6. The City has a current ordinance that a Master Electrician may only serve (work for) one company at a time.

4.1.3.1.2.2.7. The City will not sell unlicensed homeowners electrical permits.

- 4.1.3.1.2.2.8. With regard to Houston not being in alignment with Fort Worth or Austin, these jurisdiction's wording is not the same as Houston's, as has been brought up three times. These jurisdictions exempt under 35 volts and 50 watts do not identify "power-limited circuits"; Houston is less restrictive. The concern with POE was not brought up at the Resolution Committee Meeting.
- 4.1.3.1.2.2.9. The Committee was told that the City is not in line with the State on exemptions ~ the City does not require a license for individuals pulling a wire design, which is in-line with State requirements, as the State does not address permitting.
- 4.1.3.1.2.2.10. Houston adopts the NEC, NFPA 70E, OSHA and is in alignments with these requirements.
- 4.1.3.1.2.2.11. Dallas, Fort Worth and Austin Chiefs have all confirmed with Merle that Master Electricians are required for POE work, and Merle questioned if the proponents understand or are operating otherwise?
  - 4.1.3.1.2.2.11.1. Kris questioned the permitting oversight, having heard nothing from that State (State Office of Risk Management) and questioned if this will also move to low-voltage for elevators; to which Merle stated nothing is changing and the ordinance will stay as-is. When questioned by Kris as to the justification of the permitting process for the private building Owner, Merle responded that it is electrical work and needs to be done in a safe manner. The ramifications of exempting the requirement causes safety issues.
  - 4.1.3.1.2.2.11.2. Jason Potterf submitted that the vast majority of communications cable installed in Houston is being done by low voltage integrators who do not pull permits, because they do not have a Master Electrician on staff; and this is true in Austin and Fort Worth. He submitted that the Chief Inspectors in these Cities are unfamiliar with the technology that there is not a clear understanding of the exceptions. Merle responded that he does not find these Chiefs to be unfamiliar or unknowledgeable in this area.
- 4.1.3.1.2.2.12. There was discussion surrounding other jurisdiction's understanding (or lack thereof) requirements and exemptions for permitting and inspecting this work; along with the Standards (NEC, NFPA-70E and OSHA), and clarification of intent and language.
  - 4.1.3.1.2.2.12.1. Chad pointed out that if POE is required to be inspected, every single IT install will require permitting and inspected.
- 4.1.3.1.2.2.13. Rich Anderson asked Merle about licensing of firestop contractors; to which he responded that Structural Permitting would oversee that; enforcing Chapter 17 Special Inspections. It was confirmed that the firestop licensing is not required in TX, and that periodic inspections of firestopping are done.

4.1.3.2. Rich made a Motion to Approve TFG-4-004A, seconded by Chad

4.1.3.2.1. Merle questioned Chad regarding a project in Fort Worth that is exempt from POE licensing, which Chad confirmed; and it was further identified that the City of Fort Worth has awarded a Grant for the project, proving it has not slipped under the radar.

4.1.3.2.1.1. Jason Potterf clarified and confirmed that, for this project, building, electrical, mechanical, and life safety work were all permitted and inspected, but there was no permit required for Class 2 and Class 3 circuits. He further submitted that the “Class 2” and “Class 3” verbiage covers the totality of the circuits that include Class 2 and Class 3, and that Class 2 is the gold standard of safety.

4.1.3.2.2. Rob reviewed the language from Fort Worth and Austin, which is an exemption for power-limited circuits meeting the Class 2 and Class 3 definition; which by definition in NFPA Class 2 and Class 3 are power-limited circuits; pointing out that the due diligence has been done by the Task Force and Resolution Committee to ensure the Standard of Care.

4.1.3.2.2.1. Merle noted that it would be his desire to leave the Ordinance and Base Code the same as it is now.

4.1.3.2.3. Rich suggested a Roll-call Vote for this particular Proposed Amendment, which Jason Johnson conducted:

4.1.3.2.3.1.1. Jason reminded attendees of the voting rules, including:

- One vote per organization
  - Those joining on line should identify their vote in the chat
- |  |                       |   |    |
|--|-----------------------|---|----|
| - Ron Lord, Southwest Pipe Trade Association - | Against               | / | NO |
| - Merle Neville, CoH -                         | Against               | / | NO |
| - Don Rabel, NECA -                            | Against               | / | NO |
| - Carlos Flores, CoH                           | Against (not counted) |   |    |
| - Armando Lozano, IEC -                        | Against               | / | NO |
| - Jesse Mendoza , CoH                          | Against (not counted) |   |    |
| - Carlos Rubiano, CoH                          | Against (not counted) |   |    |
| - Alex McCray, CoH -                           | Abstain               |   |    |
| - Luccia Chavarria, CoH -                      | Abstain               |   |    |
| - Heath Wierck, CoH -                          | Against (not counted) |   |    |

Rich questioned the amount of CoH votes, to which Heath responded that Merle Neville will cast the formal vote for the CoH, which will serve as CoH’s one vote.

- |                         |                   |   |     |
|-------------------------|-------------------|---|-----|
| - Josh Hollub, IAPMO -  | Against           | / | NO  |
| - Keith Reihl, USGBS -  | For (not counted) |   |     |
| - Chad Jones, NSCA -    | For               | / | YES |
| - Rich Anderson, ICC -  | For               | / | YES |
| - Darren Reaman, CEDIA- | For               | / | YES |

- Kris Zimmerman, UofH / BOMA - Against / NO
- Doug Bassett, Electronic Security Assoc. - For (not counted)
- Roel Garcia, CoH Against (not counted)
- Geoffrey Conner, CoH - Against (not counted)

**4.1.3.2.3.1.2. VOTES WERE TALLIED, WITH 6 NO AND 3 YES – TFG-4-004A REJECTED**

4.1.3.2.3.1.2..1. Alex stated TFG-4-004A will not move forward to the CCMH as an approved amendment, and he will get back with the Proponents as to next steps.

4.1.3.2.3.1.3. Jason asked if the subsequent Proposed Amendments should be discussed, to which Rich responded no.

5. Jason asked if there was any further discussion points

5.1. Alex identified the 30-day Public Notice for the Running Documents – everything approved so-far that will be submitted to City Council – are online. With that, we should plan for this Task Force Group to meet over the next few weeks.

5.2. Avani noted that this week’s CCMC Meeting has been cancelled.

6. Meeting adjourned at 12:04 pm

## Meeting Minutes

Meeting Title:	City of Houston Code Modernization Project Construction Code Modernization Committee Meeting # 6		
Date/Time	May 19, 2023 2:00 pm CDT	Chair/Leader	Jason Johnson, JH
		Facilitator	Lewis Bennett, CoH
Meeting Location:	Conference Room B2; and MS Teams	Recorder	Jason Johnson, JH

ATTENDEES: (P-PRESENT A-ABSENT)		ATTENDEES:	
Lewis Bennett, CoH CCM Division Manager	P	Sally Acorn, Council Member At-Large Position 5, City of Houston	P
Byron King, CoH Building Official	P	Carlos Rubiano HPW-HPC	P
Cindy Giedraitis, National Fire Sprinkler Association	P	Diana Caicedo – Chief of Staff, Council Member David Robinson, At-Large Position 2, City of Houston	P
Alex McCray, CoH-CCM	P	Jason Johnson, Jensen Hughes	P
Avani Mehta, HPC-HPW	P	Todd Oliver, Jensen Hughes	P
Jim Clark, CoH-Chief HFD	P	Nikeshia Smith, Jensen Hughes	P
Heath Wierck, CoH-CACD	P	Carlos Flores, CoH-HPC-HPW	P
Brian Crimmins, Mayors Office	P	Ashley Baird, NSCA	P
Lucia Chavarria, CoH-CACD	P	Bill Carey, Senterra	P
Rick Nordquist, CoH-BCE	P	Rob Hicks, SFPE	P
Merle Nevill, CoH Electrical Inspections – TFG-4 Co-Chair	P	Randy Plumlee, SPEER	P
Walter Morris, KLP	P	Bradley Elliott, Houston BOMA	P
Devin Robinson, NCARB	P	Don Rabel, NECA – Delegate, TFG-4 Co-Chair	P
Scott Becker, Houston BOMA	P	Sheila Blake, SBC	P
Ron Lord, SWPTA	P	John Mata, IAPMO	P
Patti Joiner, Kundson	P	Genesis Morales - AIA Houston	P
Heather Hinze, New Hope Housing	P	Jordan Kari, Water Quality Association (WQA)	P
Jeff Nielsen, ABC	P	Joseph Lee - Cisco System	P
Ryan Slattery, HCFCD	P	Mike Crowley, SFPE	P

ATTENDEES: (P-PRESENT A-ABSENT)		ATTENDEES:	
Stephen Klimas, Lovette Commercial	P	Josh Jordan, MCA Houston	P
Rick Blunter, ICC	P	Armondo Lozano, IEC	P
Robert Ruhstorfer, WQA	P	Randy Macchi, HPW	P
Kevin Verges, Houston Habitat	P	Scott Reiley, HAC	P
Christina Kaeini, IAPMO – Alternate Vice Chair	P	Keith Reihl USGBC	P
Douge Bassett, Electronic Security Association	P	Kevin Mcosker, ICC	P
Garth Williams, PDR	P	Solie Saenz, HPW HPC-CACD	P
Darren Reaman, CEDIA	P	David Davies, Texas Water Association	P
Richard Anderson, PMG Technical Resources / ICCS – Co-Chair	P	Rick Lord, UAPP 68	P
Robert Jones, NEC Panel 3 Chair, NEC Code Changes	P	Monica Enamorado, BASF	P
Lesley Garland, ICC	P	Chad Jones, NSCA	P
Nathan Washington, HCD	P	Rob Hicks, SFPE – Co-Chair	P
Jason Potterf - NSCA Alternate	P		

1. The 6<sup>th</sup> meeting of the City of Houston Construction Code Modernization Committee (CCMC) commenced at approximately 2:00 p.m. CDT.
2. Lew Bennett opened the meeting by welcoming everyone to the CCMC # 6 reviewing the rules and regulations to make sure everyone’s heard during the meeting without interruptions during the process of everything on the agenda
3. Lew introduced the Panel:
  - Council Member Sallie Alcorn, At-Large Position 5, City of Houston
  - Byron King, CBO, Building Official at City of Houston
  - Rob Hicks, Co-Chair of the CMC Resolution Committee
  - Lewis Bennet, Division Manager of Construction Code Modernization Project
4. In-person attendees were invited to introduce themselves, and attendees joining via MS Teams were asked to identify themselves and their organization in the chat
5. Jason Johnson welcomed all and reviewed the Houston Public Works mandate for this code adoption, which is to adopt the 2021 Code Editions as a base code with local amendments that:
  - Help strengthen and ensure long term sustainability and resiliency in Houston.
  - Do not reduce the fire- or life-safety provisions without providing an equivalency to what is found in the base code; and

- Comply with the intent of the code in quality, strength, effectiveness, fire-resistance, durability, and safety for the purpose intended.
  - Chapter One is for the Legal Department only. Amendments are excluded from submission
6. Meeting minutes were distributed from the last week's CCMC meeting #5, they were distributed as part of the invite. In the minutes were the tabulations of the votes from last meeting as well for each of the proposed amendments. I believe all of the proposed amendments from last meeting were approved, with no exceptions
- 6.1. Jason asked if there are any comments from last week's CCMC # 5 meeting minutes
- 6.2. Jason asked if there were any further comments, hearing none
- 6.3. **Meeting minutes are approved as distributed**
7. Today we have one proposed amendment and one amendment that's being put forth by the Resolution Committee and the Task Force Group.
- 7.1. Jason reviews the voting process for the meeting today by stating here in the room we have ballots that have been provided for you. The ballot forms you will fill out are being handed to those who can vote. Online there will be a poll pulled up in the chat, if you could put your name and the number of the proposed amendments in the poll, prior to you selecting how you will vote and then submit. You will have 30 seconds to vote then the voting will close. There will be only one vote for each organization
- 7.2. Jason asked if there were any questions regarding the voting process, hearing none
8. Proposed Amendments
- 8.1 Proposed Amendment TFG-1-053A originally was rejected by the Task Force Group the proponent asked it to be reviewed by the Resolution committee. Resolution Committee reviewed the proposed amendment and discussed with the proponent of any additional information or revisions to the proposed amendment. It was discussed that compromise that the opponent requested information to be pulled over from the International Plumbing code as opposed amendment for drinking fountains and locations along with certain exemptions for drinking fountain locations. It was then sent back to the TFG-1 and approved as modified as you as see here, this was also distributed in the invite.
- 8.2 Byron King questioned if this is the approval or one that was sent in
- 8.3 Jason stated this is the proposed amendment we will be voting on, and we need a motion to open up the discussion
- 8.4 Motion put forth for discussion by Byron King
- 8.5 An attendee had a comment and suggested on 2904.2 it says drinking fountains shall be provided according to the sections 410.3.1 and 410.3.2. I think that should be changed to either say IPC sections or you could just change it because it's the same wording to 410.3.1 and 410.3.2, just for clarification.
- 8.6 Jason mentioned in order for this to fit properly into the City of Houston Amendments section 410 was that it had to be changed to 2904.2.2 of the Houston Amendments for a more logical location for that. What he is asking is if you see here 2904.2.2 and it's referencing section 410, that needs to be modified as well and there might be other areas too to be stated
- 8.7 Rob Hicks stated those sections would have to be modified to reference whatever the requirement is from which ever Plumbing code. He stated its more likely they would work that out in the resolution, but it would say in accordance with the Houston plumbing code.
- 8.8 Garth Williams questioned if this has to be modified once again, does that prevent us from approving this today with those markups? Because that's a technical change, not really an interpretation change
- 8.9 Sheila Blake mentioned it's not a technical change, it's an administrative change it was an error

- 8.10 Rich Anderson, co-chair for the TFG-4, mentioned per his recollection of the TFG-4 meeting was that he personally made a request for a floor modification on this particular code proposal to include changes to Section 415 of the UPC and put a pointer in to this new section within the Houston Plumbing Code. I don't see those code changes within this proposal that staff has approved. I would also like to further recommend that maybe we look at the definition of drinking fountain in the UPC and reference this new definition. The UPC does not have water cooler definitions or water dispenser definitions in it. What we don't want to do is create conflict between the City of Houston Plumbing Code and the City of Houston Building Code. So, could staff please elaborate why that floor modification is not being presented here today as part of this package as approved by TFG-4
- 8.11 Heath Wierck noted we have worked on that language, I apologize Rich, that it's not on this form. Yes, we did agree that a basically a pointer would need to be put into 415 of the UPC that points back to this. That was a very good point though on the definitions and the UPC, we might want to include language in the drinking fountain definition that gives the pointer back to just so that there's no inconsistencies and we have correlation between the two codes.
- 8.12 Richard Anderson stated great, you know as co-chair for TFG-4, I don't mind because it was approved if staff agrees to bring it to the CCMC at a later date for them to approve those UPC changes. Does the staff think we the TFG needs to review those proposed changes before coming to the CCMC? I don't know if any other TFG-4 members are on and have an opinion.
- 8.13 Jason made a recommendation, we would be providing an addendum to the code which will have all that language correctly in there identified from both the IPC, UPC and IBC. We can review it as a group at that point moving forward as an addendum, and not have to necessarily bring it forward to have another CCMC meeting to discuss what's more of an administrative item and not a Code.
- 8.14 An attendee asked is it one of those changes that you can see to the common code to be reviewed, the CCMC will be reviewing the common code modifications and that are even possible.
- 8.15 Richard Anderson stated thank you for that clarification, Jason. I appreciate that and I would assume that all of the language would be in the final approval of the amended packet that this, committee will ultimately approve, correct?
- 8.16 Jason confirmed that is correct
- 8.17 Jason asked if there were any further discussion? Is there a motion on the floor?
- 8.18 Bill Carey puts forth a motion to approve amendment as modified seconded by Mike Crawley
- 8.19 Jason asked if there were any further comments, hearing none
- 8.20 Jason reminded the voters online to put their name and proposed amendment TFG-1053A for the poll in the chat. He informed that some of the voters may not have access to the poll because of the firewalls from their company, so if they could type their name and the way they are voting in the chat function so it can be recorded that way.
- 8.21 Jason stated times up, voting is now closed.
- 8.22. VOTE WAS TAKEN TO APPROVE TFG-1-053A AS MODIFIED WITH IN PERSON BALLOTS AND ONLINE POLL**
- 8.23. TOTAL VOTING RESULTS - 24 APPROVED, 0 DENIED, 3 ABSTAINED**
- 8.24. PROPOSED AMENDMENT TFG-1-053A – APPROVED**
9. Jason moves on to the next item with regards to TFG-4-05A with low voltage. This proposed amendment was reviewed by TFG-4, it was rejected by TFG-4. the proponents requested that the proposed amendment be sent to the Resolution Committee. They met with Resolution Committee, discussed it, took it back to the TGF-4 for review again with additional information. It was again rejected from the TFG-4, the proponents then requested that it be put forth to the CCMC for further review.

- 9.1. Jason stated that the proponents will have 15 minutes to discuss the proposed amendment. Once the 15 minutes are up, we will be timing them as well. They will have 20 minutes for a question and answer after that they will have an additional 10 minutes for further discussion. When the time is up, we will be asking for a motion. I Believe the proponents are online and ready to speak. Who will be speaking first?
- 9.2. This is Darren Reaman CEDIA; I'll start on behalf of CEDIA. Thank you for hearing on this Class 2 and Class 3 amendment. CEDIA represents residential integrators who provide technology in the home and work with many different technology systems and support this Class 2 and Class 3 amendment before you. Some key points on the amendment of the Class 2 and Class 3 recognizes the importance of the National Electrical Code and the safety of Class 2 and Class 3 circuits defined by the National Electrical Code. Class 2 and Class 3 products are listed to ensure conformity to the safety requirements that ensure safety from a fire initiation standpoint and provide protection from electrical shock. Houston's current 50 Volt, 50-Watt exemption does not properly align with the National Electrical Code definitions for Class 2 and Class 3 circuits and the tables that support these definitions. The 50 Volt 50-Watt exemption currently in Houston will force integration firms to hire a master electrician on staff with an increased cost for projects for Houstonians throughout the city. The code making panel for the National Electrical Code are made-up of national experts that stay up to date with the technology trends and the latest practices for safety initiatives and issues for commercial and residential projects and thus the importance of aligning to the National Electrical Code.
- 9.3. Darren Reaman then stated this is reviewed every three years on a continuous cycle and its safety is at the forefront of each addition of the National Electrical Code for safety practices in the field. One other point I'd like to make is throughout this process it has been repeatedly stated that the State of Texas only exempts Class 1, 2, and 3 licensing. This is not the case currently; Houston code contradicts the state of Texas. The Class 2 and Class 3 amendment is needed to update Houston's code to the State of Texas and other cities throughout Texas. I appreciate everyone's time and attention on this important matter, and I'll let the other proponents speak.
- 9.4. This is Chad Jones with NSCA to expand on what Darren said, for Class 2 and Class 3 circuits, I sit on the National Electrical code panel that covers those. You're Robert Jones there in the room there, he's my code making panel chair and he's very familiar with these things. The thing about the Class 2 and Class 3 circuits, there's definition in National Electrical Code that covers not just a voltage and a wattage, it's a range of voltages and wattages, it covers them A/C versus DC. So, a 50 Volt A/C signal is not necessarily a safe signal versus a 50 Volt DC signal. At a minimum the Houston code needs to change to find a number for A/C and a number for DC. He stated we are saying you don't need to do that because if you use Class 2 and Class 3 the numbers are already there in the table. We have a markup of the Class 2 and Class 3 tables from the NEC tables 11A and 11B if you'd like to see that, one can show it. If you just take my word for it, there is 17 different permutations that cover voltage ranges and current ranges. The major limits that we talk about is a 60 Volt maximum voltage for anything that could deliver 100 watts, that's on the DC side and on the A/C side is 30 volts.
- 9.5. Chad then stated if you look on the chart you can see the top table is for A/C, the bottom table is for DC. At the top you'll see the first two green shaded squares, those conform to Houston's restrictions but everything that has a red in them doesn't comply. If you look the columns define the permutations, there's not one permutation that complies with the Houston restrictions. Houston's restrictions cut right in the middle of what the National Electrical Code defines as safe circuits, safer shocks for human shock and safer fire initiation. Darren also had alluded to; they get listed by UL and that's how we go confirm the safety and I don't think I need to be lather much more so I will pass my time on to the next person.
- 9.6. Jason Potterf introduced his self and began with I am also a principal on Code making Panel 18 which overseas low voltage lighting and a few other issues within the NEC, and I'm also an Electrical engineer. We're here today appealing because during the TFG-4 meetings, Merle Neville presented a narrative and Merle is from HPC. That stated that Houston is highly permissive with its 50 volts and 50 watts, that Fort Worth, Austin, and Dallas do not exempt Class 2 and Class 3 circuits, and that the status quo in Houston is that electrical contractors are pulling permits for Class 2 circuits and his office inspects them. Every one

of these statements is verifiably false. Hearsay is defined as the report of another person's words by a witness, which is usually disallowed as evidence in a court of law. Merle's claim that Fort Worth, Austin, Dallas require permits for Class 2 and Class 3 was made based on his phone calls to inspectors, which is hearsay. We have provided you with PDF copies of the governing city codes which clearly exempt NEC define Class 2 and Class 3 circuits or in Dallas case DC circuits under 60 Volts. Merle claims that the language around the Austin Fort Worth exemptions isn't exactly the title of NEC Article 725 and so they must refer to something else, but I'm here to tell you it's a simple transcription error made when copying the Texas State license exemption to the city codes. At the core of each city's exemption is Class 2 or Class 3 circuits as defined in the electrical code, anyone familiar with the NEC will tell you there's only one Class 2 and Class 3 circuit definition in the NEC, and it's located in Article 725. These are the same circuits exempted at the state level, which does exactly copy the article title, claiming that the city's invented a new circuit type that does not exist in the NEC, despite saying as defined in the Electrical Code, makes absolutely zero sense.

- 9.7. Jason Potterf continued with stating Merle also claimed that the Dallas clause stating does not include generating or transforming equipment means that Poe isn't included because the Dallas inspector told him so. If this were a court of law, Merle's secondhand report would be thrown out as hearsay. However, this is not a court of law and we're happy to report that we also made some phone calls. I contacted the Dallas permitting office who confirmed that does not include generating or transforming equipment. Prefers to control circuits for high-powered A/C generators and large A/C transformer equipment which is a part of the building high voltage electrical system. They reconfirmed that a 55 Volt DC camera system such as a Poe camera system does not require a permit in the city of Dallas. I contacted real estate developers in the DFW area, could do business in Fort Worth and Dallas and conferred that while they do obtain permits for all high voltage work, they aren't required to obtain a permit to install Class 2 and Class 3 circuits, consistent with the state law. I also contacted no fewer than 4 low voltage installers in the Houston area who all advised me when I was stating I would be a potential customer that permits are not required for Ethernet cable and confirmed that they do not pull permits on.
- 9.8. Jason Potterf mentioned failure to approve this appeal would not maintain the status quo. They would force these companies to continue to operate in a gray area and if ever consistently enforced by HPC, the Houston exception language would force these companies to all hire master electricians or go out of business. The latter is more likely as master electricians are in short supply, they typically own their business and do not work for another company. So, while I appreciate Merle's due diligence, his research method was skewed unreasonably, expect accurate information on when a permit is required from inspectors. After all, they're only involved after a permit is issued. We have ample evidence that Texas cities do not require permits for Class 2 and Class 3 circuits, which is consistent with the state level license or exemption.
- 9.10. Jason asked if there were any further discussion from the points
- 9.11. Joseph Lee with Cisco Systems stated we engage with City of Houston on their policy of not exempting Class 2 and Class 3 circuits which are exempt from state licensure. Houston currently requires a Master Electrician licensed by the State of Texas to obtain a permit to install these circuits, which has the effect of Houston requiring your state Master Electrician's license to do work with Class 2 and Class 3 circuits. This is clearly with the Texas Occupations Code, Title 8, Chapter 1305, otherwise known as the Texas Electrical Safety and Licensing Act. This state law clearly says that Class 2 and Class 3 circuits are exempt from state licensure attempts to alter this exemption.
- 9.12. Joseph Lee continued stating in attempts to alter this exemption in 2019, were met with little interest by the Texas State legislature to impose further limits on commerce. Most recently, House Bill 2127 amends the entire Texas Occupations Code, of which the Texas Electrical Safety and Licensing Act is a part, to include the following language unless expressly authorized by another statute, a municipality or county may not adopt, enforce, or maintain an ordinance order or rule regulating conduct in the field of regulation that is occupied by provision of this code. An ordinance, order or rule that violates this section is void, unenforceable, and inconsistent with this code. While this bill has not yet been signed into law, it appears

likely to pass if passed, Houston's position of requiring a state masters electrician's license to obtain a permit for class work on Class 2 and Class 3 circuits could be constructed, construed to be covered by this law. Further, this could invalidate the whole of the Houston Electrical Code as the way the law is written and avoids the entire ordinance, not just the conflicting provision.

- 9.13. Jason mentioned you still have three and half minutes, if you have any further discussion opponents.
- 9.14. Jason Potterf stated if Doug isn't present, I'll just add two more points when trying to justify the 50 Volt, 50-Watt limit. OSHA was referred to as was the International Residential Code. The International Residential Code has a 50-Watt limit, but it's designed for residences and that particular exemption was meant for doorbells and has not been updated in a very long time. As we all know, we are putting much more high-tech equipment other than doorbells including video doorbells and camera systems and simply IRC has fallen a little bit behind. OSHA also has a limit for 50 volts, it is for guarding, and this is meant for when you have to work on a circuit without de energizing it. The beauty of a Class 2 circuit is they're usually very easy to de energize. In fact, power over ethernet has a feature that automatically de energizes the circuit when a device is unplugged, making them among the safest Class 2 circuits.
- 9.15. Jason mentioned you have two minutes Doug if you would like to speak
- 9.16. Doug Bassett stated he appreciated the opportunity to speak before the group. I'm hoping that Darren and Jason have already had an opportunity to present the language that we'd like to have the requirements pended to what I would like to speak about. Separately, because I think we're all in alignment on the adoption of 2023 specific reference to Class 1, 2, and 3 circuits are in alignment with the Texas statutes. My thoughts were more around how we would be able to have a Master Electrician pull a permit for my organization without hiring a Master Electrician as a fulltime employee based on our interpretation of 1305. The way we interpret it is, the Master Electrician would have to be a fulltime employee of ours in order to pull that permit and would still be responsible for the job, as most statutes of this nature are inclined to require the person to be responsible for the job, the supervision of all the activities from start to finish, and accountability for the permit and all of the inspections required. Again, the way I read 1305 is this would now require me to engage an employee, a master electrician for my organization to pull my permits for a low voltage limited energy category at work. I just don't think the statutes allowed us to navigate any other way, with that I'd like to just offer that I'm not an attorney, but I do work with licensing and compliance items across the country.
- 9.17. Jason stated the 15 minutes are up and now it's time for questions and answers from the CCMC Committee.
- 9.18. Merle Nevill stated he would like to respond back to the first task group when we had this meeting. It was brought up that where did we get the 50 Volt, 50-Watt invitation, like they said OSHA, they have a 50 Volt limit. Their definition of a shock hazard is 50 volts and over, it's nothing to do with 60 Volt. We keep trying to stretch this to 60, but it aligns with the NFPA 70, it aligns with 70 E. They all talk about 50 volts, nothing to do with 60, the only where 60 comes up I believe is in Article 725. You know, it was brought up that Class 2 circuits have been around for a long time, and they've been installed, but they've been installed by licensed contractors, that's why it's been safe. We're trying to get it now to exempt this, to not just let anybody come in and do this wire in a 75-story building. We have no way of monitoring them and knowing how much knowledge they have and the misconception on the exemption with the state. It exempts the design, installation, erection, repair, or alteration of Class 1,2, or 3 remote control signaling power limited circuits, fire alarm circuits, optical fiber cables or communication circuits, including raceways as defined by the National Electrical Code. This is from being licensed, not permitting. This is coming out of the licensing Act; we're trying to put this into the permitting part of our ordinance. If we're talking two different things, if you want to align with the state, let's put it in 403, we're licensing it and then it'll align with it, but it won't give you that same benefit of exempting from permitting that's the issue. Class 2 and Class 3, Article 725, doesn't just pertain to Article 725, it pertains to Articles 300.17, 300.21, 300.2, 392, 327A, 350 see I can go on and on through the code.

- 9.19. Merle Nevill continued stating this is what an electrician is licensed on, tested on, it's what he takes continuing education on every year to know all of these, all of these sections. It's not just Article 725. In article 700.11 in the 2023, NEC, Article 700.11, Class 2 Powered Emergency Lighting System, that would be exempt. You're talking about getting out of a building, stairwells, and hallways, this would be exempt. If this is the truth, it's a safety issue, I mean to me to just say it's, it's not going to pull much and you don't need to know much about it as we were told in the resolution committee, I think it was brought up, Doug, I mean, correct me if I'm wrong, but you said you'd have to hire a master electrician. Right now, the ones doing the work have a master electrician, he is on the payroll and making sure the work is done. Let's say, Merle's tire shop wanted to do the low voltage, I'd have to hire a master electrician, but they shouldn't be doing that. We're talking apples and oranges here, somebody that's qualified and somebody that's not having to hire that, I think we're looking at it wrong there.
- 9.20. Merle Nevill further stated you said you'd have to hire a master and he'd just be standing around not knowing what he's supervising, but you could get past it in a few years of training. Well, if it's going to take years for this knowledgeable master to learn how to do this, why would we exempt this for somebody that doesn't have to have a license? I mean, it's like we're talking two different things here. We all know there's some risk here they need to know about the code. It's not just a matter of plugging in a connector and a wire, there's a whole lot of things that go into it. In all these other Articles it's been brought up about going to the state. I've talked to the state, Jerry Daniels, I don't know if y'all have reached out. He told me, yes, it's hearsay, but I've said it in every meeting, and nobody has told me I'm wrong on this or told me they talked to him. He said it needs to go before the legislature and the state to try to get an integrator's license. The city of Houston shouldn't be doing that. I don't want to vet somebody that has no knowledge of the code or all these articles of the code and say they're good enough to go in that 75-story building. That's for one of the other amendments you have brought up, but if we don't even do that than anybody can do it. If this is exempt, anybody can do this wiring like I've say emergency circuits and everything else they don't have to have any knowledge of this code. They can just do what they want to do and it's not fair to exempt this kind of work, when there's so much other electrical code knowledge needed to do it. It's not just the cable, it's the installation of it, this is out of the Licensing Act, the state has nothing to do with permitting and you can verify that, you can call the state. Look at the black and white, it's a licensing act, nothing to do with permitting and we're trying to put it under our ordinance and permitting. That's what I have on that on my side of it.
- 9.21. Jason asked if anyone had anything further, if the CCMC had any questions for the proponents
- 9.22. Ashley Baird asked what did the resolution committee recommend?
- 9.23. Jason responded that the Resolution Committee gathered further information and listened to both sides and took it back to the Task Force Group 4 for further review than, it was rejected again in the TFG-4
- 9.24. Robert Jones stated I represent Independent Electrical Contractors, I am the current chair for code making Panel 3 and I am not representing National Fire Protection Association, but it looks to me like the whole issue is really pretty simple, it's about voltage. The Houston exemption is 50 volts is less than 50 volts, the exemption applies is less than 50 volts. The same thing is mentioned in NFPA 70 E says below 50 volts. You don't have to guard it, and put it in a safe condition, you can work on it. NFPA 70 the National Electrical Code also has the 50 volts and that is for contact like it was mentioned, but contact means it's a shock hazard. 50 volts and above by OSHA is considered a shock hazard, what we're dealing with is new technology.
- 9.25. Robert Jones continued by stating that the Class 2 and Class 3 is the wiring method for POE which is limited energy. What hasn't been made clear to everybody at this point, is how is it safe? How is it to become safe? We don't know, I don't know, so I'm stuck with the 50 volts, city of Houston is in total alignment with 70, 70 E and OSHA to go anything more, is just lessening the code at this point. Sometime in the future we might all understand limited energy and it be considered safe. Remember, Edison said distributing DC power to homes was safe, 17 years after you started distributing, we had the National Electrical Code. It's got to be determined, Houston can't do that, we are stuck with 50 Volts.

- 9.26. Jason asked any further questions from the CCMC
- 9.27. David Davies with the Texas Water Quality Association, electricity is not my expertise, but it seems that risk for potential risk is one of the points that's been raised here, so I just have a simple question. Is there any evidence or data on risks that occurred? Is there one of these systems that was wired in an existing high rise building that caused a fire, was there any injury or is there a record of any of these risks actually occurring?
- 9.28. Jason Potterf stated he can answer that one of my roles over the last three years has been to work tightly with UL on electrical shock safety topics around Class 2 limits. I have had extended conversations with them, and we have reviewed the literature about what the safe limits were, on the Class 2 definitions from UL. Those Class 2 definitions are the same definitions as Class 2 and Class 3. In fact, the Class 2 and Class 3 limits are more restrictive. The 50 Volt limit you guys are defending is actually dangerous when it's AC power. There are concerns with ability to let go with an AC power, so the voltage has to be lower for AC, but for DC it's actually much higher. The DC limit is 60 volts in Class 2. However, NFPA 70 E actually raised the limit for DC power to 100 volts for a full cycle, and the only reason they brought it back down was from pressure from OSHA, which did not want to essentially admit that they were wrong in their evaluation of the safety. All the safety experts in NFPA looked at DC power and saw that it was safe up to 100 volts. We're not asking for 100 volts we're asking for the same definitions that are used to define low voltage work in California, in Chicago, in Maryland, everywhere on this planet. When they define low voltage, they define it as Class 2 and Class 3 because it takes all safety into account and just picking a number like 50 Volt and 50 Watt, actually leads to a less safe situation.
- 9.29. Robert Jones mentioned just a clarification the NEC definition does not address voltage for Class 2 Class 3, there's no mention of voltage.
- 9.30. Jason Potterf and Merle continue to discuss back in forth about what's in the table of the Class 2 and Class 3 voltage levels and the understanding of limited currents with limited energy
- 9.31. Armando stated the 50 Volts needs to be addressed at OSHA with the 70 E. He serves on code panel 17 and he is familiar with the process of changing the code but not really familiar with how OSHA does it. He stated that it doesn't make any sense trying to change something that the city is used to. Looks to me that whatever the process is with or NFPA, 70 E that's what it needs to be addressed. I just can't see how we can go below code standards that's all we found.
- 9.32. Don Rabel with NECA mentioned we are all here for the same reason, safety. He thinks it would be better now to enact this now to reject this, because if we're going to be talking about this now, next year or even the next year and something does happen to somebody. As Merle mentioned a 75 story buildings and something happens to that building a 1000 or 2000 people get hurt, burned, smoke inhalation, whatever you want to call it. Then you're going back again and reacting to this standard again in in between that time you got lawsuits between all these management companies, CPRE transgression, whomever and the owners in the city of Houston will get drugged into it. Why not take care of it now instead of waiting till later.
- 9.33. Merle Nevill mentioned I forgot to address what Jason was saying about Fort Worth, Austin, Dallas. I'd like to know who you spoke to within those cities, because I've spoken to the Dallas chief and he's the one that told me specifically, I can give you his name and number. He told me about the 30 Volts, 60 Volts and also about transforming and generating in power on what keeps it from being exempt with the power limiting circuits. I'm not lying about this, I've reached out three times to each one of these cities, I'd be glad to get you in touch with them if you find that this is not correct. Each one of them told me when they say low power, energy control and signal, they're not saying power limited circuit is being exempt, they specifically told me that we can try to change the words and move the words around, but they're not exempting that. If somebody's doing the work, and they're not having to pull a permit, it's because they're getting around it and not because we know about it. Permits and inspections are a big part of it and just let just anybody do it and try to say other cities are letting it happen when I know for a fact, they are not they told me they are not and that they are in alignment with us. If we did this, we would be the first city

in Texas that I know of and that they know of that lets this happen. It was brought up a couple years ago about the city losing so much money that a job was moved to The Woodlands. I found out in The Woodlands they do not do any inspections; they give that to the builder or the insurance company to do the inspections on it. Now, you tell me who they're going to pick for their inspectors, I mean that's just common sense. We need to tell everything if we're going to tell the story on this stuff. There's concerns. I agree. I think it needs to go to the state and get a license for it, then it's regulated, and they will test for it. If they don't need to know as much as a master, that's great. They've been vetted, did the background checks, and they've seen what knowledge they have and will take it in and register.

9.34. Devin Robinson stated I just have a comment based on that discussion, I think the gentleman, Mr. Jones perspective and statement defined as limited energy and all these new technologies as they come out in the city of Houston and being the most progressive city, I think it's an opportunity to have a valid dialogue with directing back to OSHA, and there's some systems there that may not qualify. The licensing component is an expended cost for somebody to pick up a master and that's viable to be able to have that operating expense in a small business it can make or break you.

9.35. Jason Potterf mentioned I just want to point out one thing, the committee as they consider this. If these circuits aren't as safe as the NEC UL and we are telling you there would be a record of loss, and I guarantee you our opponents sitting at this table would not be saying what if maybe next year something happens. Now what they're really saying is it's been decades, and nothing has happened.

9.36. Jason stated time is up for the Q&A, technically we have a few more minutes before open discussion is over. We've had a large discussion here if we are wanting to continue, we have for 10 more minutes to do so or do we want to put a motion on the floor?

9.37. Armondo Lozano put forth a motion to reject the proposed amendment seconded by Jon Mata

9.38. Jason reminds the online voters to place the number of the proposed amendment TGF-4-005A and their name in the chat box

**9.39. VOTE WAS TAKEN TO DENY TFG-4-005A WITH IN PERSON BALLOTS AND ONLINE POLL**

**9.40. TOTAL VOTING RESULTS - 9 APPROVED, 11 DENIED. 3 ABSTAINED**

**9.41. PROPOSED AMENDMENT TFG-4-005A - DENIED**

10. Jason brings up what's next on the agenda

- Resolution Committee is currently working on two additional field proposed amendments, ASCE 7 22 edition and Water Quality Association. We did meet with regards to the ASCE 7 22 edition yesterday. Further research and follow-ups are going to be required for that one. Water quality I believe we're meeting next week sometime to discuss.
- TFG-1 Building and Fire codes are with the city of Houston legal department
- TFG- 2 Residential, Pools and Spa codes are with legal
- TFG-3 Energy code is with legal
- TFG-4 MEP: 30-day public comment period closes June 8th, 2023
- CCMC #7 meeting is June 23rd tentatively for all the MEP codes and any Resolution items

11. There's an addendum we discussed last time, there were some amendments that were approved by the CCMC that did not get published into the first running documents. The addendum has been posted as of this afternoon at like 3:00pm. They are there to view, I want to say there was 10 proposed amendments, I . they are there for you to review. It is not the entire running documents that we discussed; it is just new proposed amendments that were approved by the CCMC after April.

12. New Business - Jason noted Byron King has a topic to discuss

- 12.1. Byron King mentioned there is a letter he wants to read he started off by saying as you may be aware, the city of Houston recently decided to continue the adoption of the International Association of Plumbing and Mechanical Officials codes as the Houston of Plumbing and Mechanical Codes. The consultant currently working with Building Code Enforcement BC on the construction code modernization project, Jenson Hughes, was tasked with reviewing and analyzing the differences between that IAPMO and ICC plumbing and mechanical codes to determine their usability and overall feasibility in the City of Houston. The analysis of the ICC and IAPMO codes was produced and given to the City of Houston for evaluation after reviewing the analysis, it was determined by the administration to move forward with adoption of the IAPMO plumbing and mechanical codes as opposed to the ICC plumbing and mechanical codes. We want to thank you for the attention to this matter at this particular time. We need to make sure that we let everyone notice the decision by the administration moving forward with IAPMO at this particular time.
- 12.2. Kevin Mcosker, on behalf of International Code Council, we respectfully object to the adoption of the Uniform Plumbing Code and Uniform Mechanical Code. We're disappointed that the Task Group won't have the opportunity to evaluate international and uniform plumbing and mechanical codes and fuel gas codes at the process originally outlined. We respect the staff that has put in a lot of hard and energy into this process and hopefully we'll work closely with the city of Houston on future code adoptions.
- 12.3. John Mata, Senior Director Field Service for at IAPMO I agree with, this it's something that's been ongoing for almost 40 years now, that the uniform code has been adopted in the city of Houston. It's not only what the industry wants, but also what we look at as looking at for safety issues and things of that nature for everybody across the board. The best thing we can do right now is move forward with the current code, not create an unfunded mandate, with the city of Houston, especially coming out of the pandemic like we have. I agree with the city's decision, and we stand here to offer our full support resources moving forward.
- 12.4. Jason asked if there were any further discussions
- 13. Meeting adjourned 3:15pm

- **VOTING RESULTS CONSISTED OF 1 PERSON PER ORGANIZATION, IN PERSON BALLOTS AND ONLINE POLL**

<b>AMENDMENTS</b>	<b>AMENDMENTS APPROVED</b>	<b>AMENDMENTS DENIED</b>	<b>AMENDMENTS ABSTAIN</b>
TFG-1-053A	24	0	3
TFG-4-005A	9	11	3



## EXHIBIT D

June 29, 2023

Attn: City Council Member David Robinson  
At Large 2  
900 Bagby, First Floor  
Houston, TX 77002

Dear Council Member Robinson,

The Independent Electrical Contractors Association Texas Gulf Coast, Inc. represents over 215 electrical contractor companies. We are sending this letter to express our concerns, on their behalf, regarding the recent push of the amendments proposed to Task Force Group 4 and the CCMC to exempt power limiting circuits and change the electrical ordinance.

Currently, the city ordinance ensures qualified people are installing life saving items like emergency lighting needed to exit a building (NEC article 700.11) and requires an electrical contractor to **permit** any work over 50 volts and 50 watts. The 50v and 50w limitation has been in line with OSHA, NEC 70 and NFPA 70E. Please understand this has to do with permitting and has nothing to do with the State Licensing Act. **The State does not have a permitting act in place.**

Houston is in line with all the other major municipalities in Texas, and in some cases, is less stringent. Merle Nevill, Division Manager Electrical Inspections has been in contact with Dallas, FT. Worth and Austin and has written confirmation of their requirements (which is not hearsay as stated by other parties).

These amendments have been **voted down** numerous times in Task Force Group 4. The approval of these amendments will take the electrical code **below base code.**

We have discussed that this issue is one that needs to be addressed at the State level to adapt a change for this NEC requirement.

Please note: The City of Houston is being asked to be the first major city to go against the requirements set forth in this code cycle and allow an exemption that could impact public safety.

We ask that you do NOT allow these amendments to be approved.

Regards,

*Helene W. Webster*

Helene W. Webster  
Executive Director

601 N. Shepherd, Suite 330  
Houston, TX 77007

P.O. Box 7907  
Houston, TX 77270



# Construction Code Modernization Project

**TO:** Councilmember David Robinson  
**FROM:** Byron King, Building Official  
**SUBJECT:** Clarification on Low Voltage / Power Over Ethernet (P.O.E.)  
**DATE:** August 29, 2023  
**CC:** Director Carol Haddock, Deputy Director Chris Butler

---

## BACKGROUND:

- The City of Houston staff recommends continuing with the established low voltage exceptions in the Houston Electrical Code.
- Low voltage / POE stakeholders are requesting to increase current low voltage exceptions to include all Class 2 and Class 3 wiring applications.
- The Task Force Group (TFG) and Construction Code Modernization Committee (CCMC) stakeholders support the recommendation of City of Houston staff to limit low voltage exceptions to what's currently enforced.

## STATE LAW:

- Chapter 1305 of the Texas Occupations Code is cited as the "Texas Electrical Safety and Licensing Act" and provides regulations to govern the occupation of electricians.
- Class 2 and Class 3 wiring exemptions found in the Occupations Code only exempt requirements for licensing, and do not exempt Class 2 and 3 wiring from code or permitting requirements.

## CITY OF HOUSTON:

- The City of Houston is not proposing any changes to current procedures or the Houston Electrical Code.
- Current exceptions are for any wiring less than 50v and 50w; also, any low voltage sound, telephone, thermostat, or burglar alarm wiring applications.
- Any work a contractor is currently performing now that is exempt will continue to be exempt.

## OTHER CITIES:

All major jurisdiction's in Texas provide similar exceptions to low voltage wiring and Houston is currently the least restrictive among other major Texas cities with their low voltage exception limits:

- |                                     |  |                                      |
|-------------------------------------|--|--------------------------------------|
| • <b>Austin</b> – Less than 25v/50w | • <b>Dallas</b> – Less than 30v        | • <b>San Antonio</b> – Less than 50v |
| • <b>Arlington</b> – Less than 24v  | • <b>Ft. Worth</b> – Less than 25v/50w | • <b>Houston</b> – Less than 50v/50w |

Across all the major cities in Texas if wiring exceeds the power limit of the provided exception a permit is required and an electrical contractor is required to perform the work – This has been verified with the Chief Electrical Inspector in each of the major Texas cities.

## TFG / RC / CCMC:

- TFG-4 rejects two variations of low voltage proposal; proponents request appeal to Resolution Committee.
- Resolution Committee recommends moving a revised proposal back to TFG-4 for review.
- TFG-4 rejects low voltage proposal for third time.
- CCMC hears appeal on low voltage proposal; amendment is rejected once again. (Only external stakeholders are eligible to vote in CCMC.)

## POTENTIAL HAZARDS:

There are a number of fire and life safety issues that could arise from improper installation of Class 2 or 3 wiring, including:

- |   |  |
|---|--|
| • Electrical shock when improperly wired                | • Integrity of fire rated walls, etc. could be compromised |
| • Creation of deadly gases when listed wire is not used | • Potential for fire when bundled/cabled incorrectly       |

## SUMMARY:

For the safety and general welfare of Houston citizens the City of Houston, along with the TFG and CCMC stakeholders, recommend the adoption of 2023 NEC base code and the continuation of current Houston amendments that allow specific low voltage exemptions.