

Meeting Minutes: Construction Codes Advisory Council

Date: July 18, 2019
Time: 9:30 a.m.
Location: Minnesota Room, Department of Labor and Industry
443 Lafayette Road North, St. Paul, MN 55155

Members:

Mark Brunner
Jennifer DeJournett
Gerhard Guth – via teleconference
Duane Hendricks
Mike Herman
Ken Hinz
Laura McCarthy
Scott McLellan (Chair)
Jason Nerison (Erdman alternate)
Mike Paradise
Russ Scherber
Gary Thaden (Gray alternate)
Steve Ubl

Members Absent:

Tom Downs
Dan McConnell
Jim Smith
Reed Sprung

Staff & Visitors

Jeff Lebowski – DLI
Lyndy Logan – DLI
Scott McKown – DLI
Ryan Rehn – DLI
Bill Reinke – DLI
Rich Lockrem – DLI
Amanda Spuckler – DLI
Gregory Metz – DLI
Remi Stone – BAM
Nick Erickson – Housing First MN
Kevin Toskey – League of MN Cities
Tom Jensen – State Fire Marshall Division
Russ Landry – CEE – MN Chapter of ASHRAE
Ben Rabe – Fresh Energy

1. **Call to Order**
 - a) **Roll call of members**
 - b) **Audience introductions**
 - c) **Housekeeping announcements**
 - d) **Safety**

Members and guests introduced themselves and a quorum was declared with 13 of 17 members present – the meeting began at 9:30 a.m.

2. Approval of meeting agenda

A motion was made by Hendricks, seconded by Paradise, to approve the agenda as presented. The vote was unanimous with 13 votes in favor; the motion carried.

3. Approval of previous minutes

A motion was made by Brunner, seconded by Scherber, to approve the May 30, 2019, meeting minutes as presented. The vote was unanimous with 13 votes in favor; the motion carried.

4. Department updates

McLellan said that a brief survey will soon be sent to stakeholders asking for input regarding future legislation, rulemaking or suggestions for improvement.

Guth asked how the department's new electronic plan review system was working and McLellan replied that most plan submittals were now coming in electronically. Greg Metz said plan review can be applied for and plans submitted at the same time although they are two separate systems, IMS and ProjectDox. The department is still educating users on how both systems work.

Ubl added that the City of St. Paul is in the first phase of electronic plan review and that the industry is demanding paperless. Laura McCarthy said the City of Bloomington is using CityView Portal for plan review – they still accept paper plans, but their intention is to eventually go paperless.

DLI does not mandate electronic plan submittal – paper submittals will continue to be accepted. DLI's new plan review and permitting system also allows field inspectors to download plans directly to their iPad.

5. New business

a) Code adoption updates

The following codes are nearing completion and will be reviewed at future CCAC meeting:

- Elevator Code (Chapter 1307)
- Mechanical and Fuel Gas Code (Chapter 1346)
- Commercial Energy Code (Chapter 1323)
- International Residential Code (Chapter 1309)

Rulemaking dockets are available on the department's website at:

<http://www.dli.mn.gov/about-department/rulemaking/construction-codes-and-licensing-rulemaking>

Technical Advisory Group (TAG) leaders explained proposed code changes as follows (see **Attachment A for detailed code information**):

- Chapter 1300 – Building Code Administration – MN Provisions (Scott McKown, Assistant Director, CCLD)
Proposed changes:
 - ✓ Added definition for “Electric Substation”
 - ✓ Alternate means and methods: Added language “The permit applicant may request written documentation of the denial, including the reasons for the denial”
 - ✓ Work Commencing Before Permits: Added language to clarify that the investigation fee for work commencing before permits must comply with requirements for fees in Subpart 2.

- Chapter 1305 – Minnesota Building Code (Greg Metz, Building Plan Supervisor, CCLD)
Proposed changes:
 - ✓ R-4 and I-1 occupancies: Added a second condition, Condition 2 – where some persons receiving custodial care may require limited verbal or physical assistance while responding to an emergency situation to evacuate the building.
 - ✓ Required Storm Shelters: K-12 Schools with occupancies of 50 or more where tornado wind speed is 250 mph or more.
 - ✓ Plumbing Requirements, Chapter 29:
 - Family or assisted use toilet facilities: SHALL NOT BE signed for exclusive use by either sex
 - Table 2902.1 – Bathing fixtures no longer required in Adult and Child Day Care
 - ✓ Photovoltaic Solar Installations: Access to rooftop mounted solar photovoltaic systems rewritten and refers to the fire code.

- Chapter 1311 – Conservation Code for Existing Buildings (Greg Metz)
Proposed changes:
 - ✓ Structural Alterations to Existing Buildings – Language added to clarify the code for gravity and lateral loads.

- Chapter 1341 – MN Accessibility Code (Karen Gridley, Building Plan Reviewer / Accessibility Specialist, CCLD)
Proposed changes:
 - ✓ The IEBC re-worked the Accessibility provisions to look substantially like the current MN code. MN will adopt the 2018 code in place of Minnesota’s current code amendments.
 - ✓ Places of Religion of Worship – A new exemption was introduced in the 2015 IBC that permits small, raised or lowered areas that are used for the performance of religious ceremonies to be non-accessible.

- ✓ Quantity of Accessible Resident Rooms – Increased from 10 to 50%, aligns with Federal ADA and IBC Model Code.
- Chapter 7511 – MN Fire Code (Tom Jenson, Deputy, State Fire Marshal)
Proposed changes:
 - ✓ Added code section 319 IFC for mobile food trucks.
 - ✓ Added code section IFC 5707 for on demand mobile fueling.
 - ✓ Deleted and added some language for pull stations in schools: Manual Fire Alarm boxes are only required in the main office and in only custodial area when group E school buildings are protected throughout by an approved automatic sprinkler system or an approved fire alarm system equipped with corridor smoke detection.

6. Announcements

Future meeting notifications will be sent to you at least one week prior.

7. Adjournment

A motion was made by Smith, seconded by Brunner, to adjourn the meeting at 10:58 a.m. The roll call vote was unanimous with 13 votes in favor; the motion carried.

Respectfully Submitted,

Lyndy Logan

Executive Secretary to the CCAC

Highlights of the Proposed 2020 Minnesota Construction Codes

July 18, 2019

1300 Administrative Provisions

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Electric Substations

Electric Substation- Definition Added

Electric substation. “Electric substation” means an enclosed assemblage of equipment, including switches, circuit breakers, buses, and transformers that are accessible only to employees of an electric utility or persons acting under the electric utility’s control or direction, through which electric energy is passed for the purpose of switching or modifying the electric energy’s characteristics to increase or decrease voltage or control frequency.

Alternate Means and Methods

Alternate Materials

The details of any action granting or denying approval of an alternate shall be recorded and entered in the files of the Department of Building Safety. The permit applicant may request written documentation of the denial, including the reasons for the denial.



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Work Commencing Before Permits

Work Commencing Before Permits



If work for which a permit is required by the code has been commenced without first obtaining a permit, a special investigation shall be made before a permit may be issued for the work. An investigation fee established by the municipality shall be collected whether or not a permit is issued and is in addition to the required permit fees, but may not exceed the permit fee. The investigation fee must comply with requirements for fees in subpart 2.



1305 Minnesota Building Code



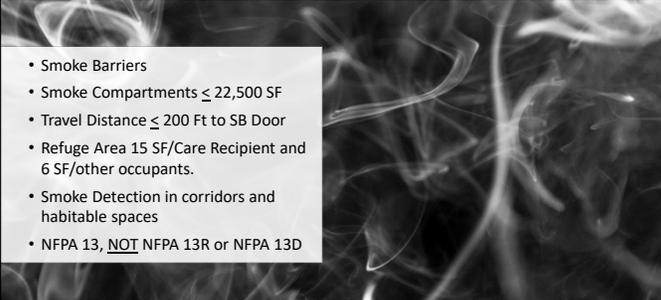

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R-4 & I-1 Occupancies

R-4 & I-1 Conditions 1 and 2

R-4	6- 16 Receiving Custodial Care	Condition 1	Condition 2
		Capable of Self Preservation without assistance <small>(Current model code)</small>	Some may require limited verbal or physical Assistance with Self Preservation <small>(New Condition)</small>
I-1	> 16 Receiving Custodial Care		

Condition 2 Requirements:

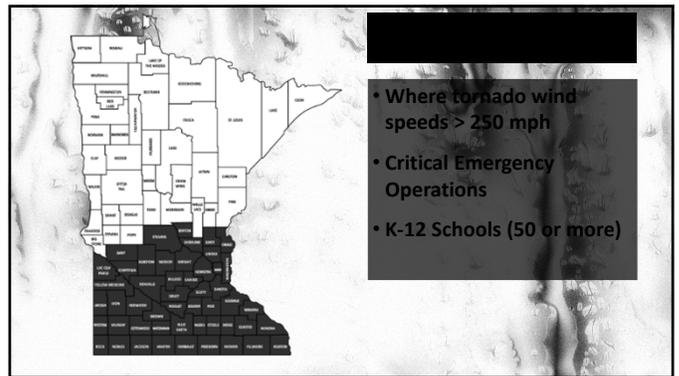


- Smoke Barriers
- Smoke Compartments ≤ 22,500 SF
- Travel Distance ≤ 200 Ft to SB Door
- Refuge Area 15 SF/Care Recipient and 6 SF/other occupants.
- Smoke Detection in corridors and habitable spaces
- NFPA 13, NOT NFPA 13R or NFPA 13D

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Storm Shelters

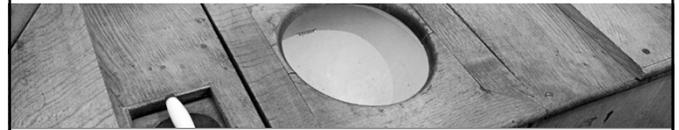


- Where tornado wind speeds > 250 mph
- Critical Emergency Operations
- K-12 Schools (50 or more)




- Reinforced and anchored at each corner and each side of doors.
- Horizontal & Vertical Protection-missile test: 15 lb 2x4 sawn lumber end impact at 100 mph to vertical surfaces and 67 mph to horizontal surfaces.
- Atmospheric Pressure Change Ventilation: 1 SF/ 1000 SF Area.

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Changes to Plumbing Requirements- Chapter 29

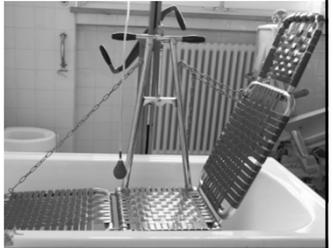
Single-User Toilet and Bathing Facilities

IBC 2902.1.2 Single User Toilets. Single-user toilets SHALL NOT BE signed for exclusive use by men or women. (model code language)



Changes to Plumbing Fixture Requirements

Table 2902.1 Bathing fixtures no longer required in Adult and Child Day Care.



Changes to Plumbing Fixture Requirements

IBC 2902.2 Separate Facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Dwelling & Sleeping Units
2. Structures or Tenant spaces with ≤ 25
3. M Occupancies ≤ 100
4. B occupancies with ≤ 25 .

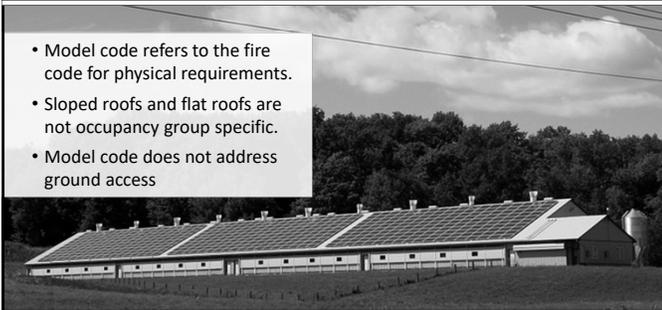


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Why such a big change to the Solar Section?

- Model code refers to the fire code for physical requirements.
- Sloped roofs and flat roofs are not occupancy group specific.
- Model code does not address ground access



Sloped Roofs- Solar Photovoltaics

Required Access:

- Unobstructed Fire Department Access from Ground to Roof Landing Area
- Roof Landing Pathways to Ridge or Venting Locations
- Ridgeline Pathway/ Venting Location requirements



1311 Conservation Code for Existing Buildings

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Structural Alterations to Existing Buildings



Adding Load to Existing Structure

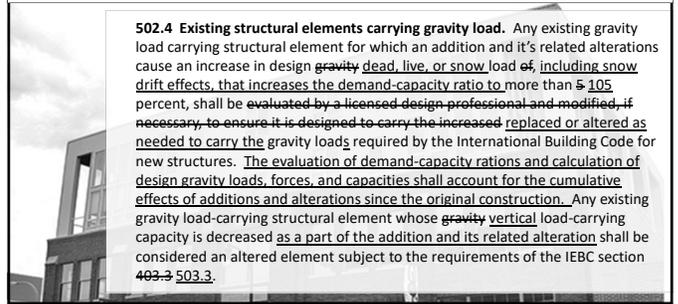
1. Adding to Gravity Loads

- Amendment written to clarify that existing structure shall not be required to carry more than 105% of it's design load carrying capacity.



Adding Load to Existing Structure

502.4 Existing structural elements carrying gravity load. Any existing gravity load carrying structural element for which an addition and it's related alterations cause an increase in design gravity, dead, live, or snow load of, including snow drift effects, that increases the demand-capacity ratio to more than 5 105 percent, shall be evaluated by a licensed design professional and modified, if necessary, to ensure it is designed to carry the increased replaced or altered as needed to carry the gravity loads required by the International Building Code for new structures. The evaluation of demand-capacity ratios and calculation of design gravity loads, forces, and capacities shall account for the cumulative effects of additions and alterations since the original construction. Any existing gravity load-carrying structural element whose gravity vertical load-carrying capacity is decreased as a part of the addition and its related alteration shall be considered an altered element subject to the requirements of the IBC section ~~402~~ 503.3.



Adding Load to Existing Structure

2. Adding to Lateral Loads

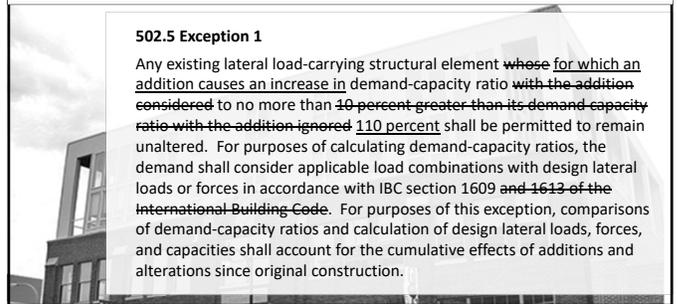
- Amendment written to clarify that existing structure shall not be required to carry more than 110% of it's design lateral load-carrying capacity.



Adding Load to Existing Structure

502.5 Exception 1

Any existing lateral load-carrying structural element whose for which an addition causes an increase in demand-capacity ratio with the addition considered to no more than 10 percent greater than its demand capacity ratio with the addition ignored 110 percent shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with IBC section 1609 and 1613 of the International Building Code. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces, and capacities shall account for the cumulative effects of additions and alterations since original construction.



Change of Occupancy Relative Hazards- Prescriptive Method

Prescriptive Method- Relative Hazard Levels

Previous Table 407.1
Life Safety and Fire Risk

Relative Hazard	Occupancy
1 (highest hazard)	H, I-2, I-3
2	I-4, A-1
3	A-2, A-3, A-4, E, I-1, R-1, R-2
4	A-5, B, F-1, R-3, R-4, M, S-1
5 (lowest Hazard)	F-2, S-2, U

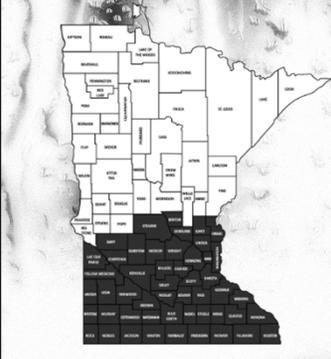
New Table 506.1
Life Safety and Fire Risk

Relative Hazard	Occupancy
1 (highest hazard)	H, I-2, I-3
2	I-4, A-1, A-2, A-3, A-4
3	A-2, A-3, A-4, A-5, E, I-1, R-1, R-2, I-4
4	A-5, B, F-1, R-3, R-4, M, S-1
5	B, F-1, S-1, IRC-1, IRC-3
6	F-2, S-2, U, IRC-2
7 (lowest Hazard)	U, IRC-4

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Storm Shelters



- Where tornado wind speeds > 250 mph
- K-12 Schools (50 or more)
- Only need to accommodate the addition occupant load



1341 Minnesota Accessibility Code

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IBC Section 1103.2.16 and IEBC Section 305: Existing Buildings

Accessibility for Existing Buildings – Background

- Scoping Section 1103.2.2 is relocated to Section 1103.3.
- IEBC Section 305 Incorporated into MN 1341
- Removes current MN 1341 Sections 1111 – 1113 and Replaces with IEBC Section 305.

Accessibility for Existing Buildings – Application

- New Model Code language maintains MN requirements.
- MN 1341 Amendments for existing buildings are no longer needed.
- New numbering will follow IEBC 305 format.

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IBC Section 1103.2.8: Places of Religious Worship Exemption

**Accessibility in Places of Religious Worship –
Background**



- A new exemption was introduced in the 2015 IBC that permits small, raised or lowered areas that are used for the performance of religious ceremonies to be non-accessible.
- Potential barriers to access at raised or lowered areas used by congregation members.

**Accessibility in Places of Religious Worship –
Application**



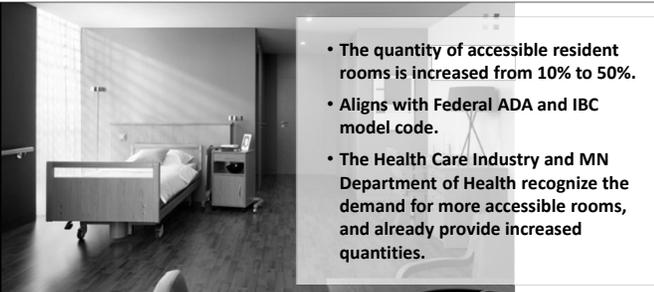
- New IBC exemption is deleted.
- The current language already provides for the same exemption at raised or lowered employee work areas where the change in elevation is essential to the function of the space.
- The deletion maintains access to areas open to members of the congregation.

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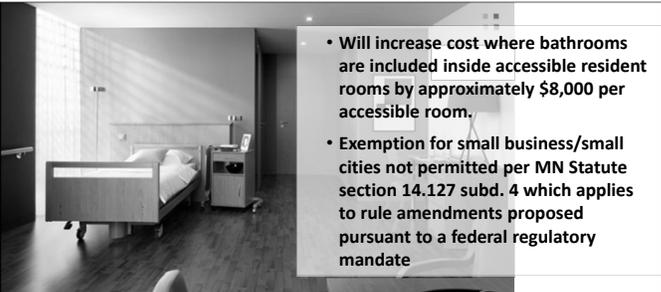
MN 1341 Section 1107.5.2: Group I-2 Nursing Homes

Quantity of Accessible Resident Rooms - Background



- The quantity of accessible resident rooms is increased from 10% to 50%.
- Aligns with Federal ADA and IBC model code.
- The Health Care Industry and MN Department of Health recognize the demand for more accessible rooms, and already provide increased quantities.

Quantity of Accessible Resident Rooms - Application



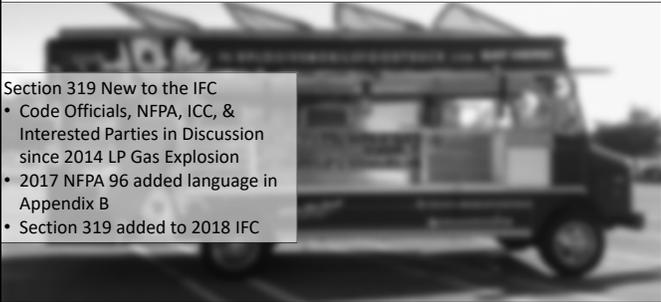
- Will increase cost where bathrooms are included inside accessible resident rooms by approximately \$8,000 per accessible room.
- Exemption for small business/small cities not permitted per MN Statute section 14.127 subd. 4 which applies to rule amendments proposed pursuant to a federal regulatory mandate



7511 Minnesota Fire Code



Section 319 Food Trucks



Section 319 New to the IFC

- Code Officials, NFPA, ICC, & Interested Parties in Discussion since 2014 LP Gas Explosion
- 2017 NFPA 96 added language in Appendix B
- Section 319 added to 2018 IFC



Addresses requirements for:

- Exhaust Hoods
- Fire Extinguishing Systems
- Maintenance
- LP-Gas and CNG systems

Mobile Food Trucks- Application



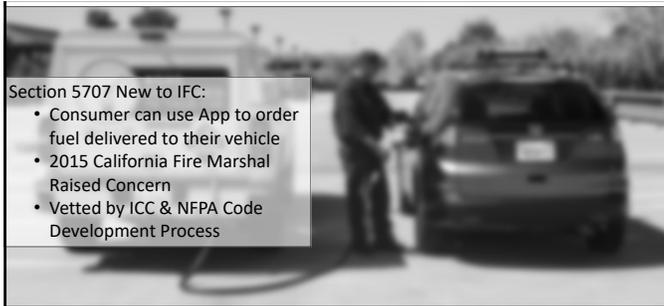
Applies to:

- New Mobile Food Vehicles
- Existing Mobile Food Vehicles

Minnesota Food Truck Association approved the proposed change



5707 On Demand Mobile Fueling



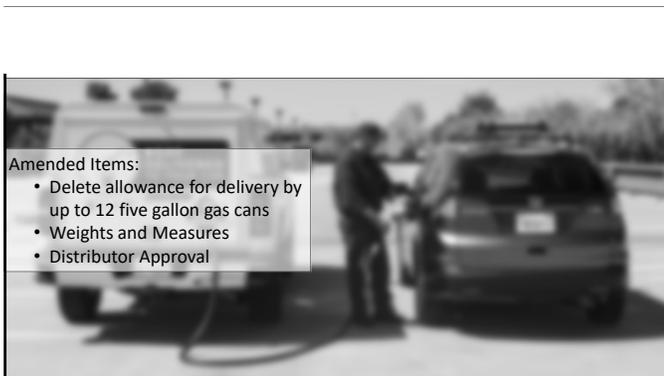
Section 5707 New to IFC:

- Consumer can use App to order fuel delivered to their vehicle
- 2015 California Fire Marshal Raised Concern
- Vetted by ICC & NFPA Code Development Process



Requirements for:

- Vehicle and Fuel Storage Tanks
- Operations and Procedures
- Training
- Emergency Response Plan
- Permit from Local Fire Code Official



Amended Items:

- Delete allowance for delivery by up to 12 five gallon gas cans
- Weights and Measures
- Distributor Approval

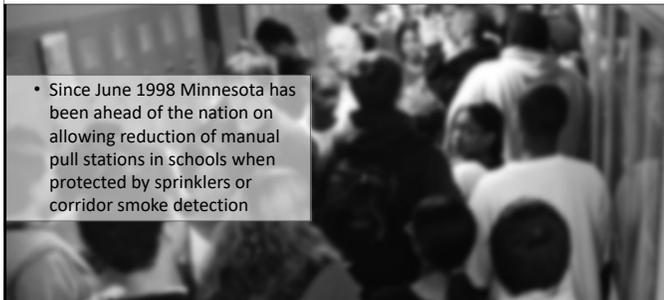


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PULL
IN CASE
OF
FIRE

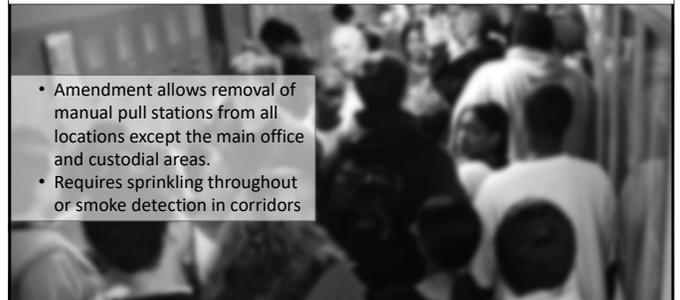
Manual Fire Alarm Pull Stations in Schools

Group E Fire Alarm Pull Stations- Background



- Since June 1998 Minnesota has been ahead of the nation on allowing reduction of manual pull stations in schools when protected by sprinklers or corridor smoke detection

Group E Fire Alarm Pull Stations- Background



- Amendment allows removal of manual pull stations from all locations except the main office and custodial areas.
- Requires sprinkling throughout or smoke detection in corridors

Questions?