



Board of Building Standards

CONFERENCE MEETING AGENDA

DATE: AUGUST 11, 2023
TIME: 10:00 AM
LOCATION: TRAINING RM 1, 6606 TUSSING RD, REYNOLDSBURG, OHIO 43068
[Click here to join the meeting](#)

Call to Order

Roll Call

Consideration of Minutes

[MIN-1](#) June 23, 2023 Meeting Minutes

Certification Hearing

[CH-1](#) Certification Hearing

Committee Reports

[CR-1](#) Certification Committee Report
[CR-2](#) Education Committee Report
[CR-3](#) Code Committee Report
CR-4 Committee-of-the-Whole

Ratification of Board Recognized Accreditation Bodies, Conformity Assessment Bodies & Industry Trade Association Certification Programs

No items for consideration

Recognition of Building Department Personnel

[RE-1](#) August Building Department Update
[RE-2](#) Complaint Summary Report

Public Comments

Old Business

OB-1 Action on Amendments Group 100 (2024 OBC, OMC & OPC)
[Proposed 2024 Ohio Building, Mechanical & Plumbing Code Rules | Ohio Department of Commerce](#)

New Business

[NB-1](#) Proposed Elevator Rules - Action to Initiate Stakeholder Input Process
[NB-2](#) Proposed Boiler Rules - Action to Initiate Stakeholder Input Process
[NB-3](#) Petition #23-06 - OPC 608.16.1 (Beverage Dispensers)
[NB-4](#) Petition #23-04 - RCO 311.7.1 Two handrails - Robert Kramer

Compensate Board Members for Work Performed at their Regular Rate

Future Meeting Schedule

September 22, 2023 November 17, 2023
October 20, 2023 December 15, 2023

Motion to Adjourn

File Attachments for Item:

MIN-1 June 23, 2023 Meeting Minutes

MINUTES
BOARD OF BUILDING STANDARDS
CONFERENCE MEETING, CERTIFICATION HEARING &
PUBLIC HEARING
June 23, 2023

The Board of Building Standards Conference Meeting was called to order at 10:00 a.m., Friday, June 23, 2023 at 6606 Tussing Road, Reynoldsburg, Ohio, Chairman Timothy Galvin presiding.

Ms. Regina Hanshaw, Executive Secretary, called the roll and reported that the following Board members were present:

Greg Barney, Industrialized Units
Joseph F. Denk, Jr., Mechanical Engineer
Timothy P. Galvin, General Contractor, Chair
Don Leach, Attorney
Terry McCafferty, Public Member
Christopher Miller, Renewable Energy
Jeff Samuelson, Architect
Bailey Stanbery, Homebuilder
Jeff Tyler, Architect
Christie Ward, Mayor
Paul Yankie, Energy Conservation

The following Board members were absent:

Julienne Cromwell, Structural Engineer
John Pavlis, Homebuilder, Vice-Chair
John Johnson, Construction Materials
Greg Warner, Fire Service

A quorum of the Board was present.

The following staff members were present:

Megan Foley, Certification Program Administrator
Debbie Ohler, Construction Codes Administrator
Jay Richards, Assistant Construction Codes Administrator
Robert Johnson, Assistant Construction Codes Administrator
Mike Regan, IU Plans Examiner
Pam Butts, Office Assistant
Laura Borso, Building Department Administrator
Jacob Erwin, AAG

The following visitors were present:

Charles Huber, City of Lakewood
Tim McClintock, NFPA
Brien Bellous, Franklin County Public Health
Colin Combs, Prater Engineering
Joshua Harman, Clinton County
Dana Daughters, Gamechanger
Diane Daughters, Gamechanger
Cory Blair, Genesis Building Systems
Steven Ribera, Hillsboro Building Department
Tracie Boyd, SFM
Sarah Bloom Anders, Columbus DPU
Kurt Beres, MA Design
Corie Anderson, MEEA
Ian Dollenmayer, JCARR
Andrew Barone, Schafer

PUBLIC HEARING – AMENDMENTS GROUP C (100)

Chairman Galvin opened the public hearing on Amendments Group C at 10:05 a.m.

Ms. Hanshaw presented the Chairman's Statement:

The Board of Building Standards is charged with the duty to formulate and adopt, amend, modify or repeal rules of the Administrative Code governing the erection, construction, repair, alteration, and maintenance of buildings, the construction and approval of industrialized units, the installation of equipment, and the standards or requirements for materials to be used in connection therewith, the installation, repair, and operation of boilers and unfired pressure vessels; and rules governing the design, construction, repair, alteration and maintenance of elevators. Further, the Board of Building Standards certifies building departments and building department personnel to enforce the Ohio Building Code and the Residential Code of Ohio.

This public hearing is held for the consideration of the following:

PART A – OHIO BUILDING CODE RULES

The Board proposes to amend the Ohio Administrative Code as follows: Chapters 4101:1-1 to 4101:1-35 (rescind and adopt new). The rules are proposed to comply with the five-year rule review and to update the current Ohio Building Code to reflect the 2021 edition of the "International Building Code".

PART B – OHIO MECHANICAL CODE RULES

The Board proposes to amend the Ohio Administrative Code as follows: Chapters 4101:2-1 to 4101:2-15 (rescind and adopt new). The rules are proposed to comply with the five-year rule review and to update the current Ohio Mechanical Code to reflect the 2021 edition of the "International Mechanical Code".

PART C – OHIO PLUMBING CODE RULES

The Board proposes to amend the Ohio Administrative Code as follows: Chapters 4101:3-1 to 4101:3-15 (rescind and adopt new). The rules are proposed to comply with the five-year rule review and to update the current Ohio Plumbing Code to reflect the 2021 edition of the "International Plumbing Code".

The eighty-eight county commissioners and other interested persons have been notified of this public hearing and the availability of these rules for review by the public.

Additionally, Business Regulatory Impact Analyses were prepared for these rules which were transmitted electronically along with the rules to Lt Governor Jon Husted's Common Sense Initiative Office in accordance with Revised Code § 121.82. The Common Sense Initiative Office has reviewed the Business Regulatory Impact Analyses and the proposed rules and concluded that the Board should proceed with the formal filing of these rules with the Joint Committee on Agency Rule Review.

All persons attending this hearing are asked to sign the roster on the table near the entrance door to the hearing room with their name, affiliation and contact information. The public hearing draft is available electronically for review on the Board's website and a QR Code to access the draft is available at the table.

In commenting on the proposed rules, we request that you complete a separate witness slip for each part and deliver it to the Secretary, come to the speaker's podium when called, give your name and affiliation before proceeding to give your testimony.

Testimony at today's hearing is being digitally recorded. Copies of the recording will be provided upon request. Sight readable transcripts of the recording are not supplied free of charge by the Board. The Board will provide a sight-readable transcription of today's hearing upon request and reimbursement of the Board for the costs of the transcription.

Chairman Galvin called for testimony on Part A and called on Mr. Huber who commented on the elimination of nonconformance approval, the definition of building and requested the language regarding direct vs indirect connections to sanitary drainage from 3 compartment sinks to revert back to previous version of the rule published during stakeholder input. Mr. McClintock provided support for the proposed rules specifically the adoption of the 2023 National Electrical Code. Ms. Anderson's comments provided support for adoption of newer energy codes but also requested

adoption without weakening amendments. Mr. Beres' comments related to illumination requirements for path of travel. There being no further testimony, Chairman Galvin closed Part A.

Chairman Galvin called for testimony on Part B. There being no testimony, Chairman Galvin closed Part B.

Chairman Galvin called for testimony on Part C and called on Mr. Bellous who provided support for revised language regarding direct vs indirect connections to sanitary drainage from 3 compartment sinks. There being no further testimony, Chairman Galvin closed Part C.

Ms. Hanshaw requested that written comments submitted by Charles Huber, Kurt Beres, Joseph Sandman, Dave Collins, Sarah Rice, Patrick Simpson, Charles Updyke, Diana Anderson, Karen Planet, and Alan Shockey be added to the record of the hearing. Chairman Galvin closed the hearing at 10:30 a.m.

CONSIDERATION OF THE MINUTES

Mr. McCafferty moved and Mr. Denk seconded to approve the minutes of the May 12, 2023 meeting.

Chairman Galvin called for the ayes and nays.

Motion carried unanimously.

CERTIFICATION HEARING

Chairman Galvin opened the hearing to hear testimony on the individuals and building departments appearing on the Final Certification Hearing Agenda in the Board's Meeting Packet at the Hearing tab. Ms. Foley informed the Board that the individuals and departments appear on the hearing agenda have been reviewed by the Certification Committee and determined to meet the requirements of certification.

COMMITTEE REPORTS

CR-1 Certification Committee Report

Mr. Leach gave the committee's report included in the Board's Meeting packet at Tab CR-1:

The Certification Committee met on June 22nd, 2023, at 10:00 AM in the BBS Library, 6606 Tussing Road, with the following members present: Mr. Leach, Mr. McCafferty, Mr. Barney, Mr. Samuelson, Mr. Stanbery, Mr. Tyler, and Ms. Ward. Board Chairman Timothy Galvin was also present. The Committee makes the following recommendations, included in the June 23rd, 2023 Board Packet at Tab CR-1, for the Board's consideration.

Also present at the meeting were BBS Staff, Regina Hanshaw, Megan Foley, and Laura Borso. Guest Todd Shetler attended in person, and guests Jason Hooks, Andrew House, Alex Wakefield, Tylon Hilt, and Dylan Marn, with building official Dan Perno, attended virtually to discuss their applications. Carlyle Rosser attended to confirm application approval at prior month's meeting, and John Muncy attended to confirm approval. Charles Huber, Kerry Sutton, Alexandra Wakefield, and committee member Greg Warner attended the meeting virtually to observe.

Recommend the following applications be approved following a certification hearing effective immediately unless otherwise noted on the certification hearing agenda:

Cert ID:	Name	Certification Approved
9107	Anderson, Joshua	Electrical Safety Inspector Trainee - Columbus

5943	Arnold, Aaron	Building Inspector
9137	Ball, Daniel	Fire Protection Inspector Trainee
9136	Battaglia, Gina Marie	Building Inspector
9135	Bernal, Anthony	Fire Protection Inspector Trainee
9138	Bratt Jr., Kenneth	Electrical Safety Inspector*
9134	Buchanczenko, Paul	Residential Building Inspector
9033	Connelly, William	Residential Building Official
6009	Corbet, Kasey	Master Plans Examiner Building Inspector
8619	Crowe, Jon	Plumbing Plans Examiner
9120	Culley II, Wilmon	Electrical Safety Inspector
5595	Hilt, Tylon	Building Official Electrical Plans Examiner
9112	Hooks, Jason	Residential Plans Examiner
8526	House, Andrew	Building Inspector Residential Building Inspector
9140	Italiano, Anthony	Electrical Safety Inspector*
8580	Johnson, Dusty	Residential Building Official
8871	Jones, Andrew	Building Inspector Residential Building Official Residential Plans Examiner Residential Building Inspector
8810	Kizer, Josh	Residential Building Official Residential Plans Examiner Residential Building Inspector
8443	Leach, Melran	Residential Building Official
9121	Lee, Jason	Building Official Master Plans Examiner Residential Building Official Residential Plans Examiner
	Marn, Dylan	Building Inspector Trainee** Residential Building Inspector Trainee** Alternative trainee plan approved
9125	Martin, Brandon	Electrical Safety Inspector*
9133	McGovern, Joseph	Building Plans Examiner
9123	Miller, Scott	Residential Building Official
8991	Muncy, John	Building Official
9109	Patrick, Anthony	Electrical Safety Inspector*
9096	Peterson, Michael	Automatic Sprinkler System Designer
9094	Quinichett, Maurice	Electrical Safety Inspector Trainee - Columbus
9101	Richardson, Brenton	Electrical Safety Inspector Trainee - Columbus
5777	Shetler, Todd	Building Inspector Trainee** Residential Building Inspector
9105	Taylor, Franklin	Fire Alarm System Designer
1488	Testa, Dave	Building Official Building Inspector
8905	Wakefield, Alex	Residential Building Official
6320	Walter, David	Residential Building Official
8697	Ward, Andrew	Residential Building Inspector
1614	Weneck, Dennis	Building Inspector
1624	Wettrick, Richard	Building Inspector Residential Building Official Residential Building Inspector
9019	Wheeler, Donald	Building Official Residential Building Official Residential Plans Examiner

1643 Wilson, Chris

Non-Residential Industrialized Unit
Inspector Electrical Plans Examiner

*Electrical Safety Inspectors must complete examinations prior to issuance of interim certification

** Denotes approval conditioned on receipt of forms or fees or other conditions.

Building Department Certifications

Columbiana (city of) - New Commercial Department

Exceptions: Plumbing, Med Gas to be performed by Columbiana County Department of Health

Recommend approval

Fostoria - Modification of Certification Application

Transition to independent department in contract with Seneca County

Previously a sub-department of Wood County

Exceptions: Plumbing, Med Gas

Recommend approval

Salem - New Commercial Department

Exceptions: Plumbing, Med Gas to be performed by Columbiana County Health District

Recommend approval

Upper Sandusky - Modification of Commercial Department Certification

Transition from subdepartment of Richland County to contract with Wyandot County (Safebuilt)

Exceptions: Plumbing, Med Gas

Application is placeholder (states subdepartment) for new application as contract department

Recommend approval upon receipt of updated application.

Personnel Certification Applications

Recommend the following applications be denied, additional information be requested, or other action as noted:

Wakefield, Alex - BI

Certification ID: 8905

Current certifications: ESI

Committee Recommendation: Approved for BI trainee pending receipt of forms

Ransom II, Robert - PI Additional information

Certification ID: 8918

Current Certifications: RBI

Committee Recommendation: Request additional detailed information on plumbing installation experience, invite to attend meeting August 10th to discuss.

Battaglia, Gina Marie - PI

Certification ID:

Current Certifications: None

Committee Recommendation: Request additional detailed information on plumbing installation experience

Marn, Dylan - BI and RBI Trainee, Alternative Trainee Plan

Certification ID:

Current Certifications: None

Committee Recommendation: BI and RBI Trainee and alternative trainee plan approved pending receipt of forms and fees.

Shetler, Todd - BI Trainee, RBI

Cert ID: 5777

Current Certifications: None

Committee Recommendation: RBI interim , BI Trainee approved under the following conditions:
Trainee sponsorship forms to be submitted by July 31, 2023, expiration date December 31, 2024,
applicant to make quarterly reports to Board regarding progress in completing exams for BI, first

report to be submitted by September 30, 2023, applicant to attend Code Academy within one year (June 2024).

Old Business
None this month

New Business
None this month

Mr. Leach moved and Mr. McCafferty seconded to approve the recommendations of the committee.

Chairman Galvin called for the ayes and nays.

Motion carried unanimously.

CR-2 Education Committee Report

Mr. McCafferty gave the committee's report included in the Board's Meeting packet at Tab CR-2:

The Education Committee met on June 22nd, 2023 at 10:00 AM in the BBS Library, 6606 Tussing Road, with the following members present: Mr. McCafferty, Mr. Stanbery, Mr. Barney, Mr. Samuelson, Mr. Tyler, and Ms. Ward. Board Chairman Timothy Galvin was also present. The Committee makes the following recommendations, included in the June 23rd, 2023 Board Packet at Tab CR-2, for the Board's consideration.

BBS Staff Megan Foley was present for the meeting, and Laura Borso attended virtually. Charles Huber and committee member Greg Warner attended virtually to observe.

Courses approved without modification:

2021 IBC Update (West Coast)
All certifications (5 hours)

Commercial Building Inspector and Plans Examiner (2021 IBC) (West Coast Code Consultants)
All certifications (19.5 hours)

Commercial Mechanical Inspector and Plans Examiner (2021 IMC)
All certifications (13 hours)

Commercial Plumbing Inspector and Plans Examiner (2021 IPC) (West Coast Code Consultants)
All certifications (11 hours)

Courses approved with modification or special circumstances, or denied, as stated.

Photovoltaic Systems: NEC Requirements and Industry Standards (Ohio Certificate Renewal)
All certifications (4 hours)
Committee Recommendation: Approved for all certifications.

Standby Generators: NEC Requirements and Generator Installation Methods (Ohio Certificate Renewal)
All certifications (4 hours)
Committee Recommendation: Approved for all certifications.

The New ACI Code 440.11 on GFRP Reinforced Concrete (American Concrete Institute)
All certifications (1 hour)
Committee Recommendation: Administrative approval ratified.

Residential Building Inspector (2021 IRC) (West Coast)
Residential certifications (11 hours)
Committee Recommendation: Approved for all certifications.

Residential Building Inspector (2021 IRC) (in Spanish) (West Coast)
Residential certifications (11 hours)
Committee Recommendation: Approved for all certifications.

Residential Electrical Inspector (2021 IRC) (West Coast)
Residential certifications (16.5 hours)
Committee Recommendation: Approved for all certifications.

Residential Mechanical Inspector (2021 IRC) (West Coast)
Residential certifications (11 hours)
Committee Recommendation: Approved for all certifications.

Residential Plans Examiner (2021 IRC) (West Coast)
Residential certifications (16 hours)
Committee Recommendation: Approved for all certifications.

Residential Plumbing Inspector (2021 IRC) (West Coast)
Residential certifications (7.5 hours)
Committee Recommendation: Approved for all certifications.

Old Business:
None this month

New Business:
None this month

Mr. McCafferty moved and Mr. Stanbery seconded to approve the recommendations of the committee.

Chairman Galvin called for the ayes and nays.

Motion carried unanimously.

CR-3 Code Committee Report

Mr. Denk gave the committee's report included in the Board's Meeting packet at Tab CR-3:

The Code Committee met on June 13, 2023 with the following members present: Ms. Cromwell, Mr. Denk, Mr. Johnson, Mr. Miller, Mr. Pavlis, Mr. Stanbery, and Mr. Tyler. Board Chairman, Tim Galvin, was also present.

The committee report is included in the June 23, 2023 Board Meeting Packet at tab CR-3 for the Board's consideration.

June 13, 2023 Code Committee Meeting
Call to Order
The meeting was called to order by Mr. Denk at 10:06 A.M.

Approval of Minutes
Mr. Miller made the motion to approve the minutes of the Code Committee meeting held on May 11, 2023. Mr. Stanbery seconded the motion. The motion passed unanimously.

Petitions
Withdrawal of Petition #23-02 - OBC Section 429 Privacy Pods/Booths - Charles Moore of Framery Acoustics
Ms. Ohler explained that she contacted the petitioner and the petitioner agreed to withdraw the petition. Staff and the petitioner will work together in the coming months to craft language to present to the committee that addresses privacy pods and similar products. No further action was taken.

Reconsideration of Petition #23-03 - OBC Ch 19 & 35 - Add ACI 440.11 to address Glass Fiber Reinforced Polymer (GFRP) - Kerry Sutton of ACI

After the committee members discussed the pros and cons of adopting the OBC Chapters 19 and 35 rules as originally filed in the proposed 2024 OBC rule package, Ms. Cromwell made a motion to revise the OBC Chapters 19 and 35 rules to remove the language addressing GFRP and to remove the references to the ACI 440.11 and ASTM D7957 standards with the understanding that she will use the added time to contact other engineers to learn more about their experience using the product. She did not want Ohio to rush into adopting language until ongoing research on the product has been completed. Mr. Miller seconded the motion. The motion passed, with Mr. Stanbery voting no. The petitioner was encouraged to bring the petition back to the committee in early 2024.

Recommendations of the Residential Construction Advisory Committee
No items for consideration

Old Business
No items for consideration

New Business
Proposed 2024 OBC – Comments received after original filing
Staff presented comments that were received since the 2024 rule packages were originally filed on May 19th. The committee reviewed and discussed the comments submitted by Kurt Beres (OBC 1008.2.3, exit discharge illumination), Diana Anderson (OBC 102.10, fence exemption), and Dave Collins (OBC 506.2.1, missing “SM” in equation 5-1 “At” variable), and decided to make no modifications to the rules as a result of the comments received.
Industrialized Unit rule package review

Mr. Richards presented the outline and the proposed IU rules to the committee and explained the need for the separation of the rules from the current OBC Section 113. The next step is to post the rules and solicit stakeholder comments.

Adjourn
Mr. Miller made the motion to adjourn at 1:09 P.M. Mr. Stanbery seconded the motion. The motion passed unanimously.

Mr. Denk moved and Mr. Leach seconded to approve the recommendations of the committee.

Chairman Galvin called for the ayes and nays.

Motion carried unanimously.

CR-4 Committee-of-the-Whole

No report.

RATIFICATION OF BOARD RECOGNIZED ACCREDITATION BODIES, CONFORMITY ASSESSMENT BODIES & INDUSTRY TRADE ASSOCIATION CERTIFICATION PROGRAMS

No items for consideration.

BUILDING DEPARTMENT SUPPORT AND OVERSIGHT

RE-1 June Building Department Update

Ms. Borso presented the June Building Department Report:

Board Staff conduct building department visits to engage building officials in discussion regarding the administration of their departments and to obtain feedback for the Board. Specifically, Board Staff inquire on the status of plan review and inspection turnaround times, protocols, policies and processes of the department, software systems used, current and projected activity, department

funding and fees, relationships with fire departments, administration and elected officials, the issuance of plan approvals, adjudication orders, certificates of occupancy, and appeals. The following Building departments were visited since the last Board update:

Butler County
East Cleveland
Glendale
Lakewood
Springdale
Pickaway County – site visit

Staff visited building officials of the departments listed and have noted that administrative and enforcement activity has remained strong but is showing some leveling off in the residential sector. There is continued implementation and upgrading of software/computer systems by departments to remain current. Two departments indicate that though they receive paper submissions, they scan them for the plan examiners. They want to ensure that documents are allowed to be submitted in any fashion in the spirit of cooperation with designers.

Nearly every department is back to full-time in the office. Some departments provide remote options, but all onsite inspections are the norm.

Our more rural departments have expressed concern regarding agricultural exemptions and converting or building barns to be used as residential structures without prior approvals.

Comments from building officials continue to include positive feedback about virtual education access. This allows them to avoid 4-5 hours of travel time for a 1-to-3-hour training. Officials also anticipate the new Codes update in 2024.

Building officials appreciate Board staff conversations during the visits as it allows the opportunity to establish rapport with staff.

PUBLIC COMMENTS

There were no public comments.

OLD BUSINESS

OB-1 Reconsideration of Petition #23-03 - OBC Ch 19 & 35 Add ACI 440.11 for structural concrete - Kerry Sutton of American Concrete Institute

Ms. Ohler summarized the review of Petition 23-03 since its submission in March 2023 and stated that the Code Committee has recommended reconsideration of Petition 23-05 previously approved to have more time review the standard and work with the petitioner.

Mr. Denk moved and Mr. Miller seconded to deny Petition 23-03 submitted by Kerry Sutton of the American Concrete Institute with the understanding that the Board will continue to work with the petitioner on this issue. The code committee determined that more time is needed to research the product before adding the standards for glass fiber reinforced polymer (GFRP) for structural concrete to the building code.

Chairman Galvin called for the ayes and nays.

Motion carried with Mr. Stanbery voting no.

NEW BUSINESS

NB-1 Draft Industrialized Units Rules - Action to Initiate Stakeholder Input Process

Mr. Richards stated that draft rules for industrialized units program are ready for stakeholder review and input.

Mr. Denk moved and Mr. Samuelson seconded to direct staff to begin the Common Sense Initiative (CSI) process by posting the rule package and requesting stakeholder feedback on the proposed 2024 Industrialized Unit rules.

Chairman Galvin called for the ayes and nays.

Motion carried unanimously.

COMPENSATE BOARD MEMBERS FOR WORK PERFORMED AT THEIR REGULAR RATE

Ms. Hanshaw reported that board members had performed committee and board work for the amount of hours, including board meetings and required training, as follows:

Mr. Barney	16	Mr. Pavlis	8
Ms. Cromwell	8	Mr. Samuelson	16
Mr. Denk	16	Mr. Stanbery	16
Mr. Galvin	32	Mr. Tyler	16
Mr. Johnson	8	Ms. Ward	16
Mr. Leach	16	Mr. Warner	0
Mr. McCafferty	16	Mr. Yankie	8
Mr. Miller	16		

Mr. McCafferty moved and Mr. Leach seconded to compensate board members for the work performed at their regular rate.

Chairman Galvin called for the ayes and nays.

Motion carried unanimously.

FUTURE MEETINGS

August 11, 2023 November 17, 2023
September 22, 2023 December 15, 2023
October 20, 2023

ADJOURNMENT

Mr. Miller moved and Mr. Denk seconded to adjourn. The Board adjourned at 10:45 a.m.

Timothy Galvin, Chairman
Board of Building Standards

Regina Hanshaw, Executive Secretary
Board of Building Standards

File Attachments for Item:

CH-1 Certification Hearing



AUGUST 11, 2023
CERTIFICATION HEARING AGENDA

Notice is hereby given that the Board of Building Standards will convene for a certification hearing in accordance with the rules of the Board at 10:00 AM, August 11th, 2023, at the Board of Building Standards, Training Room 1, 6606 Tussing Road, Reynoldsburg, Ohio 43068.

The purpose of the hearing is to hear testimony from anyone wishing to speak to the proposed certification of building departments, local boards of building appeals, and building department personnel.

Cert ID	Name	Certification Approved
9152	Beach, Preston	Residential Plans Examiner Trainee
8799	Lamp, Eric	Electrical Safety Inspector Trainee Alternative Trainee Plan
9173	Sizemore, Terry	Electrical Safety Inspector*
8905	Wakefield, Alex	Building Inspector Trainee Alternative Trainee Plan Approved
9169	Wharton, Kota	Building Plans Examiner Trainee Electrical Plans Examiner Trainee Fire Protection Plans Examiner Trainee Mechanical Plans Examiner Trainee Plumbing Plans Examiner Trainee Alternative Trainee Plan Approved
	Kenny, John	Plumbing Inspector**
4811	D'Agostino, Daniel	Building Official (5/12/23)
6013	Ream, Jeffrey	Residential Building Official
5156	Reich, Raymond	Residential Plans Examiner, Residential Mechanical Inspector Residential Building Inspector Residential Industrialized Unit Inspector
1488	Testa, David	Residential Building Inspector
9158	Listermann, Joshua	Automatic Sprinkler System Designer
9161	Sexton Jr, Rex	Fire Alarm System Designer
9165	French, Matt	Automatic Sprinkler System Designer
9166	Kaiser, Troy	Fire Alarm System Designer



BOARD OF BUILDING STANDARDS

The following certifications were approved by the certification committee, with the exception of Mr. Tyler, who abstained.

Cert ID	Name	Certification Approved
59	Baldauf, Peter	Building Plans Examiner
9160	Baldwin, Zachary	Plumbing Inspector Trainee Plumbing Plans Examiner Trainee
4685	Bieler, Michael	Residential Building Official
9162	Biello, Danielle	Residential Building Inspector
9176	Carroll, Chad	Building Inspector Trainee
9145	Donaldson, John	NonResidential Industrialized Unit Inspector Residential Industrialized Unit Inspector
2778	Drago, Anthony	Plumbing Inspector
8557	Ellison, Richard	Building Inspector
9144	Gorman, Phillip	Residential Building Inspector
6086	Gorney, Steven	Residential Building Inspector
551	Grassi, Jeffrey	NonResidential Industrialized Unit Inspector Residential Industrialized Unit Inspector
5655	Hillier, Patrick	Building Inspector
6059	Johnstone, Michael	Residential Building Inspector
794	Koogan, Hugh	Building Official Building Plans Examiner Mechanical Inspector Fire Protection Inspector
808	Kulcsar, David	Electrical Safety Inspector Trainee
9146	Meske, Joshua	NonResidential Industrialized Unit Inspector
4911	Pallens, Jose	Plumbing Inspector
2145	Randles, Christopher	Building Plans Examiner
9175	Santillo, Michael	Residential Building Inspector
4713	Skurka, April	Building Plans Examiner Mechanical Plans Examiner Plumbing Plans Examiner
1394	Snodgrass, Renee'	NonResidential Industrialized Unit Inspector
9174	Studer, Richard	Building Inspector
4593	Virostek, Thomas	Building Official
1619	West, Gordon	NonResidential Industrialized Unit Inspector Residential Industrialized Unit Inspector
6343	Frankenhoff, Joseph	Electrical Plans Examiner
9177	Harding-Minton, Austin	Plumbing Inspector
	Markley, Daniel	Residential Building Official



1271	Roush, Michael	Mechanical Inspector** Mechanical Plans Examiner** Residential Building Inspector**
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*Electrical Safety Inspectors must complete examinations prior to issuance of interim certification

** Denotes approval conditioned on receipt of forms or fees or other conditions.

Building Department Certifications

Rio Grande New Sub Department to Washington County
 Exceptions - Plumbing, Med Gas
 Waiting on additional paperwork - contract, certified personnel, transition plan
 Approved pending receipt of remaining paperwork

Fort Loramie New Sub-department to Shelby County
 Exceptions: Med Gas (should also include plumbing.)
 Still waiting on contract, certified personnel, transition plan.
 Approved pending receipt of remaining paperwork

Beach City New Commercial Department
 On the condition that Stark County performs all code enforcement
 Exceptions: Plumbing, Med Gas

File Attachments for Item:

CR-1 Certification Committee Report



BOARD OF BUILDING STANDARDS
CERTIFICATION COMMITTEE MEETING REPORT

The Certification Committee met on August 11th, 2023, at 10:00 AM in the BBS Library, 6606 Tussing Road, with the following members present: Mr. Leach, Mr. McCafferty, Ms. Cromwell, Mr. Samuelson, Mr. Stanbery, Mr. Tyler, and Ms. Ward. Board Chairman Timothy Galvin was also present. The Committee makes the following recommendations, included in the August 12th, 2023 Board Packet at Tab CR-1, for the Board’s consideration.

Also present at the meeting were BBS Staff, Regina Hanshaw, Megan Foley, Rob Johnson, and Laura Borso. Guest Robert Ransom II attended in person, and guest Kota Wharton, with building official Mike Boso, attended virtually, to discuss their applications. Charles Huber, Kara Russell, and Dave Molnar attended the meeting virtually to observe.

Recommend the following applications be approved following a certification hearing effective immediately unless otherwise noted on the certification hearing agenda:

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9169	Wharton, Kota	Building Plans Examiner Trainee Electrical Plans Examiner Trainee Fire Protection Plans Examiner Trainee Mechanical Plans Examiner Trainee Plumbing Plans Examiner Trainee Alternative Trainee Plan Approved
	Kenny, John	Plumbing Inspector**
4811	D'Agostino, Daniel	Building Official (5/12/23)
6013	Ream, Jeffrey	Residential Building Official
5156	Reich, Raymond	Residential Plans Examiner, Residential Mechanical Inspector Residential Building Inspector Residential Industrialized Unit Inspector
1488	Testa, David	Residential Building Inspector
9158	Listermann, Joshua	Automatic Sprinkler System Designer
9161	Sexton Jr, Rex	Fire Alarm System Designer
9165	French, Matt	Automatic Sprinkler System Designer
9166	Kaiser, Troy	Fire Alarm System Designer

Timothy Galvin, Chairman

Ohio Board of Building Standards
 6606 Tussing Road
 Reynoldsburg, OH 43068-9009

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The following certifications were approved by the certification committee, with the exception of Mr. Tyler, who abstained.

Cert ID	Name	Certification Approved
59	Baldauf, Peter	Building Plans Examiner
9160	Baldwin, Zachary	Plumbing Inspector Trainee Plumbing Plans Examiner Trainee
4685	Bieler, Michael	Residential Building Official
9162	Biello, Danielle	Residential Building Inspector
9176	Carroll, Chad	Building Inspector Trainee
9145	Donaldson, John	NonResidential Industrialized Unit Inspector Residential Industrialized Unit Inspector
2778	Drago, Anthony	Plumbing Inspector
8557	Ellison, Richard	Building Inspector
9144	Gorman, Phillip	Residential Building Inspector
6086	Gorney, Steven	Residential Building Inspector
551	Grassi, Jeffrey	NonResidential Industrialized Unit Inspector Residential Industrialized Unit Inspector
5655	Hillier, Patrick	Building Inspector
6059	Johnstone, Michael	Residential Building Inspector
794	Koogan, Hugh	Building Official Building Plans Examiner Mechanical Inspector Fire Protection Inspector
808	Kulcsar, David	Electrical Safety Inspector Trainee
9146	Meske, Joshua	NonResidential Industrialized Unit Inspector
4911	Pallens, Jose	Plumbing Inspector
2145	Randles, Christopher	Building Plans Examiner
9175	Santillo, Michael	Residential Building Inspector
4713	Skurka, April	Building Plans Examiner Mechanical Plans Examiner Plumbing Plans Examiner
1394	Snodgrass, Renee'	NonResidential Industrialized Unit Inspector
9174	Studer, Richard	Building Inspector
4593	Virostek, Thomas	Building Official
1619	West, Gordon	NonResidential Industrialized Unit Inspector Residential Industrialized Unit Inspector
6343	Frankenhoff, Joseph	Electrical Plans Examiner
9177	Harding-Minton, Austin	Plumbing Inspector
	Markley, Daniel	Residential Building Official

Timothy Galvin, Chairman

Ohio Board of Building Standards
6606 Tussing Road
Reynoldsburg, OH 43068-9009

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1271	Roush, Michael	Mechanical Inspector** Mechanical Plans Examiner** Residential Building Inspector**
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*Electrical Safety Inspectors must complete examinations prior to issuance of interim certification

** Denotes approval conditioned on receipt of forms or fees or other conditions.

Building Department Certifications

Rio Grande New Sub Department to Washington County
 Exceptions - Plumbing, Med Gas
 Waiting on additional paperwork - contract, certified personnel, transition plan
 Approved pending receipt of remaining paperwork

Fort Loramie New Sub-department to Shelby County
 Exceptions: Med Gas (should also include plumbing.)
 Still waiting on contract, certified personnel, transition plan.
 Approved pending receipt of remaining paperwork

Beach City New Commercial Department
 On the condition that Stark County performs all code enforcement
 Exceptions: Plumbing, Med Gas

Personnel Certification Applications

Recommend the following applications be denied, additional information be requested, or other action as noted:

Ransom II, Robert - PI Additional information
 Certification ID: 8918
 Current Certifications: RBI
 Committee Recommendation: Recommend PI trainee, to be approved administratively upon receipt, alternative trainee plan to be reviewed by committee.

Adams, Seth - FPI
 Certification ID: 9168
 Current certifications: none, FSI 1.5 years.
 Committee recommendation: Recommend request for additional information on FSI experience or fire protection installation experience, or FPI trainee.

Cloud, Chalsie - BO, BI
 Certification ID: 9172
 Current Certifications: None
 Committee recommendation: Recommend request for additional information on qualifications for certification, including work history in construction industry.

Herriott, Chad - BO, BI
Certification ID: 5914
Current certifications: RBO, held ESI through 6/30/22
Committee Recommendation: Recommend request for additional information on Georgia certifications obtained.

McDowell, Lionel - BI
Certification ID: 9170
Current certifications: None. An RBI is indicated on the form, but that ID number belongs to a different individual, whose interim RBI expired in 2010.
Committee recommendation: Recommend request for additional information on prior RBI certification, experience for BI, felony convictions

Neuendorf, Mark - PI, MechPE, MI
Certification ID: 9167
Current Certifications: None
Committee recommendation: Recommend request for additional information on design experience and education, invitation to attend September 21 committee meeting to discuss.

Rybka, Michael - ESI
Certification ID: 9151
Current Certifications - none, has passed ESI exams
ESIAC Recommendations: No consensus reached
Committee recommendation: Recommend request for additional work history to demonstrate 6+ years journeyman level work as required for certification.

Kenny, John - PI
Certification ID:
Current Certifications: None
Staff Notes: Appears to meet requirements, original application and fee not yet received. Recommend approval upon receipt.
Committee recommendation: Emailed application demonstrates certification requirements are met: certification to be approved pending receipt of forms and fees.

New Business

Confirm D'Agostino Certification

At the May meeting, Mr. D'Agostino's certification was on the consent agenda, but was erroneously excluded from the certification hearing and committee report to the Board. Board staff has issued the certification with an effective date of May 12, 2023, and this certification will be reported in the August certification hearing with explanation.

Committee Recommendation: Approved.

Complaint Summary Report

Committee Recommendation: Accept items 1 and 2, table item 3 for further information.

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New Certification Program Structure

Board staff has developed a new structure for personnel certifications that increases flexibility and provides a pathway for career advancement.

Committee recommendation: update to include notes from discussion, will require stakeholder input moving forward.

Certification Exams Revision

Board staff has been considering the list of required exams in relation to duties performed by each certification: submitted recommendation for changes.

Committee Recommendation: Approve board staff recommendation to omit requirement for residential plumbing inspector (P1, 5A) and residential electrical inspector (E1, 2A) exams and require commercial plumbing inspector (P2, 5B), commercial electrical inspector (E2, 2B) exams for the PI, ESI, RBO and RPE certifications.

Old Business

Pending or Imminent Litigation - Settlement (Wray)

A motion was made by Mr. Stanbery, and seconded by Mr. McCafferty, to adjourn to executive session pursuant to Ohio Revised Code §121.22(G)(3) to discuss pending or imminent litigation.

A vote was taken to adjourn to executive session.

Aye: Mr. Leach, Mr. McCafferty, Ms. Cromwell, Mr. Samuelson, Mr. Stanbery, Mr. Tyler, and Ms. Ward.

Nay: None

Executive session adjourned, and committee meeting was adjourned.

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File Attachments for Item:

CR-2 Education Committee Report



BOARD OF BUILDING STANDARDS

EDUCATION COMMITTEE MEETING REPORT

The Education Committee met on August 10th, 2023 at 10:00 AM in the BBS Library, 6606 Tussing Road, with the following members present: Mr. McCafferty, Mr. Stanbery, Ms. Cromwell, Mr. Samuelson, Mr. Tyler, and Ms. Ward. Board Chairman Timothy Galvin was also present. The Committee makes the following recommendations, included in the August 11th, 2023 Board Packet at Tab CR-2, for the Board's consideration.

BBS Staff Megan Foley was present for the meeting.

Courses approved without modification:

2021 IEBC Essentials (International Code Council)
All certifications (6 hours)

Authority-Having-Jurisdiction Seminar (Koorsen Fire and Security)
All certifications (7 hours)

Building Code Enforcement: Global Best Practices (Panel Discussion) (ICC)
All certifications (3 hours)

Evaluation Reports: Purpose and Criteria (ICC)
All certifications (1.5 hours)

Commercial Energy 2021 IECC (ICC)
All certifications (1.5 hours)

Fire Safety in the 2021 IBC (ICC)
All certifications (1.5 hours)

Grant Basics for Code Officials (ICC)
All certifications (1.5)

How to Be a Better Leader by Practicing Active Listening (ICC)
All certifications (1.5 hours)

Professional Ethics (ICC)
All certifications (1.5 hours)

The Plumbing Industry (ICC)
All certifications (3 hours)

The Tiny House (ICC)
All certifications (1.5 hours)

2017 vs. 2023 NEC Review (Southwest Ohio Electrical Organization)
All certifications (four 7.5-hour sessions)

2023 NEC (ICC)
All certifications (1.5 hours)

2023 NEC Code Changes Chapters 1-4 (Matthews Electrical Services)
All certifications (4 hours)

2023 NEC Code Changes Chapters 5-9 (Matthews Electrical Services)
All certifications (4 hours)

2023 NEC Significant Changes Overview (Matthews Electrical Services)
All certifications (4 hours)

Motors, Transformers, and the 2020 NEC (Matthews Electrical Services)
All certifications (4 hours)

Significant Changes to the 2023 NEC (Dayton Area Electrical JATC)
All certifications (12 hours, two 6-hour sessions)

Application and Administration of the 2021 I-Codes (ICC)
All certifications (1.5 hours)

OPC Chapter 7: Sanitary Drainage (Franklin County Public Health)
All certifications (7 hours)

Courses approved with modification or special circumstances, or denied, as stated.

2024 IBC/IEBC Significant Changes (ICC)
All certifications (1.5 hours)
Committee Recommendation: Not approved.

2024 IECC Changes and Status (ICC)
All certifications (1.5 hours)
Committee Recommendation: Not approved.

2024 IRC Significant Changes (ICC)

All certifications (1.5 hours)

Committee Recommendation: Not approved.

Western Section IAEI Annual Meeting (Conference/IAEI Western)

All certifications (18 hours)

Committee Recommendation: Full conference not approved for 18 hour course credit.

Each course is approved individually. Attendees are to receive certificates for each course attended.

Old Business:

None this month

New Business:

None this month

File Attachments for Item:

CR-3 Code Committee Report



Board of Building Standards

CODE COMMITTEE RECOMMENDATIONS

The Code Committee met on August 10, 2023 with the following members present: Ms. Cromwell, Mr. Denk, Mr. Miller, Mr. Pavlis, Mr. Samuelson, Mr. Stanbery, Mr. Tyler, and Mr. Yankie. Board Chairman, Tim Galvin, was also present.

The committee report is included in the August 11, 2023 Board Meeting Packet at tab CR-3 for the Board's consideration.

August 10, 2023 Code Committee Meeting

Call to Order

The meeting was called to order by Mr. Denk at 1:13 P.M.

Approval of Minutes

Ms. Cromwell made the motion to approve the minutes of the Code Committee meeting held on June 13, 2023. Mr. Miller seconded the motion. The motion passed unanimously.

Petitions

Petition #23-06 - OPC Section 608.16.1 - beverage dispenser backflow prevention devices - Jim Chandler of Vista Water Group, LLC

Mr. Chandler presented his proposal to eliminate the requirement for an ASSE 1022 (double check with atmospheric vent) backflow device on the water supply to a beverage dispenser. Ms. Ohler provided a brief code history of water supply backflow prevention requirements for beverage dispensers and explained that the IPC model code has been modifying the requirements for years and most recently clarified the requirements by differentiating between carbonated and noncarbonated beverage dispensers. The petitioner mentioned that the 2024 IPC will accept ASSE 1032 (double check) for beverage dispensers and would like it added to the carbonated beverage dispenser section of the 2024 OPC. Staff clarified that while it is true that the 2024 IPC will accept only the ASSE 1032 device for noncarbonated beverage dispensers, the model code does not accept only the ASSE 1032 device for carbonated beverage dispensers. Mr. Pavlis made the motion to table the petition to allow staff to talk with ASSE and to draft new language that is a blend of the previous Ohio exception adopted in 2002, Mr. Chandler's petition, and the newest model code language. Mr. Miller seconded the motion. The motion passed unanimously.

Recommendations of the Residential Construction Advisory Committee

Reconsideration of Petition #23-04 - RCO 311.7.1 Two handrails - Robert Kramer

Staff reported that the RCAC reconsidered their original recommendation of denial of the petition and, again, recommended denial of the petition. The reasons given were that an additional railing would be costly, is unnecessary as traffic is only typically traveling in one direction in a dwelling, would make it difficult to add a chair lift on a residential stair, and would be more restrictive than the OBC for similar residential dwelling units. The Code Committee further discussed the pros and cons of adding a second handrail within a dwelling unit. Mr. Tyler made the motion to accept the RCAC's second recommendation of denial of the petition. Mr. Miller seconded the motion. The motion passed unanimously.

Old Business

Industrialized Unit Rule Status

Ms. Hanshaw updated the committee on the status of the proposed IU rules. Staff has been working with the IU Board member, Greg Barney, to address a few of his concerns regarding the frequency and timing

of inspections. After Mr. Barney's concerns have been adequately addressed, the rules will be posted and stakeholder comments will be solicited. No action was taken.

New Business

Elevator rules – 5 year rule review

Staff presented a proposed draft set of elevator rules for the committee to consider. The proposed changes were primarily to update to newer standards, to remove regulatory restrictions, to add a new section that allows a more recent edition of the A17.1 to be used in certain circumstances, and to omit an alternative load test methodology at the request of the Chief Elevator Inspector for the state, Chip Updyke. Mr. Updyke shared that he was in favor of the proposed rules and answered questions of the committee relating to the alternative load testing methodology. Mr. Pavlis made a motion to start the stakeholder review process by posting the draft rules and soliciting stakeholder feedback. Mr. Yankie seconded the motion. The motion passed unanimously.

Boiler and Pressure Vessel rules – 5 year rule review

Staff presented a proposed draft set of boiler and pressure vessel rules for the committee to consider. The proposed changes were primarily to update to newer standards and to remove regulatory restrictions. Mr. Miller made a motion to start the stakeholder review process by posting the draft rules and soliciting stakeholder feedback. Mr. Stanbery seconded the motion. The motion passed unanimously.

Adjourn

Mr. Pavlis made the motion to adjourn at 2:54 P.M. Mr. Miller seconded the motion. The motion passed unanimously.

File Attachments for Item:

RE-1 August Building Department Update

Building Department Support and Oversight

August 2023 Department Visit Status Report

Board Staff conduct building department visits to engage building officials in discussion regarding the administration of their departments and to obtain feedback for the Board. Specifically, Board Staff inquire on the status of plan review and inspection turnaround times, protocols, policies and processes of the department, software systems used, current and projected activity, department funding and fees, relationships with fire departments, administration and elected officials, the issuance of plan approvals, adjudication orders, certificates of occupancy, and appeals.

The following Building departments were visited since the last Board update:

Clark County	Mayfield Heights
Hamilton	Middleburg Heights
Hillard	North Olmsted
Union County – site visit	Toledo
Kent	

Administrative and enforcement activity has remained strong but is showing some leveling off in the residential sector. There is continued upgrading of software/computer systems working towards implementing 100% digital submissions. If submitted, paper submissions are scanned for the plan examiners, ensuring documents can be accepted in any format.

There is a concern regarding the lack of certified inspectors to fill vacant positions. Departments are looking at alternative solutions to address this issue, such as, adjusting pay scales and implementing in house training. There was also an inquiry into possibly certifying permit techs.

Some departments in rural areas have inquired regarding the abuse of agricultural exemption for barns and pole structures proposed for uses regulated by the building code. Ag structures are being converted for residential structures without approvals. Other inquiries of staff include the regulation of Air B & B's and vacation rentals.

Officials are anticipating the new Codes update in 2024. They have also provided positive feedback regarding the pamphlet distributed by the Board called "So you want to be a Certified Inspector" as a helpful tool for recruiting for their building department.

Building officials appreciate the visits that allows them to ask questions of Board staff and establish rapport with the Board.

File Attachments for Item:

RE-2 Complaint Summary Report

Complaint and Investigation Consideration Status Report

DATE: August 3, 2023

To: Members of the Ohio Board of Building Standards (OBBS) for the August 11, 2023, Board Conference Meeting as reported by Board staff. The following list of new complaints received were considered by the OBBS certification committee for action.

New Complaints:

A. Columbus Building Department

On July 18, 2023, a complaint was received from Mr. Joe Motil, of Columbus, OH. Mr. Motil alleged that the City of Columbus Building Department has approved documents, dated June 12, 2023, related to the Baron's Bus Terminal located at 845 North Wilson Road Columbus, Ohio 43204 without the approval of the Columbus zoning commission's approval of substantial completion of site plans.

Mr. Amit Ghosh, Building Official, provided that the initial submission was reviewed based on the information within the construction documents submitted by the owner/representative-designer on May 15, 2023. Documents were resubmitted based on plan review comments on May 19, 2023. They were approved by the Columbus Building Department on May 22, 2023.

During that time period, local area residents informed the City of Columbus that the owner was operating the project and expressed concerns of loitering and traffic congestion impacting the community. On July 21, 2023, the owner, and the architect resubmitted documents for a new proposed building with bathroom facilities and to revise the code data to update the change of use to A-3 and address new occupancy rates, changing them from 12 occupants to 100 occupants.

The Columbus Building Dept. had inspected the site on July 27, 2023, and found it operating with portable/temporary facilities. An adjudication order was sent to the owner on July 27, 2023, indicating that the proposed project had not been approved, and that the owner was in violation for operating without a certificate of Occupancy.

The complainant cites violations of regulatory activity in the absence of site approvals/zoning, etc, to which OBBS has no authority to regulate, thus this matter of site development and approval is to be deferred to the appropriate division within the City of Columbus. The owner is responsible to ensure that all types of approvals are completed, and to coordinate them with all specific State and local requirements. The order the owner takes to apply for these approvals can vary, but any revisions needed for each approval is the owner's responsibility.

Board staff has determined that the City of Columbus (Building Dept) is operating within the requirements of the Ohio Building Code for enforcement, specifically for plan review, approval, and orders being issued by the building department. The owner is responding to the building department requests.

Recommendation: Dismiss complaint.

B. Hamilton County Building Department

On August 3, 2023, a complaint was received from Mr. Ken Yeager, of 4181 Angie Court Cincinnati, OH. Mr. Yeager alleges that he is negatively impacted by a neighbor located at 4191 Angie Court due to surface storm water runoff. He provides information related to the neighbor's relocation of an installed a sump pump drainage system without a County permit from the Hamilton County Health District and that interconnection to storm water downspouts and general site drainage has not been properly mitigated.

Mr. Mike Stehlin, Hamilton County Building Official is aware of these circumstances and has responded to the complainant that the buildings are considered existing buildings and that any alterations, etc. to the building or building service equipment would require approvals. Mr. Stehlin indicated to Board staff that these issues related to the site are exempt from the building code. The complainant cites many ordinances in violation that relate to the authority of the County Engineer and the County Health District, as well as the Hamilton County Public Works Division.

Board staff has determined that the issue is outside the authority of the OBBS to enforce. There are no violations of enforcement rules by the building department. The issue is primarily civil in nature, and any enforcement would need to be addressed by the appropriate ordinances and departments within Hamilton County for site and storm water management.

Recommendation: Dismiss complaint.

C. Streetsboro Building Department, Dan D'Agostino RBO, RBI, ESI

On July 20, 2023, a complaint was received from Ms. Nicole Johnson, of Sal's Heating and Cooling, North Royalton, OH. Ms. Johnson alleges that her business is adversely affected by Mr. D'Agostino in the enforcement of a residential HVAC replacement located at 9463 Steffner. Violations were cited in the inspection record for not properly fastening/supporting refrigerant lines through an attic between the equipment. Board staff inquired of the nature of the issues and was told that Sal's would be charged an additional inspection fee for the reinspection. Mr. D'Agostino suggested that the contractor send pictures to verify the condition. Pictures were sent according to the record, but apparently was not conclusive as to how it was done. Mr. D'Agostino informed the contractor that a site inspection was necessary to determine compliance. The contractor has objected to requesting the reinspection due to the assessed fee, even though an inspection will need to be performed to provide a certificate of completion.

Board staff determined that the inspector is not in violation to the OBBS enforcement rules, and it appears to be a local issue regarding fees and the contractor being unwilling to address compliance due to contractual issues with the owner. The RBO would be advised to issue an adjudication order to require compliance.

Recommendation: Dismiss complaint.

File Attachments for Item:

NB-1 Proposed Elevator Rules - Action to Initiate Stakeholder Input Process

2022 (extended to 2023) Five-Year Rule-Review Proposed Changes

BBS Elevator Rules (July 2023)

4101:5-1-01 Scope – Amend

4101:5-1-02 Definitions – Amend

4101:5-1-03 Enforcement – Amend

4101:5-1-04 Application for permit - Amend

4101:5-1-05 Adjudication order - Amend

4101:5-1-06 Examination for certificate of competency - Amend

4101:5-1-07 Assessment fee - Amend

4101:5-3-01 Accepted engineering practice and approved standards - Amend

4101:5-3-02 Resolution of conflicts - Amend

4101:5-1-01 Scope.

This ~~code covers~~ division of the Administrative Code applies to the design, construction, repair, alteration, and maintenance of:

- (A) Passenger elevators;
- (B) Freight elevators;
- (C) Stage lifts;
- (D) Dumbwaiters;
- (E) Escalators;
- (F) Moving walks;
- (G) Belt Manlifts;

~~(H) Mine elevators;~~

~~(H)~~ (H) Wind Elevators in wind turbine tower elevators towers connected to building services equipment;

~~(I)~~ (I) Special service elevators and other lifting and lowering equipment as provided for by section 4105.01 of the Revised Code, but ~~shall~~ does not include the following:

- (1) Conveyors and related equipment within the scope of "ANSI B20.1";

- (2) Tiering or piling machines used to move material to and from storage and located and operating entirely within one story;
- (3) Equipment for feeding or positioning materials at machine tools, printing presses, etc.;
- (4) Hoists for raising or lowering materials and which are provided with unguided hooks, slings, and similar means for attachment to the materials;
- (5) Skip or furnace hoists;
- (6) Wharf ramps;
- (7) Amusement devices, but does include elevators in observation towers, etc.;
- (8) Lift bridges;
- (9) Railroad car lifts or dumpers;
- (10) Material hoists and material lifts; and
- (11) Workmen's hoists in place for the duration of the construction renovation or demolition of the project; and
- (12) Elevators within individual dwelling units.

4101:5-1-02 Definitions.

~~Note: For definitions~~ This rule defines terms used in rules 4101:5-1-01 to 4101:5-3-02 of the Administrative Code.

(For-definitions of terms not contained herein, refer to the "ASME" standards listed in rule 4101:5-3-01 of the Administrative Code.)

"ASME" means the "American Society of Mechanical Engineers." Referenced standards, codes, and related technical information developed by this organization can be purchased by logging on to <http://www.asme.org> or by calling 1-800-the-asme.

"Board" means the board of building standards as established by section 3781.07 of the Revised Code and authorized by division (A) of section 4105.011 of the Revised Code to formulate rules and regulations governing the design, construction, repair, alteration, and maintenance of elevators.

"Board of building appeals" means the board of building appeals as established by section 3781.19 of the Revised Code.

"Division" means the division of industrial compliance in the department of commerce.

"Elevator" means, a hoisting and lowering apparatus equipped with a car, cage, or platform which moves on or between permanent rails or guides and serves two or more fixed landings in a building or structure to which section 3781.06 of the Revised Code applies. "Elevator" includes

dumb-waiters other than hand-powered dumb-waiters, escalators, manlifts of the endless belt type, moving walks, other lifting or lowering apparatus permanently installed on or between rails or guides, and all equipment, machinery, and construction related to any elevator; but does not include construction hoists and other similar temporary lifting or lowering apparatuses, ski lifts, traveling, portable amusement rides or devices that are not affixed to a permanent foundation, or nonportable amusement rides or devices that are affixed to a permanent foundation.

"Freight elevator" means an elevator normally used for carrying freight and on which only the operator and employees in the pursuit of their duties, by the permission of the employer, are allowed to ride.

"General inspector" means a state inspector examined and hired to inspect elevators and lifting apparatus for that state.

"Inspector" means either a general or special inspector.

"Moving walks" means a type of passenger-carrying device on which passengers stand or walk, and in which the passenger-carrying surface remains parallel to its direction of motion and is uninterrupted.

"Owner or user" means any person, firm or corporation owning or operating any elevator.

"Special inspector" means an inspector examined and commissioned by the superintendent to inspect elevators and lifting apparatus in the state.

"Superintendent" means the superintendent of the division of industrial compliance created in the department of commerce under section 121.04 of the Revised Code, or the person designated by the superintendent as responsible for the enforcement of rules 4101:5-1-01 to 4101:5-3-02 and 1301:3-6-01 to 1301:3-6-06 of the Administrative Code.

4101:5-1-03 Enforcement.

- (A) The superintendent of the division of industrial compliance ~~shall enforce all~~ enforces the provisions of rules 4101:5-1-01 to 4101:5-3-02 and rules 1301:3-6-01 to 1301:3-6-06 of the Administrative Code relating to the design, construction, repair, alteration, and maintenance of elevators and elevator controls as defined in rule 4101:5-1-02 of the Administrative Code.

Exception: Municipal corporations, such as the city of Cleveland and the city of Cincinnati, which are authorized to adopt regulations for the regular inspection of elevators pursuant to section 4105.19 of the Revised Code.

- (B) All requirements within the standards referenced in "Table 4101:5-3-01" of rule 4101:5-3-01 of the Administrative Code that relate to the construction of the building and the building service equipment located within an elevator hoistway enclosure, hoistway, machine room, and control room such as, but not limited to, requirements for wall materials, wall fire resistance ratings, fire and/or smoke dampers, means of egress doors and hardware, ladders, air conditioning systems, ventilation systems, fire protection systems, lighting systems, electrical power supply to the elevator controls, lighting switches, electrical disconnects and selective coordination of

overcurrent protective devices (OCPD), plumbing, sanitary piping, and sump pits ~~shall~~ are to be enforced by the building official having jurisdiction as determined in division (A)(1) of section 3791.04 of the Revised Code.

4101:5-1-04 Application for permit.

In accordance with section 4105.16 of the Revised Code-, every owner or contractor ~~shall~~ is required to apply for and obtain a permit from the division of industrial compliance prior to the installation of, alteration of, or repair of any elevator regulated by the division. The application ~~shall~~ is to be made on forms prescribed by the superintendent and in accordance with rule 1301:3-6-03 of the Administrative Code.

4101:5-1-05 Adjudication order.

Before attempting to enforce, by any remedy, civil or criminal, the provisions with which the proposed or inspected elevator does not comply, the superintendent ~~shall~~ will issue an adjudication order in accordance with section 4105.11 of the Revised Code. The owner of the elevator specified therein may appeal to the board of building appeals under section 3781.19 of the Revised Code.

4101:5-1-06 Examination for certificate of competency.

- (A) No person may act, either as a general inspector or as a special inspector of elevators, unless ~~he~~ that person holds a certificate of competency issued by the superintendent in accordance with rule 1301:3-6-02 of the Administrative Code.
- (B) The written examination administered by the superintendent, prior to issuance of a certificate of competency, ~~shall be~~ is the "Quality Elevator Inspectors (QEI) Examination."

4101:5-1-07 Assessment fee.

- (A) In accordance with division (I) of section 4105.17 of the Revised Code, in addition to any fees assessed and collected directly from the owner or user for the inspection and issuance of a certificate of operation, the superintendent will collect, directly from the owner or user, a board assessed fee of three dollars and twenty-five cents for each certificate of operation or renewal thereof and for each inspection conducted.
- (B) The three dollars and twenty-five cent assessment fee collected directly from the owner or user on behalf of the board ~~shall~~ is to be remitted to the board when deposited by the division of industrial compliance pursuant to section 121.084 of the Revised Code. The superintendent ~~shall~~ is to report to the board the amounts remitted not later than one month following the first full month's collection and then monthly thereafter.

4101:5-3-01 Accepted engineering practice and approved standards.

Unless otherwise specifically provided for in rules 4101:1-30-01 or 4101:5-1-01 to 4101:5-3-02 of the Administrative Code, compliance with the applicable technical provisions and requirements of the standards listed in "Table 4101:5-3-01" of the Administrative Code ~~this rule~~ is prima facie evidence of conformity with accepted engineering practice or with an approved standard governing the design, construction, repair, alteration and maintenance of elevators.

Compliance with a more recently published edition of a standard listed in "Table 4101:5-3-01" of this rule is acceptable as meeting the minimum standard identified provided that compliance is demonstrated to the entire standard and the specific edition of that standard is identified on the approval record issued by the superintendent. Additionally, the specific edition of that standard is to be identified on the certificate of plan approval and the certificate of occupancy issued by the building official having jurisdiction pursuant to rule 4101:1-1-01 of the Administrative Code. Addenda subsequently issued by the promulgating agency in between published editions is not enforceable unless specifically adopted herein.

Table 4101:5-3-01

Promulgating Agency (Note a)	Standard Identification	Edition	Title
ASME	A 17.1 (Note b)	2016 2019	Safety Code for Elevators and Escalators
ASME	A17.3 (Note c)	2015 2020	Safety Code for Existing Elevators and Escalators.
ASME	A17.6	2010 2017	Standard for Elevator Suspension, Compensation, and Governor Systems
ASME	A17.7	2007	Performance-based Safety Code for Elevators and Escalators
ASME	A17.8	2016	Standard for Wind Turbine Tower Elevators
ASME	A18.1	2014 2020	Safety Standard for Platform Lifts and Stairway Chairlifts

Table 4101:5-3-01

ASME	A 90.1	2015	Safety Standard for Belt Manlifts
ESTA	E1.42	2016 2018	Design, Installation, and Use of Orchestra Pit Lifts
Note a	ASME means the "American Society of Mechanical Engineers" and ESTA means the "Entertainment Services and Technology Association"		
Note b	<p>Section 2.2.2.5-delete the last sentence;</p> <p>Section 8.6.11.10 – delete the entire section.</p> <p>Section 8.11.1.1.2(a)- change to read as follows: Periodic tests, as required in 8.6, are not required to be witnessed by a general or special inspector.;</p> <p>Section 8.11.1.1.2(b)- change to read as follows: Periodic test reports shall <u>are to be</u> submitted to the division within five business days of the completion of the periodic test. The test reports shall <u>are to be</u> on forms prescribed by the superintendent and shall <u>are to</u> include the date and type of test(s) performed, detailed results of the test(s), and a statement as to any corrective action taken.</p>		
Note c	The rules of the board shall <u>are not to be</u> retroactively applied to existing elevators that are not otherwise being altered or repaired. Portions of an elevator not altered and not affected by an alteration are not required to comply with the code requirements for a new elevator.		

4101:5-3-02 Resolution of conflicts.

- (A) In the event of conflict, the rules of the board of building standards adopted pursuant to section 3781.10 of the Revised Code and known as the "Ohio Building Code", the "Ohio Mechanical Code", and the "Ohio Plumbing Code" ~~shall~~ govern any rule or standards adopted by the board pursuant to division (A) of section 4105.011 of the Revised Code.
- (B) The rules of the board ~~shall~~ are not to be retroactively applied to existing elevators that are not otherwise being altered or repaired. Portions of an elevator not altered and not affected by an alteration are not required to comply with the code requirements for a new elevator.

File Attachments for Item:

NB-2 Proposed Boiler Rules - Action to Initiate Stakeholder Input Process

2023 Five-Year Rule-Review Proposed Changes

BBS Boiler Rules (July 2023)

- 4101:4-1-01 Definitions and abbreviations - Amend
- 4101:4-2-01 Scope, administration, and enforcement - Amend
- 4101:4-2-02 Types and qualifications of inspectors - Amend
- 4101:4-3-01 Accepted engineering practice and approved standards - Amend
- 4101:4-4-01 Design of boilers and pressure vessels - Amend
- 4101:4-4-02 Maximum allowable working pressure of new boilers and pressure vessels - Amend
- 4101:4-4-03 Safety devices and controls - Amend
- 4101:4-4-04 Steam boiler blowoff systems - Amend
- 4101:4-4-05 Clearances - Amend
- 4101:4-5-01 Boilers and pressure vessels of special design - Amend
- 4101:4-6-01 Construction and stamping of boilers and pressure vessels - Amend
- 4101:4-7-01 Contractor registration and boiler permits - Amend
- 4101:4-8-01 Inspection of boilers - Amend
- 4101:4-9-01 Existing boilers and pressure vessels - Amend
- 4101:4-10-01 Licensure and attendance requirements of operators - Amend

4101:4-1-01 Definitions and abbreviations.

As used in Chapters 4101:4-1 to 4101:4-10 of the Administrative Code,

- (A) "Alteration" means any change in the item described on the original manufacturer's data report which affects the pressure containing capability of the boiler or pressure vessel. Non physical changes such as an increase in the maximum allowable working pressure (internal or external) or design temperature of a boiler or pressure vessel ~~shall be~~ are considered ~~an alteration~~ alterations. A reduction in minimum temperature such that additional mechanical tests are required ~~shall is~~ also be considered an alteration.
- (B) "ASME" means the "American Society of Mechanical Engineers". Referenced standards, codes, and related technical information developed by this organization can be purchased by logging on to <http://www.asme.org> or by calling 1-800-the-asme.
- (C) "Authorized Inspection Agency" means an entity, accepted by the "National Board," that provides third party inspection services in which boilers and pressure vessels are inspected during

construction, repairs, and alterations to verify their conformity with the code of construction adopted by the board of building standards. Authorized inspection agencies employ authorized inspectors.

- (D) "Authorized Inspector" means an individual holding a "National Board" commission with the appropriate endorsement and designated as such by an "Authorized Inspection Agency".
- (E) "Board" means the board of building standards established by section 3781.07 of the Revised Code and authorized by section 4104.02 of the Revised Code to formulate rules and regulations for the construction, installation, repair, conservation of energy, and operation of boilers and for the construction and repair of pressure vessels.
- (F) "Boiler" means a closed vessel in which water is heated, steam is generated, steam is superheated, or any combination thereof, under pressure or vacuum for use externally to itself by the direct application of heat from the combustion of fuels, or from electricity or nuclear energy. The term boiler ~~shall include~~ includes fired units for heating or vaporizing liquids other than water where these units are separate from processing systems and are complete within themselves.
- (G) "Boiler, high pressure, high temperature water" means a water heating boiler operating at pressures exceeding one hundred sixty psig or temperatures exceeding two hundred fifty degrees Fahrenheit.
- (H) "Boiler, low pressure" means a steam boiler operating at pressures not exceeding fifteen psig, or a hot water heating boiler operating at pressures not exceeding one hundred sixty psig or temperatures not exceeding two hundred fifty degrees Fahrenheit.
- (I) "Boiler, portable" means a boiler which is primarily intended for temporary use and the construction and usage of which is obviously portable.
- (J) "Boiler, potable water heater" means a boiler used for supplying potable hot water for commercial purposes at pressures not exceeding one hundred sixty psig and temperatures not exceeding two hundred ten degrees Fahrenheit, except that water heaters are exempted when none of the following limitations are exceeded:
 - (1) Heat input of two hundred thousand Btu per hour;
 - (2) Water temperature of two hundred ten degrees Fahrenheit;
 - (3) Nominal water-containing capacity of one hundred twenty gallons.
- (K) "Boiler, power" means a boiler in which steam or other vapor, to be used externally to itself, is generated at a pressure of more than fifteen psig.
- (L) "Boiler, process" means a boiler to which all of the following apply:
 - (1) The steam in the boiler is either generated or superheated, or both, under pressure or vacuum for use external to itself.
 - (2) The source of heat for the boiler is, in part or in whole, from a process other than the boiler itself.
 - (3) The boiler is part of a continuous processing unit, such as used in chemical manufacture or petroleum refining, other than a steam-generated process unit.

- (M) "Btu" means "British Thermal Unit".
- (N) "Certificate of competency" means the document issued by the superintendent to a person who has passed the examination prescribed by the board of building standards.
- (O) "Certificate of inspection" means a report of the inspection of a boiler as required by sections 4104.11, 4104.12, and 4104.13 of the Revised Code and the rules of the board of building standards. The written report, completed by a general or special inspector, when filed in the office of the superintendent, ~~shall be~~ becomes the basis on which a certificate of operation may be granted or denied. The certificate of inspection would then be replaced with a certificate of operation, if granted.
- (P) "Certificate of operation" means the certificate issued by the superintendent to the owner or user following the general or special inspector's inspection of a boiler in accordance with section 4104.12 of the Revised Code.
- (Q) "Code stamp" means the permanent "ASME" identifying stamping applied to boilers and pressure vessels which indicates that the vessel has been constructed in accordance with the rules of the board and the applicable section of the "ASME Boiler and Pressure Vessel Code" and has been approved by an authorized inspector.
- (R) "Commission, National Board" means a certificate and renewable commission card issued by the "National Board" to an individual who has satisfied the requirements and the rules of the "National Board."
- (S) "Commission, Ohio" means a document issued by the superintendent pursuant to section 4104.08 of the Revised Code, which authorizes a general or special inspector to inspect boilers and pressure vessels for use in the state of Ohio.
- (T) "Contractor" means any person, firm, partnership, company, or corporation that engages in the practice of installing or making major repairs or modifications to any boiler that is subject to the provisions of Chapters 4101:4-1 to 4101:4-10 and 1301:3-5 of the Administrative Code.
- (U) "Inspection, external" means the inspection of the exterior parts of a boiler and the fittings, appurtenances, controls, and safety appliances attached thereto while the boiler is under operating conditions.
- (V) "Inspection, internal" means a complete visual and physical inspection of the interior of a boiler.
- (W) "Inspector, general" means a state of Ohio employee holding a certificate of competency and a valid Ohio commission to inspect boilers and pressure vessels to be used in the state of Ohio.
- (X) "Inspector, special" means an individual who holds a valid "National Board" commission and a valid Ohio commission to inspect boilers and pressure vessels to be used in the state of Ohio. Special inspectors are typically employed by an insurance company authorized to write boiler and pressure vessel insurance in the state of Ohio but can also be employed as an inspector by the owner-user of the boiler or pressure vessel which is proposed for use or is operating within the state of Ohio. The owner-user ~~must~~ is obligated to maintain an established inspection program meeting the requirements of the "National Board" publication "NB-371, Accreditation

of Owner-User Inspection Organizations (OUIO)" referenced in rule 4101:4-3-01 of the Administrative Code. In their capacity as a special inspector, they are a representative of the state boiler inspection department, acting independently of their relationship with their employer.

- (Y) "Installation, existing" means any boiler or pressure vessel within the scope of these rules that has been previously approved and issued a certificate of operation.
- (Z) "Installation, new" means any boiler or pressure vessel that has not yet been placed in service or issued a certificate of operation.
- (AA) "National Board" or "NB" means the "National Board of Boiler and Pressure Vessel Inspectors." Referenced standards, codes, publications, and other technical information developed by this organization can be purchased and obtained by logging on to <http://www.nationalboard.org> or by calling (614)888-8320.
- (BB) "NBIC" means the "National Board Inspection Code" as published by the "National Board of Boiler and Pressure Vessel Inspectors" and referenced in rule 4101:4-3-01 of the Administrative Code.
- (CC) "NFPA" means the "National Fire Protection Association." Referenced standards published by this organization can be purchased by logging on to <http://www.nfpa.org> or by calling (800)344-3555.
- (DD) "Non-standard" means an existing power boiler or pressure vessel which was installed prior to July 1, 1913 and was not constructed and stamped in accordance with the rules adopted by the industrial commission of Ohio or the Ohio board of building standards.
- (EE) "Ohio special" means a boiler or pressure vessel which does not fully comply with "ASME" code requirements, but has been approved for use in Ohio by special action of the board of building standards under section 4104.02 of the Revised Code or permitted for use by the board of building appeals under section 3781.19 of the Revised Code.
- (FF) "Ohio-standard" means an existing boiler or pressure vessel constructed to meet the rules of the Ohio industrial commission code requirements but not stamped with the applicable "ASME" symbol.
- (GG) "Owner or user" means any person, firm or corporation owning or operating any boiler or pressure vessel.
- (HH) "Pressure vessel" means a container for the containment of pressure, either internal or external. This pressure may be obtained from an external source or by the application of heat from a direct or indirect source or any combination thereof.
- (II) "psi" means pounds per square inch.
- (JJ) "psig" means pounds per square inch gage.
- (KK) "Qualified individual" means a service technician trained and thoroughly knowledgeable about the installation, operation, maintenance and service of the specific boiler fuel-burning system, controls, and safety devices.
- (LL) "Reinstallation" means a boiler or pressure vessel removed from its original setting and re-erected at the same location or a new location without a change of ownership.

- (MM) "Repair, major" means the process of restoring a boiler, pressure vessel, or component of a boiler or pressure vessel to a safe and satisfactory condition such that the existing design requirements are met.
- (NN) "Repair, routine" means repairs meeting the conditions prescribed in ["Part 3"](#) of the "NBIC ~~Part 3~~" and determined acceptable to the superintendent as a routine repair.
- (OO) "Revised Code" means the general statutes of the state of Ohio as revised and consolidated into titles, chapters, and sections.
- (PP) "Secondhand" means a used boiler or used pressure vessel which has had a change of ownership and location.
- (QQ) "Stationary Steam Engine" means an engine or turbine in which the mechanical force arising from the elasticity and expansion action of steam or from its property of rapid condensation or from a combination of the two is made available as a motive power.
- (RR) "Superintendent" means the superintendent of the division of industrial compliance created in the department of commerce under section 121.04 of the Revised Code, or the person designated by the superintendent as responsible for the enforcement of rules 4101:4-1-01 to 4101:4-10-01 and 1301:3-5-01 to 1301:3-5-10 of the Administrative Code.

4101:4-2-01 Scope, administration, and enforcement.

- (A) All boilers and pressure vessels proposed for use in the state of Ohio ~~shall~~[are to](#) be designed, constructed, installed, altered, repaired, maintained, and operated in accordance with the rules adopted by the board as prescribed in Chapters 4101:4-1 to 4101:4-10 of the Administrative Code, except as follows:
- (1) Boilers, pressure vessels, and stationary steam engines under federal control or subject to inspection under federal laws;
 - (2) Air tanks located on vehicles operating under the rules of other state authorities and used for carrying passengers, or freight;
 - (3) Air tanks installed on the right of way of railroads and used directly in the operation of trains;
 - (4) Pressure vessels that are under the regulation and control of the state fire marshal under Chapter 3737. of the Revised Code;
 - (5) Boilers and pressure vessels outside the scope of the applicable section of the "ASME Code for Boilers and Pressure Vessels" as referenced in rule 4101:4-3-01 of the Administrative Code;
 - (6) Historical steam boilers of riveted construction, preserved, restored, or maintained for hobby or demonstration use. In accordance with section 4104.33 of the Revised Code, these boilers ~~shall~~[are to](#) be repaired, altered, inspected and operated in compliance with Chapter 1301:3-4 of the Administrative Code, the rules adopted by the historical boilers licensing board.

- (B) All boilers and pressure vessels proposed for use in the state of Ohio, except those exempt in paragraph (A) of this rule ~~shall~~are to be inspected by an authorized inspector during fabrication and construction and upon completion for compliance with the rules of the board. The inservice inspections ~~shall~~are to be conducted by general and special inspectors in accordance with rules adopted by the superintendent in Chapter 1301:3-5 of the Administrative Code. The following boilers and pressure vessels ~~shall~~are to comply with the rules of the board for construction but ~~shall~~are not to be subjected to the superintendent's inspection requirements or contractor registration requirements prescribed in Chapter 1301:3-5 or 4101:4-7, respectively, of the Administrative Code:
- (1) Portable boilers or pressure vessels when located on farms and used solely for agricultural purposes;
 - (2) Low pressure boilers which are located in private residences or in apartment houses of less than or equal to five family units (these boilers are regulated by Chapters 4101:8-1 to 4101:8-44 of the Administrative Code known as the "Residential Code of Ohio" or Chapters 4101:2-1 to 4101:2-15 of the Administrative Code known as the "Ohio Mechanical Code");
 - (3) Pressure vessels containing only water under pressure for domestic supply purposes, including those containing air, the compression of which serves only as a cushion or airlift pumping system, when located in private residences or in apartment houses of less than or equal to five family units (these pressure vessels, hot water expansion tanks, and pressure tanks are regulated by the Chapters 4101:2-1 to 4101:2-15 of the Administrative Code known as the "Ohio Mechanical Code" and Chapters 4101: 3-1 to ~~4101:3-13~~4101:3-15 of the Administrative Code known as the "Ohio Plumbing Code");
 - (4) Portable boilers used in pumping, heating, steaming, and drilling, in the open field, for water, gas, and oil;
 - (5) Portable boilers used in the construction of and repair to public roads, railroads, and bridges.
- (C) If the owner or user of any boiler disagrees with the inspector as to the necessity for shutting down a boiler or for making repairs or alterations to it, or taking any other measures for safety, the owner or user may appeal the decision of the inspector to the board of building appeals.
- (D) In the event of a conflict, the rules of the board adopted pursuant to section 3781.10 of the Revised Code and known as the "Ohio Building Code," the "Ohio Mechanical Code," and the "Ohio Plumbing Code" ~~shall~~ govern any ~~rule~~rules or standards adopted by the board pursuant to section 4104.02 of the Revised Code.
- (E) In any condition not covered by these rules, the applicable section of the "ASME Code for Boilers and Pressure Vessels" as referenced in rule 4101:4-3-01 of the Administrative Code for new installations ~~shall~~ apply when not inconsistent with the provisions of Chapter 4104. of the Revised Code. Should any paragraph, subparagraph, sentence, clause, phrase, provision, or exemption of these rules be declared unconstitutional or invalid for any reason, the invalidity ~~shall~~does not affect the remaining portions or paragraphs.

4101:4-2-02 Types and qualifications of inspectors.

- (A) Only an "Authorized Inspector" employed by an "Authorized Inspection Agency" ~~shall~~is permitted to conduct inspections of boilers and pressure vessels during construction and fabrication to determine compliance with the rules of the board.
- (B) Only a general or special inspector ~~shall~~ is permitted to conduct inservice periodic inspections for boilers and repair and alteration inspections of boilers and pressure vessels to determine compliance with the rules of the board.
- (C) An applicant for examination as an inspector of boilers and pressure vessels ~~shall~~is to be qualified as prescribed in the "National Board" publication "NB-263, Rules for National Board Inservice and New Construction Commissioned Inspectors" as referenced in rule 4101:4-3-01 of the Administrative Code.
- (D) The written examination administered by the superintendent ~~shall~~is to be the "National Board Commission Examination." The examination ~~shall be~~ is given four times each year, on the first Wednesday of March, June, September, and December.
- (E) The superintendent may allow an applicant to sit for the examination at an "On-Demand" location accepted by the "National Board" in accordance with "Part 2" of the "National Board" publication "NB-263, Rules for National Board Inservice and New Construction Commissioned Inspectors" as referenced in rule 4101:4-3-01 of the Administrative Code.

4101:4-3-01 Accepted engineering practice and approved standards.

- (A) Where references are made in Chapters 4101:4-1 to 4101:4-10 of the Administrative Code to the applicable section of the "ASME Boiler and Pressure Vessel Code" or to other standards or publications, this rule identifies the specific edition of the code, standard, or publication that is adopted. Conformity to the applicable technical provisions, requirements, recommendations, and determinations in the codes, standards or other referenced publications adopted in "Table 4-3-01" of this rule, is prima-facie evidence of conformity with accepted engineering practice or with an approved standard.
- (B) The board of building standards adopts existing published standards by year of issue as shown in "Table 4-3-01" of the Administrative Code as well as amendments, supplements, and addenda subsequently published prior to issuance of the next edition by the same authority in accordance with section 4104.02 of the Revised Code.

Table 4-3-01

Authority	Edition Date	Designation	Title
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Table 4-3-01

ASME	2017 2023	BPVC -Section I (see footnote a)	Rules for Construction of Power Boilers.
ASME	2017 2023	BPVC -Section II	Material Specifications Materials. Part A-Ferrous. Part B-Non-Ferrous. Part C-Welding Rods, Electrodes and Filler Metals. Part D-Properties.
ASME	2017 2023	BPVC -Section III	Rules for Construction of Nuclear Facility Components.
ASME	2017 2023	BPVC -Section IV	Rules for Construction of Heating Boilers.
ASME	2017 2023	BPVC -Section V	Nondestructive Examination.
ASME	2017 2023	BPVC -Section VI	Recommended Rules for Care and Operation of Heating Boilers.
ASME	2017 2023	BPVC -Section VII	Recommended Guidelines for the Care of Power Boilers.
ASME	2017 2023	BPVC -Section VIII	Rules for Construction of Pressure Vessels-Division 1.
ASME	2017 2023	BPVC -Section VIII	Rules for Construction of Pressure Vessels-Division 2-.Alternative Rules
ASME	2017 2023	BPVC -Section VIII	Pressure Vessels-Division 3- . Alternative Rules for Construction of High Pressure Vessels
ASME	2017 2023	BPVC -Section IX	Welding, Brazing, and Fusing Qualifications.

Table 4-3-01

ASME	2017 2023	BPVC -Section X	Fiber-Reinforced Plastic Pressure Vessels.
ASME	2017 2023	BPVC -Section XI	Rules for Inservice Inspection of Nuclear Power Plant Reactor Facility Components.
ASME	2017 2023	BPVC	Code Cases: Boilers and Pressure Vessels.
ASME	2016 2022	B 31.1	Power Piping.
ASME	2015 2021	CSD-1	"Controls and Safety Devices for Automatically Fired Boilers."
NFPA	2015 2023	NFPA 85	"Boiler and Combustion Systems Hazards Code"
National Board	2017 2023	NBIC - Part 3, Repairs and Alterations	National Board Inspection Code.
National Board	Jul. 2012, Rev. 1	NB-27	A Guide for Blowoff Vessels.
National Board	Jul. 2017 2023	NB-263	Rules for Commissioned Inspectors (RCI-1).
National Board	Oct. 2016 Jul. 2020 , Rev. 8.1.1.010	NB-371	Accreditation of Owner-User Inspection Organizations (OUIO).

Footnote a: For riveted construction, see "ASME, BPVC-Section I, Power Boilers, Part PR (1971 edition)."

4101:4-4-01 Design of boilers and pressure vessels.

- (A) All new boilers and pressure vessels proposed for use in the state of Ohio, except those exempt by division (A) of section 4104.04 of the Revised Code, ~~shall~~[are to](#) be designed in accordance with the applicable approved referenced standard(s) adopted in "Table 4101:4-3-01" of rule 4101:4-3-01 of the Administrative Code and other requirements as prescribed in rules 4101:4-4-01 to 4101:4-4-04 of the Administrative Code.

(B) A boiler having the standard stamping of another state that has adopted rules of construction equivalent to those of Ohio may be accepted by the superintendent provided that the person desiring to install the boiler ~~shall make~~makes application to the superintendent for the installation and ~~shall include~~includes the manufacturers' data report covering the construction of the boiler.

(C) All electric boilers ~~shall are to~~ be wired and the shell grounded, in accordance with "NFPA 70, the National ~~Electric~~Electrical Code" referenced in rule 4101:1-35-01 of the Administrative Code.

4101:4-4-02 Maximum allowable working pressure of new boilers and pressure vessels.

(A) The maximum allowable working pressure for boilers and pressure vessels built in accordance with the applicable section of the "ASME Boiler and Pressure Vessel Code" as referenced in rule 4101:4-3-01 of the Administrative Code ~~shall is to~~ be as determined in the applicable approved referenced standard to which it is constructed and stamped. In no case ~~shall is~~ the maximum allowable pressure permitted to exceed the pressure indicated by the manufacturer's identification stamped or cast upon the boiler or pressure vessel. Upon inspection of a boiler, if conditions are found which justify a reduction of the maximum allowable working pressure, the factor of safety shall be appropriately increased.

(B) The maximum allowable steam working pressure for cast iron boilers, except for hot water boilers, ~~shall be is~~ fifteen psig.

4101:4-4-03 Safety devices and controls.

(A) All boilers and pressure vessels ~~shall are to~~ be provided with the necessary safety appliances and controls that will prevent pressure and temperature from rising above the design limits. The required safety devices and controls ~~shall are to~~ be as required in the applicable section of the "ASME Boiler and Pressure Vessel Code" as referenced in rule 4101:4-3-01 of the Administrative Code.

(B) The operation of a boiler or pressure vessel without the required safety devices or controls is prohibited, except where alternate device(s) are provided for use on a temporary basis.

(C) Any owner or operator who in any manner loads the safety valve or valves to a greater pressure than that allowed by the certificate of operation ~~shall be is~~ subject to the penalty provided in section 4104.99 of the Revised Code.

(D) The minimum safety or relief valve relieving capacity for electric boilers ~~shall be is~~ 3.5 pounds of steam per hour for each kilowatt input.

(E) The discharge of safety valves and other outlets ~~shall be installed~~is to be directed and terminated in

[such a manner](#) so as not to endanger any person.

- (F) Replacement of existing safety devices and controls [shallis to](#) comply with the requirements for new safety devices and controls as prescribed in the applicable section of the "ASME Boiler and Pressure Vessel Code" as referenced in rule 4101:4-3-01 of the Administrative Code.
- (G) When an owner wishes to install safety devices and controls which will enable a new or an existing boiler to be operated without continuous, manned attendance by a licensed operator, the requirements of paragraph (B)(4) or (B)(5) of rule 4101:4-10-01 of the Administrative Code [shallare to](#) be met.

4101:4-4-04 Steam boiler blowoff systems.

- (A) The blowoff from boilers may be discharged directly to any place such as a lake, swamp, stream, sump, or open pit provided there is no hazard to life or property. Where a safe place of discharge is not available, a blowoff tank [shallis to](#) be used. The tank [shallis to](#) be designed to separate the flash steam from the water and [shallis to](#) be flashed to a lower pressure system or vented to the atmosphere. The vent [shallis to](#) be large enough to prevent a steam pressure greater than five psig in the blowoff tank. The water from the blowoff tank may be discharged into a building drain or building sewer provided the water temperature does not exceed one hundred forty degrees Fahrenheit.
- (B) When a blowoff tank is elevated above the lowest point of a boiler, provisions [shallare to](#) be made for draining water from the boiler.
- (C) The shell thickness of a blowoff tank [shallis to](#) be not less than one-fourth inch and [shallis to](#) be constructed for a pressure of not less than twenty-five per cent of the allowed pressure of the boilers connected to it for boilers up to and including four hundred psig. For boiler pressure greater than four hundred psig, use "Table 4-4-04(C)" for the blowoff tank allowable pressure. Construction of the blowoff tank [shallis to](#) comply with section VIII, division 1, of the "ASME Boiler and Pressure Vessel Code" as referenced in rule 4101:4-3-01 of the Administrative Code and as modified in this rule.

Table 4-4-04(C)

Maximum allowable working pressure of boiler (psig)	Blowoff tank allowable pressure (psig)
3000	400
2250	325
1500	275
1000	200
750	165

Table 4-4-04(C)

500	125
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(D) Blowoff piping between the boiler blowoff valve and the blowoff tank or other safe place of discharge, where the pressure is approximately atmospheric and when there are no intervening valves, shall ~~is to~~ be constructed in accordance with "Table 4-4-04(D)". All boiler blowoff pipe fittings shall ~~are to~~ be fabricated of steel.

Table 4-4-04(D)

Boiler pressure (psig)	Piping pressure (psig)
1501 to 2000	900
901 to 1500	600
601 to 900	400
250 to 600	250
Below 250	150

(E) In lieu of the design requirements of paragraphs (C) and (D) of this rule, the "National Board" publication entitled "NB-27, A Guide for Blowoff Vessels" as referenced in rule 4101:4-3-01 of the Administrative Code may be used for the design, construction, and arrangement of boiler blowoff equipment.

4101:4-4-05 Clearances.

When boilers are replaced or when new boilers are installed in either existing or new buildings, a minimum clear space of three feet shall ~~is to~~ be provided on the control and service sides of the boiler. All other sides shall ~~are to~~ comply with the boiler manufacturer's installation instructions for clearances to combustible materials. All boilers shall ~~are to~~ be so located that adequate space will be provided for the proper operation of the boiler and its appurtenances, for the inspection of all surfaces, tubes, water walls, economizer piping, valves, and other equipment, and for their necessary maintenance and repair.

4101:4-5-01 Boilers and pressure vessels of special design.

(A) When a boiler or pressure vessel proposed for use in Ohio does not conform to all the provisions of the applicable section of the "ASME Boiler and Pressure Vessel Code" referenced in rule 4101:4-3-01 of the Administrative Code, application can be made to the board for legal use in Ohio by submitting, prior to fabrication, the following documents, sealed by a registered professional engineer holding a certificate issued under section 4733.14 of the Revised Code:

- (1) A written analysis detailing how the proposed boiler or pressure vessel does not conform to the requirements of the "ASME Boiler and Pressure Vessel Code";
- (2) Detailed construction drawings;

- (3) Materials specifications;
- (4) Design calculations;
- (5) Welding details and procedures, and procedure qualification tests (when applicable); and
- (6) Detailed quality control procedures used in all phases of construction.

(Note: All documents submitted [shall are to](#) be in the English language, and all dimensions, pressures, temperatures, and material properties [shall are to](#) be in the same units as used in the applicable section of the "ASME Boiler and Pressure Vessel Code" referenced in rule 4101:4-3-01 of the Administrative Code.

- (B) After receipt by the board, the documents listed above [shall will](#) be reviewed by a registered professional engineer assigned or approved by the board. After review, the professional engineer [shall will](#) make a recommendation to the board.
- (C) If the application is approved by the board, the boiler or pressure vessel [shall is to](#) be inspected during construction by an authorized inspector, tested as required by the applicable section of the "ASME Boiler and Pressure Vessel Code" as referenced in rule 4101:4-3-01 of the Administrative Code and in accordance with the conditions of the resolution issued by the board. If approved, the boiler or pressure vessel of special design [shall is to](#) be tagged with an "OHIO SPECIAL" serial number by a general inspector.
- (D) When an existing "Ohio Special" boiler or pressure vessel that has been approved by the board is proposed to be repaired, reinstalled, or relocated, the work [shall is to](#) be performed in accordance with rule 4101:4-9-01 of the Administrative Code.
- (E) When an existing "Ohio Special" boiler or pressure vessel that has been approved by the board is proposed to be altered, the proposed alterations [shall are to](#) be documented by a registered design professional and evaluated and approved by the board, prior to the alteration, in the same manner as described in paragraphs (A) and (B) of this rule. If the alterations are approved by the board, the boiler or pressure vessel may be altered in accordance with the conditions of the resolution and, consistent with ["Part 3" of the "NBIC"](#), the original code of construction or the currently adopted "ASME Boiler and Pressure Vessel Code" referenced in rule 4101:4-3-01 of the Administrative Code. The boiler or pressure vessel [shall is to](#) be tested and inspected as required by the conditions of the resolution issued by the board.

4101:4-6-01 Construction and stamping of boilers and pressure vessels.

Unless exempt by rule 4101:4-2-01 of the Administrative Code,

- (A) All boilers and pressure vessels [shall are to](#) be constructed and tested in accordance with the applicable section(s) of the "ASME Boiler and Pressure Vessel Code" as referenced in rule

4101:4-3-01 of the Administrative Code.

- (B) All boilers and pressure vessels ~~shall~~ are to be inspected during construction and after completion by an authorized inspector to determine compliance with the applicable section of the "ASME Boiler and Pressure Vessel Code."
- (C) Unless exempt from stamping requirements by the "ASME Boiler and Pressure Vessel Code," after certification of the manufacturer's data report and acceptance by an authorized inspector, the manufacturer ~~shall~~ is to apply the appropriate "ASME" code stamp symbol to the boiler or pressure vessel indicating that the boiler or pressure vessel complies with all of the "ASME" code requirements that are prescribed in the applicable code section referenced in rule 4101:4-3-01 of the Administrative Code.
- (D) All boilers and pressure vessels ~~shall~~ are to be registered with the "National Board." In accordance with the "National Board" registration requirements, the original manufacturer's data report, properly executed and signed by both the manufacturer and an authorized inspector, ~~shall~~ is to be filed with the "National Board" for permanent retention.
- (E) The manufacturer, in accordance with the "National Board" registration requirements, ~~shall~~ is also to apply the "National Board" registration number to the boiler or pressure vessel.

4101:4-7-01 Contractor registration and boiler permits.

Unless exempt by paragraph (B) of rule 4101:4-2-01 of the Administrative Code,

- (A) Every contractor or owner ~~shall~~ is to be registered with the division of industrial compliance before installing or making major repairs or alterations to any boiler. Applications for registration will be obtained from the division of industrial compliance on forms prescribed by the superintendent.
- (B) All contractors or owners performing boiler installations, repairs, or alterations ~~shall~~ are to register annually with the superintendent. The annual registration processing fee ~~shall be~~ is fifty dollars.
- (C) Every contractor or owner ~~shall~~ is to apply for and obtain a permit from the division of industrial compliance prior to making the installation of any boiler. The application ~~shall~~ is to be made on forms prescribed by the superintendent. A permit fee of one-hundred dollars per boiler ~~shall~~ is to be submitted with each permit application form.
- (D) Unless the contractor or owner obtains a "National Board "R" Certificate of Authorization" as prescribed in "Part 3" of the "NBIC" referenced in rule 4101:4-3-01 of the Administrative Code, every contractor or owner ~~shall~~ is to apply for and obtain a permit from the division of industrial compliance prior to making a routine repair that involves welding or a major repair to an existing

boiler. The application ~~shall~~ is to be made on forms prescribed by the superintendent. A permit fee of one-hundred dollars per boiler ~~shall~~ is to be submitted with each permit application form.

- (E) Every contractor or owner performing boiler alterations ~~shall~~ is to obtain a "National Board "R" Certificate of Authorization" as prescribed in "Part 3" of the "NBIC" referenced in rule 4101:4-3-01 of the Administrative Code. The contractor or owner is not required to apply for or obtain a permit from the division of industrial compliance. However, in accordance with "Part 3" of the "NBIC" and rule 4101:4-9-01 of the Administrative Code, authorization from an authorized inspector ~~shall~~ is to be obtained prior to making the proposed alteration.

4101:4-8-01 Inspection of boilers.

- (A) Unless exempt by paragraph (B) of rule 4101:4-2-01 of the Administrative Code, upon completion of an installation and in accordance with rules 1301:3-5-01 to 1301:3-5-09 of the Administrative Code, all boilers ~~shall~~ are to be inspected by a general or special inspector who holds an Ohio commission issued by the superintendent. Each boiler ~~shall~~ will be assigned a state of Ohio serial number obtained from the superintendent and affixed by the inspector. Unless otherwise authorized by the superintendent, the boilers ~~shall~~ are not to be operated until a certificate of operation has been issued by the superintendent.
- (B) In accordance with division (~~F~~G) of section 4104.18 of the Revised Code, in addition to any fee assessed and collected directly from the owner or user for the inspection and issuance of a certificate of operation, the superintendent will collect, directly from the owner or user, a board assessed fee of three dollars and twenty-five cents for each certificate of operation or renewal thereof and for each inspection conducted.
- (C) The three dollar and twenty-five cent assessment fee collected directly from the owner or user on behalf of the board ~~shall~~ is to be remitted to the board when deposited by the division of industrial compliance pursuant to section 121.084 of the Revised Code. The superintendent ~~shall~~ will report to the board the amounts remitted not later than one month following the first full month's collection and then monthly thereafter.
- (D) Before inspection or any other work is started on an electric boiler, ~~it shall~~ the boiler is to be isolated electrically. An appropriate warning tag ~~shall~~ is to be posted on the disconnect.
- (E) If, in the judgment of the inspector, it is advisable to apply a hydrostatic test to a boiler or pressure vessel, the owner or user ~~shall~~ is to prepare for and apply the test, which ~~shall~~ will be witnessed by the inspector.

4101:4-9-01 Existing boilers and pressure vessels.

- (A) All existing boilers and pressure vessels and the associated equipment, controls, devices, and safeguards ~~shall~~ are to be maintained in a safe and sanitary condition, in good working order,

and free of leaks and defects. The owner or the owner's designated agent ~~shall be~~ is responsible for the maintenance of such boilers and pressure vessels and associated equipment, controls, devices, and safeguards.

- (B) The rules of the board ~~shall are not to~~ be retroactively applied to existing boilers or pressure vessels that are not otherwise being altered, repaired, reinstalled, or relocated. Portions of a boiler or pressure vessel not altered or repaired and not affected by an alteration or repair are not required to comply with the code requirements for a new boiler or pressure vessel.
- (C) Routine boiler repairs such as piping or tube replacement or repairs considered general maintenance may be made without permit or inspection. However, routine repairs that involve welding do require a permit and approval must be obtained from a general or special inspector prior to performing the repair. In the case where the contractor or owner making the routine repair has obtained a "National Board "R" Certificate of Authorization", the authorized inspector ~~shall is to~~ authorize the routine repair prior to the work being performed. If the repair requires welding, ~~it shall~~ the welding is to be performed in accordance with the provisions of section IX of the "ASME Boiler and Pressure Vessel Code" as referenced in rule 4101:4-3-01 of the Administrative Code.
- (D) Where a major repair or alteration (including a re-rating) is necessary or desired on an existing boiler which bears the stamp of the appropriate "ASME" symbol or which is stamped with a state of Ohio boiler number, the repair or alteration ~~shall is to~~ comply with the requirements of "Part 3" of the "NBIC" as referenced in rule 4101:4-3-01 of the Administrative Code. The repair or alteration ~~shall is to~~ meet the requirements for the conditions under which it will be operated.
- (1) In accordance with rule 4101:4-7-01 of the Administrative Code, unless the contractor or owner has obtained a "National Board "R" Certificate of Authorization", all contractors or owners ~~shall are to~~ apply for a permit from the division of industrial compliance to make proposed repairs and the repairs ~~shall are to~~ be approved by a special or general inspector. A repair report, executed and signed by the special or general inspector, ~~shall is to~~ be filed with the superintendent on forms provided.
- (2) In accordance with "Part 3" of the "NBIC," contractors or owners performing boiler alterations ~~shall are to~~ obtain a "National Board "R" Certificate of Authorization" prior to making any alterations. All alterations ~~shall are to~~ be authorized and approved by an authorized inspector.
- (E) Where a major repair or alteration (including a re-rating) is necessary or desired on an existing boiler or pressure vessel which does not bear the appropriate "ASME" symbol stamp or which is not stamped with a state of Ohio boiler number, the boiler or pressure vessel ~~shall is to~~ be evaluated by the superintendent and required to meet the applicable requirements of the "ASME Boiler and Pressure Vessel Code" referenced in rule 4101:4-3-01 of the Administrative Code. Otherwise, the boiler or pressure vessel ~~shall is to~~ be retired from use.
- (F) Repairs made to an existing "Ohio Special" boiler or pressure vessel ~~shall are to~~ be done in accordance with paragraph (C), (D)(1), or (H)(1) of this rule, as applicable.

- (G) Alterations, including re-ratings, made to an existing "Ohio Special" boiler or pressure vessel ~~shall~~ are to be approved, prior to the alteration, by the board of building standards in accordance with the special procedure outlined in rule 4101:4-5-01 of the Administrative Code for boilers and pressure vessels of special design.
- (H) Where a major repair or alteration (including a re-rating) is necessary or desired on an existing pressure vessel which bears the stamp of the appropriate "ASME" symbol, the repair or alteration ~~shall~~ is to comply with the requirements of "Part 3" of the "NBIC" as referenced in rule 4101:4-3-01 of the Administrative Code. The repair or alteration ~~shall~~ is to meet the requirements for the conditions under which it will be operated.
- (1) Unless the contractor or owner has obtained a "National Board "R" Certificate of Authorization", all contractors or owners ~~shall~~ are to notify the division of industrial compliance prior to making repairs to an existing pressure vessel and the repairs ~~shall~~ are to be approved by a special or general inspector. A repair report, executed and signed by the special or general inspector, ~~shall~~ is to be filed with the superintendent on forms provided.
- (2) In accordance with "Part 3" of the "NBIC", contractors or owners performing pressure vessel alterations ~~shall~~ are to obtain a "National Board "R" Certificate of Authorization" prior to making any alterations. All alterations ~~shall~~ are to be authorized and approved by an authorized inspector.
- (I) Whenever repairs are made to fittings, safety devices, appliances, or controls or it becomes necessary or desirable to replace them, the work ~~shall~~ is to comply with the requirements for new installations as prescribed in the applicable section of the "ASME Boiler and Pressure Vessel Code" as referenced in rule 4101:4-3-01 of the Administrative Code. When an owner wishes to install safety devices and controls which will enable an existing boiler to be operated without continuous, manned attendance by a licensed operator, the requirements of paragraph (B)(4) or (B)(5) of rule 4101:4-10-01 of the Administrative Code ~~shall~~ are to be met.
- (J) An existing stationary boiler or pressure vessel which bears the appropriate "ASME" symbol or which is stamped with a state of Ohio boiler number may be reinstalled or relocated within Ohio, provided that the installation complies with the applicable section of the "ASME Boiler and Pressure Vessel Code" as referenced in rule 4101:4-3-01 of the Administrative Code and an inspection is made by a special or general inspector prior to operation. The fittings and appliances ~~shall~~ are to comply with the requirements for a new installation.
- (K) A secondhand boiler or pressure vessel stamped with the appropriate "ASME" symbol or having the standard stamping of another state that has adopted rules of construction equivalent to those of Ohio may be installed for use in the state of Ohio provided that application is made for the installation, the manufacturer's data report, indicating that the boiler or pressure vessel was inspected during construction by an authorized inspector, is filed in the office of the superintendent, and an inspection is made by a special or general inspector prior to operation. The inspector ~~shall~~ is to submit a report to the superintendent which contains a facsimile of the code stamping, a statement concerning any corrosion or other deteriorating conditions and the extent and location of any welded or riveted repairs. Upon approval of a secondhand boiler by the superintendent, a certificate of operation ~~shall~~ is to be issued.

- (L) Except as permitted in paragraph (K) of this rule, an existing boiler or pressure vessel that does not bear the appropriate "ASME" symbol, was not registered with the "National Board," does not have a state of Ohio boiler number stamped upon it, or does not have an "Ohio Special" serial number tagged upon it is prohibited from reinstallation or relocation within the state of Ohio.
- (M) The maximum allowable steam working pressure for cast iron boilers, except for hot water boilers, ~~shall~~ is to be fifteen psig.
- (N) The maximum allowable working pressure on the shell or drum of an existing nonstandard boiler ~~shall~~ is to be determined by the strength of the weakest section of the structure, computed from the thickness of the plate, the tensile strength of the plate, the efficiency of the longitudinal joint or the tube ligaments, the inside diameter of the weakest course and the factor of safety allowed by these rules.

(S)(t)(E)/(R)(F) = Maximum allowable working pressure, psig.

Where:

S = ultimate tensile strength of shell plates, psi.

When the ultimate tensile strength, "S", of steel or wrought-iron shell plates is not known, it ~~shall~~ is to be taken as fifty-five thousand psi for steel and forty-five thousand psi for wrought-iron.

t = minimum thickness of shell plate, in weakest course, inch.

E = efficiency of longitudinal joint.

For riveted construction, "E" ~~shall~~ is to be determined by rules given in paragraph "PR-15" of the 1971 edition of the "ASME Boiler and Pressure Vessel Code, section I."

For tube ligaments, "E" ~~shall~~ is to be determined by rules "PG-52" or, "PG-53" of the "ASME Boiler and Pressure Vessel Code, section I" and "PR-25", of the 1971 edition of the "ASME Boiler and Pressure Vessel Code, section I."

R = inside radius of the weakest course of the shell or drum in inches.

F = factor of safety permitted.

- (1) When computing the ultimate strength of rivets in shear, the following values in pounds per square inch of the cross-sectional area of the rivet shank (after driving) ~~shall~~ is to be used:

Strength of existing rivets in shear

Type of rivet	Strength
Iron rivet in single shear	38,000
Iron rivet in double shear	76,000

Strength of existing rivets in shear

Steel rivets in single shear	44,000
Steel rivets in double shear	88,000

(2) When the diameter of the rivet holes in the longitudinal joints of a boiler is not known, the diameter and cross-sectional area of rivets, after driving, may be ascertained from the following table or by cutting out one rivet in the body of the joint:

Sizes of rivets in inches based on plate thickness

Thickness of plate, inches.	1/4	9/32	5/16	11/32	3/8	13/32
Diameter of rivet after driving, inches.	11/16	11/16	3/4	3/4	13/16	13/16
Thickness of plate, inches.	7/16	15/32	1/2	9/16	5/8	-
Diameter of rivet after driving, inches.	15/16	15/16	15/16	17/16	17/16	-

(3) The resistance of steel to crushing ~~shall~~ is to be taken as ninety-five thousand psi.

(4) The lowest factor of safety permissible on existing installations ~~shall~~ is to be 4.5 excepting for horizontal return tubular boilers having continuous longitudinal lap seams more than twelve feet in length where the factor of safety ~~shall~~ is to be 8, and when this latter type of boiler is removed from its existing setting, it ~~shall~~ is not to be reinstalled for pressure in excess of fifteen psig. Reinstalled or secondhand nonstandard boilers ~~shall~~ are to have a minimum factor of safety of 6 when the longitudinal seams are of lap riveted construction, and a minimum factor of 5 when the longitudinal seams are of butt and double strap construction. A boiler constructed of wrought iron ~~shall~~ is to have a factor of safety of 7. Upon inspection of the boiler, if conditions are found which justify a reduction of the safe working pressure, the factor of safety as stated above ~~shall~~ is to be appropriately increased.

(O) The maximum allowable working pressure of a nonstandard low pressure steam boiler ~~shall~~ is not to exceed fifteen psig.

(P) The maximum allowable working pressure of a nonstandard boiler constructed principally of cast iron or constructed of a cast iron shell or heads and steel tubes ~~shall~~ is not to exceed thirty psig for hot water service.

- (Q) The maximum allowable working pressure of a nonstandard water tube boiler, the tubes of which are secured to cast iron or malleable iron headers, or which have cast iron mud drums, ~~shall~~ is not to exceed one hundred sixty psig for steam service.
- (R) If, in the judgment of the inspector, a low pressure boiler is unsafe for operation at the pressure previously approved, the pressure ~~shall~~ is to be reduced, proper repair made, or the boiler retired from service.
- (S) Nonstandard pressure vessels, except those exempt in section 4104.04 of the Revised Code and paragraph "U-1" of the "ASME Boiler and Pressure Vessel Code, section VIII", are prohibited for use in excess of fifteen psi internal or external pressure.
- (T) Any owner or operator who in any manner loads the safety valve or valves to a greater pressure than that allowed by the certificate of operation ~~shall be~~ is subject to the penalty provided in section 4104.99 of the Revised Code.

4101:4-10-01 Licensure and attendance requirements of operators.

- (A) In accordance with section 4104.05 of the Revised Code, no person ~~shall~~ is to operate a low pressure steam boiler that has more than three hundred sixty square feet of heating surface, a power steam boiler that has more than three hundred sixty square feet of heating surface, or a stationary steam engine operating at more than thirty horsepower, unless one of the following applies to that person:
 - (1) The person holds the required license as specified in section 4104.05 of the Revised Code, or
 - (2) The person is working under the direct supervision of a person holding the required license as specified in section 4104.05 of the Revised Code.
- (B) The operator described in paragraph (A) of this rule ~~shall~~ is to maintain continuous, manned attendance during all times of operation of a steam boiler that has more than three hundred sixty square feet of heating surface or a stationary steam engine operating at more than thirty horsepower, except as follows:
 - (1) The continuous, manned attendance by the operator during all times of operation of such steam boiler or stationary steam engine may occur from a central control room on the premises when the steam boiler or stationary steam engine can be monitored, controlled, and shut down from that central control room by the operator and is equipped with manual operational resets.
 - (2) The steam boiler may be operated without continuous, manned attendance for a maximum length of time equal to the time it takes for the boiler to go into a low water condition when subjected to an annual evaporation test conducted in accordance with the "ASME Boiler and Pressure Vessel Code, Section VI, 7.05 (H)" referenced in rule 4101:4-3-01 of the Administrative Code.
 - (3) The continuous, manned attendance by the operator during all times of operation of a non-solid-fuel-fired steam boiler or stationary steam engine is not required when the

superintendent of the division of industrial compliance has approved a site-specific, detailed written plan to provide for automated electronic monitoring of the steam boiler or stationary steam engine which utilizes controls that contain all operational functions, are equipped with manual operational resets, and are labeled for the intended operation, provided that all of the following apply:

- (a) The control equipment ~~must be~~ is located within the same complex or production facility premises;
 - (b) A person licensed under section 4104.19 of the Revised Code is present at all times within the same complex or production facility premises and is available to respond to an emergency condition when summoned by the automated electronic monitoring system;
 - (c) A secondary means of alerting such licensed person is within the same complex or production facility premises in the event of failure of the primary electronic monitoring system;
 - (d) A qualified individual as defined in rule 4101:4-1-01 of the Administrative Code performs annual operational tests on the automated electronic monitoring system to verify that the system is maintained in accordance with that original manufacturer specification; and
 - (e) A copy of such dated and signed service report or checklist, listing each control and safety device tested with the manufacturer's name, model number, set point, and actual operational test point is provided to the superintendent of the division of industrial compliance upon request. Failure to produce such service report may result in the issuance of an adjudication order within the meaning of Chapter 119. of the Revised Code.
- (4) The continuous, manned attendance by the operator during all times of operation of a non-solid-fuel-fired steam boiler having a fuel input rating of less than 12,500,000 BTU/hr is not required when an automated electronic control system meeting the requirements of "ASME CSD-1" referenced in rule 4101:4-3-01 of the Administrative Code is utilized, provided that all of the following requirements have also been met:
- (a) The boiler manufacturer and the installing contractor ~~shall complete~~ completes and ~~sign~~ signs a certification report (similar to the report shown in Appendix C of ASME CSD-1) for each boiler. The certification report ~~shall~~ is to meet the requirements of Section CG-510 of the ASME CSD-1 and ~~shall~~ is to identify the manufacturer, model number, and operational test date for each specific boiler control and safety device and certify that each control and safety device was installed and tested in accordance with the manufacturer's installation instructions and the ASME CSD-1.
 - (b) The installing contractor, who ~~shall~~ is to be registered in accordance with rule 4101:4-7-01 of the Administrative Code, ~~shall~~ is to obtain and provide to the owner or user the operating, testing, servicing, and cleaning instructions for the controls and safety devices. Additionally, the installing contractor ~~shall~~ is to provide to the owner or user the complete wiring and piping diagrams and a written precaution that the annual

operating, testing, and servicing of the controls and safety devices is to be performed only by a qualified individual. The contractor ~~shall~~ is to obtain a receipt from the owner or user for the delivery of these instructions.

- (c) The certification report and the receipt described in paragraphs (B)(4)(a) and (B)(4)(b) of this rule ~~shall~~ are to be submitted to the superintendent prior to the required inspection and issuance of the certificate of operation prescribed in rule 4101:4-8-01 of the Administrative Code. Failure to submit this documentation may result in the issuance of an adjudication order within the meaning of Chapter 119. of the Revised Code.
 - (d) The owner or user ~~shall~~ is to develop, coordinate, and implement a preventative maintenance program and ensure that the employee responsible for maintaining the boiler is trained, knowledgeable, and competent to operate and maintain such boiler, controls, and safety devices. The maintenance program ~~shall~~ is to be consistent with the manufacturer's recommendations and ~~shall~~ is to include regular inspections and operational testing for the boiler controls and safety devices. Annual inspection and operational testing ~~shall~~ is to be performed and documented by a qualified individual as defined in rule 4101:4-1-01 of the Administrative Code. Daily, weekly, monthly, and semi-annual inspections and operational testing, as outlined by the manufacturer and as recommended in Appendix D of the ASME CSD-1, ~~shall~~ is to be performed and documented by an employee who has been trained, is knowledgeable, and is competent to operate and maintain such boiler, controls, and safety devices. The maintenance records ~~shall~~ are to identify the manufacturer, model number, set point, the operational tests performed, the operational test date, the inspection results, and who performed the tests or inspection for each specific boiler control and safety device. The maintenance records ~~shall~~ are to be made available to the inspector for review during the certificate inspection. Failure to provide the required maintenance records may result in the issuance of an adjudication order within the meaning of Chapter 119. of the Revised Code.
- (5) The continuous, manned attendance by the operator during all times of operation of a non-solid-fuel-fired steam boiler having a fuel input rating of greater than or equal to 12,500,000 BTU/hr and meeting the requirements of "NFPA 85" referenced in rule 4101:4-3-01 is not required when an automated electronic control system is utilized meeting the requirements of the ASME CSD-1 referenced in rule 4101:4-3-01 of the Administrative Code, provided that all of the following requirements have also been met:
- (a) The certification report, wiring diagrams, instructions, maintenance, and testing requirements for the control system outlined in paragraphs (B)(4)(a) to (B)(4)(d) of this rule ~~shall~~ apply.
 - (b) Prior to installation of the boiler(s), the owner ~~shall~~ is to submit a detailed, written, process hazard analysis (PHA) to the superintendent of industrial compliance that identifies and evaluates the hazards associated with the unattended operation of the boiler and justifies the method(s) proposed to address the hazards. The analysis ~~shall~~ is to be prepared and sealed by a registered professional engineer holding a certificate issued under section 4733.14 of the Revised Code and ~~shall~~ is to identify possible

incident scenarios, the proposed protection/solution for each scenario, and any such additional information as determined necessary by the superintendent. The PHA ~~shall~~ is to be reviewed by the owner, updated at least every five years, and submitted to the superintendent for review and filing. Failure to provide the required PHA may result in the issuance of an adjudication order within the meaning of Chapter 119. of the Revised Code.

File Attachments for Item:

NB-3 Petition #23-06 - OPC 608.16.1 (Beverage Dispensers)



CRITERIA FOR SUBMITTING RULE CHANGES TO THE BOARD OF BUILDING STANDARDS

The Ohio Board of Building Standards processes all petitions for changes to the rules of the Board of Building Standards (Building, Mechanical, Plumbing, Boiler, Elevator, or Residential Codes) pursuant to ORC Chapter 119.

When anyone desires to petition the Board of Building Standards to adopt, amend, or annul a provision of rules of the Board, they must complete an application and provide supporting information submitted to the Secretary of the Board of Building Standards.

The application must include the following:

- (1) The date the application is prepared;
- (2) The rule number or section that is proposed for amendment, adoption, or annulment;
- (3) The rule numbers of all other rules that will be affected by the matter proposed;
- (4) The name, address, contact information, affiliation of the applicant, and of any representative;
- (5) The provisions that are proposed for adoption, amendment, or annulment;
- (6) The reason and technical justification for the proposed change;
- (7) All text to be eliminated shall be shown deleted by means of strikethrough, e.g., ~~matter to be eliminated~~;
- (8) All proposed new text to be inserted into a rule shall be shown as underlined, e.g., proposed new matter; and
- (9) One copy of the completed application and attachments.
- (10) An estimate of the increase or decrease in cost that would occur with the adoption of the proposed code change.

When the Secretary of the Board of Building Standards receives a completed application for an adoption, amendment, or annulment of rules of the Board, the Secretary will promptly deliver or mail a copy of the application to each member of the Board.

After receiving an application for the adoption, amendment, or annulment of rules of the Board, the Board of Building Standards shall proceed under sections 3781.101 and 3781.12 of the Revised Code.

APPLICATION

FOR
RULE CHANGE

BOARD OF BUILDING STANDARDS

6606 Tussing Road, P.O. Box 4009
Reynoldsburg, Ohio 43068-9009
(614) 644-2613
bbs@ohio.gov

www.com.state.oh.us/dico/bbs/default.aspx



Pursuant to section 3781.12 of the Revised Code and rules adopted by the Board of Building Standards, application is herewith submitted to adopt, amend, or annul a rule adopted by the Board pursuant to section 3718.10 of the Revised Code.

For BBS use:	
Petition #:	23-06
Date Recv'd:	June 27, 2023

Submitter: Jim Chandler Vista Water Group, LLC
(Contact Name) (Organization/Company)

Address: 1244 County Road 1475
(Include Room Number, Suite, etc.)

Ashland Ohio 44805
(City) (State) (Zip)

Telephone Number: (419) 282-2035 **Fax Number:** _____

Date: June 27, 2023 **E-mail Address:** jim@vistawatergroup.com

Code Section: Ohio Plumbing Code (OPC) 608.16.1

General Explanation of Proposed Change (attach additional sheets if necessary):

See PDF attachment - "applicationToChangeTheBuildingCode-649b36cb034432f6f2ef9168"

Explanation of Cost Impact of Proposed Code Change*: _____

*Attach additional cost information as necessary to justify any statement of cost increase or cost decrease.

Information on Submittal (attach additional sheets if necessary):	
1. Sponsor:	Vista Water Group, LLC, https://vistawatergroup.com Organization sponsoring or requesting the rule change (if any)
2. Rule Title:	Beverage Dispensers Title of rule change
3. Purpose/ Objective:	To allow other ASSE certified dual check devices to be allowed for backflow protection in addition to ASSE 1022 certified devices. Devices that conform to ASSE 1024 and ASSE 1032 have been in use for many years and have proven to be very reliable for backflow prevention. ASSE 1032 certified devices have been the gold standard for use with carbonated beverage machines. Technical justification for the proposed rule change
4. Formatted Rule Language (Using Strike-out for Deleted Text and Underline for Added Text)	608.16.1 Beverage dispensers. The water supply connection to beverage dispensers shall be protected against backflow by a backflow preventer conforming to ASSE 1022, ASSE 1024, ASSE 1032, or by an air gap. The portion of the backflow prevention device downstream from the second check valve and the piping downstream shall not be affected by carbon dioxide gas. Use strike-out for deleted text and underline for added text
5. Notes:	<ol style="list-style-type: none"> 1. To encourage uniformity among states using model codes, it is recommended that the submitter first submit any code change directly to ICC and participate in the national model code development process. 2. Please provide a copy of application and documentation. 3. Use a separate form for each code change proposal.

File Attachments for Item:

NB-4 Petition #23-04 - RCO 311.7.1 Two handrails - Robert Kramer

BOARD OF BUILDING STANDARDS

6606 Tussing Road, P.O. Box 4009
Reynoldsburg, Ohio 43068-9009
(614) 644-2613
bbs@ohio.gov

www.com.state.oh.us/dico/bbs/default.aspx



APPLICATION FOR RULE CHANGE

Pursuant to section 3781.12 of the Revised Code and rules adopted by the Board of Building Standards, application is herewith submitted to adopt, amend, or annul a rule adopted by the Board pursuant to section 3718.10 of the Revised Code.

For BBS use:	
Petition #:	23-04
Date Recv'd:	03/27/2023

Submitter: ROBERT KRAMER CITIZEN
(Contact Name) (Organization/Company)

Address: 5690 GENEVIEVE PLACE
(Include Room Number, Suite, etc.)

FAIRFIELD OHIO 45014
(City) (State) (Zip)

Telephone Number: 513-885-4600 Fax Number: _____

Date: MARCH 26, 2023 E-mail Address: KEYNOTEMAN@HOTMAIL.COM

Code Section: 101

General Explanation of Proposed Change (attach additional sheets if necessary):

311.7.1 Stairways shall not be less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. Handrails must be installed on both sides of all stairways and shall not project more than 4.5 inches (114 mm) on either side of the stairway and the minimum clear width of the stairway at and below the handrail height, including treads and landings, shall not be less than 31½ inches (787 mm) where a handrail is installed on one side and 27 inches (698 mm) where handrails are provided on both sides

1. Around 24,760,843 patients were admitted to emergency departments due to staircase-related injury during a 23 year-long study by NEISS.
2. In an average year, 1,076,558 people in the US suffer from a staircase-related injury.
3. More than 12,000 people meet death from falling down stairs every year. This itself tells how fatal a fall could be. Simple tripping down stairs or falling off the stairs can rewrite one's destiny. Since the fall will be very fast, the speed of impacting your head or back will occur in a fraction of a second.

The cost should be no more than \$200.00 per home.

Explanation of Cost Impact of Proposed Code Change*: _____

* Attach additional cost information as necessary to justify any statement of cost increase or cost decrease.

SECTION 311 MEANS OF EGRESS

311.1 Means of egress. Dwellings shall be provided with a means of egress in accordance with this section. The means of egress shall provide a continuous and unobstructed path of vertical and horizontal egress travel from all portions of the dwelling to the required egress door without requiring travel through a garage. The required egress door shall open directly into a public way or to a yard or court that opens to a public way.

311.2 Egress door. Not less than one egress door shall be provided for each dwelling unit. The egress door shall be side-hinged, and shall provide a clear width of not less than 32 inches (813 mm) where measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). The clear height of the door opening shall be not less than 78 inches (1981 mm) in height measured from the top of the threshold to the bottom of the stop. Other doors shall not be required to comply with these minimum dimensions. Egress doors shall be readily openable from inside the dwelling without the use of a key or special knowledge or effort.

311.2.1 Garage access doors. Garages shall be served by at least one side hinged door not less than 2 feet 6 inches (760 mm) in width and 6 feet 8 inches (2032 mm) in height. Such door located between a dwelling and an attached garage shall be acceptable for meeting this requirement.

311.3 Floors and landings at exterior doors. There shall be a landing or floor on each side of each exterior door. The width of each landing shall be not less than the door served. Landings shall have a dimension of not less than 36 inches (914 mm) measured in the direction of travel. The slope at exterior landings shall not exceed 1/4 unit vertical in 12 units horizontal (2 percent). Exception: Exterior balconies less than 60 square feet (5.6 m²) and only accessed from a door are permitted to have a landing that is less than 36 inches (914 mm) measured in the direction of travel.

311.3.1 Floor elevations at the required egress doors. Landings or finished floors at the required egress door shall be not more than 1 1/2 inches (38 mm) lower than the top of the threshold. Exception: The landing or floor on the exterior side shall be not more than 8 1/4 -inches (209 mm) below the top of the threshold provided that the door does not swing over the landing or floor. Where exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a ramp in accordance with Section 311.8 or a stairway in accordance with Section 311.7.

311.3.2 Floor elevations at other exterior doors. Doors other than the required egress door shall be provided with landings or floors not more than 8 1/4 -inches (209 mm) below the top of the threshold.

Exception: A top landing is not required for the stairway located on the exterior side of the door, provided that the threshold of the door is not more than 30" above the adjacent grade and the door does not swing over the stairway.

311.3.3 Storm and screen doors. Storm and screen doors shall be permitted to swing over exterior stairs and landings.

311.4 Vertical egress. Egress from habitable levels including habitable attics and basements that are not provided with an egress door in accordance with Section 311.2 shall be by a ramp in accordance with Section 311.8 or a stairway in accordance with Section 311.7.

311.5 Landing, deck, balcony and stair construction and attachment. Exterior landings, decks, balconies, stairs and similar facilities shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal.

311.6 Hallways. The width of a hallway shall be not less than 3 feet (914 mm).

311.7 Stairways.

311.7.1 Width. Stairways shall be not less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. The clear width of stairways at and below the handrail height, including treads and landings, shall be not less than 31 1/2 inches (787 mm) where a handrail is installed on one side and 27 inches (698 mm) where handrails are installed on both sides *in accordance with 311.7.8*. Exception: The width of spiral stairways shall be in accordance with Section 311.7.10.1.

311.7.2 Headroom. The headroom in stairways shall be not less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.

Exceptions:

1. Where the nosings of treads at the side of a flight extend under the edge of a floor opening through which the stair passes, the floor opening shall not project horizontally into the required headroom more than 4 3/4 inches (121 mm).

2. The headroom for spiral stairways shall be in accordance with Section 311.7.10.1.

311.7.3 Vertical rise. A flight of stairs shall not have a vertical rise larger than 148 1/2 -inches (3772 mm) between floor levels or landings.

311.7.4 Walkline. The walkline across winder treads and landings shall be concentric to the turn and parallel to the direction of travel entering and exiting the turn. The walkline shall be located 12 inches (305 mm) from the inside of the turn. The 12-inch (305 mm) dimension shall be measured from the widest point of the clear stair width at the walking surface. Where winders are adjacent within a flight, the point of the widest clear stair width of the adjacent winders shall be used.

311.7.5 Stair treads and risers. Stair treads and risers shall meet the requirements of this section. For the purposes of this section, dimensions and dimensioned surfaces shall be exclusive of carpets, rugs or runners.

311.7.5.1 Risers. The riser height shall be not more than 8 1/4 -inches (209 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Risers shall be vertical or sloped from the underside of the nosing of

the tread above at an angle not more than 30 degrees (0.51 rad) from the vertical. At open risers, openings located more than 30 inches (762 mm), as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch-diameter (102 mm) sphere. Exceptions: 1. The opening between adjacent treads is not limited on spiral stairways. 2. The riser height of spiral stairways shall be in accordance with Section 311.7.10.1.

311.7.5.2 Treads. The tread depth shall be not less than 9 -inches (229 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

311.7.5.2.1 Winder treads. Winder treads shall have a tread depth of not less than 9 -inches (229 mm) measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline. Winder treads shall have a tread depth of not less than 6 inches (152 mm) at any point within the clear width of the stair. Within any flight of stairs, the largest winder tread depth at the walkline shall not exceed the smallest winder tread by more than 3/8 inch (9.5 mm). Consistently shaped winders at the walkline shall be allowed within the same flight of stairs as rectangular treads and shall not be required to be within 3/8 inch (9.5 mm) of the rectangular tread depth. Exception: The tread depth at spiral stairways shall be in accordance with Section 311.7.10.1.

311.7.5.3 Nosings. Nosings at treads, landings and floors of stairways shall have a radius of curvature at the nosing not greater than 9/16 inch (14 mm) or a bevel not greater than 1/2 inch (12.7 mm). A nosing projection not less than 3/4 inch (19 mm) and not more than 1 1/4 inches (32 mm) shall be provided on stairways. The greatest nosing projection shall not exceed the smallest nosing projection by more than 3/8 -inch (9.5 mm) within a stairway. Exception: A nosing projection is not required where the tread depth is not less than 11 inches (279 mm).

311.7.5.4 Exterior plastic composite stair treads. Plastic composite exterior stair treads shall comply with the provisions of this section and Section 507.2.2.

311.7.6 Landings for stairways. There shall be a floor or landing at the top and bottom of each stairway. The width perpendicular to the direction of travel shall be not less than the width of the flight served. For landings of shapes other than square or rectangular, the depth at the walk line and the total area shall be not less than that of a quarter circle with a radius equal to the required landing width. Where the stairway has a straight run, the depth in the direction of travel shall be not less than 36 inches (914 mm). Exception: A floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided that a door does not swing over the stairs.

311.7.7 Stairway walking surface. The walking surface of treads and landings of stairways shall be sloped not steeper than one unit vertical in 48 inches horizontal (2-percent slope).

311.7.8 Handrails. Handrails shall be provided on not less than one side of each flight of stairs with four or more risers. Where the stairway width exceeds (36, 54, 60) inches, a handrail is to be provided on both sides of the flight of stairs.

311.7.8.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) Exceptions: 1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread. 2. Where handrail fittings or bendings are used to provide continuous transition between flights, transitions at winder treads, the transition from handrail to guard, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed 38 inches (956 mm).

311.7.8.2 Handrail projection. Handrails shall not project more than 4 1/2 inches (114 mm) on either side of the stairway. Exception: Where nosings of landings, floors or passing flights project into the stairway reducing the clearance at passing handrails, handrails shall project not more than 6 1/2 inches (165 mm) into the stairway, provided that the stair width and handrail clearance are not reduced to less than that required.

311.7.8.3 Handrail clearance. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inches (38 mm) between the wall and the handrails.

311.7.8.4 Continuity. Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Exceptions: 1. Handrail continuity shall be permitted to be interrupted by a newel post at a turn in a flight with winders, at a landing, or over the lowest tread. 2. A volute, turnout or starting easing shall be allowed to terminate over the lowest tread. 3. Two or more separate rails shall be considered continuous if the termination of the rails occurs over a single tread and positioned within 4 inches of each other. If the transition occurs between a wall mounted handrail and handrail/guardrail combination, the wall mounted handrail shall return into the wall.

311.7.8.5 Grip size. Required handrails shall be of one of the following types or provide equivalent graspability. 1. Type I. Handrails with a circular cross section shall have an outside diameter of not less than 1 1/4 inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter of not less than 4 inches (102 mm) and not greater than 6 1/4 inches (160 mm) and a cross section of not more than 2 1/4 inches (57 mm). Edges shall have a radius of not less than 0.01 inch (0.25 mm). 2. Type II. Handrails with a perimeter greater than 6 1/4 inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within 3/4 inch (19 mm) measured vertically from the tallest portion of the profile and have a depth of not less than 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for not less than 3/8 inch (10 mm) to a level that is not less than 1 3/4 inches (45 mm) below the tallest portion of the profile. The width of the handrail above the recess shall be not less than 1 1/4 inches (32 mm) and not more than 2 3/4 inches (70 mm). Edges shall have a radius of not less than 0.01 inch (0.25 mm).

311.7.8.6 Exterior plastic composite handrails. Plastic composite exterior handrails shall comply with the requirements of Section 507.2.2.

311.7.9 Illumination. Stairways shall be provided with illumination in accordance with Sections 303.7 and 303.8.

311.7.10 Special stairways. Spiral stairways and bulkhead enclosure stairways shall comply with the requirements of Section 311.7 except as specified in Sections 311.7.10.1 and 311.7.10.2.

311.7.10.1 Spiral stairways. The clear width at and below the handrails at spiral stairways shall be not less than 26 inches (660 mm) and the walkline radius shall be not greater than 24 1/2 inches (622 mm). Each tread shall have a depth of no less than 6 3/4 inches (171 mm) at the walkline. Treads shall be identical, and the rise shall be not more than 9 1/2 inches (241 mm). Headroom shall be not less than 6 feet 6 inches (1982 mm).

311.7.10.2 Bulkhead enclosure stairways. Stairways serving bulkhead enclosures, not part of the required building egress, providing access from the outside grade level to the basement shall be exempt from the requirements of Sections 311.3 and 311.7 where the height from the basement finished floor level to grade adjacent to the stairway is not more than 8 feet (2438 mm) and the grade level opening to the stairway is covered by a bulkhead enclosure with hinged doors or other approved means.

311.7.11 Alternating tread devices. Alternating tread devices shall not be used as an element of a means of egress. Alternating tread devices shall be permitted provided that a required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at and below the handrails shall be not less than 20 inches (508 mm). Exception: Alternating tread devices are allowed to be used as an element of a means of egress for lofts, mezzanines and similar areas of 200 gross square feet (18.6m²) or less where such devices do not provide exclusive access to a kitchen or bathroom.

311.7.11.1 Treads of alternating tread devices. Alternating tread devices shall have a tread depth of not less than 5 inches (127 mm), a projected tread depth of not less than 8 1/2 inches (216 mm), a tread width of not less than 7 inches (178 mm) and a riser height of not more than 9 1/2 inches (241 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projections of adjacent treads. The riser height shall be measured vertically between the leading edges of adjacent treads. The riser height and tread depth provided shall result in an angle of ascent from the horizontal of between 50 and 70 degrees (0.87 and 1.22 rad). The initial tread of the device shall begin at the same elevation as the platform, landing or floor surface.

311.7.11.2 Handrails of alternating tread devices. Handrails shall be provided on both sides of alternating tread devices and shall comply with Sections 311.7.8.2 to 311.7.8.6. Handrail height shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

311.7.12 Ships ladders. Ships ladders shall not be used as an element of a means of egress. Ships ladders shall be permitted provided that a required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at

and below the handrails shall be not less than 20 inches (508 mm). Exception: Ships ladders are allowed to be used as an element of a means of egress for lofts, mezzanines and similar areas of 200 gross square feet (18.6 m²) or less that do not provide exclusive access to a kitchen or bathroom.

311.7.12.1 Treads of ships ladders. Treads shall have a depth of not less than 5 inches (127 mm). The tread shall be projected such that the total of the tread depth plus the nosing projection is not less than 8 1/2 inches (216 mm). The riser height shall be not more than 9 1/2 inches (241 mm).

311.7.12.2 Handrails of ships ladders. Handrails shall be provided on both sides of ships ladders and shall comply with Sections 311.7.8.2 to 311.7.8.6. Handrail height shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

311.8 Ramps.

311.8.1 Maximum slope. Ramps serving the egress door required by Section 311.2 shall have a slope of not more than 1 unit vertical in 8 units horizontal (12.5 -percent slope).

311.8.2 Landings required. There shall be a floor or landing at the top and bottom of each ramp, where doors open onto ramps, and where ramps change directions. The width of the landing perpendicular to the ramp slope shall be not less than 36 inches (914 mm).

311.8.3 Handrails required. Handrails shall be provided on not less than one side of ramps exceeding a slope of one unit vertical in 12 units horizontal (8.33percent slope). *Where the ramp width exceeds (36, 54, 60) inches, a handrail is to be provided on both sides of the ramp.*

311.8.3.1 Height. Handrail height, measured above the finished surface of the ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

311.8.3.2 Grip size. Handrails on ramps shall comply with Section 311.7.8.5.

311.8.3.3 Continuity. Handrails where required on ramps shall be continuous for the full length of ramp. Handrail ends shall return or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 1/2 -inches (38 mm) between the wall and the handrails.