2015 ICC CODE DEVELOPMENT CYCLE

UPDATES TO THE 2015 PROPOSED CHANGES TO THE INTERNATIONAL CODES

Update to the 2015 Group A – Consolidated Monograph Updates 4/16/2015

The first errata was posted on 3/30/2015 and updated on 4/16/2015. This booklet contains only the additional errata.

First Printing

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Replace the Cost Impact statements for the code changes listed below as follows:

INTERNATIONAL BUILDING CODE – GENERAL (G):

G1-15:
Cost Impact: Will not increase the cost of construction. This code amendment will not increase the cost of construction since it does not add requirements for changing construction. This proposal only seeks clarification of the code requirements.

G12-15:
Cost Impact: Will not increase the cost of construction. This code amendment will not increase the cost of construction. This amendment only seeks to simplify how the grade plane is regulated by reducing the amount of work it takes to find the grade plane elevation.

G3-15:
Cost Impact: Will not increase the cost of construction. The proposal adds clarity through definitions only, and does not change code requirements nor change the cost of construction.

G34-15:
Cost Impact: Will not increase the cost of construction. This code change merely seeks to remove redundancy in the code text. It does not make the code more stringent nor does it add additional requirements. Therefore there are no cost implications.

G90-15:
Cost Impact: Will not increase the cost of construction. This proposal offers options for construction of 2 story floor openings and would not increase cost of construction. This proposal does not mandate application of the new provisions and does not remove the option to comply with the base code. For this reason it will only be implemented if it is advantageous to the projects and reduces cost of construction.

G129-15:
Cost Impact: Will not increase the cost of construction. This proposal is a clarification of existing code provisions and will not increase the cost of construction.

G140-15:
Cost Impact: Will increase the cost of construction. This change reduces the allowable areas of essential buildings to the allowable areas specified for non-sprinklered buildings, and the increased cost will be consistent with the costs for non sprinklered buildings. The increased costs are only proposed for limited geographic areas.

G152-15:
Cost Impact: Will increase the cost of construction. This change increases the fire ratings for occupancy separations in essential buildings to the hourly ratings specified for non-sprinklered buildings, and the increased cost will be consistent with the costs for non sprinklered buildings. The increased costs are only proposed for limited geographic areas.

G169-15:
Cost Impact: Will not increase the cost of construction. The code change proposal will decrease costs for buildings meeting the conditions of the proposal (increased fire separation distance and a full NFPA sprinkler system). However, if these features are not currently required and are provided in order to take advantage of the decreased exterior wall ratings, the increased costs for these features would have to be compared to the savings from the reduced wall rating to determine whether there is a cost reduction or not.

G171-15:
Cost Impact: Will increase the cost of construction. This change increases the fire ratings of structural elements of essential buildings to the fire ratings specified for non-sprinklered buildings, and the

increased cost will be consistent with the costs for non sprinklered buildings. The increased costs are only proposed for limited geographic areas.

G183-15:
Cost Impact: Will not increase the cost of construction. FRTW can be used in bearing and nonbearing exterior walls in Type IV construction.

For a nonbearing wall, the required fire rating could be the only factor dictating the thickness. Where no fire rating is required by Table 602 the FRTW stud could be 2X4 or less with only an exterior finish. Total thickness could be 4 inches. Using the mandatory minimum thickness the wall would have to be 2X6 with an exterior finish membrane of 1/2 or more. Assuming everything else is equal; 2X4's cost less than 2X6's.

There are two important aspects for consideration of frame construction in determining how thick a bearing wall must be: required fire rating and the load. In this case the wall needs a 2 hr rating. Depending on several factors: load, height, unsupported length, etc., a 2X4 could be used. Example: 2X4=3.5 inches. 2-5/8 inch gypsum=1.25 inches, if more than 10 feet fire separation distance the exterior finish could be a material only 1/2 inch thick or less as shown in UL V314. See link: http://database.ul.com/cgi-n/XYV/template/LISEXT/1FRAME/showpage.html?name=BXUV.V314&ccnshorttitle=Fire-resistance+Ratings+-+ANSI/UL+263&objid=1084396657&cfgid=1073741824&version=versionless&parent_id=1073984818&sequence=1
Total thickness=5.25 inches. Again, assuming everything else is equal: 2X4's cost less than 2X6's.

G185-15:
Cost Impact: Will not increase the cost of construction. The proposal is a clarification of existing requirements. It only creates cross references from one section to another. There is no technical changes to the code.

G221-15:
Cost Impact: Will not increase the cost of construction. This code amendment will not increase the cost of construction. This amendment seeks to establish consistency in requirements for the regulation of Photovoltaic systems installation.

G236-15:
Cost Impact: Will increase the cost of construction. Will increase the cost of construction in some areas of the U.S. while reducing the cost of construction in other areas. To evaluate the cost impact for every occupancy and use, type of construction and building configuration is excessively burdensome for any proposed code change. In an effort to satisfy the request in the code development process that construction type determined by the proponent to be influence by cost was evaluated to the most significant cost potential impacts relative to this proposal, rectangular 4-story Type V multi-family dwellings. The independent third party studies indicate that the cost differential ranges between minus 3% to plus 3% for the most significant cost impact associated with the code change proposal which typically shifted the design from Type V construction to other Types of construction. To accurately evaluate the relative construction cost it was determined that a multi-family residential structure should be schematically designed meeting all of the requirements of the International Building Code. Once designed, the buildings were reviewed for code compliance, and cost estimates would be prepared. The study was conducted by:

Architect & Engineer: *Haas Architects Engineers*[1]
Code Official: *Tim E. Knisely*[2]
Cost Estimation : *Poole Anderson Construction*[3]

The building model chosen for the project was a 4 story multi-family residential structure encompassing approximately 25,000 gross square feet of building area per floor. The cost comparisons are based on the proposed target building assembled using a typical mix of one and two bedroom dwelling units.

The following construction types and alternates were included in the evaluation:
Conventional Type V framing with Type V floor system
Alternate: Conventional Type VA framing with Type VA floor system
Non-combustible framing with fire-rated non-combustible floors (concrete on steel deck)
Fire-rated load bearing non-combustible construction with fire rated non-combustible floor system (block and plank)
The cost estimate for each building model included the complete fit out of each building with the exception of movable appliances and furniture. For more details on the specific criteria visit: www.psfscac.org.

G237-15:
Cost Impact: Will not increase the cost of construction. This code amendment will not increase the cost of construction. This amendment will provide consistency in regulating building terms, but does not add or remove any requirements.

INTERNATIONAL BUILDING CODE – MEANS OF EGRESS (E):

E9-15:
Cost Impact: Will not increase the cost of construction. Overall, the proposal seeks to lessen the occupant load, thus reducing the required means of egress capacity, and the number of plumbing fixtures required for business use occupancies. However, the cost of construction may increase where occupant load factors for concentrated business use are applied to telephone call centers, trading floors, electronic data processing centers and similar business use areas with a higher density of occupants by increasing the means of egress capacity as well as the number of plumbing fixtures to address these specific conditions.

E10-15:
Cost Impact: Will not increase the cost of construction. The code change proposal would decrease the required design occupant load in business offices and would therefore reduce the number of plumbing fixtures required as well as possibly reduce the required capacity of egress elements. A rough estimate of the installation of a commercial toilet with associated plumbing is at least $1,500. The lost usable/rentable area due to oversizing egress elements could cost thousands of dollars per year. Overdesign is inefficient and not sustainable. Maintaining the unnecessary area would add annual operating costs to the building and waste energy.

E12-15:
Cost Impact: Will not increase the cost of construction. This proposal would reduce the cost for construction of swimming pool decks that serve R-2 and R-3 occupancies because it allows the occupant load factor to be revised from 1:15 to 1:30 SF gross resulting in reduction of the occupant load and possible reduction in egress width and number of plumbing facilities.

E13-15:
Cost Impact: Will not increase the cost of construction. The code change proposal will not increase the cost of construction is does not alter requirements, it just simply provides clarity for application of the code by the fire code official.

E22-15:
Cost Impact: Will not increase the cost of construction. The code change proposal simply seeks to provide clearer code language and with no intended changes in requirements, therefore cost is not an issue…..

E40-15:
Cost Impact: Will not increase the cost of construction. The code change proposal would eliminate the cost of the passive fire resistance rated construction materials required for the exterior area of assisted rescue in buildings that are equipped throughout with an NFPA 13 or NFPA 13R fire sprinkler systems.

E44-15:
Cost Impact: Will not increase the cost of construction. This proposal would reduce cost of construction because it eliminates cost of labor and materials for installation and maintenance of two way communication system in I-2 Group 2 occupancies.

E48-15:
Cost Impact: Will not increase the cost of construction. No cost implications could be identified. The code change proposal seeks to eliminate an unnecessary requirement in the code and does not intend to make the code more restrictive, therefore cost is not an issue. If anything, costs may decrease as eliminating these unnecessary requirements may allow designers more flexibility in complying with code requirements.

E58-15:
Cost Impact: Will not increase the cost of construction. We believe the proposed change is consistent with common current practice and therefore only permits what is already being done. Since it is already being done, there is no effect on product or cost and therefore requires no further study.

E59-15:
Cost Impact: Will not increase the cost of construction. The proposed code change does not impose any additional costs. The provision would merely provide a temporary relaxation of normal egress requirements during threat of a hurricane or tropical storm. The proposed code change will eliminate an extremely costly interpretation that all egress openings need to be impact resistant and fully operational for egress purposes. Many, if not most, opening protective are not intended for egress and, therefore, do not comply with the operational constraints of a means of egress. Requiring all opening protectives to be fully operational for egress purposes would be extremely costly and unnecessary.

Opening protection is of major importance during a hurricane or tropical storm. The proposed modification will assist in safeguarding the public from the hazards of such high wind events. The proposal provides for minimal escape from a fire emergency while ensuring full protection from wind-borne debris and wind-induced structural collapse during a hurricane or tropical storm.

While it is acknowledged there is a risk of fire during a hurricane, structural integrity and protection from wind-borne debris must be considered the greater concern during the brief period of time a property is threatened by a hurricane or tropical storm. Clearly the greatest imperils during such high wind events are from wind and wind-borne debris, not fire. The period of time where egress would be limited due to the threat of a hurricane would be relatively short. Most likely, opening protection would be installed a day or two in advance of a storm and remain in place a day or two after the storm. Storm protection devices are typically installed or closed unless there is a serious threat of a storm.

The proposed change is reasonable, cost-effective and substantially promotes the safety and general welfare of the general public by maintaining egress for fire safety, while protecting building occupants from that hazards of high winds and wind-borne debris during hurricanes and tropical storms.

E97-15:
Cost Impact: Will increase the cost of construction. This change decreases the travel distances for essential buildings to the travel distances specified for non-sprinklered buildings, and the increased cost will be consistent with the costs for non sprinklered buildings. The increased costs are only proposed for limited geographic areas.

E105-15:
Cost Impact: Will increase the cost of construction. This increases the fire ratings for corridors in essential buildings to the hourly ratings specified for corridors in non-sprinklered buildings, and the increased cost will be consistent with the costs for non sprinklered buildings. The increased costs are only proposed for limited geographic areas.

E111-15:
Cost Impact: Will not increase the cost of construction. The code change proposal does not seek to change requirements, it merely seeks to install improved regulatory language, therefore cost of construction is not at issue.

E166-15:
Cost Impact: Will not increase the cost of construction. The number of outlets that are required is governed by the electrical code. The proposed code change would not increase nor decrease the number of outlets required, only the accessible location. Therefore, it can be concluded that there would be no increase in cost of construction.

INTERNATIONAL BUILDING CODE – STRUCTURAL (S):

S7-15:
Cost Impact: Will not increase the cost of construction. This proposal will not increase the cost of construction because it merely reorganizes and clarifies the existing code sections.

INTERNATIONAL EXISTING BUILDING CODE (IEBC):

EB4-15:
Cost Impact: Will not increase the cost of construction. This proposal will not affect the cost of construction because it merely adds a definition.

EB6-15:
Cost Impact: Will not increase the cost of construction. This proposal will not increase the cost of construction because it adds alternatives for alterations in flood hazard areas.

EB16-15:
Cost Impact: Will not increase the cost of construction. This proposal could reduce the cost of construction because it allows alteration projects using the prescriptive method to use sprinkler systems as alternatives to other forms of protection as allowed in the Building Code and as allowed in the IEBC for the work area method.

EB17-15:
Cost Impact: Will not increase the cost of construction. This proposal will not affect the cost of construction because it deletes unnecessary language.

EB29-15:
Cost Impact: Will not increase the cost of construction. This proposal will not increase the cost of construction because it is simply coordinating current options in the IEBC.

INTERNATIONAL MECHANICAL CODE (IMC):

M152-15:
Cost Impact: Will not increase the cost of construction. The addition of PEX joints in this particular section of the code is really more editorial in nature as PEX is already addressed in the code but is lacking the same treatment as the other piping materials mentioned in 1209.3.

INTERNATIONAL PLUMBING CODE (IPC):

P29-15:
Cost Impact: Will not increase the cost of construction. The code change proposal would decrease costs due to the reduction in the number of fixtures required and reduction in building floor area occupied by such plumbing fixtures.

P139-15:
Cost Impact: Will not increase the cost of construction. If you do not have to install demand recirculation controls proximity sensors, electrical wiring, transformers, control wiring, circulating pumps, etc. it will save money. This will not increase the cost of construction when the cost of previously heated warm water is dumped down the drain every time someone needs cold water. Th hot water will also promote

bacteria growth in the piping system which will lead to medical expenses and illness, doctors fees, lawyers fees, and the cost of labor, materials to make repairs to the plumbing system when it is discovered this system does not provide cold water to the fixture for brushing teeth, drinking or any other uses for cold water The cost to make corrections in order to get cold water from the fixture should be factored in.

P204-15 Part I:
Cost Impact: Will not increase the cost of construction. This proposal is modifying language to coordinate with each other in multiple code sections and does not impact costs. Thus the code with this proposal added will not cause the cost of construction to increase.

P266-15:
Cost Impact: Will not increase the cost of IAPMO is currently completing work on Z1207, a mechanical performance standard for greywater (bath/shower, laundry & lavatory) recycling. The term “recycling” is used to differentiate it from “reuse”, with “recycling” meaning water which is applied to a non-potable water application without treatment, and “reuse” meaning water which is treated to a specific water quality standard and is then applied to a non-potable water application. There are a range of technologies and enabling jurisdictions that favor recycling greywater for subsurface irrigation as well as toilet flushing – primarily for single family residential applications (i.e. recycling bathwater, or lavatory drainage, for toilet flushing) as having an inherently very-low risk of disease transmission due to the limited number of individuals (family members) generating the greywater and flushing the toilet. The purpose of developing IAPMO Z1207 was to provide a mechanical performance standard for greywater recycling that did not include the high costs of treatment that would be required for other non-potable water applications requiring reuse water quality, such as surface irrigation.

Code change P266-15 is in reference to 1302.6 “gray water” systems refers to providing “disinfection or other treatment” where required. This is an unnecessary statement, as the water quality and/or disinfection is specified by the jurisdiction. However, the change in water quality as a result of excess holding (storage) times for is a common issue for all untreated greywater applications requiring storage, and worthy of stating. NO COST IMPLICATION

Although 1306.2 refers to disinfection or other treatment as applying “where required”, Section 1302.6.1 states the gray water “shall be disinfected and treated” – making treatment mandatory and having a significant treatment cost implication in the order of $5,000 for a commercial package treatment system. The proposed wording changes eliminates the mandatory treatment and disinfection (cost) requirements, and leaves the need for treatment to achieve a specific water quality to the local jurisdiction. POTENTIAL COST SAVINGS IF TREATMENT IS NOT REQUIRED.

Table 1302.7 establishes the horizontal setback distance from reuse storage tanks to various site features including seepage pits, septic tanks, and protected tree root zones. The CSA B128.3 and NSF/ANSI Standard 350 both achieve fully disinfected advanced secondary/tertiary reuse water qualities that contained in storage will clearly not adversely affect a seepage pit, septic tank or protected root zones, and the horizontal setback distance to potable water sources varies from jurisdiction to jurisdiction. Therefor deletion without substitution is recommended. Unnecessary mandatory horizontal setback distances could restrict or impede the placement of a storage tank, so this recommendation has a POTENTIAL COST SAVINGS IF MANDATORY SETBACKS ARE NOT REQUIRED

The elimination of Section 1302.7 – positioning outlets a minimum of 4 inches above the bottom of the storage tank prevents the entire contents of the tank from being flushed. In the case of untreated greywater, IAPMO Z1207 requires the contents of the greywater storage tank to be flushed every 24 hours and to not retain solids. This cannot be achieved if the outlet is 4 inches or more from the bottom. Although the positioning of the tank outlet has no direct cost implication, an elevated position implies the need to pump out the bottom of the storage tank, POTENTIAL COST SAVINGS IF MINIMUM OUTLET ELEVATION IS NOT SPECIFIED

Section 1302.12.6 requires the water quality to be verified at the point of use. Firstly, the point of use is open to interpretation, and some jurisdictions require “reuse” water quality conditions to be met at the point of discharge from the treatment facility (e.g. reclaimed water discharged to a storage pond used for irrigation at a golf course), whereas others require it at the point of use (e.g. at the toilet for use in flushing). As Section 1302.12.6 requires water quality assessment, this infers laboratory analyses and cost. POTENTIAL COST SAVINGS IF MANDATORY WATER QUALITY VERIFICATION AT POINT OF

USE IS NOT SPECIFIED ASSOCIATED WITH ELIMINATION OF ANALYTICAL COSTS – PARTICULARLY IN CONSIDERATION OF IAPMO Z1207 WHICH DOES NOT REQUIRE TREATMENT OR A SPECIFIC WATER QUALITY.

Considering the above, there is a potential cost saving for the suggested changes. However, those who are not in favour of recycled greywater (recycle meaning without treatment) will point out that the water quality is likely to affect the performance of the fixtures (e.g. biofilm growth in the toilet tank affecting water seals). This is a perfectly reasonable concern, and can be addressed through routine tank cleaning or the use of biofilm inhibiting chemicals, which are commonly used. The cost consideration for the labour associated with cleaning the toilet tanks, water losses due to leakage if the biofilm is not cleaned, or the cost of chemicals to inhibit biofilm growth in the tank, could neutralize the cost savings associated with the suggested changes to the draft code. Accordingly, it is concluded that the proposed changes DO NOT HAVE COST IMPLICATIONS – I.E. WILL BE COST NEUTRAL construction.

Add Photo to Reason Statement

FS 89-15

716.5.3.1.1 (New)

Proponent : John Woestman, representing Builders Hardware Manufacturers Association (BHMA) (jwoestman@kellencompany.com)

2015 International Building Code

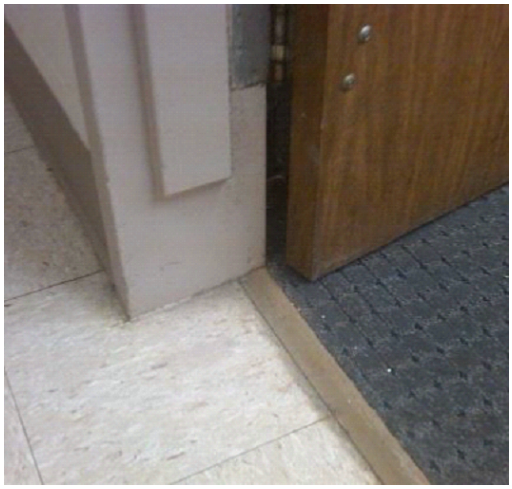
Add new text as follows:

716.5.3.1.1 Terminated stops. On doors required by this code to be smoke and draft control doors, stops on door frames shall be permitted to terminate not more than 6" above the floor.

Exception: Section 716.5.3.1.1 shall not apply to smoke and draft control doors required by Sections 3006.3, 3007.6.3, and 3008.6.3.

Reason: Many doors installed in hollow metal frames in health care facilities have terminated stops. These terminated stops are also known as "hospital stops" or "sanitary stops." A terminated stop is a factory modification to a door frame, where the stop is terminated above the floor. The bottom of the stop is closed at a 45-degree or 90-degree angle. The purpose of a terminated stop is to make it easier to clean that area of the floor without the extra corners to catch debris or pathogens, and to avoid getting cart or bed wheels caught on the stop.
The code is silent regarding terminated stops. This proposal provides guidance where terminated stops would be allowed, and not allowed, by the code. This proposal is consistent with the testing requirements of UL 1784.

Cost Impact: Will not increase the cost of construction
No mandatory costs. Door frames with terminated stops may have a slight increase in cost compared to door frames with full length stops. However, installation of door frames with terminated stops is optional.



FS 89-15 : 716.5.3.1.1 (New)-WOESTMAN5522

REVISIONS TO TENTATIVE ORDER OF DISCUSSION

FS47-15 has been Withdrawn
FS48-15 has been Withdrawn
FS71-15 has been Withdrawn
FS147-15 Was NOT Withdrawn
FS148-15 Was NOT Withdrawn

TENTATIVE ORDER OF DISCUSSION
2015 PROPOSED CHANGES TO THE INTERNATIONAL BUILDING CODE (FIRE SAFETY)

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some FS code change proposals may not be included on this list, as they are being heard by another committee.

FS1-15
FS2-15
G5-15
FS3-15
FS4-15
FS5-15
FS6-15 Part II
FS6-15 Part I
FS7-15
FS8-15
FS9-15
FS10-15
FS11-15
FS12-15
FS13-15
FS14-15
FS15-15
FS16-15
G14-15
FS17-15
FS18-15
FS19-15
FS20-15
FS21-15
FS22-15
FS23-15
FS24-15
FS25-15
FS26-15
FS27-15
FS28-15
FS29-15
FS30-15
FS32-15
FS31-15
FS33-15
FS34-15 Part I
FS34-15 Part II
FS34-15 Part III
FS35-15
FS36-15
FS37-15
FS38-15
FS39-15
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FS41-15
FS42-15
FS43-15 Part I
FS43-15 Part II
FS44-15
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FS102-15 Part I
FS102-15 Part II
FS102-15 Part III
FS103-15
FS104-15
FS105-15
FS106-15
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FS108-15
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FS121-15 Part II
FS122-15
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FS145-15
FS146-15
FS147-15
FS148-15
FS149-15 Part I
FS149-15 Part II
FS150-15
FS151-15
FS152-15
FS153-15
FS154-15
FS155-15
FS156-15
FS157-15
FS158-15
G21-15
FS159-15

FS160-15
FS161-15
FS162-15
FS163-15
FS164-15
FS165-15
FS166-15
FS167-15
FS168-15
- S1-15
- S2-15
- S3-15
- S4-15
- S5-15
- S6-15
- S10-15
- G15-15
- G16-15

FS169-15
FS170-15
FS171-15
FS172-15
FS173-15
FS174-15
FS175-15
FS176-15
FS177-15
FS178-15
FS179-15
- G17-15

FS180-15
FS181-15
FS182-15
FS183-15

REVISIONS TO TENTATIVE ORDER OF DISCUSSION

G32-15 has been Withdrawn
G106-15 has been Withdrawn

TENTATIVE ORDER OF DISCUSSION 2015 PROPOSED CHANGES TO THE INTERNATIONAL BUILDING CODE (GENERAL)

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some G code change proposals may not be included on this list, as they are being heard by another committee.

Chapter 2
G1-15
G2-15
G237-15
G6-15
G8-15
G9-15
G11-15
G12-15
G20-15

Chapter 3
E5-15 Part II
G22-15
G23-15
G24-15
G131-15
G134-15
G166-15
G25-15
G26-15
G27-15
G29-15
G30-15
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G42-15
G43-15
G44-15
G45-15
G46-15
G47-15

Chapter 4
G49-15
G50-15
G51-15
G52-15
G53-15
G54-15
G55-15
G56-15
G57-15
G58-15
G59-15
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G119-15
G120-15
G121-15
G123-15
G122-15
G124-15
G125-15
G126-15
G4-15
G19-15
G127-15
G128-15

Chapter 5
G129-15
G130-15
G132-15
G133-15
G135-15
G136-15
G137-15
G138-15
G139-15
G142-15
G144-15

G143-15
G145-15
G140-15
G152-15
G171-15
G146-15
G147-15
G148-15
G149-15
G150-15
G151-15
G153-15
G154-15
G155-15
G156-15
G157-15
G158-15
G159-15
G160-15
G161-15
G162-15
G163-15
G164-15
G165-15

Chapter 6
G167-15
G168-15
G169-15
G170-15
G172-15
G173-15
G174-15
G175-15
G176-15
G177-15
G178-15
G179-15
G180-15
G181-15
G182-15
G183-15
G184-15
G185-15

Chapter 12
G186-15
G187-15
G188-15
G189-15
G190-15
G191-15
P54-15 Part II

Chapter 15
S7-15
S8-15
S9-15

Chapter 27
G192-15 Part I

Chapter 29
G193-15
P46-15 Part II

Chapter 30
G194-15
G195-15
G196-15
G197-15
G198-15
G199-15
G200-15
G201-15
G202-15
G203-15
G205-15
G204-15
G206-15
G210-15
G207-15
G208-15

Chapter 30 (New)
G209-15

Chapter 31
G212-15
G213-15
G214-15
G215-15
G216-15
G217-15
G218-15
G219-15
G220-15
G211-15
G221-15
G223-15
G224-15

Chapter 33
G225-15
G226-15
G227-15
G228-15
G229-15
G230-15
G231-15
G232-15

Appendix I
G233-15

Appendix N (New)
G234-15
G235-15
G236-15

REVISIONS TO TENTATIVE ORDER OF DISCUSSION

E60-15 has been Withdrawn

TENTATIVE ORDER OF DISCUSSION 2015 PROPOSED CHANGES TO THE INTERNATIONAL BUILDING CODE (MEANS OF EGRESS)

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some E code change proposals may not be included on this list, as they are being heard by another committee.

Chapter 10
E1-15
G10-15
E2-15
E3-15
E4-15
E5-15 Part 1
E6-15
E123-15
E7-15
E8-15
E9-15
E10-15
E11-15
E12-15
E13-15
E14-15
E15-15 Part 1
E15-15 Part 2
E16-15
E17-15
E18-15
E19-15
E20-15
E21-15
E80-15
E22-15
E23-15
E24-15
E25-15
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E48-15
E49-15
E50-15
E51-15
E52-15
E53-15
E54-15
E55-15
E56-15
E57-15 Part 1
E58-15
E60-15
E61-15
E62-15
E63-15
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E134-15
E135-15
E136-15
E137-15
E138-15
E139-15
E140-15
E141-15
E142-15
E143-15
E144-15
E145-15
E146-15
E147-15 Part 1
    E59-15

Chapter 11

E149-15
    EB93-15
E150-15
E151-15
E152-15
E153-15
E154-15
E155-15
E156-15
E157-15
E158-15
E159-15
E160-15
E161-15
E162-15
E163-15
E164-15
E165-15
E166-15
E167-15
E168-15
E169-15

REVISIONS TO TENTATIVE ORDER OF DISCUSSION

M47-15 has been Withdrawn
M81-15 has been Withdrawn
M82-15 has been Withdrawn
M83-15 has been Withdrawn
M86-15 has been Withdrawn
M87-15 has been Withdrawn
M91-15 has been Withdrawn
G192, Part II was added
M85-15 was added
M126-15 was added

TENTATIVE ORDER OF DISCUSSION
2015 PROPOSED CHANGES TO THE INTERNATIONAL MECHANICAL CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some M code change proposals may not be included on this list, as they are being heard by another committee.

Number(s) Not Used:
M7-15
M16-15
M74-15

M1-15
M2-15
M3-15
M4-15
M5-15
M6-15
M8-15
M9-15
M11-15
M12-15
M13-15
M14-15
M15-15 Part I
M17-15
    M61-15
    M130-15
    M157-15
M18-15
    M10-15
M19-15
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M21-15
M22-15
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M32-15
M33-15
M34-15
M35-15
M36-15
M37-15
M38-15
M39-15
M40-15
M41-15 Part I
M42-15
M43-15
M44-15
M45-15
M46-15
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M48-15
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M62-15
M63-15
M64-15
M65-15
M66-15
M67-15
M68-15
M69-15 Part I
M69-15 Part II
M70-15 Part I
M70-15 Part II
M160-15 Part I
M160-15 Part II
M71-15
M72-15
M73-15
M75-15
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M102-15
M103-15
M104-15
M105-15
M106-15
M107-15
M108-15
M109-15 Part I
FG42-15 Part III
M110-15
M111-15
M112-15
M113-15
M114-15
M161-15
M115-15
M116-15
M117-15
M118-15
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M150-15
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M152-15
M153-15
M154-15
M155-15
M156-15
M158-15
M159-15
G192, Part II

REVISIONS TO TENTATIVE ORDER OF DISCUSSION

P61-15 has been Withdrawn
P68-15 has been Withdrawn
Remove the WP from P162-15 Part I
P172-15 Part II should read P172-15 Part I
P219-15 Part I has been Withdrawn
P242-15 has been Withdrawn
Add P279-15 Part I after P204-15 Part I

TENTATIVE ORDER OF DISCUSSION 2015 PROPOSED CHANGES TO THE INTERNATIONAL PLUMBING CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some P code change proposals may not be included on this list, as they are being heard by another committee.

Numbers not used:
P32-15
P85-15
P116-15

P1-15
P2-15
P3-15 Part I
P4-15
P5-15
P6-15
P7-15
P8-15
P9-15
P10-15
P11-15
P12-15
P13-15
P14-15
P16-15
P17-15
P18-15
P19-15 Part I
P15-15 Part I
P20-15 Part I
P21-15
P22-15
P23-15
P24-15
P25-15
P26-15
G192-15 Part III

P27-15
P28-15
P29-15
P30-15
P31-15
P33-15
P34-15
P35-15
P36-15 Part I
P36-15 Part II
P37-15
P38-15
P39-15
P40-15
P41-15
P42-15
P43-15
P44-15
P45-15
P46-15 Part I
P47-15
P48-15
P49-15
P50-15
P114-15
P126-15
P118-15

P129-15
P134-15
P168-15
P179-15
P180-15
P181-15 Part I
PSD1-15
P182-15
P183-15
P185-15
P187-15
P191-15 Part I
P196-15
P51-15 Part I
P52-15
P53-15 Part I
P54-15 Part I
P55-15 Part I
P56-15
P57-15
P58-15
P59-15
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P62-15
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P81-15
P82-15 Part I
P83-15
P84-15
P86-15
P87-15
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P89-15
P90-15
P91-15
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P93-15 Part I
P94-15
P95-15
P96-15
P97-15
P98-15 Part I
P99-15 Part I
P100-15
P101-15 Part I
P102-15
P103-15
P104-15
P105-15
P106-15
P107-15 Part I
P108-15
P109-15 Part I
P110-15
P111-15
P112-15
P113-15 Part I
P115-15 Part I
P117-15 Part I
P119-15
P120-15
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P122-15
P123-15
P124-15 Part I
P125-15
P127-15
P128-15 Part I
P130-15
P131-15 Part I
P132-15 Part I
P133-15 Part I
P135-15 Part I
P136-15
P137-15
P138-15
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P141-15
P142-15
P143-15
P144-15
P145-15
P146-15
P147-15
P148-15
P149-15
P150-15 Part I
P151-15
P152-15
P153-15
P154-15
P155-15
P156-15
P157-15
P158-15
P159-15
P160-15
P161-15
P162-15 Part I ~~WP~~
P163-15
P164-15
P165-15
P166-15 Part I
P167-15
P169-15
P170-15 Part I
P171-15
P172-15 ~~Part II~~ Part I
P173-15
P174-15 Part I
P175-15
P176-15
P177-15
P178-15 Part I
P184-15 Part I
P186-15
P188-15
P189-15
P190-15 Part I
P192-15
P193-15
P194-15 Part I
P195-15 Part I
P197-15 Part I
P198-15 Part I
P199-15
P200-15
P201-15
P202-15 Part I
P203-15 Part I
P204-15 Part I
P279-15 Part I
P205-15 Part I
P206-15
P207-15
P208-15
P209-15
P210-15
P211-15
P212-15
P213-15
P214-15
P215-15 Part I
P216-15
P217-15
P218-15 Part I
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P220-15 Part I
P221-15 Part I
P222-15
P223-15
P224-15 Part I
P225-15
P226-15 Part I
P227-15
P228-15 Part I
P229-15
P230-15
P231-15
P232-15
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P263-15
P264-15
P265-15
P266-15
P267-15
P268-15
P269-15
P270-15
P271-15
P272-15
P273-15
P274-15
P275-15
P276-15
P277-15
P278-15

P 90-15

202 (New), 502.6 (New), 502.6.1 (New), 502.6.2 (New)

Proponent : Ronald George, Self; Plumb-Tech Design & Consulting Services LLC; www.Plumb-TechLLC.com; www.ScaldPrevention.org, representing Self; Plumb-Tech Design & Consulting Services LLC; www.Plumb-TechLLC.com (Ron@Plumb-TechLLC.com)

2015 International Plumbing Code

Add new definition as follows:

SECTION 202 DEFINITIONS

SCALD HAZARD A condition where high temperature hot water discharged from a plumbing fixture can cause serious burn injuries to the user.

Add new text as follows:

502.6 Water heater replacement and scald protection Where the water temperature in a hot water distribution system changes as the result of a water heater replacement, repair or an alteration of the hot water distribution system such as a water heater thermostat adjustment or master mixing valve adjustment or replacement, each shower or combination tub-shower supplied by the system shall be inspected for the presence of a means for reducing scald hazards to the users.

Where the means for limiting the hot water temperature is a master mixing valve complying with ASSE 1017, a mixing valve complying with ASSE 1070 or an integral limit stop on the shower or combination tub-shower valve, adjustments shall be made in accordance with Section 502.6.1. Where the means for limiting the hot water temperature discharged at the fixture is a device complying with ASSE 1062, then the operation of the device shall be verified that it significantly reduces flow when the discharge temperature approaches 120◦F (48.8◦C).

Where a shower or tub-shower combination does not have a means for scald protection for a user, a means shall be installed in accordance with Section 502.6.2.

502.6.1 Adjustment procedure Temperature limit adjustments for shall be made and set to limit the temperature of the hot water discharged to any user to not greater than 120◦F (48.8◦C). These adjustments and settings shall only be performed after both of the following are satisfied:

1. The water heater has reached the water heater temperature control setting as recommended by the water heater manufacturer and has shut off its burner or electric elements.

2. Hot water has sufficiently reached the valve such that the temperature of the discharging at the fixture does not continue to rise.

A water heater thermostat shall be prohibited as a means for limiting hot water temperature for the purposes of required scald protection for a user of hot water.

502.6.2 Showers and combination tub-showers without means of protection against scalding.
Where a shower or tub-shower combination valve does not have a means for scald protection for a user, one or more of the following shall be performed:

1. The shower or combination tub/shower valve shall be replaced with a valve complying with ASSE 1016/ASME A112.1016/CSA B125.16. After replacement, the temperature limit stop shall be adjusted in accordance with Section 502.6.1

2. A master temperature actuated mixing valve complying with ASSE 1017 or ASSE 1070 shall be installed in the hot water outlet piping at the water heater. After installation, the temperature setting of the valve shall be adjusted in accordance with Section 502.6.1.

3. A point-of-use water temperature limiting valve complying with ASSE 1070 shall be installed at or near each shower or tub-shower combination valve After installation,the the temperature setting of the ASSE 1070 valve

shall be adjusted in accordance with Section 502.6.1. ASSE 1070 valves shall be provided with access.

4. A temperature-actuated, flow reduction valve complying with ASSE 1062 shall be installed on the shower arm prior to connection of shower head and, for tub-shower combinations, on both the tub spout and the shower arm. ASSE 1062 devices shall be capable of significantly limiting the flow of water discharged as the water temperature rises towards 120◦F (48.8◦C).

Reason: Reason: There are currently no provisions in the code to require protection for unsafe existing plumbing installations where scalding is a hazard. Hundreds of people are scalded each year where non-code compliant (Two-handle) shower valves are installed and a wateer heater is replaced causing a hotter temperature than was present prior to the water heater replacement. This code change is iintended to address this and other hot water scald hazards in existing installations.

What are safe hot water temperatures?

By Ron George
President, Ron George Design & Consulting Services
Plumbing Engineer Magazine Aug 2009

I am often asked, "What is a safe hot water temperature for domestic hot water?" If you read the model codes, it states the maximum hot water temperature for a shower or bathtub is 120 degrees Fahrenheit. If you read the warning labels on the side of most water heaters the maximum hot water temperature is 120 degrees Fahrenheit on some labels and 125 degrees Fahrenheit on other labels. The 125 degree limit probably allows for some temperature loss before the hot water gets to the fixtures. Most water heater literature and warning labels mention the availability of thermostatic mixing valves or automatic temperature compensating valves and they recommend their use. If you look at many of the industry standards for shower mixing valves, they state the valves must have limit stops that are adjustable to limit the maximum hot water temperature to 120 degrees Fahrenheit. The testing in the standards gives test criteria for testing the shower valves to these limits.

I have served on the working groups for several plumbing industry standards committees for temperature actuated mixing valves and shower valves and it is generally agreed that 120 degrees is the maximum, safe hot water temperature. I also have served on hot water system design standards committees where the participants had agreed that maximum domestic hot water temperature from plumbing fixtures used for bathing and washing purposes should be 120 degrees Fahrenheit. There were a few exceptions for bidets, sitz baths and whirlpool tubs that had temperatures lower than 120 degrees Fahrenheit for the recommended maximum temperatures to prevent scalding. It also should be noted that some other uses like commercial dishwashers and laundries may need temperatures higher than 120 degrees Fahrenheit. There were two temperatures discussed for each fixture during the design standard meetings. One was the "use temperature" and the other was "the maximum temperature" to prevent scalding.

It's generally agreed that 120 degrees Fahrenheit is the maximum safe hot water temperature that should be delivered from a fixture. Therefore hot water above 120 degrees Fahrenheit can be considered hazardous. Model codes address this in various plumbing code sections...

...The codes generally agree if there is a hazardous condition or a condition that is unsafe or a nuisance to life, health and property it should be corrected but in the existing building code and property maintenance code there is little guidance. It is also generally agreed that water above 120 degrees Fahrenheit at fixtures for bathing and washing with a few exceptions for lower temperatures can be considered dangerous and proper precautions should be taken to prevent the hot water from being a scalding hazard by using the proper safety devices. When I hear about people setting their water heater to 120 degrees Fahrenheit to prevent scalding, I know they have good intentions, but most people do not know you cannot accurately control the hot water temperature leaving a water heater with the thermostat dial.
Maximum Hot Water Temperature to Prevent Scalding
I have served on many industry committees dealing with hot water system code requirements, hot water system design standards and product standards related to domestic hot water systems devices for temperature control and scald prevention. There has been consensus in all of these committees that the maximum safe hot water delivery temperature for a shower or bathtub is 120 degrees Fahrenheit to prevent scalding with a few exceptions for lower temperatures for bidets and emergency eye wash fixtures. (See the attached Figure 1 - Hot Water Scald Burns – Time vs Temperature Relationship for Second and Third Degree Burns for Adults and Children)
There were discussions in a plumbing code ad-hoc committee on temperature limits for the hot water system where everyone agreed the maximum safe temperature was 120 F. The ASPE Hot water committee dealing with a proposed standard for temperature limits in hot water systems also agreed the maximum safe hot water temperature to prevent scalding is 120 Fahrenheit. Several ASSE working groups that I have served on dealing with hot water temperature controls have all have discussed the reaction time of bathers and they have taken into consideration that children, the elderly and people with disabilities usually take longer to get out of harm's way if the water suddenly gets hot and they agreed 120 Fahrenheit is the maximum safe hot water temperature that a valve should deliver. At 120 F it takes about 80 seconds to develop a second degree burn in a child and it takes about 8 minutes to develop a second degree burn in an adult. (See Figure 1) The 120 Degree F temperature limit gives bathers or users an adequate amount of time to get out of harm's way before an irreversible scald burn injury can occur. Each of these committees looked back to the data that was the result of burn studies done by Dr. Moritz and Dr. Henrique's at Harvard Medical College in the 1940s. The burn studies were done using baby pigs that had skin thicknesses similar to that of adult males. The studies exposed the pig's skin to various temperatures of hot water for various periods of time and the severity of the burns were studied and recorded. These were the studies used to develop the time and temperature exposure charts. There have been numerous white papers, seminars, and reports since then discussing the fact that burns can occur quicker than those recorded in the Moritz & Henrique's studies for adult males. The skin is thinner for children and the elderly and the amount of time to receive an irreversible 2nd degree burn injury is less because their skin is thinner. Many of the white papers use the Moritz and Dr. Henrique's original burn studies and they use a ratio of the skin thickness to come up with burn times for thinner skin of children and the elderly. Children, the elderly and handicapped are also slower to react because it takes them more time to realize what is happening and try to react to get out of harm's way. Someone once told me an apartment complex was not intended for children or the elderly. I said everyone grows old and children often come visit so we need to consider prevention of scalds to children, the elderly and people with disabilities more so than burns to adults because burns can occur

quicker for those groups.

The PIEV Theory for Reaction Time

There is a PIEV theory relates to reaction time. The PIEV theory is most commonly used to address braking distance in automobile accidents. It addresses the amount of time it takes a driver to sense a problem and decide to react, then the reaction time is added to the braking time for the total distance that a car travels before stopping. The PIEV theory can also apply to reaction times for a bather with respect to hot water scalds.

PIEV relates to the amount of time it takes a person to react to a hazard. PIEV means - Perception, Intellection, Emotion and Volition. It is usually referred to as the PIEV theory. Before we recognize and react to a hazard, four specific areas of activity need to be processed by the brain for the muscles to react. Those processes are:

1. **Perception** - We need to perceive or gain a Perception of a hazard. There can be delays in the perception with limitation in sight, sound, feeling, or any other of our senses.
2. **Intellection** - We go through a period called, Intellection or the act or process of using the intellect by thinking or reasoning. The bather must determine if the hazard is legitimate and deciding either move out of the way of the hazard or eliminate the hazard by adjusting the controls or in some cases where the bather may be sitting out of the reach of the controls the bather may choose to pull the shower curtain in front of them. If the adjustment of the controls is the choice one must decide which control to turn and try to remember which way to turn each control to adjust the temperature or turn the water off in order to eliminate the hazard. If a wrong choice is made during this process it could compound the situation by making the water even hotter. I travel a lot and I often find that shower controls can be very confusing with respect to how to adjust the controls. I still find two handle shower controls that do not meet code requirements. This is critically important when there is no temperature limit on the shower controls. For example if the shower has a two-handle shower valve and 160 degree hot water is supplied to the system, then turning of the cold water first could lead to instant scalding injuries. Turning down the hot water to 120 F or below creates a system where it could incubate Legionella Bacteria to very high levels.
3. **Emotion** - There is an Emotion or evaluation factor which is defined as a conscious mental reaction (as anger or fear) subjectively experienced as strong feeling usually directed toward a specific object and typically accompanied by physiological and behavioral changes in the body with respect to deciding or assessing how we want to react. A person with reduced mental capacity or someone that is just very old will take longer to process this information and ultimately decide to react.
4. **Volition** - There is the physical Volition or deciding/choosing to act and acting. In the case of braking distance it is when the choice is made to move the foot from the gas pedal to the brake pedal and pressing on the brake pedal. This can be related to the time the bather chooses to adjust the control, and they move their hand to the shower control valve, plus the time to rotate or re-adjust the shower valve plus the time from the adjustment until the water temperature changes coming out of the shower head. Often it can take as much as 3-5 seconds to re-adjust the shower head and another few seconds until the water temperature changes coming out of the shower head. For ultra-low-flow (ULF) showers the delay from the time of the adjustment of the shower valve until the water temperature changes coming out of the shower head can be even longer. So burns can become more severe with ULF shower heads. This is one more area where water conservations measures can unintentionally make plumbing systems less safe.

As the temperature of the water increases this PIEV reaction time becomes more important. Using a bathtub/shower controller with a single handle and a rotational limit-stop adjustment allow for adjustment to a safe temperature and it would reduce the mental processing time and reduce the possibility of making an error when turning off the water. As Figure 1 shows the higher the temperatures get, the quicker the burns can occur. within seconds or less and the degree and severity of the burn can be affected by this reaction time.

As you can see by the chart in Figure 1, if the water is at 140 F it will take about 0.8 seconds for a child to receive a 2nd degree irreversible burn injury and it will take about 5.6 seconds for an adult male to receive an irreversible burn injury at 140 degrees F. Everyone else will fall somewhere in between. An adult will often find it very difficult to react to a sudden change in temperature within five (5) seconds. If the shower head is an Ultra-Low-Flow (ULF) shower head the delay can be several seconds longer before the water temperature is reduced because the mixed water temperature must evacuate or flush out the hot water in the pipe riser from the shower valve to the shower head. There is basically very little or no time to react at higher temperatures. For a typical adult that is alert and aware the PIEV theory shows it can take well over five (5) seconds to react to a sudden burst of hot water in a shower. For an elderly person or a small child that is confused it could take several minutes or more before they are able to react and adjust the controls or get out of harm's way. There has been a lot of information that suggests reducing the domestic hot water temperature to 120 F or less as it flows from the fixtures will minimize scalding and allow most people to react or get out of harm's way before a scald injury occurs.

Reducing the water temperature flowing from the fixture can be done in several ways by:

1. Reducing the hot water temperature at the fixture by adjusting the maximum temperature limit-stop on the shower valve. (The best way)
2. Using local mixing valves conforming to ASSE 1070 to reduce the hot water temperature flowing from a faucet.
3. Reducing the temperature at the source (Water Heater) with the use of a master mixing valve or temperature actuated mixing valve conforming to ASSE 1017.
4. For existing non code compliant shower or tub/shower installations, Two handle tub/shower valves without a maximum temperature limit adjustment) an ASSE 1062 valve could be used. An ASSE 1062 valve is a Temperature Actuated Flow Reduction (TAFR) valve. It looks like a chrome pipe coupling and it screws on between the shower head and the shower arm. Other models screw into a tub spout or onto a sink faucet in place of the aerator. If the water flowing from fixture exceeds about 117-120 degrees Fahrenheit the TAFR valve will shut the flow of water down to just a trickle so that scalding hot water does not spray onto the bather. It can be reset by adjusting the fixture control valve to a cold water setting and when the cold water reaches the valve it will reset and begin flowing again. This can be a bit of a nuisance in buildings where the hot water temperature is erratic, but it is an inexpensive way to provide protection against scald injuries in older buildings without code compliant shower valves.

Water Heater Thermostats Do Not Control the Water Heater Outlet Temperatures

If you adjust the water heater thermostat for the burner or heating element on a water heater down to 120 degrees, it will not prevent scalding. Water heater thermostats cannot be relied upon to control the hot water temperature leaving a water heater. Water heater manufacturers recommend that installers set thermostats at 120 - 125 F, and most of them ship the water heaters at an even lower temperature setting. It is not possible to set a water heater thermostat at a given temperature and get a relatively constant temperature of hot water from a water heater. The thermostat can not accurately control the water heater outlet temperature with a water heater thermostat.

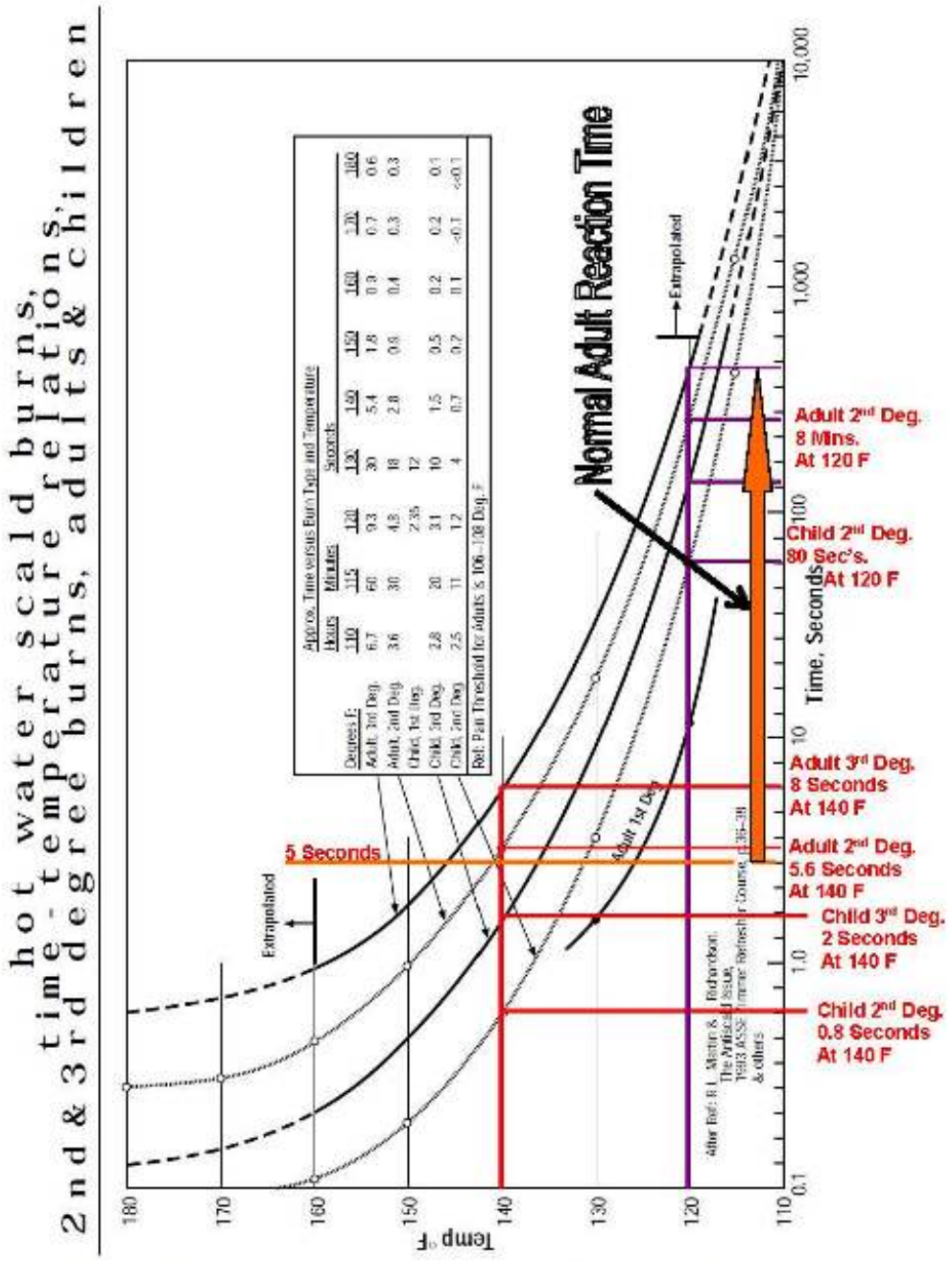
My experience has been that not many people know that water heater thermostats cannot control the outlet temperature of a water heater. This warrants an explanation of how a water heater thermostat works so everyone understands the dial on the water heater does not have the accuracy to control the outlet temperature of storage type heater.

Water heater thermostats do not provide precise temperature controls for hot water systems. For example: the thermostat dial calibration test of ANSI Z21.10.1-1998, which is the applicable standard for gas-fired water heaters, allows the temperature to vary 10 degrees above or below the thermostat setting. I have talked to water heater manufacturers that have indicated that the controls can vary as much as 15 to 18 degrees Fahrenheit above or below the set point of the thermostat. From my experience, I have recorded the temperature leaving the top portion of a water heater over a long period of time during intermittent uses and saw temperature swings over 40 degrees Fahrenheit leaving the water heater. The shower valve standards do not have this kind of temperature fluctuation included their testing for all types of shower valves. The significant temperature swings are because the thermostat is inserted into the lower portion of a water heater tank and turns the fuel supply to the heater on and off. Most new water heater thermostat dials have no way to know what the temperature in the tank is. There is rarely a fixed temperature indicated on the dial, however some manufacturers publish temperatures associated with various marks on the thermostat dial or in their literature even though the dial cannot not control the outlet temperature of the water heater, it only controls when the energy to the heater is turned "on" and "off" by sensing the cold water coming into the bottom of the heater.

Generally, if the water heater thermostat dial is set at 120 degrees Fahrenheit, the burner would come on when the temperature at the thermostat reaches about 105 degrees Fahrenheit. The burner stays on until the water around the thermostat which is near the bottom of the heater reaches about 135 degrees Fahrenheit. (The "burner off" temperature is about 30 degrees higher than when the burner came "on" and generally about 15 degrees above the theoretical set point of the thermostat).

Most people don't realize that the maximum temperature limit test of the ANSI Z21.10.1 Gas Water Heater Standard allows the outlet water temperature of the water heater to rise significantly above the thermostat setting. This provision in the standard accounts for the phenomenon known as "stacking" or "thermal layering". The hot water is less dense and rises to the top of the hot water tank. Just like hot air rises and lifts a hot air balloon, hot water rises to the top of the tank and the cooler water drops to the bottom of the tank. Stacking or thermal layering occurs when the hot water rises to the top of the heater due to recurring short duration heating cycles caused by a frequent number of small quantity hot water uses. Frequent short draws cause cold water to enter the bottom of the water heater where the thermostatic element senses the cold water from the turbulent flow stirring in the bottom of the heater. The cold water causes the water heater to cycle on. This phenomenon can occur in any type of storage water heater and generally is more significant in vertical heaters.

I have recorded temperatures as high as 150 to 166 degrees Fahrenheit at the top of water heaters that had the thermostats set between 120 to 125 degrees Fahrenheit. Temperatures over 151 degrees Fahrenheit are extremely high temperatures and can cause serious scald burns in only a two seconds of contact with the skin. (See Table 1 - Water Temperature Effects on Adult Skin) It should be noted that the time temperature relationships in Table 1 are based upon the thickness of the skin for adult males. Children and the elderly typically have a thinner layer of the skin or epidermis and the exposure times can be shorter or the same burns can occurs in a given time at slightly lower temperatures.
Source: http://www.plumbingengineer.com/aug_09



A Seminar and Technical Paper for the 25-28 Oct. 98 Annual ASPE Meeting at the Indianapolis Convention Center in Indianapolis, Indiana. Reprinted by Watts Regulator Company with permission of Dr. D. Bynum Jr.

Figure 1 – Hot Water Scald Burns – Time vs Temperature Relationship for Second and Third Degree Burns for Adults and Children.
(Notes By: Ron George, CPD, See: www.ScaldPrevention.org)

Bibliography: www.ScaldPrevention.org
www.Plumb-TechLLC.com
www.LegionellaPrevention.org

ASSE 1016-2011/ASME A112.1016-2011/CSA B125.16-11 Automatic Compensating Valves for Individual Shower & Tub/Shower Combinations

ASSE 1017-2009: Temperature Actuated Mixing Valves for Hot Water Distribution Systems

ASSE 1070-2004: Water Temperature Limiting Devices

ASSE 1062-2006: Temperature Actuated, Flow Reduction (TAFR) Valves for Individual Supply Fittings

Cost Impact: Will increase the cost of construction
The cost impact is minimal. TAFR devices sell for less than $10. Other options cost more and provide a better level of safety. The health and safety impact of this code change is very significant when dealing with older non-code compliant showers and bathtubs. This code change will save countless lives and prevent countless life altering, very painful scald injuries.

P 90-15 : 502.6 (New)-GEORGE5558

P 190-15

Part I:
705.16.4, 707.1, Chapter 14
Part II:
P3003.13.4, P3003.2, Chapter 44

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IPC COMMITTEE. PART II WILL BE HEARD BY THE IRC-PLUMBING COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Proponent : Tim Earl, GBH International, representing The Oatey Company (tearl@gbhinternational.com)

Part I

2015 International Plumbing Code

Revise as follows:

705.16.4 Plastic pipe or tubing to other piping material. Joints between different types of plastic pipe or between plastic pipe and other piping material shall be made with an *approved* adapter fitting. Joints between plastic pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.

> **Exception:** Where a PVC sewer pipe connects to an ABS building drainage pipe, an adapter fitting shall not be required to be used where a single, solvent cement joint will be used. The solvent cement for the single joint shall be green in color and shall conform to ASTM D3138.

707.1 Prohibited joints. The following types of joints and connections shall be prohibited:

1. Cement or concrete joints.
2. Mastic or hot-pour bituminous joints.
3. Joints made with fittings not *approved* for the specific installation.
4. Joints between different diameter pipes made with elastomeric rolling O-rings.
5. Solvent-cement joints between different types of plastic pipe except where provided for in Section 705.16.4.
6. Saddle-type fittings.

Add new standard(s) as follows:
ASTM D3138 - ??? Standard Specification for Solvent Cements for Transition Joints Between Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Non-Pressure Piping Components

Part II

2015 International Residential Code

Revise as follows:

P3003.13.4 Plastic pipe or tubing to other piping material. Joints between different types of plastic pipe or between plastic pipe and other piping material shall be made with an *approved* adapter fitting. Joints between plastic pipe and cast-iron hub pipe shall be made by a caulked joint or a mechanical compression joint.

> **Exception:** Where a PVC sewer pipe connects to an ABS building drainage pipe, an adapter fitting shall not be required to be used where a single, solvent cement joint will be used. The solvent cement for the single joint shall be green in color and shall conform to ASTM D3138.

P3003.2 Prohibited joints. Running threads and bands shall not be used in the drainage system. Drainage and vent piping shall not be drilled, tapped, burned or welded.

The following types of joints and connections shall be prohibited:

1. Cement or concrete.
2. Mastic or hot-pour bituminous joints.
3. Joints made with fittings not *approved* for the specific installation.

4. Joints between different diameter pipes made with elastomeric rolling O-rings.
5. Solvent-cement joints between different types of plastic pipe except as provided for in Section P3003.13.4.
6. Saddle-type fittings.

Add new standard(s) as follows:

ASTM D3138 - 04 (2011) Standard Specification for Solvent Cements for Transition Joints Between Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Non-Pressure Piping Components

Reason: The use of a cement for this single application is widely accepted, both by local authorities having jurisdiction and other national codes, including the UPC. This will create a consistent practice in the industry and save time and money. This is also consistent with a similar proposal in the IRC.

Cost Impact:

Part I: Will not increase the cost of construction
This may save as much as $50 per such joint, accounting for labor reduction and no longer needing mechanical joint components.

Part II: Will not increase the cost of construction
This may save as much as $50 per such joint, accounting for labor reduction and no longer needing mechanical joint components.

Analysis:

Part II: A review of the standard proposed for inclusion in the code, ASTM D3138, with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 2, 2015.

P 190-15 : 707.1-EARL4640

P 279-15

Part I:
717, 717.1, 717.2, 717.6, 702.2
Part II:
P3002.1, P3010, P3010.1, P3010.2, P3010.6

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IPC COMMITTEE. PART II WILL BE HEARD BY THE IRC PLUMBING COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Proponent : Skip Harper, VA Department of Housing and Community Development, representing VA Plumbing and Mechanical Inspectors Association (VPMIA) and the VA Building Code Officials Association (VBCOA) Skip.Harper@dhcd.virginia.gov

Part I

2015 International Plumbing Code

Revise as follows:

SECTION 717
REPLACEMENT OF UNDERGROUND BUILDING SEWERS AND BUILDING DRAINS BY PIPE-BURSTING METHODS

717.1 General. This section shall govern the replacement of existing *building sewer and building drain* piping by pipe-bursting methods.

717.2 Applicability. The replacement of *building sewer and building drain* piping by pipe-bursting methods shall be limited to gravity drainage piping of sizes 6 inches (152 mm) and smaller. The replacement piping shall be of the same nominal size as the existing piping.

717.6 Cleanouts. Where the existing *building sewer or building drain* did not have cleanouts meeting the requirements of this code, cleanout fittings shall be installed as required by this code.

TABLE 702.2
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

MATERIAL	STANDARD
Polyethylene (PE) plastic pipe (SDR-PR)	ASTM F 714

(Portions of table not shown remain unchanged)

For SI: 1 inch = 25.4 mm.

Part II

2015 International Residential Code

TABLE P3002.1
UNDERGROUND BUILDING DRAINAGE AND VENT PIPE

PIPE	STANDARD
Polyethylene (PE) plastic pipe (SDR-PR)	ASTM F 714

(Portions of table not shown remain unchanged)

For SI: 1 inch = 25.4 mm.

Revise as follows:

SECTION P3010
REPLACEMENT OF UNDERGROUND BUILDING SEWERS AND BUILDING DRAINS BY PIPE BURSTING METHODS

P3010.1 General. This section shall govern the replacement of existing *building sewer and building drain* piping by pipe-bursting methods.

P3010.2 Applicability. The replacement of building sewer and building drain piping by pipe bursting methods shall be limited to gravity drainage piping of sizes 6 inches (150 mm) and smaller. The replacement piping shall be of the same nominal size as the existing piping.

P3010.6 Cleanouts. Where the existing *building sewer or building drain* did not have cleanouts meeting the requirements of this code, cleanout fittings shall be installed as required by this code.

Reason: Pipe bursting is commonly used in both underground building sewers and building drains. The original proposal did not include the replacement of existing underground building drainage piping. The changes as seen above will allow pipe bursting of underground building drainage piping meeting all of the other necessary requirements under these sections. The addition of PE pipe to the underground building drain and vent piping table provides the suitable material for pipe bursting sections of underground building drains.

CostImpact: Will not increase the cost of construction

The addition of pipe bursting of existing building drains will lead to repair/renovation cost that will most likely be less than by using conventional pipe replacement methodology.

P 279-15 : 717-HARPER4531

REVISIONS TO TENTATIVE ORDER OF DISCUSSION

P219-15 Part II has been Withdrawn
Add P279-15 Part II after P204-15 Part II

TENTATIVE ORDER OF DISCUSSION 2015 PROPOSED CHANGES TO THE INTERNATIONAL RESIDENTIAL CODE (PLUMBING)

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some RP code change proposals may not be included on this list, as they are being heard by another committee.

P3-15 Part II
RP1-15
RP2-15
P20-15 Part II
P98-15 Part II
P166-15 Part II
P99-15 Part II
RP3-15
P15-15 Part II
P19-15 Part II
P115-15 Part II
P117-15 Part II
P51-15 Part II
P53-15 Part II
RP4-15
P55-15 Part II
P82-15 Part II
P162-15 Part II
FG42-15 Part II
RP5-15
RP6-15
RP7-15
P93-15 Part II
RP8-15
P107-15 Part II
P109 Part II
RP9-15
RP10-15
P101-15 Part II
P150-15 Part II
P124-15 Part II
RP11-15
RP12-15
RP13-15
P113-15 Part II
RP14-15
RP15-15
P133-15 Part II
P131-15 Part II
P135-15 Part II
RP16-15
P132-15 Part II
P170-15 Part II
P172-15 Part II
P174-15 Part II
P184-15 Part II
P128-15 Part II
RP17-15
P181-15 Part II
P190-15 Part II
P178-15 Part II
P191-15 Part II
P194-15 Part II
P195-15 Part II
P197-15 Part II
P198-15 Part II
P202-15 Part II
P203-15 Part II
RP18-15
P204-15 Part II
P279-15 Part II
P205-15 Part II
P215-15 Part II
P218-15 Part II
~~P219-15 Part II~~
P220-15 Part II
P221-15 Part II
P224-15 Part II
P226-15 Part II
P228-15 Part II
RP19-15

SP 19-15

313.7, 202 (New)

Proponent : Janine Snyder, representing Plumbing, Mechanical, and Fuel Gas Code Action Committee (PMGCAC@iccsafe.org)

2015 International Swimming Pool and Spa Code

Revise as follows:

313.7 Emergency shutoff switch. An emergency shutoff switch shall be provided to disconnect all power to recirculation and jet system pumps and air blowers. Emergency shutoff switches shall be~~:~~ provided with ready access~~;~~, be located within sight of the pool or spa~~;~~, and be located not less than 5 feet (~~1524 mm~~1524mm) horizontally from ~~the~~an inside wall~~s~~ of the pool or spa~~.~~ that is served by the pumps and blowers controlled by the switch.

> **Exception:** *Onground storable pools*, permanent inground *residential* swimming pools, *residential* spas and *residential* water features.

Add new definition as follows:

SECTION 202 DEFINITIONS

READY ACCESS. That which enables a fixture, appliance or equipment to be directly reached without requiring the removal or movement of any panel, door or similar obstruction and without the use of a portable ladder, step stool or similar device.

Reason: The emergency shutoff switch should be out in the open and not behind a panel so it is obvious where the switch is for fast access. Using the term "ready access" along with the IMC definition, will make this clear.
The definition is identical to the IMC definition for this term. The IMC has scoping control of this defined term where it is used in all codes except for the IRC.

This proposal is submitted by the ICC Plumbing, Mechanical and Fuel Gas Code Action Committee (PMGCAC) The PMGCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. This includes both the technical aspects of the codes and the code content in terms of scope and application of referenced standards. The PMGCAC has held one open meeting and multiple conference calls which included members of the PMGCAC. Interested parties also participated in all conference calls to discuss and debate the proposed changes. This is PMGCAC Item 107.

Cost Impact: Will not increase the cost of construction
This proposal will not increase the cost of construction because additional labor, materials, equipment, appliances or devices are mandated beyond what is currently required by the code.

SP 19-15 : 313.7-SNYDER4155