2022 New York City Plumbing Code Part 2

ASPE NYC Chapter Monthly Meeting

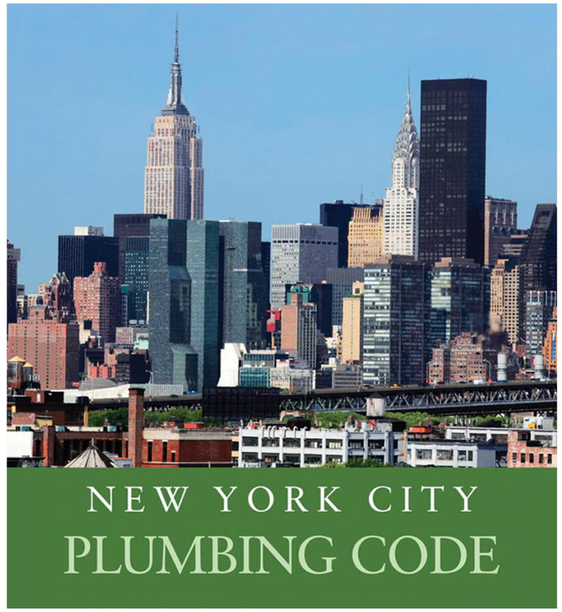
May 4, 2022, 5:30pm – 6:30pm

Stout NYC, 133 West 33rd Street, NY, NY

Presented by Philip F. Parisi Jr., P.E.

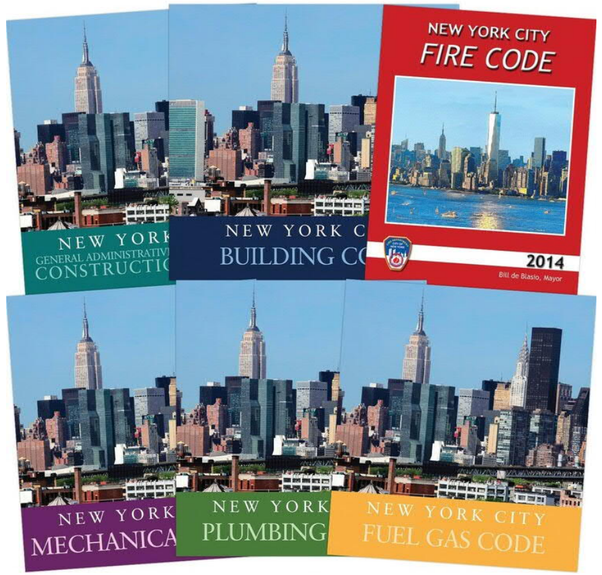
TODAY'S AGENDA

1. CODE REVISION COMMITTEE STRUCTURE
2. CODE REVISION CYCLE PROCESS
3. 2022 CONSTRUCTION CODE REVISIONS
4. PLUMBING CODE REVISION OVERVIEW
5. PLUMBING CODE (PC) REVISIONS
   A. PRIMARY ASSIGNMENTS
      PC CHAPTERS 7 - 15
      PC APPENDICES A, B, C, D & E



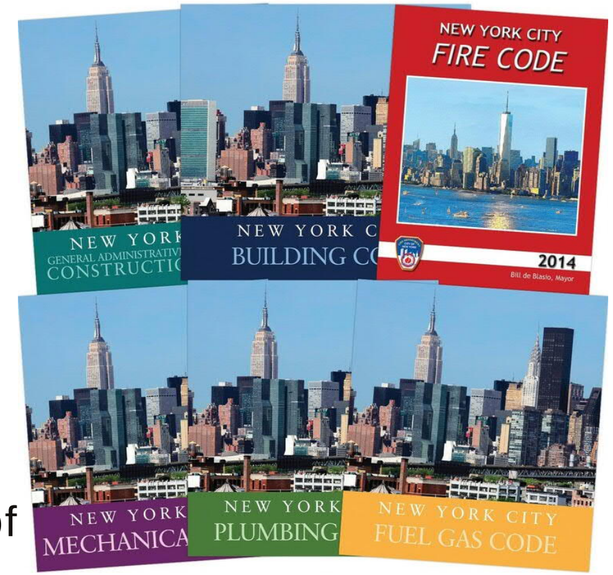
Code Revision Committee Structure

- Consensus-Based Approach
  - Members work together to find a mutually acceptable solution.
- Assistant Commissioner of Technical Affairs
  - Responsible for overseeing the Construction Codes revision cycle.
- Managing Committee
  - Responsible for reviewing technical and advisory committee proposals.
  - Consists of the Chairs, Vice Chairs of the Managing, Technical and Advisory Committees.
  - Also consists of representatives from construction, labor, real estate, government, professional organizations and other industry stakeholders.
  - May require guess experts and working panels.

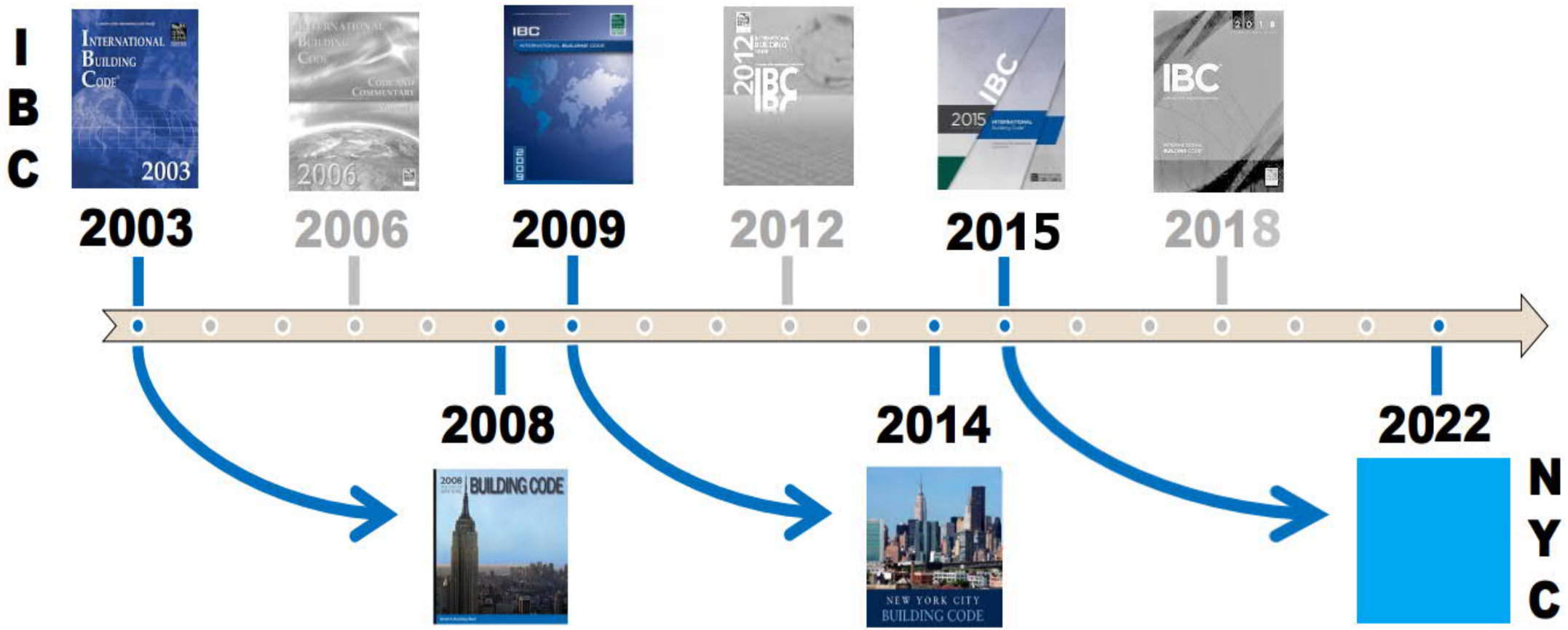


Code Revision Committee Structure

- Technical Committees
  - Consists of 20-25 members including a Chair, Vice Chair and other members from construction, labor, real estate, government, professional organizations and other industry stakeholders. May include guest experts or working panels.
  - Responsible for reviewing specific chapters of the NYC Construction Codes and crafting, modifying or developing proposed language.
  - Focuses on primary and secondary assignments.
- Advisory Committees
  - May be formed at the discretion of the Assistant Commissioner to consider portions of the code and issues that relate Department operations, inspection, permits, fees, etc.
  - Is not required to achieve consensus. Recommendations will be considered but not binding.

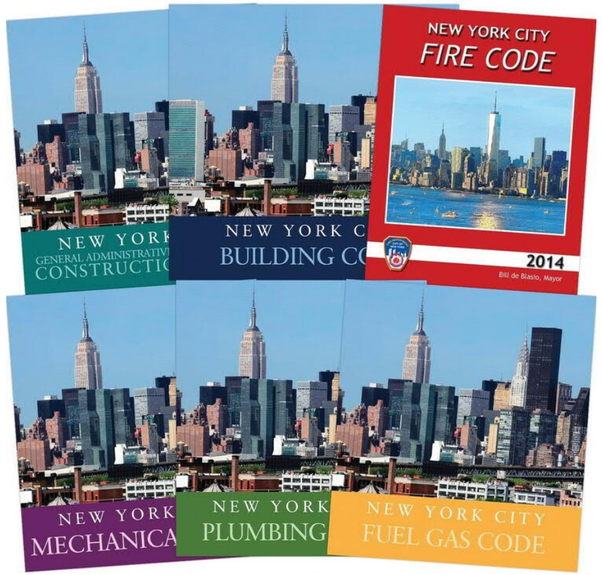


Code Revision Cycle Process



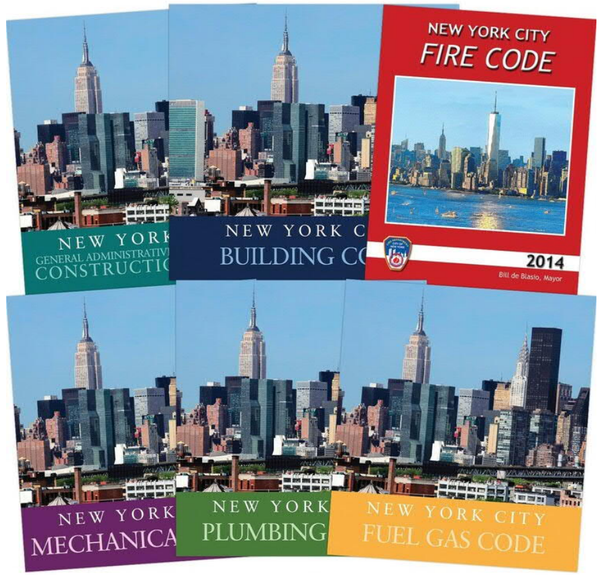
Code Revision Cycle Process

- Department Review
  - The Department of Buildings (DOB) reviewed the 2014 NYC Construction Codes referenced 2015 I-Codes with reference standards.
- Presentation of Proposed Revisions
  - The DOB presents to the Technical Committee or Advisory Committee the proposed language to be utilized for review.
- Committee Review of Proposed Revisions
  - The technical or advisory committee will review, discuss, modify and come to consensus on language.
  - Ad-Hoc Working Meetings – if necessary will form working groups to further develop specific code language.



Code Revision Cycle Process

- Legal Review
  - All proposed revisions from the technical and advisory committees are reviewed by the Law Department. Once approved it's sent to Managing Committee for presentation.
- Managing Committee Review
  - Proposed local law text that contains Code revisions are forwarded for review and ultimately accepted for inclusion in a bill to be submitted to City Council.
- Mediation
  - When the technical committee cannot achieve consensus.
  - When rejected by the Managing Committee.
  - Avoided where possible.

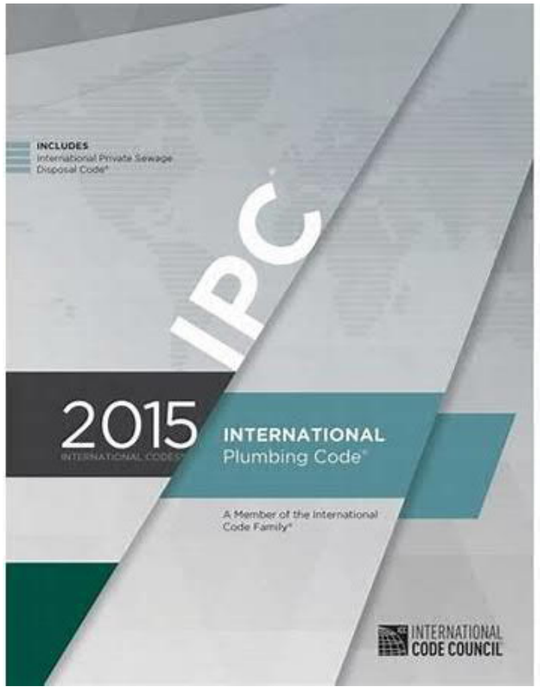


Goals for 2022 Code Revision Cycle

- Assembled Committees and kickoff began March 2017
- Submit Revisions to the City Council beginning EOY 2018
- Revisions utilize the 2015 I-Codes with NYC Modifications
- Achieve Consensus and Avoid/Limit Mediation
- Plumbing Committee
  - Consisted of 41 members including Chair and Vice Chair, Alternate Members and Guest Experts
  - Meetings were conducted bi-weekly kicking off July 2017.
  - Responsible for entire Plumbing Code, Building Code Chapter 29, Fuel Gas Code Chapters 4, 7 & Appendices E & G.

Overview

- NYC Plumbing Code
  - Revisions Began September 2017 & Completed June 2019
  - Incorporated in Intro No. 1481-A for City Council Submission
  - Became Local Law 14 of 2020 (waiting on balance of NYCCC)
  - IPC edition standard has been updated from 2009 to 2015
- NYC Fuel Gas Code
  - Revisions Begin February 2019 & Completed June 2019
  - Incorporated in Intro No. 2261 for City Council Submission
  - Became Local Law 126 of 2021 (includes balance of NYCCC)
- NYC Existing Building Code is progressing, submission to City Council September 2022.



NYC PLUMBING CODE REVISIONS

THE NEW YORK CITY COUNCIL
Adrienne E. Adams, Speaker

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File #	Law Number	Type	Status	Committee	Prime Sponsor	Council Member Sponsors	Title
Int 2264-2021	2021/148	Introduction	Enacted	Committee on Housing and Buildings	Robert E. Cornegy, Jr.	4	A Local Law to amend the New York city building code, in relation to cold-formed steel construction
Int 2276-2021	2021/149	Introduction	Enacted	Committee on Housing and Buildings	Francisco P. Moya	3	A Local Law to amend the New York city building code, in relation to construction superintendents
Int 2261-2021	2021/126	Introduction	Enacted	Committee on Housing and Buildings	Robert E. Cornegy, Jr.	4	A Local Law to amend the administrative code of the city of New York, the New York city plumbing code, the New York city building code, the New York city mechanical code and the New York city fuel gas code, in relation to bringing such codes and related provisions of law up to date with the 2015 editions of the international building, mechanical, fuel gas and plumbing codes, with differences that reflect the unique character of the city, clarifying and updating administration and enforcement of such codes and the 1968 code and repealing chapters 2 and 35, appendices K and M, section N102 of

November 7, 2021
Council approval
LL 126 of 2021*

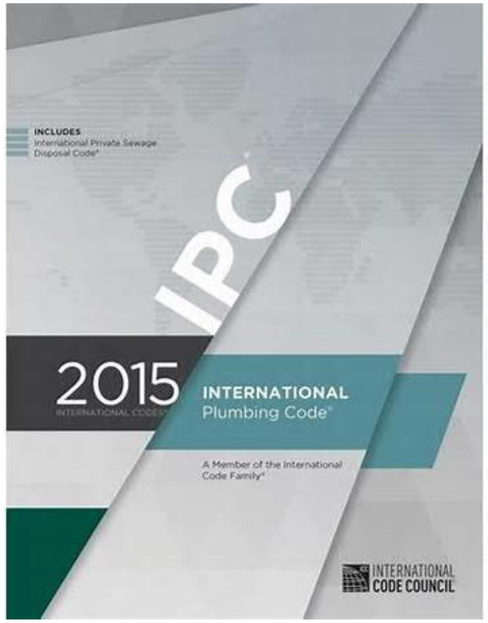
12 Months

Implementation & Training

November 7, 2022
Effective date

ASPE American Society of Plumbing Engineers NEW YORK CITY

ASSE SANITARY ENGINEERING Prevention Rather Than Cure ®



*Council approval also amends **Local Law 14 of 2020 (2022 NYC Plumbing Code)**

Chapter 7 – Sanitary Drainage

- Section 701.7 – Connections of Steam Exhaust (Relocated to 701.11)
- Section 701.10 – Cured-in-place pipe (new prohibition)
- Table 702.1-Table 702.4 – Drainage and vent piping
  - Above Ground – Glass, High Silicon CI, Polyolefin, PVDF deleted.
  - Underground – Nonasbestos fiber cement deleted, Polyolefin pipe added.
  - Building Sewer – Concrete, VCP & Nonasbestos fiber deleted, Galvanized steel & CPVC added.
  - Fittings table was updated to align with piping tables noted above.
- Section 702.5 – Temperature rating (new)
  - Drain pipe material shall be rated for the highest waste water temperature, if greater than 140ºF.
- Section 702.6 – Chemical waste system – new reference to Section 803.3.

Chapter 7 – Sanitary Drainage

- Section 703.6 – Combined sanitary and storm public sewer (new)
  - For a combined sanitary-storm sewer, the sanitary building drain shall conform to Section 1109.1.
- Section 703.7 – Building house traps
  - Chapter 10 PC reference provided in lieu of existing spacing and sizing requirements.
- Section 703.7.1/703.7.2 – Fresh air inlets/Fresh air inlets located in flood hazard areas
  - This requirement clarified that FAIs are required for all building drains and removed reference to equipment listed as part of the system.
  - New requirement for all FAI's in flood areas shall be above the DFE in accordance with App G.
- Section 704.7 –Collection pipe labeling and marking (new)
  - Collection for reuse – Gray (painted or tape) and labeled with arrow for direction of flow.
  - Hazardous piping shall contain the nature of the hazard.
  - Pipe identification shall be at intervals not exceeding 25 feet.

Chapter 7 – Sanitary Drainage

- Section 705.3 – Asbestos cement (deleted)
- Section 705.11 – Borosilicate glass joints (deleted)
  - Sections regarding glass-to-glass and caulked joint connections are removed.
- Section 705.11.1 – Caulked Joints (deleted)
- Section 705.11.2 – Solvent cementing
  - Clarified that primers are not required if solvent cement is 3rd party certified and used to join non-pressurized PVC fittings 4 inch or smaller.
- Section 705.17/705.18 – Polyolefin/Polyvinylidene fluoride plastic (deleted)
- Section 705.16.2 – Copper or copper-alloy tubing to galvanized steel pipe (new)
  - Joints shall be soldered/threaded and made with a brass converter fitting or dielectric fitting.

Chapter 7 – Sanitary Drainage

- Section 706.2 – Obstructions
  - Added language that the section does not apply to tubular waste fittings conveying vertical flow upstream of a trap. This was added due to traditional fittings used for fixtures, i.e. tail pieces.
- Section 708 – Cleanouts (revised section)
- Section 708.1.1 – Horizontal drains and building drains
  - Horizontal and building drains shall have cleanouts at intervals of not more than 100ft.
  - Horizontal piping serving a nonremovable trap shall not require a cleanout.
- Section 708.1.2 – Building sewers
  - Clarifies interval length is measured from cleanout/mahole along developed length of piping.

Chapter 7 – Sanitary Drainage

- Section 708.1.3 – Building drain and building sewer junction (new)
  - Junction of building drain and sewer shall be served by a cleanout at or within 10 feet upstream of the junction. This cannot be substituted for a fixture, i.e. water closet.
- Section 708.1.4 – Changes of Direction
  - Clarification provided, a cleanout may serve 40 feet of pipe, regardless the changes in direction.
- Section 708.1.5 – Cleanout size (new)
  - Cleanouts shall be same size as the pipe served, but not greater than 4 inch.
  - Exception added - P-traps may serve as cleanouts for drain piping one size larger than trap size.
  - Cleanouts on stacks may be one size smaller than the stack size.
- Section 708.1.6 – Cleanout plugs (new with clarified language & ASTM standard)

Chapter 7 – Sanitary Drainage

- Section 708.1.8 – Installation arrangement (new)
  - Cleanouts other than tees or two-ways shall be installed according to the direction of flow.
  - Exception added for test tees and a two-way cleanout installation in accordance with 708.1.3.
- Section 708.1.9 – Required cleanout clearance (new)
  - Requires 18 inch clear for 6-inch piping and smaller, 36 inch clear for 8-inch and greater.
- Section 708.1.10 – Cleanout access (new)
  - New language requiring to extend cleanout to within 1-1/2 of wall or floor with countersunk plug.
- Section 708.1.10.1 & 708.1.10.2 – Cleanout plug trim covers and assemblies (new)
  - New language requiring access, corrosion resistance and ASME approval.
- Section 708.1.11 Prohibited Use – Cleanouts cannot be extended or used to add a fixture.

Chapter 7 – Sanitary Drainage

- Section 708.1.12 – Base of stack (new)
  - Cleanouts shall be required at the base of each waste or soil stack.
- Table 709.1 – Drainage fixture units for fixtures and groups.
  - Bathroom Group (1.6 gpf) – deleted
  - Emergency Floor Drain – added, 0 dfu
  - Hand wash sink/Lavs per faucet – added, 2 dfu
  - Multi-Shower Head – added, based on flow 2 – 6 dfu.
  - Waterless Urinal – added, ½ dfu
  - Water closet, private, public – deleted
- Section 709.4.1 – Clear-water waste receptors (new)
  - Clear-water waste receptors shall have a drainage fixture unit value of one half.

Chapter 7 – Sanitary Drainage

- Section 710.2 – Future fixtures
  - Provisions for future fixtures shall be considered when sizing drain pipes.
- Section 712.3.2 – Ejector pit
  - Ejectors shall have gas-tight covers installed flush with or above grade/floor level.
- Section 712.3.3 – Discharge pipe and fittings (new)
  - Pipe and fitting materials shall be in accordance with Table 702.1 and rated for maximum system operating pressure and temperature.
- Section 712.3.5 – Waste Pump and Waste Ejector Connection to Drainage System
  - Permits the connection to a building drain, soil stack, waste stack or horizontal branch. (NEW)
- Section 712.4.1 – Exception for Macerating toilet systems (new)
  - Macerating toilets shall discharge to a horizontal drain or stack according to Section 712.3.5.

Chapter 8 – Indirect/Special Waste

- Section 802.1 – Indirect Wastes where required
  - Clarifies non-dwelling unit food-handling equipment shall discharge through indirect waste.
- Section 802.1.1 – Food handling (new)
  - Each well of a multiple-compartment sink shall discharge independently to a waste receptor.
- Section 802.1.6 & 802.1.7 – Commercial and domestic dishwashing machines
  - Prohibits commercial and domestic discharge into a standpipe.
- Section 802.1.8 – Food utensils, dishes, pots and pans sinks
  - Clarifies that non-dwelling unit sinks only shall discharge indirectly.
- Section 802.2 – Installation
  - Indirect waste piping exceeding 30 inches horizontally or 54 inches in TDL requires a trap.
  - Exception added for waste receptors that receive only clear-water waste and do not connect to the sanitary drainage system shall not require a trap.

Chapter 8 – Indirect/Special Waste

- Section 802.2.2 – Air break
  - Air break requirement refers to waste receptors only, not standpipes.
- Section 802.3 – Waste receptors
  - Removable strainer required for waste receptors other than standpipes and hub drains.
  - Waste receptors shall not be installed in concealed spaces, plenums, crawl spaces, attics, interstitial spaces above ceilings, and below floors.
- Section 802.3.2 – Hub drains (new) shall have strainers.
- Section 803.3.1 & 2 – Chemical drainage and vent pipe and fittings (new)
  - Chemical waste and vent pipe/fittings shall conform to the standards listed in Table 803.3.1/2 which include CPVC, glass pipe, high silicon cast iron, polyolefin, Polypropylene & PVDF.

Chapter 8 – Indirect/Special Waste

- Section 803.3.3 thru 803.3.7 – Chemical drainage and vent pipe installation (new)
  - New section added to provide references for chemical waste pipe installation including materials sizing requirements, cleanout locations and offset requirements.
- Section 803.3.5 – Chemical drainage and vent piping cleanouts
  - Chapter 7 references provided for cleanout conformance requirements.
- Section 802.3.6 – Chemical drainage and vent pipe sizing
  - Sizing shall conform to Sections 709 and 710.
- Section 803.3.7 – Offsets in chemical drainage and vent pipe sizing
  - Offsets shall conform to Section 711.

Chapter 9 – Vents

- Section 903 – Vent Terminals (section renamed)
- Section 903.1 Stack required deleted, Section required 4 inch undiminished vent stack.
- Section 903.1 – Roof extension (new)
  - Vent pipes extension through roof shall terminate no less than 24 inches above the roof or 7 feet above an occupied roof. Approved vandal-resistant vent caps may be used.
- Section 903.2 – Frost closure (new)
  - Vents through roof or wall shall not be less than 4 inch and size shall increase no less than 1ft inside the building's thermal envelope.
- Section 903.3 – Flashings are required at roof line juncture. (new)
- Section 903.4 – Prohibited use/Location of vent terminal (new)
  - Vent terminals shall not be used for any other purpose.

Chapter 9 – Vents

- Section 903.5.1 – New vent terminals (new)
  - Open vent terminals may not be located directly beneath or within 10ft of any openings unless it is at least 3 feet above the top of the opening. This section also permits consent from the owner of an adjoining taller building to be obtained to extend to a level above the higher existing roof.
- Section 903.5.2 – New openings (new) – same requirement as above at owners expense.
- Section 904 – Outdoor Vent Extensions (new section)
- Section 904.1 – Required vent extension (new section)
  - Requires one dry vent pipe that extends outdoors for each building, sized based on bldg drain.
- Section 904 – Vent terminals (section was relocated to 903)
- Section 906 – Vent Pipe Sizing (new section relocated from 916, no other revisions)

Chapter 9 – Vents

- Section 907 – Vents for stack offsets (section relocated from 915)
- Section 908 – Relief Vents – Stacks more than 10 branch intervals (Relocated from 914)
- Section 909 – Fixture Vents (section relocated from 906)
- Section 909.1 – Distance of trap from vent
  - Developed length from trap weir to vent fitting shall conform to Table 909.1 (provided). This limits the vent connection from the trap serving the fixture 5 to 16 feet based on trap size.
- Section 910.1 – Individual vents permitted
  - Individual vents limited to comply with Section 909.1 but not more than 16 feet, formerly 4 feet.
- Section 911.2 – Common Vent Connection at the same level
  - Exception: Where wet vents are permitted, they may be made downstream of the interconnection.

Chapter 9 – Vents

- Section 912.1.1 – Vertical wet vent permitted (new)
  - New section allowing any combination of fixtures within one bathroom group to be vented by a vertical wet vent. Vertical wet vent shall extend to the lowest fixture drain connection. Each wet-vented fixture shall independently connect to the vertical wet vent.
- Section 912.2.2 – Vertical wet vent (new)
  - Dry-vent connection for a vertical wet-vent system shall be individual or common vent.
- Section 912.3 – Wet vent size (new)
  - Table provided with minimum wet vent pipe sizes and their corresponding DFU loads.
- Section 915.1 – Combination Water and Vent System - Types of fixtures
  - Prohibits waste disposers & clinical sink discharge, limited to floor drains, lavatories and drinking fountains only.

Chapter 9 – Vents

- Section 915.2 – Installation (new)
  - System shall be horizontal only & the only vertical pipe shall be the connection between the fixture drain & the horizontal combination waste & vent pipe. Vertical distance shall not exceed 8 ft.
- Section 915.2.2 – Size and length
  - Piping shall be sized according to Table 915.2.2 & horizontal length is unlimited.
- Section 916 – Island Fixture Venting (formerly section 913, no technical revisions)
- Section 919 – Engineered Vent Systems (formerly section 918, no technical revisions)
- Section 920 – Computerized Vent Design (formerly section 919, no technical revisions)

Chapter 10 – Traps, Interceptors, & Separators

- Section 1002.1 – Fixture traps
  - Maximum vertical distance increased to 48 inches from 24 inches.
  - Exceptions added for installing individual traps for floor drains in multi-level parking structures discharging to a building storm system and acid neutralizing equipment systems required by NYC DEP.
- Section 1002.3 Prohibited Traps
  - An exception was added for drum traps for solids interceptors and serving chemical waste.
- Section 1002.4.1 – Trap seal protection (new, relocated from 1002.4)
  - Emergency floor drain trap seals and trap seals subject to evaporation shall be protected by a potable water trap primer, reclaimed water trap primer, manual hose bibb.

Chapter 10 – Traps, Interceptors, & Separators

- Section 1002.6 – Building traps (new/revised)
  - Clarifies the requirement to have building house traps installed on all building drains, inside the street line and downstream of all connections except sewage ejectors, oil separators or leaders.
  - Requires traps outside of foundation walls or below cellar slab shall have a manhole for access.
  - Handheld extensions shall be no more than 18 inches above the drain centerline.
  - Traps shall be the same size as the building drain connected thereto and shall be provided with a fresh air inlet in accordance with Section 703.7.1.
- Section 1003.3.1 & 5 – Grease Interceptors and Automatic grease removal devices
  - Suggested language removed and replaced with reference to DEP sizing requirements.
- Section 1003.3.6 – Direct Connection – New, required for all devices.

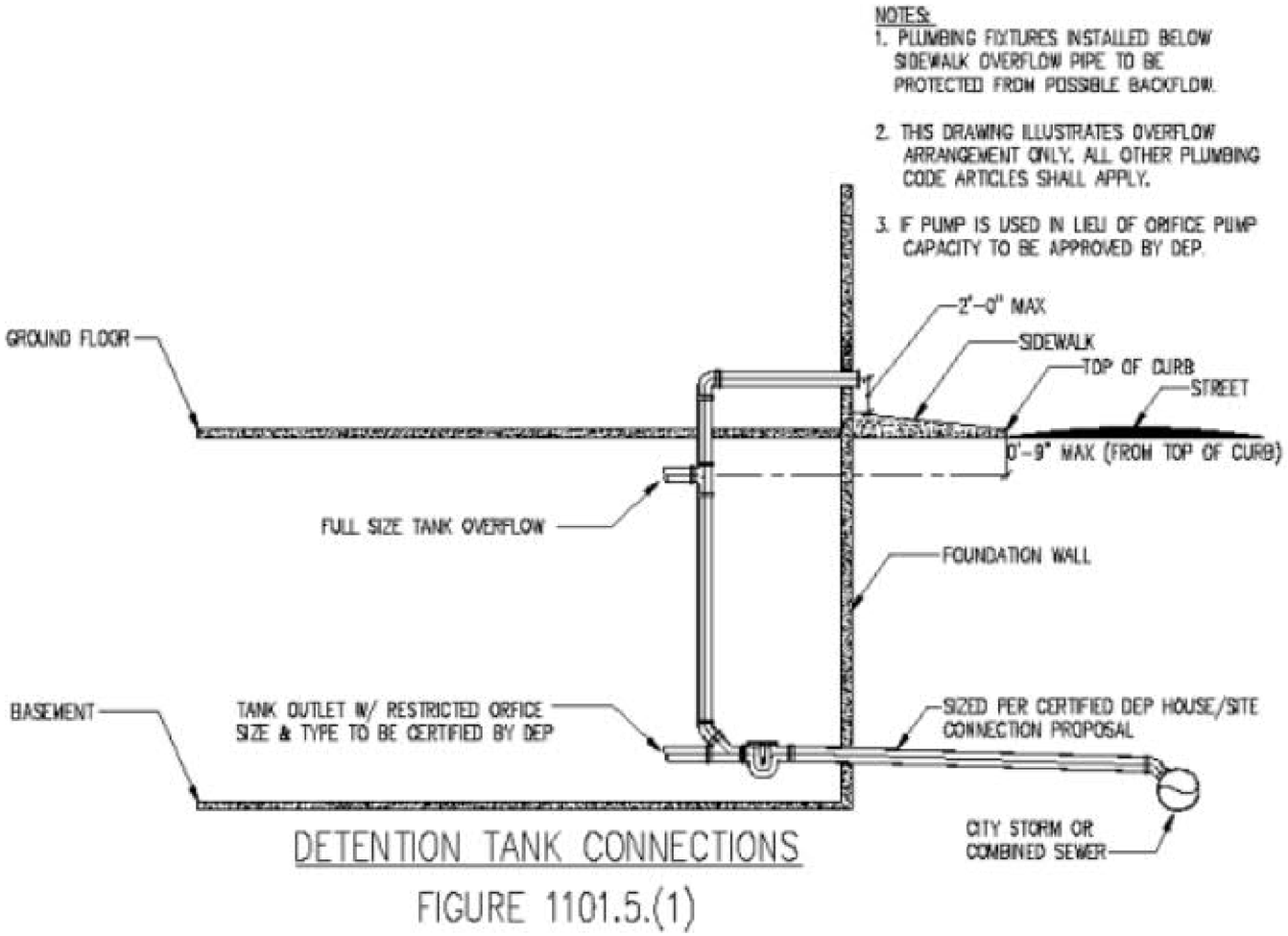
Chapter 10 – Traps, Interceptors, & Separators

- Section 1003.4 – Oil separators required
  - Added language for an oil separator required only where floor drains provided in repair garages, and when serving hydraulic elevator pits.
  - Exception: added language for emergency operation, automatic shutdown shall not terminate the operation of pumps to maintain emergency operation of fire fighter elevator.
- Section 1003.6 – Clothes washer discharge interceptor
  - Clarifies language for commercial clothes washers and provides exception for domestic units.
- Section 1003.9 – Venting of interceptors and separators
  - Section no longer applies only to interceptors and separators where tight covers are used.
  - Interceptors and separators shall be vented according to Chapter 9.

Chapter 11 – Storm Drainage

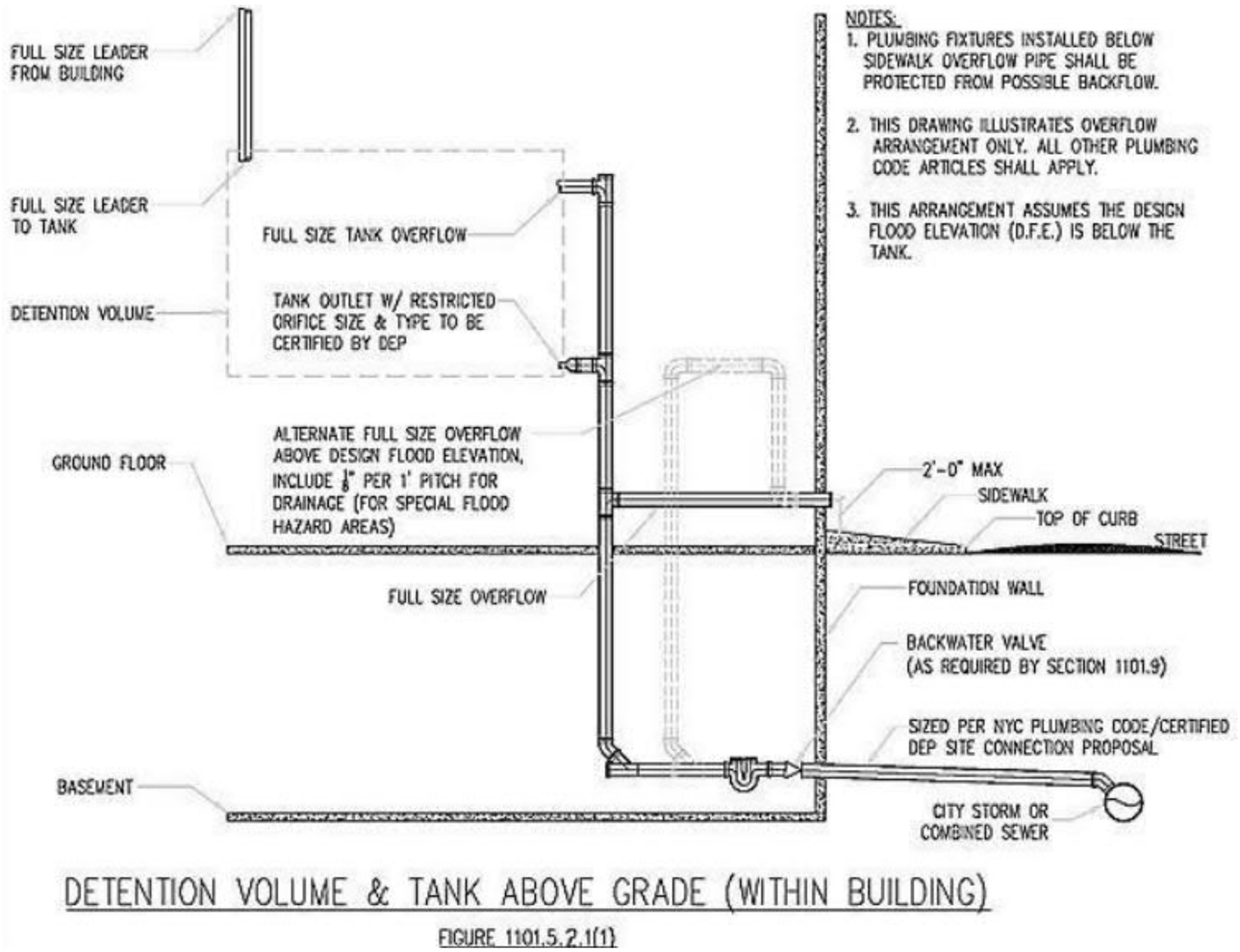
- Entire chapter was repealed but NOT all language is new!
- Section 1101.2 – Where Required
  - Added language that required discharge to a safe location subject to approval by NYC DEP.
- Section 1101.5 – Change in Size
  - “Retention” system was added to the exception for clarity in addition to detention.
- Section 1101.5.2 – Detention and Retention Tanks (new)
  - Detention and retention tanks in buildings in flood hazard areas must be above the DFE.
- Section 1101.5.2.1 – Emergency Overflow (new)
  - Emergency overflows and vents for buildings in flood hazard areas must be above the DFE.
  - Figures 1101.5.2.1(1), (2) and (3) added for tank and overflow piping design.

Chapter 11 – Storm Drainage



- Figure 1101.5.(1) was removed and replaced with three options for installation.

Chapter 11 – Storm Drainage

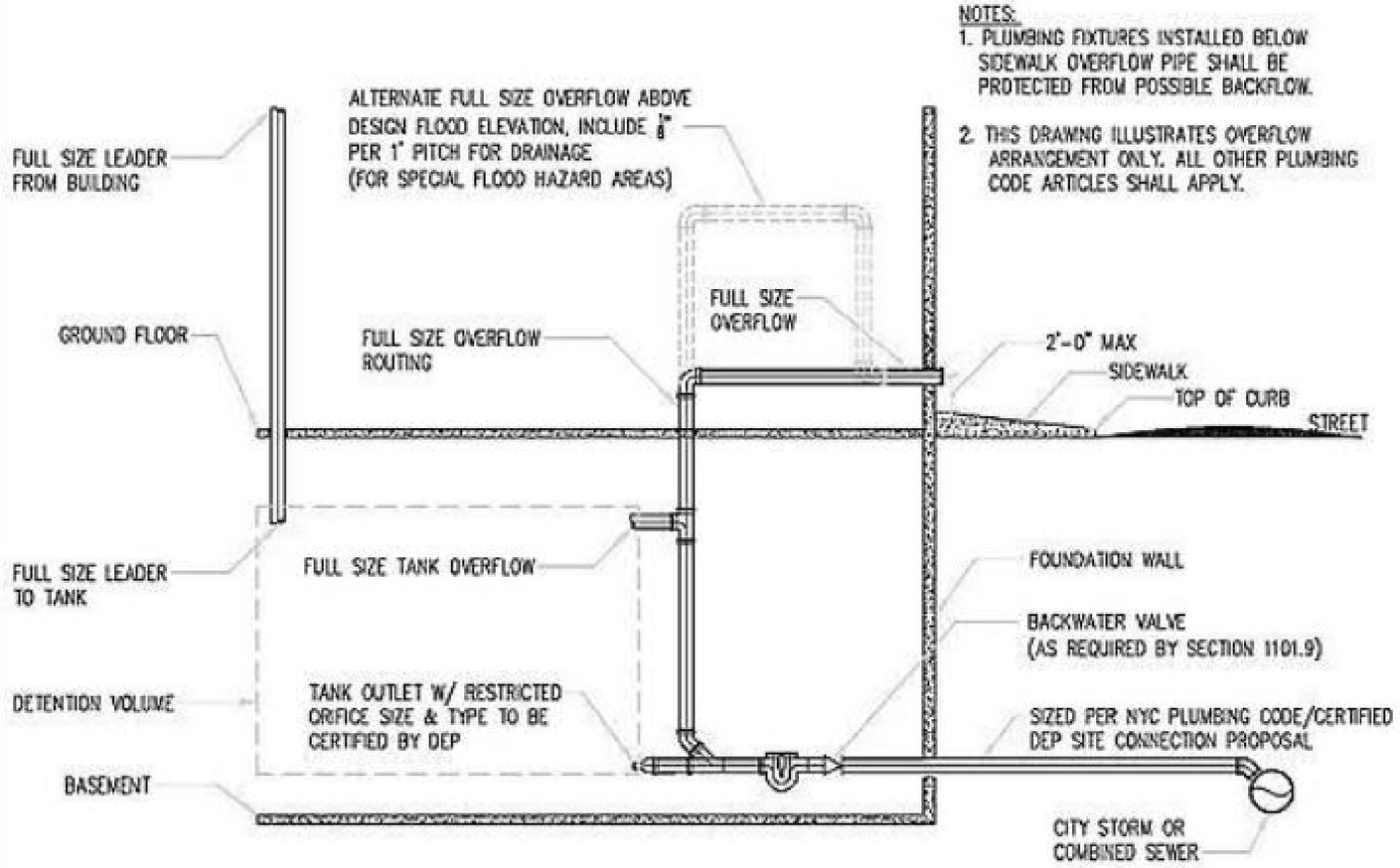


DETENTION VOLUME & TANK ABOVE GRADE (WITHIN BUILDING)

FIGURE 1101.5.2.1(1)

- New Figure 1101.5.2.1(1) for tanks above grade within buildings.
- Added check backwater valve.
- Added orifice reference to DEP.
- Assumes DFE is below tank.
- Offers and alternate design for an overflow above DFE.
- Will not require a pressurized tank.

Chapter 11 – Storm Drainage

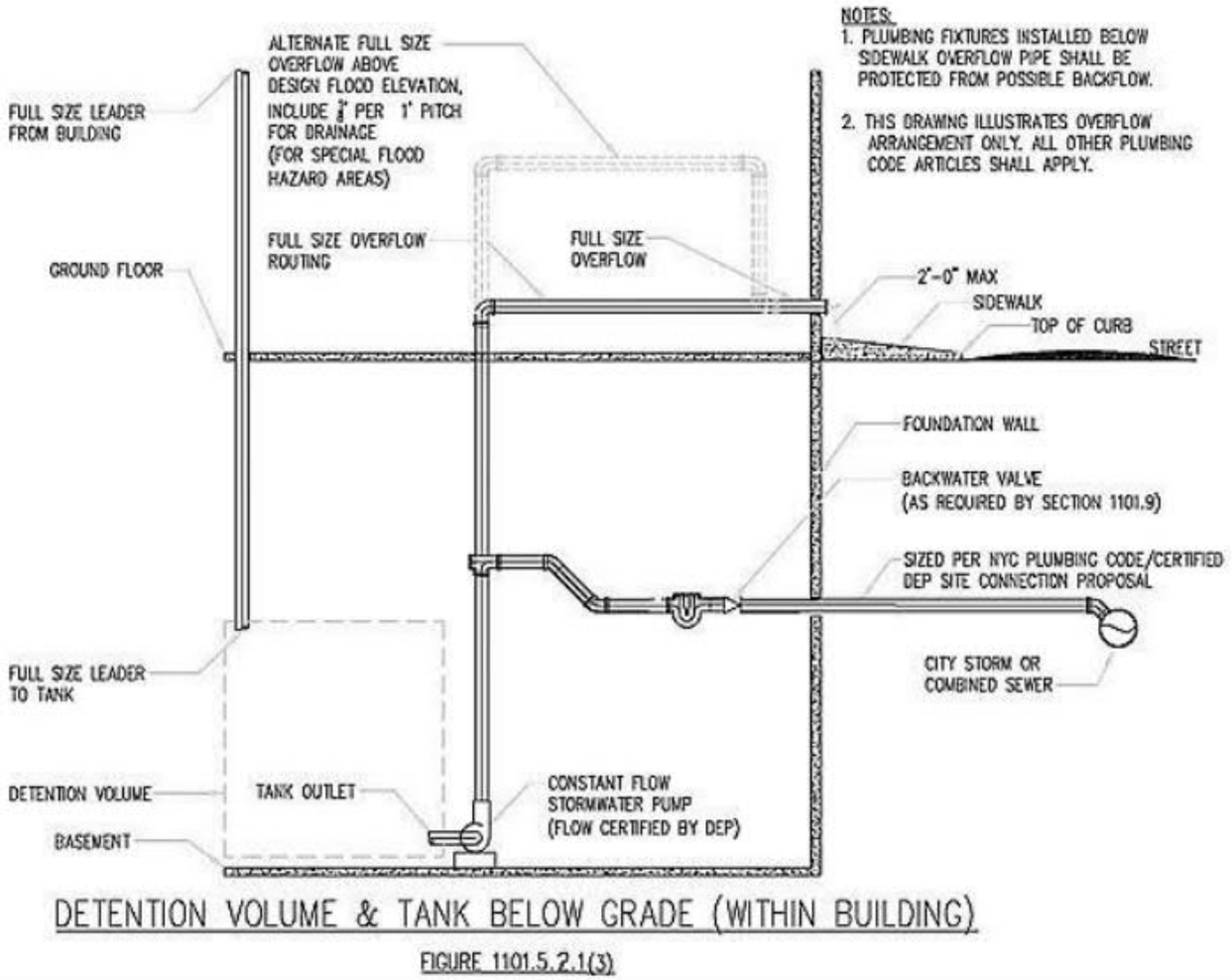


DETENTION VOLUME ABOVE SEWER, TANK BELOW GRADE (WITHIN BUILDING)

FIGURE 1101.5.2.1(2)

- New Figure 1101.5.2.1(2) for tanks below grade within buildings.
- Added check backwater valve.
- Added orifice reference to DEP.
- Assumes DFE is above tank.
- Offers and alternate design for an overflow above DFE.
- Requires a pressurized tank.

Chapter 11 – Storm Drainage



DETENTION VOLUME & TANK BELOW GRADE (WITHIN BUILDING)

FIGURE 1101.5.2.1(3)

- New Figure 1101.5.2.1(3) for tanks below grade within buildings.
- Added check backwater valve.
- Added constant flow pump.
- Assumes DFE is above tank.
- Offers and alternate design for an overflow above DFE.
- Will not require a pressurized tank.

Chapter 11 – Storm Drainage

- Section 1101.7 – Roof design
  - Added language that maximum roof water depth shall include the water height required above secondary roof drainage inlets to achieve the required flow rate of the secondary drainage.
- Section 1101.9.1 – Backwater Valves
  - Clarifies requirements for the installation when in a special flood hazard area.
- Section 1101.11 – Cured-in-place pipe (new)
  - CIPP and epoxy spray pipe lining systems are prohibited.
- Section 1102.2.1 & .2 – Inside conductors and Exterior leaders (new)
  - Created references to Chapter 7 for piping and fitting materials and standards.
  - New exception for storm drainage leaders in R-3 occupancy buildings and bulkheads draining to other roof surfaces.

Chapter 11 – Storm Drainage

- Tables 1102.4, 1102.5 & 1102.7
  - Additional materials and their respective reference standards added.
  - Building Storm Sewer Pipe– Nonasbestos fiber cement deleted, copper & galvanized steel added.
  - Subsoil Drain Pipe – Polypropylene (PP) added.
  - Fittings table was updated to align with piping tables noted above.
- Sections 1104.2 – Floor drains (new)
  - Added prohibition that floor drains shall not connect to a storm drain.
- Section 1104.5 – Parking garage floor drains (new)
  - Exception added limiting parking drains to a storm system only if combined with a sanitary system.
- Section 1105.1 – General (new)
  - Roofing membrane material shall not obstruct the inside opening of the roof drain.

Chapter 11 – Storm Drainage

- Section 1105.2 – Roof drain flow rate (new)
  - Roof drains shall be sized based on flow rate and the head of water above the drain.
  - Maximum anticipated ponding shall be used to size the roof drain.
- Section 1106.2 – Size of storm drain piping
  - Piping shall be sized based on flow rate through the roof drain and not exceed Table 1106.2.
  - Using the rational method and the weighted runoff coefficient. Rainfall is 3 inches/hr.

$$Q = CIA$$

Q = The flow rate in cfs (cubic feet per second)
C = The runoff coefficient
I = Rainfall intensity in inches/hr.
A = Tributary area in acres

C = 1.00 for roof areas;
= 0.85 for pavement;
= 0.75 for porous asphalt;
= 0.30 for undeveloped areas;
= 0.20 for grass areas

Chapter 11 – Storm Drainage

- Section 1106.2.1 Value for Continuous Flow
  - Pump or Ejector discharge of 1 gpm = 32 sq.ft., based on 3 inch/hr.
- Section 1106.3 – Vertical leader sizing
  - Vertical leaders size based on the max flow through roof drains not exceeding Table 1106.3.
- Sections 1106.4 – Vertical walls (revised)
  - Vertical wall area reduced to ¼ of the area diverted to a setback. This was reduced from ½.
  - Exception added omitting vertical walls fronting a public right of way.
- Section 1106.6 – Size of roof gutters (new)
  - Section and table refer to horizontal gutters of all shapes, not just semicircular gutters.
- Section 1107 – Siphonic roof drainage systems (new section)
  - New section provides references for siphonic roof drain systems, ASME A112.6.9 and ASPE 45.

Chapter 11 – Storm Drainage

- Section 1108.1 – Secondary (emergency overflow) drains (previously 1107)
  - Added language which requires independent outlets for primary and secondary roof drains manufactured as a single assembly.
- Section 1109 (moved to 1106.2.1 & renamed to Combined Sanitary and Storm System)
- Section 1110.2 Control Devices (new)
  - Added requirement that controlled flow must be inline with DEP requirements.
- Sections 1111.1 – Subsoil drains (new)
  - Added requirement, subsoil drainage discharged into a public sewer shall be approved by the DEP.
- Section 1114.9 – Post-construction stormwater management facilities (new)
  - Facilities shall be designed, installed, and maintained according to PC and the DEP.

Chapter 12 – Special Piping and Storage Systems

- Section 1201.1 – Scope
  - Language changed to refer to all nonmedical gas systems, not just oxygen systems.
- Section 1201.2 – Storage, handling, and use
  - The storage, handling & use of medical and nonmedical gases shall comply with NYC Fire Code.
- Section 1202 – Medical and nonmedical gases (renamed to include nonmedical)
  - Language deleted anesthetic & vacuum piping systems however requires compliance with NFPA 99.
- Section 1203 – Nonmedical Oxygen Systems (renamed to include nonmedical)
  - Oxygen systems used for nonmedical purposes only and maintains NFPA 51 & 55 reference.
- Section 1204.2 – Storage, handling, and use
  - The storage, handling & use of cryogenic gases shall comply with NYC Fire Code.

Chapter 13 – Nonpotable Water Systems

- New chapter which was relocated from Appendix C with edits.
- Section 1301.1 – Scope
  - Nonpotable water systems shall comply with NYC Construction Codes, local laws, the DEP, and the Dept. of Health and Mental Hygiene and limited to the same tax lot as the collection site.
- Section 1301.1.1 – Uses of nonpotable water – compliance with NYC DOHMH required.
- Section 1301.2 – Water Quality – Nonpotable water quality standards now set by NYC DOHMH.
- Section 1301.4 – Permits – NYC DOHMH permits are now required for this work.
- Section 1301.5 – Potable water connections – Only an air gap is permitted.
- Section 1301.6 – Approved components and materials
  - Above & Underground drain, waste and vent piping and fittings shall comply with Chapter 7.

Chapter 13 – Nonpotable Water Systems

- Section 1301.6 – Approved components and materials (cont.)
  - Table 1301.6 - Conveyance piping – brass, CPVC, copper, polypropylene and stainless steel.
- Section 1301.7 – Insect and vermin control (new) – Required to protect system against pests.
- Section 1301.8 – Freeze Protection (new) – Required to protect system against freezing.
- Section 1301.9 – Nonpotable water storage tanks (new)
  - Sizing of tanks shall be based on the anticipated demand & where receiving rainwater for detention must comply with NYC DEP requirements. Storage tanks may be for combined for detention and demand.
- Section 1301.9.2 – Location (new) – No limitation on location except under sources of contamination.
- Section 1301.9.2.1 – Separate Nonpotable water storage tanks from multiple sources (new)
  - Separate collection tanks or compartments are required for influent wastewater and rainwater.

Chapter 13 – Nonpotable Water Systems

- Section 1301.9.3 – Materials (new)
  - Defines materials of tanks & requires a liner where a wooden tank is not provided with water makeup.
- Section 1301.9.4 – Foundation and supports – Compliance with NYCBC & Appendix G required.
- Section 1301.9.5 – Makeup water (new)
  - Potable water shall be protected by an air gap, with a manual valve along with automatic supply valves which will protect the tank from overflow as well as maintain a minimum level for operation.
  - Exception: Drip and subsurface landscape irrigation systems do not require makeup water.
- Section 1301.9.6 – Overflow (new)
  - Overflow and cleanouts are required & directed to the correct drainage system. Valves are prohibited.
- Section 1301.9.7 – Access (new) - One locked opening required for tanks aboveground, 24 inch manhole required for tanks below ground. Exception for 800 gallon tanks below grade, service port only.

Chapter 13 – Nonpotable Water Systems

- Section 1301.9.8 – Venting (new)
  - Storage tanks shall have vents sized according to Chapter 9 independent of sanitary system.
- Section 1301.9.9 – Drainage of tanks (new)
  - Tank drains required by using a pump or gravity directed to the appropriate drainage system.
- Section 1301.9.11 – Storage tank tests (new)
  - Tank requires a 24 hour test followed by a 15 minute test of the overflow system.
  - Tank drain and water makeup system shall also be tested for proper operation.
- Section 1301.10 – System abandonment (cease use or failure to maintain)
  - Conveyance system shall be replaced with an approved potable water system. Except where a system is already in place, the system can be disinfected, identified and provided with proper backflow measures.
  - System shall be secured from accidental access.

Chapter 13 – Nonpotable Water Systems

- Section 1301.11 – Trenching requirements for piping (new)
  - This section outlines trenching requirements for buried collection and conveyance piping.
- Section 1301.12 – Outdoor Outlet Access (new) – Locked access is required to hose bibbs, etc.
- Section 1302 – On-Site Nonpotable Reuse Systems (new section for collection of wastewater)
- Section 1302.1/1302.2 – General/Sources – Limited to collecting wastewater discharge.
- Section 1302.4 – Collection pipe (new) – Piping, joints, marking & sizing in accordance with Chapter 7.
- Section 1302.5/1302.6 – Filtration/Disinfection and Treatment (new)
  - Filtration, disinfection and treatment must be in compliance with the end use per NYC DOHMH.
  - Water closet and urinal flushing applications must utilize a 100 micron or finer filter at a minimum.

Chapter 13 – Nonpotable Water Systems

- Section 1302.7 – Storage tanks (new)
  - Table 1302.7.1 establishes the location of tanks and distances from other elements.
- Section 1302.7.2 – Design and construction (new)
  - Design and construction standards are specific and differ from other requirements. These include compliance with NYCBC Chap 16 thru 22 and AWWA, UL or API for the material of the tank.
- Section 1302.7.3/1302.7.4 – Inlets/Outlets (new)
  - Storage tank inlets shall be designed to prevent turbulence or agitation to tank contents.
  - Outlets shall be 4 inches above the bottom of the tank and shall not skim water from the surface.
- Section 1302.8.1 – Collection Bypass Valve (new)
  - A 3-way diverter valve shall be installed on collection piping upstream of the storage tank and downstream of fixture traps and vent connections. Two shutoff valves cannot substitute a bypass.

Chapter 13 – Nonpotable Water Systems

- Section 1302.8.2 – Backwater Valve (new)
  - A backwater valve shall be provided on each tank overflow.
- Section 1302.8.3 – Conveyance Bypass Valve (new)
  - A 3-way diverter valve shall be installed on conveyance piping upstream and downstream of all storage tanks to divert treated water to the sanitary sewer to allow system testing and bypass.
- Section 1302.9 – Pumping and control system (new) – shall comply with Chapter 6.
- Section 1302.10 – Water pressure-reducing valve or regulator (new) – Required where >85psig.
- Section 1302.11 – Conveyance pipe (new) – Compliance with 1301 and Chapter 6, except irrigation.
- Section 1302.12 – Tests and Inspections (new) – Requires compliance with Section 312, 1301 and the NYC DOHMH. Tests for piping, storage tank, water supply, backflow prevention & water quality.

Chapter 13 – Nonpotable Water Systems

- Section 1302.13 – Operation and maintenance manuals (new)
  - This section operation manual requirements, including schematics, instructions, and schedules.
- Section 1303 – Nonpotable Rainwater Collection Systems (new)
- This section pertains to rainwater collection and conveyance systems only.
- Section 1303.2 – Collection surface (new)
  - Limited to rainwater collected from above-ground impervious roofing surfaces. Collection from parking or pedestrian surfaces is prohibited except if used for landscape irrigation.
- Section 1303.2.1 – Prohibited Sources (new) - Roof equipment shall not discharge onto rainwater collection surfaces including evaporative coolers, cooling towers, water heaters and solar water heaters.
- Section 1303.3 – Debris excluders (new) – Required for all down spouts and leaders (self-cleaning).

Chapter 13 – Nonpotable Water Systems

- Section 1303.4 – Roof washer (new)
  - A sufficient amount of rainwater shall be diverted at the beginning of each rain event and discharged consistent with storm water runoff. This is similar to the term “first flush”.
- Section 1303.5 – Roof gutters and downspouts (new) – compliance with Chapter 11.
- Section 1303.7 – Collection pipe (new) – compliance with Chapters 7 & 11.
- Section 1303.8/1303.9 – Filtration/Disinfection and Treatment (new)
  - Filtration, disinfection and treatment must be in compliance with the end use per NYC DOHMH.
  - Water closet and urinal flushing applications must utilize a 100 micron or finer filter at a minimum.
- Section 1303.10 – Storage tanks (new)
  - Table 1303.10.1 establishes the location of tanks and distances from other elements.

Chapter 13 – Nonpotable Water Systems

- Section 1303.10.2 – Design and construction (new)
  - Design and construction standards are specific and differ from other requirements. These include compliance with NYCBC Chap 16 thru 22 and AWWA, UL or API for the material of the tank.
- Section 1303.10.3/1303.10.4 – Inlets/Outlets (new)
  - Storage tank inlets shall be designed to prevent turbulence or agitation to tank contents.
  - Outlets shall be 4 inches above the bottom of the tank and shall not skim water from the surface.
- Section 1303.11.1 – Collection Bypass Valve (new)
  - A 3-way diverter valve shall be installed on collection piping upstream of the storage tank and downstream of the drainage field. Two shutoff valves cannot substitute a bypass.
- Section 1303.11.2 – Backwater Valve (new) - Backwater valve shall be provided on each tank overflow.

Chapter 13 – Nonpotable Water Systems

- Section 1303.11.3 – Conveyance Bypass Valve (new)
  - A 3-way diverter valve shall be installed on conveyance piping upstream and downstream of all storage tanks to divert treated water to the sanitary sewer to allow system testing and bypass.
- Section 1303.12 – Pumping and control system (new) – shall comply with Chapter 6.
- Section 1303.13 – Water pressure-reducing valve or regulator (new) – Required where >85psig.
- Section 1303.14 – Conveyance pipe (new) – Compliance with 1301 and Chapter 6.
- Section 1303.15 – Tests & Inspections (new) – Compliance with Section 312, 1301 & the DOHMH. Tests for roof washer, piping, storage tank, water supply, backflow prevention & water quality.
- Section 1303.16 – Operation and maintenance manuals (new) - Section requires operation manual, including schematics, instructions, and schedules.

Chapter 14 – Subsurface Landscape Irrigation Systems

- Section 1401.1 – Scope
  - New Chapter 14 governs subsurface landscape irrigation systems connected to nonpotable water from on-site water reuse systems.
- Section 1401.2 – Materials
  - Above-ground & subsurface waste piping shall follow Tables 702.1 and 702.2, respectively.
- Section 1401.3 – Tests – Required in accordance with Section 312.
- Section 1401.4 – Inspections - Required in accordance with Section 107.
- Section 1401.5 – Disinfection – Not required for subsurface landscape irrigation systems.
- Section 1401.6 – Coloring – Water shall not be required to be dyed.

Chapter 14 – Subsurface Landscape Irrigation Systems

- Section 1402.1 – Sizing
  - System sized in accordance with the sum of the output of all water sources collected.
  - Gray water output is calculated by the number of occupants and use per occupant.
  - Residential 25 gpd/person for domestic use and 15 gpd/person for clothes/laundry use.
  - Commercial is based on the type of fixture installed.
- Section 1402.2 – Percolation tests
  - Percolation tests are required to determine soil permeability before system is installed.
- Section 1402.2.1 thru 1402.2.2 – Percolation tests and procedures
  - The sections provide detailed requirements for test procedures in various soils.

Chapter 14 – Subsurface Landscape Irrigation Systems

- Section 1402.3 – Subsurface Landscape Irrigation Site Location
  - Table 1402.3 provides minimum horizontal distances required for the storage tank and irrigation disposal field from common elements including lot lines, water wells, water services, etc..
- Section 1403.1 – Installation
  - This section provides detailed requirements for the absorption area, percolation rates required, trench excavation, aggregate and backfill.
- Section 1403.2 – Distribution Piping
  - This section requires distribution piping to be no less than 3 inches and must be installed a minimum of 4 inches but no greater than 12 inches below the surface. Sloping of the piping is required between 2 to 4 inches per 100 feet.

Chapter 14 – Subsurface Landscape Irrigation Systems

- Tables 1403.2 & 1403.2.1 – Distribution Pipe, Joints and Fittings
  - Materials permitted includes polypropylene (PP), polyethylene (PE) & PVC.
- Section 1403.2.2 – Diversion Valves
  - Systems shall include diversion valves to divert gray water to the building sanitary system when soils are saturated or frozen, blockage or backup occurs, maintenance is required or the maximum usage is reached.
- Section 1403.2.3 – Overflow Connection
  - Each system must have an overflow connection piped to the building drainage system to accommodate tank overflow.

Chapter 15 – Reference Standards

- Section 1501.1 – General
  - All reference standards have been updated as required for current standards.

Appendices

- Appendices A & B - Existing titles of appendices have been repealed & reserved for future codes.
- Appendix C – Structural Safety (formerly water recycling systems)
  - Previous appendix title repealed and replaced with structural safety which covers cutting, notching and boring.
- Appendix D - Existing title of appendix has been repealed & reserved for future codes.
- Appendix E – Sizing of water piping system
  - General change of wording throughout appendix: “flush valve” changed to “flushometer valve”.

Thank you for your attending!!