

Construction Code Communicator



State of New Jersey
Philip D. Murphy, Governor

Department of Community Affairs
Lt. Governor Sheila Y. Oliver, Commissioner

Volume 31, Number 2

Summer 2019

Stepped-Down Foundation Walls

(Updated reprint – published Fall 1995 and Summer/Fall 2003)

The practice of reducing the thickness of foundation walls once the wall is above grade is ever increasing.

The scope of this article is limited to the use of Tables 1807.1.6.2 and 1807.1.6.3(1) for plain concrete and plain masonry walls, respectively, and Tables 1807.1.6.3(2), 1807.1.6.3(3) and 1807.1.6.3(4) for reinforced masonry walls of the 2015 International Building Code, which specify the minimum thickness of foundation walls for various building materials when calculations are not provided.

The wall thickness specified in these tables is based on the height of unbalanced backfill which the foundation is required to support. The wall is required to be this thickness from support to support, in most cases from the top of the footing to the bottom of the sill plate. If the thickness of the wall is reduced at any point in between supports, the depth of unbalanced backfill is limited to the tabular depth based on the reduced wall thickness.

To demonstrate this point, envision the foundation wall on the horizontal plane. This wall is nothing more than a supported beam with the connections at the top of the foundation and the bottom of the plate being the end supports, and the unbalanced backfill being the distributed load. When viewing the wall in this plane, it is obvious that the thickness of the “beam” is required to be consistent from support to support. The same holds true for the vertical plane.

Should a design professional choose to use a design beyond the scope of tables referenced above, calculations should be submitted for the code official’s review and release.

Source: Rob Austin
Code Assistance Unit
(609) 984-7609



In This Issue

Accessibility versus Accessible Means of Egress  	10	Single-Family Detached Home – FAQs 	6
April 2019 Highlights of the <i>New Jersey Construction Reporter</i>	11	Smoke Alarms: 10-Year Sealed Battery Type 	13
Automatic Wet Standpipe System Flow Tests, Sprinklered versus Non-Sprinklered Buildings 	7	Splash Pads and the Like 	10
Electrical Installations Related to HVACR and Well Driller and Pump Installers 	9	Stepped-Down Foundation Walls 	1
Exit Access Travel Distance Measurement 	7	The 38 th Annual Building Safety Conference of New Jersey	2
Read Your Wire 	7		

The 38th Annual Building Safety Conference of New Jersey

The 38th Annual Building Safety Conference of New Jersey was held on May 1st through 3rd at Bally's Atlantic City. Our focus this year was on preparing our code enforcement officials for the pending updates to the model codes and their application upon adoption.

As always, our conference started with the "Crackerbarrel." This popular event gives our guests the opportunity to hear from a variety of presenters in a short format style with a focus on new items of particular interest to the code enforcement community. Topics ranged from emergency lighting requirements to an opportunity to meet with DCA staff for insight into recent code changes and guidance. We also held our first annual "Job Fair" this year, which was a success for the Associations and those seeking positions in code enforcement throughout the State. We are looking to expand the fair next year to include more prospective employers.

The centerpiece of the Building Safety Conference was the opportunity to recognize and honor those selected by their associations as Code Enforcement Professionals of the Year. We were honored to have Assistant Director Kevin Luckie and retired Directors Cynthia Wilk and William Connolly present for these awards. Each of the Presidents of their respective partner associations were also present to make the award presentations at the annual luncheon.

The following awards were presented:



New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year – Louis J. Buonocore



Municipal Construction Officials of New Jersey
Construction Official of the Year – John W. Fiedler



New Jersey Association of Technical Assistants
Technical Assistant of the Year – Susan L. Mealey



New Jersey Building Officials Association
Building Inspector of the Year – Pat J. Naticchione



Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year – Richard Vigliotti, Jr.



New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year – Richard Silvia



*New Jersey State Plumbing Inspectors Association
Plumbing Inspector of the Year – Louis J. Buonocore (with Assistant Director Kevin Luckie, NJPIA President Mark Bocchino, and John Delesandro, Supervisor, Licensing and Education Unit)*

(The 38th Annual Building Safety Conference of New Jersey)



Municipal Construction Officials of New Jersey

Construction Official of the Year – John W. Fiedler (with John Delesandro, Supervisor, Licensing and Education Unit, Assistant Director Kevin Luckie, Retired Director William M. Connolly, and MUNCO Chairman Jerry Eger)



New Jersey Association of Technical Assistants

Technical Assistant of the Year – Susan L. Mealey (with John Delesandro, Supervisor, Licensing and Education Unit, Assistant Director Kevin Luckie, and Brenda Sirkis of West Windsor Township)

(The 38th Annual Building Safety Conference of New Jersey)



*New Jersey Building Officials Association
Building Inspector of the Year – Pat J. Naticchione (with John Delesandro, Supervisor, Licensing and Education Unit, Assistant Director Kevin Luckie, and NJBOA President Jerry Eger)*



*Municipal Electrical Inspectors Association of New Jersey
Electrical Inspector of the Year – Richard Vigliotti, Jr. (with Assistant Director Kevin Luckie, NJMEIA President George Selah III, and John Delesandro, Supervisor, Licensing and Education Unit)*

(The 38th Annual Building Safety Conference of New Jersey)



*New Jersey Fire Prevention and Protection Association
Fire Protection Inspector of the Year – Richard Silvia (with John Delesandro, Supervisor, Licensing and Education Unit, Assistant Director Kevin Luckie, and Kevin Batzel, President, Ocean County Fire Prevention and Protection Association)*



(The award recipients and Association Presidents with retired Director William Connolly)

Congratulations to all for your hard work and dedication in improving code enforcement for New Jersey!

Looking ahead, the 2020 Building Safety Conference will be a very special event! We will be expanding the Conference to include a third day option to incorporate testing academies for preparation of both new and upgrading licensees for their exams. Of special note is a Building Inspector RCS academy that will incorporate a review of both the residential building and mechanical codes. We are still finalizing the details for the three-day Conference, including offering other two-day classes in combination with a third day of training, so stay tuned! We are also pleased to announce that we will be kicking off Building Safety Month 2020 during our annual awards luncheon with the International Code Council. It will be an event you won't want to miss!

(The 38th Annual Building Safety Conference of New Jersey)

We hope to see you all next year at Bally's Atlantic City, April 28 through May 1, 2020. Please save the date and "Like" us on Facebook for event updates, room locations and other important information!

We are proud to say that the Conference continues to grow, and the Committee always seeks to meet the ever-changing needs of our community by offering new training opportunities. However, if you have an idea to better the Conference, please pass that along through your association or email me at john.delesandro@dca.nj.gov.

Source: John Delesandro, Supervisor of Enforcement
Licensing and Education Unit

Single-Family Detached Home – FAQs

Owner-occupied single-family detached homes have more flexibility with the New Jersey building codes than any other residential or commercial building in the state. The Code Assistance Unit consistently receives a variety of inquiries on these structures, including: design; usage; permit requirements; and more. The following are some of the most Frequently Asked Questions:

Who can design and submit plans for a single-family detached home?

As per N.J.A.C. 5:23-2.15(f)1ix (and further explained in Bulletin # 96-2), residential structures must be designed by an architect; however, the bulletin also states that either an architect or an engineer can sign and seal plans for "engineering systems." In other words, an engineer can design any system in a house (for example – HVAC, plumbing, electric, etc.), but not the house itself. The architect must certify that the design of the engineered system(s) will be compatible with the building he or she has designed pursuant to N.J.A.C. 5:23-2.15(f)1xi(1). An exception exists; N.J.A.C. 5:23-2.15(f)1ix(1) allows a single-family detached home owner to prepare his or her own plans as long the structure is used or intended for use as his or her private residence. The owner must sign an affidavit.

Is there anything the owner of a single-family detached home cannot design?

Single-family detached homeowners cannot prepare their own plans for a home in a V Zone. N.J.A.C. 5:23-2.15(f)1ix(1) states that only registered architects and licensed engineers can prepare the plans for new homes or homes undergoing substantial improvement in a V Zone.

What kind of work can be performed by the owner of a single-family detached home?

Almost all work. This includes electrical, HVACR, lead abatement (pursuant to N.J.A.C. 5:23-2.23(p)3), plumbing, structural, etc. For more specific examples, see the Spring 2019 CCC article titled, "License Check" (https://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/CCC_Spr_2019.pdf). This leads us to the next question.

What kind of work cannot be performed by the owner of a single-family detached home?

As per N.J.A.C. 7:14B (and further explained in Bulletin # 95-1B), removal/abandonment required for residential heating oil tanks. Underground residential heating oil tanks are regulated under the jurisdiction of the Department of Environmental Protection. Homeowners are not permitted to remove or abandon these tanks. Only DEP certified individuals and firms can perform services on underground residential heating oil tanks.

What if the home is renter occupied?

The owner no longer qualifies for the exception that allows them to submit drawings, and may not be able to perform some of the work. (For more information, see Spring 2019 CCC article titled, "License Check," https://www.nj.gov/dca/divisions/codes/publications/pdf_ccc/CCC_Spr_2019.pdf.)

Do I need a building permit to install a driveway, parking lot or sidewalk?

No. Driveway, parking lots and sidewalks in general are not regulated under the Uniform Construction Code (UCC). Owners should obtain zoning approval for any of these projects, but this is outside the scope of the UCC.

Do I need a building permit to install a patio made of pavestones?

No. Patio pavers installed at grade are not regulated by the UCC. Home owners should obtain zoning approval, but this is outside the scope of building codes.

Source: Keith Makai,
Code Assistance Unit
(609) 984-7609

Exit Access Travel Distance Measurement

A question that is asked of the Code Assistance Unit often is, what is the appropriate measurement of travel distance? For starters, one should visit the section of the building subcode (International Building Code/2015) that regulates this: Section 1017.3, Measurement. Here it states that exit access travel distance is to be measured from the most remote point within a story along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit.

So what does this mean? In a single-exit building, the answer is pretty simple. Start from the furthest point of the floor/story and measure until you reach the door of a rated stair (that takes you directly outside). In the event that building is permitted to have an open stair, the measurement would continue down the stair until outside the building. In a building with two or more exits, the measurement is calculated to the first/closest egress stair. The second (or third) stair is a “back up” in case the closest stair is no longer available and the measurement to the other egress stair(s) is not regulated.

Source: Rob Austin, Code Assistance Unit
(609) 984-7609

Read Your Wire

This is something I have said for years now, and it still holds true: Read your wire or material, and you will be surprised what you can find out!

Recently, I received an inquiry about Type TC cable that was “included” with the manufacturer’s installation kit. Upon reading the installation kit, it was revealed that it was not Type TC Cable. It, in fact, was a Type CM-CL2 cable assembly. From what I can determine from one particular type (e.g. Honeywell Genesis Part #1214 and others), it is being used by several manufacturers for split A/C systems. Some Genesis-type cable may have THHN conductors.

The 2014 National Electric Code (NEC) is specific that outdoor installations and interiors of conduits that are approved for wet locations. [see NEC articles 300.9 and 310.10(B) and (C)].

Type CM-CL2 and THHN are not approved wet location conductors. If you find them installed in locations such as the outdoors, they are not in accordance with its testing by the appropriate Nationally Recognized Testing Laboratory (NRTL). Guide yourself accordingly.

If you have further questions, please contact the Code Assistance Unit at (609) 984-7609.

Source: Neil Nagy
Bureau of Construction Plan Review

Automatic Wet Standpipe System Flow Tests, Sprinklered versus Non-Sprinklered Buildings

The installation of standpipe systems has been the same since the old BOCA Building Code days, and we continue to modify the standpipe section of the International Building Codes since 2003. Standpipe piping needs to be installed per the sizing requirements of Section 905.2.1, Piping design. The piping must be designed with a pressure of 150 psi being supplied at the fire department connection. The sizing of the piping should be hydraulic calculated to flow the required gallon per minute (gpm) per Sections 905.2.1.1, Riser sizing, and 905.2.1.2, System pipe sizing. The required flow rates vary based on building occupancies. Section 905.2.1.1 Riser sizing, requires the first risers flow rate must be sized to flow a minimum of 500 gpm. There are four exceptions to this requirement in the code text and they are listed below. Section 905.2.1.2, System pipe sizing, also requires that when additional risers are required, they need to be sized at 250 gpm for each riser not to exceed 1250 gpm. There are three exceptions to these requirements, also listed below. So the code requirements of Sections 905.2.1.1, Riser sizing, and 905.2.1.2, System pipe sizing, are pipe sizing requirements only to make sure the hydraulic calculation proves out when the FDC is being supplied with 150 psi of water from the fire department.

The automatic water supply requirements for standpipe systems is basically one of two methods: non-sprinklered buildings and sprinklered buildings. Non-sprinklered buildings must meet the required gpm flow rates of Section 905.2.1.1, Piping sizing, and 905.2.1.2, System pipe sizing, based on Section 905.2.2.1, Automatic water supply. Sprinkler buildings only need to meet the water supply required by NFPA 13 or 13R. This is where a little confusion starts to come into play, how much water needs to be flowed during the acceptance test.

(continued on next page)

(Automatic Wet Standpipe Systems Flow Tests, Sprinklered versus Non-Sprinklered Buildings)

When a non-sprinklered building has three standpipes, the first standpipe must flow 500 gpm and the standpipe used should be the most hydraulically remote hose connection and the other two risers would need to flow 250 gpm each. While flowing the required gpm the residual pressure must not go below 65psi. A duration of 30 minutes of available water must be automatically present on site, a public water supply can be used to accomplish this. Non-sprinklered or separately supplied standpipe buildings must be tested this way.

When buildings are sprinklered with either a NFPA 13 or NFPA 13R system, the gpm rate would not be a concern due to the exception in Section 905.2.2.1, Automatic water supply. As long as the buildings highest floor level is not more than 150 feet above the lowest level of fire department vehicle access, the automatic water supply is not required to exceed that required by NFPA 13. So the acceptance test for the automatic standpipe in a sprinklered building (combination system) would just be to just flow the most hydraulically remote standpipe and record the pressure reading. No minimum residual pressures or minimum gpm are required in a sprinklered building. The exception in 905.2.2.1 only requires the automatic water supply to be present for the automatic fire sprinkler system so the gpm may not be possible to achieve the flow rates required in a non-sprinklered building. In many cases the flow rate in gpm may meet the requirements for a single riser, but the 500 gpm flow rate is not required. Lower flow rates does not mean the test has failed. In some situation the most remote standpipe may not be able to be flowed so the NFPA 14 standard allows the code official to pick an appropriate location.

Some code officials require all the standpipes to be flushed during the acceptance test and this flushing is also not part of the code or NFPA 14 standard requirements. Flushing is only required for underground piping.

Relevant Code Sections of the International Building Code 2015

905.2 Installation standard. Standpipe systems shall be installed in accordance with this section and NFPA 14. Fire department connections for standpipe systems shall be in accordance with Section 912.

905.2.1 Piping design. The riser piping, supply piping and the water service piping shall be sized to maintain a residual pressure of at least 65 psi (448 kPa) at the topmost outlet of each riser while flowing the minimum quantities of water specified in Sections 905.2.1.1 and 905.2.1.2. The pipe size shall be based on the capacity of the automatic water supply system or, where an automatic water supply is neither required nor provided to maintain the residual pressure of 65 psi (448 kPa), the pipe size shall be based on a pressure of 150 psi (1034 kPa) available at the fire department connection.

Exception: The residual pressure of 65 psi (448 kPa) is not required in buildings equipped throughout with an automatic sprinkler system installed in accordance with either Section 903.3.1.1 or 903.3.1.2 and also where the highest floor level is not more than 150 feet (45 720mm) above the lowest level of fire department vehicle access.

905.2.1.1 Riser sizing. The riser size shall be based on hydraulic calculations for a minimum flow of 500 gallons per minute (gpm) (1892 L/min.).

Exceptions:

1. Where only 1 1/2-inch valves are provided, the riser(s) shall be sized to provide a minimum flow of 100 gpm (378 L/min.).
2. In buildings where limited area sprinkler systems are supplied with water from a common standpipe riser, the riser shall be sized to satisfy total demand.
3. For occupancies in Group B, I, R-1 or R-2 in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, each riser shall be sized for a minimum flow of 250 gpm (945 L/min.).
4. Risers that are sized in accordance with the pipe schedule requirements of NFPA 14 listed in Chapter 35 are not subject to this requirement.

905.2.1.2 System pipe sizing. The system piping, including the horizontal or common feeder lines shall be sized for a minimum flow of 500 gpm (1892 L/min.). Where more than one standpipe riser is required or provided, all common system piping shall be sized for a minimum flow of 500 gpm (1892 L/min.) for the first riser plus 250 gpm (945 L/min.) for each additional riser, and the total shall not be required to exceed 1,250 gpm (4731 L/min.).

Exceptions:

1. Where only 1 1/2-inch valves are provided, the supply piping shall be sized for a minimum flow of 100 gpm (378 L/min.) for each riser, and the total shall not be required to exceed 500 gpm (1892 L/min.).
2. In buildings where limited area sprinkler systems are supplied with water from a common standpipe riser, the supply piping shall be sized for a minimum flow of 500 gpm (1892 L/min.) plus the sprinkler demand for the first riser, plus 250 gpm (945 L/min.) for each additional riser, and the total shall not be required to exceed 1,250 gpm (4731 L/min.).

(continued on next page)

(Automatic Wet Standpipe Systems Flow Tests, Sprinklered versus Non-Sprinklered Buildings)

3. For occupancies in Group B, I, R-1 or R-2 in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, all common supply piping shall be sized for a minimum flow of 250 gpm (945 L/min.) for the first riser plus 250 gpm (945 L/min.) for each additional riser, and the total shall not be required to exceed 750 gpm (2838 L/min.).

905.2.2 Water supply. A water supply for fire department equipment shall be available to the building site. The water supply shall be capable of a minimum flow as required by Section 905.2.1.2 for a duration of 30 minutes.

905.2.2.1 Automatic water supply. An automatic water supply is required for all standpipe systems. The automatic water supply and supply piping shall be capable of delivering a flow of 500 gpm (1892 L/min.) at the residual pressure specified in Section 905.2.1 for a duration of 30 minutes.

Exceptions:

1. In buildings equipped throughout with an automatic sprinkler system installed in accordance with either Section 903.3.1.1 or 903.3.1.2 and also where the highest floor is located not more than 150 feet (45 720 mm) above the lowest level of fire department vehicle access, the automatic water supply is not required to exceed the requirements of NFPA 13 listed in Chapter 35.

Source Michael Whalen
Code Assistance Unit
609-984-7609

Electrical Installations Related to HVACR, Well Driller and Pump Installers, and Telecommunications

Judging from the inquiries I have been receiving as of late, it appears there might be some confusion related to the above topic.

Starting with the permit requirements of the Uniform Construction Code (UCC), N.J.A.C.-5:23-2.14 specifies that a permit **is required** for the installation of equipment, with very few exceptions. Please note that Heating, Ventilation, Air conditioning, and Refrigeration (HVACR) installations and well equipment installations, amongst others, are not exempt from the UCC permitting process, especially in relation to the associated inspection(s).

The following is a list of related activities that require a UCC permit and inspection but may not necessarily involve a licensed electrician.

- Per N.J.A.C. 13:31-4.1 (Telecommunications Exemption), any properly recognized contractor – as recognized by the New Jersey Board of Electrical Examiners – is permitted to install telecommunication wiring; this does not apply to low voltage wiring. I know we've all heard the term "low voltage wiring exception" but in actuality, there is none. All landscape lighting, low voltage wiring and lighting in excess of 10 volts, which is not telecommunication wiring, requires a New Jersey licensed electrical contractor; the exception to this would be a listed/labeled "do-it-yourself" kit that is provided with a factory supplied plug in transformer .
- Per N.J.A.C. 13:31-4.2, a well driller/pump installer is permitted to install those conductors from the *load side of the pressure switch, controller or disconnect on the interior of a building up to a maximum of ten (10) feet*; again, this does not exempt the installer from compliance with the UCC for permits/inspections.
- Per N.J.A.C. 13:32A-1.2 (see #10 in the Definitions), HVACR contractors are permitted to replace the connection of the wiring from a disconnect box of adequate size meeting the following conditions:
 - 25 tons or less;
 - 240 volts or less; and
 - Connection of the wiring complies with all provisions of the UCC.
- Per N.J.A.C. 13:32A-1.3 (Electrical work), HVACR contractors are not to perform any electrical work in excess of 10 volts except in the case of a Class 3 structure (defined at NJAC 5:23-4.3A), 30 volts.

The end results is: regardless of whether an electrical contractor is required for the electrical work, the need for permits and inspections still exists. In the event of the non-electrical contractor doing the work described above, one should fill out the permit(s) by using the "exempt contractor" box .

If you have further questions, please contact the Code Assistance Unit at (609) 984-7609.

Source: Neil Nagy
Bureau of Construction Project Review

Accessibility versus Accessible Means of Egress

Recently, the Code Assistance Unit has had an influx of calls regarding Section 1009 of the building subcode (International Building Code/2015), Accessible Means of Egress, with the real issue regarding buildings that are not provided with (and are not required to have) an elevator to provide a vertical accessible route to the second floor per Section 1104/1107 of the building subcode. Please note, even though these sections seem similar, they are distinct and separate in application.

Section 1009.1 of the building subcode states that spaces required to be accessible [per Sections 1104/1107] must be provided with at least one accessible means of egress. This raises the following question: Is a second floor of a building that is not provided with an elevator (and not required to have one) required to have an accessible means of egress? The answer is no.

The purpose of an accessible means of egress is to provide a protected waiting space for a person with a disability in the case of an emergency. If the building is not provided with an elevator, the upper levels of the building are not required to be provided with the accessible means of egress. Individuals who occupy those floors have done so by using the stairs and they may do so in an emergency as well.

In short, any space that is not required by the code to be accessible in accordance with Chapter 11 is not required to be provided with accessible means of egress. This may include an entire story, a portion of a story, a mezzanine, or an individual room.

Some examples are provided below:

- Business building with a total gross enclosed floor area of less than 10,000 square feet of two or more stories.
 - An elevator is not required per Section 1104.4.1 (unless the “small building” is mandated to have one, like a State-owned facility), therefore no accessible spaces above the first floor and accessible means of egress is not required per Section 1009.1;
 - If elevator is electively installed, accessible spaces are now above the first floor and accessible means of egress is required per Section 1009.1.
- Business building with a total gross enclosed floor area of 10,000 square feet or more.
 - An elevator is required per Section 1104.4.2, therefore accessible spaces are above the first floor and accessible means of egress is required.
- Residential building with four or more dwelling units of 2 or more stories (Section 1107.6).
 - No elevator is proposed and ground level units are Type A. This is acceptable and any upper units are not required to be Type A and accessible means of egress is not required;
 - No elevator is proposed and there are no units at ground level. This is not acceptable and would require an elevator to be installed to at least the 1st level of residential units, these units would be Type A units at this level and accessible means of egress is required from this level.
 - Elevator is electively installed, all units must be Type A and accessible means of egress is required. Note that, if the building has five accessible floors, Section 1009.2.1 requires the building to be served by not less than one accessible means of egress utilizing an elevator complying with Section 1009.4 (in conjunction with at least one other accessible means of egress per Section 1009.1).

Source: Rob Austin, Code Assistance Unit
(609) 984-7609

Splash Pads and the Like

The Division has received numerous questions regarding the appropriate bonding inspection requirements for splash pads and similar installations.

But before speaking to the bonding inspection requirements, here is some background: In short, a splash pad or spray pool is a recreation area for water play that has little or no standing water. There may be ground nozzles that spray water upwards and other water features such as a semicircular pipe shower and various other configurations.

Moving back to the code requirements, Article 680 of the electrical subcode (the 2014 edition of NFPA 70) contains bonding requirements for swimming pools that contain water on a permanent or semi-permanent basis. A splash pad would not meet this definition; thus, Article 680 would not apply. Also, N.J.A.C. 5:23-2.18B is specific in that the grounding and bonding certificate is issued to swimming pools, spas, and hot tubs on any property other than one- and two-family dwellings. Again, this would not apply to a splash pad.

Lastly, some would like to apply the International Swimming Pool and Spa Code's (ISPSC) requirements to this installation. Because the adopted electrical subcode overrules the referenced standard regarding bonding, the electrical subcode prevails. Splash pads do not require bonding per Article 680 of the electrical subcode.

Source: Neil Nagy, Construction Official, Bureau of Construction Project Review

April 2019 Highlights of the *New Jersey Construction Reporter*

The following information is from the April 2019 Highlights. The New Jersey Construction Reporter is published on a monthly basis and includes highlights and summary data on building permits from local construction offices throughout the state. To view full reports, please visit <https://www.nj.gov/dca/divisions/codes/reporter/>.

Source: John Lago
 Division of Codes and Standards
 (609) 984-7609

- \$1.251 billion of construction was authorized by building permits in April. Residential activity totaled \$579.8 million (46.4 percent). Office, retail, and other nonresidential work amounted to \$670.8 million (54.5 percent).
- 517 municipalities reported.
- Newark reported \$61.9 million of construction authorized by building permits in April. Jersey City had \$50.6 million.

Major Construction Indicators, New Jersey, January - April 2009 to 2019

NJ DCA, 6/7/2019

Period	Estimated cost of construction	Authorized housing units	Authorized office space (square feet)	Authorized retail space (square feet)
January - April 2019	\$4,617,390,543	7,259	1,432,202	226,617
January - April 2018	4,455,430,800	6,908	1,473,343	764,409
January - April 2017	4,772,835,656	5,477	2,072,928	794,048
January - April 2016	5,734,978,178	9,149	1,617,303	810,587
January - April 2015	4,039,461,004	4,968	1,005,828	1,746,835
January - April 2014	3,876,038,930	6,230	1,601,420	628,231
January - April 2013	3,930,738,582	5,737	1,921,562	695,444
January - April 2012	3,390,078,746	4,208	2,415,800	646,398
January - April 2011	3,444,393,038	3,786	1,978,255	781,690
January - April 2010	2,869,962,723	3,474	1,487,311	431,806
2018-19	\$161,959,743	351	-41,141	-537,792
percent change	3.5%	4.8%	-2.9%	-237.3%
2017-18	-\$317,404,856	1,431	-599,585	-29,639
percent change	-6.7%	26.1%	-28.9%	-3.7%
2016-17	-\$962,142,522	-3,672	455,625	-16,539
percent change	-16.8%	-40.1%	28.2%	-2.0%

- The dollar amount of work authorized between January and April 2019 totals \$4.617 billion. This is 3.5 percent higher than last year at this time.
- The number of new houses authorized by permits in the first four months of 2019 was 7,259. This is 351 more than last year at this time.

(continued on next page)

(April 2019 Highlights)

Dollar Amount of Authorized Construction, top municipalities, January - April 2019					
NJ DCA, 6/7/2019					
Municipality	County	Estimated cost of construction	Authorized housing units	Authorized office space (square feet)	Authorized retail space (square feet)
Jersey City	Hudson	\$167,173,729	959	132,205	0
Cherry Hill	Camden	130,116,412	2	0	51,220
Newark	Essex	122,307,413	7	58,159	1
Piscataway	Middlesex	118,162,035	2	0	0
Camden City	Camden	111,995,202	2	16,751	7,610
Lawrence	Mercer	110,145,298	19	1	0
Hackensack	Bergen	99,722,200	88	1	1
Toms River	Ocean	64,466,133	129	1	11,470
Raritan borough	Somerset	60,483,725	1	5,300	0
Harrington Park	Bergen	60,160,014	85	0	0
Top municipalities		1,044,732,161	1,294	212,418	70,302
New Jersey		\$4,617,390,543	7,259	1,432,202	226,617
top munis as % of NJ		22.6%	17.8%	14.8%	31.0%

Big permits, 2019				
Construction Reporter, 6/7/2019				
municipality	county	permit no.	dollar amt of construction	descripton
Jersey City	Hudson	20184390+G	206,000,000	615 Pavonia Av, Journal Sq, 704 apt units broke ground 11/18
Cherry Hill	Camden	20190017	95,265,809	JFK Memorial Hospital addition
Jersey City	Hudson	20191843	62,364,637	20 Theodore Conrad Dr; Sysco Food Svcs warehouse
Harrington Park	Bergen	2019/046	59,566,000	Allegro Senior Living includes 85 independent apts
Eatononw	Monmouth	19-0293	58,906,000	Artis Senior Living; 147 Grant Av; assisted living
Camden City	Camden	000020190177	41,507,456	Resinapak recycling factory, NE Federal & 17th St; no fee-in transit zone
Raritan Borough	Somerset	18-349+F	39,732,600	office fit out, Ortho McNeil Pharmaceutical, 1000 US Rte 202, update 11/18
Newark	Essex	19CP000796	38,254,500	47-63 Green St, Newark Parking Authority; mixed use; parking & retail
Millville	Cumberland	18-60029+E	38,080,360	high school renovation, SDA
Montclair	Essex	19-0937	37,442,448	Willow St & Bloomfield Av, mixed-use bldg; 200 apts, retail, parking;
Hackensack	Bergen	000020190029	35,950,000	Hackensack Univ Med Ctr; central utility plant; 2nd & Atlantic Sts
Sayreville	Middlesex	00020170175U	32,337,000	pump station renovation, Middlesex Co Utility Authority, 56 Canal St
Piscataway	Middlesex	20190210	31,880,300	community cultural arts center; 5241 Stockton St
Jersey City	Hudson	20192070	31,817,541	Water St development; 145 apts
Lawren ce	Mercer	00020180513U	30,555,521	permit update, Bristol Myers Squibb, blgs M & N; broke ground 4/18
West Caldwell	Essex	19-222	28,940,000	620 Passaic Av, Essex Co voc school
South Brunswick	Middlesex	000020190628	28,220,100	Harbor Chase asst lvg; 4331 US Rte 1
Branchburg	Somerset	19-00192	25,762,636	Allergen Pharmaceutical, 4 Millennium Way
Camden City	Camden	19-60004	23,431,324	public high school; Park and Baird Blvds
Millburn	Essex	19-0106	23,037,521	150 JFK Pkwy, 200 apartments
Jersey City	Hudson	20183960+B	22,650,000	update, 159 rentals, 172 2nd St; broke ground 10/18
Cranbury	Middlesex	19-145	22,208,000	341 Half Acre Rd, Wayfair warehouse
Westwood	Bergen	000020190114	21,670,000	Westwood middle sch addition
Dover Town	Morris	00020180012U	20,275,000	permit update, Meridia Transit Plaza; mixed use, 214 apts, broke ground 1/18
East Brunswick	Middlesex	18CP001698	20,198,366	Care One assisted living; 666 Cranbury Rd
Bayonne	Hudson	19-03-021	20,000,000	180 rental units; 101 E 23rd St
Park Ridge	Bergen	19-083	20,000,000	downtown redevelopment; mixed-use; bldg 1; 120 apts
Long Branch	Monmouth	17-0550+I	18,035,000	permit update, 57 condos broke ground 9/17; 310 Ocean Av
Hanover	Morris	000020190109	17,800,000	Barclays investment bank; 200-500 Jefferson Park, Whippany
Bloomfield	Essex	19-0228+A	17,211,692	30-4 Farrand St; Metro Real Estate; hi-rise , 176 rental units with parking deck
Washington Twp	Morris	00020180735U	17,000,000	assisted living, Heath Village, 430 Schoolys Mtn Rd
Woodbridge	Middlesex	000020190160	16,366,601	conversion, mixed use, office, retail, & 113 apts; 1 Woodbridge Ctr Dr
Mount Laurel	Burlington	000020190716	16,179,593	1200 Knox Way; 31 apts
Hoboken	Hudson	19-90074	16,078,341	Foot of Hudson Pl, NJ Transit
Passaic City	Passaic	18-60055+C	15,881,594	permit update for new public school, Dayton Av
Hackensack	Bergen	00020190029U	15,600,000	permit update, utility plant for medical center
East Rutherford	Bergen	19-10039	15,505,000	NJ Sports & Exposition Authority; American Dream
Camden City	Camden	000020190178	14,666,523	Action Pack packing, assembly, & shipping; River Rd & East State St
West Orange	Essex	00020190086U	14,300,000	parking deck for zoo; Northfield Av; Essex County
Moorestown	Morris	P2019-0204	14,020,000	water treatment plant addition; 1248 N Church St
Piscataway	Middlesex	20190331	13,778,000	warehouse fit out, 199 Ridge Rd, fka River Rd
Piscataway	Middlesex	20181576+B	13,467,000	warehouse, 199 River Rd, shell, bldg 5
West Orange	Essex	000020190741	13,133,751	748 Northfield Av; nursing home renovation, Daughters of Isreal
Clifton	Passaic	190087	12,862,000	new office & retail bldg, 1153 Bloomfield Av
Wayne	Passaic	000020190005	12,522,103	movie theater, Willowbrook Mall
Morristown	Morris	20180391+B	12,450,000	update, AHS Hospital Corp, 48 Madison Av
Wayne	Morris	000020190856	12,165,734	350 Rte 46; Home2suties; new hotel; Jack
Hackensack	Bergen	00020151379U	12,000,000	fit up of residential bldg; 150 Main St

Smoke Alarms 10-Year Sealed Battery Type

Recently the Division has been getting numerous calls from dwelling owners, realtors, electricians, fire alarm installers, and code officials regarding when 10 year sealed battery units need to be installed.

The New Jersey Uniform Fire Code (NJ UFC) was amended July 1, 2018 with an effective date of January 1, 2019. The NJ UFC now requires 10-year sealed battery single station smoke alarms to be installed where single station smoke alarms with a removable battery are installed or when no smoke alarms are present. The NJ UFC rules require all single station smoke alarms with a removable battery to be replaced regardless of whether they were just installed last year or if they are older.

When a dwelling is constructed in accordance with the Uniform Construction Code (UCC), since 1977, the dwelling would have required some type of AC-hardwired 120 volt smoke alarm. In some cases, a homeowner may have chosen to install a Low Voltage Household Fire Alarm System in accordance with the One- and Two-Family Dwelling Subcode (IRC/NJ) and National Fire Protection Association (NFPA) 72. The new NJ UFC rules have nothing to do with UCC-compliant smoke alarms or low voltage household fire alarm systems. When the systems are installed in accordance with the UCC, they may have only been required to install 120 volt AC smoke alarms or 120 volt AC smoke alarms with a removal battery backup. But none of these alarms are required to be replaced because the backup battery can be removed.

Smoke alarms installed before August 6, 1984 were not required to be interconnected, and no battery backup was required. After that date, until September 4, 1991, smoke alarms needed to be interconnected on each floor level of the dwelling. After that date, through the present, smoke alarms need to be on each floor and in each bedroom of the dwelling. Smoke alarms are also required in the vicinity of the bedrooms, this has always been a topic of discussion. When smoke alarms are interconnected they may be up to 21 feet away from bedrooms, if the alarm is a single station they must be within 10 feet. Finally, since September 7, 2010, Low-Voltage Household Fire Alarm Systems can be installed, so the inspector should be aware of what they are looking at.

Some inspectors have advised homeowners and their agents that UCC smoke alarms have to be removed from service and AC-sealed unit smoke alarms have to be installed. Some have advised realtors that UCC household fire alarm system low voltage system detectors needed to be removed and 10-year sealed battery smoke alarms have to be installed. Some have sent the owner to the construction department to apply for a permit to install battery operated smoke alarms. Some have even told owners that the carbon monoxide (CO) alarms need to be 10-year sealed battery units. **NONE of these examples are covered by the new NJ UFC rules.**

Furthermore, 10-year sealed battery smoke alarms can be installed under ordinary maintenance, and no permit is required. CO alarms are permitted to be "normal" battery operated units, plug-in type; if someone wishes, they may opt to have a hardwired unit installed. When a hard wired CO alarm is installed, a permit would be required. Battery or plug-in type CO alarms are also covered under ordinary maintenance, and no permits are required.

UCC systems, line voltage or low voltage, must be maintained as required at the time of installation. When an inspector suspects there might be a UCC installation issue or a system has had a required smoke alarm removed and a battery smoke alarm installed in its place, they need to inform the construction official so the fire subcode official can issue a CO notice of violation.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

The Construction Code Communicator is an online publication of the New Jersey Department of Community Affairs' Division of Codes and Standards. It is typically published four times a year.

Copies may be read or downloaded from the division's website at: www.nj.gov/dca/divisions/codes.

Please direct any comments or suggestions to the NJDCA, Division of Codes and Standards, Attention: Code Development Unit, PO Box 802, Trenton, NJ 08625-0802 or codeassist@dca.nj.gov.

New Jersey Department of Community Affairs
Division of Codes and Standards
101 South Broad Street
P.O. Box 802
Trenton, NJ 08625-0802

BULK RATE
US POSTAGE
PAID
PERMIT NO.
XXXXX

FIRST-CLASS MAIL

Mail to:  
 

