



# The Drawingboard

## Queens Chapter

New York State Society of Professional Engineers

May 2010

Volume 10, Number 5

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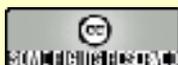
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## President's Message

*By George Tavoulaareas, P.E.*

*President*

[gltpe@msn.com](mailto:gltpe@msn.com)

My fellow professional engineers, the oil spill in the Gulf of Mexico could have been prevented if a redundant safety device was part of the design of the oil well. A blowout preventer (valve) failed to close the well after the explosion and, hence the massive oil spill that is causing havoc in the Gulf. Engineers are taught the fundamental principles of safety factors and redundant systems in any Design 101 course. Unfortunately, the Gulf will pay a big price because the BP and the federal agency regulating the oil companies did not understand these well known and elementary engineering principles. Engineers are currently working to shut the oil spigot and this disaster underscores more than ever the importance of engineers and engineering in our society. It was engineers who designed the oil platform and the ability to siphon off oil from a mile below the bottom of the sea and it will be engineers who will design a method to cap the well.

I am pleased to announce that **Dr. James Yarmus, PE, President of the NY State Society of Professional Engineers** will be attending our May 27, 2010 general membership meeting. Dr. Yarmus's term expires in June and I look forward to seeing everyone at the meeting.

I attended a meeting with DOB Commissioner **LiMandri**, Deputy Commissioner **Fatma Amer, PE**, and representatives from the AIA chapters and NSPE. Plan exam service levels, determinations and zoning challenge process results were discussed. According to the DOB, graphics standards will be rolled out in June requiring standardize lettering, line sizes, etc. Plan examiners, will soon be using written guidelines in evaluating projects and sixty-three guidelines have been written. The Department will also track the time a plan examiner begins reviewing the plans to final approval.

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The new determination (reconsideration) procedure for design professionals was also discussed and the new reconsideration (recon) procedure involves writing your questions on a DOB form, submitting it to DOB and the Borough Commissioner or his authorized representative will answer it in writing. Previously, design professionals were able to meet at the DOB office with DOB officials to discuss their issues face to face until this new procedure was implemented. This new procedure has delayed many projects from going forward because it takes DOB many weeks to respond to these recons. Commissioner LiMandri admitted that there were delays in answering them but that DOB has reduced the wait time to three weeks from a high of ten weeks. I told the Commissioner that this new process is not working in Queens and it is taking too long for us to get them answered and we have clients that need answers in days not weeks. The Commissioner told us that he had a significant number of staff leave the DOB and he has been unable to hire replacements, and hence, this has caused the delay. Furthermore, I told him that we shouldn't suffer because of his lack of manpower and I also offered an alternate solution. I proposed that we continue writing the recon and the DOB slot a couple hours a week of face time with engineers and architects to discuss their recons. I believe this may shorten the time for an answer. The Commissioner agreed to look at this issue further and to discuss it at our next meeting.

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Last year DOB instituted the new development challenge process where the public can challenge a project after it has been approved by the DOB. There was a public outcry against this challenge procedure from politicians, contractors, design professionals, community groups and others. See [http://www.nyc.gov/html/dob/html/news/pr\\_development\\_challenge\\_06\\_0909.shtml](http://www.nyc.gov/html/dob/html/news/pr_development_challenge_06_0909.shtml) for additional information regarding the Challenge process.

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During the meeting, **Scott Pavan** of the DOB stated that 840 jobs were subjected to the new challenge and only eight (8) jobs were challenged, a relatively low number of challenges.

Local Law 85/2009 established the NYC Energy Conservation Code. The NYC energy code will become law effective July 1, 2010 and there will be many challenges and opportunities for professional engineers. The energy code will require professional engineers to show energy calculations on their drawings, specify and perform progress inspections, require electrical drawings to be submitted if required for compliance, etc. The NYC Dept. of Buildings (DOB) had Proposed amendment to Rule 101-07 relating to progress inspections, and on the proposed addition of rule 5000-01 relating to construction document compliance with the New York City Energy Code,

([http://www.nyc.gov/html/dob/downloads/pdf/rule\\_101-7\\_energy\\_code.pdf](http://www.nyc.gov/html/dob/downloads/pdf/rule_101-7_energy_code.pdf) )

for public review. The public review period has ended and I wrote a letter to Ms. **Deborah Taylor**, AIA of the DOB requesting that all progress inspection agencies be either a professional corporation (PCs) with a certificate of authorization from the State Education Dept. or professional engineers acting as sole proprietors. In my letter to Ms Taylor I stated that business corporations (Inc.) cannot practice nor offer engineering services in NY state. The DOB after reviewing all comments will issue the rule shortly. The Chapter's letter to DOB is included in this month's Drawingboard.

A draft Buildings Bulletin regarding the energy code and the building envelope is also in this month's Drawingboard. Please review the draft Bulletin and forward me your comments by May 29, 2010. Your comments must be in to me by the 29<sup>th</sup> and a letter with our comments will be forwarded to the DOB.

I attended two DOB seminars during Construction week and I found them to be informative and quite interesting. At one of the seminars, Director **Gus Sirakis, PE** who is writing the special inspection requirements stated that inspection agencies will be classified under three classes. Class one inspection agencies will be able to perform inspections on new/major buildings ten stories and taller but will have to be accredited by IAS. Classes 2 and 3 special inspection agencies are for smaller buildings and alterations and they **WILL NOT** have to be accredited by IAS. All agencies will however have to register with the Department. These special inspection requirements are at the City's law department and should soon be out for public comment. The second seminar given by **Tim Lynch, PE** and **Delia Schumway, PE** of the Forensic Unit at York College focused on the various types of building structures throughout the City and how the DOB's responds to building collapses. Using the various online websites, the DOB can research a site and determine its current owner and its status going back more than a hundred years. I have attached the "Key Websites for Buildings Research" at the end of the Drawingboard.

NYSSPE is holding their annual meeting in Saratoga Springs, NY on June 10-12, 2010 and I will be attending along with several other board members. NSPE is the only organization that is comprised of professional engineers of all disciplines dedicated to preserving our license.. Attendees will have the opportunity to obtain up to 9.5 Professional Development Hours (PDHs) of continuing education credits. For more information, please click on the following link:

<http://guest.cvent.com/EVENTS/Info/Summary.aspx?e=ad9e1481-9db5-41b4-b102-4da1e8a13f8a>

## TRADE SHOWS & CHAPTER SEMINAR

- The Green Buildings/Buildings of NY is having their annual trade show on June 16-17, 2010 at the Jacob Javits Center. Additional information can be found at: <http://www.buildingsny.com/>
- The American Water Works Association is having their annual trade show on June 20-24, 2010 in Chicago. Additional information can be found at: <http://www.awwa.org/index.cfm>
- PDC Lecture on the Fire Code with James Hansen is scheduled for June 16, 2010 at 6:30PM at Ft.

Totten- 2 continuing education credits will be provided.

**For those interested in becoming NYSSPE members,** NYSSPE is offering a 6-months-free membership until June 2010, so sign up today!

Please let me know what you are thinking and what issues or concerns are on your mind. I can be reached at the e-mail address above or you can call me at 347.387.1649.

I look forward to seeing you at our Chapter meeting on May 27, 2010 at 6:30PM.

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## Next Meeting

The next general membership meeting will be held on Thursday, May 27 at 6:30PM  
There will be a charge of \$10 for members and \$25 for non-members.

Mr. Kenneth Schmitt of Exterior Wall Products LTD will present "Designing and Detailing Masonry Wall Systems"

The following topics will be covered:

- Wire reinforcement for CMU veneer walls and how movement affects the wall
- Seismic and wind load requirements and how it affects the placement of anchors.
- Anchor systems for metal stud projects,
- Expansion and Control joints, the difference in specifications and locations.
- Flashing, drip plates and the affect of moisture on masonry walls,



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May 18, 2010

Ms. Deborah Taylor, AIA  
NYC Dept. of Buildings  
280 Broadway  
New York, NY 10007

**RE: Progress inspections  
Proposed amendment to Rule 101-07**

Dear Ms. Taylor:

We applaud the inclusion of progress inspections into the Building Code.

Pursuant to New York State Education Law [with the limited exception of some grandfathered general business corporations - see NYS Education Law section 7209 (6)], general business corporations and other business entities, such as a limited liability companies, cannot offer to provide or provide professional engineering services – see NYS Education Law section 6512. In short, a progress inspection agency must possess either a Certificate of Authorization issued pursuant to NYS Education Law section 7210 or be a professional engineer doing business as a sole proprietor.

There remains one matter which we believe needs to be addressed regarding current section 101-06 (c) (5) [proposed to be renumbered 101-06 (c) (6)], which unfortunately seemingly has reached an impasse. The problematic language reads as follows

((i)(iii)Agency qualifications- Registered design professionals with relevant experience shall be deemed approved progress inspection agencies, without further requirement of registration or requirement.....

Notwithstanding the foregoing requirement, the language of the rule fails to afford adequate warning respecting the inability of general business corporations (Inc.) and limited liability companies (excluding grandfathered corporations) to offer to provide special inspections. In fact the first sentence, with its reference to registered design



professionals in responsible charge is quite misleading. Except for a limited number of grandfathered entities, under no circumstances can a general business corporation qualify as a Progress Inspection Agency. The first sentence can easily be misconstrued to suggest that general business corporations can qualify as Progress Inspection Agencies by having a full time registered design professional in responsible charge.

The vast majority of illegal practice cases investigated by the State Education Department and referred to the State Board for Engineering and Land surveying involve the illegal offering of professional engineering services by general business corporations. Failure to enforce the State Education Law in these proposed changes to Rule 101-07 will only promote the wide spread rubber stamping that is problematic with non-professional general business corporations that operate without restraint. Our chapter would like to add the following to Section 1 Paragraph 3, Agency qualifications:

All Progress Inspection Agencies shall possess either a Certificate of Authorization issued pursuant to NYS Education Law section 7210 or be a professional engineer doing business as a sole proprietor.

Please feel free to contact me if I can be of further assistance.

Sincerely,

George Tavoulaareas, PE

# Key Websites for Buildings Research

Website	Resources Available	URL
Open Accessible Space Information System (OASIS)	Tax maps, aerial views of buildings, Owner information, estimated building age, dimensions and height, and links to other important websites	<a href="http://oasisnyc.net">oasisnyc.net</a>
Department of Buildings <i>Buildings Information System (BIS)</i>	Certificates of Occupancy, Actions, violations, property profile information, history of alterations, complaint history, and insurance information	<a href="http://nyc.gov/bis">nyc.gov/bis</a>
NYC Department of Housing (HPD)	Floor Plans, Alteration History, I-Cards (Initial Inspection Cards) used prior to 1938 in lieu of C of O's, building plans, database of complaints, violations and registration information	<a href="http://nyc.gov/hpd">nyc.gov/hpd</a>
New York Public Library	Digital Historic Maps (including: wharves, piers, and farms), Historical Photos, and atlases of New York City	<a href="http://digitalgallery.nypl.org/nypldigital/">http://digitalgallery.nypl.org/nypldigital/</a>
Department of Finance <i>Automated City Register Information System (ACRIS)</i>	Ownership Information and Liens, property records, document images for Manhattan, Queens, Bronx, and Brooklyn back to 1966.	<a href="http://nyc.gov/acris">nyc.gov/acris</a>
Google Maps	Aerial Maps	<a href="http://maps.google.com">maps.google.com</a>
Bing Maps	Aerial Maps	<a href="http://bing.com/maps">bing.com/maps</a>



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## BUILDINGS BULLETIN 2010-XXX-DRAFT

### Technical

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**Supersedes:** None

**Issuer:** Fatma M. Amer, P.E.  
First Deputy Commissioner

**Issuance Date:** May XX, 2010

**Purpose:** This document clarifies when an addition, alteration, renovation or repair to the building envelope may be exempt from the New York City Energy Conservation Code (NYCECC) pursuant to section NYCECC 101.4.4.

**Related Code Section(s):** NYCECC 101.4.4  
Chapter 10

**Subject(s):** Alteration; repair; roof replacement; exterior wall; curtain wall; wall, exterior; wall, curtain; wall, masonry; wall, frame; wall, foundation; wall, basement; door, exterior; insulation; building envelope; envelope; energy code

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New York City Energy Conservation Code (NYCECC) Section ECC 101.4.4 requires that additions, alterations, renovations or repairs ("work") conform to the NYCECC unless they would "create an unsafe or hazardous condition or overload existing building systems." The building envelope system may be overloaded when new materials such as insulation are introduced unevenly into the envelope assembly as the envelope may experience freeze-thaw and water management problems. This bulletin establishes parameters for insulation in such alterations, renovations or repairs to reduce the likelihood of overloading the building envelope system.

In addition to the exceptions in Section ECC 101.4.4, the following types of work may not need to comply provided that energy use of the building is not increased:

1. **Exterior Doors:** Replacement of existing doors that separate conditioned space from the exterior shall not require the installation of a vestibule or revolving door, provided, however, that an existing vestibule that separates a conditioned space from the exterior shall not be removed.
2. **Insulated Envelope:** Work to insulated envelope elements shall be insulated to meet the requirements of the NYCECC unless the requirement exceeds the thermal value of the existing envelope elements and the resulting increase in the thermal value of the element would cause freeze-thaw and water management problems to the envelope system. In such case, the requirements for un-insulated envelope elements in Item 3 below shall govern.
3. **Uninsulated Envelope:** The following work to un-insulated envelope elements is clarified as follows:

- A. Roofs\*
  - i. Flat roofs: If the scope of work on the roof affects less than 50% of a roof as bounded by a wall, parapet, rail or edge, or a minimum roof portion of 20,000 square feet, whichever is less, then insulation shall not be required.
  - ii. Sloped roofs: If the scope of work on the roof affects less than 50% of a roof plane as bounded by a ridge, wall, edge, parapet or rail, then insulation of that roof plane shall not be required.
  
- B. Above-grade walls\*
  - i. Solid masonry wall: Unless an entire wall plane is being re-built, insulation shall not be required.
  - ii. Cavity masonry wall: If the scope of work of the wall affects less than 50% of a wall plane, then insulation of such wall plane shall not be required.
  - iii. Framed wall: If the scope of work of the wall affects less than 50% of a wall plane, then insulation of such wall plane shall not be required.
  - iv. Curtain wall
    - a. If a vision panel is replaced within the system, then the thermal qualities of such vision panel shall meet the requirements of the NYCECC.
    - b. If the exterior glazing of a shadow-box panel is replaced, then the replacement exterior glazing may be treated in accordance with section ECC 101.4.4, exception 2. If the shadow-box panel is replaced, the entire panel shall comply with the requirements of the NYCECC.
    - c. If a non-vision panel is replaced, it shall meet the requirements of the NYCECC.
  
- C. Below-grade wall\* as defined by Section 802.1.1.2 in the ECCCNY, 2007
  - i. If the scope of work of the wall plane affects less than 50% of the wall plane, then insulation of such wall plane shall not be required.
  
- D. Slab-on-grade
  - i. Perimeter insulation shall be required where work is made to slab-on-grade.

\* Where work on a roof or wall plain equals or exceeds 50%, the entire wall shall comply.



PROFESSIONAL DESIGN CENTER  
422 Weaver Ave  
Fort Totten, Bayside, NY 11356

Queens Chapter      NYS Society of Professional Engineers

2010

NSPE Lecture Series

2-10

# Lecture

Date: Wednesday June 16, 2010  
Time: 7:00PM to 9:00PM

At

422 Weaver Ave. Fort Totten, Bayside, Queens

## 2 Continuing Education Credits

Admission fee is \$40 for AIA & NYSSPE members; \$50 for non-members.  
Make check payable to Queens Chapter NYSSPE and mail to:  
George Tavoulaareas, 272 Clinton Road Garden City, NY 11530 by 5/10/10

### PRESENTED BY:

James Hansen, PE ; Director, NYC Fire Department.  
George Tavoulaareas, PE and Paul Di Natale, AIA

### THE PROGRAM: NYC Fire Code

As the Director of Code Revision for the New York City Fire Department, James Hansen was responsible for administering the technical aspects of the New York City Fire Code Revision Project, and helping to shepherd the new Fire Code through the legislative process. Mr. Hansen is a NYS Licensed Professional Engineer, possesses a Bachelor of Chemical Engineering degree from Manhattan College, and has more than 25 years of experience with the Department. Additionally, Mr. Hansen is a member of the International Code Council's Code Technology Committee.

Mr. Hansen will be presenting a general overview of the 2008 Fire Code and the associated rules, including provisions of fire apparatus access roads, sprinklering of buildings with substandard street width, rooftop access and obstructions, and fire protection and life safety system periodic inspection, testing and maintenance.

**Buffet dinner 6:15 pm-7:00pm included**

Contact George Tavoulaareas, PE at 347-387-1649 for further information

**New standpipe and sprinkler piping laws go into effect in 2010. Building owners and contractors must be sure their properties and projects comply with these new local laws.**

The Buildings Department participated in the multi-agency advisory group that proposed these new safety standards. Mayor Michael R. Bloomberg appointed Deputy Mayor Edward Skyler to lead the Construction, Demolition and Abatement Working Group, which generated 33 safety recommendations – including the four local laws described here.

To learn more, read *Strengthening the Safety, Oversight and Coordination of Construction, Demolition and Abatement Operations*, available at [nyc.gov/buildings](http://nyc.gov/buildings).

### CUTTING AND CAPPING

**Local Law 60/09, effective 3/2/2010.**

Permits are required to cut and cap standpipes or sprinklers.

- Authorized Licensees: Only licensed master plumbers or licensed master fire suppression piping contractors may cut and cap standpipes or sprinklers during demolition.
- Local Law Incorporates TPPN 3/07: For demolitions and gut rehabilitations, a registered design professional must have a variance to remove damaged or inoperable sprinklers. This filing must include a damage report and explanation why the system can't be restored. (The design professional must first file the variance with the Fire Department and have FDNY approval before filing it with the Buildings Department.)

### COLOR CODING

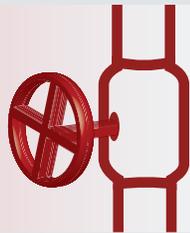
**Local Law 58/09, effective 3/2/2010.**

**Existing buildings must comply by 6/2/2010.**

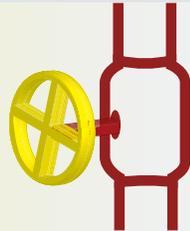
All exposed standpipes and sprinkler piping must be painted red. The law outlines specific exceptions, such as branch piping.

All buildings – no matter the size or occupancy – must comply with these new requirements.

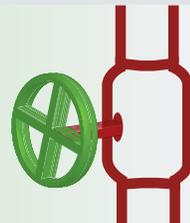
Dedicated standpipe valve handles must be painted **red**.



Combination standpipe valve handles must be painted **yellow**.



Dedicated sprinkler valve handles must be painted **green**.



### COLOR CODING CERTIFICATION

#### Buildings Under Construction

The special inspector will confirm compliance before the walls are enclosed.

#### Existing Buildings

Owners of buildings with exposed sprinkler piping and standpipes must comply and hire one of four types of contractors to certify the color coding:

- Licensed master plumbers;
- Licensed master fire suppression piping contractors;
- Registered design professionals; or
- People with the appropriate Fire Department Certificate of Fitness.

### PROOF OF COLOR CODING CERTIFICATION

The color coding certification must be kept on the premises at all times for Buildings and Fire Department inspection. Visit [nyc.gov/buildings](http://nyc.gov/buildings) for the certification form, available online in March 2010.

(over)



### PRESSURE TESTING

#### Local Law 63/09, effective 2/4/2010.

Freezing temperatures can damage a pressurized system. Compressors without air dryers generate moisture in the line, which can freeze. Exposed valves can also freeze – causing the system to depressurize and triggering the alarm.

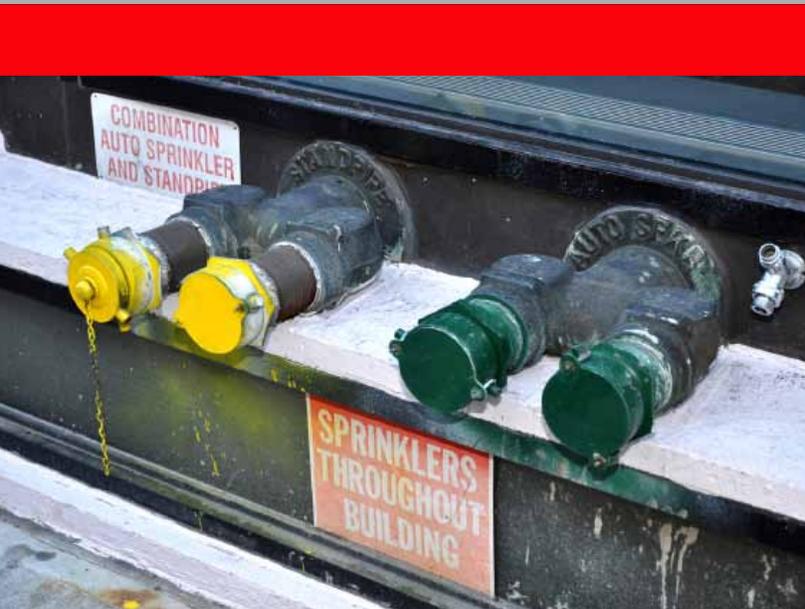
- New or Altered Sprinkler Systems: A licensed master plumber or licensed fire suppression piping contractor must conduct hydrostatic pressure testing.
- New or Altered Standpipe Systems: A licensed master plumber or licensed fire suppression piping contractor must conduct hydrostatic pressure testing. (Read Local Law 63/09 for limited exceptions in freezing conditions.)
- Removing Stories: A licensed master plumber or licensed fire suppression piping contractor must conduct hydrostatic pressure testing before work begins.
- New Buildings Under Construction: An initial standpipe hydrostatic pressure test must be performed when the building reaches 75 feet high; additional tests are required when the building reaches 175 feet high and every 100 feet thereafter.
- Enlargement Triggering a New Standpipe System or Addition to an Existing Standpipe System: A hydrostatic pressure test is required at every 75 feet in height added to the system.



### STANDPIPE PRESSURIZED ALARM SYSTEMS

#### Local Law 64/09, effective 2/4/2010.

- Vacant Buildings Being Demolished: Existing standpipes must be dry standpipes and have an air-pressurized alarm.
- New Buildings Higher Than 75 Feet: Temporary and permanent dry standpipes must have an air-pressurized alarm.
- Prior Notification for Scheduled Work: Contractors must notify the Fire Department before any planned alarm deactivation.
- Out of Service Standpipes: Contractors must notify the Fire Department.
- Site Safety Manager's Log: Alarm activations, inspections and repairs must be logged.
- Installation Applications: A registered design professional must file the application.
- Installation Permits: A licensed master plumber or licensed master fire suppression piping contractor *and* a licensed electrician must have a permit.



# LOWER ENERGY USE AND COSTS.

## REDUCE YOUR CARBON FOOTPRINT.

Saving energy and reducing cooling costs are a key part of Mayor Bloomberg's PlaNYC initiative launched in 2007. Dark-colored roofs absorb heat and increase cooling costs. By coating your roof white, a "cool roof" reflects heat away from the roof and keeps the building more comfortable. Cool roof coatings help roofs to last longer, increase the efficiency of air conditioning equipment and greatly reduce peak energy use to avoid brownouts or blackouts during hot summer months. Read more to learn about the NYC °Cool Roofs program and ways that you can be a part of the cool roof movement.

**"The threat we face from the climate crisis is unsurpassed and smart policies like installing cool roofs are one way that we are going to meet the challenge."**

- Former U.S. Vice President Al Gore

### COLLECTIVE BENEFITS OF COOL ROOFS

#### 1. Reduce The Urban Heat Island Effect

—Cool roofs reduce the urban heat island effect by reflecting the sun's heat and could reduce the City's temperature by up to 1°F.

#### 2. Reduce Peak Load Energy Demand

—A reduction of 1°F can significantly reduce peak energy demand, considerably reducing the risk of brownouts and blackouts.

#### 3. Improved Environmental Quality

—Reduce smog by lowering temperatures and energy demand.

#### 4. Energy Cost Savings

—On summer days, air conditioning can account for approximately 40% of daily electricity use. White coatings can reduce these costs by 10-30% on average.

# LOWER ENERGY USE AND COSTS.

## REDUCE YOUR CARBON FOOTPRINT.

### INDIVIDUAL BENEFITS OF COOL ROOFS

#### 1. Cost Savings from Reduced Energy Demand

—White rooftops can reduce the temperature of a roof by 30 °F.Reduced temperatures from white roofs could result in as much as50% savings on air conditioning costs in a 1-story building and 10% savings in a 5-story building.

#### 2. Cost Savings from Reduced Maintenance

—Roofs will last longer due to less heat damage. Air Conditionerunits will operate more efficiently and last longer.

### FREQUENTLY ASKED QUESTIONS

#### Q: What are Cool Roof Coatings?

A: Cool roof coatings are coatings (like a thick paint) that will be rolled onto existing flat roofs. The coatings are highly reflective, white, and are simply applied to existing roofing. Cool roof coatings reflect 70% to 90% of the sun's energy when newly installed.

#### Q: What risks do I face as a building owner?

A: The application of coating will not hurt the roof. In fact, the coatings can extend the life of the roof and the Heat, Ventilation and Air Conditioning (HVAC) systems on roof. Make sure to check your roof warranty before beginning coating.



#### Q: What types of roofs can receive a cool roof coating?

A: Suitable roof types include granule surfaces (white, grey or black), smooth asphalt (black or silvery finish), EPDM Rubber and smooth aluminum.

#### Q: What types of roofs are unsuitable for a cool roof coating?

A: Gravel roofs, spray foam, TPO, PVC, clay tile, wood shingles, slate and asphalt shingles. Additionally, roofs with a significant amount of pooling must be fixed before coating can be installed.

# LOWER ENERGY USE AND COSTS.

## REDUCE YOUR CARBON FOOTPRINT.

### **Q: What are the first steps if I want to coat my roof?**

A: You should first check with your roof warranty. Following, learn more about the coating that would be appropriate for your roof type.

### **Q: How does the coating process work?**

A: The process itself is very simple: roofs must be cleaned and then receive two layers of coating with at least 24-hours drying time between coatings. The coating must be dry before it rains in order to be effective. Coating also must be done when temperatures will be above 50 °F in order to be effective.

### **Q: How can I learn more about roof coating?**

A: To find out more information about coating resources, please contact the Community Environmental Center at 718-784-1444 or visit the Cool Roofs Rating Council at <http://www.coolbuildings.info>

## **IMPORTANT CONTACT INFORMATION**

To register to be put on a volunteer list for the spring coating season, please contact: Bets Radley, Volunteer Coordinator, Green City Force, (718) 923 1400 ext. 237

[bets@greencityforce.org](mailto:bets@greencityforce.org)

To learn more about whether your building would be eligible for a Cool Roof, contact: Lynne Serpe, Community Liaison, Community Environmental Center, (718) 784 1444 ext.120

[lsерpe@cecenter.org](mailto:lsерpe@cecenter.org)

If you are interested in becoming a sponsor of the NYC °Cool Roofs program, contact: Jenny Sharfstein, Mayor's Fund to Advance NYC 212-788-4258

[jsharfstein@cityhall.nyc.gov](mailto:jsharfstein@cityhall.nyc.gov)

To learn more about the science behind Cool Roofs (and Green Roofs as well), click the link below to view the New York City Department of Design and Construction's review of Cool (and Green) Roofs.

[http://www.nyc.gov/html/ddc/downloads/pdf/cool\\_green\\_roof\\_man.pdf](http://www.nyc.gov/html/ddc/downloads/pdf/cool_green_roof_man.pdf)

*NYC °Cool Roofs is a partnership of NYC Service, the Community Environmental Center and Green City Force. Cool roof coating, services and other supplies for the pilot program were donated by APOC a division of Gardner-Gibson and distributed by BradcoSupply Corp. The pilot program was funded by private donations to the Mayor's Fund to Advance NYC.*

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# °COOL IT YOURSELF

Saving energy and reducing costs are a key part of the PlaNYC initiative, launched in 2007 by Mayor Michael Bloomberg. Dark-colored roofs absorb heat and increase cooling costs while “cool roofs” reflect heat and keep buildings cooler and more comfortable. Cool roof coatings also:

- increase the efficiency of roof-mounted air conditioning equipment
- protect roofs against thermal expansion and UV radiation, making them more durable and longer-lasting, and
- decrease the risk of brownouts and blackouts during the warmer months by reducing peak energy use.



## STEP 1: Identify your roof's eligibility

The cool roof coating can be applied to a flat roof covered with smooth asphalt, EDPM Rubber or smooth aluminum.

## STEP 2: Check your roof's warranty

Before you coat, check current roof warranty to make sure that coating the roof will not void the warranty.

## STEP 3: Follow the forecast

You will need three days (72 hours) of rain-free weather to properly coat your roof. The temperature should be over 50° F for the coating to dry properly.

## STEP 4: Plan for safety

Safety is of utmost importance. Familiarize yourself with the building's roof. Be aware of any tripping hazards and always stay alert.

## STEP 5: Inspect and repair your roof

Your roof must be free of any blisters, cracks or peeling paint before you can begin to coat it. It is also a good idea to check for loose screws, poor drainage and any other issues that may need to be addressed before beginning the coating process.

## STEP 6: Measure your roof

The amount of coating needed is determined by the square footage of your roof. Use this number to calculate the amount of coating you need based on the manufacturer's directions.

## STEP 7: Clean your roof

Before you can begin coating your roof, you should clean and wash the surface using brooms and pressure washers. When washing the roof, pay attention to drainage and make sure there is no puddling.

## STEP 8: Grid your roof

Grid your rooftop into square sections to ensure the coating is applied evenly. Most coating products suggest gridding your roof into 100 square foot sections. Read the manufacturer's directions to determine how much area one container of coating material will cover.

## STEP 9: Coat your roof

Start coating the furthest away from the roof entrance and work backward. Be sure not to paint yourself into a corner. The first coat must dry overnight before applying a second.

## STEP 10: Clean your roof annually

To sustain your roofs coating, clean it once a year. This is also a good time to look for leaks, puddling or other issues that could damage your roof if left unaddressed.

# FREQUENTLY ASKED QUESTIONS

## Q: What is cool roof coating?

A: Cool roof coating is a highly reflective white membrane that is rolled or sprayed onto flat roofs. The coating reflects 70% to 90% of the sun's energy when newly installed. When you are deciding which coating product to purchase for your roof, look for coatings marked Energy Star, the industry standard for quality certification.

## Q: What types of roofs can be coated?

A: Suitable roof types include granule, smooth asphalt, EDPM Rubber and smooth aluminum. Roofs that are not suitable include gravel roofs, spray foam, TPO, PVC, clay tile, wood shingles, and slate and asphalt shingles.

## Q: What risks do I face as a building owner?

The application of coating will not hurt your roof. In fact, the coatings can extend the life of your roof as well as the heat, ventilation and air conditioning (HVAC) systems on the roof.

## Q: Will coating my roof significantly increase my heating bills in the winter months?

A: No. In winter, the roof does not provide a significant amount of heat for the building. While cool roof owners may pay slightly more to heat

their buildings during cold weather, the amount is usually minimal compared to the cooling energy savings during the summer.

## Q: Do I need a permit?

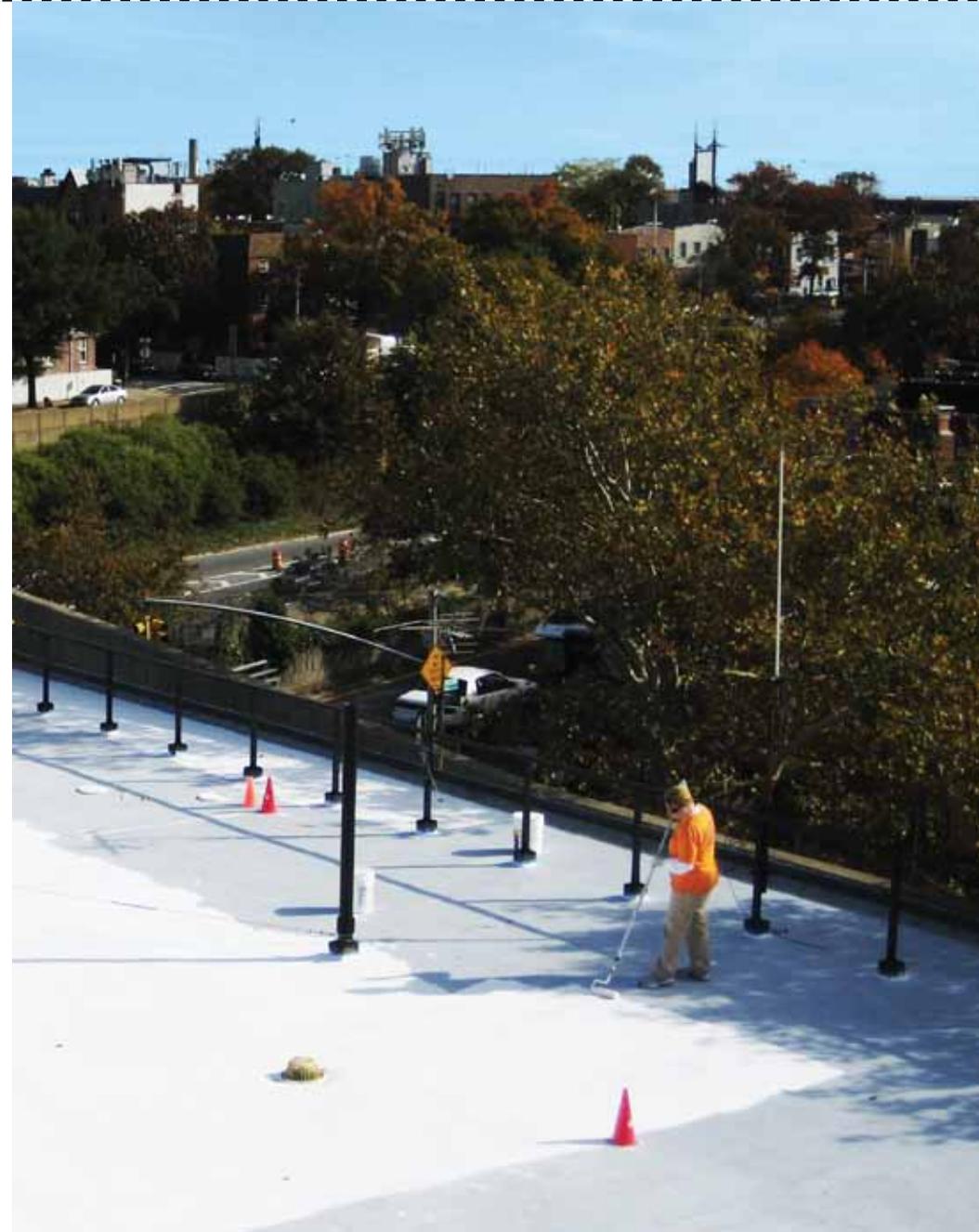
A: No. Make sure that the roof coating product you select is rated for white-roof use and won't void your roof's warranty.

## Q: Are there any new Building Code requirements that affect cool roofs?

A: The 2008 Building Code requires that 75% of the roof area must be coated white or rated as highly reflective by Energy Star. The following roof types are exempt from these requirements:

- Pitched roofs (25 % slope)
- Small setbacks
- Green (planted) roofs
- Landscaped recreation areas (walking surface paving must have a reflective, or "albedo," rating of at least 30)
- Existing buildings permitted before July 1, 2009.

If you would like more information, email us at [Coolroofs@buildings.nyc.gov](mailto:Coolroofs@buildings.nyc.gov).



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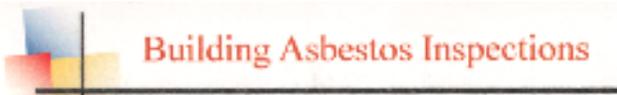
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