Dear Resident:

2016 Floodplain Management Plan (FMP) Annual Implementation Progress Report

The City of Los Angeles joined the National Flood Insurance Program (NFIP) in 1980, which made federally-backed flood insurance available to all City residents. The NFIP/Community Rating System (CRS) was implemented by the Federal Emergency Management Agency (FEMA) in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP requirements. Flood insurance premium rates are adjusted to reflect the reduced flood risk.

Since October 2005, the City has received a class 7 rating under CRS, which means the residents within FMEA-designated Special Flood Hazard Area(s) (SFHA) receive a 15% flood insurance premium discount and others in the City outside the SFHA receive a 5% discount.

As a participant in the NFIP, the City of Los Angeles produces a yearly Floodplain Management Plan (FMP) progress report. The FMP describes the progress and latest issues affecting the Floodplain Management Plan and floodplains of the city. It is highly encouraged that residents living within the City of Los Angeles participate as a stakeholder in the preparation of the FMP. Interested party can contact: Eng.nfip@lacity.org

Average Yearly Rainfall

According to the latest statistics from National Oceanic and Atmospheric Administration’s (NOAA) National Climatic Data Center, precipitation averaged across the Continental United States in 2015 was 34.47 inches, 4.53 inches above the 20th century average. This was the third wettest year on record. Only 1973 and 1983 were wetter. During both 1973 and 1983 strong El Niño conditions were present in the equatorial Pacific Ocean, similar to 2015. Over the 121-year period of record, precipitation across the U.S. has increased at an average rate of 0.16 inch per decade.

Per County of Los Angeles precipitation records for the 2015-16 water year (from October 1, 2015 to September 30, 2016), the Downtown Los Angeles (USC) gauge ended the water year with 6.88 inches of rain. This is about 52% below average rainfall of 14.28 inches.

Recent Activities (Continued from page 1)

Projects in Your County

In an on-going effort to provide the most up-to-date risk assessments and mapping information, the Federal Emergency Management Agency (FEMA) is currently working with State agencies, regional entities, tribes, and communities to update the flood hazard risk information and produce new digital Flood Insurance Rate Maps (FIRMs).

As a covered entity under Title II of the American with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.

Surge in Flood Insurance Policies Purchased in California in Anticipation of El Niño

According to data released in February 2016 from the Federal Emergency Management Agency, a 25 percent increase in the purchase of new NFIP policies was observed from August 31st through December 31 2015. This was the biggest increase since the NFIP was created in 1968. FEMA is crediting this increase to the anticipation of El Niño by the homeowners. More than 55,500 new flood insurance policies were purchased in California from August 31st to the end of 2015.

Although the agency does not directly correlate all NFIP claims this year to El Niño, FEMA has already seen 127 National Flood Insurance Program policyholders submit claims in California during January 2016 as compared to only 1 claim submitted in California for the same period during the previous year.

Please see the following link for additional information: http://www.insurancejournal.com/topics/national-flood-insurance-program/

FEMA Announces Reforms to National Flood Insurance Programs

The Federal Emergency Management Agency announced changes to the nation’s flood insurance program on May 23rd 2016, in response to complaints from Superstorm Sandy victims. The survivors had protested over the fact that private insurers participating in this program underpaid their claims and prolonged lawsuits.

The anticipated changes are supposed to translate into giving FEMA more oversight over how the insurance companies participating in this program deal with the claims of homeowners. This would take place through a restructuring of what’s known as “the arrangement” between the government and insurers. This reform is meant to simplify renegotiating 79 insurance firms’ contracts with FEMA.

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The NFIP is a federal program enabling property owners in participating communities to purchase protection against property losses due to flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents.

Flood insurance covers direct losses caused by surface flooding, including a river flowing over its banks, a lake or ocean storm (including tsunami and seiches), and local flooding.

There is a 30 day waiting period before the policy becomes effective.

There are two types of coverage: Structural and Contents. Structural coverage is for the walls, floors, insulation, furnance and other items permanently attached to the structure. Contents coverage, purchased separately, requires the contents to be in an insurable structure.

**Insurance Premium Discount**

Due to the City of Los Angeles’ active participation in the NFIP and CRS, new and renewed flood policies in SFHA continue to receive a 15% premium discount. Through the NFIP, flood insurance is available to all City residents who wish to purchase flood insurance regardless of their flood risk or flood history. Properties located outside the SFHA receive a 5% premium discount.

Insurance agents should use the latest Flood Insurance Manual in order to apply the discount automatically. This manual is available on the Web at:

http://www.fema.gov/flood-insurance-manual

**Flood Facts**

Everyone lives in a flood zone. Floods and flash floods happen in all 50 states. Most homeowners insurance does not cover flood damage. Just an inch of water can cost tens of thousands of dollars in damage to your property. A car can easily be carried away by just two feet of floodwater.

If you live in an SFHA or high-risk area and have a Federally backed mortgage, your mortgage lender requires you to purchase flood insurance outside of an SFHA.

There is no payback requirement.

Flood insurance policies are continuous, and are not non-renewed or cancelled for repeat losses.

Flood insurance reimburses you for all covered losses up to $250,000 for homeowners and $500,000 for businesses.

The average flood insurance policy costs about $650 per year.

For a $100,000 flood insurance coverage, your premium payment is about $400 a year ($33 a month).

**Disaster Assistance**

- Most forms of federal disaster assistance require a presidential declaration.
- Federal disaster assistance declarations are awarded in less than 50% of flooding incidents.
- The most typical form of disaster assistance is a loan that must be repaid with interest.
- The duration of a Small Business Administration (SBA) disaster home loan is approximately 30 years.
- The average Individuals and Households Program award related to flooding was less than $4,000.
- Repayment on a $50,000 SBA disaster home loan is $240 a month or $2,880 annually at 4% interest. This comes out to more than $8 dollars per day.

Over 5.1 million people currently hold flood insurance policies in more than 22,000 communities across the U.S. From 1978, the NFIP has paid over $52 billion for flood insurance claims and related costs (as of 2/25/16). Since the City of Los Angeles participates in the CRS, you can qualify for an insurance premium discount of up to 15%. For more policy and claim statistics, visit the National Flood Insurance Program at:

http://www.floodsmart.gov/floodsmart/pages/flood_facts.jsp

**Free Flood Information**

The City of Los Angeles provides free flood zone information. Copies of the Federal Emergency Management Agency Flood Insurance Rate Maps are available for review in all Bureau of Engineering district offices. For flood zone information and availability of elevation certificates, contact us by email at Eng.nfip@lacity.org, or call (213) 485-4820 (call back time is within 3 business days). This information is also available to you directly through the Internet at:

http://navigate.lacity.org/navigatefa

**Investigation of Drainage Deficiencies**

Request a drainage investigation when the water in the streets overtops the curb by calling your local Bureau of Engineering (BOE) District office:

- Harbor District, (310) 732-4691
- West L. A., (310) 575-8617
- Valley District, (818) 374-4643
- Central District, (213) 485-1604

If requested, a staff engineer from BOE will visit your property to review your flood problem and explain ways to stop flooding or prevent flood damage. Call the NFIP info line at (213) 485-4820. These services are free.

**Illegal Dumping**

Used motor oil, discarded food, trash and other debris are just some of the items routinely dumped into storm drains, which eventually drains out into the ocean. Additionally, catch basins filled with debris can create unhealthy conditions in residential neighborhoods by becoming a breeding ground for rats, roaches, and other nuisances.

An ordinance passed in 1999 (LAMC Sec 64.70) makes it illegal to dump or discharge trash, debris, chemicals, contaminated water, or any other liquid or solid material into the storm drain system. Violators are subject to stiff fines and criminal prosecution.

Residents are encouraged to report illegal dumping by calling the Stormwater Program at (800) 974-9794. Please note: after 5:00PM and before 7:00AM Monday through Saturday and all day Sunday the (800)-974-9794 will roll over to the City’s 311 number. More information are available at:

http://www.lastormwater.org/about-us/contact-us/

**Flood Protection Library**

Additional information regarding flood protection, floodplain management and the NFIP can be found through the FEMA web site at: www.fema.gov
DRAINAGE SYSTEM MAINTENANCE

The original storm drain system was developed in the 1930s by the Army Corps of Engineers. As the City began to grow rapidly in the 1920s and 1930s, rainfall that was once absorbed by miles of undeveloped land began to run off the newly paved and developed areas, increasing amount of water flowing into Los Angeles rivers and local creeks. These waterways could not contain the increased amount of water and the region experienced massive flooding. Because of this, the Army Corps of Engineers lined the Los Angeles River and Ballona Creek with concrete and started the development of an underground urban drainage system. As Los Angeles continued to grow, a complex drain- age system developed.

Today, the City’s storm drain system total 35,000 catch basins, over 1,500 miles of underground pipes, and 100 miles of open channels. Runoff from approximately 1,060 basins, over 1,500 miles of underground pipes, and 100 miles of open channels. Runoff from 64.07, 64.08, and 64.09 prohibit anything that obstructs or blocks stormwater runoff. It’s important to our environment and the native riparian area vegetation along stream systems. The Los Angeles Municipal Code Sections 64.07, 64.08, and 64.09 prohibit anything that obstructs or blocks stormwater runoff. It’s important to our environment and the native riparian area vegetation along stream systems. It is the responsibility of the City to keep the storm drain system in an operable condition by clearing catch basins as needed. Runoff from approximately 1,060 basins, over 1,500 miles of underground pipes, and 100 miles of open channels. Runoff from 64.07, 64.08, and 64.09 prohibit anything that obstructs or blocks stormwater runoff. It’s important to our environment and the native riparian area vegetation along stream systems. Los Angeles Municipal Code Sections 64.07, 64.08, and 64.09 prohibit anything that obstructs or blocks stormwater runoff. It’s important to our environment and the native riparian area vegetation along stream systems. If you want to know more about our storm drain sys- tem, please log on to:

http://www.lastormwater.org

Flood Prevention Tips

- ■ Keep drainage areas (ditches, swales, small channels) free of debris.
- ■ Consult an engineer to design a permanent water/flood debris control device, if needed.
- ■ Ensure that drainage pipes within your property are cleaned and work properly.
- ■ Landscape slope areas with plants suitable for fire re- tardant and erosion control.
- ■ Report clogged catch basins to request cleaning and flooding waters overtopping the curb for engineering in- vestigations.

Typical Flood Problems

Mudslides from slope failures are also common problems. If ero- sion on your property is a problem or if others have change the normal drainage patterns, you can call (213) 495-4820 to re- quest an investigation, or information on how to protect your home. Sandbags are provided free during the rainy season (please refer to the City Services Phone List provided).

Street Drainage Problem

Flooding may occur when street runoff enters private property. If the property is located on a street sump area (lowest point of the nearby streets), or if the building pads on these properties are lower than the street level, and/or the driveway is sloped toward the house and garage, the street flow can pond. Drain- age problems can be caused by undersized or broken City storm drains, or clogged City catch basins. If this problem ap- plies to you, you can call the Bureau of Engineering to request a drainage investigation, and the Bureau of Sanitation at (800) 974-9794 to request that the catch basins be cleaned or ob- structions removed from City drains.

On-Site Drainage Problem

When private drain inlets or v-ditches are inadequate or be- come plugged with yard debris, water ponds within the property and cannot drain to the street. Underground garages with insuf- ficient drainage are also commonly flooded.

Other Hazards

These properties have site-specific problems that need special and individual attention. For example:

- Buildings damaged by coastal flooding exacerbated by a storm drain failure;
- Catastrophic rains far exceeding drain capacity;
- Buildings built too low into the bed of a natural water- course;
- Groundwater seepage enters the lower level of the house, flooding the basement after heavy storms.

Mandatory Purchase Requirement

The mandatory flood insurance purchase requirement applies to all forms of federal or federally related financial assistance for buildings located in an SFHA. A home lo- cated in a SFHA is assessed the annual cost of insuring flood- ing flood damage during the term of a 30-year mortgage.

This requirement affects loans and grants for the pur- chase, construction, repair, or improvement of any public- ly or privately owned building in the SFHA, including ma- chinery, equipment, fixtures, and furnishings contained in such buildings.

The requirement also applies to secured mortgage loans from financial institutions, such as commercial lenders, savings and loan associations, savings banks, and credit unions that are regulated, supervised, or insured by Fed- eral agencies such as the Federal Deposit Insurance Cor- poration and the Office of Thrift Supervision. It also ap- plies to all mortgage loans purchased by Fannie Mae or Freddie Mac in the secondary mortgage market.

How It Works

Before a person can receive a loan or other financial as- sistance from one of the affected agencies or lenders, there must be a check to see if the building is in an SFHA. SFHA is defined as a flood plain having a 1% annual risk for flooding. These areas are indicated on the Digital Flood Insurance Rate Map (DFIRM). It is shown as one or more zones that begin with the letter “A” or “V.”

Many lenders and insurance agents also have copies of the DFIRM for the City of Los Angeles. It is the lender’s responsibility to check the DFIRM to determine if the build- ing is in an SFHA. If the building is in an SFHA, your lend- er is required by law to require you to purchase a flood insurance policy on the building. Federal regulations re- quire purchase of structural insurance coverage equal to the amount of the loan or the maximum amount available from the NFIP, whichever is less. The maximum amount available for a single-family house is $250,000 for struc- ture and $100,000 for its contents.

The mandatory purchase requirement does not affect loans or financial assistance for items that are not covered by a flood insurance policy, such as vehicles, business expenses, landscaping, and vacant lots. It does not affect loans for buildings that are not in the SFHA, even though a portion of the lot may be flood prone. While not mandated by law, a lender may require a flood insurance policy as a condition of a loan for a property in any zone on a DFIRM.

The most important thing you can do to protect yourself from financial loss is to have flood insurance. Floods can also pose life-threatening risks to you and your family, so be smart. Be prepared for anything nature sends your way. Federal disaster assistance is usually a loan that must be paid back with interest.

If you live in a low-to-moderate-risk area and are eligible for the Preferred Risk Policy (PRP), your flood insurance premium may be as low as $146 a year, including cover- age for your property’s contents.

You are eligible to purchase flood insurance because the City of Los Angeles participates in the NFIP. It takes 30 days after purchase for a policy to take effect, so it’s im- portant to buy insurance before floodwaters start to rise. All claims and expenses of the NFIP program are funded by insurance premiums, not tax dollars.

Financial Assistance

Financial assistance includes loans and grants from agencies such as the Department of Veterans Affairs, Farmers Home Administration, Federal Housing Admin- istration, Small Business Administration, and FEMA.

FEMA Grant Assistance

Grant assistance is provided to those who have suffered damage and loss from disasters occurring in that state. When there is a presidential declaration, FEMA begins accepting assistance applications for a period of time that varies depending on the scope and magnitude of the dis- aster, as well as affected areas and amendments to the governor’s declaration request. Those applicants may be eligible for FEMA grant money. This disaster assistance does not have to be repaid and is to be used for vital ex- penses that cannot be managed via other means.

Increased Cost of Compliance (ICC) Cover- age

If your property is damaged by flood, you may be required by law to bring your home up to community and/or state floodplain management standards. If you have NFIP insur- ance, and your home has been declared substantially damaged by your community, ICC coverage is provided to cover up to $30,000 of the cost to elevate, floodproof, de- molish, or relocate your property. ICC coverage is in addi- tion to the coverage you receive to repair flood damage; however, the total of insurance under a policy may not exceed $250,000 for residential buildings and $500,000 for non- residential buildings.

ICC coverage does not apply to substantial improvements unless a structure is substantially damaged due to flood- ing. More information on ICC can be found at:

http://www.fema.gov/media-library/assets/documents/1130
FLOOD ZONE Map

The flood zone map of the City of Los Angeles is included as an insert of this newsletter. If you want to verify whether or not your property is within a flood zone, you can log on at: http://navigatela.lacity.org or email us at Eng.nifp@lacity.org or call (213) 485-4820.

The Bureau of Engineering keeps copies of the DFIRM for the City of Los Angeles. If you have recently purchased or re-financed your home, your lender may require you to obtain a flood insurance policy. Whether you own or rent the property you are in, you need to know where it is located with the flood designation in order to take precautions that protect your interests. The City of Los Angeles prepares annual mailing to provide you with information that may help you understand and reduce the flood risk surrounding your home. If you have questions regarding this publication, you can email the City of Los Angeles at Eng.nifp@lacity.org or call (213) 485-4820.

What Can Homeowners Do if They Believe Their Homes are Erroneously Included in the Flood Zone?

If a homeowner can show that the home is located above the Base Flood Elevation (BFE) he/she can apply for a map amendment by completing an application for a Letter of Map Amendment (LOMA) and submitting this request to FEMA. A LOMA application (known as MT-EZ) can be obtained on line at: http://www.fema.gov/forms

FEMA’s review is free to individual property owners who apply for single LOMA review. However, a Registered Profession- al Engineer or Licensed Land Surveyor will need to be hired by the homeowner to certify the elevation information in the application. More information is available by accessing FEM- A’s web site at: http://www.fema.gov/letter-map-amendment-letter-map-revision-based-filter-process

If you would like assistance in completing a LOMA application from a Map Specialist, you may call the FEMA Map Service Center toll free at (877)-FEMA-MAP or (877)-336-2827. Please note that the City does not approve or deny any map amendment requests since the FIRMs are published by a fed- eral agency.

Building or Remodeling in the Flood Zone

All developments in the floodplain, not just construction of buildings, need local permits. The Lowest Finished Floor (LFF) of all new buildings and ex- isting buildings undergoing a major renovation (including remodeling) located in SFHA must be one foot higher than the expected Base Flood Elevation (BFE) per City Ordinance No. 17056. Certain flood hazard areas are considered floodways or pas- sages to the 100-year flow, therefore, no new development will be allowed. Other areas that experience high velocity flow and heavy debris loads may require special design considerations.

No basements for residential structures located in the flood zones will be permitted in new buildings. Substantial improve- ments and substantial damage residential projects (including multiple residential units) will be required to seal any existing basements.

Mendeville Canyon is considered a Flood Risk Area and de- velopers are likely to be required to obtain a watercourse per- mit per Special Order SD003-1005. A copy of the Special Order can be obtained by emailing a request to Eng.nifp@lacity.org.

If your property is in the flood zone, please contact the City’s NFIP information line at (213) 485-4820 or email us at: Eng.nifp@lacity.org before designing your project.

What are Substantial Improvements?

Any reconstruction, rehabilitation, addition, or other im- provement of a structure, the cost of which equals or ex- ceeds 50 percent of the market value of the structure before the start of the construction is a substantial improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed.

The term does not, however, include either:

■ Any project for improvement of a structure to correct ex- isting violations of state or local health, sanitation, or safety code specifications which have been identified by the lo- cal code enforcement official and which are the minimum necessary to assure safe living conditions.

■ Any alterations of a "historic structure," provided that the alteration will not preclude the structure's continued des- ignation as a "historic structure."

Floodplain management requirements apply to new con- struction and substantial improvements.

What is a Floodplain and Special Flood Hazard Areas?

Floodplain is defined as any land area susceptible to being inundated by flood waters from any source.

SFHAs are areas subject to inundation by a 100-year flood, a flood that has a 1-percent or greater chance of being equaled or exceeded during any given year. They are shown on the DFIRMs as zones labeled with the letters A, AO, AH, A1-A30, AE, A99, AR, AA, AR/AR, AR/A, AR/A1-A30, AR/A, V, VE and V1-V30. In an SFHA, there is at least a 1 in 4 chance of flood- ing during a 30-year mortgage. All home and business own- ers in these areas with mortgages from Federally-regulated or insured lenders are required to buy flood insurance.

For a more thorough explanation of a Floodplain and SFHA please check out:

http://www.fema.gov/floodplain-management/flood-zones

The most visible features of the City of Los Angeles are the 70 miles of open flood control channels, which include the Los Angeles River, Dominguez Channel, and Ballona Creek. They serve to collect rainwater from most of the City’s storm drain systems and move the water out to either the Santa Monica Bay or San Pedro Bay. When it rains, it fills up with fast flowing water that can kill anyone who tries to reach safety or escape in it. It is illegal to enter the flood control channels at anytime.

What if I see someone fall into the channel?

Immediately call 911. Do not go into the channel to try to save them. Don’t try to save them using a rope as the force of the water will pull you in. Find some sort of flotation device (such as foam chest, foam cushions, any unattached object they can use to hang on.

What if I fall in?

Remain calm, float on your back with your head up from the water. Use your feet and legs to steer yourself clear of ob- structions. If a large obstacle is blocking the channel, try to flip over so you can see where your next step is. Do not attempt to swim against the current. Crawl over the top of it. People die in swift water when they get pinned or trapped against debris. Never finding yourself in this situation is the best way of surviving swift waters.

■ Do not walk through flowing water.

■ Do not drive through a flooded area.

■ Stay away from power lines and electrical wires.

■ If flooded, have your electricity turned off by the Department of Water and Power.

■ Look out for animals, especially snakes.

■ Be alert for gas leaks.

Emergency Alert System

On January 7, 2010, Los Angeles County officials launched an Emergency Alert System, similar to reverse 911, that will notify residents and businesses by phone, text or e-mail about dangerous conditions in their area. Residents and businesses will be contacted if they are in an emergency like wildfires or floods near their home or offices, and tell them whether evacuation is necessary.

The Sheriff Department's Emergency Communications Cen- ter will be responsible for sending out the alerts. Members of the public who would rather receive the emergency notifi- cation via their cell phone or e-mail account will have to reg- ister that information through the www.alert.lacounty.gov web site.

You will also have the option of registering your fax numbers and voice-over Internet Protocol (IP) lines. But only one phone number or e-mail address may be entered per street address. If you do not answer, the sys- tem will be re-dialed twice. If it reaches an answering ma- chine, the system leaves a message. The system will also have the ability to detect and communicate with telecommu- nication devices for the deaf.

Tsunami - What to Do

Tsunamis (pronounced soo-ná-mees), also known as seis- mic sea waves (mistakenly called “tidal waves”), are a se- ries of enormous waves created by an underwater disrup- tion such as an earthquake, landslide, volcanic eruption, or meteorite. A tsunami can move hundreds of miles per hour in the open ocean and smash into land with waves as high as 100 feet or more. From the area where the tsunami ma- rine originates, waves travel outward in all directions. Once they reach the shoreline, it builds in height. Topography of the coastline and the ocean floor will influ- ence the size of the wave. There may be more than one wave if the succeeding one may be larger than the one before. That is why a small tsunami at one beach can be a giant wave a few miles away. All tsunamis are potentially dangerous, even though they may not damage every coastline they strike. A tsunami can strike anywhere along most of the U.S. coastline. The most destructive tsunamis have occurred along the coasts of California, Oregon, Washington, Alaska, and Hawaii. Earthquake-induced movement of the ocean floor most often generates tsunami- es. Other causes include landslides, volcanic eruptions, and near-shore, the first wave in a series could reach the beach in a few minutes, even before a warning is issued. Areas are still at risk if a tsunami occurs after less than 25 feet above sea level and within a mile of the shoreline. Drowning is the most common cause of death associated with a tsunami. Tsum- a- waves and the receding water are very destructive to structures in the run-up zone. Other hazards include flood- ing, contamination of drinking water, and fires from gas lines or ruptured tanks.

What to Do Before and During a Tsunami

The following are guidelines for what you should do if a tsunami is likely in your area:

1. Turn on your radio to learn if there is a tsunami warn- ing.

2. If an earthquake occurs and you are in a coastal area move inland to higher ground immediately and stay there.

3. Stay away from the beach. Never go down to the beach to watch a tsunami come in. If you can see the waves you are too close to escape it.

CAUTION - If there is noticeable recession in water away from the shoreline this is nature’s tsunami warning and it should be heeded. You should move away immediately.

What to Do After a Tsunami

The following are guidelines for the period following a tsu- namis:

1. Stay away from flooded and damaged areas until offi- cials say it is safe to return. If flood waters have the ability to detect and communicate with telecommunica- tion devices, also known as seis- 2. Stay away from debris in the water; it may pose a safe- tอาמee in the future.

3. If a major earthquake or landslide occurs close to your posseseees, also known as seis- 4. If you see someone in the water you can do not drive through a flooded area.

5. If you see debris in the water, you can do}
### DOCUMENTS YOU SHOULD HAVE BEFORE MAKING YOUR APPOINTMENT FOR FLOOD ZONE CLEARANCE

Appointment is required. Please call (213) 485-4820 or e-mail ENG.NFIP@acity.org to make your appointment.
(For all cases, please have your permit application PCIS number ready before you make your appointment.)

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<tr>
<th>SUBSTANTIAL IMPROVEMENT</th>
<th>NON-SUBSTANTIAL IMPROVEMENT</th>
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<tr>
<td>1) Two (2) sets of plans, including floor plans, site plans, cross-section/elevation views. Plans must be signed and stamped by a licensed civil engineer or architect.</td>
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<tr>
<td>2) Topographic survey with footprint of proposed structure on existing site (undisturbed project site) stamped, dated and signed by licensed surveyor. If Base Flood Elevation (BFE) is not known, Survey must reference 1988 Datum Reference and City Benchmark Map with ID number.</td>
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<td>3) Site plan or survey should show proposed structure with elevation information of lowest finish floor and adjacent grounds. If Base Flood Elevation (BFE) is unknown, it will be determined from the highest grade adjacent to the improvement, plus the flood depth expected. The minimum finish floor elevation will be the BFE plus one foot for freeboard.</td>
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<td>4) Plans must show waterproofing for materials susceptible to water damage below the minimum required finish floor elevation (FFE). Metal, concrete, cement and masonry are considered to be waterproof. Flood certificate will be required after construction for commercial projects.</td>
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<td>5) Plans must also show flood venting at ground level based on the ratio of one square inch of venting per one square foot of additional improved space of building. The bottom of the vent must be within 12 inches from the ground level.</td>
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<td>6) If existing walls are to be removed as part of the improvement, the existing floor must be raised where the addition joins the existing structure.</td>
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<td>7) Any additional information such as documentation or calculations confirming that new or improved structure will withstand potential flooding such as (but not limited to):</td>
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<td>- hydraulic and hydrologic calculations</td>
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<td>- FEMA-established calculations for hydrostatic, hydrodynamic and buoyancy forces</td>
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<td>- Written correspondence from any government agency confirming approval of improvement within an agency easement.</td>
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<td>- Structural plans and calculations wet-stamped and signed with original signature of a licensed civil or structural engineer.</td>
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### SCOPE OF PROJECT

If you contend that your improvements are less than 50% of the appraised value of the existing structure, you will need to bring the following documents to your appointment for verification.

1) Recent appraisal of existing structure by certified appraiser dating from no more than twelve months ago. County Assessors tax records may be used in lieu of an appraisal report.

2) Cost estimate from contractor, with breakdowns for labor, material, profit and overhead. (Material costs must be further broken down by unit cost and quantity of each type of material).

### COMMERCIAL PROJECTS WITH SUBGRADE STRUCTURES

In addition to the documents listed on the left, you must submit an emergency plan for flooding and a covenant agreement attached to the property.

### LETTER OF MAP AMENDMENT (LOMA)

If you believe that your project does not sit within a floodplain, you must file a Letter of Map Amendment (LOMA) with FEMA, which approves your petition. Issuance of a LOMA eliminates the Federal flood insurance purchase requirement for Federal or federally backed financing, but not necessarily for private mortgage lenders.


### LETTER OF MAP REVISION (LOMR)

If you believe that the floodplain boundary is incorrect and wish to request a re-drawing of the boundary, you must file a LOMR with FEMA (or a Letter of Map Revision – Fill [LOMR-F] for a revision based on increased elevation of property due to certified fill). The LOMR application should include, but is not limited to, calculations specified on the application. The Stormwater Engineer can guide you in preparing the LOMR, if necessary. However, please review [http://www.fema.gov/national-flood-insurance-program-2/letter-map-revision](http://www.fema.gov/national-flood-insurance-program-2/letter-map-revision) before making an appointment.