

Improving the Stormwater Development Code

City Council Workshop
October 19, 2020
Streets & Stormwater Department



Background

October 17, 2007: City enacts Section 16-115 creating a stormwater development code for properties not covered by the State development regulation.

2007 GOALS

1. Protect existing low-lying private property;
2. Compliment and support the City's stormwater management system;
3. Provide pre-treatment of stormwater thereby helping the City protect receiving waters.

Background Continued

2008 - 2020:

- Estimated 1,700 properties constructed under the new code;
- Estimated 800,000 cubic feet of stormwater retention and detention under the new code;

Background Continued

City Efforts to Improve Flood Protection and Stormwater Quality

2007 SW Master Plan Update: \$79M Projects & Programs

2007 – 2009: \$5.7M expansion of the Basin III (Old Naples) SW system

2008 – 2011: \$3.7 expansion of the Basin V SW system

2010: \$3.8M upgrade of the Cove Stormwater Pump Station

2013: \$3.9M upgrade of the Public Works SW Pump Station

2014: \$1.1M upgrade of the Port Royal SW Pump Station

Background Continued

City Efforts to Improve Flood Protection and Stormwater Quality

2018 SW Master Plan Update: \$60M Projects & Programs

2018 - 23: \$25M Basin II Beach Outfall Removal Projects

2015 – 2025+: \$30M Lakes Restoration Projects

2019 – 2025+: Basin Assessments & Improvement Projects

Background Continued

2002- 2007: Development Boom

Dec. 2007 – Jun. 2009: The Great Recession

2010 – 2020: Steady Increase in Development/Economy

2020 - ?: Pandemic (Resilient Economy & Real Estate Market)

Background Continued

Water Quality Focus

2018

- Salt Water Karenia Brevis = Red Tide
- Fresh Water (Lakes) Cyanobacteria = Harmful Algal Blooms
- Tourism, Economy, Quality of Life



2020 And Beyond...

Public / Private Partnership: Update SW Development & Utility Fee Code

9 Goals = Code Amendments

Sec. 16-51

Sec. 16-115

Sec. 30-340

Sec. 30-8

Sec. 50-76

Public Involvement

- Hosted:
 - video roundtable meeting with the CBIA on August 25th
 - video webinar for architects, engineer, and POA presidents on September 9th
 - video meeting with The Conservancy of Southwest Florida on September 15th and a follow up phone call on October 6th
 - Correspondence with the Naples Historical Society
 - FDEP guidance towards EPA Model Ordinance for Illicit Discharge Code
- Follow-up video roundtable meeting with the CBIA on September 24th
- Posted all information and updates on www.naplesgov.com
- Sent group emails to contractors, architects, engineers, and POA presidents:
 - August 24th, 31st, September 8th, 18th, and 23rd

Next step: PAB

www.naplesgov.com

Goal #1

The Goal:

- Increase the number of properties with stormwater management systems to reduce flooding and improve water quality throughout the City.

To Achieve the Goal:

- Revise the definition for re-development, as found in the Code of Ordinances Section 16-51.- Definitions.

Existing Code Wording

Section 16-51.-Definitions

Re-development is any construction activity on a site where the aggregate of actions and/or costs to reconstruct, modify, alter, or improve the property, whether in one phase or in multiple phases, are anticipated to do any of the following: (1) increase the appraised value of the property more than 50 percent of its current appraised value; (2) replaces the existing building or reconstructs more than 50 percent of the area under existing roof; (3) raises more than 50 percent of the existing finished floor; or (4) modifies the existing site grading sufficiently to warrant concern that the new activities could create problems for offsite or adjacent property.

Proposed Change #1

Section 16-51.-Definitions

- *Re-development* is any construction activity on a site where the aggregate of actions and/or costs to repair, reconstruct, rehabilitate, add to, modify, alter, or improve a building, structure, or property, whether in one phase or multiple phases, are anticipated to do any of the following: (1) increase the appraised value of the property more than 10 percent of its current appraised value; (2) replace the existing building or reconstruct more than 25 percent of the area under the existing roof; (3) raise more than 10 percent of the existing finished floor of a structure; (4) submit a site grading plan application that modifies the existing site grading more than 50 percent; or (5) increase the impervious area of the property by greater than 15 percent. If the structure has sustained substantial damage, any repairs are considered re-development, regardless of the actual repair work performed.

Proposed Change #1 (continued)

Re-development does not include:

- (1) Any project(s) for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.
- (2) Any alteration(s) of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

Goal #2

The Goal:

- Capture additional site runoff and reduce flow to the public stormwater system.

To Achieve the Goal:

- Increase required retention/detention storage volume to one inch and dry detention storage volume to two and one-half inches, as found in the Code of Ordinances Section 16-115 (a) (B) and Section 16-115 (a) (B) a).



Existing Code Wording #2

Section 16-115 (a) (B) and Section 16-115 (a) (B) a)

. . . under no circumstances will the design storage volume be allowed to be less than one-half inch of retention storage volume nor less than 1.25 inch of dry detention storage volume (based on total site area). The following special conditions shall apply in meeting the above standards: a) on single-family lots no more than one-half inch of detention or retention shall be stored underground in vaults, exfiltration pipes, or french drains;

Proposed Change #2

Section 16-115 (a) (B) and Section 16-115 (a) (B) a)

- Under no circumstances will the design storage volume be allowed to have less than one inch of retention storage volume, nor less than two and one-half inches of dry detention storage volume (based on total site area within the bounded property limits). The following special conditions shall apply in meeting the above standards: a) on single-family lots, no more than one inch of detention or retention shall be stored underground in vaults, exfiltration pipes, or french drains; b) retention and exfiltration systems shall be built over permeable materials to allow for percolation (compacted limerock, and similar materials, used to support structures are not considered permeable);

Goal #3

The Goal:

- Capture additional site runoff from impervious areas and encourage permeable greenspace.

To Achieve the Goal:

- Include rainfall runoff from roof drains in the water quality calculations and disregard permeable greenspace area from the water quality calculations, as found in the Code of Ordinances Section 16-115 (a) (B).



Existing Code Wording #3

Section 16-115 (a) (B)

b) rainfall runoff from roof drains can be disregarded from the water quality calculations (GOAL "B") but not from the conveyance calculations (GOAL "A") since roof water is not a major source of pollutant concern but it is a major concern for release into the public system for flooding considerations. Directly connected impervious area (DCIA) is discouraged for purposes of GOAL "A";

Proposed Change #3

Section 16-115 (a) (B)

- c) site designs are encouraged to maximize permeable greenspace areas and minimize impervious surface areas;
- d) the permeable greenspace area of a site may be disregarded from the water quality calculations (GOAL "B"), but not from the conveyance calculations (GOAL "A"), since permeable greenspace may reduce stormwater pollutant loads, but is a concern for potential flooding if released into the public system;
- e) pervious and permeable pavements may be used in the design of stormwater management systems, but shall not be disregarded from the water quality volume calculations or the conveyance calculations;

Estimated Impacts

- In 10-years, Citywide SW storage volume is estimated to increase $\frac{1}{2}$ million cubic feet above what the current criteria provides for; thereby holding back an additional 3.74 million gallons of stormwater per storm event.
- As noted in Basin IV's assessment, this provides a measurable difference in flood protection and the City's drainage level of service.
- Provides incentive to increase pervious greenspace.
- The percentage of a SW system's construction cost to the property's market value ranges from 14.5% in River Park East to 0.2% in Port Royal and Old Naples.

Goal #4

The Goals:

- Improve the quality of runoff from private property.

To Achieve Goals:

- Strengthen the requirements for the re-establishment and maintenance of swales as found in the Code of Ordinances Section 16-115 (b) (2).



Existing Code Wording #4

Section 16-115 (b) (2)

Establishment, re-establishment or maintenance of swales within the abutting city street right-of-way in accordance with the city's right-of-way standards handbook.

Proposed Change #4

Section 16-115 (b) (2)

- (2) Establishment, re-establishment, or maintenance of swales within the abutting City street right-of-way in accordance with the City's Right-of-Way Standards Handbook. The restoration design and details of swales within the right-of-way shall be shown on the plans. An authorized representative of the City shall approve the design of swales and driveways within the right-of-way prior to construction. A City representative shall inspect and approve the construction of swales and driveways within the right-of-way prior to issuance of a certificate of occupancy. New or replacement driveways shall conform to the adjacent elevation(s) and grade(s) of the existing right-of-way swale, unless unimpeded and easily maintained conveyance systems can be designed through a driveway above existing swale grade.

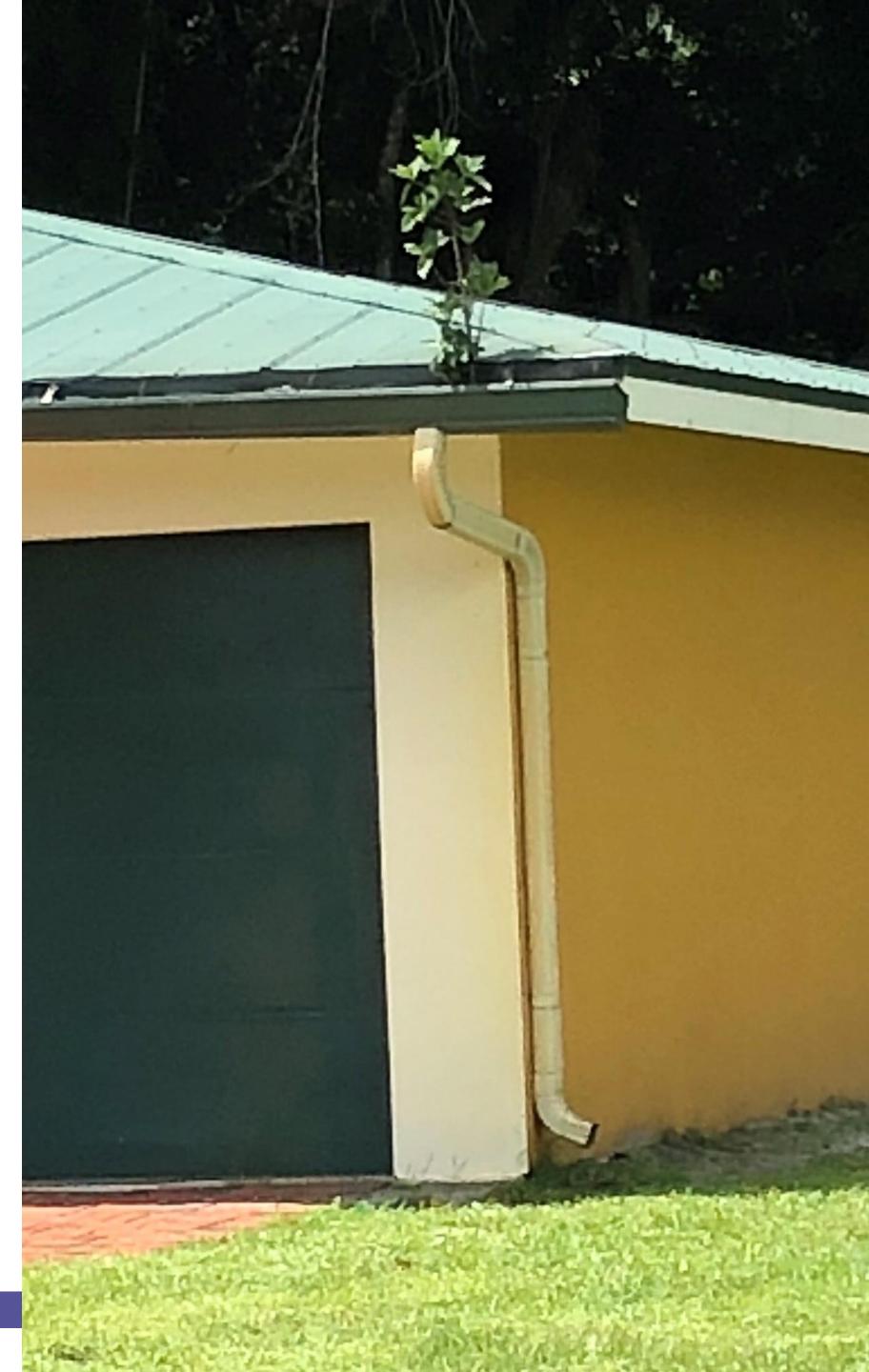
Goal #5

The Goals:

- Protect adjacent properties from stormwater impacts.
- Capture and treat roof runoff through the on-site stormwater management system.

To Achieve Goals:

- Require roof drainage to be directed to the on-site stormwater management system. New language is proposed for the Code of Ordinances Section 16-115 (b) (4).



Existing Code Wording #5

Section 16-115 (b) (4)

(4) Roof gutters are required as an erosion control technique that also follows the philosophy of reducing DCIA and shall be installed on all buildings. However, in special cases, where the side yard widths are greater than ten feet, the building official may allow an exemption as long as the roof directs less than 25 percent of the roof runoff to a side yard area, and erosion control is adequately addressed.



Proposed Change #5

Section 16-115 (b) (4)

- (4) Roof gutters are required as an erosion control technique, a means to prevent stormwater from adversely affecting adjacent properties, and a means to convey stormwater to the site's stormwater treatment system. If the building is ten feet or less from the property line, roof gutters shall be installed on the sides of buildings facing the side lot lines. If the building is greater than ten feet from the property line and gutters are not installed, the total volume of roof top runoff directed to the side yard area shall be less than 25 percent of the total roof runoff and erosion control must be adequately addressed. Roof gutters shall be directed to the stormwater management system designed for the site. All roof gutters shall be appropriately sized for the rooftop receiving area. Roof gutter design calculations may be required upon request by the City during the building permit application process and during City site inspection.



Goal #6

The Goal:

- Capture, treat, and minimize the volume of stormwater runoff from impermeable areas within the front yard.

To Achieve the Goal:

- Limit impermeable areas in front yards and require runoff from impermeable areas to be directed to the on-site stormwater management system. New language is proposed for the Code of Ordinances Section 16-115 (b) (5).



Existing Code Wording #6

Section 16-115 (b) (5)

(5) Streets, driveways and sidewalks shall be designed to minimize potential for increasing the runoff from private property to the city's stormwater system.

Proposed Change #6

Section 16-115 (b) (5)

(5) Streets, driveways, and sidewalks shall be designed to minimize potential for increasing the runoff from private property to the City's stormwater system. Runoff from impermeable areas in the required front yard shall be directed to the on-site stormwater management system. Driveways and sidewalks within the required front yard shall be limited to a maximum of 30 percent of the area. Plantings within the required front yard shall meet the minimum, according to Section 50-76.

Goal #7

The Goal:

- Encourage permitted stormwater management systems to be properly operated and maintained.

To Achieve the Goal:

- Revise the Code of Ordinances Section 30-340 to:
 - Eliminate credits to the utility fee for meeting development requirements;
 - Establish a new fee credit criteria to be provided by permitted water management systems;
 - Establish a new surcharge criteria for improperly managed, negatively altered, and/or deficient stormwater management systems.



Existing Code Wording #7

Section 30-340. - Credit policy for approved stormwater management systems credits

- (a) Properties that currently operate and maintain an approved stormwater management system that is shown to reduce stormwater runoff and improve the quality of stormwater runoff are eligible for a reduction in the stormwater utility fee in the form of a credit. Stormwater utility customers with property meeting the criteria provided in this section may receive a stormwater utility fee credit of up to, but not exceeding, 30 percent on the fee for the subject property.
- (b) The following criteria must be met by the stormwater utility customer in order to receive the on-site stormwater utility fee credit:
 - (1) The stormwater facilities have been permitted by the South Florida Water Management District or approved by the city manager.
 - (2) The stormwater utility customer requesting the credit demonstrates to the city manager, on or before every third year anniversary after the granting of the credit that said stormwater facilities are operating properly and being maintained according to standard practices. The demonstration shall include, at a minimum, photographs of the subject stormwater facilities during the year prior and a signed affidavit by a professional civil engineer registered in the State of Florida that the facilities have been operated properly and maintained according to standard practices.

Proposed Change #7

Sec. 30-340. - Credit and surcharge policy for permitted and operational stormwater management systems.

(a) The following criteria must be met by the stormwater utility customer in order to receive a credit and to avoid a surcharge onto the property's stormwater utility fee:

(1) The stormwater facilities have been permitted by the South Florida Water Management District (SFWMD) or the City of Naples.

(2) The stormwater utility customer demonstrates to the City Manager on or before every fifth-year anniversary of the permitting (or prior certification) of the site's stormwater system that the facilities are operating properly and are being maintained according to the permitted design requirements. The demonstration shall include (at a minimum) photographs of the inspected stormwater facilities and a signed affidavit by a professional civil engineer registered in the State of Florida, stating that the facilities remain consistent with the permitted design and are operating according to permitted design parameters.

Proposed Change #7 (continued)

(b) A credit to the stormwater utility fee may be approved by the City Manager (up to 25 percent) for permitted stormwater management systems that exceed the water quality volume minimum requirement by 25 percent. A credit to the stormwater utility fee may also be approved by the City Manager for implementing a Best Management Practice (BMP) defined in the most recent update to the City's Stormwater Standards Handbook. BMPs must also meet the fifth-year anniversary certification requirements or the credit will be discontinued. A combination of water quality volume and BMPs that quantitatively demonstrate equivalent water quality benefit may also receive up to a 25 percent stormwater fee credit.

(c) Properties that have not been properly managed, have altered a system to its detriment, and/or create inconsistency with the permitted design may be subject to a surcharge of 50 percent of the site's total stormwater total utility fee. The City Manager may impose the surcharge from the date the City becomes aware of any deficiencies and may end it when the deficiencies have been corrected, as determined through a City inspection. Appeals to the surcharge amount and duration may be made in accordance with Section 2-846 of the Code of Ordinances.

Estimated Impacts

- \$170,051.87 that is currently credited to property owners each year for having a stormwater management system would be collected by the City and used toward stormwater projects and programs.
 - 1,017.3 ARUs credited at the current rate of \$13.93 per ARU per month.
- The bulk of these credits are issued to commercial and multi-family properties.
- Only one single family residential property is receiving the 30% credit.

Goal #8

The Goal:

- Improve the landscaping standards for new single-family and two-family dwellings.

To Achieve the Goal:

- Update the applicability and required plantings for landscaping in the Code of Ordinances Section 50-76.

Existing Code Wording #8

Section 50-76.-Landscaping standards for new single-family and 2-family dwellings.

- (a) *Applicability.* The minimum standards for landscaping set forth in this section are applicable to the construction of a new single-family or 2-family dwelling and shall be complied with prior to the issuance of a certificate of occupancy by the building official. Excluded from this section are buildings, sidewalks, driveways and other impermeable surfaces.
- (b) *Plantings required.* Any part of the site which is not designed for use of buildings, sidewalks, and driveways or is otherwise an impermeable surface shall be planted with sod or a combination of sod, mulch, trees and landscaping material.
- (c) *Barren soil prohibited.* No area shall be maintained with barren soil or sand except for planting beds and areas around trees or plants.
- (d) *Use of rocks, shell or similar matter.* Rocks, stone, shell, gravel or similar matter shall not be used for more than 10 percent of a front yard except for planting beds and areas around trees or plants.

Proposed Change #8

Sec. 50-76. - Landscaping standards for new single-family and 2-family dwellings.

(a) *Applicability.* The minimum standards for landscaping set forth in this section are applicable to the construction of a new single-family or 2-family dwelling. A landscape plan, prepared by a design professional, indicating compliance with this section shall be required as part of the building permit review. These minimum standards shall be complied with prior to the issuance of a certificate of occupancy by the building official, as certified by the design professional.

Proposed Change #8 (continued)

(b) *Plantings required.* Any part of the site which is not designed for use of buildings, sidewalks, and driveways or is otherwise an allowable impermeable surface shall be planted with sod or a combination of sod, mulch, trees and landscaping material. All required front yards must be planted with a minimum 70 % of trees, shrubs, and ground cover. Impervious coverage in required front yards shall be limited according to Section 16-115.

(c) *Barren soil prohibited.* No area shall be maintained with barren soil or sand except for planting beds and areas around trees or plants.

(d) *Use of rocks, shell or similar matter.* Rocks, stone, shell, gravel or similar matter shall not be used for more than 10 percent of a front yard except for planting beds and areas around trees or plants.

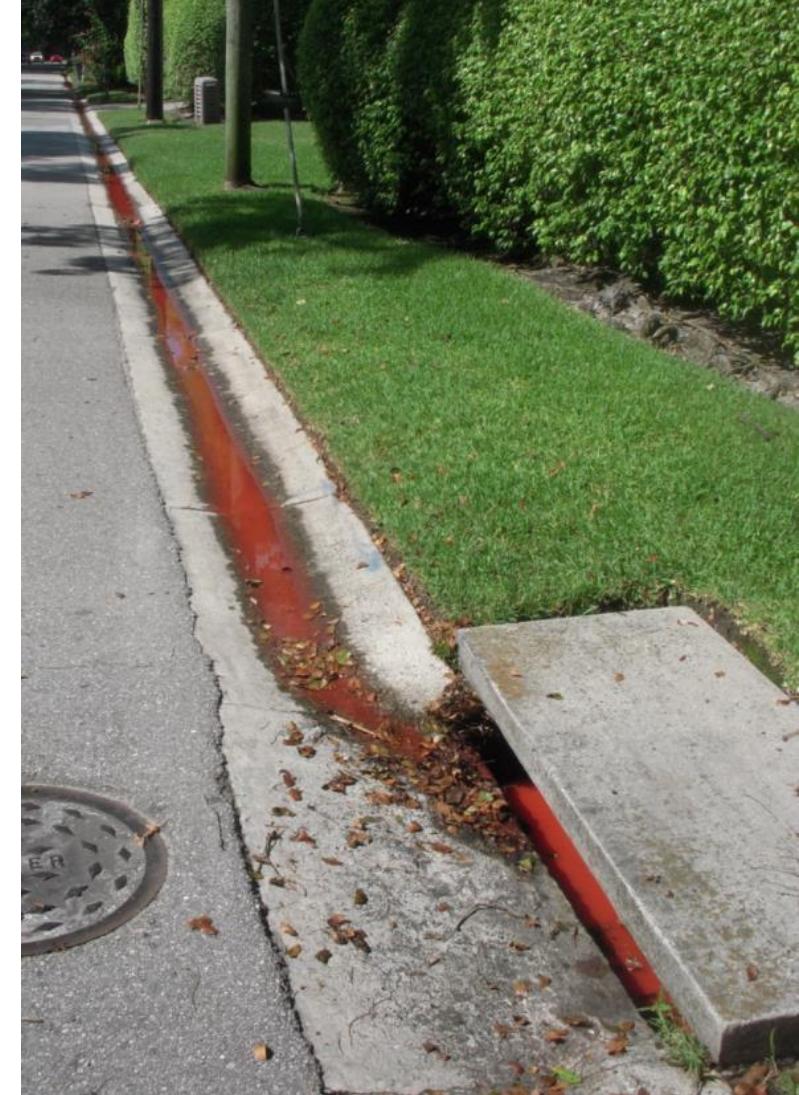
Goal #9

The Goal:

- To comply with the permit conditions in the State's Generic Permit for Discharge of Stormwater from Phase II Municipal Separate Storm Sewer Systems (MS4).
- Conditions for maintaining the City's permit are outlined in the Stormwater Management Program (SWMP) developed by FDEP.
- Upon renewal of the 5-yr permit in 2019, FDEP found the City code deficient of defining and prohibiting illicit discharges into the stormwater system.

To Achieve the Goal:

- City must create an Illicit Discharge and Connection Stormwater Ordinance which contains language primarily from the EPA model ordinance defining and prohibiting illicit discharges and connections to the City's stormwater system.



Proposed Change #9

To the extent allowable under State or local law, effectively prohibit through ordinance non-stormwater (i.e., "illicit") discharges into the storm sewer system and implement appropriate enforcement procedures and actions.

Content:

- Prohibits discharges of pollutants into the storm drain system & defines exemptions
- Prohibits illicit connections to the stormwater system (e.g. from sewer)
- Pollution prevention—Best Management Practices (BMPs)
- Provides procedures for reporting spills and remediation
- Establishes enforcement procedures & subsequent fines for violations

Comments & Questions

Comments and questions may be directed to:

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Moving Forward

1. Discussion;
2. Present at the November 13th meeting of the Planning Advisory Board;
3. Continue to receive public input;
4. Return to a future City Council Workshop to present final drafts;
5. Present code amendments at a 1st and 2nd reading before City Council;
6. Amendments to take effect 90-calendar days from City Council's 2nd reading.