Storm Resiliency & Infrastructure Development Review Committee

New Development
Revised Drainage Design Criteria
Considerations (Part 3)

Department of Public Works & Planning Department
April 26, 2019

AGENDA

- Subdivision Standards Policy Advisory Committee (SSPAC) Comments on the items approved by Storm Resiliency & Infrastructure Development Review Committee
- Design standards related to lot coverage impervious construction (Bill K.)
- Forestry – Water consumption documented per tree canopy

SSPAC Comments and Concerns

- **SOIL PERMEABILITY ON FILLED LOTS**
- **APPROVED BY RESILIENCY & INFRASTRUCTURE DEVELOPMENT REVIEW COMMITTEE**: Concerning all fill, require use of AASHTO Class A-3 Soil for fill or allow for a Pre vs Post analysis by a Certified Geotechnical Engineer to ensure that the fill material will not adversely impact groundwater levels. All fill shall be placed and compacted in accordance with the Development's Engineer.
- **SSPAC Concerns/Discussion:**
  - A-3 soil has to come from somewhere so are we hurting groundwater levels where you are getting the soil from?
  - Alternative is an option that shows no adverse impact to groundwater levels.
  - Financial impact of importing fill ….try to use existing soils on site.
  - "What is the adverse impact definition" on groundwater impacts?
    - Comments were that it always raised GW elevation where fill placed within development. (This requirement focused on area adjacent to development.)
  - How do we demonstrate no adverse impacts?
    - Certified Geotechnical Report not on going testing
  - If geotechnical testing demonstrates seasonal high GW is lower that can apply to modifying amount of underdrain needed on project.

SSPAC Comments and Concerns

- **MAINTENANCE OF DRAINAGE PLANS**

- **APPROVED BY RESILIENCY & INFRASTRUCTURE DEVELOPMENT REVIEW COMMITTEE :**

Plans submitted for review shall include a proposed “Maintenance of Drainage” (MOD) plan which identifies the site-specific method to maintain stormwater drainage patterns during the construction phase of a project.

SSPAC Concerns/Discussion:

- Require MOD plan at time of Site Clearing Permit Application not during the 10-Set design review process.
- General statement that multiple ordinances is not an approach that development community would support.
- Allow time to modify once General Contractor is selected. GC may propose alternate means and methods.
- Who to enforce- Development Services drainage group.
- Review/Modification time a concern – Looking for quick turn-around time for reviews.

SSPAC Comments and Concerns

- **BACKYARD DRAINAGE SYSTEMS**
  - **APPROVED BY RESILIENCY & INFRASTRUCTURE DEVELOPMENT REVIEW COMMITTEE :** All rear-lot drainage systems shall be included as a part of the ongoing development's stormwater management certification requirements. A public access easement shall be recorded to allow city and or state official's access to the systems for inspection.
  - **SSPAC Concerns/Discussion:**
    - Access to private homeowners back yards (easement for public access for inspection).
    - Current HOA documents have right to inspect language.
    - Private vs. Public drainage easement. Keep as private easement but dedicate public access on plat.
    - Stormwater pond certifications are not being completed by HOA's even though required every 2-yrs by SJRWMD.

SSPAC Comments and Concerns

- **6-MONTH SITE INSPECTION**
- **APPROVED BY RESILIENCY & INFRASTRUCTURE DEVELOPMENT REVIEW COMMITTEE :** Once a project begins (issuance of site permit or notification from the developer) a formal 6-month inspection report will be required to be submitted to the city. Formal inspection reports will be required to be submitted every 6-months until construction is complete.
- **SSPAC Concerns/Discussion:**
  - Who would produce the report? The Inspection firm preforming construction inspection for the developer.
  - Requiring inspection report every 6-months seemed excessive – concerns with affordability/increasing cost.
  - Develop list of criteria for the inspection report
  - One Developer mentioned that he currently requires such report every month

ADDITIONAL ITEMS PRESENTED AND DISCUSSED WITH THE SSPAC

SSPAC Comments and Concerns

EXPANSION OF PRE-DEVELOPMENT SURVEY

- **APPROVED BY RESILIENCY & INFRASTRUCTURE DEVELOPMENT REVIEW COMMITTEE :** Site topography shall extend a minimum of 100 feet beyond the boundaries of the development. Existing city topographic contour maps, beyond 100 feet, may be utilized to provide necessary topographic mapping to establish the entire drainage basin.
- **SSPAC Concerns/Discussion:**
  - Additional cost (Housing affordability) any additional cost is transferred to the buyer
    - Related to the $300K (entry home buyer) housing market every $1,000 increased cost equates to a 1% loss in potential buyers
  - What if access is prohibited? State statute addressed allowing surveyors access onto private property. May be a need to engage JSO (additional cost and time).
  - Discussed the use of City LiDAR vs the gathering of additional survey (accuracy).
  - SJRWMD already require the 100-foot of additional survey.
  - Offset additional expense of new rule(s) with some other saving opportunities?

SSPAC Comments and Concerns

- **25-FOOT FLOODWAY SETBACK**
  - **APPROVED BY RESILIENCY & INFRASTRUCTURE DEVELOPMENT REVIEW COMMITTEE :** A 25-foot setback of the channel of a river or other riverine watercourse and the adjacent land (Floodway) areas that must be reserved in order to discharge the base flood without increasing the water surface elevation.
- **SSPAC Concerns/Discussion:**
  - SJRWMD already requires an “Average” 25-Foot setback from the floodway line.
    - Called SJRWMD and determined the “Average” 25-foot setback requirement is related to protection of habitat functions in wetlands.
    - The 25-foot setback buffer is in **Section 10.2.7 Secondary Impacts** in the Applicants Handbook.
    - 25-foot setback represents an upland-buffer to protect the function of the natural habitat of the upland/wetland system.
    - It is an Average 25-foot buffer with a 15-foot minimum

SSPAC Comments and Concerns

- **2-FOOT FREEBOARD REQUIREMENT**
  - **APPROVED BY RESILIENCY & INFRASTRUCTURE DEVELOPMENT REVIEW COMMITTEE :** Development in a special food hazard area to set the finished-floor elevation 2-foot above the Base Flood Elevation (BFE).
- **SSPAC Concerns/Discussion:**
  - Additional cost/time related to now having to elevate the finished-floor by use of stem-wall construction.
  - Advised committee recommendation resulted from review Palm Coast criteria.
  - Challenges with housing accessibility (ADA).
  - What is the problem that we are tying to solve? Is there a problem with the current 1-foot factor of safety?
  - Discussed applying the additional 1-foot addresses proposed sea level rise (1-foot in the next 100 years).
  - Committee was asked if there are flooding challenges with “newer” construction?
    - New developments perform LOMAR’s to take development out of Special Flood Hazard Area
  - Infill lots would be the most affected

SSPAC Comments and Concerns

- **FLOODPLAIN MANAGEMENT**
  - **APPROVED BY RESILIENCY & INFRASTRUCTURE DEVELOPMENT REVIEW COMMITTEE :** Modify City Ordinance to require a separate Flood Plain Permit for Development not requiring a 10-set and enforce COJ Ordinance (OR 652.406) for the Permit expiration (180-days). For development requiring a 10-set, the 10-set approval will be adequate for Flood Plain management.
- **SSPAC Concerns/Discussion:**
  - Due to already being required there were no serious concerns.
  - General discussion on FEMA long review time of CLOMAR's and issuance of a Building Permit.

Subdivision Standards Policy Advisory Committee:

Action Taken:

- SSPAC voted unanimously and passed in support of the approved items subject to clarifications**.**

Impervious Surface Ratio
Policy Questions

Bill Killingsworth

Should the ISRs be:

- To control maximum impervious surface on individual lots; or
- A design standard for calculating stormwater runoff
- Used to impact Stormwater fee

Potential Drainage Design Criteria Revisions

Should we give credit?

- For pools and other water bodies
- For pervious pavers and other surfaces
- For exfiltration trenches
- For collecting rain in rain gardens

Forestry – Tree Canopy Water Consumption

FORESTRY – WATER CONSUMPTION DOCUMENT PER TREE SIZE ON EXISTING PROPERTY

Study nearing completion…the results of the Study will provide the following:

- A tree canopy calculator which estimates tree canopy affects on stormwater runoff (based on satellite imagery 20-acre minimum area)
- New design criterial that will take into account tree canopy interception (SCS methodology; Runoff Cure Numbers CN determination).
- Recommendation to the SSPAC for inclusion of Tree Canopy impacts to development projects.

Storm Resiliency & Infrastructure Development Review Committee

Questions

Department of Public Works & Planning Department
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