

# Storm Drainage Study Review Checklist

## 1. Title Sheet (cover page):

- ☐ Name and type of project, city, county, state.
- ☐ Consultant name, address, phone number, and e-mail address
- ☐ Client/Developer Contact information.
- ☐ P.E seal (original wet seal).
- ☐ ☐Macro ☐Micro
- ☐ Date and Revision Log.
- ☐ Revision Letter addressing changes if resubmittal. Letter Date: \_\_\_\_\_

## 2. Body (Content)

- ☐ Description of area, including name of watershed and location/location map.
- ☐ Description of project, acreage, and how it will change hydrological parameters.
- ☐ Documentation of proposed site characteristics (SCS soil survey, contours, and/ or FEMA floodplain panel), and research/coordination efforts.
- ☐ Methodology (Rational Method <=5acres, Other approved Methods > 5 acres).
- ☐ Existing Condition Analysis (see 300.5, KCMO Storm Water Management Plan) identifying non-conformance issues.
- ☐ Analysis includes downstream drainage system to the point the development's land mass is less than 10% of the total watershed. (APWA 5601.5.4)
- ☐ Evaluation structurally and hydraulically of all existing site and downstream drainage systems using APWA 5600 and adopted supplements.
  - (Drainage map, showing drainage areas and both improved and unimproved drainage systems)
    - ☐ Is it adequate for existing conditions? YES\_\_\_\_, NO\_\_\_\_(✓ appropriate response)
    - ☐ Are there downstream problems? YES\_\_\_\_, NO\_\_\_\_.
    - ☐ Is it adequate for the proposed condition? YES\_\_\_\_, NO\_\_\_\_.
  - ☐ 1) If adequate, detention waiver requested, per APWA 5601.6. A detention waiver may be granted for project less than 1/2 acre, if:
    - 1a. A detention basin would not feasibly operate as intended and/or provide a benefit to the existing watershed drainage systems.
    - 1b. The project is not considered a development, per APWA 5601.3.
    - 1c. No change in runoff characteristics.
- ☐ Proposed Condition Analysis (see 300.6, KCMO Storm Water Management Plan) identifying proposed system modifications.
- ☐ Proposed Water Quality Analysis meets BMP Manual Requirements. (if not in a Combined Sewer area)
  - ☐ Worksheets 1 & 2 provided.
  - ☐ Map showing location and drainage areas to all BMPs.
  - ☐ BMP Map should show BMP locations, type of BMP's, and size of BMP's along with dimensions.
- ☐ Proposed Retention/Detention of 1.5 inches of rainfall from site (If in a Combined Sewer area)
  - ☐ Retention system draw-down time provided (less than 72 hours).
  - ☐ Detention system connects to existing storm system if practical.
  - ☐ Detention system connects to existing combined sewer.
- ☐ Evaluation structurally and hydraulically of all proposed site and downstream drainage systems using APWA 5600 and adopted supplements.
  - (Drainage map, showing drainage areas and improved drainage systems)
    - ☐ Adequate for proposed conditions? YES\_\_\_\_, NO\_\_\_\_(✓ appropriate response)

- Are downstream problems mitigated? YES\_\_\_\_, NO\_\_\_\_.
- A description of proposed mitigation systems, to compare to construction drawings.
- ❑ Summary (see 300.7, KCMO Storm Water Management Plan).
  - Comparison of existing to proposed Peak Flow rate provided.
  - Comparison of existing to proposed Total Volume provided.
  - Description of Water Quality Compliance.
- ❑ Conclusion and Recommendations (see 300.8, KCMO Storm Water Management Plan).
  - Adverse Impacts Addressed? YES\_\_\_\_, NO\_\_\_\_(✓ appropriate response)
  - Remaining non-conformance issues? YES\_\_\_\_, NO\_\_\_\_.
  - Statement of Appropriateness of Design? YES\_\_\_\_, NO\_\_\_\_.
  - Endangerment issues remaining? YES\_\_\_\_, NO\_\_\_\_.
- ❑ Maps and Exhibits (see 300.9, KCMO Storm Water Management Plan).
 

(Maps – Separate Drainage Maps of Existing Conditions and Proposed Conditions)

  - Drainage Areas marked clearly? YES\_\_\_\_, NO\_\_\_\_(✓ appropriate response)
  - Impervious Conditions clearly labeled? YES\_\_\_\_, NO\_\_\_\_.
  - Critical points of interest easily identified? YES\_\_\_\_, NO\_\_\_\_.
  - Proposed improvements and networks clearly shown? YES\_\_\_\_, NO\_\_\_\_.
- ❑ Supporting Calculations (see 300.10, KCMO Storm Water Management Plan).
  - Adequate information on input data provided.
  - Summary of analysis provided.