

CHAPTER 1. SUBMITTAL REQUIREMENTS

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EXECUTIVE SUMMARY

Purpose of the Chapter

The purpose of this Submittal Requirements chapter is to provide a means to standardize the plans and drainage reports for proposed improvements submitted to the City for Review.

1.0 PLAN REQUIREMENTS

1.1 Plan Sheets

The plan sheets for improvements shall meet the requirements shown in the City of Bella Vista's Subdivision Code in Article 900: Plat and Plan Requirements.

1.2 Drainage Report

The following items shall be included in the Drainage Report that accompanies each proposed improvement plan set submitted to the City.

- Project title and date;
- Project location: include the street address and a vicinity map;
- Project description: a brief description of the proposed project;
- Project owner's name, address and telephone number;
- Site area: to the nearest 0.1 acre;
- Site drainage: a brief description of the site drainage for the proposed project;
- Area drainage problems: provide a description of any known on-site, downstream or upstream drainage/flooding problems;
- Upstream and downstream drainage: a) pre- and post-developed drainage area maps as well as inlet area maps with the time of concentration flow paths and b) proposed and existing topography shown as appropriate;
- Summary of runoff: provide a table with the 1, 2, 5, 10, 25, 50, and 100-year storm flows for existing and proposed conditions (with and without detention if shown) and the proposed difference in flows;
- Calculations : provide copies of all calculations performed, including:
 - Runoff flow calculations for the 1, 2, 5, 10, 25, 50, and 100-year storm events (existing and proposed conditions);

- Coefficients or runoff curve numbers;
- Inlet calculations, include any ponded area created at each;
- Pipe or culvert calculations;
- Open-channel calculations including any flumes;
- Detention calculations including:
 - Basin sizing calculations;
 - Outlet structure design with release rates computations for the 1, 2, 5, 10, 25, 50, and 100-year storm events;
 - Stage-storage and stage-discharge curves; and
- Hydraulic grade line calculations.
- Recommendations/Summary: description of any assumptions made in the calculations, drainage improvements to be made to the site and the expected effects of the project.
- Certification : all drainage reports shall be signed, sealed and dated by an engineer registered in the State of Arkansas and shall include the following certification:

I _____, Registered Professional Engineering No. _____ in the State of Arkansas, hereby certify that the drainage designs and specifications contained in this Report have been prepared by me, or under my responsible supervision, in accordance with the regulations of the City of Bella Vista, Arkansas, the Professional Engineers Registration Act of the State of Arkansas, and reflect the application of generally accepted standards of engineering practice. I further certify that the improvements outlined in this Report will not have any adverse effects to life or downstream properties. I understand that review of these plans is limited to general compliance with the City codes and regulations and does not warrant the engineer's design or imply any liability to the City of Bella Vista for the designs contained herein.

1.3 As-built Drawings and Certifications

Final as-built plans and a certification letter shall be submitted to the City's Planning, Building, and Code Enforcement Department upon completion of all work for the drainage improvements. The certification letter shall be signed by the engineer of record affirming that all improvements have been constructed as shown in the as-built plans which shall conform to the approved construction plans except for modifications approved through the City. All improvements must be in place and as-builts, certifications,

one-year maintenance bond for 100% of the cost of drainage improvements and easements provided to the PBCE prior to Final Plat for a subdivision or issuance of the Certificate of Occupancy for a Large Scale Development. As-built plans shall be based on surveyed data of the constructed improvements.

As-builts to be submitted include:

- One hard-copy plan set (signed, sealed and dated by the engineer of record)
- An AutoCAD file formatted to AutoCAD 2011 or earlier
- One PDF copy of as-built plans and drainage report