



August 31, 2011

Scott Lindebak, P.E. CFM
Public Works, Stormwater Division
City of Wichita, Kansas

**RE: Angel Fire 2ND Addition
Drainage Plan
WQv and CPv Calculations**

Mr. Lindebak,

The following is a summary of the re-plat of existing lots within the Angel Fire Addition residential subdivision. The existing Drainage Plan on file for this subdivision will still be effective with this re-plat. This re-plat will consist of shifting lot lines and easements, and will leave the previous street locations and Reserves.

As you know, the overall storm water controls have previously been installed including the two retention ponds, their respective outfalls, as well as a portion of the subdivision is already built. A new Grading Plan for this area will be provided.

The existing ponds on the property serve as detention for the entire subdivision, as well as offsite runoff from the north, and will continue to serve as water quality wet detention ponds. The ponds have a total under-static storage volume of approximately 72.7 ac-ft. For the entire subdivision – including portions already built – these ponds will need to have at least 2.6 ac-ft of storage for the water quality volume.

Due to the large storage volume in the existing ponds, and the over-detention provided in that volume, the downstream channel protection requirement should be met. The ponds are interconnected with 2 - 7'x3' RCBC under Kessler. This structure, along with the primary outfall of 3 - 4'x3' RCBC under 47th Street South, are already in place. As of this report, we are not aware of any downstream channel erosion problems caused by this subdivision. Due to the facts that these ponds are built and are functioning properly; and that homes are already constructed around the ponds, we do not recommend altering the outfall sections.

Attached is the worksheet depicting the water quality volume calculations. These calculations were done in accordance with the City of Wichita's Storm Water Manual. As you can see, the 8.7 acre (at static water surface) pond system will provide the needed water quality volume within its static pool. Due to these ponds already being constructed with

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B a u g h m a n
C o m p a n y , P . A .
315 Ellis Street
Wichita, Kansas 67203
P 316.262.7271
F 316.262.0149

structures around them, we do not expect any modifications or changes to this system with this project.

A new Final Grading Plan will be provided at the time of engineering plans for the subdivision.

Please review and let us know of any questions or concerns by phone at 316.262.7271 or by email at tkurth@baughmanco.com.

Sincerely,



Trevor R. Kurth, P.E. CFM
Water Resources Engineer

Cc: File

Attachments