

Drainage Report

Smithmoor 11th Addition, To Wichita, Sedgwick County, Kansas



March 2008



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Final Plat

USGS map with area highlighted

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SMITHMOOR 11th ADDITION

Introduction

The subject property is located ¼ mile west of Greenwich Road, about 400 feet south of Harry. The property is currently platted as a part of Lot 1, Block A, Smithmoor Commercial Addition, and zoned GO. The property is governed by the Smithmoor Commercial CUP. An administrative adjustment will be filed to adjust the CUP to conform to the proposed use. The tract of land is about 2 acres total. The property is being platted into 9 lots.

Current Conditions

The site is served by City of Wichita utilities. Single family residential abuts the property on the south and west, with a real estate office north and future commercial development east. The property is undeveloped. The soils are a Type A, with a high runoff coefficient. There are no signs of wetlands and the land is not in a floodplain. The land drains to the west and into a public storm sewer system that drains to the detention pond in the middle of the Smithmoor Additions. The site drains at a slope of about 1.0%.

The attached plat with topography shows existing features including contours and utilities, including proposed easements.

Proposed Improvements

The site will be developed for limited residential use. The lot will drain from east to west as shown on the attached grading plan. The storm water detention pond in the Smithmoor Addition was designed to handle all of the Smithmoor Drainage.

Best management practices for erosion control will include seeding disturbed areas and installing city approved measures for industrial uses. Since the total disturbed area is more than 1 acre, a notice-of-intent will be filed with KDHE. The attached calculations show the existing and developed peak runoffs, including assumed coefficients and conditions.

Site Hydrological Analysis

Existing and proposed site conditions have been modeled using the rational method. The Values for Rainfall Intensity and Runoff Coefficients were established using the *Drainage and Storm Sewer Policy for Design Criteria and Documentation, City of Wichita, Kansas*. A time of concentration of 15 minutes was used as it is the minimum inlet time. A proposed time of concentration of 15 minutes was also used.

Future Development

There will be no future development of this plat after the lots are built.

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