

April 8, 2022

Michael Spickelmier, P.E.  
Director of Public Works  
City of Lansing  
730 1<sup>st</sup> Terrace #3  
Lansing, KS 66043

Re – Reeslon Addition

Dear Mr. Spickelmier,

I was asked to analyze the impacts of the storm water runoff from this proposed development on the existing development to the east. The proposed development will create one new residential building lot, Lot 2 shown below on exhibit #1. Lots 1 and 3 both have existing homes on them.

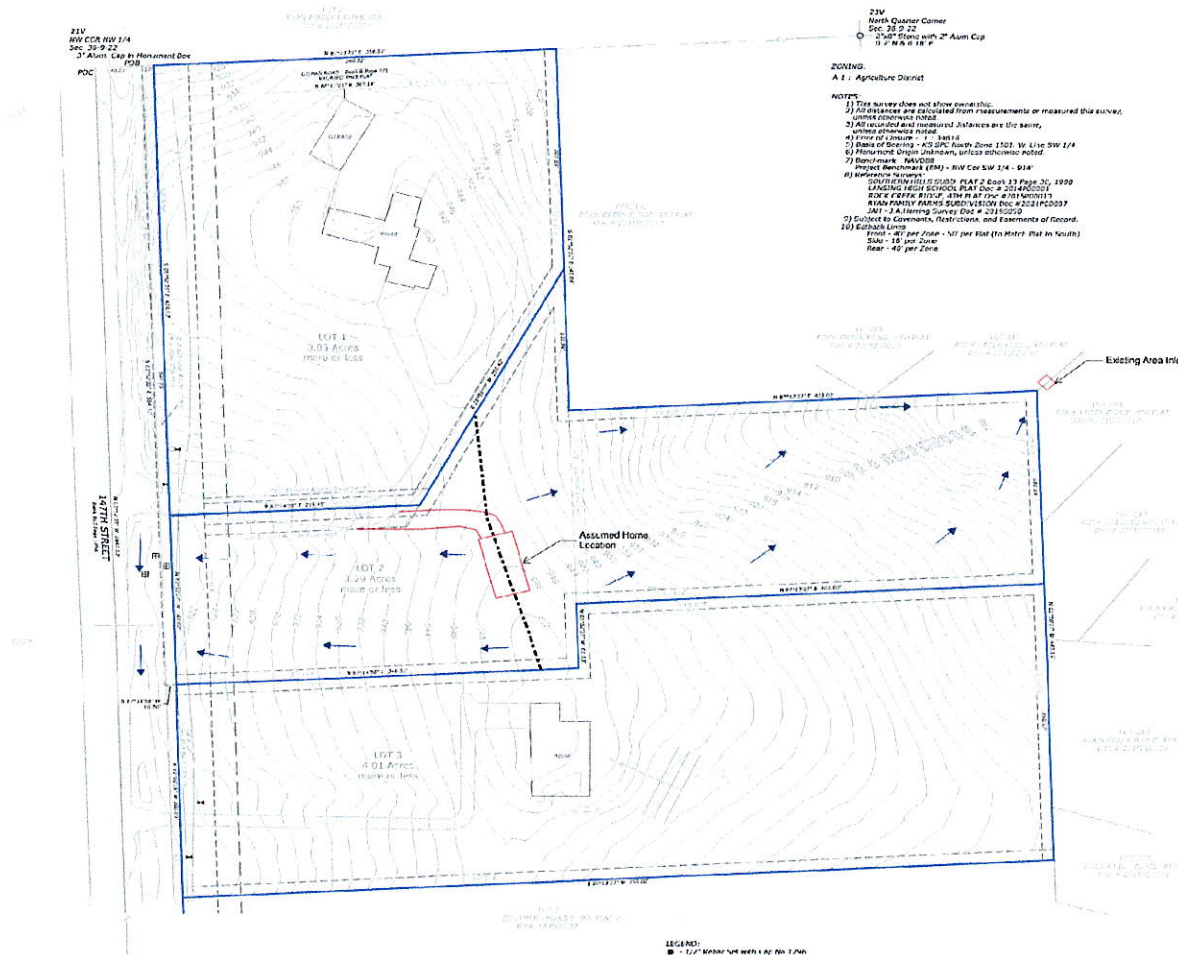


Exhibit #1

Lot 2 can be divided into two drainage areas as shown on exhibit #1. Approximately 2.16 acres of Lot 2 drains to the east. It is assumed that a new home would be constructed on/near the ridge line and that half of the roof will drain each direction.

A composite c value was calculated for the east drainage area as shown in the table below. The composite c value is based on the soil type, slopes, and existing land use.

Existing		Acres in each Drainage Area			
	c value	East Drainage Area			
Wooded	0.50	0.75			
Grass	0.30	1.41			
Composite c		0.37			

In a similar manner, a composite c value was calculated for the developed storm water runoff. The calculation includes 1,500 sq ft of impervious area for lot 2.

Developed		Acres in each Drainage Area			
	c value	East Drainage Area			
Wooded	0.50	0.75			
Impervious	0.90	0.03			
Grass	0.30	1.38			
Composite c		0.38			

The storm water runoff for existing and developed conditions is summarized in the following table.

	Q10 cfs	Q100 cfs
<b>Existing</b>	4.8	8.5
<b>Developed</b>	5.0	8.8
<b>Change</b>	3%	3%

The storm water runoff from the east portion of Lot 2 flows to the north east corner of the parcel to an existing area inlet at the corner of the Rock Creek Ridge Development. The storm water runoff from the proposed development will increase approximately 3%. This minimal increase in runoff will not adversely affect the neighboring properties.



Sincerely,

*David Lutgen*

David Lutgen, P.E.

