

December 18, 2020

Development Services
City of Lee's Summit
220 SE Green
Lee's Summit, MO 64063

RE: Stormwater Assessment
John Knox Village Meadows Phase II and O'Brien Parking Lot

To Whom It May Concern:

John Knox Village is applying for a Final Development Plan to construct a second phase of their Meadows building, along with a proposed parking lot across NW O'Brien Road from the first phase of the Meadows. This letter will address any stormwater impacts associated with the project.

Both areas impacted by this project are part of an overall watershed that drains into a large existing pond on the campus of John Knox Village. A pond analysis was completed in 2015 as part of the first phase of the Meadows project. This analysis showed that even with an increase of 0.57 acres of impervious surface with the first phase, it had a very minimal impact on the outflow rate from the pond, while having no increase in the maximum water surface elevation of the pond.

When looking at the limits of construction for the Phase II work for the Meadows, there is an existing 47,600 square feet of impervious surface. The proposed building and associated improvements adjacent to it will result in an increase of 1,900 square feet of impervious surface. This amount of increase would not have an impact in the pond modeling that was completed in 2015 as it would not change the composite CN calculated.

For the proposed parking lot on the south side of NW O'Brien Road, the existing site has 14,500 square feet of impervious surface. The proposed parking lot will result in an increase of 6,600 square feet of impervious surface. However, in the previous pond analysis, the watershed that the parking lot is within had an assumed CN value of 92, which anticipates 65% impervious cover. The amount of impervious surface on this lot with the proposed parking lot will only come to 53% impervious cover. Thus, the CN value used for this watershed would not be impacted by the increased impervious, resulting in no change in the pond analysis.

In summary, both parts of the proposed work will result in minimal increases in the amount of impervious surface within the overall watershed that enters the existing detention pond. When evaluated against the pond analysis completed in 2015 for the first phase of the Meadows project, this would amount to no change in the release rate from the pond or the maximum water surface elevation with the proposed improvements. Thus no modifications are proposed or needed to the existing pond.

If you have any questions on any of the above, please feel free to reach me at 913-663-1900 or eric.byrd@ibhc.com.

Sincerely,



Eric Byrd, P.E.
Project Engineer

