

## MEMORANDUM

January 31, 2019

TO: Sean Marquez, PE - Senior Project Engineer, Village of Orland Park

FROM: Travis Parry, PE, CFM, CMS4S  
Michael Burke, PE, CFM

SUBJECT: Olde Mill Lot 56, Orland Park, IL  
Revised Grading Plan Review  
(CBBEL Project No. 04-0389)

As requested by the Village of Orland Park (Village), Christopher B. Burke Engineering, Ltd. (CBBEL) has completed a review of the revised grading to accommodate the 100-year overland flow in the rear yard of Lot 56 in the Olde Mill Subdivision. The following items were reviewed:

- Detailed Grading Plan for Lot 56 in Olde Mill Phase III dated January 22, 2019
- Open Channel Flow Spreadsheet

We understand that the homeowner would like to construct a swimming pool in the rear yard which will encroach on the existing 30-foot drainage and utility easement. To accommodate the proposed swimming pool, the existing easement will be revised at a width of 10-feet and a length of 53-feet and the yard will be re-graded. The re-grading consists of additional fill of +/- 1.0 feet proposed throughout the rear yard. The proposed grading ties into the existing grades along the east, south, and west property boundaries and no grading is shown beyond the property boundary.

The rear yard swale flows from east to west into a stormwater catch basin at the property boundary with Lot 55. There is a ridge, or high point, on the property boundary with Lot 57 that separates the overland flow swales. Therefore, nearly all the overland drainage to the rear yard is generated on-site. CBBEL calculated an approximate drainage area of 10,000 ft<sup>2</sup> (0.23 acres) to the rear yard swale.

The rear yard swale is designed with a 4-foot wide bottom, 4:1 side slopes, and an average depth of approximately 1-foot. The Open Channel Flow Spreadsheet indicates that the swale can accommodate a flowrate of 4.23 cfs at a water depth of 0.36 which is well above the 100-year runoff for the area. Based on a review of the provided information, CBBEL recommends approval of the south swale redesign for Lot 56 in the Olde Mill Subdivision.

MJB/TMP  
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