



August 6, 2021

Mr. Kevin Krulik
City of Lebanon Engineering
401 South Meridian Street
Lebanon, IN 46052

RE: IMI Lebanon
3450 S. Indianapolis Road
Variance Letter from Chapter 6.C.9 of the STSM

Mr. Krulik:

Please accept this letter, and the enclosed calculations and exhibits, as our formal request and documentation for approval of the requested variance from Chapter 6.C.9 of the City of Lebanon Stormwater Technical Standards Manual. Chapter 6.C.9 of the City of Lebanon Stormwater Technical Standards Manual states, "Emergency overflow facilities such as a weir or spillway shall be provided for the release of exceptional storm runoff or in emergency conditions should the normal discharge devices become totally or partially inoperative." We are requesting variance from this section for the proposed detention pond to not install an emergency overflow spillway.

There are significant elevation challenges with installing an emergency overflow spillway. Due to the nature of the expansion of the detention pond and the fact per Chapter 6.C.9 that the "emergency overflow routing from the emergency overflow facility to an adequate receiving system must be positive (by gravity)", the crest elevation of a proposed emergency overflow spillway would need to be significantly higher than the designed 100-year storm. This crest elevation would, at a minimum, need to be at an elevation of 955.61 located in the southwest corner of the site. The southwest corner of the pond cannot be regraded to lower the required spillway elevation because there are several existing trees that are being utilized for required bufferyard and landscaping requirements. Re-grading this area would likely mean these trees would need removed. The required 955.61 elevation is higher than the proposed top of bank of the proposed pond expansion and would not be feasible to construct.

Another challenge that arises with the requirement to install an emergency spillway is the relationship between the emergency spillway and the finish floor elevation/minimum lowest adjacent grade. Per Chapter 6.C.9 of the STSM, the "Lowest Adjacent Grade of all residential, commercial, or industrial buildings along this emergency overflow route shall be set a minimum of 2 feet above the flood elevation." If a spillway was constructed at the required crest elevation of 955.61, then the minimum lowest adjacent grade for the proposed concrete plant would be 957.61. This elevation would be a significant fill to the site and would cause maneuverability challenges to the vehicles that utilize the site due to steepened grading and site slopes.

In an effort to mitigate not installing a dedicated emergency spillway, the proposed detention pond was designed to have significantly more volume than required for the 100-year storm event. The 100-year storm event produces a total stored volume of 122,221.12 cu. ft. and the proposed detention pond has a total volume of 280,149.66 cu. ft., which is more than double the required volume. The site will function as a concrete plant and will have persons at the plant daily. Regular observation of

the detention pond would reveal if the outlet structure becomes plugged as the normal water level of the pond would be noticeably higher. Once this has been observed, IMI can then unplug the outlet structure and return the detention pond to normal function.

If you should have any questions or comments concerning this project, feel free to contact me at (317) 780-1555 ext. 113.

Sincerely,



Michael Kalberg, P.E.
CrossRoad Engineers, P.C.
3417 Sherman Drive
Beech Grove, IN 46107