

**ANN AUBRY, P.E.**  
Interim Director

February 17, 2022

Derik Leary, P.E.  
Kimley-Horn and Associates, Inc  
7965 North High Street, Suite 200  
Columbus, Ohio 43235

Re: Stormwater Drainage Manual (SWDM) type II Variance Request – Carvana - 8350 Lyra Drive Parcel ID 318-43401021002

This letter is in response to the subject variance request to the SWDM Section 3.4.3. *Underground Storage*. More specifically SWDM Section 3.4.3.3.a.ii. does not allow credit for storm water storage in void space of the stone backfill surrounding perforated closed conduit systems. A variance is requested to allow storm water storage in the stone backfill to count towards the detention volume required to meet the storm water quantity controls required per the SWDM. The request is to count 30% of the stone volume as void for storm water storage as required for open bottom systems.

The request was submitted to the City January 6, 2022. The Variance Review Committee met and reviewed the subject Variance Request on February 9, 2022. As part of the Variance review process, the subject Variance request was posted on the City website on January 24, 2022 to solicit public comments. No public comments were received by the due date of February 8, 2022.

The submitted Variance Request was found by the Variance Review Committee to be in compliance with the SWDM Non-Stream Type II Variance application requirements.

Three alternatives were considered within the application for the requested Section 3.4.3. variance – Full Compliance Open Bottom System, Full Compliance Closed Conduit System without Stone Storage, and the Preferred Alternative.

Under the Full Compliance Alternative - Open Bottom System, an ADS open-bottom underground system with stormwater storage allowed in the stone surrounding the structures would provide the required storm water detention. The ADS structures available require a much larger footprint. The system would cost significantly more than the proposed perforated closed conduit system due to the less efficient height to shape ratio. The larger footprint of this system is also less desirable to the owner.

Under the Full Compliance Alternative - Closed Conduit System without Stone Storage additional pipe and stone is required to provide detention. The voids will still be utilized providing excess water quantity volume, but not count towards the recognized detention. The additional cost for this system over the preferred alternative is \$88,000.

Under the Preferred Alternative – Closed Conduit System with Stone Storage 30% of the stone will be counted towards storm water storage. The footprint for this alternative is the smallest of the 3 systems. This system is also the least expensive. Full water quantity storage will be provided as required by the SWDM.



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Upon reviewing and discussing the application submitted the applicant, the Variance Review Committee agreed with the applicant that the Preferred Alternative represents the development team's good faith effort to comply with the SWDM storm water quantity control requirements within the confines of the proposed development. The Committee further agreed with the applicant's argument that both of the Full Compliance alternatives would be a hardship.

In light of the above, the subject Variance request (Type II SWDM Section 3.4.3.), Preferred Alternative is conditionally approved contingent upon the following stipulations:

- Storm water must be pretreated to remove sediments prior to entering the storm water storage system. Pretreatment shall be sized appropriately for the flows to the detention system. Post –construction inspection and maintenance of the pretreatment system and storage system shall be at a minimum monthly to assure sediment does not accumulate in the storage system.
- SWDM Section 3.4.3. only allows aluminum for corrugated metal storage systems. A geo-membrane will be required if salt will be used for winter weather treatment in areas tributary to the storm water storage system.
- Storm CC-Plan and Stormwater Management Report must be submitted and approved by the City of Columbus.

No approval contained herein relieves or absolves the applicant of any provisions of applicable state or federal laws. Please contact Plan Review Section Manager Greg Fedner, P.E. at 614-645-8072 with any questions.

Sincerely,



John G Newsome, P.E., Administrator  
Division of Sewerage and Drainage

pc: Variance Review Committee  
File

