

August 10, 2018

Mr. Craig Perl, P.E. C.F.M.

City of Aurora
15151 E Alameda Parkway
Aurora, CO 80012

Subject: Variance Request for Detention and Water Quality Requirements - Aurora Wemlinger CT
Chamber project, Highpoint Park Subdivision Filing No. 2, L3, B1

Dear Mr. Perl:

This letter serves as a request for a variance to the detention and water quality improvements for the Aurora Wemlinger CT Chamber project. The project consists of a new buried concrete structure. The above grade components include stair towers to the north and storage and electrical rooms to the south. Additionally, a paved road with curb and gutter will be installed to the west to provide access to the structure. The area where the CT Chamber will be built is covered with native grasses and generally drains from the north to the south

The existing and proposed drainage conditions are further detailed in a separate drainage letter for the project. There are no existing detention or water quality facilities on site for the drainage sub basin where the improvements will be built. Exemptions were granted from these requirements for previous WPF facility improvements (See Final Drainage Report, Wemlinger Water Treatment Plant Renovation and Expansion, CH2MHill, 2002, COA Engineering Drawing Number 202144.)

Variance request for Detention and Water Quality

The increase in required 100-year detention volume and WQCV associated with the project is minimal. The minor increase in flows will be discharged through downspouts to splash pads at grade, and then routed through grassy areas to an existing catch basin by overland flow, grass swales, and curb and gutter.

Physical site constraints limit the ability to implement stormwater detention and water quality outlet facilities within the existing sub- basin area. Therefore, a variance is requested for these improvements as an alternative to a traditional detention basin and water quality control structure.

Efforts were made to incorporate water quality improvements where feasible into the design. A grass swale meeting UDFCD dimensions is proposed to be built to the east of the new CT Chamber. Other water quality improvements evaluated were as follows:

- Overland flow drainage on the west side of the improvements runs across grass. It is not feasible to provide a grass swale or grass buffer that meets UDFCD dimensions on this side due to lack of available side water depth.
- Although a hydrodynamic separator or similar water quality improvements to existing catch basins could be provided, it is requested that this be deferred until construction of the future water treatment plant process Flocculation and Sedimentation Basins occurs. Any investment in a hydrodynamic separator for existing catch basins to meet the minimal water quality requirements for this project will have to be rebuilt and upsized when the Flocculation and Sedimentation Basins are built.

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If you have any further questions, please contact me at 303-404-6306 or bgiles@carollo.com.

Sincerely,

CAROLLO ENGINEERS, INC.

A handwritten signature in black ink that reads "Bart Giles". The signature is written in a cursive, flowing style.

Bart Giles, P.E.

cc: Elizabeth Carter