

# Memorandum

**To:** Alan Tiefenbach  
Planner

**From:** Patrick O'Connell  
Engineering Geologist

**Date:** June 7, 2013

**Re:** Ken Caryl Towne Center, Case No. 13-106886SD

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I have reviewed the April 19, 2013 Geologic Hazard Assessment prepared by MW West, the April 30, 2013 Geotechnical Study prepared by ASW, and the May 20, 2013 plans prepared by HKS for the subject site. I have the following comments:

1. Based on the boring logs and proposed construction (pt slabs), there is sufficient material between the foundation and top of bedrock and an over-excavation plan for the structures is not required. If pt slabs are not utilized, over-excavation would be required near boring TB-9-2 and TB-9-1.
2. Retaining walls that exceed three feet require supporting calculations that were completed by a Colorado professional engineer must be provided for the walls. The supporting calculations must demonstrate an adequate factor of safety with respect to bearing capacity, overturning, sliding, and internal stability. The calculations must take into account any surcharge loads due to sloping backfill, adjacent vehicles and adjacent structures.
3. Retaining walls shall be faced with stone or constructed with a textured earth color material that is identified in the plans.
4. Retaining walls below the 100 year WSEL shall be the large block (1 ton or greater) or cast in place. Retaining walls must not exceed 50% of the perimeter for residential use.
5. Tiered retaining walls shall have a minimum of four feet of separation between the front of the upper wall to the rear of the lower wall, otherwise, the sum of the wall heights will be calculated.
6. Details of the retaining walls are required in the construction set.
7. The following note shall be included on the site plan:

Public notice is hereby given that a portion or all of this site is located within the Dipping Bedrock Overlay District as defined in the Jefferson County Zoning Resolution. This district contains an unusual geologic hazard with the potential for severe differential heaving of bedrock that can result in foundation, buried utility and concrete flatwork movement. This Site Development Plan was processed accordance with the regulations contained in the Jefferson County Zoning Resolution and Land Development Regulation.