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Memorandum from Dan Ervin RH2
Review of Stormwater Deviation Request
July 17, 2014



Memorandum



To: Andy Williamson – MDRT Director
CC: Dan Ervin

From: Dan Ervin, P.E.

Subject: City of Black Diamond – PP2C – Stormwater Deviation

Date: July 17th, 2014

As a part of the engineering review for Preliminary Plat 2C, the applicant has submitted a Preliminary Drainage Analysis (dated November 8, 2013 and prepared by Triad Associates) and therein requested a deviation in accordance with Condition 77 of the Villages Development Agreement.

The Villages Development Agreement identifies several different stormwater management zones within Parcels V28 and V29 (the extent of the Phase 2C Pre Plat application), and two of those zones exist within this Preliminary Plat: Zone 1C and Zone 2.

In accordance with the EIS and the Development Agreement, stormwater within Zone 1C is used to recharge wetlands where necessary and all excess stormwater is discharged off-site to the regional stormwater facility located in Preliminary Plat 1A prior to infiltration. Stormwater within Zone 2 is used to recharge Wetland TOS and maintain base flow in Rock Creek.

The Villages Development Agreement anticipated certain projects and infrastructure to manage the stormwater from this area. Namely, new treatment ponds and detention ponds would be constructed in each Zone with the goal of maintaining base flows of clean water into nearby wetlands, creeks and to maintain recharge to the regional aquifer under the project site. The Development Agreement allows for deviations and revisions to the DA stormwater system when justified by a technical analysis and risk analysis.

Several previous studies have been completed and considerable technical scrutiny has been applied to the facilities and processes that control discharge to Rock Creek (and downstream Lake Sawyer) in an attempt to minimize the introduction of additional phosphorus to the creek and lake. The applicant proposed a revision to the proposed drainage facilities to improve stormwater management and minimize the risk potential for phosphorus discharge to the creek and the lake. The proposal redirects flows from

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pollution-generating surfaces (roads and parking areas) within Zone 2 into Zone 1C (Zone 1C is less sensitive to phosphorus whereas Zone 2 is more sensitive to phosphorus). A similar (compensating) volume of stormwater from non-pollution-generating (rooftop) surfaces in Zone 1C will be redirected into Zone 2. In this way the volume of runoff from each Zone will be maintained. But whereas in the original configuration some treatment would be required in Zone 2 to remove phosphorus from the stormwater, the revision directs only clean stormwater into Zone 2. In other words, ALL of the stormwater in Zone 2 is from non-pollution generating surfaces and does not contain any phosphorus-laden stormwater from impervious surfaces.

This revised configuration has been analyzed and modeled in the Preliminary Drainage Analysis for Preliminary Plat 2C. We have reviewed the proposal and have determined that it meets the requirements of Condition 77. It is technically feasible, it eliminates some of the risk associated with phosphorus treatment and meets the goals and objectives of the EIS and Development Agreement.

We therefore recommend approval and acceptance of the Preliminary Drainage Analysis prepared by Triad Associates and dated November 8, 2013 as the basis for utility planning and design in the Phase 2C Preliminary Plat.
