CITY OF EDMONDS

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May 4, 2012

Subject: Burnstead Construction Company
Woodway Elementary Preliminary Plat/PRD
P-2007-17/PRD-2007-18

INTRODUCTION

This document has been prepared by City of Edmonds Public Works Staff to provide context for the appeal of the hearing examiner's approval of the Burnstead Construction Company's Woodway Elementary Preliminary Plat/Planned Residential Development (PRD)[1]. It begins with a brief description of the review process used by the Public Works Division for projects such as the proposed Burnstead project. Next, the relevant portions of the Court of appeals and remand hearing proceedings on the drainage issues are presented. Staff responses to the Appellants written arguments submitted on April 26 and 27, 2012 are also provided herein.

Public Works Division Review Process

As described in the Hearing Examiner's decision, the referenced Burnstead project is at the preliminary plat phase[2]: As stated before the Hearing Examiner, and consistent with the Public Works Department's review of all Preliminary Plat/PRD submittals, each phase of the project requires a different level of review:

> "…at this phase, the City requires the Applicant to provide a preliminary stormwater design plan that shows the proposed development is feasible. The second phase is the review of civil construction plans with the final design of utility improvements. During the civil review, the City will ensure compliance with the storm water regulation and any conditions of approval applied to the plat, PRD or SEPA determination.[3]"

It is important to note that the recent Hearing Examiner decision approved, with conditions, the <u>preliminary</u> plat/PRD[4]. During the review of preliminary plats/PRDs, Public Works Staff primarily focus review efforts on confirming whether the development is feasible. The Revised Code of Washington (RCW) 58.17.020 (4) defines the term "preliminary plat"as follows:

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[1] Record at 000001 -000025
[2] Record at 000003
[3] Ibid
[4] Record at 000023

> "Preliminary plat is a neat and approximate (*emphasis added)* drawing of a proposed subdivision showing the general layout of streets and alleys, lots, blocks, and other elements of a subdivision consistent with the requirements of this chapter. The preliminary plat shall be the basis for the approval or disapproval of the general layout of a subdivision."

Should this project proceed to final design, Public Works Staff members will perform a detailed review of the Applicant's final civil engineering design plans and supporting calculations to determine if these submittals meet applicable stormwater management codes and standards and any applicable conditions imposed by the Hearing Examiner[5], the Council, or other government entities.

Appellate Court Decision on Drainage Issues

The Appellate Court decision in April 2011[6] remanded for further proceedings before the Hearing Examiner three items: the preliminary drainage plan, the perimeter buffer, and open space matters[7]. The two specific remand issues under the drainage plan are the:

1. Size of drainage system[8]
2. Future maintenance of the vault[9].

During the Appellate Court proceedings, it was argued that the proposed drainage plan (developed in 2007) was inadequate because the size of the proposed retention vault was too small[10]. This vault was designed to hold runoff from the proposed development and infiltrate into the ground approximately 6 feet below ground surface. The argument that the vault is too small was based on an erroneous statement made by the Hearing Examiner in 2007. According to the Court of appeals:

> "The hearing examiner erroneously stated in her decision that Burnstead's proposed vault, sized using an infiltration rate of 10 inches per hour…is better able to handle excess water than a vault sized for a lower infiltration rate. This is incorrect." [11]
>
> "The reason this statement is incorrect is that the size of the stormwater retention vault is inversely proportional to the infiltration rate of stormwater into the ground. …the **lower** the infiltration rate of stormwater into the ground, the **larger** the required the size of the retention vault.[12]"

The Appellate Court also commented on the location of the previous infiltration tests:

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[5] Record at 000023-000024
[6] Record at 000058-000082
[7] Record at 000081
[8] Record at 000063-000069
[9] Record at 000069
[10] Record at 000065
[11] Record at 000067
[12] Ibid

> "…this mistake is compounded by the fact that Burnstead's Stormwater Infiltration Study … did not include any infiltration tests on the site of the proposed vault." [13]

The Appellate Court further stated:

> "...proper drainage is a major issue for this project given the serious existing drainage problem and the additional drainage burden that this project will place on the area. Simply stated, selecting a proper infiltration rate and safety factor for designing a properly sized vault are essential." [14]

The second drainage issue involves "… a failure to provided for [future] maintenance of the vault." [15] The Court of appeals also commented:

> "… the hearing examiner failed to provide a clear decision to resolve this dispute for who would be responsible for maintenance: the homeowners association [HOA] or the city. The assumption that the HOA will act in accordance with the applicable laws is insufficient under these circumstances." [16]

The remedy from the Court of appeals for these two specific drainage issues was to remand for further proceeding back to the Hearing Examiner.

Remand

According to the December 2011 Pre-Hearing order[17], the remand hearing is "… on the original application plus any revised materials submitted in accordance with the Appellate Court decision and vested under the code in force at the time of the project's notice of a completed application." [18]

I. Vault Sizing Issue

In late 2011 and early 2012, Burnstead submitted revised drainage reports and plans. The City responded with comments on these submittals dated November 9, 2011[19] and January 9, 2012[20]. The comments from January 9, 2012 included those submitted from a professional geotechnical engineering firm hired as a peer review by the City. These comments noted that although the most recent infiltration test was done in the spot of the proposed drainage facility (as recommended by the Appellate Court),

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[13] Record at 000068
[14] Ibid
[15] Record at 000069
[16] Ibid
[17] Record at 000083-000087
[18] Record at 000086
[19] Record at 000097
[20] Record at 000175

the safety factors applied to convert the field infiltration rate to the design infiltration rate were not acceptable[21].

As previously noted, the Pre-Hearing Order states the Applicant is vested to the drainage code in force at the time of the project's notice of a completed application." [22] This vested code (which differs from the current code) relies on the *Stormwater Management Manual for the Puget Sound Basin*, Department of Ecology, 1992, (1992 Ecology Manual). In the recent drainage submittals, the Applicant says they used technical guidance in the 2005 King County Surface Water Design Manual (KSWDM) for converting the field infiltration rate to the design infiltration rate. *This is appropriate since the more recent manual (KCSWDM) provides for* ***a larger factor of safety*** *than does the older 1992 Ecology Manual, but the methods in the KCSWDM need to be applied properly.* In the comments on the Applicants December 2011 submittal, the City's consultant noted that using the KCSWDM methodology, the minimum factor of safety is 5.5, while the Applicant's proposed a value of 3.5[23]. The methodology had not been applied properly.

In subsequent revisions to the drainage documents, the Applicant used a factor of safety of 5.5, thus, sizing the infiltration vault using a design infiltration rate of 2.3 inches per hour. With this revision, *City Staff found that this preliminary design parameter satisfies the Appellate Court's recommendations for a proper design infiltration rate obtained from field infiltration tests done at the site of the proposed facility. This method of determining the field infiltration rate meets or exceeds the standard to which the applicant is vested.*

To that end, the Hearing Examiner's decision included the following condition:

> "8. Prior to final plat approval, the Applicant shall demonstrate compliance with all stormwater best management practices requirements pursuant to the *Stormwater Management Manual for the Puget Sound Basin*, Department of Ecology (1992), including the ultimate value for the design infiltration rate, even if more recent methodologies are employed to determine design parameters of the stormwater facility." [24]

This condition reflects the following statement in the Hearing Examiner's conclusion of law:

> "The City has developed a "roadmap" for the applicant to follow during final design of the infiltration system which includes using the 2005 King County Surface Water Design Manual (2005 KCSWDM) to determine the design infiltration rate for the proposed facility. … All applicable portions of the 1992 Ecology manual will remain in effect." [25]

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[21] Record at 000179
[22] Record at 000086
[23] Record at 000163
[24] Record at 000024
[25] Record at 000021

In addition, the Hearing Examiner's conclusion included the following:

> "The City testified that they are satisfied the Applicant's preliminary stormwater design is adequate to meet ECDC 18.30 and the vested 1992 Ecology stormwater manual. No opposing expert testimony was offered." [26]

The City is sensitive to the concerns regarding past flooding in the neighborhood. As in past reviews, any future reviews of this project, Staff will continue to emphasize that concern.

Appellants written arguments Related to Vault Sizing
The following four paragraphs address:

Appellants	Item	Appellant page number
Petso	(1),(2), (4), (5)	1-3
Miller/Tagios	1.,2.,3.,4.,5.,7.,8.[27]	1-4

The stormwater infiltration vault is sized to manage runoff from the proposed development plus 3.35 acres of offsite area[28]. This offsite area is to the north of the proposed plat and is the primary source of the runoff that is carried by the existing drainage ditch on the west side of the Burnstead parcel[29]. The runoff that is currently carried in this ditch will be placed in a closed pipe system that discharges into the infiltration vault. The vault has also been sized assuming there are no additional infiltration systems on any of the individual lots[30].

The vault has been sized in accordance with the applicable standards document referenced in the vested code (previous version of ECDC 18.30) and the *Stormwater Management Manual for the Puget Sound Basin*, Department of Ecology (1992)[31].

The *Stormwater Management Manual for the Puget Sound Basin*, Department of Ecology (1992) requires an overflow route be identified in the event that the capacity of the infiltration system is exceeded. (Manual Volume III, page 3-26). The Applicant has identified an overflow route in the Preliminary Drainage Plan[32]. The overflow requirement in the 1992 Ecology Manual assumes there is an overflow path available to safely convey the surplus flow to receiving water such as a stream or lake. This is not the case in this area of Edmonds since the Southwest Edmonds drainage basin (which this

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[26] Record at 00022
[27] Miller/Tagios comment 9 on page 5 of their written argument is outside of the remand issues and is not addressed.
[28] Record at 00105
[29] Record at 00113-00114
[30] Record at 00105
[31] Record at 00024
[32] Record at 00106

project is contained within) has no direct surface water outlet. The natural condition is for the incident rainfall to soak into the ground. The City has suggested the overflow be directed to the adjacent park[33]. Being located in a closed basin, this was suggested since it would be better to have standing water the park than in the homes downstream.

The City has always acknowledged the neighborhood in question has drainage problems[34]. The City has several capital improvement projects already planned to address those issues[35].

II. Future Stormwater Facility Maintenance Issue

City stormwater code clearly states that property owners are responsible for maintenance, operation, or repair of stormwater drainage systems[36]. As currently designed, the infiltration facility is located in a private tract that will be jointly owned by all property owners within the plat. All owners will share in the responsibility associated with owning and maintaining the system. The code also gives the City the right to inspect these systems and to require the private property owners to maintain all stormwater facilities to current standards. These maintenance standards are referenced in the current version of ECDC 18.30.090 and in Exhibit A to the current version of ECDC 18.30. The code also has an enforcement section that can ensure owners are maintaining their system properly.

The standard practice for all developments is for the final drainage plan to include a commitment for proper maintenance by the developer to the applicable drainage standards. A performance bond is placed on the stormwater system requiring the developer to properly maintain the system for 2 years. The system will be inspected annually. After the bonding period is completed, the system is inspected and if meets city standards, the bond is released and the maintenance of the facility falls on the owners.

The final plat will have covenants, conditions, and restrictions that will:

- Allow the City to regularly inspect the stormwater management system
- Bind the owners of the lots and their successors to maintain the plat's stormwater management system in accordance with City maintenance standards.

To that end, the Hearing Examiner's decision added the following specific conditions to the approval:

> "4. The recording documents shall include access easements on Tract C (as identified in Exhibit 1, Attachment 2012-3) and/or all final locations of storm drainage facilities to the City of Edmonds for the purpose of accessing and inspecting the storm drainage facility or facilities. The

[33] Record at 00168
[34] Record at 00003
[35] Ibid
[36] Since Inspection and enforcement are not a land-use related item, the Applicant is not vested to those provisions of the code in-place in 2007 but the current code (ECDC 18.30.090 -.100).

City shall use enforcement actions as appropriate to ensure all necessary maintenance is completed in a timely fashion." [37]

"5. The recording documents shall reflect the responsibility for long term maintenance of all storm water and open space facilities rests with the Homeowners' Association and that each lot owner within the plat is jointly and severally liable."[38]

The City understands the concern about proper maintenance of the proposed stormwater facility. Consistent with applicable City code, City staff will inspect and enforce the applicable standards to ensure the stormwater system is operated and maintained properly so it functions as designed.

Appellants written arguments Related to Future Stormwater Facility Maintenance

The preceding paragraphs in the future maintenance issue section address:

Appellants	**Item**	**Appellant page number**
Petso	(3)	2
Miller/Tagios	6.	4

To summarize this issue, the developer is initially responsible for the proper operation and maintenance of the stormwater system. Once system has been working and maintained properly for 2 years, the lot owners will be held accountable for maintaining the infiltration facility. City codes allow for inspection and enforcement as appropriate to ensure the maintenance is completed in a timely fashion.

[37] Record at 00024
[38] Ibid