

CES ♦ NW
INCORPORATED
CIVIL ENGINEERING & SURVEYING

November 1, 2018

City of Puyallup
333 S. Meridian
Puyallup, WA 98372

RE: Response to Comments for the Sunset Pointe Preliminary Major Plat (CES #04148)
Permit Number P-09-0083

Dear Chris,

Thank you for the opportunity to respond to the city's comments for the Sunset Pointe Preliminary Major Plat application under permit number P-09-0083.

Planning – Chris Beale 253-841-5418 cbeale@ci.puyallup.wa.us

See DRT Letter for comments.

1. Roadway classifications: *Responses to Staff analysis*

Response: *The roadways will be designed to meet City Standards.*

2. Critical Areas:

Response: *See responses to SCJ below.*

SCJ Alliance 3rd Party Review Lisa Palazzi 360-352-1465

- The ponds in the southern parcel are also wetlands, and should be delineated, rated and buffered. They are not “landscape amenities” or livestock ponds created in what was previously an upland condition. They appear to be ponds that were created from damming an existing stream or wetland swale corridor many decades ago. The hydrology is natural, the ponds have been stable and in place for many decades, and the current hydrologic condition cannot be differentiated from the pre-dammed condition. Therefore, the current ponds would be regulated as wetlands.
- Overall, the report was difficult to read for a variety of reasons.
 - A project proposal map is needed to provide context for potential impacts of the proposed development to wetlands or buffers.
 - A single map showing all wetlands and buffers overlaid across the entire project area would help assess comprehensive impacts of Critical Areas to the site, rather than having separate maps of the separate wetlands after each set of rating forms.
 - Figures in the Appendices associated with each set of Rating forms should have complete captions – for example, the caption should describe if the drawing is intended to show vegetation zones versus hydrologic regimes.
 - A Table of Contents, Table of Figures and Table of Tables at the beginning would help the

reader locate certain sections or maps more easily in a report of this length.

- The Field Data Forms are missing the name of the Applicant/Owner and the name(s) of the people doing the field work. Please resubmit with all information provided.
- The Rating Forms also need the name of the person who filled out the form included.

Response: *An updated Critical Area Assessment, dated September 21, 2018 is included for your review. The updated report should address the above comments.*

3. Drainage Facilities Responses to Staff analysis:

Response: *The Preliminary Storm drainage report is utilizing the current version of the Stormwater Management Manual for Western Washington as adopted by the City of Puyallup. Low impact principles are being integrated into the design by proposing amended soils for the landscape areas and driveway dispersion where feasible as well as roof top dispersion trenches and full dispersion.*

4. Domestic Water Facilities Responses to Staff analysis:

Response: *The water availability certificate has been ordered with the City of Puyallup.*

5. Sanitary Sewer Facilities Responses to Staff analysis:

Response: *The sanitary sewer invert for the proposed manhole in 23rd St PL NE has been added to the plan per your recommendation.*

6. Undergrounding of Utilities Responses to Staff analysis:

Response: *The final Civil plans will reflect the new utilities will be underground.*

7. Transportation Facilities Responses to Staff analysis:

Response: *The northern parcel is no longer part of this plat. Therefore, a connection between 19th Ave SE and Highland Drive is no longer applicable.*

8. Sidewalk and Walkways Responses to Staff analysis:

Response: *Sidewalks are being proposed for the cul-de-sac extension for 23rd St PI SE and along 19th Ave SE.*

9. Bikeways Responses to Staff analysis:

Response: *The roadways are designed to meet the City of Puyallup standards.*

10. Street Lighting Responses to Staff analysis:

Response: *Streetlights will be provided as part of the final engineering plans.*

11. Block Lot Layout *Responses to Staff analysis:*

Response: *The civil engineering drawings will meet the requirements of the City standards.*

12. Vegetation Buffers *Responses to Staff analysis:*

Response: *The civil engineering drawings will meet the requirements of the City standards.*

13. Street Trees *Responses to Staff analysis:*

Response: *Street trees will be provided as part of the final engineering plans.*

14. Fence and Walls *Responses to Staff analysis:*

Response: *Fence and walls standards will be addressed as part of the final plat and building permits.*

15. Common Areas and Facilities *Responses to Staff analysis:*

Response: *Privately held Common areas and Facilities will be owned and maintained by the Homeowner's Association.*

16. Park and recreation Facilities *Responses to Staff analysis:*

Response: *Park and recreation impact fees will be addressed as part of the building permit process.*

17. School Facilities *Responses to Staff analysis:*

Response: *School Facilities impact fees will be addressed as part of the building permit process.*

Engineering – Alicia Floyd 253-435-3637 afloyd@ci.puyallup.wa.us

Geotechnical/Critical Areas Assessment/Stormwater Report:

1. The geotechnical report prepared by Earth Solutions NW must be updated to reflect the current project design. Applicant will not be permitted to redirect surface water to neighboring adjacent properties at the Southern boundaries of lots 13, 14, 15, 16, 17, 7, and 8 as currently designed. The stormwater report must specifically address PMC 21.10.050 (3) with regards to surface water drainage from the proposed development posing "no significant adverse impact to the downhill property". This condition does not appear to be currently met for lots 13, 14, 15, 16, 17, 7, and 8.

Response: *Updated Geotechnical Report by ESNW, provided with resubmittal.*

2. If retaining wall(s) are proposed for the steep slopes at the Eastern boundary of the site, the civil plan must depict wall footing drains that are directed onto the development property and not onto adjacent properties. Retaining walls, if proposed, must also comply with setback requirements set forth in PMC 20.58.005 (2)(a).

Response: *At this time no walls are being proposed.*

3. The geotechnical study does not include any infiltration testing to support its claim that infiltration is infeasible. In addition, other than the heavy perched groundwater seepage observed in TP-4, the report offers little discussion on the expected groundwater conditions. Evidence of iron oxide staining in many of the test pits along with Habitat Technologies' observation of "numerous groundwater seeps" and "fully saturated conditions" in their site reconnaissance suggests that there is more to elaborate on with regards to groundwater. Prior to preliminary plat approval, wet- weather infiltration and groundwater testing in accordance with the 2012 SWMMWW will be required to support stormwater feasibility/infeasibility.

Response: *– Heavy perched groundwater seepage was encountered at test pit location TP-4 at an approximate depth of four feet below the existing ground surface elevation. Groundwater seeps were not encountered at any other test pit location. Given the extent of site exploration, it is our opinion the encountered seepage is considered representative of an isolated occurrence rather than a pervasive condition underlying the entire site. Perched seepage zones are common within glacial deposits, with variable 'daylight' elevations and flow amounts due to many factors, including, but not limited to precipitation amounts and the time of year and flow rates through the soil profile. It is possible that interflow (shallow groundwater) conditions are present on the site; however, if these are present it is difficult to correlate the communication of interflow, surface flow, and deeper groundwater conditions with a sufficient degree of certainty. In general, groundwater seepage zones typically develop as subsurface groundwater becomes perched atop the denser, less-pervious soil substratum's.*

Iron oxide staining was encountered at various locations and depths within the test pit locations during our October 2017 exploration. However, it is difficult to attribute the cause of the discoloration. In actuality, the staining may be a result of either current or historic subsurface seepage zones, surface water that has transmitted through the soil substratum's, or a combination of the two. Regardless, iron oxide staining is not explicitly a direct indication of the current, seasonally high groundwater elevations that may affect the proposed development. Due to the soil conditions and undulating terrain at this site, it is highly unlikely that a well-defined groundwater table is present within proximity to the development areas.

Our October 2017 subsurface exploration encountered site soils that are highly variable in terms of gradation and in-situ densities. Additionally, we were unable to delineate transition zones of soil gradation changes with a high degree of certainty. Representative sieve analyses indicate that soils range from poorly graded sand with silt (slightly gravelly sand) to silt with sand (loam). Fines contents of the tested soils range from 6 to 81 percent. No definitive depositional sequence was attributed to the soil variations. In other words, the variability does not have a distinct, uniform sequence or transition that was observed across the site; rather, the deposits encountered at the test pit locations represent a more chaotic environment.

In general, poorly graded sands with minor silt contents are generally considered suitable for facilitating infiltration applications. However, an extensive deposit of poorly graded sand was not observed at the test pit locations that would lend itself sufficient for supporting infiltration. In general, the encountered silty sand and silt are not considered suitable for infiltrating purposes. Areas characterized as dense are regarded as near-impervious and are not considered suitable for

infiltration. Infiltration rates typically observed within these deposits are generally considered below the minimum threshold necessary to maintain successful performance of a facility. The encountered fill soils are also not considered suitable for infiltration purposes due to variability of gradation and in-situ densities. Therefore, general site infiltration testing would not be practical, because to determine feasibility would require some degree of design relating to facility location(s) and grades. Additionally, impacts to adjacent wetlands and critical areas would need to be evaluated if infiltration is pursued.

From a geotechnical standpoint, the site is not considered a suitable candidate for infiltration. The highly variable soil gradation and in-situ characteristics, and general uncertainty of transition locations are the primary bases for this consideration.

4. The geotechnical study does not address the presence of wetlands and perennial streams on-site. Please include a brief description of these features and their impact on the site soils if applicable.

Response: *This ravine was identified to contain a seasonal stream that originated offsite to the south. Onsite this ravine had undergone prior development actions to include the excavation and creation of three (3) ornamental ponds. These ponds appeared to have been created through the excavation of material within the ravine and through the placement of material to establish two (2) internal roadway corridors crossing the ravine generally north to south. Hydrology control structures and culverts had been installed to intentionally control surface water ponding within these ornamental features.*

5. Please elaborate on the "moderate organic debris" found in TP-15 that was found to be deleterious.

Response: *The organic debris was observed to consist of roots, branches, and/or logs throughout the fill zone. These inclusions are considered deleterious due to their susceptibility to degradation.*

It should be noted; since the completion of our original study (January 2018), site layout plans have been revised and no longer include the area at which test pit TP-15 was excavated. As detailed in our updated report, test pit TP-15 is not within the proposed development area and is no longer considered applicable to the subject project.

6. The landslide hazard discussion for lots 12 and 13 appears to be commenting on the existing slope and not the proposed 2:1 20+ foot slope at the southern sides of lots 13, 14, 15, 16, 17, 7, and 8. Further, the discussion does not address the heavy perched groundwater found in TP-4 near proposed lot 14 or the presence of loose to medium dense soils on top of dense silts and the impact of the development on these soils. Applicant will not be permitted to increase the height and slope of the landslide hazard area as currently depicted.

Response: *Since original report production (January 2018), grading plans and site layout designs have changed. Review of the referenced grading sheet, indicates the above-mentioned Lots 13 – 17 (mentioned in the comment) now correspond to Lots 6 – 11. Lots 7 and 8 as discussed in our original report are no longer included within the scope of development.*

The referenced grading plan indicates that up to 25 of engineered fill may be necessary to establish finish grades for Lots 6 – 11. In this regard the identified landslide hazard originally identified on Lots 6 and 7 (originally Lots 12 and 13) will be eliminated. The engineered slope will be

constructed using structural fill as specified in the referenced geotechnical engineering study. Additionally, it is expected that ESNW will be retained at the time of construction to test compaction of the slope fill and to assess the need of drainage elements beneath the fill. The referenced report provides recommendations for slope fill placement that are applicable to this proposed configuration.

7. The landslide hazard discussion for lot 8 must be updated to reflect the current proposed conditions for lots 7 and 8, which do not include an MSE wall as initially assumed by Earth Solutions NW.

Response *Since original report preparation and comment letter generation, site layout and grading plans have been revised. The aforementioned lots are no longer within the scope of development proposal and do not correlate to any new lot layout configuration or numbering. As such, this comment is no longer relevant to the proposal.*

8. According to SJC's 3rd party review the "ornamental ponds" must be regulated as wetlands. As such, the discharge from the proposed storm facility and lot 17 must be assessed against Minimum Requirement #8.

Response: *The stormwater report has been revised and a copy is attached for your review.*

9. Compliance with MR #8 is not met by providing the critical area assessment alone. Applicant must provide an analysis of MR #8 in accordance with Appendix 1-D of the 2012 SWMMWW. Class IV wetlands are not required to strictly meet MR #8, but the analysis must still be presented to the City for review. The City will require a signed letter from a wetland biologist or hydrogeologist stating that the development poses no adverse impact to the wetlands' hydroperiods or ecosystems.

Response: *The stormwater report has been revised and a copy is attached for your review.*

10. Please depict and describe the downstream drainage path for the water that is discharged to the "ponds". Provide a downstream summary/analysis for all outfall points.

Response: *The stormwater report has been revised and a copy is attached for your review.*

11. Public ROW runoff must be treated and detained separately from private drainage facilities. This shall be accomplished by providing separate publicly maintained storm facilities within a tract or dedicated right-of-way; enlarging the private facilities to account for bypass runoff; or other methods as approved by the City Engineer.

Response: *The stormwater report has been revised and a copy is attached for your review.*

12. Flow rates for the North and South basin do not match the WWHM output provided. Please reconcile.

Response: *The stormwater report has been revised and a copy is attached for your review.*

13. The percent exceedance column provided is confusing/misleading because it is a positive percentage whether post development conditions exceeded or was less than pre-developed conditions. Additionally, it appears that several of the percentages are incorrect.

Response: *The stormwater report has been revised and a copy is attached for your review.*

SEPA:

1. Item B.1.d must include a description of the landslide hazard areas present on-site.

Response: *The SEPA was revised to provide a description of the landslide area present on-site.*

2. Item B.3.1. must include a description of the perennial stream observed by Habitat Technologies. Also, please provide a brief description of the site wetlands as opposed to solely referring to the critical areas report.

Response: *A brief description of the perennial stream was provided in the revised SEPA.*

3. Item B.3.2 provides no description or attached plans for the proposed work within the wetland buffer area.

Response: *The SEPA was revised to include a description of the proposed work within 200-feet of the man-made ponds. The proposed construction will be outside of the proposed buffer for the existing ornamental ponds.*

4. The description provided for item B.7.a.(1) is incorrect. There is site history of a dam constructed from used car battery casings that was remediated. Please discuss this historic contamination in the SEPA report.

Response: *The SEPA was revised to discuss the historic car battery casings and the site remediation.*

5. The height provided for item B.10.b. does not include the height of the slope for proposed lots 13, 14, 15, 16, 17, 7, and 8. Please include a description of the entire height of obstruction from the toe of the existing slope on the Kodiak estates properties to the assumed roof line of the proposed properties listed above. A simple sight diagram may be useful in illustrating this project's impact to the neighboring properties.

Response: *Updates SEPA provided.*

Preliminary Plat Comments (all comments apply to Sheet P2):

1. Depict and label the following existing easements:
 - 1071540
 - 1549950
 - 22510
 - 201710300359
 - 201710300360

Response: *The appropriate easements have been added to the plans.*

2. Provide preliminary road profiles so that the proposed roads can be reviewed against vertical design criteria.

Response: *The preliminary profiles are provided on sheet P3 for review.*

3. Show locations of proposed streetlights.

Response: *The streetlights are shown on sheet P2 as requested.*

4. Provide contours a minimum of 20' beyond the property lines. Will be required to show the toe of the steep slope ending at Kodiak Estates.

Response: *We do not have permission to enter the private property for Kodiak Estates. The toe of the slope cannot be provided at this time.*

5. Label existing culverts that are crossing from Pond A to Pond B.

Response: *The existing culverts are labelled on sheet P2 as requested.*

6. Minimum easement width for a utility is 40 feet.

Response: *The preliminary plat illustrates all proposed easements.*

7. Please clarify what the 25' x 25' leased easement area is for and if it is still in use.

Response: *The leased area is for the existing KIRO 7 translator tower.*

8. The City will allow some lateral connections into a manhole, however the 5 laterals entering the same manhole as currently shown is not constructible. Please revise.

Response: *The plan has been revised to reduce the number of laterals entering the manhole and is depicted on sheet P2.*

9. Provide a dual water meter between lots 19 and 20 and between lots 21 and 22.

Response: *The water meter locations have been revised per your request.*

10. Lot 1 must have frontage on a public street.

Response: *Lot 1 has access via an existing ingress, egress easement. The existing easement is labelled on sheet P2.*

11. Please clarify where the water meters for lots 1 and 3 will be located.

Response: *The water meters are depicted on sheet P2 for your review.*

12. Lots 1 and 3 will not be permitted to share a sanitary lateral as currently depicted.

Response: *The sanitary sewer lateral has been revised to depict the separate laterals for the proposed lots.*

TRAFFIC – Bryan Roberts (253) 841-5542 broberts@ci.puyallup.wa.us

- Per Puyallup Municipal Code Section 11.08.130, the applicant/owner would be expected to construct half-street improvements including curb, gutter, sidewalk, roadway base, pavement, and street lighting. Any existing improvements which are damaged now or during construction, or which do not meet current City Standards, shall be replaced. Based on the materials submitted, the applicant would be expected to construct half-street improvements on the following streets:
 - 19th Ave SE extension (between 21st St SE & Highland Dr) shall consist of a 28' street with curb, gutter, 5' sidewalks, 5.5ft planter strip and street lights in a 50' right-of-way.
 - The alignment of this new roadway connection can utilize a non-standard "Knuckle" design similar to Pierce Co PC.A6.1 standard detail. This design will allow a more feasible roadway design based on the existing topography.
 - 23rd St PI SE & 21st St SE shall consist of 28' streets with curb, gutter, 5' sidewalks, 5.5' planter strips, and street lights within a 50' right-of-way. The improvements shall be from street centerline. Assuming a symmetrical cross section, additional right-of-way (ROW) may need to be dedicated to the city.
 - With 28' wide roadway width, NO Parking signs shall be required on at least one side of these roads.

Response: *The road cross section is provided on sheet P2, which depicts a 50-foot right-of-way.*

- A separate street lighting plan is required for the City's review.

Response: *A streetlighting plan will be submitted as part of the engineering plans.*

- The driveways adjacent to the existing cul-de-sac along 23rd St PI SE must be rebuilt to accommodate the new roadway alignment. Will need to coordinate with existing home owners.

Response: *The coordination of the existing driveways will be addressed as part of the engineering plans.*

- This project will require property dedication along the west side of parcel 0420353009 to allow 60ft of ROW. This ROW dedication will facilitate future city roadway improvements along 21st ST SE.

Response: *The above referenced parcel is no longer part of the proposed project area.*

Fire Prevention – David Drake (253) 841-4171 ddrake@ci.puyallup.wa.us /Ray Cockerham (253) 841-5585 rayc@ci.puyallup.wa.us

- Verify fire flow, a Water Availability/ Fire Flow report shall be required.

Response: *The water availability certificate has been ordered with the City of Puyallup.*

- City of Puyallup Municipal Code requires a minimum 1,000 GPM of fire flow. If this amount is less than the requirement, a fire sprinkler system shall be required in the new structures built in the plat.

Response: *The water availability certificate has been ordered with the City of Puyallup.*

- Per City of Puyallup Municipal Code 16.08.070 (14), Installation of fire hydrants. Any portion of new single-family dwellings shall be within 600' from a public hydrant that is located on a fire apparatus access road.

Response: *Proposed fire hydrant locations are depicted on sheet P2.*

- Fire Hydrants will be required per city standards and fire code.

Response: *Fire hydrants are depicted on sheet P2 of the attached plans.*

- Driveways 150' and over will require a fire truck turn around. Lots 1,3,7, and 8 may require a turn around.

Response: *The driveway lengths in excess of 150' will be addressed as part of the building permit process.*

- Maximum grade shall not exceed 10% for fire access roads.

Response: *The proposed roadways do not exceed 10%.*

BUILDING – Eric Belin (253) 770-3328 eric@ci.puyallup.wa.us

- Earth moving during the grading process will require a Geo Engineers report for Building Envelope soils compaction and bearing capacity.

Response: *This comment will be addressed as part of construction.*

If you have any questions, please do not hesitate to contact me at fbrown@cesnwinc.com or 253-848-4282.

Regards,



Fred Brown
Project Manager

Prepared by DM