



Memorandum

To: Lindsey Ozbolt, Associate Planner

From: Haim Strasbourger, P.E.
Development Review Engineer

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Stormwater Program Manager

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Traffic Engineer

Date: March 27, 2017

Subject: Public Works Review 1
East Lake Sammamish Trail Master Plan
Inglewood Hill Road Parking Lot
Shoreline Substantial Development Permit
SSDP2016-00414

This letter presents comments from the Public Works review of the East Lake Sammamish Master Plan Trail, Inglewood Hill Road Parking Lot for the shoreline substantial development application under SMC Chapter 25 Shoreline Management. Based on Chapter 25 the following sections are most applicable to the review performed.

SMC 25.06.050 Water quality, stormwater, and nonpoint pollution regulations.



(1) New shoreline uses and developments (and their related construction processes) shall incorporate all known, available, and reasonable methods of preventing, controlling, and treating stormwater to protect and maintain surface and ground water quantity and water quality in accordance with Chapter [15.05](#) SMC (Surface Water Management), requirements of Chapter [21A.50](#) SMC and other applicable laws.

(2) Best management practices (BMPs) for controlling erosion and sedimentation and preventing pollutants from entering lakes shall be implemented for all new uses and developments (and their related construction processes).

SMC 25.07.100 Transportation regulations.



(1) The following regulations for transportation use shall apply to any use or development where transportation infrastructure is, or is proposed to be, a primary land use, including new or expanded roadways, trails, nonmotorized facilities and parking facilities. Transportation use regulations shall not apply to residential access drives that are accessory to residential use.

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(2) New transportation development shall be carried out in a manner that maintains or improves water quality for receiving waters through implementation of state and City stormwater regulations (see SMC [25.07.110](#)).

(3) New transportation and stormwater facilities and improvements to existing transportation facilities, not including trails, shall be located outside of the shoreline setback and any required building setback unless there is no feasible alternative. Adverse impacts shall be mitigated according to the mitigation requirements of Chapter 21.50 SMC and other applicable regulations.

(4) New roads shall be developed to minimize impacts to surface waters and new culverts shall meet applicable City and state standards.

(5) New transportation facilities shall be located and designed to preclude the need for shoreline stabilization where reasonable.

(6) Parking within the shoreline jurisdictions shall be limited to parking facilities that directly serve a permitted shoreline use, such as waterfront regional trails, including on-street parking where otherwise allowed in SMC Titles [14](#) (Public Works and Transportation) and [21A](#). Parking as a primary use shall be prohibited.

(7) To the extent possible, vehicle and pedestrian circulation systems shall be designed to minimize clearing, grading and alteration of topography and natural features. Roadway and driveway alignment shall follow the natural contours and minimize width to the maximum extent reasonable.

(8) Parking facilities shall be located and designed to minimize adverse environmental impacts including, but not limited to, the following:

(a) Stormwater runoff; and

(b) Water quality and shoreline habitat; and

(c) Visual qualities; and

(d) Public access; and

(e) Lake management districts regulated by Chapter [21A.50](#) SMC.

(9) Parking is prohibited on structures located in, on or over water. (Ord. O2011-308 § 1 (Att. A))

25.07.110 Utilities regulations. 

(1) Utility regulations shall apply to any use or development where utility infrastructure is required to support the primary land use.

(2) Utility facilities shall provide for multiple use of sites and rights-of-way (i.e., trail corridors along underground utility rights-of-way), except in instances where multiple uses would unduly interfere with utility operations, endanger public health and safety, or create a significant and disproportionate liability for the owner.

(3) When reasonable, new utility lines shall use existing rights-of-way, corridors and/or bridge crossings and shall avoid duplication and/or construction of new or parallel corridors in all shoreline jurisdictions.

(4) Conveyance utilities shall be placed underground or alongside or under bridges except where the presence of bedrock or other obstructions make such placement infeasible. Stormwater conveyance facilities may be open ditch where appropriate and beneficial to water quality.

(5) New transmission and distribution facilities shall avoid shoreline setbacks and shoreline jurisdiction wherever possible. Otherwise, such facilities shall only cross areas of shoreline jurisdiction by the shortest, most direct route reasonable, unless such route would cause significant environmental damage.

(6) Utility developments shall be located and designed so as to avoid or minimize the need for current or future structural shoreline stabilization.

(7) All underwater pipelines transporting liquids intrinsically harmful to aquatic life or potentially injurious to water quality are prohibited, except in situations where no other reasonable alternative exists. In those limited instances when permitted, automatic shutoff valves shall be provided on both sides of the water body.

(8) Surface water management facilities, such as an energy dissipater and associated pipes, are allowed in the Lake Sammamish, Pine Lake, and Beaver Lake shoreline setbacks only if the applicant demonstrates, to the satisfaction of the department, that:

(a) No feasible alternative exists; and

(b) The functions of the lake and related VEA are not adversely affected or are appropriately mitigated.

(9) Clearing of vegetation for the installation or maintenance of utilities shall be minimized and disturbed areas shall be restored following project completion consistent with the requirements of City stormwater management regulations.

(10) Utility production and processing facilities, such as power plants and sewage treatment plants, or parts of those facilities that are non-water-oriented, shall not be allowed in shoreline areas, unless it can be demonstrated that no other feasible option is available.

(11) Accessory Utilities. For single-family residences accessory utilities include electrical, gas, water, cable, telephone, and public sewer connections to the primary utilities, and also installation of septic tank and drainfields. (Ord. O2011-308 § 1 (Att. A))

Comments provided below are based on additional information request to comprehensively review the documents for compliance with SMC 25. They are not intended to provide a full or comprehensive construction document review. The Applicant should expect additional comments and/or conditions to be placed on the Shoreline Substantial Development Permit. The Applicant should expect that full compliance with vested Surface Water Design Manual and Public Works Standards will be required under the Clear and Grade Permit review.

The following items were received and considered in the review:

- Engineering Plans by Parametrix, *East Lake Sammamish Master Plan Trail, Inglewood Hill Road Parking Lot* which was received by the City on October 19, 2016.
- *East Lake Sammamish Master Plan Trail, Inglewood Hill Road Parking Lot, Draft Technical Information Report (TIR)* by Parametrix dated October 2016.
- *East Lake Sammamish Master Plan Trail, Inglewood Hill Road Parking Lot, Geotechnical Engineering Services* prepared by Icicle Creek Engineers for Parametrix dated October 2016.
- *Preliminary Illumination Technical Memo, East Lake Sammamish Trail – Inglewood Hill Parking Lot* prepared by Parametrix dated November 18, 2016.

Civil Engineering Drawings

General

1. Clearly demonstrate that the properties downstream of the infiltration facilities and the dispersion areas won't be negatively impacted (see TIR comments).
2. Indicate jetting, cleaning, and TV of all existing storm pipe and culverts to be retained in system.
3. Indicate jetting, cleaning, and TV of all new storm pipe, culverts, and underdrains in system.
4. Indicate the existing sand filter shall be inspected and cleaned prior to project completion.

5. Show right-of-way dedication adjacent to ELSP (minor arterial) consistent with dedication requirements in accordance to vested Public Works Standards. City will have a peer review surveyor review ROW dedication.
6. Show half street frontage improvements on ELSP consistent with a minor arterial in accordance to vested Public Works Standards.
7. Public comment indicates strong neighborhood desire to maintain or provide equivalent alternate to the existing driveway proposed to be removed at approximate Station 472. Provide narrative to support proposal to remove driveway and respond to public comments on this issue in the context of SMC 25.

Sheet G2 – Abbreviations and Sheet List

8. Include an Illumination plan sheet.

Sheet SP1 – TESC/Site Preparation Plan

9. Review, revise, and accurately show existing storm drain system on ELSP and through proposed development. See attached markup.
10. Show inlet protection for all existing catch basin along ELSP adjacent to development and through proposed development.
11. Show protection of existing sand filter open grates for erosion and sediment control.
12. Show protection of existing storm system given proposed work.
13. Location of construction access driveway along trail is unclear. Please clarify.
14. Location of sediment trap is unclear. Please clarify.
15. Several significant trees are shown to west and south of clearing limits. Please specify removal or tree protection. If possible, relocate clearing limits to save significant trees.
16. The existing contours and existing storm infrastructure leaders are too light and difficult to see in the plans provided (half-size). Show darker on these plans for clarity.
17. Plans show removal of existing guardrail in the public ROW. Please contact Dan Johnson at City MOC to determine if salvage desired by City.
18. Remove proposed rockery from this plan sheet.
19. Show construction signage to include No Driveway Blocking on Kokomo Drive.
20. Retain existing sidewalk under proposed construction entrance on ELSP. Show wedged curb.
21. Show location of staging area, including job shack, over excavation and material stockpiling, and materials import.

Sheet SP2 - TESC/Site Preparation Plan

22. Show clearing grading limits on this sheet.
23. Show protection of existing storm system under proposed rockery.
24. Remove proposed rockery from this sheet.

Sheet TD1 – TESC Details

25. Show additional TESC details such as inlet protection of sand filter and cb's, slope protection, construction access, silt fence, etc.

Sheets CS1 to CS2 - Typical Cross Sections

26. Provide a typical cross section that includes existing 18-inch storm outfall protection or relocation.
27. Provide structural and geotechnical analysis to support the proposed MSE type walls at all locations where proposed. If a more robust retaining wall system is needed for a portion of the site, update the design for that portion with appropriate backup structural calculations and geotechnical analysis of that wall design.

Sheet AL1 – Parking Lot Plan

28. Review, revise, and accurately show base map existing storm on plans.
29. Show protection of existing storm system and sand filter vault. Specifically,
30. Provide infiltration testing at the location of the proposed infiltration trench.
31. Show culvert connecting infiltration trenches at ped ramp crossing.
32. Provide emergency overflow from the proposed infiltration trench going back into adjacent ditch.
33. Rockery work is proposed at Station 471+70 outside the clearing and grading limits. Adjust CG limits.
34. Show wall drain and discharge point.
35. Show half street frontage improvements.
36. Existing ELSP CB is located in the wheel path on ingress to Parking lot. Relocate entrance to avoid CB. Alternatively, removal of CB may be allowed if demonstrated that pavement runoff is adequately collected into ESLP Phase 1A outfall conveyance system.
37. Show adjustment to grade of all existing catchbasins.
38. Existing outfall CB is located near or under Wall 4. Please address.
39. Show ingress/egress with ADA ramps. Provide ADA ramp details with spot elevations and drainage flow line.

40. The proposed driveway at C-line station 10+00 is located within a taper and allows cars exiting to only take right turns. Both of these should be adjusted so the driveway is not in a taper and exiting cars can turn left or right.
41. In line with the note provided in civil construction note #4, show on MD sheet the details for concrete stair and pedestrian handrail.

Sheet AL2 - Plan and Profile

42. Show protection and sleeving of existing storm system under proposed rockery. Alternatively, relocate rockery.

Sheet SD1 – Drainage Profiles and Details

43. Eliminate geotextile at bottom of infiltration trench. Show 1-ft scarification of infiltration trench bottom.
44. Show detail of curb returns/gutters adjacent to existing CB's and sand filter grates.

Sheet WD1 – Structural Earth Wall Details

45. Show fence and hand rail detail (Detail 6 not provided).
46. Add note or show plan view installation of MSE wall geogrid around underdrain cleanouts.
47. Show wall knockout detail for underdrains.

Sheet PS1 – Pavement Marking, Signing, and Landscape Plan

48. Include a "Stop" sign above sign 005.
49. Street luminaire shall be placed a minimum of 20 feet from any street tree.
50. Update pavement marking and signing construction note #2 to reference "WSDOT" and place a callout on the plan showing a typical location such as at the turnaround cross hatched area immediately to the west of sign 010, at the north end of the same parking side, and adjacent to the accessible parking spots.
51. Pavement marking and signing construction note #3 placement on the plan view appears to either be incorrect and should be #2, or is pointing at the incorrect locations. This needs to be revised either way.
52. Make sure that landscaping and trees along the frontage with East Lake Sammamish Parkway SE are not sight distance obstructions for the south driveway.
53. Show luminaires for conflict resolution.

54. Sign schedule – All “custom” and “mod” signs shall have detail with design specific dimensions and details (typ).

Sheet LD1 – Planting Schedule and Details

55. Show 8-inch amended compost to all new and disturbed landscaped areas.
56. The landscape strip along the frontage improvements will need to include trees from the approved City of Sammamish list of street trees that can fit in a 5-foot wide strip.

Sheet GN1 – Standard Plan Notes

57. The standard notes identified on this sheet don't match the City of Sammamish various standard notes. These will need to be updated to match the standard notes as of vesting date of the project. For example, erosion control standard notes 24 through 27 have been updated to reference actual dates rather than the shown April 31.

Sheet MD1 – Miscellaneous Details

58. Show handrail detail and reference to illumination sheet. Otherwise provide illuminated handrail detail on illumination sheets.
59. All signs on City right-of-way should be installed per City of Sammamish Sign Installation Standard Details.

Technical Information Report

60. Update TIR to address vested Surface Water Design Manual requirements.
61. Update TIR to discuss existing sand filter, outfall, and associated conveyance system.
62. Page 1-3, indicate location of soils borings.
63. Page 4-2, Core Requirement No 3, Direct Discharge Exemption should be clarified to include an explanation of how the project meets all criteria for exemption under the vested Surface Water Design Manual.
64. Page 4-2, provide detail on how Core Requirement No 8 is met, including capacity of existing sand filter and calculations showing additional runoff.
65. Page 4-2, Soil Amendments, correct City of Sammamish Solid Waste to vested City of Sammamish Surface Water Design Manual.
66. For each TDA, include analysis of impacts to downstream conditions where infiltration is proposed. Depict through a figure where stormwater will be conveyed in emergency situations and show an overflow path if downstream flooding of driveways and homes would occur.

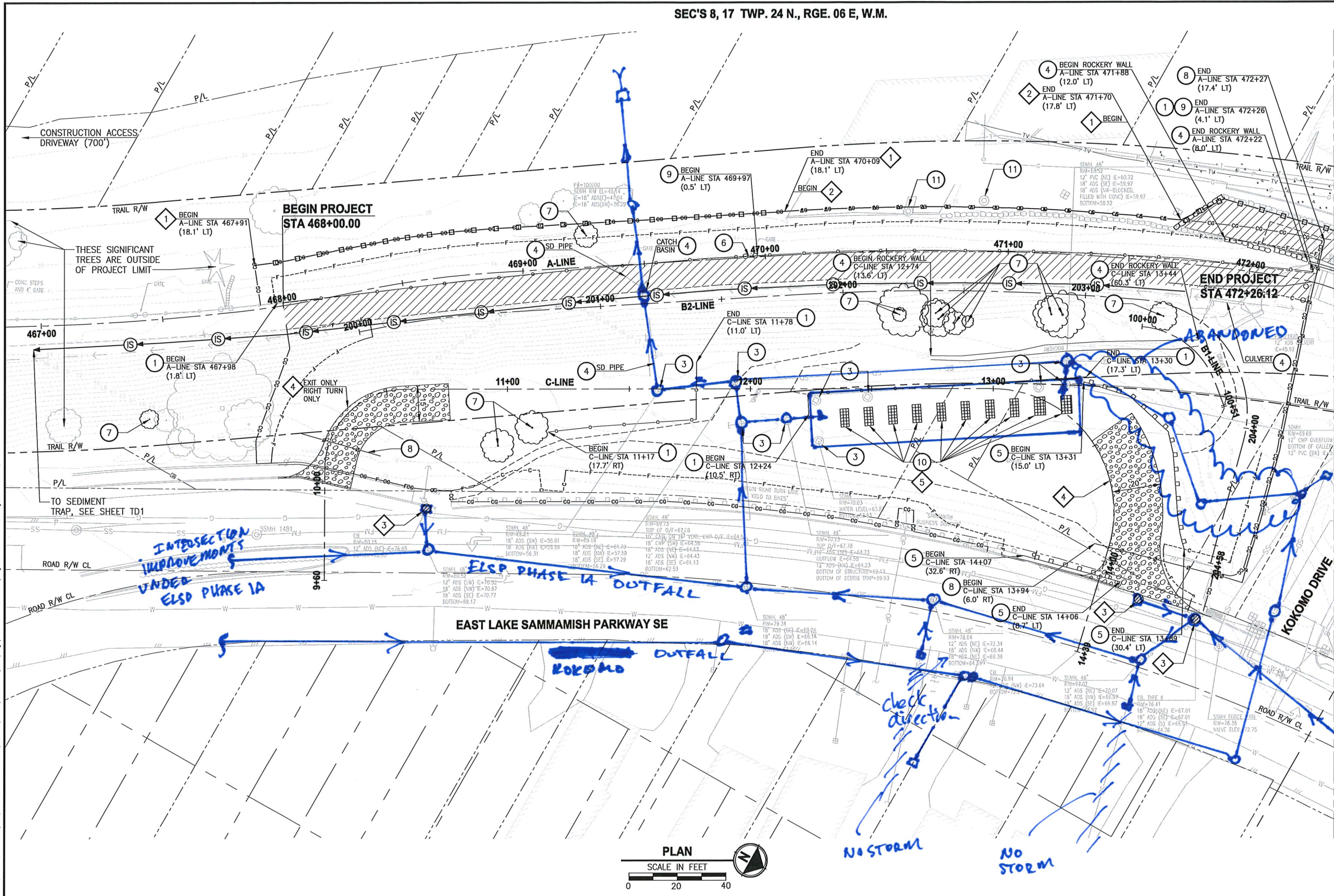
Geotechnical Report

67. Update Geotechnical Report to address infiltration testing using the requirements of the vested Surface Water Design Manual.
68. Show results and analysis of infiltration testing. Show location of each test pit as it relates to proposed design.
69. For each TDA proposing infiltration, include analysis of downstream groundwater conditions that could affect homes and private property.
70. Provide narrative and analysis of proposed wall construction including protection of existing sand filter, stormwater structures and conveyance. Include narrative discussing location of materials stockpiles for over-excavation or materials import if impact to slope or erosion.

Preliminary Illumination Technical Memo

71. Page 2 – Roadway connection shall be illuminated per WSDOT Exhibit 1040-11.
72. Page 3 – Proceed with LED Largent fixture and include house side shield.
73. Sheet IL1:
 - a. It is not clear from the drawing whether there is a handhole or junction box at each luminaire. This will need to be addressed.
 - b. Illumination note #2 – Use asymmetrical LEDPOD 50 rather than tilting to reduce glare.
 - c. General note #2 – Provide conduit/wiring schedule, rather than note.
 - d. Analyze roadway design areas per WSDOT DM Exhibit 1040-11 for ELSP/DW connections.
 - e. Luminaire schedule note #1 – Can all luminaries be installed as same type? Less for maintenance yard to keep spares for.
 - f. Regarding the note to reviewer – Include photocell to operate on-site lighting.

SEC'S 8, 17 TWP. 24 N., RGE. 06 E, W.M.



- SITE PREPARATION NOTES:**
- 1 REMOVE AND SALVAGE CHAIN LINK FENCE.
 - 2 REMOVE AND DISPOSE STAIR.
 - 3 ADJUST MANHOLE TO FINISHED GRADE.
 - 4 REMOVAL OF STRUCTURE AND OBSTRUCTION.
 - 5 REMOVE AND SALVAGE GUARDRAILS.
 - 6 REMOVE AND SALVAGE CHAIN LINK GATE.
 - 7 REMOVE TREE OR HEDGE WITHIN CLEARING AND GRUBBING LIMITS.
 - 8 INSTALL TEMPORARY SAFETY FENCE. SEE SPECIAL PROVISIONS.
 - 9 REMOVE AND SALVAGE WOOD BOARD FENCE.
 - 10 ADJUST METAL GRATE TO FINISHED GRADE.
 - 11 PRESERVE AND PROTECT SEWER LINE.

- TESC NOTES:**
- 1 SILT FENCE PER WSDOT STANDARD DETAIL 1-30.15-02.
 - 2 TRIANGLE SILT DIKE.
 - 3 STORM DRAIN INLET PROTECTION, PER WSDOT STANDARD DETAIL 1-40.20-00.
 - 4 STABILIZED CONSTRUCTION ENTRANCE, PER WSDOT STANDARD DETAIL 1-80.10-01.
 - 5 METAL GRATE INLET PROTECTION, SEE DETAIL SHEET TD1.
 - 6 TEMPORARY BYPASS.

- LEGEND:**
- [Symbol] REMOVE EXISTING GRAVEL SURFACE
 - [Symbol] PAVEMENT EXCAVATION LIMIT
 - [Symbol] INLET PROTECTION
 - [Symbol] STABILIZED CONSTRUCTION ENTRANCE
 - [Symbol] NPDES CONSTRUCTION STORMWATER DISCHARGE MONITORING POINT
 - [Symbol] INTERCEPTOR SWALE

CITY OF SAMMAMISH APPROVAL

City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

Exhibit 39
SSDP2016-00414
001814 SP1

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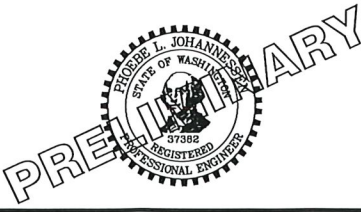
REVISIONS	DATE	BY	DESIGNED
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			B. PURGANAN
			P. JOHANNESSEN
			Y. HO

ONE INCH AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

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PROJECT NAME
EAST LAKE SAMMAMISH
MASTER PLAN TRAIL
INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

TESC/SITE PREPARATION PLAN