East Lake Sammamish Master Plan Trail
Inglewood Hill Road Parking Lot
Draft Stormwater Technical Information Report

Prepared for
King County

October 2016

Prepared by
Parametrix

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Inglewood Hill Road Parking Lot
Draft Stormwater Technical Information Report

Prepared for

King County
Division of Capital Planning and Development
Facilitiies Management Devision, DES
King County Administration Building
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October 11, 2016 | 554-1521-075 (21/05)

CITATION

Parametrix. 2016. East Lake Sammamish Master Plan Trail
Inglewood Hill Road Parking Lot
Draft Stormwater Technical Information Report. Prepared by
Parametrix, Seattle, WA. October 11, 2016.

CERTIFICATION

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.

_____

Prepared by Phoebe Johannessen, P.E.

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Checked by Craig Buitrago, P.E.

_____

Approved by Jenny Bailey

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES

LIST OF TABLES

APPENDICES

ACRONYMS

BMP	best management practice
BNSF	Burlington Northern Santa Fe
CARA	Critical Aquifer Recharge Area
cfs	cubic feet per second
CMP	corrugated metal pipe
DO	dissolved oxygen
Ecology	Washington State Department of Ecology
ELSP	East Lake Sammamish Parkway
ELST	East Lake Sammamish Trail
HDPE	high density polyethylene
2009 Manual	King County Surface Water Design Manual of 2009
Master Plan Trail	East Lake Sammamish Master Plan Trail
MGSFloodV4	MGSFlood Version 4
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
O&M	operation and maintenance
PGIS	pollution-generating impervious surfaces
Q100	100-year peak flow rate
Sta.	station
TDA	threshold discharge area
TESC	temporary erosion and sediment control
TIR	technical information report
TMDL	total maximum daily load
WDFW	Washington Department of Fish and Wildlife
WWHM4	Western Washington Hydrology Model version 4
WRIA	Water Resource Inventory Area

1. PROJECT OVERVIEW

1.1 Project Description

The East Lake Sammamish Master Plan Trail (Master Plan Trail) Project begins at Gilman Boulevard in Issaquah and ends 200 feet south of Bear Creek in Redmond. The East Lake Sammamish Trail (ELST) is located on the alignment of the former Burlington Northern Santa Fe (BNSF) railroad that began operations in 1855 and ceased operations along this corridor in 1996. King County acquired the rail-banked corridor in 1998 and completed construction of an interim trail in 2006. The ELST corridor travels along the east shore of Lake Sammamish. Proposed improvements will be constructed in multiple phases, which correspond with the three jurisdictions the trail crosses—Redmond, Sammamish, and Issaquah.

The Redmond Section of the trail was constructed in 2011 and the Issaquah Section was constructed in 2013. The North Sammamish Section was constructed in 2015. The entire 4.8-mile South Sammamish Section of the ELST is separated into two construction phases: Segments A and B. Segment A is approximately 1.3 miles long from the city of Issaquah boundary at the south end to SE 33rd Street at the north terminus. Segment B is approximately 3.5 miles long from SE 33rd Street at the south end to the Inglewood Hill Road Parking Lot at the north terminus.

This technical information report (TIR) provides stormwater design documentation for the Inglewood Hill Parking Lot and a 425-foot-long segment of the trail below the parking lot. The TIR Worksheet (Figure 1-1) provides a general overview of the components of this report. A site location map is provided a Figure 1-2.

1.2 Existing Site Conditions

The ELST is an 8- to 12-foot-wide gravel trail located on a historical railroad prism that generally runs along the east side of Lake Sammamish. Lake Sammamish is located within one-quarter mile downstream of the trail within the project site. The site is located in the Panhandle Basin of the East Lake Sammamish Drainage Basins. Flow Control Figure 2-1 shows the drainage basins. East Lake Sammamish Parkway (ELSP) forms the eastern boundary of the project.

A gravel parking lot and sand filter vault are currently located where the proposed parking lot improvements and other amenities would occur. The gravel parking lot was constructed by the City of Sammamish in 2009. The main purpose of the project was to install a sand filter vault to provide water quality treatment for stormwater runoff for the East Lake Sammamish Parkway improvements. The sand filter vault was designed to accommodate treatment of the stormwater runoff from the County's future Inglewood Hill Road Parking Lot (Perteet 2008).

1.3 Project Area Soils

Natural Resources Conservation Service (NRCS) soil maps were used to show the existing soils within the project corridor. Figure 1-3 depicts the soils by type and hydrologic group. According to the NRCS map, the project site consists of Kitsap Silt Loam, hydrologic soil type C.

A geotechnical survey was completed by Icicle Creek Engineers, Inc. date February 10, 2016 for the parking lot area. Parametrix engineers used the information in the geotechnical report to design retaining walls for

the parking lot. The soil borings do not agree with the NRCS soil map. Instead, the five soil borings revealed recessional outwash overlain by fill in some areas (Icicle Creek Engineers 2016).

Sensitive Areas Geologic Hazards

City of Sammamish Environmentally Sensitive Areas Geologic Hazards map was used to identify the erosion and landslide hazard areas within the project site. Figure 1-4 depicts the geologic hazards in the project vicinity (outlined in blue). As shown below, only seismic areas are found within the project area. Erosion hazard areas occur when underlying soils types like EvD and KpD are combined with slopes steeper than 15 percent. Although the NRCS Soils map indicates Kitsap Silt Loam on the site, the geotechnical investigation found outwash soils. Therefore, the site is not considered an erosion hazard area. Additionally, because the underlying soils (recessional outwash) are not particularly sensitive to liquefaction, the site should not be considered a seismic hazard either (Icicle Creek 2016).

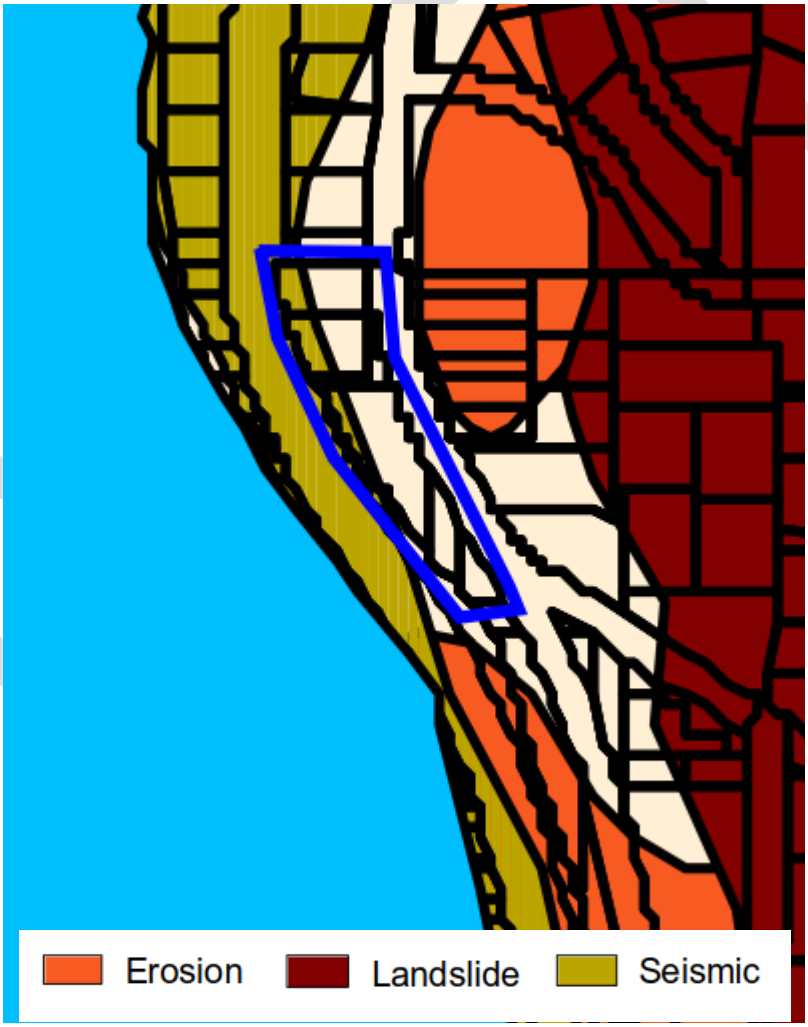


Figure 1-4. Environmentally Sensitive Areas

Figure 1-5 Erosion Hazards Near Sensitive Water Bodies Overlay

Source: City of Sammamish Data (2013)

1.4 Groundwater

Parking Lot Area

At the time of drilling, no groundwater was found in the five borings in the parking lot area. Two piezometers were installed in the parking lot area to monitor depth to groundwater. The groundwater level was measured on September 29, 2015 and January 25, 2016 and no water was observed.

Trail Area

The geotechnical exploration for the ELST South Sammamish Segment was conducted in September and October 2013. Soil boring B-71 is approximately xx feet south of the project limit and B-72 is located within the project site at approximate station A-471+00. Both borings were drilled to a depth of 16.5 feet below ground surface on October 7, 2013. No water was encountered in B-71 and water was encountered at 13 feet in B-72. Groundwater monitoring will be conducted prior to final design of the infiltration facility.

Critical Aquifer Recharge Area

The project site is located within the City of Sammamish Critical Aquifer Recharge Areas (CARA), Class 3 CARA. Class 3 CARAs are defined as being located outside wellhead protection areas that have high aquifer recharge potential.

The Sammamish Municipal Code (SMC) 21A.50.280 provides development standards for projects that are located in Class 3 CARA. There is a requirement to infiltrate 75-percent of on-site water generated from the project site unless infiltration is not feasible. Runoff from the trail will be infiltrated. The trail is a non-pollution generating surface; therefore, infiltrating runoff from this area will not increase the risk of contamination to drinking water supplies.

Because the existing sand filter and outfall system were designed to handle runoff from the parking lot, infiltration was not considered for this area. It was also assumed that infiltration would not be advisable due high retaining wall and relatively steep slopes in the area of the parking lot. The geotechnical report will be amended to assess the potential for infiltration in this area.

2. CONDITIONS AND REQUIREMENTS

The City of Sammamish Surface Water Design Manual Addendum directs projects disturbing over an acre to use the 2009 King County Surface Water Design Manual (KCSWDM) guidelines, in conjunction with the City of Sammamish Addendum published in 2011 (City of Sammamish 2011). The project lies within the Panhandle Basin, which is designated as a Level 2 Flow Control area (Figure 2-1).

Based on the 2009 KCSWDM and the City of Sammamish Addendum, the project requires a full drainage review because it will result in greater than 2,000 square feet of new and replaced impervious surface. Table 2-1 provides a summary of the existing and proposed impervious surfaces within the project site. For the impervious surfaces presented in the project area summary (Table 2-1), the existing gravel trail and parking lot were assumed to be impervious; however, for Chapter 4, flow control calculations were done assuming that the existing trail is forested, in accordance with the 2009 KCSWDM requirements.

Table 2-1. Summary of Project Area Impervious Surfaces

	Impervious Surface (acre)	Total Site Area (acre)	Percent Impervious Surface
Existing	0.37	2.0	**18%**
Proposed	0.95	2.0	**48%**

This project meets the eight core requirements and five special requirements outlined in Table 1.1.2.A in the 2009 Manual. The core and special requirements were analyzed for each TDA; this section describes, generally, how this project will meet each requirement (Table 2-2). The details of the analysis, including the basis of the hydrologic and hydraulic design, are discussed in subsequent sections.

The City of Sammamish Addendum provides a list of impaired water bodies. The only water body that applies to this project is Lake Sammamish, which is a Category 5 (requiring a total maximum daily load [TMDL] plan) for dissolved oxygen and fecal coliform, and a Category 2 (water of concern) for total phosphorus. Section 1.2.2.3 Water Quality Problem Impact Mitigation of the 2009 Manual provides treatment options for projects draining to water bodies with bacteria, dissolved oxygen, and phosphorus problems.

The runoff from the parking lot will be treated in the existing sand filter vault, which was sized to accommodate runoff from the proposed parking lot. The sand filter meets the treatment requirements for the Bacterial Problem, Dissolved Oxygen Problem, and Phosphorus Problem.

2.1 Flow Control BMP Requirements

Section 5.2 of the KCSWDM, states that portions of projects that are subject to flow control requirements and will not be served by an infiltration facility must apply flow control best management practices (FCBMPs). Runoff from the trail will be served by an infiltration facility; however, runoff from the parking lot will be treated in the existing sand filter and conveyed directly to Lake Sammamish as previously agreed upon in the East Lake Sammamish Parkway TIR (Perteet 2008). Therefore, FCBPPs will not be employed for the parking lot runoff.

Table 2-2. Summary of Core and Special Requirements

Core and Special Requirements per Table 1.1.1.A of the 2009 Manual	Proposed Stormwater Management Approach
C1 Discharge Location	The discharge from the parking will be conveyed to Lake Sammamish in the City's stormwater pipe, consistent with the discharge point for the existing gravel parking lot.
C2 Offsite Analysis	Conducted offsite analysis.
C3 Flow Control	The project is subject to conservation flow control area requirements.
	This project will use the direct discharge exemption for the parking lot area and will infiltrate stormwater from the trail.
C4 Conveyance	A new conveyance system consisting of catch basins and pipes will be constructed to collect water from the new parking lot and tie into the City's stormwater discharge pipe to Lake Sammamish.
C5 Temporary Erosion and Sediment Control (TESC)	A TESC plan is provided in the project plans.
C6 Operation and Maintenance (O&M)	Prepare O&M plan. To be added.
C7 Financial	Not applicable.
C8 Water Quality	Non-motorized trails are considered non-PGIS. Water quality treatment is not required for non-PGIS. Water quality treatment is required if a project TDA has greater than 5,000 square feet of new and replaced PGIS. Water quality treatment will be provided for runoff from the parking lot in the existing sand filter vault.
S1 Other Adopted Requirements	No area-specific requirements apply to this project.
S2 Flood Hazard Area Delineation	This special requirement is not applicable to this project because the project is not in the 100-year floodplain.
S3 Flood Protection Facilities	This special requirement is not applicable to this project because the project is not in the 100-year floodplain.
S4 Source Control	This special requirement is not applicable to this project because it does not meet the commercial development permit threshold.
S5 Oil Control	This special requirement is not applicable to this project because does not meet the high-use site threshold.

3. OFFSITE ANALYSIS

3.1 Study Area Definition and Maps

The project lies within the Washington State Department of Ecology's (Ecology) Water Resource Inventory Area (WRIA) 8, East Lake Sammamish Basin.

3.2 Resource Review

The existing parking lot configuration and the existing sand filter and outfall were constructed by the City of Sammamish in 2009. The City is currently upsizing and relocating the stormwater outfall from the sand filter to accommodate additional runoff from the Inglewood Hill basin above. The outfall will continue to discharge stormwater to Lake Sammamish at approximately the same location after their project is completed.

Parametrix reviewed various resources to identify the sensitive areas within the project area. Resources include the King County iMAP: Interactive Mapping Tool, which allows usage of the County's geographic information system (GIS) data, and the City of Sammamish maps that are provided on the City's website, and via GIS data transfer from the City GIS manager. Sensitive areas within the project area include seismic hazard areas, landslide hazard areas, erosion hazard areas, and Lake Sammamish, with its associated flood hazards downslope of the project. A portion of the project also is located within the Erosion Hazards near sensitive water bodies – Special district overlay.

Review of the City of Sammamish Environmentally Sensitive Areas Map indicates that project right-of-way is within the 100-year floodplain of Lake Sammamish. Using the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) 530330685F, effective May 16, 1995, the 100-year floodplain elevation for Lake Sammamish is 33.00 feet (NGVD 29). The vertical datum for the project is NAVD 88. To convert from NVGD 29 to NAVD 88 the datum shift adds 3.57 feet to get 36.57 feet (NAVD 88). Trail improvements occur at elevations above 45 feet (NAVD 88) and driveway improvements occur at elevations greater than 39 feet (NAVD 88). Therefore, although the 100-year floodplain boundary line is depicted within the project right-of-way, the proposed project improvements will not impact the 100-year floodplain elevation. The 100-year floodplain boundary is depicted on (to be provided). Trail elevations are located on the plan sheets located in Appendix A.

3.2.1 Water Quality Problems Requiring Special Attention

The City of Sammamish Surface Water Design Manual Addendum provides a list of impaired water bodies, based on the Department of Ecology 2008 Water Quality Assessment, approved by the US. Environmental Protection Agency on January 29, 2009. The only water body that applies to this project is Lake Sammamish, which is a Category 5 (requiring a total maximum daily load [TMDL] plan) for dissolved oxygen and fecal coliform, and a Category 2 (water of concern) for total phosphorus. Section 1.2.2.3 Water Quality Problem Impact Mitigation of the 2009 KCSWDM provides treatment options for projects draining to water bodies with bacteria, dissolved oxygen, and phosphorus problems. These will be addressed under Section 4.5 below.

3.3 Field Inspection

The site is currently being used as interim parking for access to the trail and is temporarily serving as construction staging for the city's stormwater outfall project. The parking areas and pathways are surfaced with gravel and other areas are covered in grass or shrubs and trees.

4. FLOW CONTROL AND WATER QUALITY FACILITY ANALYSIS AND DESIGN

4.1 Existing Site Hydrology

4.1.1 Existing (Pre-developed) Land Use

The definition of new impervious surface includes existing gravel surfaces that are upgraded to pavement (King County 2009). Target surfaces do not include existing impervious surfaces that are not disturbed by project activities.

For the purposes of this analysis, it was assumed that target surfaces requiring mitigation within Conservation Flow Control areas include the following:

- Areas within the new trail limits
- Retaining walls (concrete blocks)
- Parking lot and driveways
- Plaza area and sidewalks

The project used the hydrologic model Western Washington Hydrology Model version 4 (WWHM4 to determine flow control requirements. WWHM4 is an approved hydrologic model in accordance with Chapter 3 of the City Amendment. To comply with flow control requirements, pre-developed land uses within target surface areas were assumed to have a historical (forested) land use. Pre-developed land uses outside the target surfaces were not modeled. The native soils underlying the trail corridor are outwash soils.

4.2 Developed Site Hydrology

4.2.1 Developed Land Use

Parking Lot Area

The existing gravel parking lot will be regraded, enlarged, and paved. A plaza with restroom facilities, picnic table, and covered bicycle parking will be added to the north end of the site. A paved ramp will be constructed to connect the parking lot to the East Lake Sammamish Trail. Several retaining walls will be constructed to support the parking, plaza, and ramp.

Trail Area

The proposed project will upgrade the existing 10-foot-wide gravel trail to a 12-foot-wide paved trail with 2- to 3-foot-wide gravel shoulders. Retaining walls are proposed in places to reduce the disturbed area. The paved trail and the gravel shoulders are new impervious surfaces. Non-target surfaces in the proposed conditions do not change from existing conditions, and were not modeled.

4.3 Performance Standards

A Level 2 flow control standard applies to this project according to City Ordinance 02011-304, Title 13 Surface Water Management. The Level 2 flow control performance standard requires flow control facilities to match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 50 percent of the 2-year peak flow up to the full 50-year peak flow. Also, the facilities would match developed peak discharge rates to pre-developed peak discharges rates for the 2- and 10-year return periods. For land use, the historical site condition (forest) is assumed as the pre-developed condition.

Flow Control System

Direct Discharge Exception

The direct discharge exception to the flow control requirement will be used for runoff from the parking lot area and the plaza. As stated in the TIR prepared for the East Lake Sammamish Parkway project, the existing sand filter and outfall systems were designed to treat and convey runoff from the project to Lake Sammamish.

Infiltration Facility

An infiltration trench will be used to infiltrate runoff from the 426 feet of trail surface and the paved ramp from the parking lot. The total area to be infiltrated is 0.27 acre. The infiltration trench will be constructed under the east shoulder of the trail. The trench will be 2 feet wide where not adjacent to walls and 3 feet wide where adjacent to the retaining wall for ease of constructability. The trench will be 2 feet deep with 6 inches of crushed clean rock above the trench to serve as surfacing for the trail shoulder.

The report from WWHM is provided in Appendix B. An infiltration rate of 10 inches per hour was used for sizing the trench. This is consistent with the long-term infiltration rates recommended by Icicle Creek Engineers for other areas with outwash soils encountered along the ELST South Sammamish Segment B (Icicle Creek Engineers, 2016a). The infiltration trench was modeled using a weighted average width of 2.2 feet corresponding to

Soil Amendment

This project will comply with the City of Sammamish's Soil Amendment Requirement for all disturbed pervious areas adjacent to the trail in accordance with Section 1.2 of the City of Sammamish Solid Waste Design Manual Addendum.

4.4 Water Quality System

The new trail surface will be non-PGIS and therefore no treatment is required. The ramp down from the plaza to the trail will also be non-PGIS and will not be treated. Runoff from the plaza and sidewalks adjacent to the parking lot will also be non-PGIS, but will be combined with runoff with the parking lot and so will be treated in the sand filter with the parking lot runoff. The total area draining to the sand sand filter vault is 0.53 acre.

The sand filter meets the treatment requirements for the Bacterial Problem, Dissolved Oxygen Problem, and Phosphorus Problem as is required for PGIS runoff draining to Lake Sammamish.

5. CONVEYANCE SYSTEM ANALYSIS AND DESIGN

A conveyance system consisting of catch basins and storm drain pipes was designed to collect runoff from the parking lot and plaza area and convey it to the existing sand filter vault.

6. SPECIAL REPORTS AND STUDIES

Special reports and studies have been completed for this project including the following:

- Draft Geotechnical Engineering Report (Icicle Creek Engineers, Inc. 2016).

7. OTHER PERMITS

Other permits required for this project are listed below.

- City of Sammamish Substantial Shoreline Development Permit
- City of Sammamish Grading Permit
- National Pollutant Discharge Elimination System (NPDES) General Construction Permit
- Building permit for structural walls and restroom facility

8. TESC DESIGN

The temporary erosion and sediment control plans are provided in the construction drawings.

9. BOND QUANTITIES, FACILITY SUMMARIES, AND DECLARATION OF COVENANT

The project does not require Bond Quantities.

10. OPERATION AND MAINTENANCE

10.1 Stormwater Management

The stormwater system for the Inglewood Hill Parking Lot and the adjacent section of ELST consists of storm drains, catch basins, and an infiltration trench. Excerpts from Appendix A of the 2009 Manual describe the maintenance requirements for the following project components; these excerpts are provided in Appendix C.

- Infiltration Facilities
- Catch Basins and Manholes
- Conveyance Pipes and Ditches

Infiltration Trenches

Infiltration trenches are designed to infiltrate runoff from the trail up to the 100-year storm event. The trenches are designed to drain within 2 days following a storm event. Monitoring wells are not necessary and will not be provided to monitor the depth of water in the trenches. Also, the top 6 to 12 inches of crushed rock will be monitored for sediment buildup. The project design requires that the trenches be wrapped with geotextile fabric, which should keep the drain rock inside the trenches clean, so that only the top crushed rock would need to be replaced.

10.2 Vegetation Management

King County Parks Department uses a Vegetation Management Plan prepared for the East Lake Sammamish Interim Use Trail. Chapter 5 of that plan describes maintenance activities for drainage, including dry and wet ditches, clearing of clogged culverts, and repair of ditches and culverts. The plan also specifies monitoring of ditches and culverts at least twice a year, including once in the fall before the rainy season.

King County's contact person for maintenance issues is Robert Nunnenkamp. His contact information is:

Email: Robert.Nunnenkamp@kingcounty.gov

Telephone: 206-291-7301

11. REFERENCES

City of Sammamish. 2011. City of Sammamish Surface Water Design Manual Addendum. Sammamish, WA. Available at: http://www.sammamish.us/departments/publicworks/StormwaterManagement.aspx?Show=Engineers.

Icicle Creek Engineers, Inc. 2016. Draft Report, Geotechnical Engineering Services, East Lake Sammamish Trail, Inglewood Hill Parking Lot. Sammamish, Washington. Prepared by Icicle Creek Engineers, Inc. February 10, 2016.

Icicle Creek Engineers, Inc. 2016a. Draft Report, Geotechnical Engineering Services, South Sammamish Segment B, East Lake Sammamish Trail, Sammamish, Washington. Prepared by Icicle Creek Engineers, Inc. October, 2016.

King County. 2009. King County Surface Water Design Manual. Prepared by King County Department of Natural Resources and Parks, Seattle, WA.

Perteet Inc., 2008. Technical Information Report for East Lake Sammamish Parkway, Everett, WA.

Appendix A

Drainage Plans, Profiles, and Detail Sheets

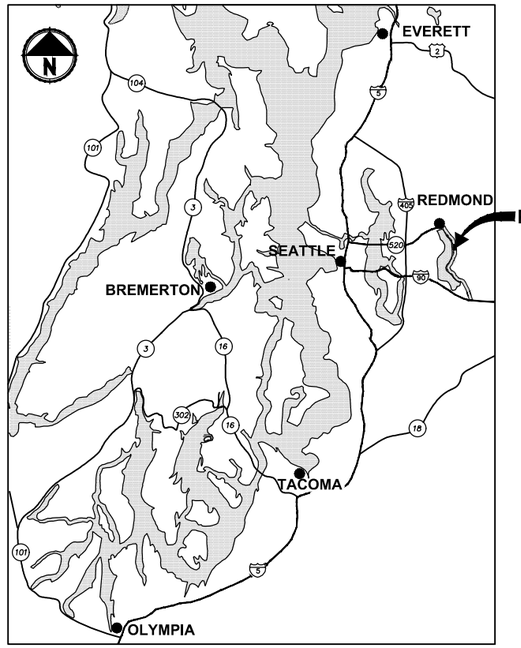
SEC'S 8, 17 TWP. 24 N., RGE. 06 E, W.M.

East Lake Sammamish Master Plan Trail, Inglewood Hill Road Parking Lot

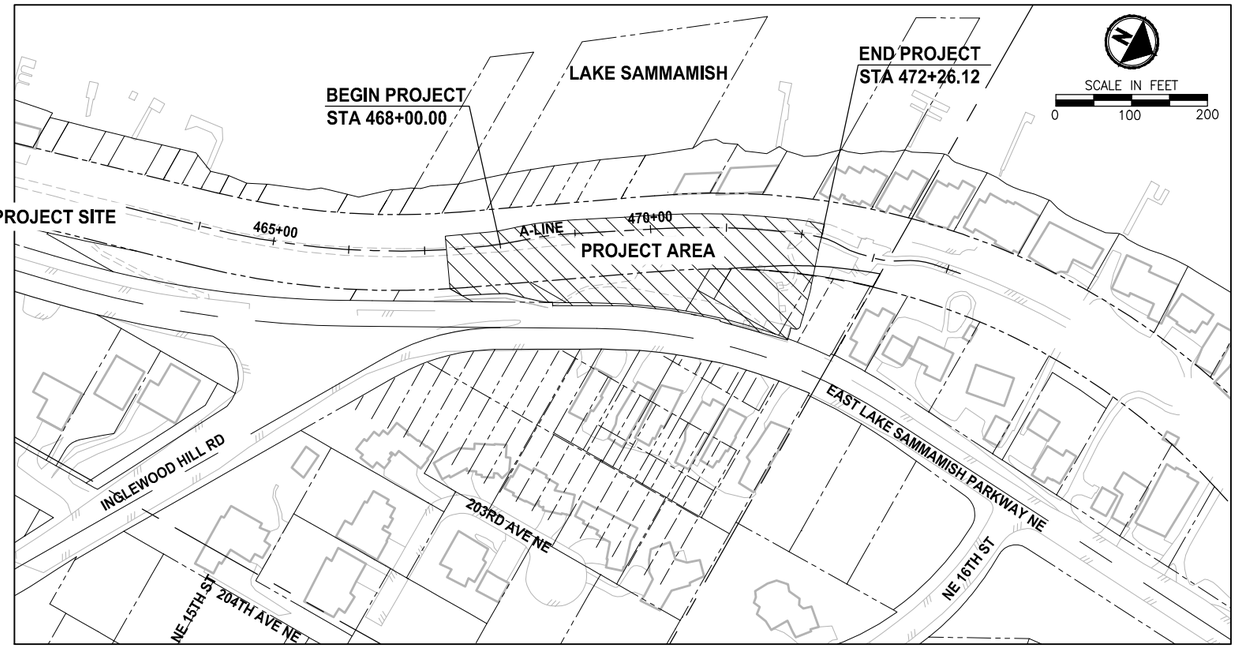
Intersection of NE Inglewood Hill Rd and East Lake Sammamish Parkway NE

King County, Washington

Contract No. XXXX



LOCATION MAP
NOT TO SCALE



VICINITY MAP

EXISTING ZONE CLASSIFICATION:

COMMUNITY FACILITIES CF–F

EXISTING SHORELINE ENVIRONMENT DESIGNATION:

CITY OF SAMMAMISH DESIGNATION: SHORELINE RESIDENTIAL

GENERAL PURPOSE OF THIS PROJECT:

TO CONSTRUCT PARKING AND RESTROOM AMENITIES FOR THE EAST LAKE SAMMAMISH TRAIL.

CONTACT INFORMATION:

APPLICANT:
KING COUNTY PARKS AND RECREATION DIVISION
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SEATTLE, WA 98104
(206) 477–4552
CONTACT: GINA AULD

OWNER:
KING COUNTY PARKS AND RECREATION DIVISION

UTILITY:
ONE–CALL 1 (800) 424–5555

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CONTACT: KEVIN DEROUEN

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SURVEYOR:
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SEATTLE, WA 98104
(206) 394–3700
CONTACT: DANIEL THIBODEAU, PLS

PROJECT & SITE INFORMATION:

KING COUNTY PROPOSES TO CONSTRUCT A PARKING LOT AND ACCESS TO SERVE THE EAST LAKE SAMMAMISH TRAIL AND TO DEVELOP 525 FEET OF THE MULTI–USE TRAIL IN THE CITY OF SAMMAMISH, LOCATED NORTH OF INGLEWOOD HILL ROAD. A GRAVEL PARKING LOT AND INTERIM TRAIL ARE CURRENTLY IN OPERATION.

DISTURBED AREA = 57,756 SF (1.33 AC)
EXISTING IMPERVIOUS AREA = 16,236 SF (0.37 AC)
PROPOSED NEW IMPERVIOUS AREA = 41,440 SF (0.95 AC)
VOLUME OF ESTIMATED FILL = 22,780 CY
VOLUME OF ESTIMATED EXCAVATION = 200 CY

PROPERTY INFORMATION:

PARCEL NUMBERS:
357530–0260–08 (29,285 SQ. FT.)
357530–0340–02 (9,671 SQ. FT.)
357530–0365–02 (1,920 SQ. FT.)
357530–0370–05 (1,669 SQ. FT.)
357530–0460–06 (2,304 SQ. FT.)
292506–9007 (484,668 SQ. FT.)

WRITTEN DESCRIPTION OF THE PROJECT:

A 30–SPACE PARKING LOT WILL BE CONSTRUCTED TO SERVE THE EAST LAKE SAMMAMISH TRAIL. IN ADDITION 525 FEET OF THE EXISTING GRAVEL TRAIL WILL BE WIDENED TO 12 FEET PAVED SURFACE WITH 2–FOOT GRAVEL SHOULDERS ON BOTH SIDES.

THE PROPOSED IMPROVEMENTS INCLUDE RETAINING WALLS, RESTROOM FACILITIES, PAVING, DRAINAGE IMPROVEMENTS, FENCE, AND SIGNAGE.

LEGAL DESCRIPTIONS:

PARCEL No. 357530–0260–08
PER STEWART TITLE GUARANTY COMPANY,
GUARANTEE No. G–6329–000007871, JANUARY 8, 2016

THOSE PORTIONS OF LOTS 1 THROUGH 10, 18 THROUGH 21 AND 23 THROUGH 27, BLOCK 6, INGLEWOOD, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 3 OF PLATS, PAGE 169, RECORDS OF KING COUNTY, WASHINGTON, LYING WESTERLY OF THE WESTERLY MARGIN OF EAST LAKE SAMMAMISH PARKWAY N. E. (ISSAQUAH–REDMOND ROAD REVISION NO. 2);
EXCEPT THAT PORTION LYING WESTERLY OF THE EASTERLY MARGIN OF THE NORTHERN PACIFIC RAILROAD RIGHT OF WAY AS CONVEYED BY DEED RECORDED UNDER RECORDING NUMBER 3051111;
AND EXCEPT THOSE PORTIONS CONVEYED TO KING COUNTY FOR ROAD PURPOSES BY DEEDS RECORDED UNDER RECORDING NUMBERS 625790, 983353, 983354 AND 983355;
AND EXCEPT THAT PORTION CONDEMNED FOR ROAD PURPOSES IN KING COUNTY SUPERIOR COURT CAUSE NO. 106364;
AND EXCEPT THOSE PORTIONS RESERVED FOR ROAD BY KING COUNTY IN DEEDS RECORDED UNDER RECORDING NUMBERS 860989 AND 2957937;
AND TOGETHER WITH THOSE PORTIONS OF VACATED DEPOT STREET ADJOINING, VACATED BY KING COUNTY SUPERIOR COURT CAUSE NUMBER 94–2–14451–1, AS WOULD ATTACH BY OPERATION OF LAW.

LEGAL DESCRIPTION CONTINUED:

PARCEL No. 357530–0340–02
PER STEWART TITLE GUARANTY COMPANY,
GUARANTEE No. G–6329–000007868, JANUARY 8, 2016

THAT PORTION OF LOT 17, BLOCK 6, INGLEWOOD, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 3 OF PLATS, PAGE 169, RECORDS OF KING COUNTY, WASHINGTON, LYING WESTERLY OF THE WESTERLY MARGIN OF EAST LAKE SAMMAMISH PARKWAY N. E. (ISSAQUAH–REDMOND ROAD REVISION NO. 2);
EXCEPT THAT PORTION RESERVED FOR ROAD BY KING COUNTY IN DEED RECORDED UNDER RECORDING NUMBER 2957937;
AND TOGETHER WITH THOSE PORTIONS OF VACATED ASH STREET (N. E. 16TH STREET) AND VACATED DEPOT STREET ADJOINING, VACATED BYKING COUNTY SUPERIOR COURT CAUSE NUMBER 94–2–14451–1, AS WOULD ATTACH BY OPERATION OF LAW.

PARCEL No. 357530–0365–02
PER STEWART TITLE GUARANTY COMPANY,
GUARANTEE No. G–6329–000007869, JANUARY 8, 2016

THAT PORTION OF LOT 22, BLOCK 6, INGLEWOOD, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 3 OF PLATS, PAGE 169, RECORDS OF KING COUNTY, WASHINGTON, LYING EASTERLY OF THE EASTERLY MARGIN OF THE NORTHERN PACIFIC RAILROAD COMPANY RIGHT OF WAY, AS CONVEYED BY DEED RECORDED UNDER RECORDING NUMBER 3051111.

LEGAL DESCRIPTION CONTINUED:

PARCEL No. 357530–0370–05
PER STEWART TITLE GUARANTY COMPANY,
GUARANTEE No. G–6329–000007867, JANUARY 8, 2016

THAT PORTION OF LOTS 11 THROUGH 16, BLOCK 6, INGLEWOOD, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 3 OF PLATS, PAGE 169, RECORDS OF KING COUNTY, WASHINGTON, LYING WESTERLY OF THE WESTERLY MARGIN OF EAST LAKE SAMMAMISH PARKWAY N. E. (ISSAQUAH–REDMOND ROAD REVISION NO. 2);
EXCEPT THOSE PORTIONS CONVEYED TO KING COUNTY FOR ROAD PURPOSES BY DEEDS RECORDED UNDER RECORDING NUMBERS 983354 AND 983356;
AND EXCEPT THAT PORTION RESERVED FOR ROAD BY KING COUNTY IN DEED RECORDED UNDER RECORDING NUMBER 769006;
AND TOGETHER WITH THAT PORTION, IF ANY, OF VACATED ASH STREET (N. E. 16TH STREET) ADJOINING, VACATED BY KING COUNTY SUPERIOR COURT CAUSE NUMBER 94–2–14451–1, AS WOULD ATTACH BY OPERATION OF LAW.

LEGAL DESCRIPTION CONTINUED:

PARCEL No. 357530–0460–06
PER STEWART TITLE GUARANTY COMPANY,
GUARANTEE No. G–6329–000007870, JANUARY 8, 2016

PARCEL 1:
THAT PORTION OF LOTS 36 THROUGH 40, BLOCK 7, INGLEWOOD, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 3 OF PLATS, PAGE 169, RECORDS OF KING COUNTY, WASHINGTON, LYING WESTERLY OF THE WESTERLY MARGIN OF EAST LAKE SAMMAMISH PARKWAY N. E. (ISSAQUAH–REDMOND ROAD REVISION NO. 2);
EXCEPT THAT PORTION LYING WESTERLY OF THE EASTERLY MARGIN OF THE NORTHERN PACIFIC RAILROAD COMPANY RIGHT OF WAY, AS CONVEYED BY DEED RECORDED UNDER RECORDING NUMBER 3051111.

PARCEL 2:
ALL THAT PORTION OF VACATED ILLINOIS AVENUE (202ND AVENUE N. E.), AS SHOWN ON AND DEDICATED TO THE PUBLIC IN THE PLAT OF INGLEWOOD, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 3 OF PLATS, PAGE 169, RECORDS OF KING COUNTY, WASHINGTON, LYING SOUTHWESTERLY OF A LINE LOCATED 30 FEET (MEASURED PERPENDICULAR TO) SOUTHWESTERLY OF AND PARALLEL TO THE CENTERLINE OF EAST LAKE SAMMAMISH PARKWAY N. E., AS VACATED BY KING COUNTY SUPERIOR COURT CAUSE NUMBER 91–2–20802–6.

LEGAL DESCRIPTION CONTINUED:

PARCEL No. 292506–9007

THAT PORTION OF THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY'S (FORMERLY NORTHERNPACIFIC RAILWAY COMPANY) SNOQUALMIE BRANCH LINE RIGHT–OF–WAY 100 FEET IN WIDTH OVER AND ACROSS GOVERNMENT LOTS 1 & 2 LESS PORTION OF SAID GOVERNMENT LOT 2 AS DEEDED TO D.P. &: E.M. STAHL UNDER REC NO 9409280762; TOGETHER WITH LOTS 1 THRU 68, BLOCK 9, PLAT OF TOWN OF INGLEWOOD LYING WESTERLY OF LINE DRAWN PARALLEL WITH & 50 FEET EASTERLY AS MEASURED AT A RIGHT ANGLE FROM MAIN TRACK CENTERLINE OF SAID BRANCH LINE RIGHT OF WAY & PORTION OF LOTS 19 THRU 24 IN BLOCK 6 OF SAID PLAT LYING WESTERLY OF LINE DRAWN CONCENTRIC WITH & 50 FEET EASTERLY AS MEASURED RADIALLY FROM SAID MAIN TRACK CENTERLINE & PORTIONS OF LOTS 1 THRU 22, BLOCK 4, LOTS 1 THRU 22, BLOCK 5 & LOTS 11 THRU 22, BLOCK 3 OF SAID PLAT LYING EASTERLY OF A LINE DRAWN PARALLEL & CONCENTRIC WITH & 50 FEET WESTERLY AS MEASURED AT A RIGHT ANGLE & RADIALLY FROM SAID MAIN TRACK CENTERLINE; & PORTIONS OF LOTS 1, 2 & 8, BLOCK 3 OF SAID PLAT LYING EASTERLY OF A LINE DRAWN PARALLEL & CONCENTRIC WITH & 50 FEET WESTERLY AS MEASURED AT A RIGHT ANGLE & RADIALLY FROM SAID MAIN TRACK CENTERLINE; & PORTIONS OF LOTS 9, 10, 12, 13 & 16 THRU 22, BLOCK 2, OF SAID PLAT LYING EASTERLY OF A LINE DRAWN CONCENTRIC & PARALLEL WITH & 50 FEET WESTERLY AS MEASURED AT A RIGHT ANGLE & RADIALLY FROM SAID MAIN TRACK CENTERLINE; & LOTS 1 THRU 41, BLOCK 14 OF SAID PLAT LESS PORTIONS OF SAID LOTS 26 THRU 41 LYING EASTERLY OF LINE DRAWN PARALLEL & CONCENTRIC WITH & 50 FEET EASTERLY AS MEASURED AT A RIGHT ANGLE & RADIALLY FROM SAID MAIN TRACK CENTERLINE LESS PORTIONS SAID OF LOTS 18 THRU 27 LYING WESTERLY OF LINE DRAWN CONCENTRIC WITH & 25 FEET WESTERLY AS

PARCEL No. 292506–9007 (CONTINUED)

MEASURED RADIALLY FROM SAID MAIN TRACK CENTERLINE LESS PORTIONS OF SAID LOTS 28 & 29 DEEDED TO J & E HAYDEN UNDER REC NO 9212311137 LESS PORTIONS LOTS 24 & 25 LYING EASTERLY OF LINE DRAWN CONCENTRIC WITH & 25 FEET EASTERLY AS MEASURED RADIALLY FROM SAID MAIN TRACK CENTERLINE; & PORTIONS LOTS 0 THRU 7 & LOTS 11 THRU 16 BLOCK 1 OF SAID PLAT LYING EASTERLY OF A LINE DRAWN PARALLEL & CONCENTRIC WITH & 50 FEET WESTERLY AS MEASURED AT A RIGHT ANGLE & RADIALLY FROM SAID MAIN TRACK CENTERLINE; & PORTION IF ANY SAID RAILWAY CO'S BRANCH LINE RIGHT OF WAY LYING WESTERLY OF LOTS 1 THRU 68, BLOCK 9, LOTS 19 THRU 24 BLOCK 6, LOTS 1 THRU 41 BLOCK 14; & LYING EASTERLY OF LOTS 1 THRU 22, BLOCK 4, LOTS 1 THRU 22, BLOCK 5, LOTS 1 THRU 22, BLOCK 3, LOTS 1 THRU 22, BLOCK 2 & LOTS 0 THRU 20, BLOCK 1 OF SAID PLAT.

SSDP XXXX–XXXXX
SHOR–XX–XXXX
GRDEXX–XXXX

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME BL1521075P21T03G–01
JOB No. 554–1521–075 P21T03
DATE OCTOBER 2016

PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

Parametrix
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WWW.PARAMETRIX.COM

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

COVER AND VICINITY MAP

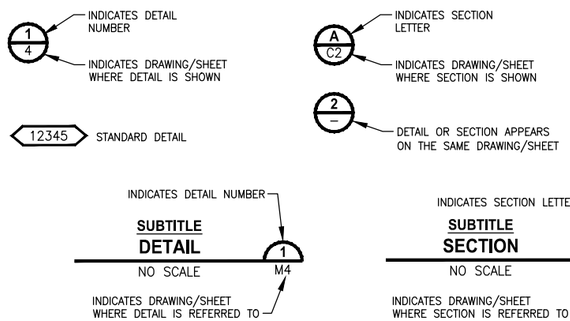
SHEET NO.
1 OF 27
G1

PATH: U:\PSO\Projects\Clients\1521–KingCo\554–1521–075–ELST\99Svcs\CADD\Phase 21\T03\Dwg\
LAYOUT: G1
PLOTTED BY: purgabut DATE: Wednesday, October 12, 2016 7:46:38 PM

ABBREVIATIONS:

ACP	ASPHALT CONCRETE PAVEMENT	N	NORTH, NORTHING
BOC	BACK OF CURB	N.I.C.	NOT IN CONTRACT
BOW	BOTTOM OF WALL	NST	NOT STEEPER THAN
BVCE	BEGIN VERTICAL CURVE ELEVATION	PC	POINT OF CURVE
BVCS	BEGIN VERTICAL CURVE STATION	PT	POINT OF TANGENT
CB	CATCH BASIN	P/L	PROPERTY LINE
C&G	CURB AND GUTTER	PUD	PUBLIC UTILITY DISTRICT
C/L	CENTERLINE	PVI	POINT OF VERTICAL INTERSECTION
CONC	CONCRETE	REINF	REINFORCED
CONST	CONSTRUCTION	ROW or R/W	RIGHT-OF-WAY
CMP	CORRUGATED METAL PIPE	RR	RAIL ROAD
CP	CONCRETE PIPE	SD	STORM DRAIN
CSTC	CRUSHED SURFACING TOP COURSE	SDMH	STORMWATER MANHOLE
DIA	DIAMETER	SIM	SIMILAR
DI, DIP	DUCTILE IRON PIPE	SS	SANITARY SEWER
E	EAST, EASTING	ST	STEEL
EOA	EDGE OF ASPHALT	STA	STATION
EVCE	END VERTICAL CURB ELEVATION	TEL	TELEPHONE
EVCS	END VERTICAL CURB STATION	TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
EOG	EDGE OF GRAVEL	TOW	TOP OF WALL
EOP	EDGE OF PAVEMENT	TYP	TYPICAL
EX, EXIST	EXISTING	W	WATER
FOC	FACE OF CURB	WS	WATER SERVICE
FL	FLANGE, FLOWLINE	WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
G	GAS	WWM	WELDED WIRE MESH
GB	GRADE BREAK		
HMA	HOT MIX ASPHALT		
IE	INVERT ELEVATION		
LF	LINEAR FEET		
LP	LOW POINT		
LT	LEFT		
ME	MATCH EXISTING		
MIN	MINIMUM		
MON	MONUMENT		

DETAIL AND SECTION DESIGNATION



INDEX TO DRAWINGS

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

▷	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03G-02
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER

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

ABBREVIATIONS AND SHEET LIST

SHEET NO. 2 OF 27

G2

PATH: U:\PSO\Projects\Clients\1521-KingCo\554-1521-075-ELST\995vce\CADD\Phase 21\T03\Dwg\
PLOTTED BY: purgabut DATE: Tuesday, October 11, 2016 7:46:32 PM
LAYOUT: G2

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

LEGEND

DESCRIPTION	PROPOSED	EXISTING
RIGHT OF WAY		R/W
PROPERTY LINE		P/L
FOUND MONUMENTS		
REBAR & CAP		
HUB & TACK		
PK NAIL		
FOUND MAG NAIL		
SET MAG NAIL		
PROPERTY CORNER		
STREAM BUFFER		B
STREAM		
EDGE OF WATER		
WETLAND FLAG		
WETLAND BUFFER		
ORDINARY HIGH WATER MARK		
FLOODWAY BOUNDARY		
DITCH		
JURISDICTIONAL DITCH CENTERLINE & EDGES		
UNDERDRAIN PIPE	UD	
TEMPORARY DRAIN PIPE	D	
STORM DRAIN		SD
CULVERT/STORM DRAIN PIPE		
QUARRY SPALL		
INFILTRATION TRENCH		
CATCH BASIN, TYPE 1		
CATCH BASIN, TYPE 2		
INLET PROTECTION		
SANITARY SEWER LINE		SS
SANITARY SEWER MANHOLE		
SANITARY SEWER VAULT		SS
CLEANOUT		CO
CONTOURS MAJOR	10	10
CONTOURS MINOR	2	2
HIGH VISIBILITY SILT FENCE		
HIGH VISIBILITY FENCE		
INTERCEPTOR SWALE	IS	
CLEARING AND GRUBBING LIMITS	CG	
CLEARING LIMITS	CLR	
FILL LINE	F	
CUT LINE	C	
SAWCUT		
ASPHALT EDGE		
CONCRETE LINE		
CURB AND GUTTER		
EDGE OF PATCH		

LEGEND

DESCRIPTION	PROPOSED	EXISTING
EDGE OF GRAVEL		
BARBWIRE FENCE		X
SPLIT RAIL FENCE		
BOARD FENCE		
CHAIN LINK FENCE		
TEMPORARY SAFETY FENCE		
HOG WIRE FENCE		
WOOD GUARDRAIL		
METAL HANDRAIL		
GUY ANCHOR		
POWER POLE WITH LIGHT		
FLOOD LIGHT		
UTILITY POLE		
PP W/ UG DROP		
PP W/ UG DROP & XMFR		
OVERHEAD POWER		OP
POWER		P
POWER VAULT		P
POWER TRANSFORMER		
POWER MANHOLE		P
POWER HANDHOLE		
POWER CABINET		PWR CAB
POWER RISER		PR
POWER METER		
SOLID LID J-BOX		
LUMINAIRE		
TELEPHONE VAULT		T
TELEPHONE RISER		TR
TELEPHONE MANHOLE		T
TELEPHONE		T
TV RISER		TV
TV		TV
GAS VALVE		
GAS METER		
GAS		G
WATER LINE		W
FIRE HYDRANT		
WATER METER		
WATER VALVE		
AREA DRAIN		
ROOF DRAIN		
WATER BLOW OFF VALVE		
WATER POST INDICATOR		
SPRINKLER HEAD ROT=90		

LEGEND

DESCRIPTION	PROPOSED	EXISTING
IRRIGATION CONTROL VALVE		
FLOW DIRECTION		
TRAFFIC SIGNAL POLE W/ LAMP		
TRAFFIC SIGNAL POLE		
TRAFFIC CONTROL LOOP (SQ)		TL
TRAFFIC CONTROL CABINET		
PEDESTRIAN POLE		
MONITORING WELL		
SURFACE POST		
SIGN		
SKIP LANE LINE		
SOLID LANE LINE		
FOG LINE		
LTO ARROW		
STO ARROW		
RTO ARROW		
MAILBOX		
DECIDUOUS TREE		
CONIFEROUS TREE		
WETLAND SYMBOL		
WETLAND BOUNDARY		
VEGETATION		
STRUCTURAL EARTH WALL		
RIP RAP		
ROCKERY		
HANDICAPPED SYMBOL		
WHEELCHAIR RAMP		
BUILDING LINE		
CONCRETE STAIR LINE		
WOOD STAIRWAY		
REMOVE ASPHALT		
PATTERNED CONCRETE INTERSECTION		
RAMP DETECTABLE WARNING		
RESTORATION PLANTING AREA		
SANDBAG DAM		
CHECK DAM		
WATTLE CHECK DAM		
FORMER RAILROAD CENTERLINE		220 + RR C/L
CONSTRUCTION CENTERLINE		220+00 + A-LINE

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

PATH: U:\PSO\Projects\Clients\1521-KingCo\554-1521-075-ELST\995vcs\CADD\Phase 21\T03\Dwg\
PLOTTED BY: purgabut DATE: Tuesday, October 11, 2016 7:47:07 PM
LAYOUT: G3

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03G-03
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

PRELIMINARY

PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER

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

LEGEND

SHEET NO. 3 OF 27

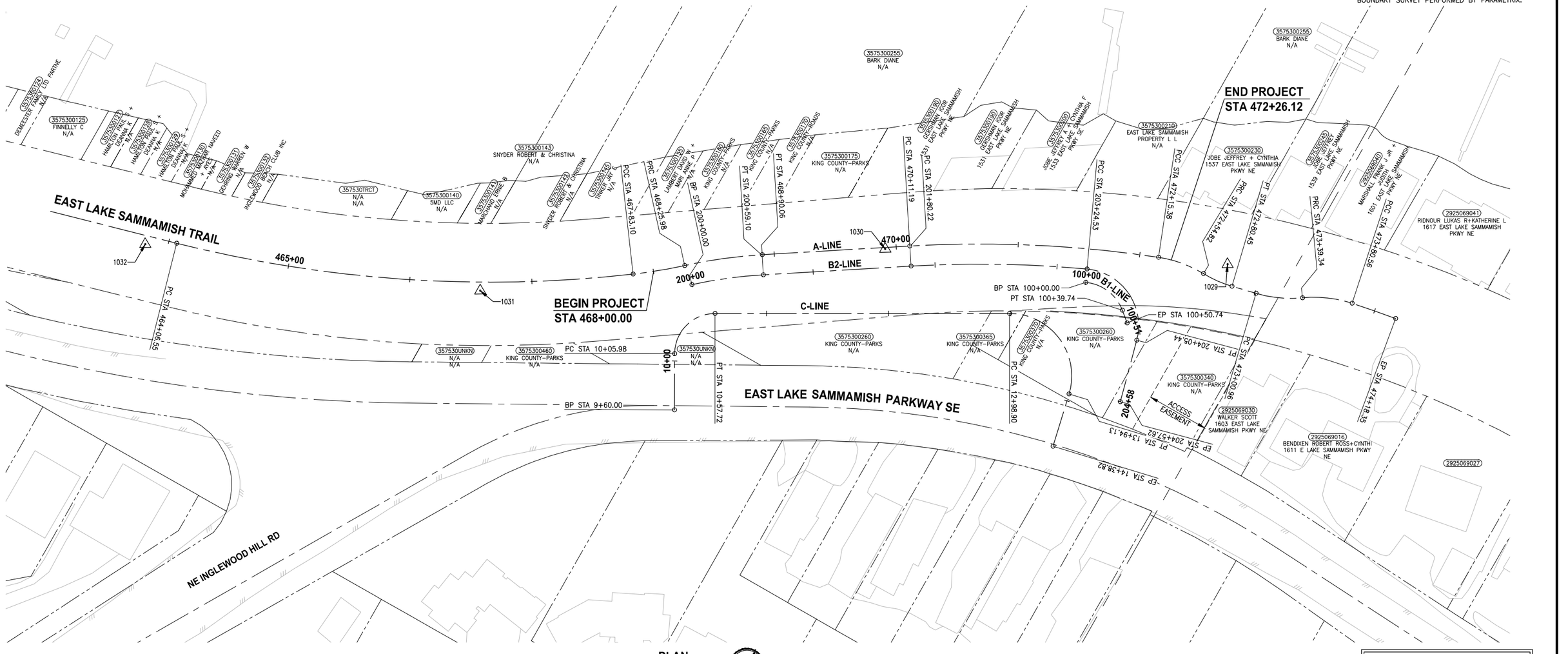
G3

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

POINT TABLE				
POINT #	NORTHING	EASTING	ELEVATION	RAW DESCRIPTION
1029	229921.05	1335206.44	47.06	REBAR & CAP
1030	229669.58	1335331.02	46.27	REBAR & CAP
1031	229395.84	1335521.28	46.14	REBAR & CAP
1032	229137.35	1335620.66	46.49	REBAR & CAP

SURVEY NOTES:

1. HORIZONTAL DATUM: NAD83 (CORS).
2. RTK CORRECTIONS OBTAINED FROM NGS CORS ID POINT "SEAT" ON OCTOBER 3, 2007.
3. VERTICAL DATUM: NAVD88.
4. WSDOT SITE BENCHMARKS HELD FOR THIS SURVEY ARE NOS. 2355, 6762, 6294, AND 617.
5. METHODOLOGY: FIELD MEASUREMENTS FOR THIS SURVEY WERE PERFORMED USING TRIMBLE 5800 RTK WITH CELL PHONE AND LIECA TCRA 1103 FULL ROBOTIC 3 SECOND TOTAL STATION IN CONFORMANCE WITH ACCEPTED SURVEY STANDARDS AS SPECIFIED BY WAC 332-130 FOR LINEAR AND ANGULAR CLOSURE.
6. THE RIGHT-OF-WAY DIMENSIONS SHOWN WERE PROVIDED BY KING COUNTY SURVEY AND DO NOT REPRESENT A BOUNDARY SURVEY PERFORMED BY PARAMETRIX.



PLAN
SCALE IN FEET
0 40 80

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

REVISIONS	DATE	BY

DESIGNED D. THIBODEAU
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03G-04
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

DANIEL A. THIBODEAU — STATE OF WASHINGTON — 21801 — REGISTERED PROFESSIONAL LAND SURVEYOR

PRELIMINARY

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

SURVEY CONTROL PLAN

SHEET NO. 4 OF 27

G4

PATH: U:\PSO\Projects\Clients\1521-KingCo\554-1521-075-ELST\99Svcs\CADD\Phase 21\T03\Dwg\
LAYOUT: G4
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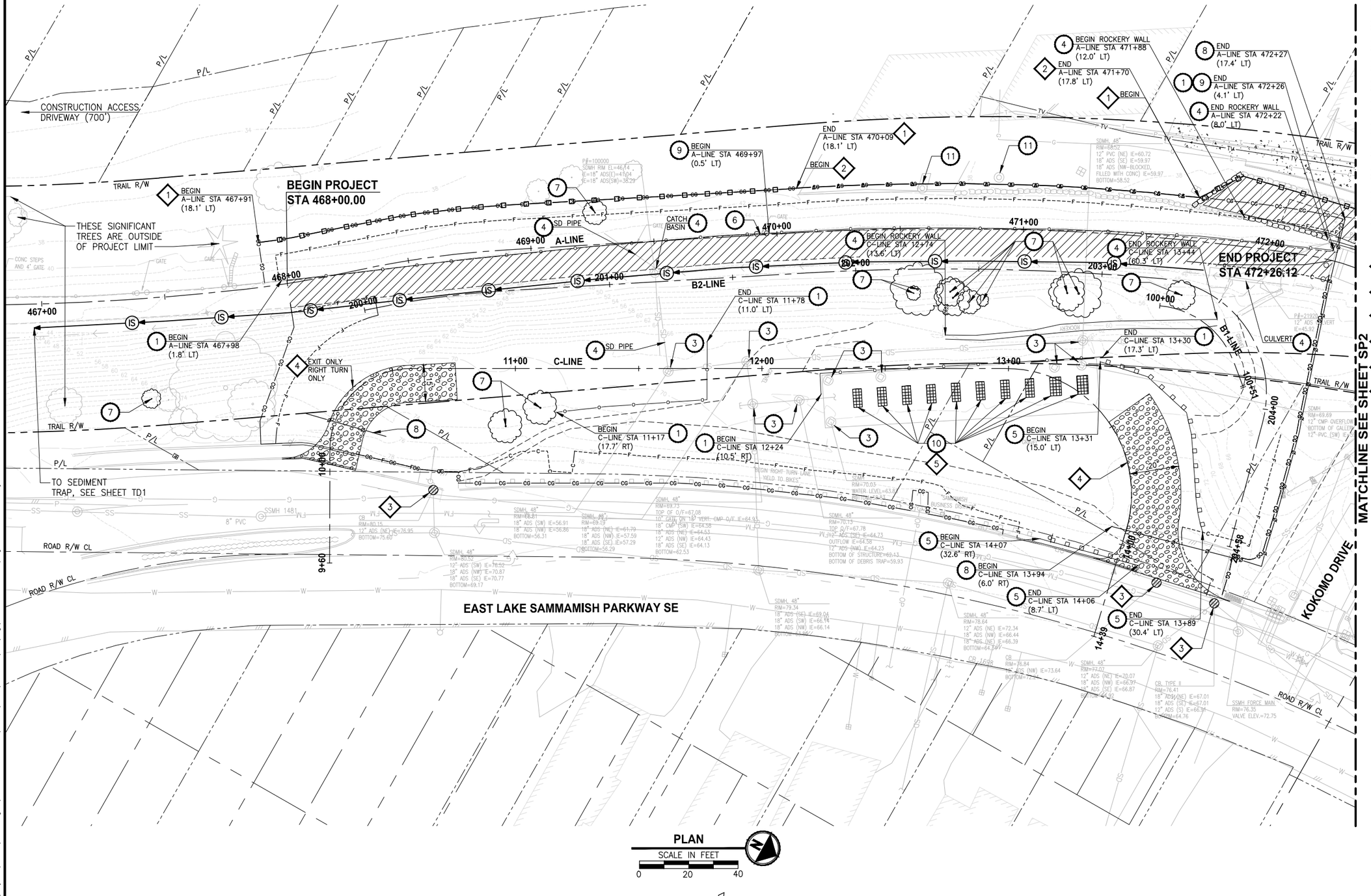
DATE: Tuesday, October 11, 2016 7:48:11 PM

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

MATCHLINE SEE SHEET SP2

LEGEND:

- REMOVE EXISTING GRAVEL SURFACE
- PAVEMENT EXCAVATION LIMIT
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- MP # — NPDES CONSTRUCTION STORMWATER DISCHARGE MONITORING POINT
- IS — INTERCEPTOR SWALE

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

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PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

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P 206.394.3700
WWW.PARAMETRIX.COM

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

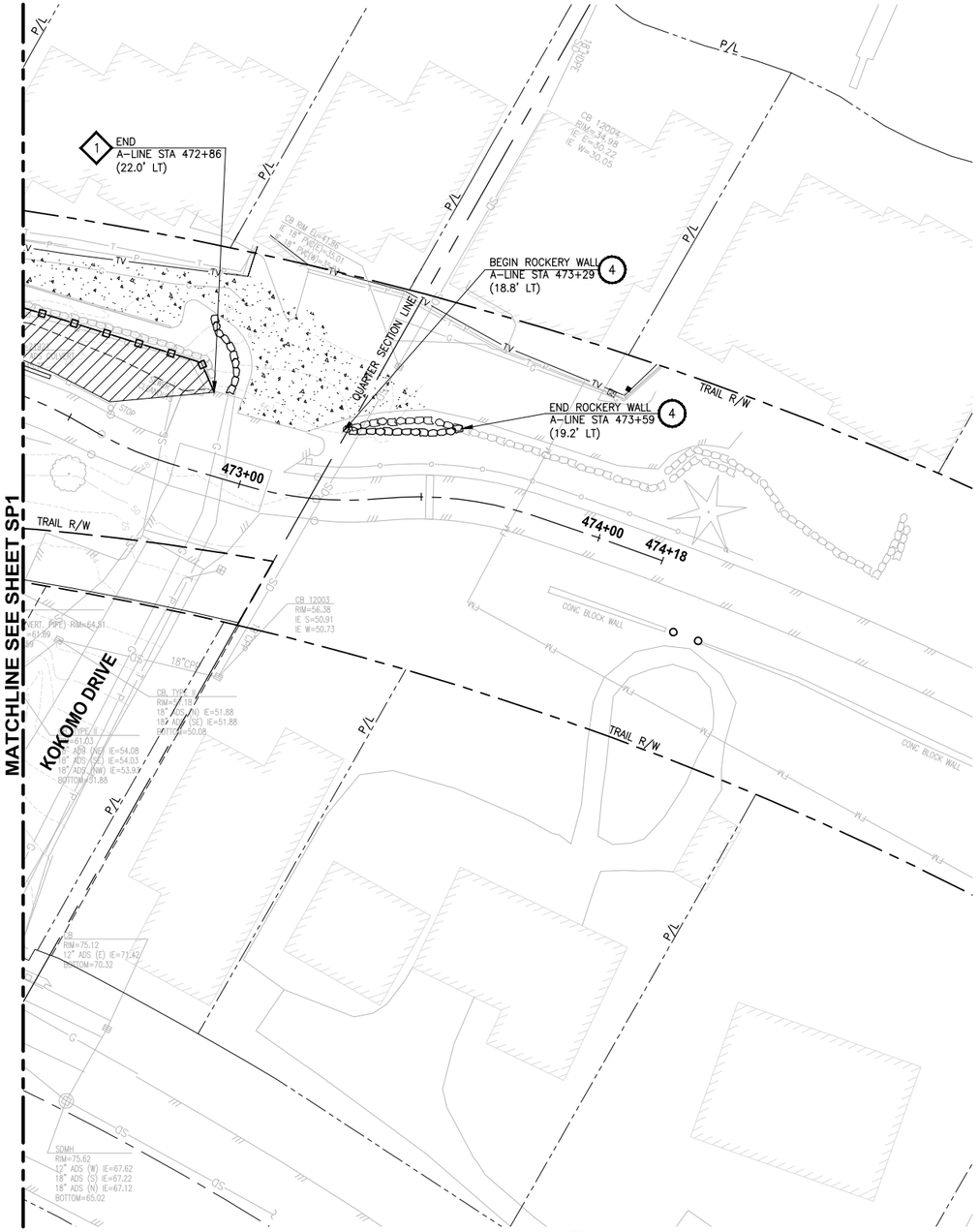
TESC/SITE PREPARATION PLAN

SHEET NO. 5 OF 27

SP1

PATH: U:\PSO\Projects\Clients\1521-KingCo\554-1521-075-ELST\995\vs\CADD\Phase 21\T03\Dwg\
PLOTTED BY: purgabut DATE: Tuesday, October 11, 2016 7:49:49 PM
LAYOUT: SP1

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



PLAN
SCALE IN FEET
0 20 40

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:

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2. TRIANGLE SILT DIKE.
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4. STABILIZED CONSTRUCTION ENTRANCE, PER WSDOT STANDARD DETAIL I-80.10-01.
5. METAL GRATE INLET PROTECTION, SEE DETAIL SHEET TD1.
6. TEMPORARY BYPASS.

LEGEND:

- REMOVE EXISTING GRAVEL SURFACE
- PAVEMENT EXCAVATION LIMIT
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- MP # — NPDES CONSTRUCTION STORMWATER DISCHARGE MONITORING POINT
- IS — INTERCEPTOR SWALE

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

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DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
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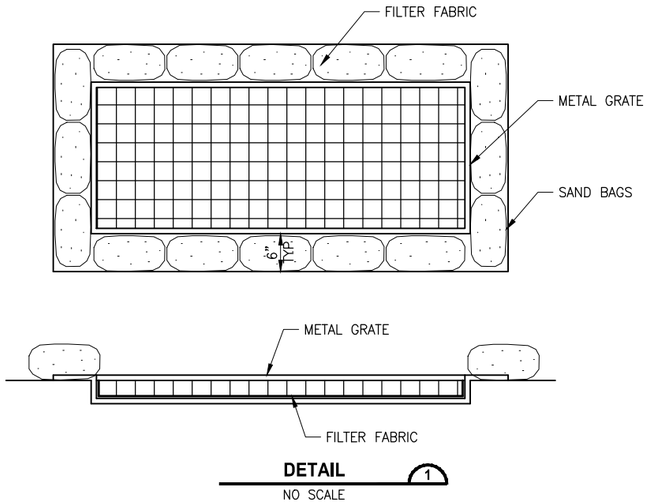
PROJECT NAME
EAST LAKE SAMMAMISH
MASTER PLAN TRAIL
INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

TESC/SITE PREPARATION PLAN

SHEET NO. 6 OF 27

SP2

PATH: U:\PSO\Projects\Clients\1521-KingCo\554-1521-075-ELST\99Secs\CADD\Phase 2\T03\Dwg\ PLOTTED BY: purgobut DATE: Wednesday, October 12, 2016 7:49:49 PM
LAYOUT: SP2



DETAIL 1
NO SCALE

CITY OF SAMMAMISH APPROVAL

City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED P. JOHANNESSEN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03TD-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

Parametrix
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM

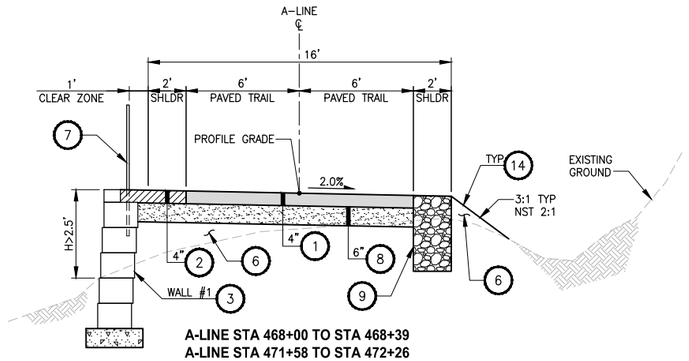
PROJECT NAME
EAST LAKE SAMMAMISH MASTER PLAN TRAIL
INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

TESC DETAILS

SHEET NO. 7 OF 27

TD1

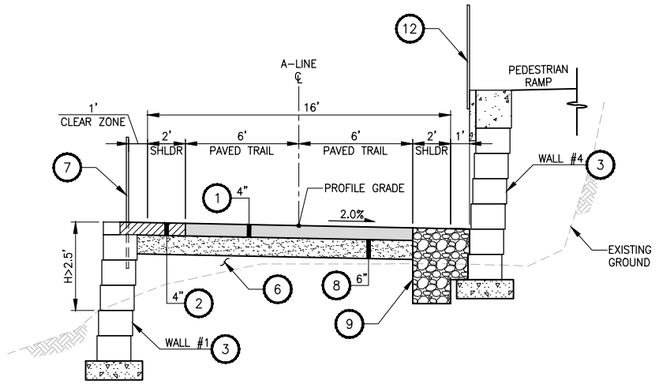
SEC'S 8, 17 TWP. 24 N., RGE. 06 E, W.M.



A-LINE STA 468+00 TO STA 468+39
A-LINE STA 471+58 TO STA 472+26

TYPICAL SECTION A

NO SCALE



A-LINE STA 468+39 TO STA 471+58

TYPICAL SECTION B

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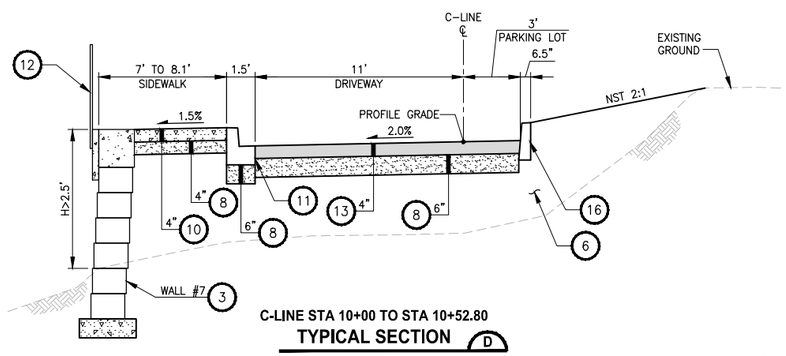
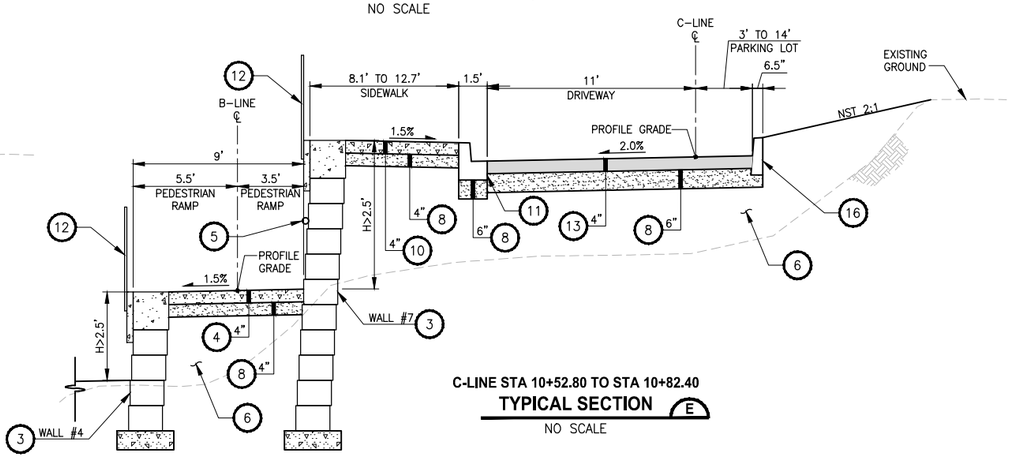


C-LINE STA 10+00 TO STA 10+52.80

TYPICAL SECTION D

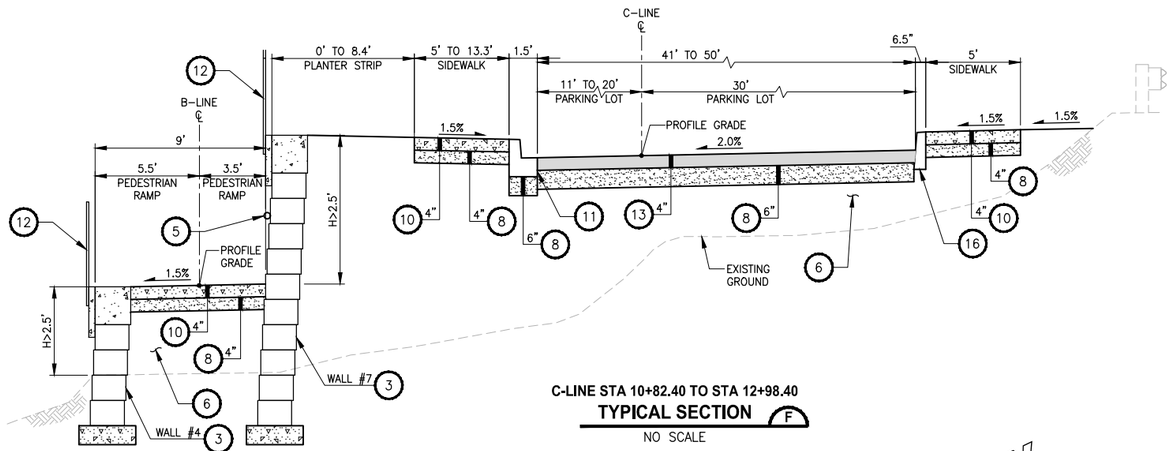
NO SCALE



C-LINE STA 10+52.80 TO STA 10+82.40

TYPICAL SECTION E

NO SCALE



C-LINE STA 10+82.40 TO STA 12+98.40

TYPICAL SECTION F

NO SCALE

CONSTRUCTION NOTES:

1. HMA CL. 3/8" PG 64–22.
2. 5/8" MINUS CRUSHED LEDGE ROCK, COMPACTED DEPTH, 100% FRACTURED. SEE SPECIAL PROVISIONS FOR SPECIFICATIONS.
3. STRUCTURAL EARTH WALL, SEE AL PLANS FOR LOCATIONS. SEE WP SHEETS FOR WALL PROFILES. SEE WD SHEET FOR DETAILS.
4. NOT USED.
5. HANDGRIP.
6. SELECT BORROW INCL. HAUL.
7. COATED CHAIN LINK FENCE TYPE 6.
8. CRUSHED SURFACING BASE COURSE.
9. INFILTRATION TRENCH (1 / SDT)
10. CEMENT CONCRETE SIDEWALK PER WSDOT STD PLAN F–30.10–03.
11. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER WSDOT STD PLAN F–10.12–03.
12. METAL HANDRAIL PER KING COUNTY ROAD STD FIG 5–008.
13. HMA CL. 1/2" PG 64–22.
14. 4" TOPSOIL TYPE A, SEEDING, FERTILIZING AND MULCHING.
15. PIGMENTED CEMENT CONCRETE PAVEMENT (4"X8" NOMINAL BRICK PATTERN).
16. CEMENT CONCRETE TRAFFIC CURB PER WSDOT STD PLAN F–10.12–03.

GENERAL NOTE:

1. APPLY SOIL RESIDUAL HERBICIDE 16–FOOT WIDTH TO THE SURFACE OF THE TRAIL CRUSHED SURFACING BASE COURSE PRIOR TO HMA PAVING.

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME BL1521075P21T03CS–01
JOB No. 554–1521–075 P21T03
DATE OCTOBER 2016

PRELIMINARY
PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER

Parametrix
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
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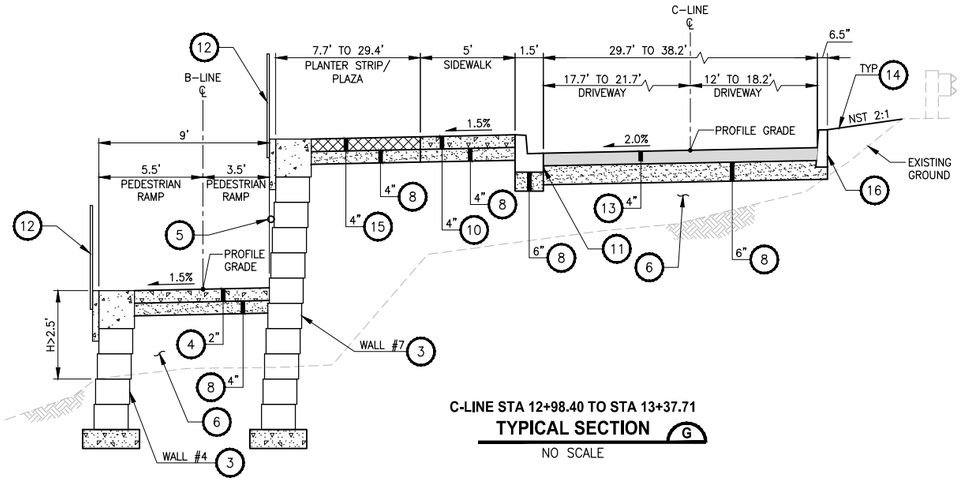
WWW.PARAMETRIX.COM

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

TYPICAL CROSS SECTIONS

SHEET NO. 8 OF 27

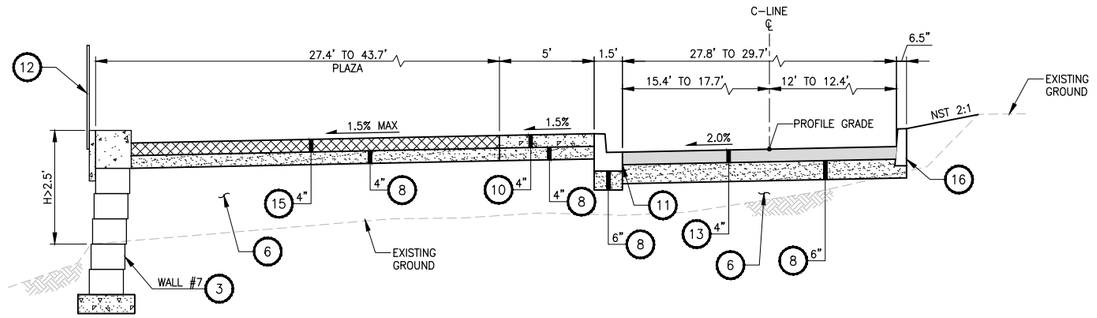
CS1



C-LINE STA 12+98.40 TO STA 13+37.71

TYPICAL SECTION G

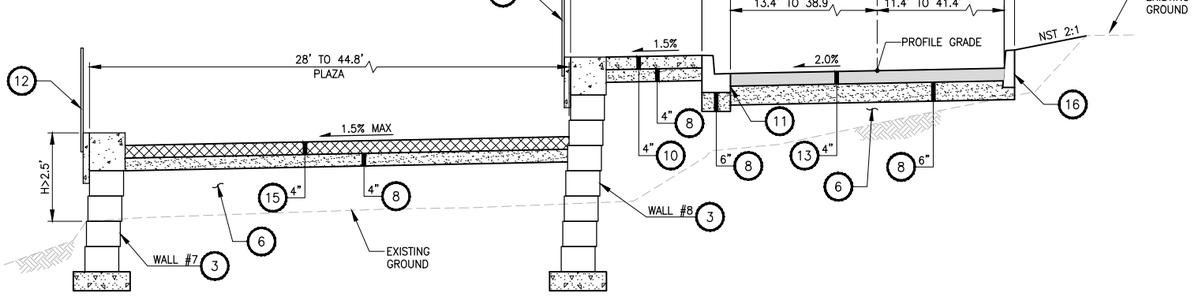
NO SCALE



C-LINE STA 13+37.71 TO STA 13+47.63

TYPICAL SECTION H

NO SCALE



C-LINE STA 13+47.63 TO STA 14+09

TYPICAL SECTION I

NO SCALE

CONSTRUCTION NOTES:

1. HMA CL. 3/8" PG 64–22.
2. 5/8" MINUS CRUSHED LEDGE ROCK, COMPACTED DEPTH, 100% FRACTURED. SEE SPECIAL PROVISIONS FOR SPECIFICATIONS.
3. STRUCTURAL EARTH WALL, SEE AL PLANS FOR LOCATIONS. SEE WP SHEETS FOR WALL PROFILES. SEE WD SHEET FOR DETAILS.
4. NOT USED.
5. HANDGRIP.
6. SELECT BORROW INCL. HAUL.
7. COATED CHAIN LINK FENCE TYPE 6.
8. CRUSHED SURFACING BASE COURSE.
9. INFILTRATION TRENCH (1 SDT)
10. CEMENT CONCRETE SIDEWALK PER WSDOT STD PLAN F–30.10–03.
11. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER WSDOT STD PLAN F–10.12–03.
12. METAL HANDRAIL PER KING COUNTY ROAD STD FIG 5–008.
13. HMA CL. 1/2" PG 64–22.
14. 4" TOPSOIL TYPE A, SEEDING, FERTILIZING AND MULCHING.
15. PIGMENTED CEMENT CONCRETE PAVEMENT (4"X8" NOMINAL BRICK PATTERN).
16. CEMENT CONCRETE TRAFFIC CURB PER WSDOT STD PLAN F–10.12–03.

GENERAL NOTE:

1. APPLY SOIL RESIDUAL HERBICIDE 16–FOOT WIDTH TO THE SURFACE OF THE TRAIL CRUSHED SURFACING BASE COURSE PRIOR TO HMA PAVING.

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

▷	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

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FILE NAME BL1521075P21T03CS–01
JOB No. 554–1521–075 P21T03
DATE OCTOBER 2016

PRELIMINARY — PHOEBE L. JOHANNESSEN, STATE OF WASHINGTON, 37382, REGISTERED PROFESSIONAL ENGINEER

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WWW.PARAMETRIX.COM

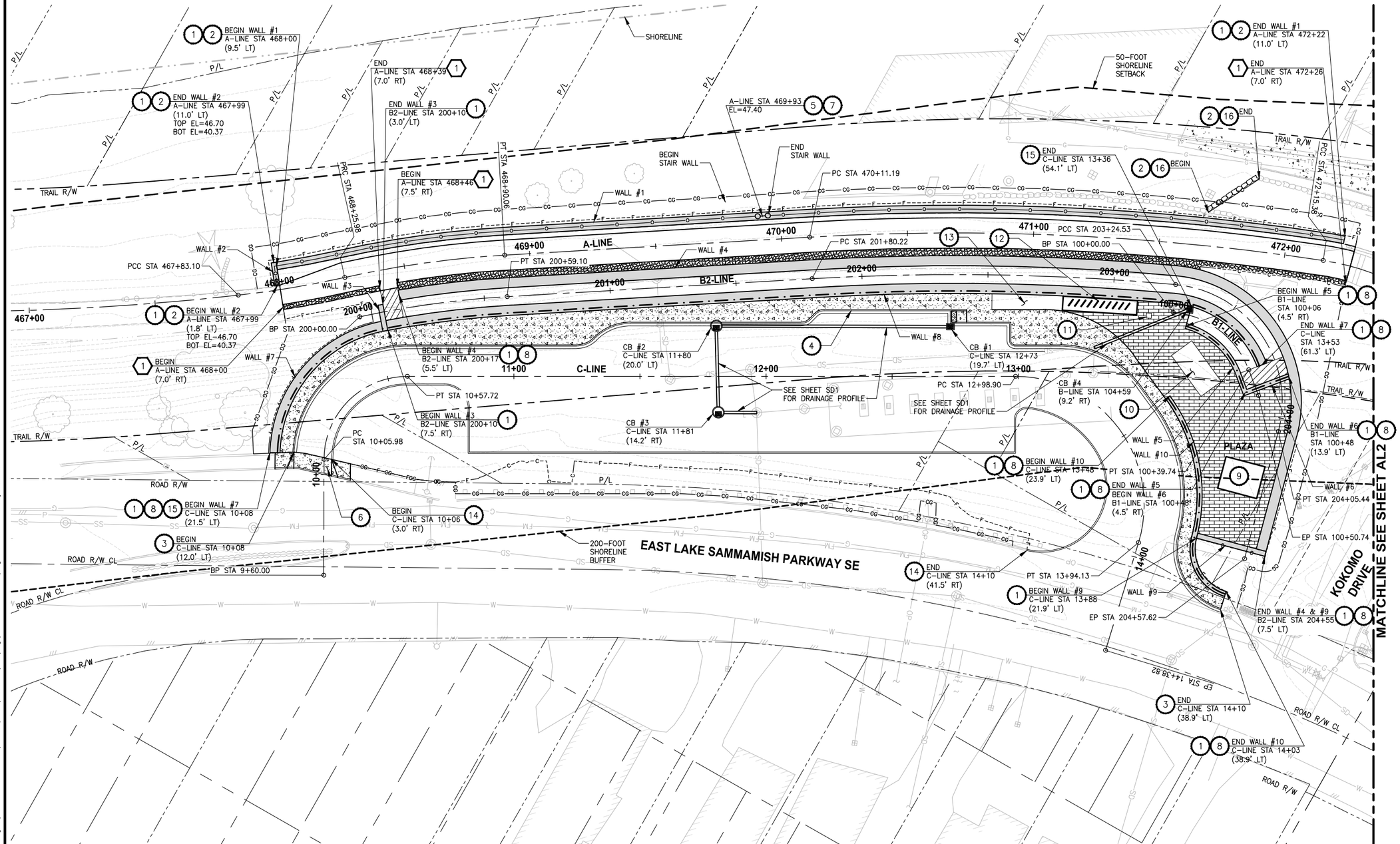
PROJECT NAME
EAST LAKE SAMMAMISH MASTER PLAN TRAIL INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

TYPICAL CROSS SECTIONS

SHEET NO. 9 OF 27

CS2

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



PLAN
SCALE IN FEET
0 20 40

CIVIL CONSTRUCTION NOTES:

1. INSTALL STRUCTURAL EARTH WALL. SEE WALL DETAILS ON WD SHEETS. SEE WALL PROFILES ON WP SHEETS.
2. INSTALL COATED CHAIN LINK FENCE TYPE 6. FOR GROUND POST INSTALLATION, SEE APPENDIX B IN THE SPECIFICATIONS. SEE WD SHEET FOR MOUNTING ON TOP OF WALL.
3. CEMENT CONCRETE TRAFFIC CURB AND GUTTER PER WSDOT STD PLAN F-10.12-03. SEE DETAILS IN APPENDIX B OF SPECIFICATIONS.
4. PERPENDICULAR CURB RAMP PER WSDOT STD PLAN F-40.15-02. SEE DETAILS IN APPENDIX B OF SPECIFICATIONS.
5. INSTALL CONCRETE STAIR AND PEDESTRIAN HANDRAIL. SEE DETAILS ON MD SHEET.
6. CEMENT CONCRETE DRIVEWAY TYPE A PER CITY OF SAMMAMISH DEPARTMENT OF PUBLIC WORKS STD PLAN FIG 02-07.
7. INSTALL CHAIN LINK CANTILEVER GATE. SEE DETAIL ON SHEET MD1.
8. INSTALL METAL HANDRAIL PER KING COUNTY ROAD STD FIG. 5-008.
9. PUBLIC RESTROOM (TO BE DESIGNED BY OTHERS).
10. COVERED PICNIC TABLE AREA.
11. KIOSK CONCRETE PAD. KIOSK SHALL BE PROVIDED BY THE COUNTY.
12. SHELTERED BIKE PARKING.
13. PLANTER, SEE SHEET PS1 FOR DETAILS.
14. CEMENT CONCRETE TRAFFIC CURB PER WSDOT STD PLAN F-10.12-03.
15. TRAFFIC CAST IN PLACE TRAFFIC BARRIER.
16. ROCK WALL.

STORMWATER CONSTRUCTION NOTES:

1. INFILTRATION TRENCH, SEE DETAIL 1 ON SHEET SD1.

LEGEND:

- RETAINING WALL
- CEMENT CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE PER WSDOT STD PLAN F-45.10-01.
- LANDING
- PIGMENTED CEMENT CONCRETE PAVEMENT (4"X8" BRICK PATTERN)

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME BL1521075P21T03AL-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

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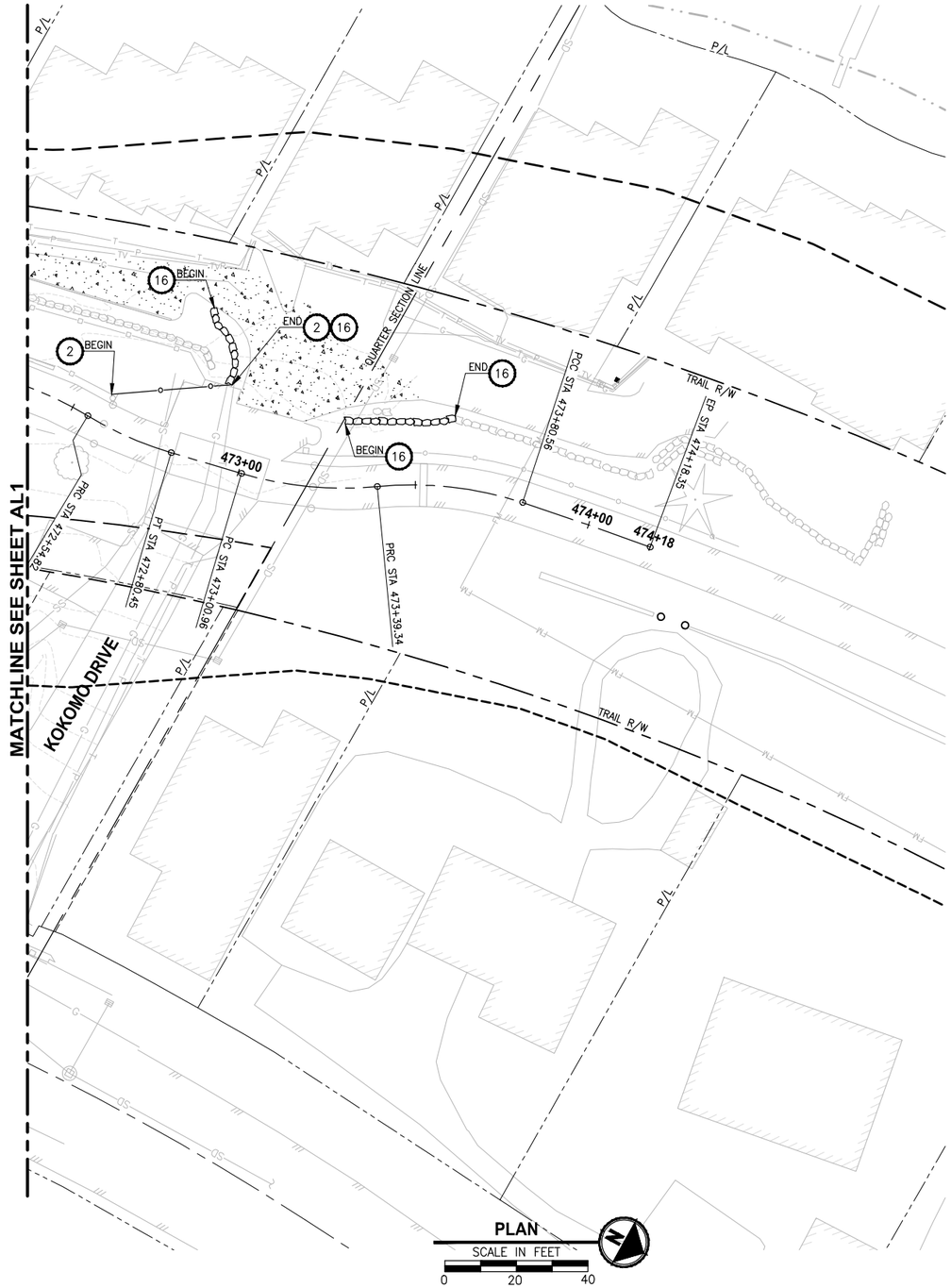
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM

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

PARKING LOT PLAN

SHEET NO. 10 OF 27
AL1

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



PLAN
SCALE IN FEET
0 20 40

CIVIL CONSTRUCTION NOTES:

1. INSTALL STRUCTURAL EARTH WALL. SEE WALL DETAILS ON WD SHEETS. SEE WALL PROFILES ON WP SHEETS.
2. INSTALL COATED CHAIN LINK FENCE TYPE 6. FOR GROUND POST INSTALLATION, SEE APPENDIX B IN THE SPECIFICATIONS. SEE WD SHEET FOR MOUNTING ON TOP OF WALL.
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6. CEMENT CONCRETE DRIVEWAY TYPE A PER CITY OF SAMMAMISH DEPARTMENT OF PUBLIC WORKS STD PLAN FIG 02-07.
7. INSTALL CHAIN LINK CANTILEVER GATE. SEE DETAIL ON SHEET MD1.
8. INSTALL METAL HANDRAIL PER KING COUNTY ROAD STD FIG. 5-008.
9. PUBLIC RESTROOM (TO BE DESIGNED BY OTHERS).
10. COVERED PICNIC TABLE AREA.
11. KIOSK CONCRETE PAD. KIOSK SHALL BE PROVIDED BY THE COUNTY.
12. SHELTERED BIKE PARKING.
13. PLANTER, SEE SHEET PS1 FOR DETAILS.
14. CEMENT CONCRETE TRAFFIC CURB PER WSDOT STD PLAN F-10.12-03.
15. TRAFFIC CAST IN PLACE TRAFFIC BARRIER.
16. ROCK WALL.

STORMWATER CONSTRUCTION NOTES:

1. INFILTRATION TRENCH, SEE DETAIL 1 ON SHEET SD1.

LEGEND:

- RETAINING WALL
- CEMENT CONCRETE SIDEWALK
- DETECTABLE WARNING SURFACE PER WSDOT STD PLAN F-45.10-01.
- LANDING
- PIGMENTED CEMENT CONCRETE PAVEMENT (4"X8" BRICK PATTERN)

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03AL-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

PHOEBE L. JOHANNESSEN — STATE OF WASHINGTON — 37382 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

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ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM

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

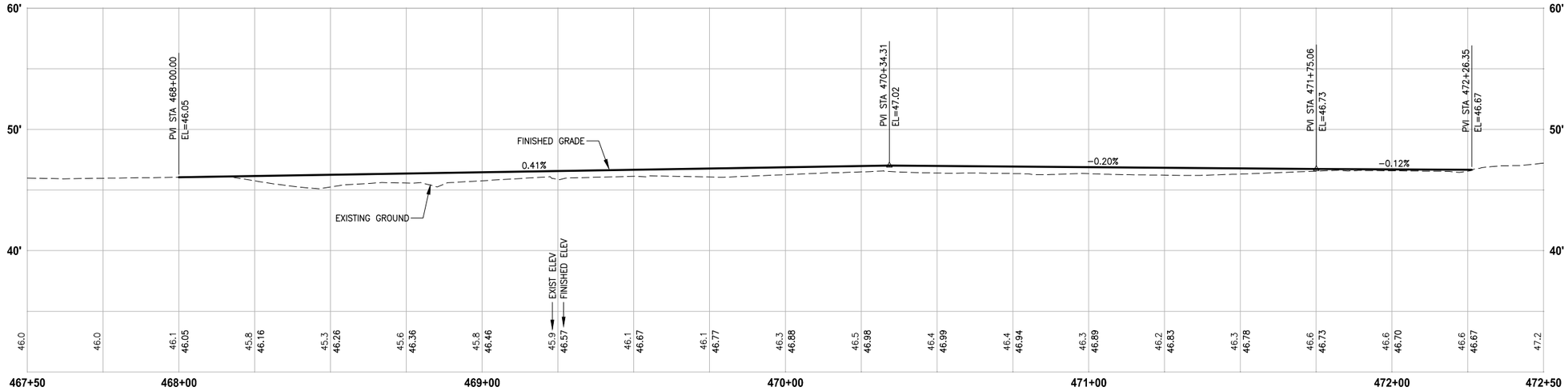
PARKING LOT PLAN

SHEET NO. 11 OF 27

AL2

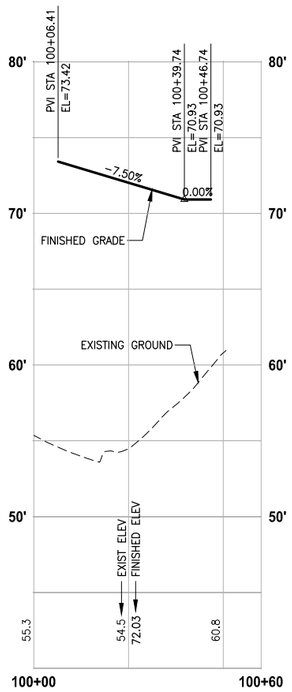
PATH: U:\PSO\Projects\Clients\1521-KingCo\554-1521-075-ELST\999vcs\CADD\Phase 21\T03\Dwg\
PLOTTED BY: purgabut DATE: Tuesday, October 11, 2016 7:54:54 PM
LAYOUT: AL2

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



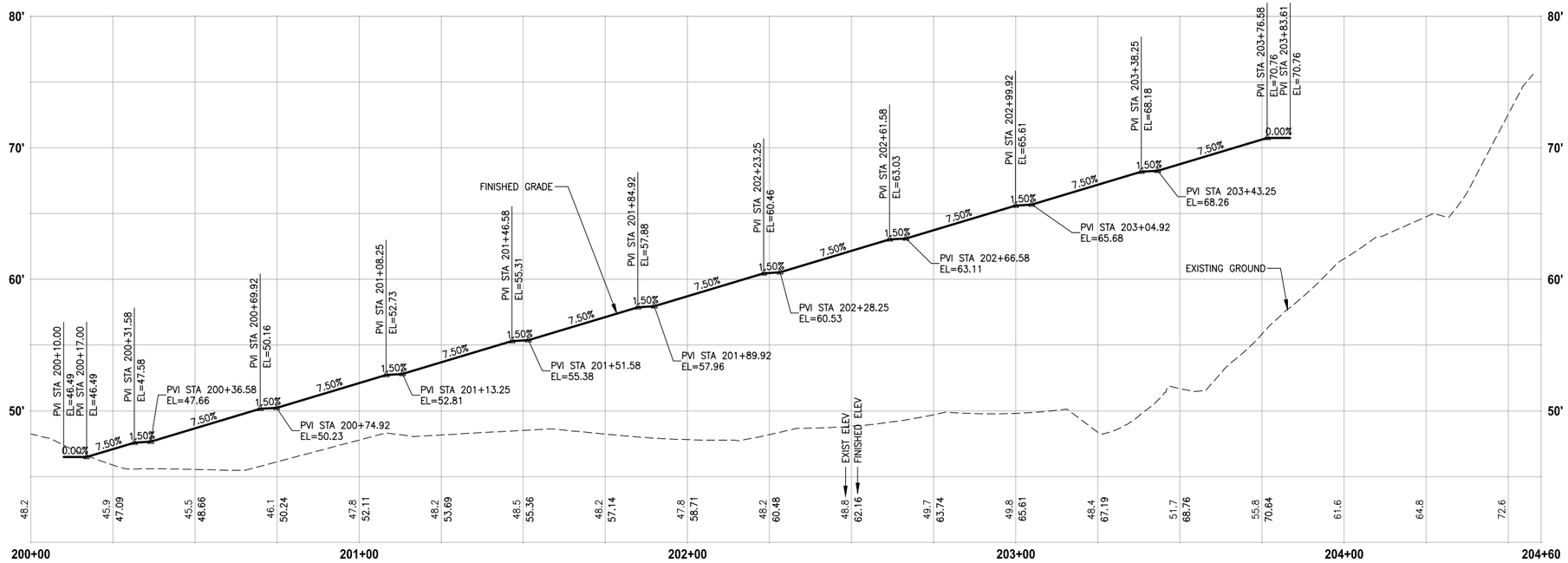
A-LINE PROFILE

HORIZ: 1"=20'
VERT: 1"=5'



B1-LINE PROFILE

HORIZ: 1"=20'
VERT: 1"=5'



B2-LINE PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03AL-01
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PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

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ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM

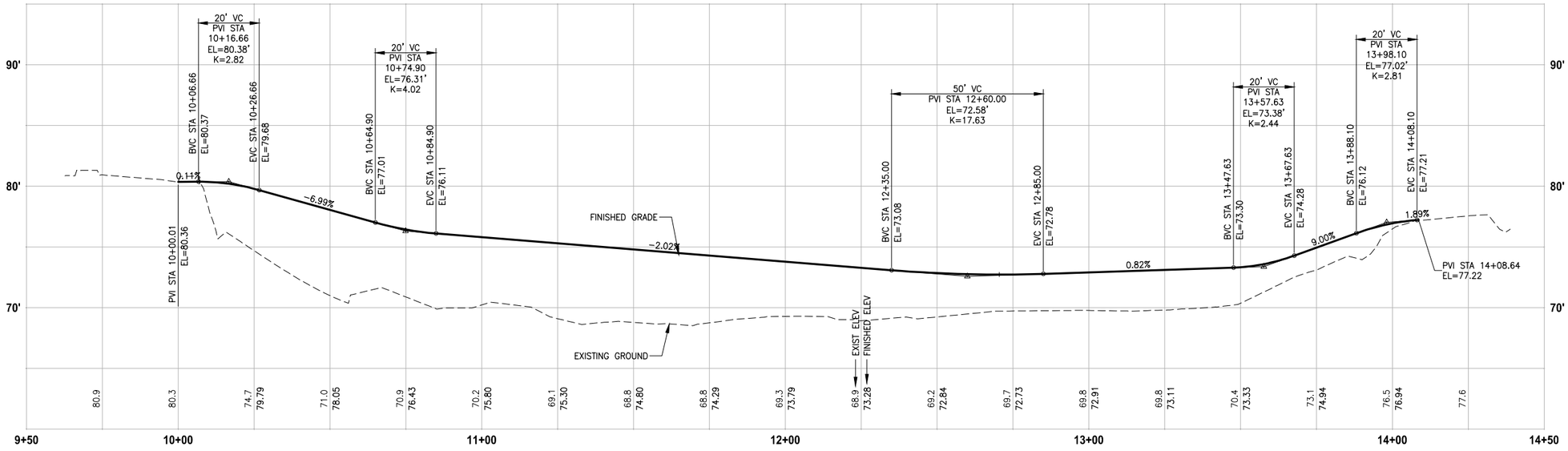
PROJECT NAME
EAST LAKE SAMMAMISH
MASTER PLAN TRAIL
INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

PARKING LOT PROFILE

SHEET NO. 12 OF 27

AL3

PATH: U:\PSO\Projects\Clients\1521-KingCo\554-1521-075-ELST\995vcs\CADD\Phase 21\T03\Dwg\
PLOTTED BY: purgabut DATE: Tuesday, October 11, 2016 7:55:10 PM
LAYOUT: AL3



C-LINE PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
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FILE NAME BL1521075P21T03AL-01
JOB No. 554-1521-075 P21T03
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PHOEBE L. JOHANNESSEN · STATE OF WASHINGTON · 37382 · REGISTERED PROFESSIONAL ENGINEER

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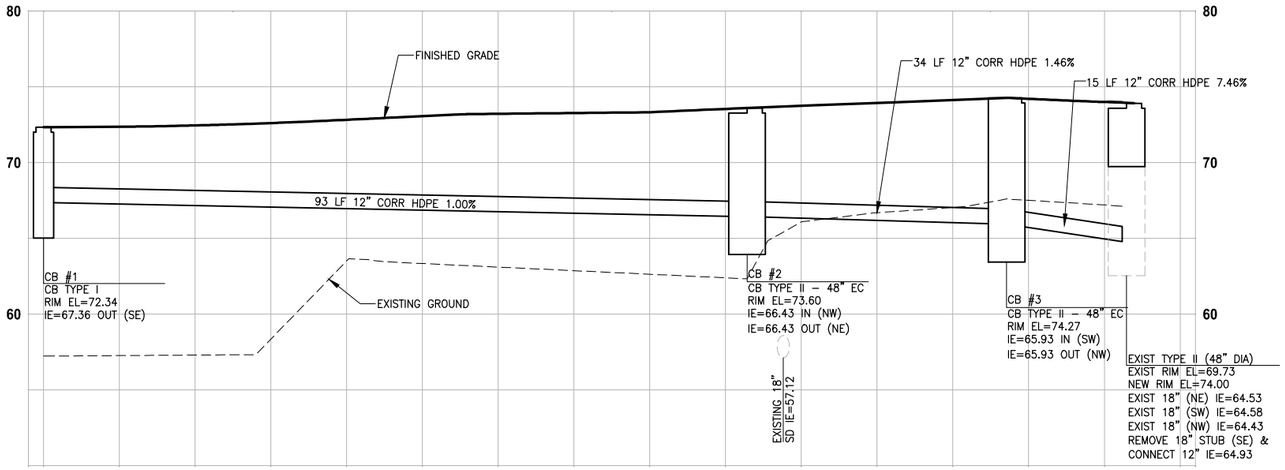
P 206.394.3700
WWW.PARAMETRIX.COM

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

PARKING LOT PROFILE

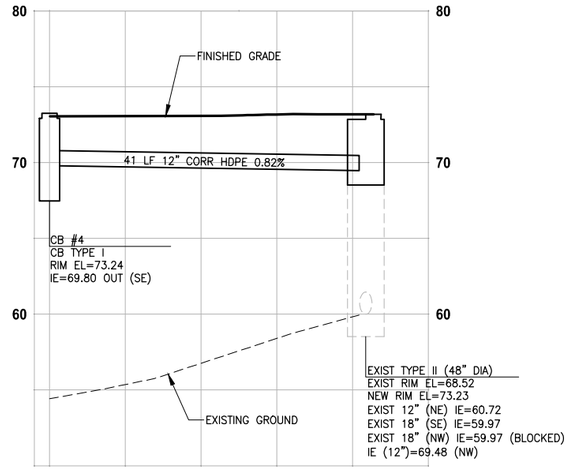
SHEET NO. 13 OF 27

AL4



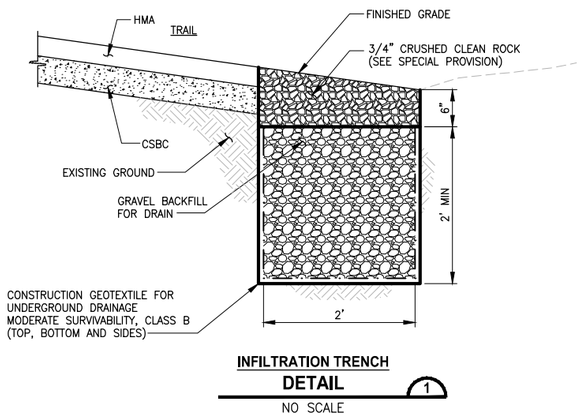
PROFILE

HORIZ: 1"=10'
VERT: 1"=5'



PROFILE

HORIZ: 1"=10'
VERT: 1"=5'



INFILTRATION TRENCH
DETAIL 1

NO SCALE

CITY OF SAMMAMISH APPROVAL

City Engineer — Date

Community Development — Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED P. JOHANNESSEN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

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FILE NAME BL1521075P21T03SD-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

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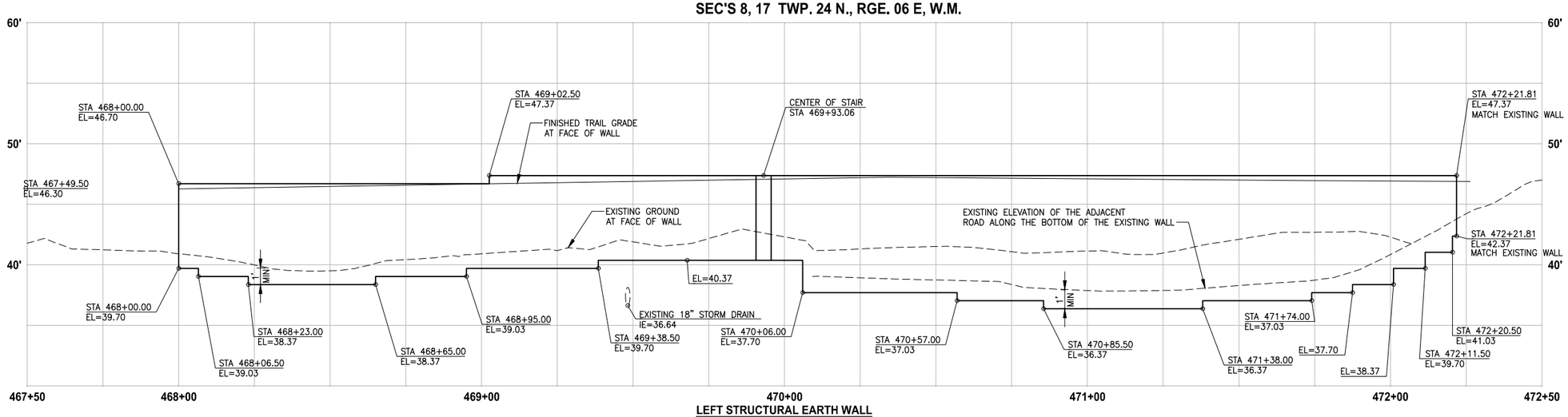
PROJECT NAME
EAST LAKE SAMMAMISH MASTER PLAN TRAIL INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

DRAINAGE PROFILES AND DETAILS

SHEET NO. 14 OF 27

SD1

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



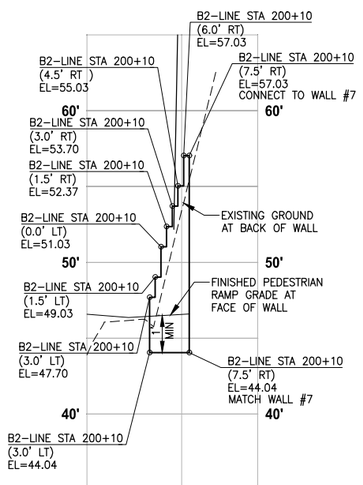
LEFT STRUCTURAL EARTH WALL

WALL #1 (FILL) A-LINE

HORIZ: 1"=20'
VERT: 1"=5'

NOTE:

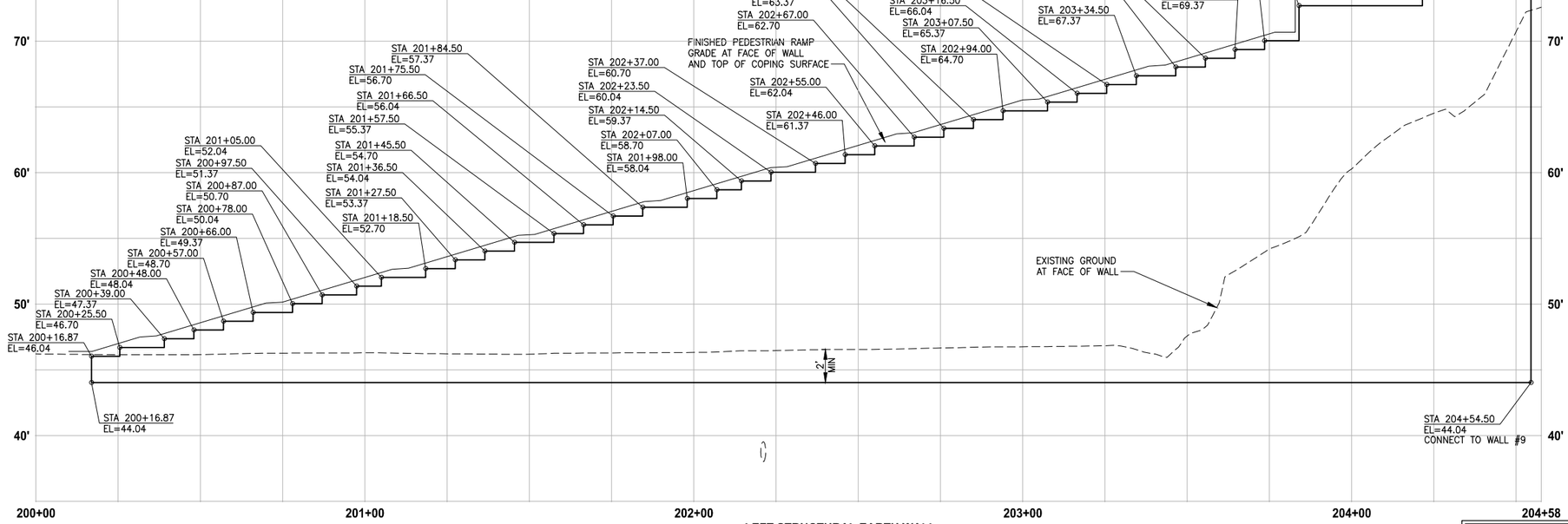
1. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATIONS AND DEPTH, AS AUTHORIZED BY THE ENGINEER.



STRUCTURAL EARTH WALL

WALL #3 (CUT) B2-LINE

HORIZ: 1"=20'
VERT: 1"=5'



LEFT STRUCTURAL EARTH WALL

WALL #4 (FILL) B2-LINE

HORIZ: 1"=20'
VERT: 1"=5'

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANA
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL15210075P21T03WP-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

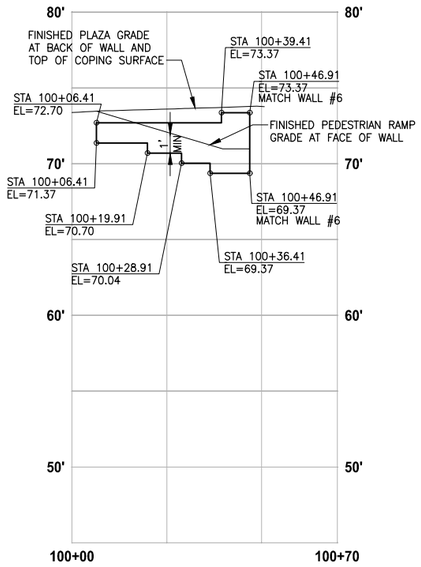
PRELIMINARY
PHOEBE L. JOHANNESSEN
STATE OF WASHINGTON
37382
REGISTERED
PROFESSIONAL ENGINEER

Parametrix
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM

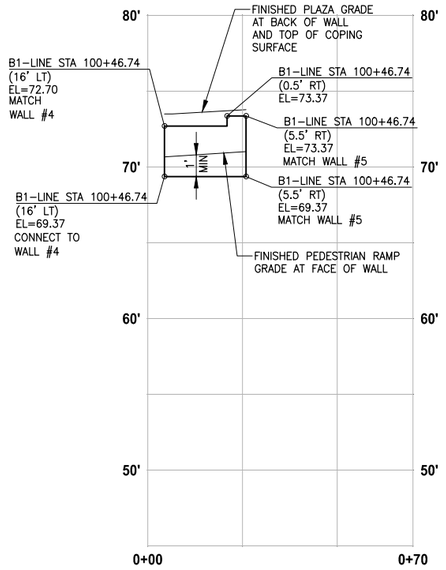
PROJECT NAME
EAST LAKE SAMMAMISH
MASTER PLAN TRAIL
INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

WALL PROFILES

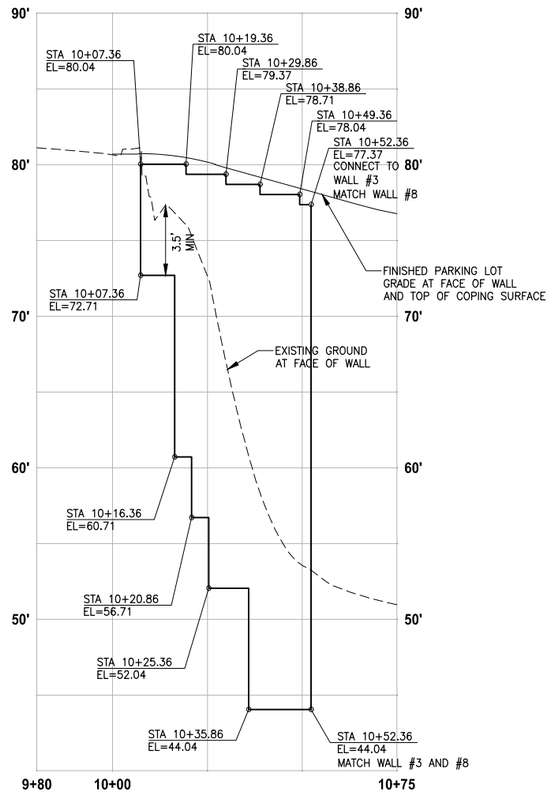
SHEET NO. 15 OF 27
WP1



LEFT STRUCTURAL EARTH WALL
WALL #5 (CUT) B1-LINE
HORIZ: 1"=20'
VERT: 1"=5'



STRUCTURAL EARTH WALL
WALL #6 (CUT) B1-LINE
HORIZ: 1"=20'
VERT: 1"=5'



LEFT STRUCTURAL EARTH WALL
WALL #7 (FILL) C-LINE
HORIZ: 1"=20'
VERT: 1"=5'

NOTE:

1. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATIONS AND DEPTH, AS AUTHORIZED BY THE ENGINEER.

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03WP-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

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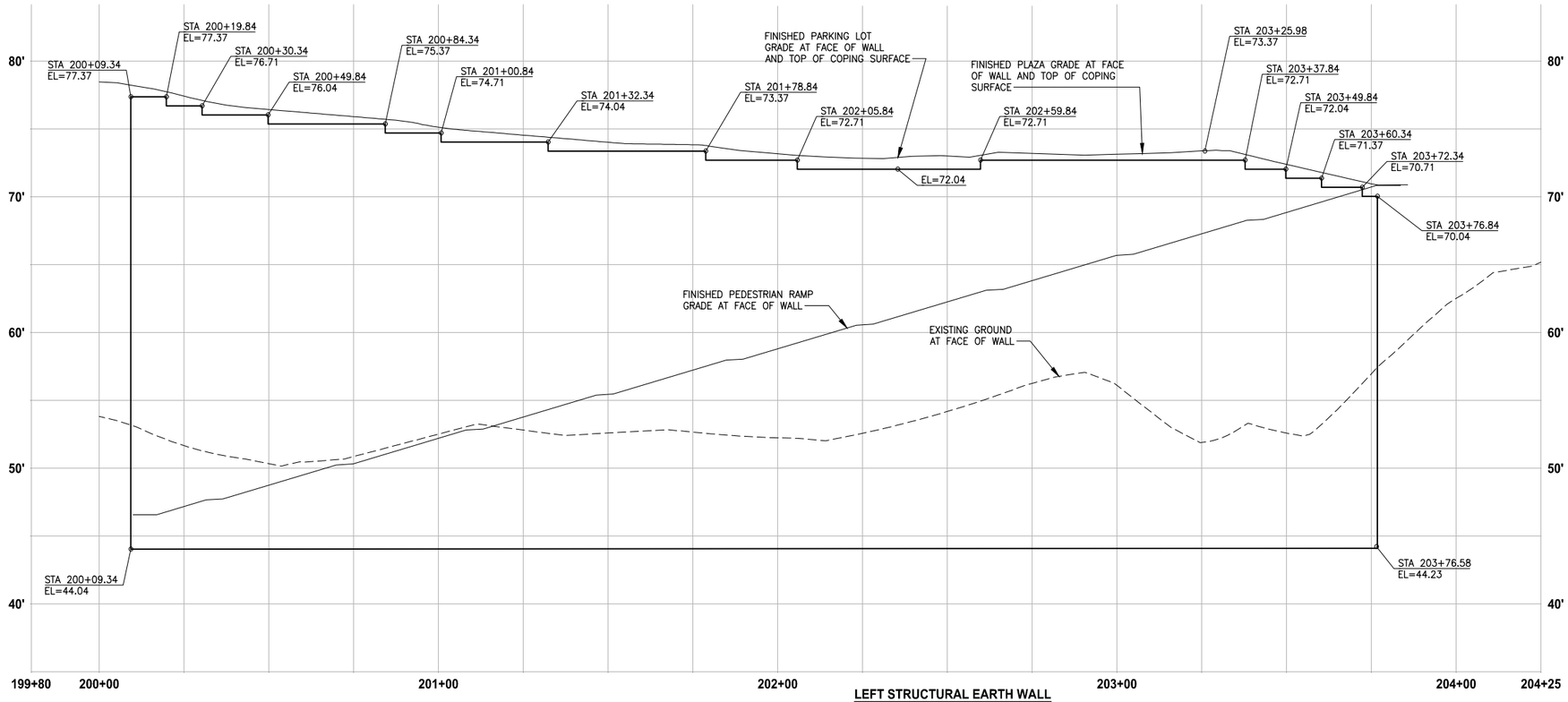
PROJECT NAME
EAST LAKE SAMMAMISH
MASTER PLAN TRAIL
INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

WALL PROFILES

SHEET NO. 16 OF 27
WP2

PATH: U:\PSO\Projects\Clients\1521-KingCo\554-1521-075-ELST\99Svcs\CADD\Phase 21\T03\Dwg\
PLOTTED BY: purgabut DATE: Tuesday, October 11, 2016 7:58:25 PM
LAYOUT: WP2

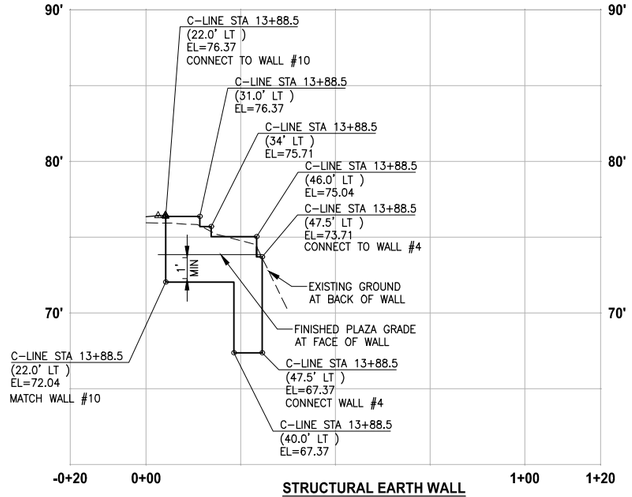
SEC'S 8, 17 TWP. 24 N., RGE. 06 E, W.M.



LEFT STRUCTURAL EARTH WALL

WALL #8 (FILL) B2-LINE

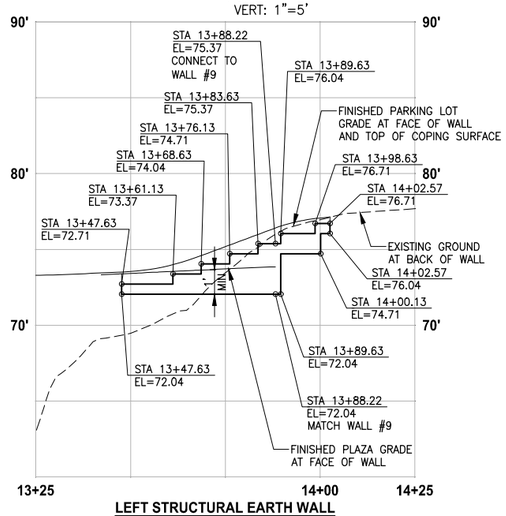
HORIZ: 1"=20'
VERT: 1"=5'



STRUCTURAL EARTH WALL

WALL #9 (CUT) C-LINE

HORIZ: 1"=20'
VERT: 1"=5'



LEFT STRUCTURAL EARTH WALL

WALL #10 (FILL) C-LINE

HORIZ: 1"=20'
VERT: 1"=5'

NOTE:

1. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY LOCATIONS AND DEPTH, AS AUTHORIZED BY THE ENGINEER.

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03WP-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

PRELIMINARY

PHOEBE L. JOHANNESSEN — STATE OF WASHINGTON — 37382 — REGISTERED PROFESSIONAL ENGINEER

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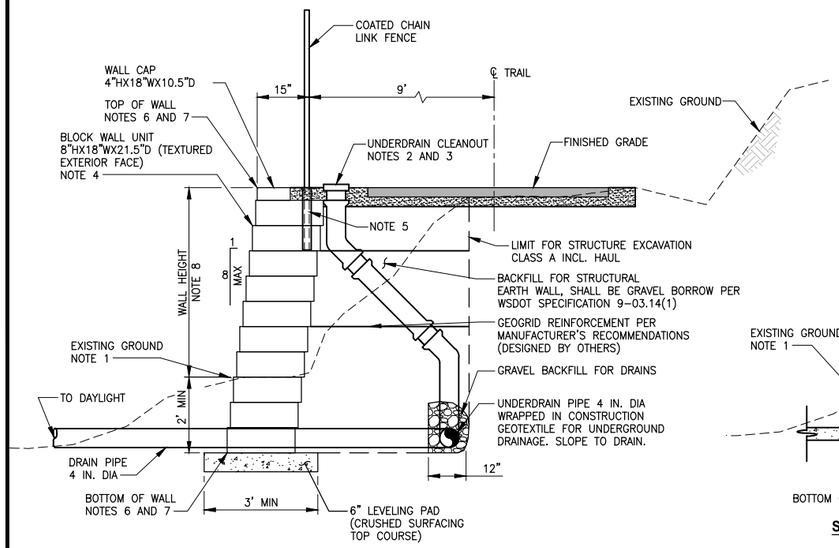
WWW.PARAMETRIX.COM

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

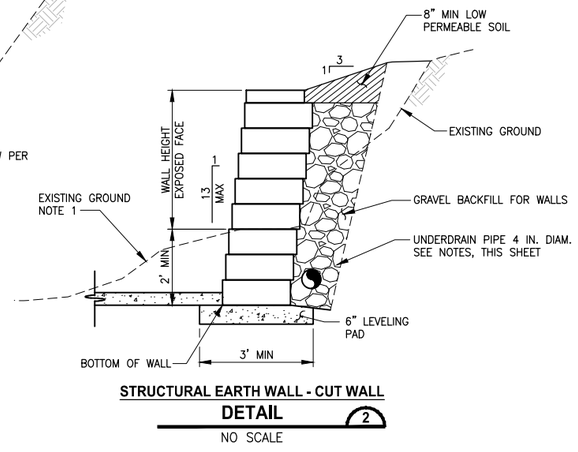
WALL PROFILES

SHEET NO. 17 OF 27

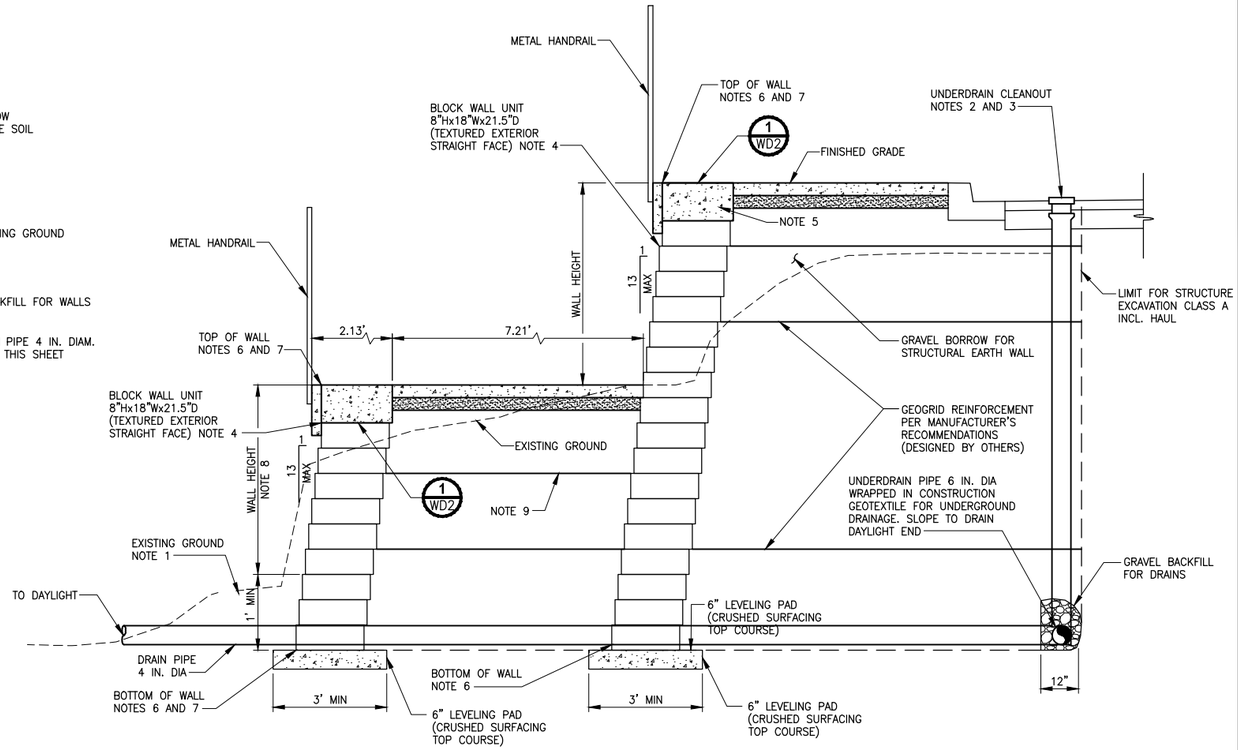
WP3



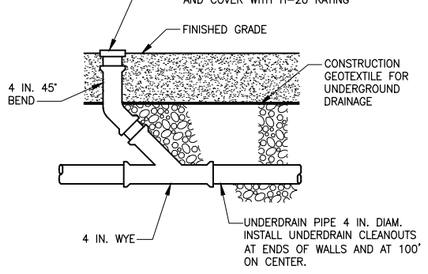
STRUCTURAL EARTH WALL - FILL WALL
DETAIL 1
NO SCALE



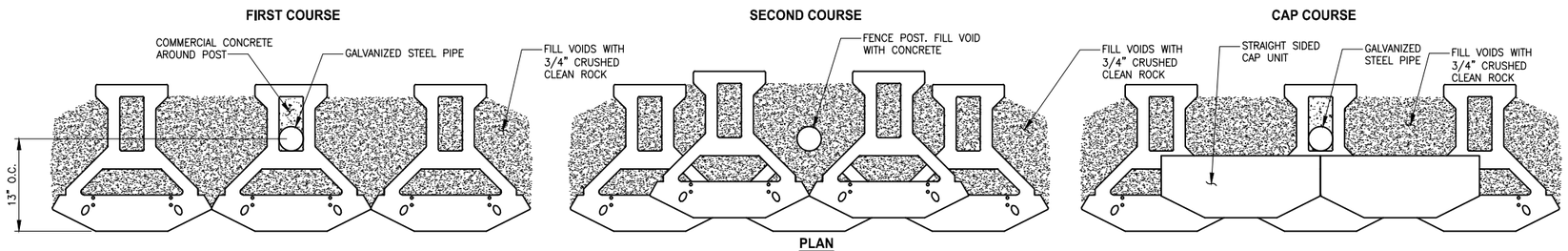
STRUCTURAL EARTH WALL - CUT WALL
DETAIL 2
NO SCALE



STRUCTURAL EARTH WALL - FILL WALL
DETAIL 3
NO SCALE



UNDERDRAIN CLEANOUT
DETAIL 4
NO SCALE



PLAN

REAR COURSE POSITIONING
DETAIL 5
NO SCALE

NOTES:

1. RESTORE EXISTING GROUND WITH NATIVE SOIL BACKFILL AND SEEDING. SEE WP SHEETS.
2. SEE UNDERDRAIN CLEANOUT DETAIL 4 ON THIS SHEET.
3. UNDERDRAIN CLEANOUT LIDS SHALL BE INSTALLED ALONG THE BACK OF WALL BLOCK AND SHALL NOT BE IN TRAIL HMA PAVEMENT.
4. FILL BLOCK UNITS WITH UNIT DRAINAGE FILL. SEE SPECIAL PROVISIONS FOR WALL DESIGN REQUIREMENTS. ALL CONSTRUCTION MUST CONFORM TO MANUFACTURER'S SPECIFIC REQUIREMENTS.
5. POST SHALL HAVE MIN 24" DEPTH. SEE DETAIL 6 ON THIS SHEET.
6. SEE WP SHEETS FOR TOP AND BOTTOM OF WALL ELEVATIONS.
7. SEE OFFSET DISTANCE ON SHEET WPX FOR OUTSIDE FACE OF CAP BLOCK. BOTTOM OF WALL OFFSET DISTANCE SHALL BE SURVEYED AND STAKED BASED ON WALL HEIGHT SHOWN ON WP SHEETS AND WALL BATTER AS SHOWN IN DETAILS 1, 2 AND 3 ON THIS SHEET.
8. SEE WALL SCHEDULE ON SHEET WPX.
9. ANCHOR GEOGRID REINFORCEMENT BETWEEN BLOCKS PER MANUFACTURER'S REQUIREMENTS.

DESIGN LOAD FOR FILL WALLS

LIVELOAD FOR TRAIL	100 PSF
LIVELOAD FOR DRIVEWAY	250 PSF
DEADLOAD	NONE

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

▷	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME BL1521075P21T03WD-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

Parametrix
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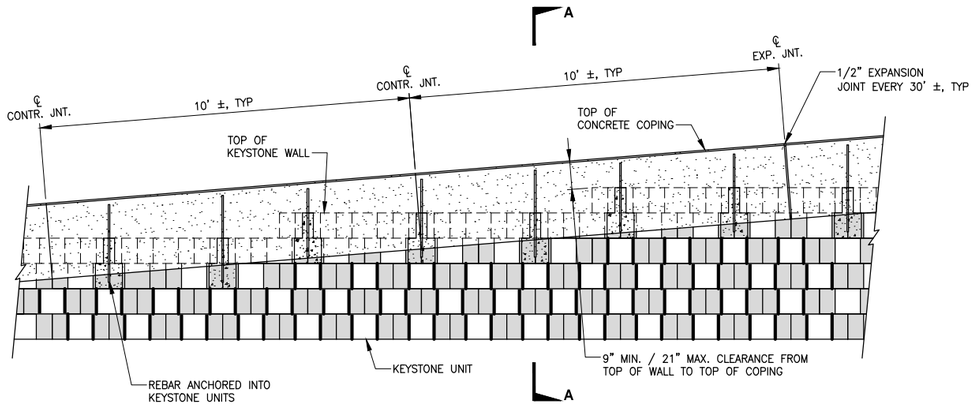
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM

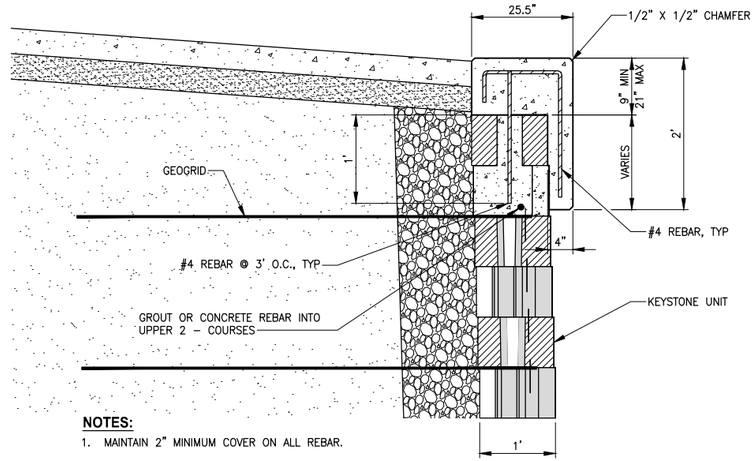
PROJECT NAME
EAST LAKE SAMMAMISH
MASTER PLAN TRAIL
INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

STRUCTURAL EARTH WALL DETAILS

SHEET NO. 18 OF 27
WD1



ELEVATION



NOTES:

1. MAINTAIN 2" MINIMUM COVER ON ALL REBAR.
2. FULL EXPANSION JOINTS SHALL BE PLACED EVERY 3RD JOINT AND AT ALL WALL RADIUS AND BEND POINTS.
3. INSURE THAT ALL TOP OF WALL STEPS ARE COMPLETELY COVERED BY OVERHANG OF CONCRETE COPING (3" MIN).

SECTION A-A

PARTIAL C.I.P CONCRETE COPING
DETAIL 1
NO SCALE

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

▷	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03WD-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

PHOEBE L. JOHANNESSEN — STATE OF WASHINGTON — 37382 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

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719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM

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

STRUCTURAL EARTH WALL DETAILS

SHEET NO. 19 OF 27
WD2

TO BE ADDED

CITY OF SAMMAMISH APPROVAL

City Engineer _____ Date _____

Community Development _____ Date _____

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03RD-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

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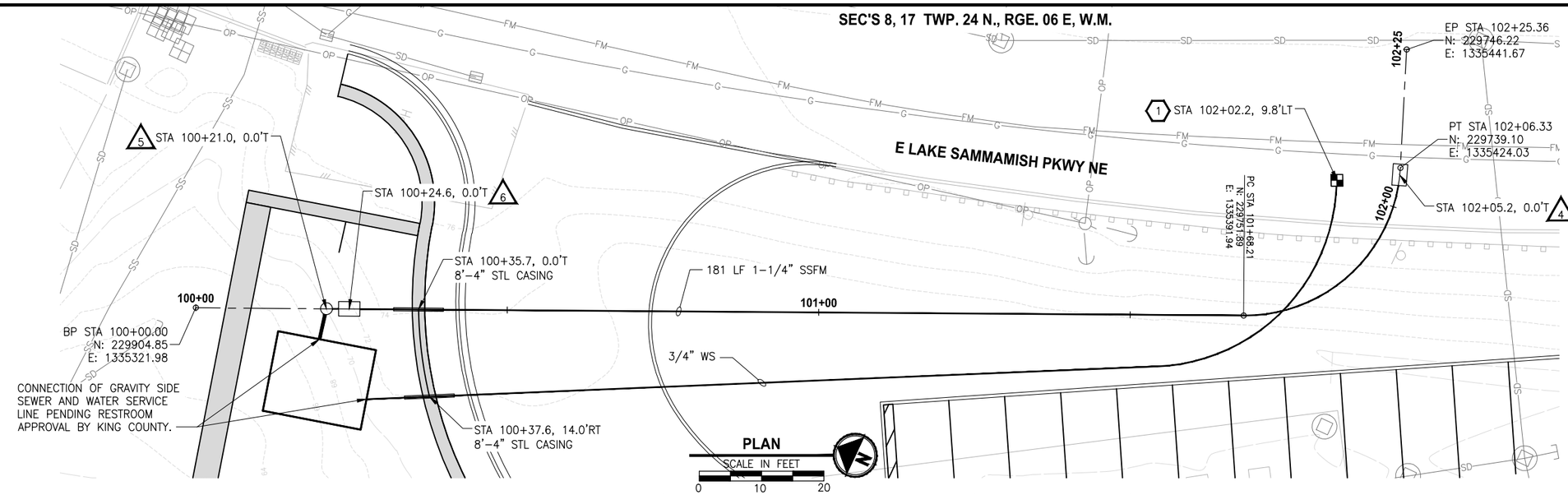
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM

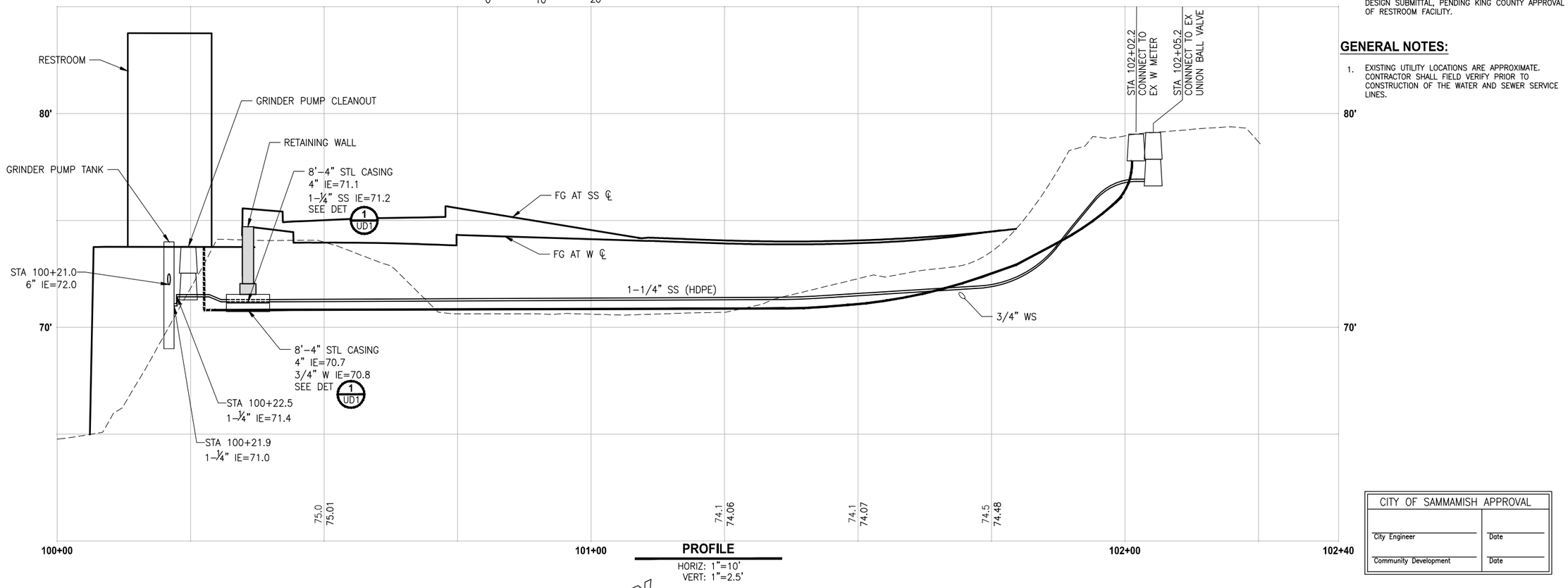
PROJECT NAME
EAST LAKE SAMMAMISH
MASTER PLAN TRAIL
INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

RESTROOM FACILITY DETAIL

SHEET NO. 20 OF 27

RD1





SEWER NOTES:

1. PRESSURE PIPE AND FITTINGS SHALL BE 1-1/4" HDPE (SDR 11) PER SPSWD SIDE SEWER REGULATIONS ARTICLE VIII.
2. ALL HDPE WELDING SHALL BE MADE USING ELECTRO-FUSION.
3. GRAVITY PIPE AND FITTINGS SHALL BE 6" PVC (C900) PER SPSWD SIDE SEWER REGULATIONS ARTICLE VII.

4 EXISTING COLLECTION VALVE BOX WITH UNION BALL VALVE AND SWING CHECK VALVE. CONNECT TO UNION BALL VALVE PER SPSWD SIDE SEWER REGULATIONS COLLECTION VALVE BOX DETAIL.

5 GRINDER SEWER PUMP SYSTEM PER SPSWD SIDE SEWER REGULATIONS SECTION 8.10 AND 8.11, GRINDER PUMP INSTALLATION DETAIL AND GRINDER PUMP SITE LAYOUT INSTRUCTIONS.

6 GRINDER PUMP CLEANOUT PER SPSWD SIDE SEWER REGULATIONS SECTION 8.09 AND GRINDER PUMP CLEANOUT DETAIL.

WATER NOTES:

1 CONNECT TO EXISTING 3/4" WATER METER SETTER PER SPSWD 3/4" AND 1" METER SETTER DETAIL. NEW METER SHALL BE PURCHASED FROM THE DISTRICT. THE DISTRICT SHALL INSTALL THE METER AT THE TIME OF FINAL ACCEPTANCE.

ELECTRICAL NOTES:

1. ELECTRICAL DESIGN TO BE SUBMITTED WITH 90% DESIGN SUBMITTAL, PENDING KING COUNTY APPROVAL OF RESTROOM FACILITY.

GENERAL NOTES:

1. EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION OF THE WATER AND SEWER SERVICE LINES.

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

REVISIONS	DATE	BY

DESIGNED M. MILLER
DRAWN M. MILLER
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03UP-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

MALLORY LESLIE MILLER — STATE OF WASHINGTON — 52673 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY

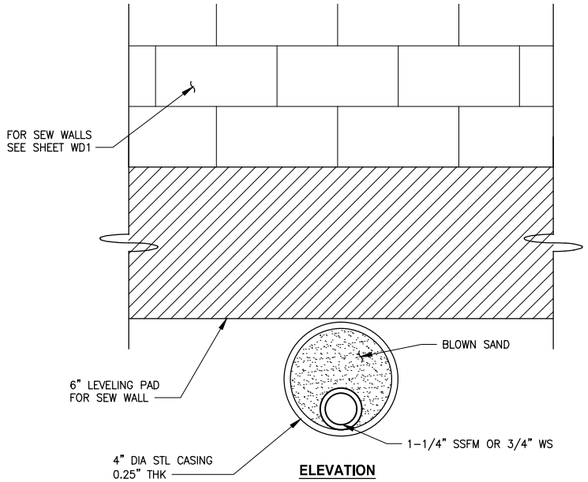
Parametrix
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM

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

UTILITY AND ELECTRICAL PLAN

SHEET NO. 21 OF 27

UP1



ELEVATION

STEEL CASING FOR SEW CROSSING

DETAIL 1

4:1

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LAYOUT: UD1
PLOTTED BY: purgabut DATE: Tuesday, October 11, 2016 8:02:59 PM

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03UD-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

MALLORY LESLEE MEZZER
STATE OF WASHINGTON
52673
REGISTERED
PROFESSIONAL ENGINEER

PRELIMINARY

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719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM

CITY OF SAMMAMISH APPROVAL

City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

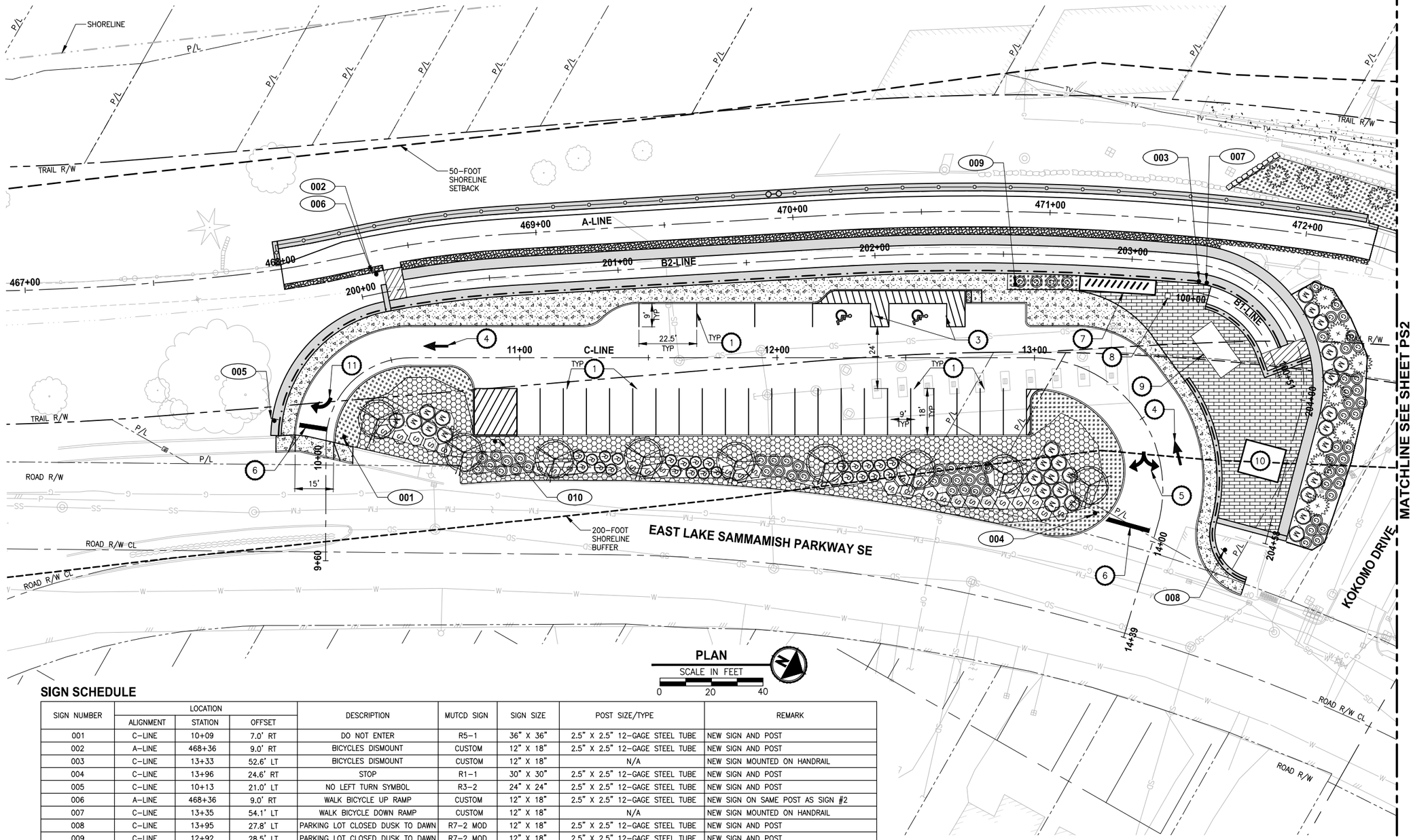
PROJECT NAME
EAST LAKE SAMMAMISH
MASTER PLAN TRAIL
INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

UTILITY AND ELECTRICAL DETAILS

SHEET NO. 22 OF 27

UD1

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



PLAN
SCALE IN FEET
0 20 40

MATCHLINE SEE SHEET PS2

SIGN SCHEDULE

SIGN NUMBER	LOCATION			DESCRIPTION	MUTCD SIGN	SIGN SIZE	POST SIZE/TYPE	REMARK
	ALIGNMENT	STATION	OFFSET					
001	C-LINE	10+09	7.0' RT	DO NOT ENTER	R5-1	36" X 36"	2.5" X 2.5" 12-GAGE STEEL TUBE	NEW SIGN AND POST
002	A-LINE	468+36	9.0' RT	BICYCLES DISMOUNT	CUSTOM	12" X 18"	2.5" X 2.5" 12-GAGE STEEL TUBE	NEW SIGN AND POST
003	C-LINE	13+33	52.6' LT	BICYCLES DISMOUNT	CUSTOM	12" X 18"	N/A	NEW SIGN MOUNTED ON HANDRAIL
004	C-LINE	13+96	24.6' RT	STOP	R1-1	30" X 30"	2.5" X 2.5" 12-GAGE STEEL TUBE	NEW SIGN AND POST
005	C-LINE	10+13	21.0' LT	NO LEFT TURN SYMBOL	R3-2	24" X 24"	2.5" X 2.5" 12-GAGE STEEL TUBE	NEW SIGN AND POST
006	A-LINE	468+36	9.0' RT	WALK BICYCLE UP RAMP	CUSTOM	12" X 18"	2.5" X 2.5" 12-GAGE STEEL TUBE	NEW SIGN ON SAME POST AS SIGN #2
007	C-LINE	13+35	54.1' LT	WALK BICYCLE DOWN RAMP	CUSTOM	12" X 18"	N/A	NEW SIGN MOUNTED ON HANDRAIL
008	C-LINE	13+95	27.8' LT	PARKING LOT CLOSED DUSK TO DAWN	R7-2 MOD	12" X 18"	2.5" X 2.5" 12-GAGE STEEL TUBE	NEW SIGN AND POST
009	C-LINE	12+92	28.5' LT	PARKING LOT CLOSED DUSK TO DAWN	R7-2 MOD	12" X 18"	2.5" X 2.5" 12-GAGE STEEL TUBE	NEW SIGN AND POST
010	C-LINE	10+40	32.5' RT	NO PARKING TURN AROUND ZONE	R7-1 MOD	12" X 18"	2.5" X 2.5" 12-GAGE STEEL TUBE	NEW SIGN AND POST

PAVEMENT MARKING AND SIGNING CONSTRUCTION NOTES:

1. WHITE PAINT LINE PER WSDOT STD PLAN M-17.10-02.
2. YELLOW PAINT LINE PER WSDO STD PLAN M-17.10-02.
3. PLASTIC ACCESS PARKING SPACE SYMBOL STANDARD PER WSDOT STD PLAN M-24.60-04.
4. PLASTIC TRAFFIC ARROW TYPE 1S PER WSDOT STD PLAN M-24.40-02.
5. PLASTIC TRAFFIC ARROW TYPE 4S PER WSDOT STD PLAN M-24.40-02.
6. STOP LINE PER WSDOT STD PLAN M-24.60-04.
7. SHELTERED BIKE PARKING.
8. KIOSK CONCRETE PAD.
9. SHELTER.
10. RESTROOM.
11. PLASTIC TRFFIC ARROW TYPE 2SR PER WSDOT STD PLAN M-24.40-02.

LEGEND:

(X) SIGN, SEE SIGN SCHEDULE ON THIS SHEET.

PLANT LEGEND:

- (M) WAX MYRTLE SHRUB
- (G) TALL OREGON GRAPE SHRUB
- (S) SNOWBERRY SHRUB
- WESTERN RED CEDAR TREE
- PARKWAY MAPLE
- LOW GROW PLANTING MIX, SEE SHEET LD1 FOR INFORMATION.
- NATIVE ROSE SHRUB PLANTING, SEE SHEET LD1 FOR INFORMATION.

NOTE:

1. SEE PLANT LISTS AND DETAILS ON SHEET LD1.

STATE OF WASHINGTON
LICENSED
LANDSCAPE ARCHITECT

JENS SWENSON

LICENSE NO. 656
EXPIRES ON

PRELIMINARY
PHOEBE L. JOHANNESSEN
STATE OF WASHINGTON
37382
REGISTERED
PROFESSIONAL ENGINEER

CITY OF SAMMAMISH APPROVAL

City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN / J. SWENSON
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

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

PAVEMENT MARKING, SIGNING, AND LANDSCAPE PLAN

SHEET NO.
23 OF 27

PS1

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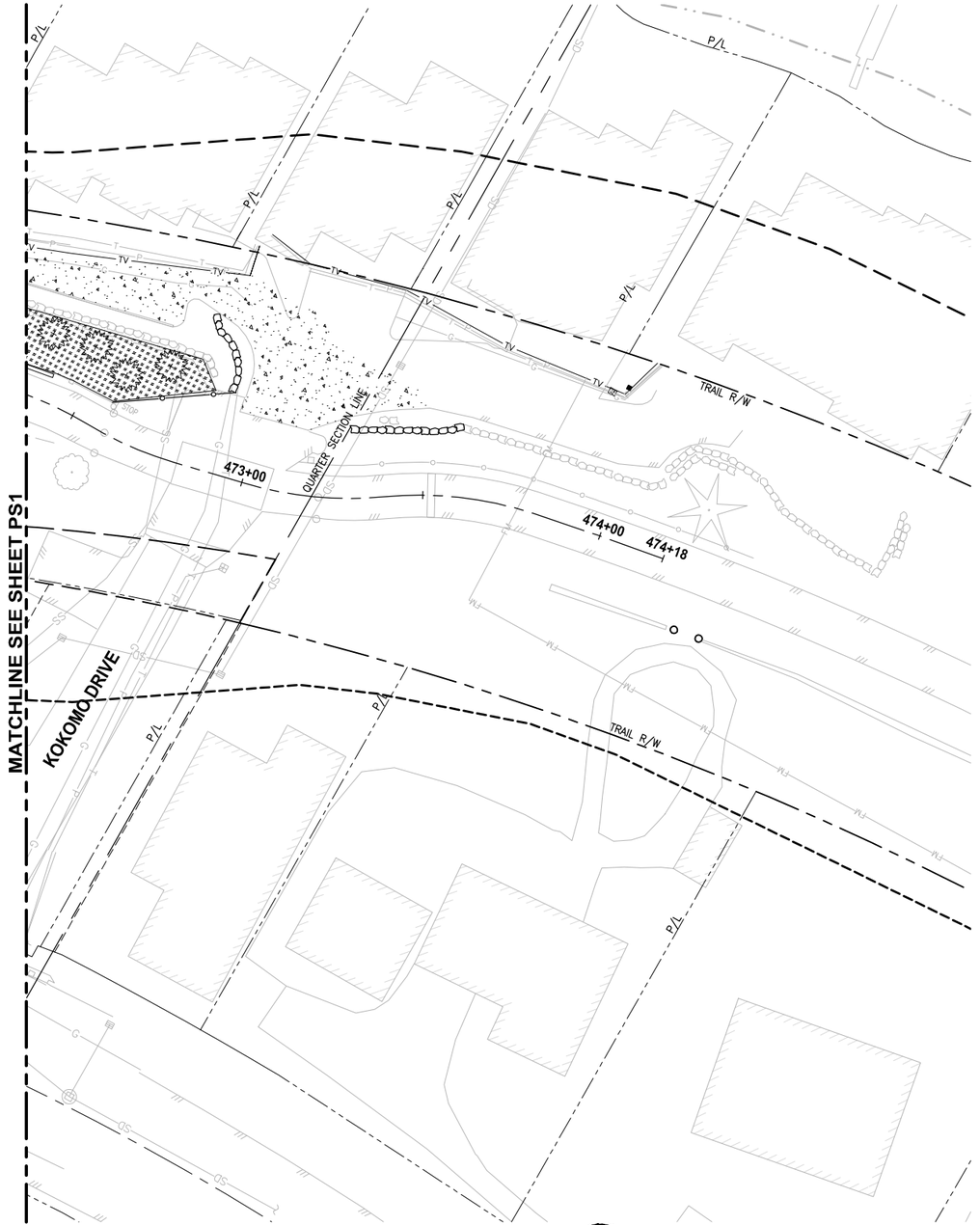
LAYOUT: PS1

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



PLAN
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PAVEMENT MARKING AND SIGNING CONSTRUCTION NOTES:

1. WHITE PAINT LINE PER WSDOT STD PLAN M-17.10-02.
2. YELLOW PAINT LINE PER WSDO STD PLAN M-17.10-02.
3. PLASTIC ACCESS PARKING SPACE SYMBOL STANDARD PER WSDOT STD PLAN M-24.60-04.
4. PLASTIC TRAFFIC ARROW TYPE 1S PER WSDOT STD PLAN M-24.40-02.
5. PLASTIC TRAFFIC ARROW TYPE 4S PER WSDOT STD PLAN M-24.40-02.
6. STOP LINE PER WSDOT STD PLAN M-24.60-04.
7. SHELTERED BIKE PARKING.
8. KIOSK CONCRETE PAD.
9. SHELTER.
10. RESTROOM.
11. PLASTIC TRFFIC ARROW TYPE 2SR PER WSDOT STD PLAN M-24.40-02.

LEGEND:

(X) SIGN, SEE SIGN SCHEDULE ON THIS SHEET.

PLANT LEGEND:

- (M) WAX MYRTLE SHRUB
- (G) TALL OREGON GRAPE SHRUB
- (S) SNOWBERRY SHRUB
- WESTERN RED CEDAR TREE
- PARKWAY MAPLE
- LOW GROW PLANTING MIX, SEE SHEET LD1 FOR INFORMATION.
- NATIVE ROSE SHRUB PLANTING, SEE SHEET LD1 FOR INFORMATION.

NOTE:

1. SEE PLANT LISTS AND DETAILS ON SHEET LD1.

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

STATE OF WASHINGTON
LICENSED
LANDSCAPE ARCHITECT
JENS SWENSON
LICENSE NO. 656
EXPIRES ON

PHOEBE L. JOHANNESSEN
STATE OF WASHINGTON
37382
REGISTERED
PROFESSIONAL ENGINEER
PRELIMINARY

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN / J. SWENSON
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03PS-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

Parametrix
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
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WWW.PARAMETRIX.COM

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

PAVEMENT MARKING, SIGNING, AND LANDSCAPE PLAN

SHEET NO. 24 OF 27
PS2

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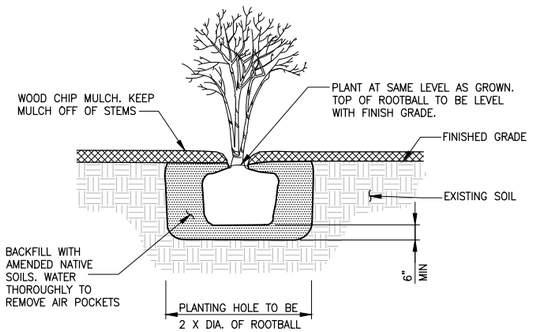

SHRUB PLANTING DETAIL 1
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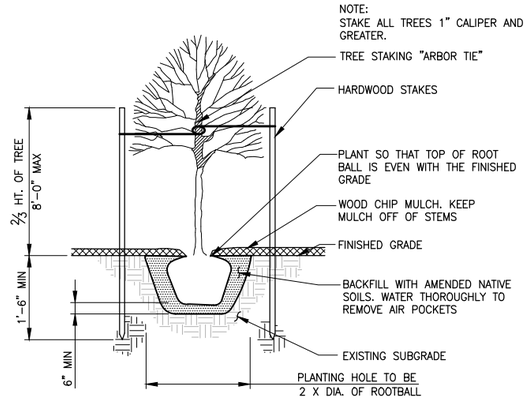

TREE PLANTING DETAIL 2
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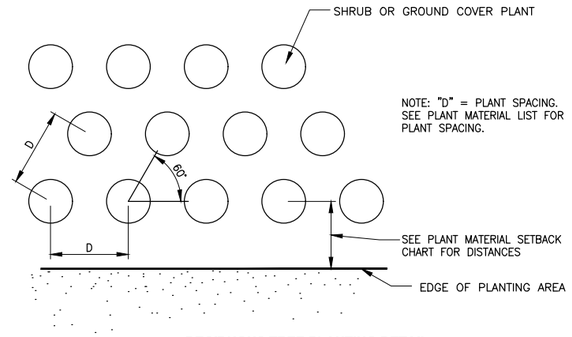


DECIDUOUS TREE PLANTING DETAIL 3
NO SCALE

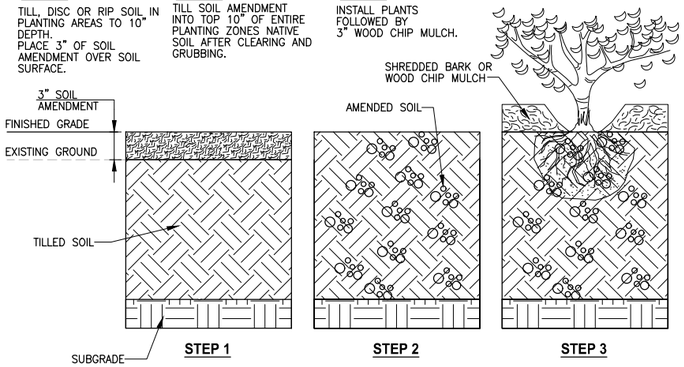
PLANTING NOTES:

1. CONTRACTOR SHALL ARRANGE TO MEET ON SITE WITH THE PROJECT REPRESENTATIVE TO DISCUSS LIMITS OF WORK AND METHODS. CONSTRUCTION ACTIVITIES SHALL NOT COMMENCE UNTIL ACCESS, LIMITS OF WORK, AND METHODS ARE APPROVED. ALL SAFETY FENCING AND TESC MEASURES MUST BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
2. ALL PLANTS TO BE SAVED AND PROTECTED WITHIN PLANTING AREAS WILL BE FLAGGED BY ENGINEER. NOTIFY ENGINEER 5 DAYS PRIOR TO START OF CLEARING ACTIVITY.
3. MITIGATION PLANTING PLANS REPRESENT A CONCEPTUAL PLANT LAYOUT. FINAL PLANT LOCATIONS SHALL BE APPROVED BY PROJECT REPRESENTATIVE PRIOR TO PLANTING. COORDINATE DATA WILL BE PROVIDED ELECTRONICALLY FOR LOCATION OF PLANTING AREA BOUNDARIES.
4. ALL PLANTS SHALL BE NURSERY GROWN A MINIMUM OF ONE YEAR. PLANT MATERIAL IS TO BE SUPPLIED BY COMMERCIAL NURSERIES. PLANT SUBSTITUTIONS ARE SUBJECT TO APPROVAL BY PROJECT REPRESENTATIVE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ALL DEBRIS AND EXCESS SOIL OCCASIONED BY THIS PROJECT.
6. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION.
7. ALL DIMENSIONS FOR LISTED HEIGHT, LENGTH AND CONTAINER SIZE ARE MINIMUM REQUIREMENTS.
8. EXISTING AREAS DISTURBED BY CONSTRUCTION ACTIVITIES AND NOT SHOWN TO BE RE-VEGETATED ON THESE PLANS SHALL BE RESTORED AND SEEDED.
9. DISCREPANCIES BETWEEN THE PLANS AND SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT REPRESENTATIVE PRIOR TO PROCEEDING WITH EFFECTED WORK.
10. SEE SP SHEETS FOR TEMPORARY EROSION CONTROL MEASURES.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING PLANTS FOR THE FIRST YEAR AFTER ACCEPTANCE OF COMPLETION OF PLANTING FOR THE PROJECT. COUNTY WILL MAKE PROVISIONS FOR WATERING AS NEEDED FOR THE REMAINDER OF THE ESTABLISHMENT PERIOD AFTER THE FIRST YEAR.
12. CONTRACTOR SHALL REMOVE ALL TREE STAKES AT THE END OF 1 YEAR.

STEP 1
TILL, DISC OR RIP SOIL IN PLANTING AREAS TO 10" DEPTH. PLACE 3" OF SOIL AMENDMENT OVER SOIL SURFACE.

STEP 2
TILL SOIL AMENDMENT INTO TOP 10" OF ENTIRE PLANTING ZONES NATIVE SOIL AFTER CLEARING AND GRUBBING.

STEP 3
INSTALL PLANTS FOLLOWED BY 3" WOOD CHIP MULCH.



SOIL PREPARATION DETAIL 1
NO SCALE

PLANT MATERIAL LIST

QUANTITY	BOTANICAL NAME	COMMON NAME	MIN SIZE/CONDITION	NOTES/SPACING
	TREES			
9	ACER PLATANOIDES 'COLUMNARBROAD'	PARKWAY MAPLE	1 1/2" CAL.	AS SHOWN ON PLAN
15	THUJA PLICATA	WESTERN RED CEDAR	6' TALL	AS SHOWN ON PLAN
	SHRUBS			
29	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	36" HT/ #5 CONT	SPACE 6' O.C.
65	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	36" HT/ #5 CONT	SPACE 5' O.C.
29	RIBES SANGUINEUM	FLOWERING RED CURRANT	36" HT/ #5 CONT	SPACE 5' O.C.
211	ROSA WOODSII	WOODS ROSE	18" HT/ #2 CONT	SPACE 4' O.C.
32	SYMPHORICARPOS ALBUS	COMMON SNOWBERRY	36" HT/ #5 CONT	SPACE 5' O.C.
	LOW SHRUBS AND GROUNDCOVER			
72	GAULTHERIA SHALLON	SALAL	#1 CONT	SPACE 3' O.C.
72	MAHONIA REPENS	CREEPING OREGON GRAPE	#1 CONT	SPACE 3' O.C.
72	HEREROCALLIS FULVA	DAYLILLY	#1 CONT	SPACE 3' O.C.

PLANT MATERIAL SETBACK CHART

	GUARDRAIL BARRIER	EDGE OF ROADWAY	PATHS, TRAILS	WALL	FENCE	SIGNS	EXISTING TREE, TRUNK	EXISTING VEGETATION MASS
EVERGREEN TREE	15'	15'	10'	8'	8'	15'	10'	–
ORNAMENTAL/NATIVE DECIDUOUS TREE	6'	6'	10'	8'	8'	15'	10'	–
MEDIUM AND LARGE SHRUBS – GREATER THAN 3' TALL	5'	5'	8'	3'	3'	6'	5'	5'
SMALL SHRUB – LESS THAN 3' TALL	3'	5'	5'	2'	3'	2'	5'	5'

TYPICAL MINIMUM DISTANCE SETBACKS ARE TO THE CENTER STEM OR TRUNK OF PLANT MATERIAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER DURING LAYOUT AND STAKING OF PLANT LOCATIONS.

TREE RETENTION CALCULATION

EXISTING SIGNIFICANT TREES ON SITE	22
TREES REMOVED FOR PROJECT	13
TREES RETAINED	41%
R-4 ZONE TREE RETENTION REQUIREMENT	35%
TREE REPLACEMENT REQUIRED AT 1 TO 1 RATIO	13
REPLACEMENT TREES PROPOSED	16

CITY OF SAMMAMISH APPROVAL

City Engineer ____ Date ____

Community Development ____ Date ____

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. SWENSON
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

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STATE OF WASHINGTON LICENSED LANDSCAPE ARCHITECT
JENS SWENSON
LICENSE NO. 656
EXPIRES ON ____

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

PLANTING SCHEDULE AND DETAILS

SHEET NO. 25 OF 27

LD1

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

EROSION/SEDIMENTATION CONTROL NOTES:

1. THE APPROVED CONSTRUCTION SEQUENCE SHALL BE AS FOLLOWS:
   A. CONDUCT PRE-CONSTRUCTION MEETING.
   B. FLAG OR FENCE CLEARING LIMITS.
   C. POST SIGN WITH NAME AND PHONE NUMBER OF TESC SUPERVISOR.
   D. INSTALL CATCH BASIN PROTECTION IF REQUIRED.
   E. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
   F. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
   G. GRADE AND STABILIZE CONSTRUCTION ROADS.
   H. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
   I. MAINTAIN EROSION CONTROL MEASURE IN ACCORDANCE WITH CITY OF SAMMAMISH STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
   J. RELOCATE EROSION CONTROL MEASURES OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY TESC MINIMUM REQUIREMENTS.
   K. COVER ALL AREAS WITHIN THE SPECIFIED TIME FRAME WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, CRUSHED ROCK OR EQUIVALENT.
   L. STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN 7 DAYS.
   M. SEED OR SOD ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
   N. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BEST MANAGEMENT PRACTICES REMOVED IF APPROPRIATE.
2. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
3. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
4. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE SET BY SURVEY AND CLEARLY FLAGGED IN THE FIELD BY A CLEARING CONTROL FENCE PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE OR REMOVAL OF ANY GROUND COVER BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE APPLICANT/CONTRACTOR SHALL MAINTAIN THE FLAGGING FOR THE DURATION OF CONSTRUCTION.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS. ADDITIONALLY, MORE ESC FACILITIES MAY BE REQUIRED TO ENSURE COMPLETE SEDIMENT CONTROL. THEREFORE, DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES OVER AND ABOVE THE MINIMUM REQUIREMENTS AS MAY BE NEEDED.
7. THE ESC FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE CONSTRUCTION STORMWATER GENERAL PERMIT AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, ALL TEMPORARY EROSION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED. WRITTEN RECORDS SHALL BE KEPT DOCUMENTING THE REVIEWS OF THE ESC FACILITIES.
8. ALL DENUDED SOILS MUST BE STABILIZED WITH AN APPROVED TESC METHOD (E.G. SEEDING, MULCHING, PLASTIC COVERING, CRUSHED ROCK) WITHIN THE FOLLOWING TIMELINES:
   - MAY 1 TO SEPTEMBER 30 – SOILS MUST BE STABILIZED WITHIN 7 DAYS OF GRADING.
   - OCTOBER 1 TO APRIL 30 – SOILS MUST BE STABILIZED WITHIN 2 DAYS OF GRADING.
9. AT NO TIME SHALL SEDIMENT ACCUMULATION WITHIN A CATCH BASIN BE MORE THAN ONE-THIRD ITS AVAILABLE STORAGE. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
10. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
11. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (EXAMPLE: ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE). APPROPRIATE WEATHER CONDITIONS ARE REQUIRED FOR GERMINATION.
12. WHERE STRAW MULCH IS REQUIRED FOR TEMPORARY EROSION CONTROL, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2-INCHES.
13. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF SAMMAMISH STANDARDS AND SPECIFICATIONS.
14. THE ESC FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THE APPROVED PLANS. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CITY OF SAMMAMISH INSPECTOR.
15. A COPY OF THE APPROVED EROSION CONTROL PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

EROSION/SEDIMENTATION CONTROL NOTES (CONTINUED):

16. CLEARING LIMITS SHALL BE DELINEATED WITH A CLEARING CONTROL FENCE. THE CLEARING CONTROL FENCE SHALL CONSIST OF A 4-FT HIGH TEMPORARY CONSTRUCTION FENCE ADJACENT THE DRIP LINE OF TREES TO BE SAVED, WETLAND OR STREAM BUFFERS, AND SENSITIVE SLOPES. CLEARING CONTROL FENCES ALONG WETLAND OR STREAM BUFFERS OR UPSLOPE OF SENSITIVE SLOPES SHALL BE ACCOMPANIED BY AN EROSION CONTROL FENCE.
17. OFF-SITE STREETS MUST BE KEPT CLEAN AT ALL TIMES. IF DIRT IS DEPOSITED ON THE PUBLIC STREET SYSTEM, THE STREET SHALL BE IMMEDIATELY CLEANED WITH POWER SWEEPER OR OTHER EQUIPMENT. ALL VEHICLES SHALL LEAVE THE SITE BY WAY OF THE CONSTRUCTION ENTRANCE AND SHALL BE CLEANED OF ALL DIRT THAT WOULD BE DEPOSITED ON THE PUBLIC STREETS.
18. ANY CATCH BASINS COLLECTING RUNOFF FROM THE SITE, WHETHER THEY ARE ON OR OFF THE SITE, SHALL HAVE THEIR GRATES COVERED WITH FILTER FABRIC DURING CONSTRUCTION. CATCH BASINS DIRECTLY DOWNSTREAM OF THE CONSTRUCTION ENTRANCE OR ANY OTHER CATCH BASIN AS DETERMINED BY THE ENGINEER SHALL BE PROTECTED WITH A "FILTER FABRIC SOCK" OR EQUIVALENT.
19. THE WASHED GRAVEL BACKFILL ADJACENT TO THE FILTER FABRIC FENCE SHALL BE REPLACED AND THE FILTER FABRIC CLEANED IF IT IS NONFUNCTIONAL BY EXCESSIVE SILT ACCUMULATION AS DETERMINED BY THE ENGINEER. ALSO, ALL INTERCEPTOR SWALES SHALL BE CLEANED IF SILT ACCUMULATION EXCEEDS ONE-QUARTER DEPTH.
20. IF ANY PART(S) OF THE CLEARING LIMIT BOUNDARY OR TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN IS/ARE DAMAGED, IT SHALL BE REPAIRED IMMEDIATELY.
21. ALL PROPERTIES ADJACENT TO THE PROJECT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND RUNOFF.
22. DO NOT FLUSH CONCRETE BY-PRODUCTS OR TRUCKS NEAR OR INTO THE STORM DRAINAGE SYSTEM. IF EXPOSED AGGREGATE IS FLUSHED INTO THE STORM SYSTEM, IT COULD MEAN RE-CLEANING THE ENTIRE DOWNSTREAM STORM SYSTEM, OR POSSIBLY RE-LAYING THE STORM LINE.
23. PRIOR TO OCTOBER 1 OF EACH YEAR (THE BEGINNING OF THE WET SEASON), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. THE IDENTIFIED DISTURBED AREA SHALL BE SEEDED WITHIN ONE WEEK AFTER OCTOBER 1. A SITE PLAN DEPICTING THE AREAS TO BE SEEDED AND THE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE ENGINEER. THE ENGINEER CAN REQUIRE SEEDING OF ADDITIONAL AREAS IN ORDER TO PROTECT SURFACE WATERS, ADJACENT PROPERTIES, OR DRAINAGE FACILITIES.
24. DURING THE WET SEASON (OCTOBER 1 – APRIL 31), STOCK PILES AND STEEP CUT AND FILL SLOPES ARE TO BE PROTECTED IF UNWORKED FOR MORE THAN 12 HOURS.
25. DURING THE WET SEASON (OCTOBER 1 – APRIL 31), COVER MATERIAL SUFFICIENT TO COVER ALL DISTURBED AREAS SHALL BE STOCKPILED ON SITE.
26. DURING THE WET SEASON (OCTOBER 1 – APRIL 31), FIFTY LINEAR FEET OF SILT FENCE PER ACRE OF DISTURBANCE MUST BE STOCKPILED ON SITE.
27. DURING THE WET SEASON (OCTOBER 1 – APRIL 31), THE FREQUENCY OF MAINTENANCE REVIEW INCREASE FROM MONTHLY TO WEEKLY.

ROADWAY NOTES:

1. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE APPLICANT/CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
2. ALL ROADWAY WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH THE CURRENT APWA AND CITY OF SAMMAMISH STANDARDS AND SPECIFICATIONS.
3. A COPY OF THE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
4. DENSITY TEST REPORTS WILL BE REQUIRED FOR ALL PUBLIC ROADWAYS AND ALL PRIVATE ROADWAYS. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95 PERCENT DENSITY (MODIFIED PROCTOR ASTM-D1557) IN ROADWAYS, ROADWAY SHOULDERS, ROADWAY PRISM AND DRIVEWAYS, 90 PERCENT IN ALL SIDEWALKS AND PEDESTRIAN PATHS, AND 85 PERCENT DENSITY IN UNPAVED AREAS. ALL PIPE ZONE COMPACTION SHALL BE 95 PERCENT (MODIFIED PROCTOR ASTM-D1557).
5. ALL COMMERCIAL AND RESIDENTIAL DRIVEWAYS MUST CONFORM TO THE CITY OF SAMMAMISH DEPARTMENT OF PUBLIC WORKS DRIVEWAY STANDARDS.
6. ALL CONCRETE FOR DRIVEWAY APPROACHES, INCLUDING SIDEWALKS, CURB, AND GUTTER MUST BE 4000 PSI MINIMUM.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ADEQUATE TEMPORARY TRAFFIC CONTROL TO ENSURE TRAFFIC SAFETY DURING CONSTRUCTION ACTIVITIES. THEREFORE, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE PUBLIC WORKS DEPARTMENT AS PART OF THE RIGHT-OF-WAY PERMIT. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) OR AS MODIFIED BY THE TRAFFIC ENGINEER.
8. ANY EXISTING PUBLIC IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED PRIOR TO FINAL INSPECTION.
9. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL PUBLIC STREETS FREE FROM MUD AND DEBRIS AT ALL TIMES. THE CONTRACTOR SHALL BE PREPARED TO USE POWER SWEEPERS OR OTHER PIECES OF EQUIPMENT NECESSARY TO KEEP THE ROADWAYS CLEAN.
10. ALL PEDESTRIAN ACCESS AREAS INCLUDING SIDEWALKS AND SIDEWALKS RAMPS SHALL BE CONSISTENT WITH CURRENT ADA REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE ENGINEER AND CONTRACTOR TO ENSURE ALL PEDESTRIAN ACCESS MEET CURRENT ADA STANDARDS.
11. AT THE ENGINEER'S DISCRETION, PROOF ROLLING SHALL BE REQUIRED FOR THE TRAIL TO ENSURE ADEQUATE COMPACTION. ALL PROOF ROLLING SHALL BE APPROVED BY THE ENGINEER.

STORM DRAINAGE NOTES:

1. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE APPLICANT/CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
2. BEFORE ANY CONSTRUCTION MAY OCCUR, THE CONTRACTOR SHALL HAVE PLANS WHICH HAVE BEEN SIGNED AND APPROVED BY THE CITY OF SAMMAMISH PUBLIC WORKS DEPARTMENT, OBTAINED ALL CITY, COUNTY, STATE, FEDERAL AND OTHER REQUIRED PERMITS, AND HAVE POSTED ALL REQUIRED BONDS.
3. ALL STORM DRAINAGE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE VESTED KING COUNTY SURFACE WATER DESIGN MANUAL, CITY OF SAMMAMISH PUBLIC WORKS STANDARDS, 2007 KING COUNTY ROAD STANDARDS, AND THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, PREPARED BY WSDOT AND THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA).
4. ANY DEVIATION FROM THE APPROVED PLANS WILL REQUIRE WRITTEN APPROVAL; ALL CHANGES SHALL BE SUBMITTED TO THE CITY.
5. A COPY OF THE APPROVED STORM WATER PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
6. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SIMILARLY STABILIZED TO THE SATISFACTION OF THE CITY OF SAMMAMISH DEPARTMENT OF PUBLIC WORKS FOR THE PREVENTION OF ON-SITE EROSION AFTER THE COMPLETION OF CONSTRUCTION.
7. MINIMUM COVER OVER STORM DRAINAGE PIPES AND FACILITIES SHALL BE 2 FEET, UNLESS OTHERWISE SHOWN AND APPROVED.
8. ALL CATCH BASINS SHALL BE TYPE I UNLESS OTHERWISE NOTED. CATCH BASINS WITH A DEPTH OF OVER FIVE FEET (5') TO THE PIPE INVERT SHALL BE A TYPE II CATCH BASIN. TYPE II CATCH BASINS EXCEEDING FIVE FEET (5') IN DEPTH SHALL HAVE A STANDARD LADDER INSTALLED. ALL STORM DRAINAGE MAIN EXTENSIONS WITHIN THE PUBLIC RIGHT-OF-WAY OR IN EASEMENTS MUST BE STAKED FOR LINE AND GRADE PRIOR TO STARTING CONSTRUCTION.
9. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95 PERCENT DENSITY (MODIFIED PROCTOR ASTM-D1557) IN ROADWAYS, ROADWAY SHOULDERS, ROADWAY PRISM AND DRIVEWAYS, AND 85 PERCENT DENSITY (MODIFIED PROCTOR ASTM-D1557) IN UNPAVED AREAS. ALL PIPE ZONE COMPACTION SHALL BE 95 PERCENT (MODIFIED PROCTOR ASTM-D1557).
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, CONFINED SPACE PROTECTION, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE A TRAFFIC CONTROL PLAN APPROVED BY THE CITY OF SAMMAMISH. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS, TRAFFIC CONTROL, AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL APPLY.
11. NO FINAL CUT OR FILL SLOPE SHALL EXCEED SLOPES OF TWO (2) HORIZONTAL TO ONE (1) VERTICAL WITHOUT STABILIZATION BY ROCKERY OR BY A STRUCTURAL RETAINING WALL, UNLESS DESIGNED AND UNDER THE SUPERVISION OF A LICENSED GEOTECHNICAL ENGINEER.
12. ALL MANHOLE LADDERS SHALL BE FIRMLY ATTACHED AND EXTEND TO WITHIN 16" OF THE BOTTOM OF THE STRUCTURE.
13. APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF EXISTING UTILITY LOCATIONS WHETHER OR NOT THESE UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE TO ANY UTILITY. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION INSPECTOR AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE CITY OF SAMMAMISH PUBLIC WORKS DEPARTMENT PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT.
14. THE UNDERGROUND UTILITY LOCATION SERVICE SHALL BE CONTACTED FOR FIELD LOCATION OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. THE OWNER OR HIS REPRESENTATIVE SHALL BE CONTACTED IF A UTILITY CONFLICT EXISTS. FOR UTILITY LOCATION IN KING COUNTY, CALL 1-800-424-5555. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT UTILITY LOCATES ARE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
15. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, WIDTHS, THICKNESSES, AND ELEVATIONS OF ALL EXISTING PAVEMENTS AND STRUCTURES THAT ARE TO INTERFACE WITH NEW WORK. PROVIDE ALL TRIMMING, CUTTING, SAW CUTTING, GRADING, LEVELING, SLOPING, COATING, AND OTHER WORK, INCLUDING MATERIALS AS NECESSARY, TO CAUSE THE INTERFACE WITH EXISTING WORKS TO BE PROPER, ACCEPTABLE TO THE ENGINEER AND THE CITY OF SAMMAMISH, COMPLETE IN PLACE AND READY TO USE.
16. ALL CATCH BASIN GRATES SHALL BE VANED GRATES OR SOLID LIDS COVERS. HERRINGBONE GRATES ARE NOT ALLOWED. ALL SOLID LID COVERS SHALL BE ROUND LOCKING DRAIN LIDS. ALL CATCH BASINS LOCATED IN UNPAVED AREAS MUST HAVE AT LEAST 2-FT OF CONCRETE OR ASPHALT PAVING AROUND PERIMETER.
17. ALL DAMAGES INCURRED TO PUBLIC AND/OR PRIVATE PROPERTY BY THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPAIRED TO THE SATISFACTION OF THE CITY CONSTRUCTION INSPECTOR BEFORE PROJECT APPROVAL AND/OR THE RELEASE OF THE PROJECT'S PERFORMANCE BOND.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF SAMMAMISH PUBLIC WORKS STANDARDS AND THE CITY OF SAMMAMISH CONDITIONS OF APPROVAL. IT SHALL BE THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR AND THE PROFESSIONAL CIVIL ENGINEER TO CORRECT ANY ERRORS, OMISSIONS, OR VARIATIONS FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS.
2. THE DESIGN ELEMENTS IN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THE CITY OF SAMMAMISH ENGINEERING REVIEW CHECKLIST. SOME ELEMENTS MAY HAVE BEEN OVERLOOKED OR MISSED BY THE CITY PLAN REVIEWER. ANY VARIANCE FROM ADOPTED STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR.
4. APPROVAL OF THIS ROAD, GRADING, AND DRAINAGE PLAN DOES NOT CONSTITUTE AN APPROVAL OF ANY OTHER CONSTRUCTION (E.G. DOMESTIC WATER CONVEYANCE, SEWER CONVEYANCE, GAS, ELECTRICAL, ETC).
5. PRIOR TO ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY, A PRECONSTRUCTION MEETING MUST BE HELD BETWEEN THE CITY OF SAMMAMISH, THE APPLICANT(S), AND THE APPLICANT'S CONSTRUCTION REPRESENTATIVE.
6. A COPY OF THESE APPROVED PLANS SHALL BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

GENERAL NOTES (CONTINUED):

7. IT SHALL BE THE APPLICANT'S/CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL CONSTRUCTION EASEMENTS NECESSARY BEFORE INITIATING ANY OFF-SITE WORK.
8. OPEN CUTTING OF EXISTING ROADWAYS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY OF SAMMAMISH AND NOTED ON THESE APPROVED PLANS.
9. ANY CHANGES TO THE APPROVED PLANS MUST BE APPROVED BY THE CITY IN WRITING.
10. THESE PLANS ARE APPROVED FOR STANDARD ROAD AND DRAINAGE IMPROVEMENTS ONLY. PLANS FOR STRUCTURES SUCH AS BRIDGES, BOX CULVERTS, AND RETAINING WALLS REQUIRE A SEPARATE REVIEW, APPROVAL, AND BUILDING PERMIT FROM THE CITY OF SAMMAMISH PRIOR TO CONSTRUCTION.
11. ANY WALL OVER 4 FEET IN HEIGHT, OR WITH A SURCHARGED LATERAL LOAD, MUST BE ACCOMPANIED BY AN ENGINEER'S STAMP. WALLS SHALL NOT BE USED TO SUPPORT DRIVEWAYS OR SIDEWALKS UNLESS ACCOMPANIED BY AN ENGINEER'S STAMP. A BUILDING PERMIT IS REQUIRED PRIOR TO CONSTRUCTION.
12. CONSTRUCTION HOURS ARE 7:00 AM TO 8:00 PM ON WEEKDAYS AND 9:00 AM TO 6:00 PM ON SATURDAYS AND CITY HOLIDAYS. WORK IS NOT ALLOWED ON SUNDAYS.
13. NO MATERIALS OR EQUIPMENT SHALL BE PLACED OR STORED ON PUBLIC STREETS AT ANY TIME.
14. NO WORK IS ALLOWED WITHIN THE CITY PUBLIC RIGHT-OF-WAY UNTIL A RIGHT-OF-WAY PERMIT HAS BEEN ISSUED AND THE CITY HAS BEEN NOTIFIED AT LEAST 24 HOURS IN ADVANCE OF STARTING WORK WITHIN THE RIGHT-OF-WAY. ALL RIGHT-OF-WAY WORK TO BE PERFORMED IN ACCORDANCE WITH CITY OF SAMMAMISH STANDARDS.
15. ALL PROJECTS ARE REQUIRED TO SUBMIT REQUESTS FOR VARIATIONS TO THE CITY PUBLIC WORKS STANDARDS IN WRITING. DETAILED DRAWINGS SHALL ACCOMPANY REQUESTS IF NECESSARY.
16. ANY INTERRUPTION OF TRAFFIC FLOW ON CITY STREETS MUST FOLLOW A TRAFFIC CONTROL PLAN APPROVED BY THE CITY.
17. CONSTRUCTION NOISE SHALL BE LIMITED AS PER THE CITY OF SAMMAMISH CODE.

SITE DEVELOPMENT PERMIT NOTES:

1. THE APPLICANT SHALL COMPLY WITH ALL CITY, COUNTY, STATE, AND FEDERAL RULES AND REGULATIONS IN EFFECT ON AUGUST 23, 2012, THE VESTING DATE OF THE SUBJECT APPLICATION, INCLUDING ANY NECESSARY PERMITS FROM APPLICABLE STATE OR FEDERAL AGENCIES.
2. A GRADING PERMIT IS REQUIRED PRIOR TO COMMENCING PROJECT CONSTRUCTION. GRADING PLANS SHOWING THE PROPOSED TRAIL WIDENING AND PAVING AND ASSOCIATED SITE IMPROVEMENTS, INCLUDING REQUIRED LANDSCAPING, RESTORATION AND MITIGATION PLANTINGS, SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE 100% REVIEW SUBMITTAL PLANS PREPARED BY PARAMETRIX, DATED FEBRUARY 2013.
3. THIS SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT SHALL COMPLY WITH ALL MITIGATION MEASURES LISTED IN THE EAST LAKE SAMMAMISH MASTER PLAN TRAIL RECORD OF DECISION, PAGES 8 – 13 (EXHIBIT 6).
4. WHERE FENCES, RETAINING WALLS, OR A COMBINATION OF FENCE AND RETAINING WALL EXCEEDS FOUR FEET IN HEIGHT, ADEQUATE PROVISIONS SHALL BE MADE TO ALLOW WILDLIFE PASSAGE AT INTERVALS ALONG THE TRAIL.
5. RESTORATION AND COMPENSATORY MITIGATION SHALL BE COMPLETED SUBSTANTIALLY AS SHOWN ON THE MITIGATION PLANS AND DESCRIBED IN THE CRITICAL AREAS STUDY (EXHIBIT 10), BOTH BY PARAMETRIX.
6. AN AS-BUILT REPORT SHALL BE COMPLETED BY A QUALIFIED PROFESSIONAL TO DOCUMENT COMPLETION OF PROPOSED MITIGATION AND RESTORATION WORK. THE AS-BUILT REPORT MUST BE SUPPLIED TO THE CITY OF SAMMAMISH BIOLOGIST FOR REVIEW. AFTER THE CITY BIOLOGIST INSPECTS AND APPROVES AS-BUILT CONDITIONS, A REQUIRED 5-YEAR MAINTENANCE AND MONITORING PERIOD WILL BEGIN. DURING THE 5-YEAR MAINTENANCE AND MONITORING PERIOD, A MONITORING REPORT SHALL BE PREPARED BY A QUALIFIED PROFESSIONAL AND SUPPLIED FOR CITY REVIEW BY OCTOBER 31 OF EACH MONITORING YEAR.
7. THIS PROJECT HAS RECEIVED HYDRAULIC PERMIT APPROVAL #128344-1 (HPA) FROM THE WASHINGTON DEPARTMENT OF FISH AND WILDLIFE (EXHIBIT 7). ALL CONDITIONS OF THE HPA SHALL BE CONSIDERED CONDITIONS OF THIS SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT.
8. THIS PROJECT HAS OBTAINED APPROVAL FROM THE ARMY CORPS OF ENGINEERS UNDER NATIONWIDE PERMIT 14 (EXHIBIT 8), AND SUBSEQUENTLY A STATE DEPARTMENT OF ECOLOGY WATER QUALITY CERTIFICATION AND COASTAL ZONE MANAGEMENT ACT CONSISTENCY DETERMINATION (EXHIBIT 9). ALL CONDITIONS OF CORPS AND DEPARTMENT OF ECOLOGY APPROVAL SHALL BE CONSIDERED CONDITIONS OF THIS SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT.
9. PER WAC 173-27-090, CONSTRUCTION SHALL BE COMMENCED ON THE PROPOSED TRAIL WIDENING AND PAVING, AND ASSOCIATED IMPROVEMENTS, WITHIN TWO YEARS OF THE EFFECTIVE DATE OF A SHORELINE PERMIT. THE CITY MAY AUTHORIZE A SINGLE EXTENSION FOR A PERIOD NOT TO EXCEED ONE YEAR BASED ON REASONABLE FACTORS, IF A REQUEST FOR EXTENSION HAS BEEN FILED BEFORE THE EXPIRATION DATE AND NOTICE OF THE PROPOSED EXTENSION IS GIVEN TO PARTIES OF RECORD AND THE DEPARTMENT.

CITY OF SAMMAMISH APPROVAL	
City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME BL1521075P21T03GN-01
JOB No. 554-1521-075 P21T03
DATE OCTOBER 2016

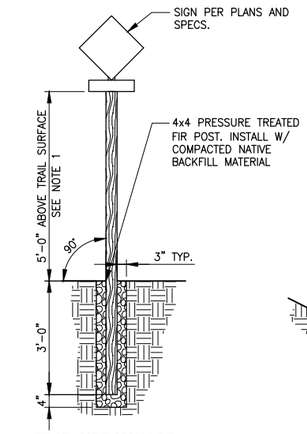
PHOEBE L. JOHANNESSEN STATE OF WASHINGTON 37382 REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

Parametrix
ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104
P 206.394.3700
WWW.PARAMETRIX.COM

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

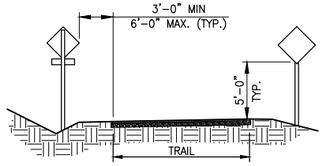
STANDARD PLAN NOTES

SHEET NO. 26 OF 27
GN1



TRAIL SIDE SIGNAGE

NOTES:
1. USE 7' MOUNTING HEIGHT FOR TRAFFIC SIGNS ALONG ROADWAYS, SEE SPECIFICATIONS.
2. USE 5' MOUNTING HEIGHT FOR TRAIL SIGNS.



NOTES:
1. STAKE SIGN LOCATIONS FOR APPROVAL.
2. SEE SHEET PS10 FOR SIGN SCHEDULE.

TRAIL SIGNAGE DETAIL 1

NOT TO SCALE

CITY OF SAMMAMISH APPROVAL

City Engineer	Date
Community Development	Date

NOT FOR CONSTRUCTION

	REVISIONS	DATE	BY

DESIGNED J. JUN
DRAWN B. PURGANAN
CHECKED P. JOHANNESSEN
APPROVED Y. HO

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

FILE NAME BL1521075P21T03MD-01
JOB No. 554-1521-075 P21T03
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PROJECT NAME
EAST LAKE SAMMAMISH MASTER PLAN TRAIL
INGLEWOOD HILL ROAD PARKING LOT
SAMMAMISH, WA

MISCELLANEOUS DETAILS

SHEET NO. 27 OF 27

MD1

Appendix B

WWHM Report

WWHM2012
PROJECT REPORT

Project Name: ParkingLotSizing
Site Name:
Site Address:
City :
Report Date: 10/13/2016
Gage : Seatac
Data Start : 1948/10/01
Data End : 2009/09/30
Precip Scale: 1.00
Version Date: 2016/05/12
Version : 4.2.12

Low Flow Threshold for POC 1 : 50 Percent of the 2 Year

High Flow Threshold for POC 1: 50 year

PREDEVELOPED LAND USE

Name : Basin 1
Bypass: No

GroundWater: No

Pervious Land Use	acre
A B, Forest, Flat	.28
Pervious Total	**0.28**

Impervious Land Use	acre
Impervious Total	**0**
Basin Total	**0.28**

Element Flows To:

Surface	Interflow	Groundwater

MITIGATED LAND USE

Name : Basin 1
Bypass: No

GroundWater: No

Pervious Land Use	acre
Pervious Total	0

Impervious Land Use	acre
SIDEWALKS FLAT	0.28
Impervious Total	0.28
Basin Total	0.28

Element Flows To:

Surface	Interflow	Groundwater
Gravel Trench Bed 1	Gravel Trench Bed 1	

Name : Gravel Trench Bed 1
Bottom Length: 426.00 ft.
Bottom Width: 2.20 ft.
Trench bottom slope 1: 0 To 1
Trench Left side slope 0: 0 To 1
Trench right side slope 2: 0 To 1
Material thickness of first layer: 2
Pour Space of material for first layer: 0.3
Material thickness of second layer: 0
Pour Space of material for second layer: 0
Material thickness of third layer: 0
Pour Space of material for third layer: 0
Infiltration On
Infiltration rate: 10
Infiltration safety factor: 1
Total Volume Infiltrated (ac-ft.): 46.689
Total Volume Through Riser (ac-ft.): 0
Total Volume Through Facility (ac-ft.): 46.689
Percent Infiltrated: 100
Total Precip Applied to Facility: 3.286
Total Evap From Facility: 0.297
Discharge Structure
Riser Height: 2 ft.
Riser Diameter: 12 in.

Element Flows To:

Outlet 1	Outlet 2

Gravel Trench Bed Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.021	0.000	0.000	0.000
0.0222	0.021	0.000	0.000	0.216
0.0444	0.021	0.000	0.000	0.216

0.0667	0.021	0.000	0.000	0.216
0.0889	0.021	0.000	0.000	0.216
0.1111	0.021	0.000	0.000	0.216
0.1333	0.021	0.000	0.000	0.216
0.1556	0.021	0.001	0.000	0.216
0.1778	0.021	0.001	0.000	0.216
0.2000	0.021	0.001	0.000	0.216
0.2222	0.021	0.001	0.000	0.216
0.2444	0.021	0.001	0.000	0.216
0.2667	0.021	0.001	0.000	0.216
0.2889	0.021	0.001	0.000	0.216
0.3111	0.021	0.002	0.000	0.216
0.3333	0.021	0.002	0.000	0.216
0.3556	0.021	0.002	0.000	0.216
0.3778	0.021	0.002	0.000	0.216
0.4000	0.021	0.002	0.000	0.216
0.4222	0.021	0.002	0.000	0.216
0.4444	0.021	0.002	0.000	0.216
0.4667	0.021	0.003	0.000	0.216
0.4889	0.021	0.003	0.000	0.216
0.5111	0.021	0.003	0.000	0.216
0.5333	0.021	0.003	0.000	0.216
0.5556	0.021	0.003	0.000	0.216
0.5778	0.021	0.003	0.000	0.216
0.6000	0.021	0.003	0.000	0.216
0.6222	0.021	0.004	0.000	0.216
0.6444	0.021	0.004	0.000	0.216
0.6667	0.021	0.004	0.000	0.216
0.6889	0.021	0.004	0.000	0.216
0.7111	0.021	0.004	0.000	0.216
0.7333	0.021	0.004	0.000	0.216
0.7556	0.021	0.004	0.000	0.216
0.7778	0.021	0.005	0.000	0.216
0.8000	0.021	0.005	0.000	0.216
0.8222	0.021	0.005	0.000	0.216
0.8444	0.021	0.005	0.000	0.216
0.8667	0.021	0.005	0.000	0.216
0.8889	0.021	0.005	0.000	0.216
0.9111	0.021	0.005	0.000	0.216
0.9333	0.021	0.006	0.000	0.216
0.9556	0.021	0.006	0.000	0.216
0.9778	0.021	0.006	0.000	0.216
1.0000	0.021	0.006	0.000	0.216
1.0222	0.021	0.006	0.000	0.216
1.0444	0.021	0.006	0.000	0.216
1.0667	0.021	0.006	0.000	0.216
1.0889	0.021	0.007	0.000	0.216
1.1111	0.021	0.007	0.000	0.216
1.1333	0.021	0.007	0.000	0.216
1.1556	0.021	0.007	0.000	0.216
1.1778	0.021	0.007	0.000	0.216
1.2000	0.021	0.007	0.000	0.216
1.2222	0.021	0.007	0.000	0.216
1.2444	0.021	0.008	0.000	0.216
1.2667	0.021	0.008	0.000	0.216
1.2889	0.021	0.008	0.000	0.216
1.3111	0.021	0.008	0.000	0.216

1.3333	0.021	0.008	0.000	0.216
1.3556	0.021	0.008	0.000	0.216
1.3778	0.021	0.008	0.000	0.216
1.4000	0.021	0.009	0.000	0.216
1.4222	0.021	0.009	0.000	0.216
1.4444	0.021	0.009	0.000	0.216
1.4667	0.021	0.009	0.000	0.216
1.4889	0.021	0.009	0.000	0.216
1.5111	0.021	0.009	0.000	0.216
1.5333	0.021	0.009	0.000	0.216
1.5556	0.021	0.010	0.000	0.216
1.5778	0.021	0.010	0.000	0.216
1.6000	0.021	0.010	0.000	0.216
1.6222	0.021	0.010	0.000	0.216
1.6444	0.021	0.010	0.000	0.216
1.6667	0.021	0.010	0.000	0.216
1.6889	0.021	0.010	0.000	0.216
1.7111	0.021	0.011	0.000	0.216
1.7333	0.021	0.011	0.000	0.216
1.7556	0.021	0.011	0.000	0.216
1.7778	0.021	0.011	0.000	0.216
1.8000	0.021	0.011	0.000	0.216
1.8222	0.021	0.011	0.000	0.216
1.8444	0.021	0.011	0.000	0.216
1.8667	0.021	0.012	0.000	0.216
1.8889	0.021	0.012	0.000	0.216
1.9111	0.021	0.012	0.000	0.216
1.9333	0.021	0.012	0.000	0.216
1.9556	0.021	0.012	0.000	0.216
1.9778	0.021	0.012	0.000	0.216
2.0000	0.021	0.012	0.000	0.216

ANALYSIS RESULTS

POC #1 was not reported because POC must exist in both scenarios and both scenarios must have been run.Perlnd and Implnd Changes

No changes have been made.

WWHM2012

PROJECT REPORT

General Model Information

Project Name: ParkingLotSizing
Site Name:
Site Address:
City:
Report Date: 10/13/2016
Gage: Seatac
Data Start: 1948/10/01
Data End: 2009/09/30
Timestep: Hourly
Precip Scale: 1.000
Version Date: 2016/05/12
Version: 4.2.12

POC Thresholds

Low Flow Threshold for POC1: 50 Percent of the 2 Year
High Flow Threshold for POC1: 50 Year

Landuse Basin Data

Predeveloped Land Use

Basin 1

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
A B, Forest, Flat	0.28
Pervious Total	0.28
Impervious Land Use	acre
Impervious Total	0
Basin Total	0.28

Element Flows To:

Surface	Interflow	Groundwater

Mitigated Land Use

Basin 1

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
SIDEWALKS FLAT	0.28
Impervious Total	0.28
Basin Total	0.28

Element Flows To:

Surface	Interflow	Groundwater
Gravel Trench Bed 1	Gravel Trench Bed 1	

Routing Elements
Predeveloped Routing

Mitigated Routing

Gravel Trench Bed 1

Bottom Length:	426.00 ft.
Bottom Width:	2.20 ft.
Trench bottom slope 1:	0 To 1
Trench Left side slope 0:	0 To 1
Trench right side slope 2:	0 To 1
Material thickness of first layer:	2
Pour Space of material for first layer:	0.3
Material thickness of second layer:	0
Pour Space of material for second layer:	0
Material thickness of third layer:	0
Pour Space of material for third layer:	0
Infiltration On	
Infiltration rate:	10
Infiltration safety factor:	1
Total Volume Infiltrated (ac-ft.):	46.689
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	46.689
Percent Infiltrated:	100
Total Precip Applied to Facility:	3.286
Total Evap From Facility:	0.297
Discharge Structure	
Riser Height:	2 ft.
Riser Diameter:	12 in.
Element Flows To:	
Outlet 1	Outlet 2

Gravel Trench Bed Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.021	0.000	0.000	0.000
0.0222	0.021	0.000	0.000	0.216
0.0444	0.021	0.000	0.000	0.216
0.0667	0.021	0.000	0.000	0.216
0.0889	0.021	0.000	0.000	0.216
0.1111	0.021	0.000	0.000	0.216
0.1333	0.021	0.000	0.000	0.216
0.1556	0.021	0.001	0.000	0.216
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0.2444	0.021	0.001	0.000	0.216
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0.2889	0.021	0.001	0.000	0.216
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0.3556	0.021	0.002	0.000	0.216
0.3778	0.021	0.002	0.000	0.216
0.4000	0.021	0.002	0.000	0.216
0.4222	0.021	0.002	0.000	0.216
0.4444	0.021	0.002	0.000	0.216
0.4667	0.021	0.003	0.000	0.216
0.4889	0.021	0.003	0.000	0.216
0.5111	0.021	0.003	0.000	0.216

0.5333	0.021	0.003	0.000	0.216
0.5556	0.021	0.003	0.000	0.216
0.5778	0.021	0.003	0.000	0.216
0.6000	0.021	0.003	0.000	0.216
0.6222	0.021	0.004	0.000	0.216
0.6444	0.021	0.004	0.000	0.216
0.6667	0.021	0.004	0.000	0.216
0.6889	0.021	0.004	0.000	0.216
0.7111	0.021	0.004	0.000	0.216
0.7333	0.021	0.004	0.000	0.216
0.7556	0.021	0.004	0.000	0.216
0.7778	0.021	0.005	0.000	0.216
0.8000	0.021	0.005	0.000	0.216
0.8222	0.021	0.005	0.000	0.216
0.8444	0.021	0.005	0.000	0.216
0.8667	0.021	0.005	0.000	0.216
0.8889	0.021	0.005	0.000	0.216
0.9111	0.021	0.005	0.000	0.216
0.9333	0.021	0.006	0.000	0.216
0.9556	0.021	0.006	0.000	0.216
0.9778	0.021	0.006	0.000	0.216
1.0000	0.021	0.006	0.000	0.216
1.0222	0.021	0.006	0.000	0.216
1.0444	0.021	0.006	0.000	0.216
1.0667	0.021	0.006	0.000	0.216
1.0889	0.021	0.007	0.000	0.216
1.1111	0.021	0.007	0.000	0.216
1.1333	0.021	0.007	0.000	0.216
1.1556	0.021	0.007	0.000	0.216
1.1778	0.021	0.007	0.000	0.216
1.2000	0.021	0.007	0.000	0.216
1.2222	0.021	0.007	0.000	0.216
1.2444	0.021	0.008	0.000	0.216
1.2667	0.021	0.008	0.000	0.216
1.2889	0.021	0.008	0.000	0.216
1.3111	0.021	0.008	0.000	0.216
1.3333	0.021	0.008	0.000	0.216
1.3556	0.021	0.008	0.000	0.216
1.3778	0.021	0.008	0.000	0.216
1.4000	0.021	0.009	0.000	0.216
1.4222	0.021	0.009	0.000	0.216
1.4444	0.021	0.009	0.000	0.216
1.4667	0.021	0.009	0.000	0.216
1.4889	0.021	0.009	0.000	0.216
1.5111	0.021	0.009	0.000	0.216
1.5333	0.021	0.009	0.000	0.216
1.5556	0.021	0.010	0.000	0.216
1.5778	0.021	0.010	0.000	0.216
1.6000	0.021	0.010	0.000	0.216
1.6222	0.021	0.010	0.000	0.216
1.6444	0.021	0.010	0.000	0.216
1.6667	0.021	0.010	0.000	0.216
1.6889	0.021	0.010	0.000	0.216
1.7111	0.021	0.011	0.000	0.216
1.7333	0.021	0.011	0.000	0.216
1.7556	0.021	0.011	0.000	0.216
1.7778	0.021	0.011	0.000	0.216
1.8000	0.021	0.011	0.000	0.216

1.8222	0.021	0.011	0.000	0.216
1.8444	0.021	0.011	0.000	0.216
1.8667	0.021	0.012	0.000	0.216
1.8889	0.021	0.012	0.000	0.216
1.9111	0.021	0.012	0.000	0.216
1.9333	0.021	0.012	0.000	0.216
1.9556	0.021	0.012	0.000	0.216
1.9778	0.021	0.012	0.000	0.216
2.0000	0.021	0.012	0.000	0.216

Analysis Results

POC 1

POC #1 was not reported because POC must exist in both scenarios and both scenarios must have been run.

Model Default Modifications

Total of 0 changes have been made.

PERLND Changes

No PERLND changes have been made.

IMPLND Changes

No IMPLND changes have been made.

Appendix
Predeveloped Schematic

Mitigated Schematic

Predeveloped UCI File

Mitigated UCI File

```
RUN

GLOBAL
  WWHM4 model simulation
  START       1948 10 01        END    2009 09 30
  RUN INTERP OUTPUT LEVEL    3    0
  RESUME     0 RUN     1                    UNIT SYSTEM     1
END GLOBAL

FILES
<File>  <Un#>   <-----------File Name------------------------------>***
<-ID->                                                              ***
WDM        26   ParkingLotSizing.wdm
MESSU      25   MitParkingLotSizing.MES
           27   MitParkingLotSizing.L61
           28   MitParkingLotSizing.L62
           30   POCParkingLotSizing1.dat
END FILES

OPN SEQUENCE
    INGRP              INDELT 00:60
      IMPLND       8
      RCHRES       1
      COPY         1
      COPY       501
      DISPLY       1
    END INGRP
END OPN SEQUENCE
DISPLY
  DISPLY-INFO1
    # -  #<----------Title---------->***TRAN PIVL DIG1 FIL1  PYR DIG2 FIL2 YRND
    1        Gravel Trench Bed 1         MAX                   1    2   30    9
  END DISPLY-INFO1
END DISPLY
COPY
  TIMESERIES
    # -  #  NPT  NMN ***
    1         1    1
  501         1    1
  END TIMESERIES
END COPY
GENER
  OPCODE
    #    # OPCD ***
  END OPCODE
  PARM
    #    #         K ***
  END PARM
END GENER
PERLND
  GEN-INFO
    <PLS ><-------Name------->NBLKS   Unit-systems   Printer ***
    # -  #                         User  t-series Engl Metr ***
                                          in  out           ***
  END GEN-INFO
  *** Section PWATER***

  ACTIVITY
    <PLS > ************ Active Sections ****************************
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC ***
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags **************************** PIVL  PYR
    # -  # ATMP SNOW PWAT  SED  PST  PWG PQAL MSTL PEST NITR PHOS TRAC  *********
  END PRINT-INFO

  PWAT-PARM1
```

```
    <PLS >  PWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP UZFG  VCS  VUZ  VNN VIFW VIRC  VLE INFC  HWT ***
  END PWAT-PARM1

  PWAT-PARM2
    <PLS >      PWATER input info: Part 2         ***
    # -  # ***FOREST      LZSN    INFILT      LSUR     SLSUR     KVARY     AGWRC
  END PWAT-PARM2

  PWAT-PARM3
    <PLS >      PWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN    INFEXP    INFILD    DEEPFR    BASETP    AGWETP
  END PWAT-PARM3
  PWAT-PARM4
    <PLS >     PWATER input info: Part 4                              ***
    # -  #     CEPSC      UZSN      NSUR     INTFW       IRC     LZETP ***
  END PWAT-PARM4

  PWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
               ran from 1990 to end of 1992 (pat 1-11-95) RUN 21 ***
    # -  # ***  CEPS      SURS       UZS       IFWS       LZS       AGWS      GWVS
  END PWAT-STATE1

END PERLND

IMPLND
  GEN-INFO
    <PLS ><-------Name------->   Unit-systems   Printer ***
    # -  #                     User  t-series Engl Metr ***
                                  in  out           ***
    8      SIDEWALKS/FLAT         1    1    1   27    0
  END GEN-INFO
  *** Section IWATER***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    ***
    8         0    0    1    0    0    0
  END ACTIVITY

  PRINT-INFO
    <ILS > ******** Print-flags ******** PIVL  PYR
    # -  # ATMP SNOW IWAT  SLD  IWG IQAL    *********
    8         0    0    4    0    0    0    1    9
  END PRINT-INFO

  IWAT-PARM1
    <PLS >  IWATER variable monthly parameter value flags  ***
    # -  # CSNO RTOP  VRS  VNN RTLI     ***
    8         0    0    0    0    0
  END IWAT-PARM1

  IWAT-PARM2
    <PLS >      IWATER input info: Part 2         ***
    # -  # ***  LSUR     SLSUR      NSUR     RETSC
    8            400      0.01       0.1       0.1
  END IWAT-PARM2

  IWAT-PARM3
    <PLS >      IWATER input info: Part 3         ***
    # -  # ***PETMAX    PETMIN
    8              0         0
  END IWAT-PARM3

  IWAT-STATE1
    <PLS > *** Initial conditions at start of simulation
    # -  # ***  RETS      SURS
    8              0         0
  END IWAT-STATE1
```

```
END IMPLND

SCHEMATIC
<-Source->                  <--Area-->     <-Target->   MBLK   ***
<Name>   #                  <-factor->     <Name>   #   Tbl#   ***
Basin  1***
IMPLND   8                        0.28     RCHRES   1      5

******Routing******
IMPLND   8                        0.28     COPY     1     15
RCHRES   1                           1     COPY   501     17
END SCHEMATIC

NETWORK
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
COPY   501 OUTPUT MEAN   1 1   12.1        DISPLY   1     INPUT  TIMSER 1



<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   #        <Name> # #<-factor->strg <Name>   #   #        <Name> # #  ***
END NETWORK

RCHRES
  GEN-INFO
    RCHRES       Name        Nexits   Unit Systems   Printer                ***
    # -  #<----------------><---> User T-series  Engl Metr LKFG             ***
                                      in  out                               ***
    1     Gravel Trench Be-017    2    1    1    1   28    0    1
  END GEN-INFO
  *** Section RCHRES***

  ACTIVITY
    <PLS > ************ Active Sections ******************************
    # -  # HYFG ADFG CNFG HTFG SDFG GQFG OXFG NUFG PKFG PHFG ***
    1         1    0    0    0    0    0    0    0    0    0
  END ACTIVITY

  PRINT-INFO
    <PLS > ***************** Print-flags ******************** PIVL  PYR
    # -  # HYDR ADCA CONS HEAT  SED  GQL OXRX NUTR PLNK PHCB PIVL  PYR  *********
    1         4    0    0    0    0    0    0    0    0    0    1    9
  END PRINT-INFO

  HYDR-PARM1
    RCHRES  Flags for each HYDR Section                                    ***
    # -  #  VC A1 A2 A3  ODFVFG for each *** ODGTFG for each     FUNCT  for each
          FG FG FG FG  possible  exit  *** possible  exit      possible  exit
           *  *  *  *    *  *  *  *  *       *  *  *  *  *        ***
    1        0  1  0  0    4  5  0  0  0       0  0  0  0  0       2  2  2  2  2
  END HYDR-PARM1

  HYDR-PARM2
    # -  #    FTABNO       LEN     DELTH     STCOR        KS      DB50       ***
  <------><--------><--------><--------><--------><--------><--------><--------> ***
    1             1      0.08       0.0       0.0       0.5       0.0
  END HYDR-PARM2
  HYDR-INIT
    RCHRES  Initial conditions for each HYDR section                       ***
    # -  # ***   VOL     Initial  value  of COLIND     Initial  value  of OUTDGT
          *** ac-ft     for each possible exit        for each possible exit
  <------><-------->     <---><---><---><---><---> *** <---><---><---><---><--->
    1            0         4.0  5.0  0.0  0.0  0.0       0.0  0.0  0.0  0.0  0.0
  END HYDR-INIT
END RCHRES

SPEC-ACTIONS
END SPEC-ACTIONS
```

FTABLES
FTABLE 1
92 5

Depth (ft)	Area (acres)	Volume (acre-ft)	Outflow1 (cfs)	Outflow2 (cfs)	Velocity (ft/sec)	Travel Time*** (Minutes)***
0.000000	0.021515	0.000000	0.000000	0.000000		
0.022222	0.021515	0.000143	0.000000	0.216944		
0.044444	0.021515	0.000287	0.000000	0.216944		
0.066667	0.021515	0.000430	0.000000	0.216944		
0.088889	0.021515	0.000574	0.000000	0.216944		
0.111111	0.021515	0.000717	0.000000	0.216944		
0.133333	0.021515	0.000861	0.000000	0.216944		
0.155556	0.021515	0.001004	0.000000	0.216944		
0.177778	0.021515	0.001147	0.000000	0.216944		
0.200000	0.021515	0.001291	0.000000	0.216944		
0.222222	0.021515	0.001434	0.000000	0.216944		
0.244444	0.021515	0.001578	0.000000	0.216944		
0.266667	0.021515	0.001721	0.000000	0.216944		
0.288889	0.021515	0.001865	0.000000	0.216944		
0.311111	0.021515	0.002008	0.000000	0.216944		
0.333333	0.021515	0.002152	0.000000	0.216944		
0.355556	0.021515	0.002295	0.000000	0.216944		
0.377778	0.021515	0.002438	0.000000	0.216944		
0.400000	0.021515	0.002582	0.000000	0.216944		
0.422222	0.021515	0.002725	0.000000	0.216944		
0.444444	0.021515	0.002869	0.000000	0.216944		
0.466667	0.021515	0.003012	0.000000	0.216944		
0.488889	0.021515	0.003156	0.000000	0.216944		
0.511111	0.021515	0.003299	0.000000	0.216944		
0.533333	0.021515	0.003442	0.000000	0.216944		
0.555556	0.021515	0.003586	0.000000	0.216944		
0.577778	0.021515	0.003729	0.000000	0.216944		
0.600000	0.021515	0.003873	0.000000	0.216944		
0.622222	0.021515	0.004016	0.000000	0.216944		
0.644444	0.021515	0.004160	0.000000	0.216944		
0.666667	0.021515	0.004303	0.000000	0.216944		
0.688889	0.021515	0.004446	0.000000	0.216944		
0.711111	0.021515	0.004590	0.000000	0.216944		
0.733333	0.021515	0.004733	0.000000	0.216944		
0.755556	0.021515	0.004877	0.000000	0.216944		
0.777778	0.021515	0.005020	0.000000	0.216944		
0.800000	0.021515	0.005164	0.000000	0.216944		
0.822222	0.021515	0.005307	0.000000	0.216944		
0.844444	0.021515	0.005451	0.000000	0.216944		
0.866667	0.021515	0.005594	0.000000	0.216944		
0.888889	0.021515	0.005737	0.000000	0.216944		
0.911111	0.021515	0.005881	0.000000	0.216944		
0.933333	0.021515	0.006024	0.000000	0.216944		
0.955556	0.021515	0.006168	0.000000	0.216944		
0.977778	0.021515	0.006311	0.000000	0.216944		
1.000000	0.021515	0.006455	0.000000	0.216944		
1.022222	0.021515	0.006598	0.000000	0.216944		
1.044444	0.021515	0.006741	0.000000	0.216944		
1.066667	0.021515	0.006885	0.000000	0.216944		
1.088889	0.021515	0.007028	0.000000	0.216944		
1.111111	0.021515	0.007172	0.000000	0.216944		
1.133333	0.021515	0.007315	0.000000	0.216944		
1.155556	0.021515	0.007459	0.000000	0.216944		
1.177778	0.021515	0.007602	0.000000	0.216944		
1.200000	0.021515	0.007745	0.000000	0.216944		
1.222222	0.021515	0.007889	0.000000	0.216944		
1.244444	0.021515	0.008032	0.000000	0.216944		
1.266667	0.021515	0.008176	0.000000	0.216944		
1.288889	0.021515	0.008319	0.000000	0.216944		
1.311111	0.021515	0.008463	0.000000	0.216944		
1.333333	0.021515	0.008606	0.000000	0.216944		
1.355556	0.021515	0.008749	0.000000	0.216944		
1.377778	0.021515	0.008893	0.000000	0.216944		
1.400000	0.021515	0.009036	0.000000	0.216944		
1.422222	0.021515	0.009180	0.000000	0.216944		

```
  1.444444  0.021515  0.009323  0.000000  0.216944
  1.466667  0.021515  0.009467  0.000000  0.216944
  1.488889  0.021515  0.009610  0.000000  0.216944
  1.511111  0.021515  0.009754  0.000000  0.216944
  1.533333  0.021515  0.009897  0.000000  0.216944
  1.555556  0.021515  0.010040  0.000000  0.216944
  1.577778  0.021515  0.010184  0.000000  0.216944
  1.600000  0.021515  0.010327  0.000000  0.216944
  1.622222  0.021515  0.010471  0.000000  0.216944
  1.644444  0.021515  0.010614  0.000000  0.216944
  1.666667  0.021515  0.010758  0.000000  0.216944
  1.688889  0.021515  0.010901  0.000000  0.216944
  1.711111  0.021515  0.011044  0.000000  0.216944
  1.733333  0.021515  0.011188  0.000000  0.216944
  1.755556  0.021515  0.011331  0.000000  0.216944
  1.777778  0.021515  0.011475  0.000000  0.216944
  1.800000  0.021515  0.011618  0.000000  0.216944
  1.822222  0.021515  0.011762  0.000000  0.216944
  1.844444  0.021515  0.011905  0.000000  0.216944
  1.866667  0.021515  0.012048  0.000000  0.216944
  1.888889  0.021515  0.012192  0.000000  0.216944
  1.911111  0.021515  0.012335  0.000000  0.216944
  1.933333  0.021515  0.012479  0.000000  0.216944
  1.955556  0.021515  0.012622  0.000000  0.216944
  1.977778  0.021515  0.012766  0.000000  0.216944
  2.000000  0.021515  0.012909  0.000000  0.216944
  2.022222  0.021515  0.013387  0.035147  0.216944
  END FTABLE  1
END FTABLES

EXT SOURCES
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member->  ***
<Name>   # <Name> # tem strg<-factor->strg <Name>   #   #        <Name> # #  ***
WDM      2 PREC     ENGL       1          SUM  PERLND   1 999 EXTNL  PREC
WDM      2 PREC     ENGL       1          SUM  IMPLND   1 999 EXTNL  PREC
WDM      1 EVAP     ENGL    0.76               PERLND   1 999 EXTNL  PETINP
WDM      1 EVAP     ENGL    0.76               IMPLND   1 999 EXTNL  PETINP
WDM      2 PREC     ENGL       1          SUM  RCHRES   1     EXTNL  PREC
WDM      1 EVAP     ENGL    0.76               RCHRES   1     EXTNL  POTEV

END EXT SOURCES

EXT TARGETS
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name>   #        <Name> # #<-factor->strg <Name>   # <Name>    tem strg strg***
RCHRES   1 HYDR   RO      1 1        1      WDM   1008 FLOW     ENGL       REPL
RCHRES   1 HYDR   O       1 1        1      WDM   1009 FLOW     ENGL       REPL
RCHRES   1 HYDR   O       2 1        1      WDM   1010 FLOW     ENGL       REPL
RCHRES   1 HYDR   STAGE   1 1        1      WDM   1011 STAG     ENGL       REPL
COPY     1 OUTPUT MEAN    1 1     12.1      WDM    701 FLOW     ENGL       REPL
COPY   501 OUTPUT MEAN    1 1     12.1      WDM    801 FLOW     ENGL       REPL
END EXT TARGETS

MASS-LINK
<Volume>   <-Grp> <-Member-><--Mult-->     <Target>       <-Grp> <-Member->***
<Name>             <Name> # #<-factor->     <Name>                <Name> # #***
  MASS-LINK        5
IMPLND     IWATER SURO       0.083333      RCHRES         INFLOW IVOL
  END MASS-LINK    5

  MASS-LINK       15
IMPLND     IWATER SURO       0.083333      COPY           INPUT  MEAN
  END MASS-LINK   15

  MASS-LINK       17
RCHRES     OFLOW  OVOL   1                 COPY           INPUT  MEAN
  END MASS-LINK   17


END MASS-LINK
```

```
END RUN
```

Predeveloped HSPF Message File

Mitigated HSPF Message File

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Appendix C

Maintenance Requirements

NO. 2 – INFILTRATION FACILITIES

Maintenance Component	Defect or Problem	Conditions When Maintenance Is Needed	Results Expected When Maintenance Is Performed
Site	Trash and debris	Any trash and debris which exceed 1 cubic foot per 1,000 square feet (this is about equal to the amount of trash it would take to fill up one standard size office garbage can). In general, there should be no visual evidence of dumping.	Trash and debris cleared from site.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Grass/groundcover	Grass or groundcover exceeds 18 inches in height.	Grass or groundcover mowed to a height no greater than 6 inches.
Infiltration Pond, Top or Side Slopes of Dam, Berm or Embankment	Rodent holes	Any evidence of rodent holes if facility is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.	Rodents removed or destroyed and dam or berm repaired.
	Tree growth	Tree growth threatens integrity of dams, berms or slopes, does not allow maintenance access, or interferes with maintenance activity. If trees are not a threat to dam, berm, or embankment integrity or not interfering with access or maintenance, they do not need to be removed.	Trees do not hinder facility performance or maintenance activities.
	Erosion	Eroded damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted slope.	Slopes stabilized using appropriate erosion control measures. If erosion is occurring on compacted slope, a licensed civil engineer should be consulted to resolve source of erosion.
	Settlement	Any part of a dam, berm or embankment that has settled 4 inches lower than the design elevation.	Top or side slope restored to design dimensions. If settlement is significant, a licensed civil engineer should be consulted to determine the cause of the settlement.
Infiltration Pond, Tank, Vault, Trench, or Small Basin Storage Area	Sediment accumulation	If two inches or more sediment is present or a percolation test indicates facility is working at or less than 90% of design.	Facility infiltrates as designed.
	Liner damaged (If Applicable)	Liner is visible or pond does not hold water as designed.	Liner repaired or replaced.
Infiltration Tank Structure	Plugged air vent	Any blockage of the vent.	Tank or vault freely vents.
	Tank bent out of shape	Any part of tank/pipe is bent out of shape more than 10% of its design shape.	Tank repaired or replaced to design.
	Gaps between sections, damaged joints or cracks or tears in wall	A gap wider than ½-inch at the joint of any tank sections or any evidence of soil particles entering the tank at a joint or through a wall.	No water or soil entering tank through joints or walls.
Infiltration Vault Structure	Damage to wall, frame, bottom, and/or top slab	Cracks wider than ½-inch, any evidence of soil entering the structure through cracks or qualified inspection personnel determines that the vault is not structurally sound.	Vault is sealed and structurally sound.

NO. 2 – INFILTRATION FACILITIES

Maintenance Component	Defect or Problem	Conditions When Maintenance Is Needed	Results Expected When Maintenance Is Performed
Inlet/Outlet Pipes	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.
Access Manhole	Cover/lid not in place	Cover/lid is missing or only partially in place. **Any open manhole requires immediate maintenance.**	Manhole access covered.
	Locking mechanism not working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to remove	One maintenance person cannot remove cover/lid after applying 80 lbs of lift.	Cover/lid can be removed and reinstalled by one maintenance person.
	Ladder rungs unsafe	Missing rungs, misalignment, rust, or cracks.	Ladder meets design standards. Allows maintenance person safe access.
Large access doors/plate	Damaged or difficult to open	Large access doors or plates cannot be opened/removed using normal equipment.	Replace or repair access door so it can opened as designed.
	Gaps, doesn't cover completely	Large access doors not flat and/or access opening not completely covered.	Doors close flat and covers access opening completely.
	Lifting Rings missing, rusted	Lifting rings not capable of lifting weight of door or plate.	Lifting rings sufficient to lift or remove door or plate.
Infiltration Pond, Tank, Vault, Trench, or Small Basin Filter Bags	Plugged	Filter bag more than $^1/_2$ full.	Replace filter bag or redesign system.
Infiltration Pond, Tank, Vault, Trench, or Small Basin Pre-settling Ponds and Vaults	Sediment accumulation	6" or more of sediment has accumulated.	Pre-settling occurs as designed
Infiltration Pond, Rock Filter	Plugged	High water level on upstream side of filter remains for extended period of time or little or no water flows through filter during heavy rain storms.	Rock filter replaced evaluate need for filter and remove if not necessary.
Infiltration Pond Emergency Overflow Spillway	Rock missing	Only one layer of rock exists above native soil in area five square feet or larger, or any exposure of native soil at the top of out flow path of spillway. Rip-rap on inside slopes need not be replaced.	Spillway restored to design standards.
	Tree growth	Tree growth impedes flow or threatens stability of spillway.	Trees removed.

NO. 4 – CONTROL STRUCTURE/FLOW RESTRICTOR

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Structure	Trash and debris	Trash or debris of more than ½ cubic foot which is located immediately in front of the structure opening or is blocking capacity of the structure by more than 10%.	No Trash or debris blocking or potentially blocking entrance to structure.
		Trash or debris in the structure that exceeds $^1/_3$ the depth from the bottom of basin to invert the lowest pipe into or out of the basin.	No trash or debris in the structure.
		Deposits of garbage exceeding 1 cubic foot in volume.	No condition present which would attract or support the breeding of insects or rodents.
	Sediment	Sediment exceeds 60% of the depth from the bottom of the structure to the invert of the lowest pipe into or out of the structure or the bottom of the FROP-T section or is within 6 inches of the invert of the lowest pipe into or out of the structure or the bottom of the FROP-T section.	Sump of structure contains no sediment.
	Damage to frame and/or top slab	Corner of frame extends more than ¾ inch past curb face into the street (If applicable).	Frame is even with curb.
		Top slab has holes larger than 2 square inches or cracks wider than ¼ inch.	Top slab is free of holes and cracks.
		Frame not sitting flush on top slab, i.e., separation of more than ¾ inch of the frame from the top slab.	Frame is sitting flush on top slab.
	Cracks in walls or bottom	Cracks wider than ½ inch and longer than 3 feet, any evidence of soil particles entering structure through cracks, or maintenance person judges that structure is unsound.	Structure is sealed and structurally sound.
		Cracks wider than ½ inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering structure through cracks.	No cracks more than $^1/_4$ inch wide at the joint of inlet/outlet pipe.
	Settlement/ misalignment	Structure has settled more than 1 inch or has rotated more than 2 inches out of alignment.	Basin replaced or repaired to design standards.
	Damaged pipe joints	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering the structure at the joint of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of inlet/outlet pipes.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Ladder rungs missing or unsafe	Ladder is unsafe due to missing rungs, misalignment, rust, cracks, or sharp edges.	Ladder meets design standards and allows maintenance person safe access.
FROP-T Section	Damage	T section is not securely attached to structure wall and outlet pipe structure should support at least 1,000 lbs of up or down pressure.	T section securely attached to wall and outlet pipe.
		Structure is not in upright position (allow up to 10% from plumb).	Structure in correct position.
		Connections to outlet pipe are not watertight or show signs of deteriorated grout.	Connections to outlet pipe are water tight; structure repaired or replaced and works as designed.
		Any holes—other than designed holes—in the structure.	Structure has no holes other than designed holes.
Cleanout Gate	Damaged or missing	Cleanout gate is missing.	Replace cleanout gate.

NO. 4 – CONTROL STRUCTURE/FLOW RESTRICTOR

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
		Cleanout gate is not watertight.	Gate is watertight and works as designed.
		Gate cannot be moved up and down by one maintenance person.	Gate moves up and down easily and is watertight.
		Chain/rod leading to gate is missing or damaged.	Chain is in place and works as designed.
Orifice Plate	Damaged or missing	Control device is not working properly due to missing, out of place, or bent orifice plate.	Plate is in place and works as designed.
	Obstructions	Any trash, debris, sediment, or vegetation blocking the plate.	Plate is free of all obstructions and works as designed.
Overflow Pipe	Obstructions	Any trash or debris blocking (or having the potential of blocking) the overflow pipe.	Pipe is free of all obstructions and works as designed.
	Deformed or damaged lip	Lip of overflow pipe is bent or deformed.	Overflow pipe does not allow overflow at an elevation lower than design
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.
Metal Grates (If Applicable)	Unsafe grate opening	Grate with opening wider than $^{7}/_{8}$ inch.	Grate opening meets design standards.
	Trash and debris	Trash and debris that is blocking more than 20% of grate surface.	Grate free of trash and debris. footnote to guidelines for disposal
	Damaged or missing	Grate missing or broken member(s) of the grate.	Grate is in place and meets design standards.
Manhole Cover/Lid	Cover/lid not in place	Cover/lid is missing or only partially in place. **Any open structure requires urgent maintenance**.	Cover/lid protects opening to structure.
	Locking mechanism Not Working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to Remove	One maintenance person cannot remove cover/lid after applying 80 lbs. of lift.	Cover/lid can be removed and reinstalled by one maintenance person.

NO. 5 – CATCH BASINS AND MANHOLES

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Structure	Sediment	Sediment exceeds 60% of the depth from the bottom of the catch basin to the invert of the lowest pipe into or out of the catch basin or is within 6 inches of the invert of the lowest pipe into or out of the catch basin.	Sump of catch basin contains no sediment.
	Trash and debris	Trash or debris of more than ½ cubic foot which is located immediately in front of the catch basin opening or is blocking capacity of the catch basin by more than 10%.	No Trash or debris blocking or potentially blocking entrance to catch basin.
		Trash or debris in the catch basin that exceeds $^1/_3$ the depth from the bottom of basin to invert the lowest pipe into or out of the basin.	No trash or debris in the catch basin.
		Dead animals or vegetation that could generate odors that could cause complaints or dangerous gases (e.g., methane).	No dead animals or vegetation present within catch basin.
		Deposits of garbage exceeding 1 cubic foot in volume.	No condition present which would attract or support the breeding of insects or rodents.
	Damage to frame and/or top slab	Corner of frame extends more than ¾ inch past curb face into the street (If applicable).	Frame is even with curb.
		Top slab has holes larger than 2 square inches or cracks wider than ¼ inch.	Top slab is free of holes and cracks.
		Frame not sitting flush on top slab, i.e., separation of more than ¾ inch of the frame from the top slab.	Frame is sitting flush on top slab.
	Cracks in walls or bottom	Cracks wider than ½ inch and longer than 3 feet, any evidence of soil particles entering catch basin through cracks, or maintenance person judges that catch basin is unsound.	Catch basin is sealed and structurally sound.
		Cracks wider than ½ inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering catch basin through cracks.	No cracks more than $^1/_4$ inch wide at the joint of inlet/outlet pipe.
	Settlement/ misalignment	Catch basin has settled more than 1 inch or has rotated more than 2 inches out of alignment.	Basin replaced or repaired to design standards.
	Damaged pipe joints	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering the catch basin at the joint of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of inlet/outlet pipes.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.

NO. 5 – CATCH BASINS AND MANHOLES

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Metal Grates (Catch Basins)	Unsafe grate opening	Grate with opening wider than $^{7}/_{8}$ inch.	Grate opening meets design standards.
	Trash and debris	Trash and debris that is blocking more than 20% of grate surface.	Grate free of trash and debris. footnote to guidelines for disposal
	Damaged or missing	Grate missing or broken member(s) of the grate. **Any open structure requires urgent maintenance**.	Grate is in place and meets design standards.
Manhole Cover/Lid	Cover/lid not in place	Cover/lid is missing or only partially in place. **Any open structure requires urgent maintenance**.	Cover/lid protects opening to structure.
	Locking mechanism Not Working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to Remove	One maintenance person cannot remove cover/lid after applying 80 lbs. of lift.	Cover/lid can be removed and reinstalled by one maintenance person.

NO. 6 – CONVEYANCE PIPES AND DITCHES

Maintenance Component	Defect or Problem	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
Pipes	Sediment & debris accumulation	Accumulated sediment or debris that exceeds 20% of the diameter of the pipe.	Water flows freely through pipes.
	Vegetation/roots	Vegetation/roots that reduce free movement of water through pipes.	Water flows freely through pipes.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Damage to protective coating or corrosion	Protective coating is damaged; rust or corrosion is weakening the structural integrity of any part of pipe.	Pipe repaired or replaced.
	Damaged	Any dent that decreases the cross section area of pipe by more than 20% or is determined to have weakened structural integrity of the pipe.	Pipe repaired or replaced.
Ditches	Trash and debris	Trash and debris exceeds 1 cubic foot per 1,000 square feet of ditch and slopes.	Trash and debris cleared from ditches.
	Sediment accumulation	Accumulated sediment that exceeds 20% of the design depth.	Ditch cleaned/flushed of all sediment and debris so that it matches design.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Vegetation	Vegetation that reduces free movement of water through ditches.	Water flows freely through ditches.
	Erosion damage to slopes	Any erosion observed on a ditch slope.	Slopes are not eroding.
	Rock lining out of place or missing (If Applicable)	One layer or less of rock exists above native soil area 5 square feet or more, any exposed native soil.	Replace rocks to design standards.