



City of Bellevue, Development Services Department  
 P.O. Box 90012, Bellevue, WA 98009-9012  
 (425) 452-6800 Fax (425) 452-5225

**SHORELINE MANAGEMENT ACT OF 1971  
 PERMIT FOR SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT**

<b>CITY FILE NO.</b> 15-130086-WG	<b>DATE OF APPLICATION:</b> 12/21/2015
<b>DECISION:</b> Approved <b>DATE OF DECISION:</b> 7/28/2016	
Pursuant to Chapter 90.58 RCW, this permit is hereby granted to <b>Chris Dew, King County Wastewater Treatment Division</b> to undertake the following development: <b>Upgrades to the Sunset sewer pump station and replacement of existing sewer main including staging and pipe layback in Lake Sammamish upon the property located at 3800 W Lake Sammamish Parkway SE and Vasa Park at 3560 W Lake Sammamish Parkway SE.</b>	
The project is located in or within 200 feet of <b>Lake Sammamish</b> , a "Shoreline of Statewide Significance" (RCW 90.58.030), and/or its associated wetlands. These areas are within the Shoreline Overlay District of the City of Bellevue, Land Use Code 20.25E. This proposal conforms to the applicable shoreline master program provisions found in the attached staff report. The project qualifies as a revision to a previously approved Shoreline Conditional Use Permit and meets the criteria for a revision in WAC 173-27-100.	
Development pursuant to this permit shall be undertaken in accordance with the following terms and conditions: <b>Conditions in attached staff report.</b>	

This permit is granted pursuant to the Shoreline Management Act of 1971 and nothing in this permit shall excuse the applicant from compliance with any other federal, state or local statutes, ordinances or regulations applicable to this project, but not inconsistent with the Shoreline Management Act (Chapter 90.58 RCW).

This permit may be rescinded pursuant to RCW 90.58.140(8) in the event the permittee fails to comply with the terms and conditions hereof. Construction pursuant to this permit, or substantial progress toward construction, must be undertaken within two years of the date of final approval. This permit shall expire five years from the date of local approval.

Construction pursuant to this permit will not begin or is not authorized until twenty-one (21) days from the "date of filing," as defined in RCW 90.58.140(6) and WAC 173-27-130, or until all review proceedings initiated within twenty-one (21) days from the date of such filing have terminated; except as provided in RCW 90.58.140(5) (A) (B) (C) (D).

7/28/2016  
 Date

City of Bellevue, Land Use Division

CC: Attorney General, Department of Ecology, Northwest Region  
 Dept. of Fish and Wildlife, 1775 12th Ave. NW Suite 201 Issaquah, WA 98027  
 DOE, Joe Burcar, 3190 160<sup>th</sup> Avenue SE, Bellevue, WA 98008-5452



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## **I. Decision Criteria for Land Use Exemption from a Shoreline Conditional Use Permit at the Sunset Pump Station**

The Director may determine that an addition or modification to a previously approved project or decision is exempt from further review under the administrative amendment process or as a new application, provided the following criteria are met:

### **1. The proposal does not result in any significant adverse impact beyond the site; and**

The proposal maintains the existing pump station location and does not expand the use or structures. The proposed improvements are localized on the existing site.

### **2. The proposal is within the general scope of the purpose and intent of the original approval; and**

The proposal maintains the existing pump station and improves its function which is within the scope and intent of the approval that established the pump station.

### **3. The proposal complies with all applicable Land Use Code requirements; and**

As found in the associated staff report for permits 15-130086-WG and 15-130087-LO the project meets the applicable Land Use Code requirements.

In addition the proposed improvements at the Sunset Pump Station comply with the criteria to revise a prior shoreline approval in WAC 173-27-100 found below. The proposal maintains an existing pump station within 200 feet of Lake Sammamish. No new structure is proposed and no improvements are proposed to extend over water. The height of the pump station after the proposed improvements are made will comply with the maximum 35 feet allowed in the shoreline jurisdiction. No exceeded of height, lot coverage, setbacks, or other requirement is proposed that was not previously part of the approved pump station. All proposed landscaping is consistent or superior to the original landscaping that was installed around the facility. The use as a pump station is not proposed to be changed. SEPA review was done by King County which issued a Determination of Non-Significance and found the proposed upgrades to this existing utility facility would not have an adverse environmental impact.

#### **WAC 173-27-100**

**(2) "Within the scope and intent of the original permit" means all of the following:**

- (a) No additional over water construction is involved except that pier, dock, or float construction may be increased by five hundred square feet or ten percent from the provisions of the original permit, whichever is less;**
- (b) Ground area coverage and height may be increased a maximum of ten percent from the provisions of the original permit;**
- (c) The revised permit does not authorize development to exceed height, lot coverage, setback, or any other requirements of the applicable master**



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**program except as authorized under a variance granted as the original permit or a part thereof;**

- (d) Additional or revised landscaping is consistent with any conditions attached to the original permit and with the applicable master program;**
  - (e) The use authorized pursuant to the original permit is not changed; and**
  - (f) No adverse environmental impact will be caused by the project revision.**
- 4. The proposal does not add square footage that is more than 20 percent of existing gross square footage; and**  
No new structural square footage is proposed.
- 5. If an addition or expansion has been approved within the preceding 24-month period, the combined additions will not add square footage that exceeds 20 percent of existing gross square footage.**



**City of Bellevue  
Development Services Department  
Land Use Staff Report**

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**Proposal Name:** Sunset & Heathfield Pump Stations and Force Main Upgrade

**Proposal Address:** 3800 W Lake Sammamish Parkway SE (Sunset)  
3541 163<sup>rd</sup> Ave SE (Heathfield)

**Proposal Description:** Land Use review of a Critical Areas Land Use Permit and Shoreline Substantial Development Permit proposal for the King County Wastewater Treatment Division to upgrade the King County sewer pumps and supporting equipment at the Sunset and Heathfield pump stations near Lake Sammamish. Included is a new 24-inch sewer force main to replace the existing 12-inch main that connects the pump stations approximately following the alignment of SE 38<sup>th</sup> PI, 164<sup>th</sup> PI SE, and SE 35<sup>th</sup> PI to reach the Eastgate Interceptor at the intersection of SE 35<sup>th</sup> PI and SE Eastgate Way. The project proposes modifications to critical areas and is within 200 feet of Lake Sammamish shoreline jurisdiction and requires a Critical Areas Land Use Permit and Shoreline Substantial Development Permit

**File Number:** 15-130086-WG and 15-130087-LO

**Applicant:** Chris Dew, King County Wastewater Treatment Division

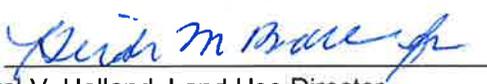
**Decisions Included:** Critical Areas Land Use Permit  
(Process II. 20.30P)  
Shoreline Substantial Development Permit  
(Process II. 20.30R)

**Planner:** Reilly Pittman, Land Use Planner

**State Environmental Policy Act  
Threshold Determination:** **Determination of Non-Significance issued on September 17, 2015 by King County for the proposed work**

**Director's Decision:** **Approval with Conditions**

Michael A. Brennan, Director  
Development Services Department

By:   
Carol V. Helland, Land Use Director

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**Application Date:** December 21, 2015  
**Notice of Application Publication:** January 14, 2016  
**Decision Publication Date:** July 28, 2016  
**CALUP Appeal Deadline:** August 11, 2016  
**Shoreline Development Permit Appeal:** August 18, 2016

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Appeal of the Decision must be received in the City's Clerk's Office by 5 PM on the date noted for appeal of the decision. Appeal of the Shoreline Substantial Development Permit must be made to the Washington State Shoreline Hearings Board (contact the project planner for more information on how to file an appeal with the Shoreline Hearings Board).

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### Attachments

1. Project and Restoration Plans – Enclosed
2. Critical Areas Report and Maintenance and Monitoring Plan – In File
3. Land Use Code and Policy review – In File
4. Project Biological Evaluation submitted to USACE – In File
5. Arborist Report and Tree Management Standards – In File
6. Public Comments – In File
7. Land Use Exemption Criteria – In File 15-130084-LJ
8. SEPA DNS – In File
9. Plans, Communication, SEPA Checklist, Geotech Report and Application Materials – In File

## I. Proposal Description

The King County Wastewater Treatment Division proposes to upgrade the existing Sunset and Heathfield sewer pump stations and replace the associated 12-inch sewer main that connects the stations with a new 24-inch force main. The pump stations were originally constructed in 1965, upgraded in 1987, and currently have a capacity of 18 million gallons per day. The proposed upgrades of the pump stations and sewer main in this project will allow this system to carry 30 million gallons per day.

Upgrades to each pump station include:

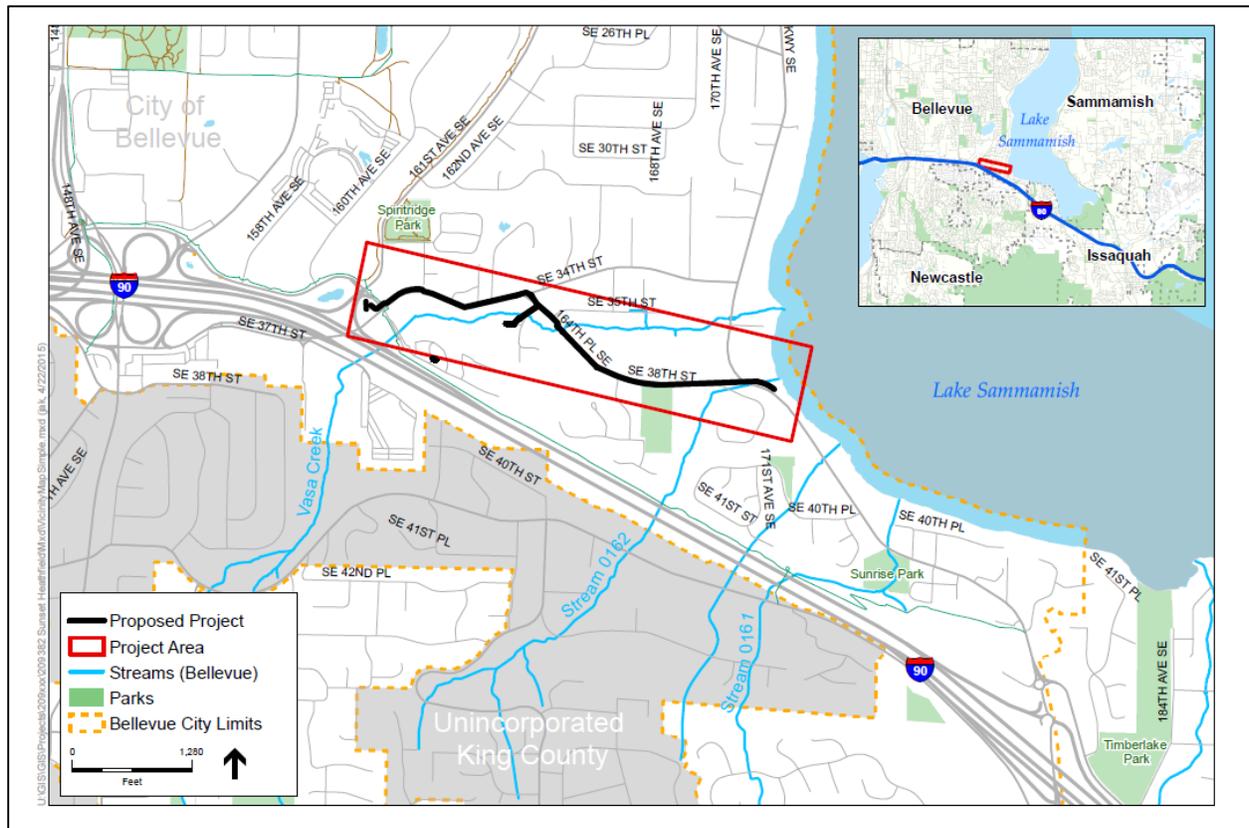
- Replacement pumps, valves, and equipment associated with running the pump station to provide larger pumps and improve station efficiency.
- Replacement of the station heating, ventilation, and air cooling to meet updated code requirements and improve odor control.
- Replacement of the existing emergency standby generators and fuel tanks with larger units to ensure the sewer pump stations continue to function in the event of a power outage.
- Replacement of fencing, landscaping, a green roof at the Sunset station, roofing and drainage systems to ensure security, provide screening, and improve drainage and water quality leaving the sites.
- Removal of existing shoreline armoring and restoration at the Sunset pump station above the ordinary high water mark.

Upgrades to the sewer main include:

- Installation of approximately 6,000 linear feet of sewer pipe and associated infrastructure to replace the existing sewer main.
- Installation will be achieved through open trenching and trenchless horizontal drilling construction methods.

The proposed work area and improvements for the Sunset Pump Station will disturb the shoreline critical area buffer and 100 year floodplain of Lake Sammamish. The proposed work area and improvements for the Heathfield Pump Station are within identified stream buffers. The proposed sewer main will be underground but construction requires temporary disturbance of the Vasa Creek stream buffer, identified wetlands and buffers, and the buffers of other identified streams. The project impacts are detailed in the project critical areas report as Attachment 2. As a result, the proposal requires a Critical Areas Land Use Permit to allow the proposed upgrades and replacement to existing public utility facilities and systems that will disturb areas protected by the City's Land Use Code 20.25H. The project also requires a Shoreline Substantial Development Permit as the work is within the shoreline jurisdiction and subject to the provisions of the City of Bellevue Shoreline Master Program. See Figure 1 below for project area.

Figure 1



## II. Site Description, Zoning, Land Use and Critical Areas

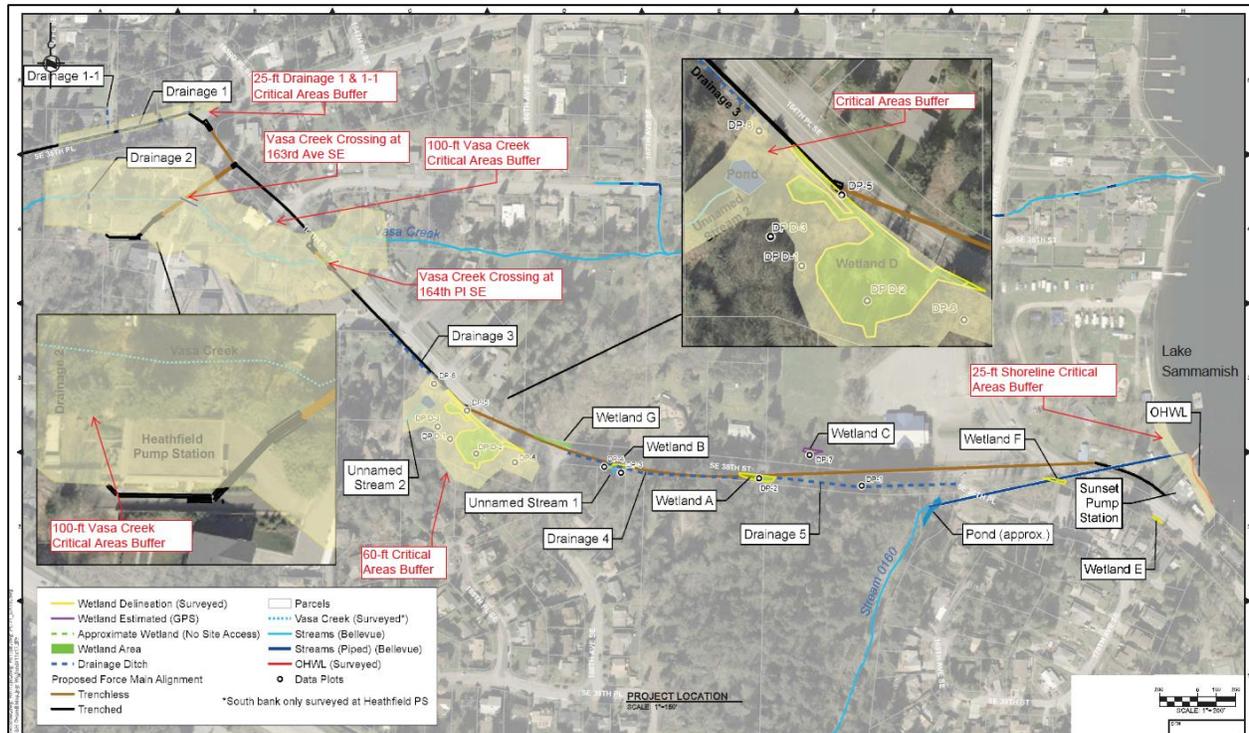
### A. Site Description

The project site is located in the Newcastle and Eastgate Subareas of the City's Comprehensive Plan. The project area begins at the Sunset Pump Station located adjacent to Lake Sammamish at 3800 W Lake Sammamish Parkway SE. The main is trenched from the Sunset station to Vasa Park which is a private park adjacent to the north of the pump station. From Vasa Park the sewer main is installed by trenchless boring which runs underground and west from the Vasa Park up SE 38<sup>th</sup> St. and 164<sup>th</sup> Pl. SE where the boring exits on a property owned by King County. The main is proposed to be installed by trenching and boring to cross under streams and runs north to where a connection from the Heathfield Pump Station at 3541 163<sup>rd</sup> Ave. SE joins the main. The sewer main then turns west along SE 34<sup>th</sup> St and SE 35<sup>th</sup> Pl., ending at SE Eastgate Way.

The project area is in vicinity of Vasa Creek and several smaller streams as well as wetlands and the 100-year floodplain of Lake Sammamish. Boring and staging for the sewer main will begin in Vasa Park and require use of Lake Sammamish and the shoreline as a pullback area to float segments of the pipe to be assembled as it is pulled upslope through the bored line.

The sewer main will be bored from the Vasa Park under Lake Sammamish Parkway and avoid all critical area impacts along SE 38<sup>th</sup> St. The boring will end at a parcel owned by King County adjacent to 164<sup>th</sup> Pl. SE which has a wetland and pond located on it. From this property the sewer main is mostly constructed by trenching with boring used intermittently to avoid impacts to streams and roadways. The connection to the Heathfield Pump Station is mostly bored in order to avoid Vasa Creek by going under it. See Figure 2 below for critical areas in work area.

**Figure 2**



**B. Zoning**

The subject site and surrounding properties are zoned single-family residential. The proposed sewer line replacement and upgrades to the existing pump stations will not alter the sites so as to trigger compliance with zoning dimensional requirements or change the current uses as utility facilities. Utility facilities are allowed in residential zones by a Conditional Use Permit or a Shoreline Conditional Use Permit in the case of the Sunset Pump Station. The upgrades proposed to these existing pump stations require a Land Use Exemption from a Conditional Use Permit which has also been submitted as application 15-130084-LJ. See Attachment 7 for decision criteria related to the exemption application.

**C. Land Use Context**

The project crosses areas that have Comprehensive Plan Land Use designations of SF-H, Single-Family High Density, MF-M, Multi-Family Medium Density, and OLB, Office and Limited Business District. No changes to the land use character of these areas should result

from the project which maintains the existing pump stations and replaces an underground sewer main. The construction staging, trenching and, boring entry pit at Vasa Park on Lake Sammamish will result in loss of vegetation and trees in the private park. Restoration for all disturbance in the park is provided in the plans.

#### **D. Critical Areas Function and Value, Regulations**

##### **i. Streams and Riparian Areas**

Most of the elements necessary for a healthy aquatic environment rely on processes sustained by dynamic interaction between the stream and the adjacent riparian area (Naiman et al., 1992). Riparian vegetation in floodplains and along stream banks provides a buffer to help mitigate the impacts of urbanization (Finkenbine et al., 2000 in Bolton and Shellberg, 2001). Riparian areas support healthy stream conditions.

Riparian vegetation, particularly forested riparian areas, affect water temperature by providing shade to reduce solar exposure and regulate high ambient air temperatures, slowing or preventing increases in water temperature (Brazier and Brown, 1973; Corbett and Lynch, 1985).

Upland and wetland riparian areas retain sediments, nutrients, pesticides, pathogens, and other pollutants that may be present in runoff, protecting water quality in streams (Ecology, 2001; City of Portland 2001). The roots of riparian plants also hold soil and prevent erosion and sedimentation that may affect spawning success or other behaviors, such as feeding.

Both upland and wetland riparian areas reduce the effects of flood flows. Riparian areas and wetlands reduce and desynchronize peak crests and flow rates of floods (Novitzki, 1979; Verry and Boelter, 1979 in Mitsch and Gosselink, 1993). Upland and wetland areas can infiltrate floodflows, which in turn, are released to the stream as baseflow

Stream riparian areas, or buffers, can be a significant factor in determining the quality of wildlife habitat. For example, buffers comprised of native vegetation with multi-canopy structure, snags, and down logs provide habitat for the greatest range of wildlife species (McMillan, 2000). Vegetated riparian areas also provide a source of large woody debris that helps create and maintain diverse in-stream habitat, as well as create woody debris jams that store sediments and moderate flood velocities.

Sparsely vegetated or vegetated buffers with non-native species may not perform the needed functions of stream buffers. In cases where the buffer is not well vegetated, it is necessary to either increase the buffer width or require that the standard buffer width be restored or revegetated (May 2003). Until the newly planted buffer is established

the near term goals for buffer functions may not be attained.

Riparian areas often have shallow groundwater tables, as well as areas where groundwater and surface waters interact. Groundwater flows out of riparian wetlands, seeps, and springs to support stream baseflows. Surface water that flows into riparian areas during floods or as direct precipitation infiltrates into groundwater in riparian areas and is stored for later discharge to the stream (Ecology, 2001; City of Portland, 2001).

#### **ii. Wetlands**

Wetlands provide important functions and values for both the human and biological environment—these functions include flood control, water quality improvement, and nutrient production. These “functions and values” to both the environment and the citizens of Bellevue depend on their size and location within a basin, as well as their diversity and quality. While Bellevue’s wetlands provides various beneficial functions, not all wetlands perform all functions, nor do they perform all functions equally well (Novitski et al., 1995). However, the combined effect of functional processes of wetlands within basins provides benefits to both natural and human environments. For example, wetlands provide significant stormwater control, even if they are degraded and comprise only a small percentage of area within a basin.

#### **iii. Shorelines**

Shorelines provide a variety of functions including shade, temperature control, water purification, woody debris recruitment, channel, bank and beach erosion, sediment delivery, and terrestrial-based food supply (Gregory et al. 1991; Naiman et al. 1993; Spence et al.1996).

Shorelines provide a wide variety of functions related to aquatic and riparian habitat, flood control and water quality, economic resources, and recreation, among others. Each function is a product of physical, chemical, and biological processes at work within the overall landscape. In lakes, these processes take place within an integrated system (ecosystem) of coupled aquatic and riparian habitats (Schindler and Scheuerell 2002). Hence, it is important to have an ecosystem approach which incorporates an understanding of shoreline functions and values. The discussion presented herein emphasizes this ecosystem approach.

#### **iv. Floodplain**

The value of floodplains can be described in terms of both the hydrologic and ecological functions that they provide. Flooding of occurs when either runoff exceeds the capacity of rivers and streams to convey water within their banks, or when engineered stormwater systems become overwhelmed. Studies have linked urbanization with increased peak discharge and channel degradation (Dunne and

Leopold 1978; Booth and Jackson 1997; Konrad 2000). Floodplains diminish the effects of urbanization by temporarily storing water and mediating flow to downstream reaches. The capacity of a floodplain to buffer upstream fluctuations in discharge may vary according to valley confinement, gradient, local relief, and flow resistance provided by vegetation. Development within the floodplain can dramatically affect the storage capacity of a floodplain, impact the hydrologic regime of a basin and present a risk to public health and safety and to property and infrastructure.

**v. Habitat**

Urbanization, the increase in human settlement density and associated intensification of land use, has a profound and lasting effect on the natural environment and wildlife habitat (McKinney 2002, Blair 2004, Marzluff 2005, Munns 2006), is a major cause of native species local extinctions (Czech et al 2000), and is likely to become the primary cause of extinctions in the coming century (Marzluff et al. 2001a). Cities are typically located along rivers, on coastlines, or near large bodies of water. The associated floodplains and riparian systems make up a relatively small percentage of land cover in the western United States, yet they provide habitat for rich wildlife communities (Knopf et al. 1988), which in turn provide a source for urban habitat patches or reserves. Consequently, urban areas can support rich wildlife communities. In fact, species richness peaks for some groups, including songbirds, at an intermediate level of development (Blair 1999, Marzluff 2005). Protected wild areas alone cannot be depended on to conserve wildlife species. Impacts from catastrophic events, environmental changes, and evolutionary processes (genetic drift, inbreeding, colonization) can be magnified when a taxonomic group or unit is confined to a specific area, and no one area or group of areas is likely to support the biological processes necessary to maintain biodiversity over a range of geographic scales (Shaughnessy and O'Neil 2001). As well, typological approaches to taxonomy or the use of indicators present the risk that evolutionary potential will be lost when depending on reserves for preservation (Rojas 2007). Urban habitat is a vital link in the process of wildlife conservation in the U.S.

**III. Consistency with Code Requirements:**

**A. Zoning District Dimensional Requirements LUC 20.20.010:**

The improvements to the pump stations comply with the maximum height restrictions of the R-5 zone and all other zoning requirements.

New security fences are proposed to replace the existing fences around each pump station. The fences are necessary to screen the facilities and provide the needed security around these essential utility facilities. The proposed fences are ornamental steel which will replace the existing chain-link fences and combined with the proposed new landscaping will improve the screening and character around each facility. No proposed fence exceeds eight feet tall.

New mechanical and HVAC equipment cannot be contained within the existing facilities and are proposed on the roof or at grade for each pump station. The new fencing and landscaping will provide the required screening under LUC 20.20.525.

Design standards applicable to Utility Facilities in LUC 20.20.650 are also met by the proposal. No changes to the existing architectural form or character of the existing pump stations are proposed. New fencing and landscaping is proposed around each pump station to improve sight screening once the vegetation is established. The pump stations are also regional utility facilities and are an existing part of the King County sewer system. Due to population growth and development, the pump stations are nearing their designed capacity. The proposed upgrades are intended to ensure continued service and environmental protection. See Land Use Code Review as Attachment 3.

#### **B. Noise Code Requirements BCC 9.18**

All noise generated, including construction noise, is regulated by BCC 9.18. Requests can be submitted to allow expanded work hours and noise generation and are reviewed through an application for expanded exempt hours type LY. Approval of expanded hours must show that the request is:

- Necessary to accommodate transportation mitigation such as evening haul routes; construction on schools and essential government facilities which cannot be undertaken during exempt hours; construction activities and site stabilization in the fall prior to the onset of winter weather; or emergency work; or
- Sounds created by construction will not exceed the maximum permissible environmental noise levels contained in BCC 9.18.030 as verified by sound level monitoring conducted before and during construction by a qualified acoustic consultant.

Approval of a permit to allow expanded work hours is required if any expanded hours are proposed. **See Section X for a related condition of approval.**

Requests for expanded work hours in the City's right-of-way are subject to separate approval by the City's Transportation Department.

#### **C. Critical Areas Requirements LUC 20.25H:**

The City of Bellevue Land Use Code Critical Areas Overlay District (LUC 20.25H) establishes standards and procedures that apply to construction of improvements on any site which contains in whole or in part any portion designated as critical area or critical area buffer. The proposed pump station upgrades and sewer main replacement are considered new or expanded utility facilities and systems which are allowed uses in critical areas and buffers per LUC 20.25H.055 and the project is subject to the following code requirements.

**i. Consistency with LUC 20.25H.055.C.2.a**

New or expanded facilities and systems are allowed within the critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists. A determination of technically feasible alternatives will consider:

**1. The location of existing infrastructure;**

The existing sewer main and pump stations are within stream and wetland buffers, the stream buffer from Vasa Creek, the shoreline buffer from Lake Sammamish, and the 100-year floodplain of Lake Sammamish. Given the need to maintain the sewer system there is no option to relocate these facilities.

**2. The function or objective of the proposed new or expanded facility or system;**

These upgrades will increase the system capacity to respond to the increased input of waste and stormwater. Based on growth projections, the system capacity will be exceeded in the near future without the proposed upgrades.

**3. Demonstration that no alternative location or configuration outside of the critical area or critical area buffer achieves the stated function or objective, including construction of new or expanded facilities or systems outside of the critical area;**

The existing facilities are within the critical areas noted. Due to the engineering requirements and need to maintain services, there is no alternative location where the pump stations or sewer main can be relocated to and maintain their functions. The proposed changes at each pump station are located in the existing areas of disturbance but are new improvements within critical areas and buffers. Due to the existing pump station construction and engineering requirements the proposed project configuration is the best alternative with the least impact on critical areas. Much of the sewer main is proposed to be bored underground and will avoid open trenching impacts to a majority of the critical areas in the project area.

**4. Whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact of proposed disturbance; and**

If this project were not carried out the existing sewer capacity would be exceeded and have impacts on economic development and the environment. The proposed improvements maintain the locations of the existing facilities. The cost to avoid these impacts by relocating the facilities would require additional property acquisition and is substantially disproportionate to the environmental impact resulting from the proposed

improvements and potential mitigation on these sites which will improve the function and values of the critical areas.

**5. The ability of both permanent and temporary disturbance to be mitigated.**

The proposed project will result in temporary impacts to wetland and stream habitat. See Figure 3 below for proposed impacts per project feature. See the Attachment 2 for the project critical areas report for full description of the proposed impacts. Wetland areas and buffers will be restored following construction. Open-cut trenches will be backfilled and the areas restored with vegetation appropriate for the critical area or buffer in question. Adjacent stream buffers and riparian areas will be replanted with appropriate native trees and shrubs.

**Figure 3**

<b>Project Component</b>	<b>Temporary Impact Areas</b>	<b>Permanent Impact Areas</b>
<b>Heathfield Pump Station</b>		
Pump station improvements and force main (Figure 6)	Vasa Creek buffer: 4,784 sf	Vasa Creek buffer: 24 sf
<b>Sunset Pump Station</b>		
Bank restoration and native landscaping (Figure 10; Appendix A)	Lake Sammamish Shoreline Critical Area buffer: 300 sf	None (permanent effects will be beneficial)
<b>New Force Main</b>		
Pipe assembly and pullback (Figure 10)	Lake Sammamish Shoreline Critical Area buffer: area unknown (minimum area needed to pull back pipe)	None
New force main along SE 35 <sup>th</sup> Place (Figure 9)	Drainage 1 and Drainage 1-1 channel: 1,100 sf Drainage 1 buffer: 2,925 sf	None
New force main crossing of Vasa Creek (164 <sup>th</sup> Place SE) (Figure 8)	Vasa Creek buffer: 1,275 sf	None
New force main along 164 <sup>th</sup> Place SE and adjacent King County-owned parcel (Figure 7)	Wetland D: 1,512 sf Drainage 3: 915 sf Buffer of Wetland D: 5,090 sf	None
<b>Construction Staging</b>		
Construction staging/laydown on King County-owned parcel along 164 <sup>th</sup> Place SE (Figure 7)	Same as above for 'new force main along 164 <sup>th</sup> Place SE' (Wetland D: 1,512 sf Buffer of Wetland D: 5,063 sf)	None

**ii. Consistency with LUC 20.25H.055.C.2.b**

If the applicant demonstrates that no technically feasible alternative with less impact on

the critical area or critical area buffer exists, then the applicant shall comply with the following:

**1. Location and design shall result in the least impacts on the critical area or critical area buffer.**

Through boring, the project avoids and minimizes effects to stream and wetland habitat to the maximum extent practicable; however, the project will result in temporary impacts to wetland and stream habitat. The submitted critical areas report describes all impacts which are noted in Figure 3 above. All temporary impacts will be restored and mitigation provided per the restoration and landscaping plans submitted.

**2. Disturbance of the critical area and critical area buffer, including disturbance of vegetation and soils, shall be minimized.**

Disturbance to wetlands, streams, and buffers in the project area will be minimized to the amount necessary to allow for construction staging and temporary construction impacts. The proposed boring avoids many impacts to wetlands and streams. The construction will be subject to standard erosion control and stormwater best management practices including catch basin inserts, straw bales, sand bags, pumping, dewatering, and other measures.

**3. Disturbance shall not occur in habitat used for salmonid rearing or spawning or by any species of local importance unless no other technically feasible location exists.**

The Biological Evaluation for the project found that the proposed action may have minor effects on aquatic habitat resulting from minor turbidity that will be minimized or eliminated from implementation of BMPs and erosion control measures. The BE received a “no effect” determination from NOAA Fisheries on September 25, 2015. See Attachment 4 for the Biological Evaluation submitted to the US Army Corps of Engineers.

**4. Any crossing over of a wetland or stream shall be designed to minimize critical area and critical area buffer coverage and critical area and critical area buffer disturbance, for example by use of bridge, boring, or open cut and perpendicular crossings, and shall be the minimum width necessary to accommodate the intended function or objective; provided, that the Director may require that the facility be designed to accommodate additional facilities where the likelihood of additional facilities exists, and one consolidated corridor would result in fewer impacts to the critical area or critical area buffer than multiple intrusions into the critical area or critical area buffer.**

Trenchless boring is proposed to cross under Vasa Creek in order to avoid impacts. Boring is also proposed from Vasa Park up SE 38<sup>th</sup> Pl. to avoid many other impacts to wetland and streams along this portion of the sewer main alignment. Open trenching, bore pits, and temporary impacts are proposed in wetlands and streams. These impacts are only temporary and do not result in permanent improvements or crossings of these critical areas. Temporary staging and bore pit exit are proposed on a County owned property with a degraded wetland. These temporary impacts allow for other more significant impacts to be avoided by boring. The impacts will be restored and the wetland improved with native vegetation so as to improve the function above the existing condition.

- 5. All work shall be consistent with applicable City of Bellevue codes and standards.**

The proposed project will comply with City of Bellevue codes and standards.

- 6. The facility or system shall not have a significant adverse impact on overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod.**

As proposed, all work will occur in the low-flow period and no improvements are proposed that would impact flows or flood storage. **See Section X for a related condition of approval.**

- 7. Associated parking and other support functions, including, for example, mechanical equipment and maintenance sheds, must be located outside critical area or critical area buffer except where no feasible alternative exists.**

Due to the existing facility layout and engineering requirements there is no feasible alternative to locate a condenser unit at the Heathfield Pump Station outside of the Vasa Creek stream buffer. This unit will impact 24 square feet of stream buffer. Plans are included to provide 4,920 square feet of mitigation and stream bank improvement to address this impact. The existing stream buffer is dominated by invasive vegetation and has limited native understory species. The buffer provides some habitat functions but the proposed mitigation will improve the functions of the buffer vegetation.

- 8. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.**

The proposed project will avoid or minimize impacts to wetlands, streams, and buffers

wherever feasible. However, total avoidance will not be possible due to the location of the pump stations and sewer main. All unavoidable impacts to critical areas will be mitigated as required by federal, state, and City requirements (LUC 20.25H). The project will restore all temporary impact areas. See attachment 1 for restoration plans. **See Section X for a related condition of approval.**

**iii. Consistency With LUC 20.25H.080 and LUC 20.25H.100**

Development on sites with a type S or F stream, wetlands, or associated critical area buffer shall incorporate the following performance standards in design of the development, as applicable

**1. Lights shall be directed away from the stream.**

New lighting is proposed by this project. All lighting must meet requirements in LUC 20.20.525 to conceal lights so that light glare does not leave the sites. In addition lighting is required to be screened from adjacent critical areas. **See Section X for a related condition of approval.**

**2. Activity that generates noise such as parking lots, generators, and residential uses, shall be located away from the stream, or any noise shall be minimized through use of design and insulation techniques.**

Temporary noise impacts will occur during project construction due to the use of construction equipment and vehicles. Construction noise was discussed previously in this report. Future use of the proposed generators would be in times of power loss and temporary. Noise from generators will be addressed as part of the design but will still result in noise temporarily leaving the site that is regulated by BCC 9.18. **See Section X for a related condition of approval.**

**3. Toxic runoff from new impervious area shall be routed away from the stream.**

Construction runoff will be handled by the erosion and sediment controls in place. New impervious surfaces are not proposed.

**4. Treated water may be allowed to enter the stream critical area buffer.**

A green roof is proposed as part of the Sunset Pump Station and a rain garden is proposed at the Heathfield Pump Station to improve water quality.

**5. The outer edge of the stream critical area buffer shall be planted with dense vegetation to limit pet or human use.**

The plans submitted restore all temporary impacts and provide mitigation for permanent impacts. **See Section X for a related condition of approval.**

6. **Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream critical area buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices", now or as hereafter amended. S60-Wilburton Sewer Capacity Upgrade Project 29 City of Bellevue - Critical Areas Report**

No use of pesticides, insecticides, or fertilizers will be used for the proposed project. **See Section X for a related condition of approval.**

**iv. Consistency with LUC 20.25H.180**

The footprint of the Sunset Pump Station is not being expanded and there is no change to the effective base flood elevation. Improvements are underground, on the roof, or within the structure. Changes to landscaping are proposed as well as tree removal which will be replaced. The proposed crossing under Vasa Creek by the sewer main will not affect the Vase Creek floodplain. No new development is proposed in a floodplain. A biological evaluation was prepared as part of this project which evaluates impacts to floodplains and Lake Sammamish as reviewed by the USACE.

**v. Consistency With LUC 20.25E.080**

The Sunset Pump Station and a portion of the sewer main replacement is within the shoreline jurisdiction of Lake Sammamish. The project will be consistent with all federal and state water quality standards. Plans were submitted that detail all work and vegetation removal. The Sunset Pump Station will continue to comply with the 35-foot height limit. The project complies with the Bellevue Shoreline Master Plan and applicable codes. No watercraft storage is proposed. Any usage of herbicides, pesticides, and/or fertilizers will comply with the City's best management practices for use of these products. **See Section X for a related condition of approval.**

**IV. Public Notice and Comment**

Application Date:	December 21, 2015
Public Notice (500 feet):	January 14, 2016
Minimum Comment Period:	February 15, 2016

The Notice of Application for this project was published in the City of Bellevue Weekly Permit Bulletin and the Seattle Times on January 14, 2016. Notice was also mailed to property owners within 500 feet of the project site. Comments were received from residents in vicinity of the project. The applicant reviewed the comments which are addressed below and in some cases responses were provided to the commenters directly by the City for comments

concerning transportation improvements. See Attachment 6 for public comments submitted.

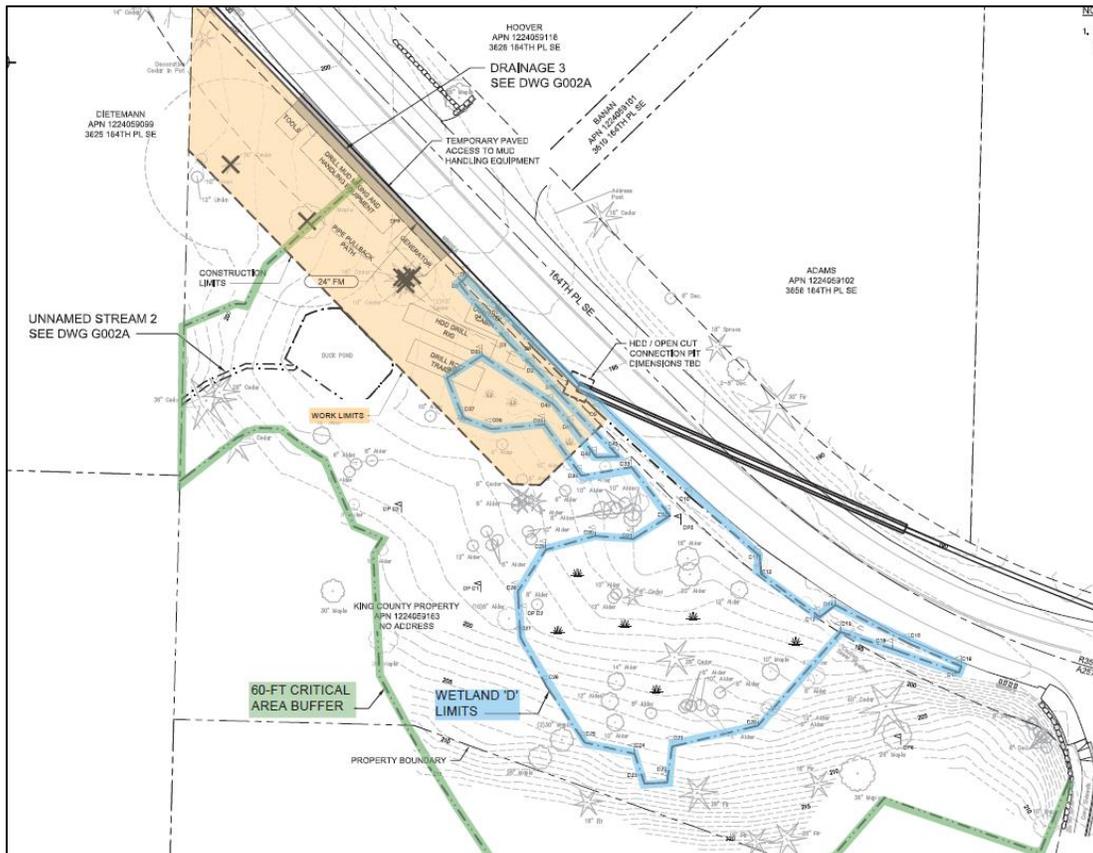
#### Responses to Comments from Glenn Extor

The City's former Transportation Development Review Manager, responded to Mr. Extor directly. King County states that the project will implement traffic control and safety plans that must be approved by the City to ensure pedestrian access is provided during construction, for the short period of time when the roads will be impacted. Construction is estimated to take up to one week at the area of concern which is between 162<sup>nd</sup> Pl. SE a three-way intersection. The ditch identified in the comments is a stream and closing streams is not part of this proposal and would be part of a City of Bellevue road improvement project to provide pedestrian access. This proposal is only to address the County sewer and does not propose any road improvements which would be City projects with City funding.

#### Responses to Scott and Cynthia Alexander

The applicant states the King County owned property at wetland D, adjacent to 164<sup>th</sup> Pl. SE, is not designated as open space and that there are no notes on the property deed or title that show the property has an open space designation. The City's Land Use Code has critical areas requirements that apply to the property which is the reason this permit review is required. The property is proposed for construction staging and storage, boring pit exit/entry, and a construction trailer. The site is currently characterized by a category III wetland (wetland D) and pond feature. Tree coverage is sparse and the site is primarily non-native invasive blackberry and reed canary grass. Native species include alder and salmon berry. Temporary construction impacts to this property are proposed and will result in vegetation removal and loss of four trees. The identified wetland and pond are not proposed to be permanently impacted. The temporary impacts are primarily in the wetland buffer. King County discussed construction staging on this property with the City which found the property is degraded and could be restored following construction. The project has plans to restore all impacts on this property and improve the critical area functions on this property above what existed prior to construction. See figure 4 below for proposed impacts and attachment 1 for project plans. All imported construction materials to provide temporary support and staging will be required to be removed as part of the County construction contract. The City's code requires that all temporary disturbance be removed. All work is proposed at times of low-flow but the project is required to meet all drainage and erosion control requirements which include routing drainage. The project construction will be required to comply with the construction hours in the City's noise code BCC 9.18 which does allow provision for increased work hours subject to approval. The existing facilities have existed for several decades without incident from the Seattle Fault that is in vicinity. The project team consulted by the applicant included geotechnical engineers which took the vicinity of the fault into account as part of their design.

Figure 4



#### Responses to Comments from Allan Dietemann

The applicant's property research does not show this property is designated as open space on a deed or property title. It is owned by King County but the King County Assessor does not show the property as part of the open space program. The property is regulated by the City of Bellevue critical areas codes that protect wetlands and streams. Based on the project design which avoids significant critical areas along the path by boring under them, this site is necessary for the boring pit and pipe pullback to draw the sewer line up the boring path from Lake Sammamish. All impacts to the property will be restored and the critical areas functions improved beyond the current site. As little of the property as possible is proposed to be used by the construction to avoid and limit impacts to the maximum extent in compliance with City rules. Where temporary impacts from construction staging cannot be limited the area is proposed to be restored. Construction noise is limited by the City of Bellevue noise code BCC 9.18. **See Section X for a related condition of approval.**

### V. Summary of Technical Reviews

#### A. Clearing and Grading

The Clearing and Grading Division of the Development Services Department has reviewed

the proposed site development for compliance with Clearing and Grading codes and standards. The Clearing and Grading staff found no issues with the proposed development.

### **B. Utilities**

The City's Utility Department reviewed and approved the proposal. Any future Utilities permit applications must comply with Bellevue Codes 24.02, 24.04 and 24.06.

## **VI. State Environmental Policy Act (SEPA)**

King County, as lead agency, issued a SEPA Determination of Non-significance for the project on September 17, 2015. See attachment 8 for the issued DNS.

## **VII. Changes to Proposal Due to Staff Review**

Staff requested responses to the comments received, more information about the project alternatives considered and impact avoidance measures. An arborist review of all tree removal and protection was also requested which is attachment 5 along with a list of tree management standards. More information on the proposed fencing and landscaping designs was requested.

## **VIII. Decision Criteria**

### **A. 20.30P.140 Critical Area Land Use Permit Decision Criteria – Decision Criteria**

The Director may approve, or approve with modifications an application for a Critical Area Land Use Permit if:

#### **1. The proposal obtains all other permits required by the Land Use Code;**

The applicant must obtain a clearing and grading permit and any other construction permits for the project. The clearing and grading permit must reference this approval. Requests to generate construction noise outside of exempted hours require application for a noise permit. **See Section X for a related condition of approval.**

#### **2. The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer;**

The project utilizes the best available construction techniques to have the least impact on critical areas and buffers as possible. The proposed boring avoids many wetland and stream impacts. And where impacts are not avoided the site of the impacts is restored and mitigated so that the critical area function is improved above the existing condition. The project plans were reviewed by an arborist who provided their assessment of tree removal needs and protection requirements in order to ensure as few trees as possible are removed and where possible converted to habitat snags.

The findings and recommendations of the arborist are required to be implemented by the project. **See Section X for a related condition of approval.**

- 3. The proposal incorporates the performance standards of Part 20.25H to the maximum extent applicable, and ;**

As discussed in Section III of this report performance standards will be met.

- 4. The proposal will be served by adequate public facilities including street, fire protection, and utilities; and;**

The proposed activity will increase a public sewer system capacity.

- 5. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC Section 20.25H.210; and**

Areas of temporary disturbance are proposed to be restored and mitigation is provided as described in the project critical areas report as attachment 2. Maintenance and monitoring is proposed in the critical areas report as well and is required for five years. Recommendations and protection measures found in the arborist report are required to be implemented. **See Section X for a related condition of approval.**

- 6. The proposal complies with other applicable requirements of this code.**

As discussed in this report, the proposal complies with all other applicable requirements of the Land Use Code.

#### **B. LUC 20.30R.155.B Shoreline Substantial Development Permit – Decision Criteria**

**The Director may approve, or approve with modifications if:**

- 1. The applicant has carried the burden of proof and produced evidence sufficient to support the conclusion that the application merits approval or approval with modifications;**

The proposal as proposed or conditioned is in conformance with required performance standards in the Land Use Code and has obtained approval of a Critical Areas Land Use permit for elements that are not in conformance with the requirements for development in areas within shoreline jurisdiction.

- 2. The applicant has demonstrated that the proposal complies with the applicable decision criteria of the Bellevue City Code;**

As discussed in this staff report, the proposal complies with all applicable decision criteria and performance standards.

3. **The applicant has demonstrated that the proposal is consistent with the policies and procedures of the Shoreline Management Act and the provisions of Chapter 173-14 WAC and the Master Program.**

The proposal complies with the policies of the Shoreline Management Act and Chapter 173-14 WAC of the Master Program. See attachment 3 for an analysis of how the project is supported by the City's Comprehensive Plan goals and objectives.

#### **IX. Conclusion and Decision**

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, City Code and Standard compliance reviews, the Director of Development Services Department does hereby **approve with conditions** the proposed upgrades to the Sunset and Heathfield pump stations and the installation of a 24 inch sewer main to replace the existing line. **A Clearing and Grading permit is required and all plans are subject to review for compliance with applicable City of Bellevue codes and standards.**

**Note- Expiration of Approval of Critical Areas Land Use Permit:** In accordance with LUC 20.30P.150 a Critical Areas Land Use Permit automatically expires and is void if the applicant fails to file for a clearing and grading permit or other necessary development permits within one year of the effective date of the approval.

**Note- Expiration of Approval of Shoreline Substantial Development Permit:** In accordance with LUC 20.30R.175, the Shoreline Substantial Development Permit automatically expires and is void if the applicant fails to file for a building permit or other necessary development permit and fails to make substantial progress towards completion of the project within two years of the effective date of the Shoreline Substantial Development Permit unless the applicant has received an extension for the Shoreline Substantial Development Permit pursuant to LUC 20.30R.180.

Permit authorization expires finally, despite substantial progress, five years after the effective date of the Shoreline Substantial Development Permit unless the applicant has received an extension pursuant to LUC 20.30R.180

#### **X. Conditions of Approval**

**The applicant shall comply with all applicable Bellevue City Codes and Ordinances including but not limited to:**

<u>Applicable Ordinances</u>	<u>Contact Person</u>
Clearing and Grading Code – BCC 23.76	Tom McFarlane, 425-452-5207
Utility Code – BCC Title 24	Mark Dewey, 425-452-6179
Land Use Code – BCC Title 20	Reilly Pittman, 425-452-4350
Noise Control – BCC 9.18	Reilly Pittman, 425-452-2973

**The following conditions are imposed under the Bellevue City Code authority referenced:**

- 1. Clearing and Grading Permit and Building Permit Required:** Grading permit 16-126512-GD for project clearing and grading is required to be approved. Building permits 16-132274-BW and 16-132275-BW are required to be approved for each pump station. Plans submitted as part of either permit application shall be consistent with the activity permitted under this approval.

Authority: Land Use Code 20.30P.140

Reviewer: Reilly Pittman, Development Services Department

- 2. Obtain all Other Applicable State and/or Federal Permits:** Before work can proceed, all required federal and state permits and approvals must be obtained by the applicant. A copy of the approved Section 404 permit issued by the Army Corps of Engineers and the approved Hydraulic Project Approval (HPA) issued by the Washington State Department of Fish and Wildlife shall be submitted to the City of Bellevue, prior to beginning construction.

Authority: Land Use Code 20.25H.080

Reviewer: Reilly Pittman, Development Services Department

- 3. Restoration Plan:** Plans submitted under the clearing and grading permit for restoration and mitigation shall be consistent with this approval and the restoration plans found as attachment 1. All temporary disturbance is required to be restored.

Authority: Land Use Code 20.30P.140; 20.25H.220

Reviewer: Reilly Pittman, Development Services Department

- 4. Maintenance and Monitoring:** The maintenance and Monitoring plan in section nine of the critical areas report is required to be included with the project plans submitted under the clearing and grading permit. Monitoring is required for five years. A copy of the annual monitoring report is required to be provided to the Environmental Planning Manager for the Land Use Department.

Authority: Land Use Code 20.30P.140; 20.25H.220  
Reviewer: Reilly Pittman, Development Services Department

- 5. Arborist Recommendations and Tree Protection:** All arborist recommendations and findings are required to be implemented to limit tree removal as described in attachment 5.

Authority: Land Use Code 20.25H.055  
Reviewer: Reilly Pittman, Development Services Department

- 6. Construction Timing:** As proposed the construction of the project should occur during low-flow periods and no improvements may impact flows or flood storage.

Authority: Land Use Code 20.25H.055  
Reviewer: Reilly Pittman, Development Services Department

- 7. Dark Sky Lighting Required:** Lighting shall be limited to the minimum necessary and constructed and installed in such a manner that all light emitted, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part, is projected below the horizontal plane through the lowest light-emitting part or otherwise obscured. The applicant shall submit a written narrative and identify lighting on the construction plans to demonstrate success at meeting this condition. Lighting that does not meet this condition shall be replaced unless analysis suggests that the location of the lighting makes the condition unnecessary or the specific lighting requirement cannot be met under these restrictions. Lighting shall be confirmed by inspection in the field after installation.

Authority: Land Use Code 20.30P.140  
Reviewer: Reilly Pittman, Development Services Department

- 8. Pesticides, Insecticides, and Fertilizers:** The applicant must submit as part of the required Clearing and Grading Permit information regarding the use of pesticides, insecticides, and fertilizers in accordance with the City of Bellevue's "Environmental Best Management Practices".

Authority: Land Use Code 20.25H.080 and LUC 20.25H.100  
Reviewer: Reilly Pittman, Development Services Department

- 9. Noise Control:** Noise related to construction is exempt from the provisions of BCC 9.18 between the hours of 7 am to 6 pm Monday through Friday and 9 am to 6 pm on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Noise emanating from construction is prohibited on Sundays or legal holidays unless expanded

hours of operation are specifically authorized in advance. Requests for construction hour extension must be done in advance with submittal of a construction noise expanded exempt hours permit.

Authority: Bellevue City Code 9.18

Reviewer: Reilly Pittman, Development Services Department

# **SUNSET AND HEATHFIELD PUMP STATIONS AND FORCE MAIN UPGRADE**

**CONTRACT NO. C01008C16**

**Funded in Part by Washington State Department of Ecology**

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**Application for City of Bellevue Critical Areas Land Use Permit  
Project Plan Set**

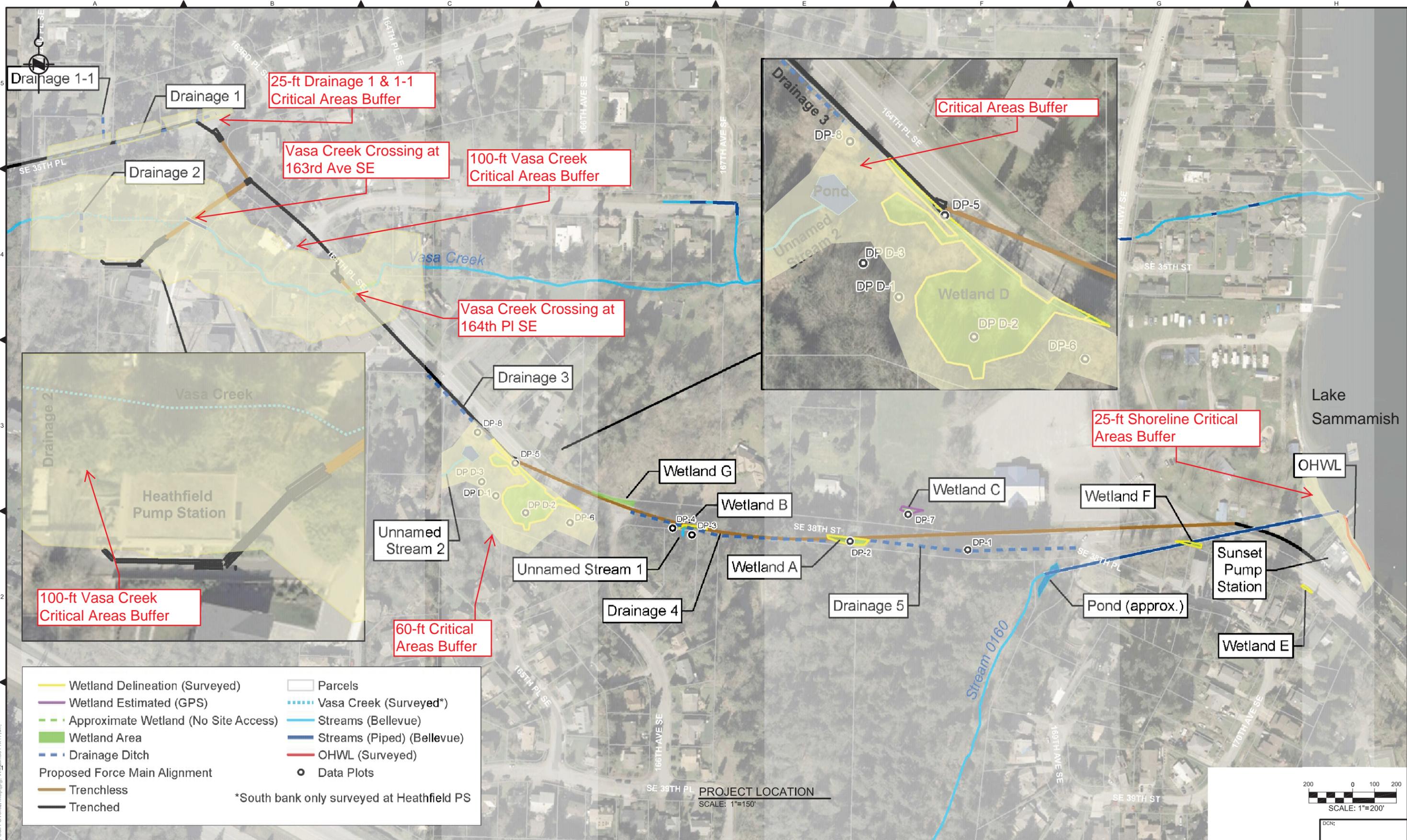
**DECEMBER 2015**



**KING COUNTY**

Department of  
Natural Resources and Parks  
Wastewater Treatment Division





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 IMAGES: King County Map 2.jpg; S&H Overall Map.jpg; Wetlands11x17.tif;

Wetland Delineation (Surveyed)	Parcels
Wetland Estimated (GPS)	Vasa Creek (Surveyed*)
Approximate Wetland (No Site Access)	Streams (Bellevue)
Wetland Area	Streams (Piped) (Bellevue)
Drainage Ditch	OHWL (Surveyed)
<b>Proposed Force Main Alignment</b>	
Trenchless	Data Plots
Trenched	

\*South bank only surveyed at Heathfield PS

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
 LAND USE PERMIT**  
 DECEMBER 2015

DESIGNED/DRAWN:  
 S. FARNAM  
 PROJECT ENGINEER:  
 L. STIEGLER  
 DESIGN APPROVAL:  
 R. GAUFF  
 PROJECT ACCEPTANCE:  
 S. NAMINI



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**CRITICAL AREAS  
 GENERAL LOCATION MAP**

DCN:	DATE:	DECEMBER 2015
	PROJECT FILE NO.:	1038122
	DRAWING NO.:	<b>G002A</b>
SHT NO / TOTAL	REV NO.:	0
3 / 41		

SHEET NO.	DRAWING NO.	DRAWING TITLE
1	--	COVER SHEET
2	G002	GENERAL PROJECT LOCATION AND VICINITY MAP
3	G002A	CRITICAL AREAS GENERAL LOCATION MAP
4	G003	GENERAL INDEX OF DRAWINGS
5	G006	GENERAL SYMBOLS
6	G007	GENERAL ABBREVIATIONS
7	C002	CIVIL STANDARD DETAILS 1
8	C005	CIVIL STANDARD DETAILS 4
9	C009	SUNSET TO HEATHFIELD EROSION CONTROL & RESTORATION ESC DETAILS
10	C010	SUNSET TO HEATHFIELD HDD PULLBACK AREAS KING COUNTY PROPERTY
11	C011	SUNSET TO HEATHFIELD HDD PULLBACK AREAS VASA PARK
12	C011A	HDD PIPE ASSEMBLY AND PULLBACK
13	C014	CIVIL FIBER OPTIC CONDUIT INSTALLATION DETAILS
14	C020	PROJECT TOPOGRAPHIC SURVEY
15	C023	PROJECT TOPOGRAPHIC SURVEY
16	C024	PROJECT TOPOGRAPHIC SURVEY
17	C026	PROJECT TOPOGRAPHIC SURVEY
18	C027	PROJECT TOPOGRAPHIC SURVEY
19	D-C100	SUNSET CIVIL DEMOLITION PLAN
20	C101	SUNSET CIVIL SITE GRADING PLAN
21	D-C200	HEATHFIELD CIVIL DEMOLITION PLAN
22	C201	HEATHFIELD CIVIL SITE GRADING PLAN
23	C306	SUNSET TO HEATHFIELD FORCE MAIN PLAN & PROFILE STA 25+50 TO 29+50
24	C307	SUNSET TO HEATHFIELD FORCE MAIN PLAN & PROFILE STA 29+50 TO 33+13
25	C309	SUNSET TO HEATHFIELD FORCE MAIN PLAN & PROFILE STA 45+00 TO 49+00
26	C350	EXISTING TREE INVENTORY SHEET 1
27	C352	SUNSET TO HEATHFIELD EROSION CONTROL & TREE PROTECTION PLAN STA 01+00 TO 5+00
28	C353	SUNSET TO HEATHFIELD RESTORATION PLAN STA 01+00 TO 5+00
29	C355	SUNSET TO HEATHFIELD EROSION CONTROL / TREE PROTECTION & RESTORATION PLAN VASA CREEK TRENCHLESS CROSSING
30	C356	SUNSET TO HEATHFIELD EROSION CONTROL / TREE PROTECTION & RESTORATION PLAN HEATHFIELD PUMP STATION
31	C357	SUNSET TO HEATHFIELD EROSION CONTROL / TREE PROTECTION & RESTORATION PLAN DRAINAGE 1-1 AND DRAINAGE 1
32	C362	SUNSET TO HEATHFIELD EROSION CONTROL / TREE PROTECTION & RESTORATION PLAN KING COUNTY PROPERTY
33	L001	MITIGATION LEGEND
34	L001A	MITIGATION NOTES
35	L002	LANDSCAPE & IRRIGATION NOTES & LEGEND
36	L003	LANDSCAPE & IRRIGATION DETAILS 1
37	L006	LANDSCAPE & IRRIGATION DETAILS 4
38	L007	GREEN ROOF AND RAIN GARDEN DETAILS
39	L100	SUNSET LANDSCAPE RESTORATION PLAN
40	L200	HEATHFIELD LANDSCAPE RESTORATION PLAN
41	E008	FIBER OPTIC HANDHOLE DETAILS

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 IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
 LAND USE PERMIT**  
 DECEMBER 2015

DESIGNED/DRAWN: <b>S. FARNAM</b>	SCALE: <b>NO SCALE</b>
PROJECT ENGINEER: <b>L. STIEGLER</b>	REFERENCE 
DESIGN APPROVAL: <b>R. GAUFF</b>	FACILITY NUMBER: <b>330-331</b>
PROJECT ACCEPTANCE: <b>S. NAMINI</b>	CONTRACT NO: <b>C01008C16</b>



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**GENERAL  
 INDEX OF DRAWINGS**

DCN:	
DATE: <b>DECEMBER 2015</b>	
PROJECT FILE NO: <b>1038122</b>	
DRAWING NO: <b>G003</b>	
SHT NO / TOTAL <b>4 / 41</b>	REV NO: <b>0</b>

**MATERIAL SYMBOLS**

	CAST-IN-PLACE CONCRETE		NEW ASPHALT PAVEMENT
	PRECAST CONCRETE IN SECTION		NEW BANK RESTORATION GROUND COVER
	MORTAR, GROUT, SAND OR PLASTER		NEW POROUS CONC PAVEMENT OR SIDEWALK
	QUARRY SPALLS OR RIPRAP		POROUS FLEXIBLE PAVING SYSTEM
	NATURAL GROUND OR GRADE (EARTH)		NEW CEMENT CONC PAVEMENT OR SIDEWALK
	BACKFILL		GRATING OR AC PAVEMENT IN SECTION
	STEEL OR STAINLESS STEEL		CHECKERED PLATE
	CONCRETE MASONRY UNIT		GRATING (SPAN IS IN DIRECTION OF MORE CLOSELY SPACED BARS)
	BATT OR FILL INSULATION		GRATING (TWO WAY SPAN)
	RIGID INSULATION		BLOCK RETAINING WALL
	WOOD		EROSION CONTROL SEEDING
	WETLANDS		CONSTRUCTION STAGING
	TEMPORARY CONSTRUCTION ENTRANCE		ROCK DRAINAGE DITCH
	CONCRETE RESTORATION		GRASS-LINED CHANNEL
	ASPHALT PAVING RESTORATION		INSULATING GASKET

**DEMOLITION SYMBOLS**

	EXISTING CONCRETE OR ASPHALT TO BE REMOVED		EXISTING GRAVEL/VEGETATION/LANDSCAPING TO BE REMOVED
	EXISTING STRUCTURE TO BE REMOVED		EXISTING ROCK WALL TO BE REMOVED
	TEMPORARY -TO BE BUILT FOR FUTURE REMOVAL		ASPHALT TO REMAIN (PROTECT)
	CONCRETE SIDEWALK REMOVAL LIMITS		GRAVEL TO REMAIN (PROTECT)
	EXISTING DRAINAGE SWALE		TEMPORARY WORK AREA
	ABANDON		TREE DEMOLITION
	DEMOLITION NOTE		

**ARCHITECTURAL SYMBOLS**

	EXIT EGRESS PATH		DOOR NO. CALLOUT
	METAL STUD WALL W/ GYP BD EACH SIDE		

**LINETYPE SYMBOLS**

	CENTERLINE
	MATCHLINE
	INVISIBLE OR HIDDEN LINE
	BREAKLINE
	GRID LINE

**UTILITY LINETYPE SYMBOLS**

EXISTING UTILITIES		EXISTING UTILITIES		PROPOSED UTILITIES	
	SD		G		P
	SS		OP		OT
			T		UGT
	W		FO		COM
	IR				

**SYMBOLS**

	EXISTING CATCH BASIN		HORIZONTAL CONTROL POINT		TRANSMISSION TOWER
	NEW CATCH BASIN		VERTICAL CONTROL POINT		POWER OR UTILITY VAULT
	EXISTING MANHOLE		WORK POINT		POWER TRANSFORMER
	NEW MANHOLE		SPOT ELEVATION		ELECTRICAL MANHOLE
	CLEANOUT		WETLAND FLAG AND ID		ELECTRICAL BOX
	ABANDON & PLUG PIPE		FINISH GRADE ELEVATION		COMMUNICATION MANHOLE
	THRUST BLOCK		TOP OF CURB (OR WALL) ELEVATION		SLOPE
	EXISTING FIRE HYDRANT		BOTTOM OF CURB (OR WALL) ELEVATION		INTERSTATE ROUTE
	NEW FIRE HYDRANT		WATER SURFACE		U.S. ROUTE
	EXISTING WATER METER		WATER SURFACE LEVEL		STATE ROUTE
	EXISTING VALVE		TRAFFIC CONTROL BOX		SECTION CORNER
	NEW VALVE		TRAFFIC SIGNAL HANDHOLE		QUARTER SECTION CORNER
	EXISTING PRESSURE RELIEF VALVE		TRAFFIC SIGNAL POLE		HANDICAP PARKING
	BOLLARD		PEDESTRIAN PUSH BUTTON POLE		TRAFFIC DIRECTION ARROW
	EXISTING GAS METER		TRAFFIC LIGHT		TRAFFIC TURN ARROW
	EXISTING GAS VALVE		TRAFFIC SPAN WIRE		CENTERLINE
	SIGNS AND/OR POSTS		EXISTING UTILITY POLE		SPRINGLINE
	DECIDUOUS TREE		EXISTING UTILITY POLE WITH ANCHOR		PROPERTY LINE
	EVERGREEN TREE		NEW UTILITY POLE		COMMUNICATION MH
	BRUSH OR TREE LINE		NEW UTILITY POLE WITH ANCHOR		CATCH BASIN INLET PROTECTION
	STRAW BALE		LUMINAIRE		SILTY PROTECTION IN END OF DITCH
	INLET PROTECTION		POLE LIGHT		TREE INVENTORY CALLOUT
	CULVERT		ARM LIGHT		EQUIPMENT TAG
	SANDBAG		ARM LIGHT (TWO)		TREE PROTECTION
	SOIL BORING & DESIGNATION		POWER BOX		PILASTER FOR PICKET FENCE
	MONUMENT		HANDHOLE		TEST HOLE FOR UTILITY POTHOLING
	HORIZONTAL AND VERTICAL CONTROL POINT				

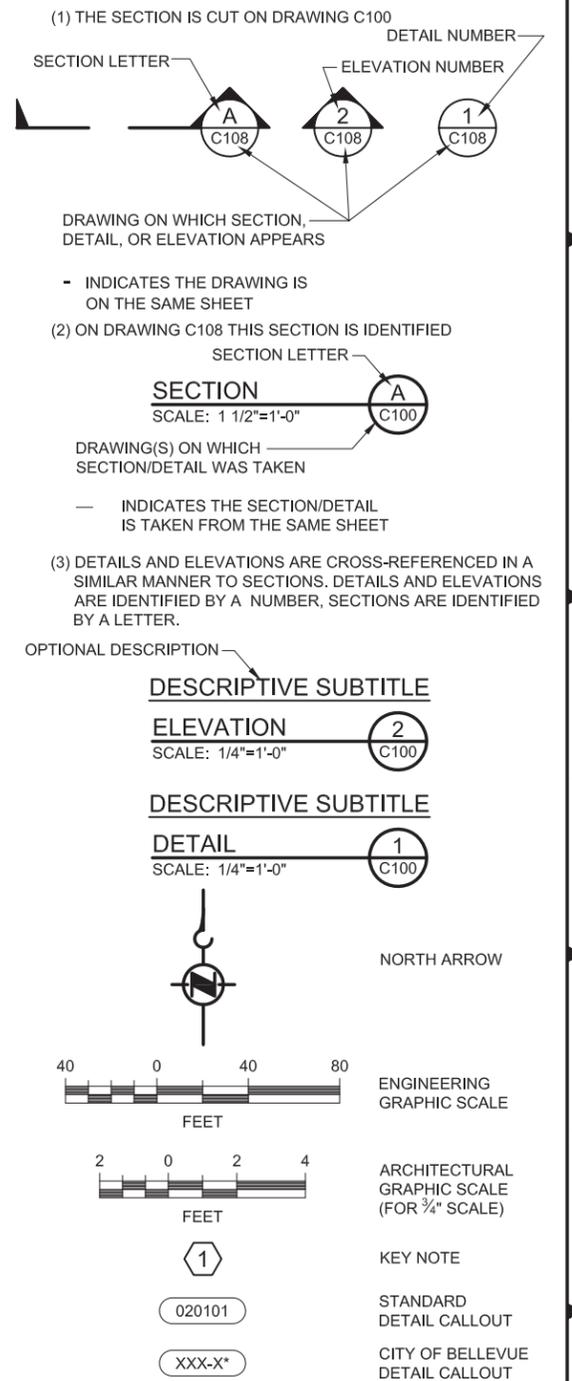
**GEOTECHNICAL INSTRUMENTATION**

	STRUCTURE SETTLEMENT POINT		VIBRATION MONITORING POINT
	UTILITY SETTLEMENT POINT		HISTORIC BORING
	SURFACE SETTLEMENT POINT		PROJECT BORING
	OPTICAL SURVEY POINT		

**LINE DESIGNATIONS**

	EXISTING CONTOUR
	PROPOSED CONTOURS
	TEMPORARY CONSTRUCTION EASEMENT
	PERMANENT EASEMENT
	SUBSURFACE PERMANENT EASEMENT
	PROPERTY LINE
	RIGHT OF WAY
	FENCE
	CONSTRUCTION FENCE
	COMBINED CONSTRUCTION FENCE AND SILT PROTECTION
	SILT FENCE
	GUARDRAIL
	HANDRAIL
	SCREENING WALL
	SAWCUT
	EDGE OF GRAVEL ROAD
	CURB AND GUTTER
	EDGE OF ASPHALT OR CONCRETE
	DRAINAGE DITCH (WITH FLOW DIRECTION)
	CONSTRUCTION LIMIT
	WATTLE
	WETLAND BOUNDARY
	CRITICAL AREA BUFFER LIMIT
	EXISTING ORDINARY HIGH WATER MARKS
	DOWN SLOPE ARROW AND VALUE
	ALIGNMENT STATIONING
	EASEMENT CALLOUT BUBBLE
	JERSEY BARRIER
	CITY LIMIT
	STATE/COUNTY LIMIT
	RAILROAD
	GRIND AND OVERLAY LIMIT

**TYPICAL SECTION AND DETAIL REFERENCING SYSTEM**



**LANDSCAPE SYMBOLS**

REFER TO DWGS L001 AND L002 FOR LANDSCAPE SYMBOLS

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 IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
LAND USE PERMIT**  
DECEMBER 2015



DESIGNED/DRAWN: S. FARNAM	SCALE: NO SCALE
PROJECT ENGINEER: L. STIEGLER	0 REFERENCE 1"
DESIGN APPROVAL: R. GAUFF	FACILITY NUMBER: 330-331
PROJECT ACCEPTANCE: S. NAMINI	CONTRACT NO: C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION  
SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE

**GENERAL  
SYMBOLS**

DATE: DECEMBER 2015
PROJECT FILE NO: 1038122
DRAWING NO: <b>G006</b>
SHT NO / TOTAL 5 / 41
REV NO: 0

A	AMPERE	CO	CLEANOUT	FAN	HP	HIGH PRESSURE, HIGH POINT,	MG	MILLION GALLONS	POI	PROPORTIONAL PLUS INTEGRAL	SA	SUPPLY AIR	TOW	TOP OF WALL	
AB	ANCHOR BOLT	COB	CITY OF BELLEVUE, WASHINGTON	FA	FOUL AIR	HORSEPOWER	MGD	MILLION GALLONS PER DAY		CONTROL, PRESSURE INDICATOR,	SB	SIGNAL BOX	TP	TANGENT POINT, TRAP PRIMER	
AC	ASPHALT CONCRETE	COF	COOLING AIR FAN	FAB	FABRICATE(D), FABRICATION	HORIZONTAL POINT OF	MG/L	MILLIGRAMS PER LITER		POINT OF INTERSECTION	SCH	SCHEDULE	TPX	TAPPING, TRANSLUCENT PANEL	
A/C	AIR CONDITIONING	COL	COLUMN, COLLECTION	FAI	FRESH AIR INTAKE	INTERSECTION	MH	MANHOLE, MAINTENANCE HOLE	POS	POSITIVE	SCRD	SCREWED	TPC	TREATMENT PLANT CONTRACTOR	
ACC	AREA CONTROL CENTER	CONC	CONCRETE, CONCENTRIC	FB	FLAT BAR, FLOOR BEAM	HPU	HYDRAULIC POWER UNIT	MHHW	MEAN HIGH HIGH WATER	PK	PEAK	SD	STORM DRAIN	TPX	TRIPLEXED
ACOU	ACOUSTIC	COND	CONDUCTOR, CONDENSATE	FC	FAIL CLOSED	HR	HANDRAIL, HEAT RESERVOIR,	MI	MALLEABLE IRON	PL	PLATE, PIPELINE, PROPERTY LINE	SDMH	STORM DRAIN MANHOLE	TPX	TREATMENT PLANT PORTAL
ACP	ASBESTOS CEMENT PIPE	CONN	CONNECTION	FCO	FLOOR CLEANOUT	HSS	HIGH SIGNAL SELECT. HOLLOW	MIE	MISCELLANEOUS	PLCS	PLACES	SEL	SMOKE DETECTOR,	TR	TIMING RELAY, STAIR TREAD
ADD	ADDITION(AL)	CONT	CONTINUOUS, CONTAINER	FCR	FINE CRUSHED ROCK	HT	HEIGHT	MIN	MINIMUM, MINUTE	PLE	PLAIN LARGE END	SD	SANITARY DRAIN, STORM DRAIN	TRANS	TRANSFORMER
ADJ	ADJUSTABLE	CONTD	CONTINUED	FD	FLOOR DRAIN	HTR	HEATER	MISC	MISCELLANEOUS	PLV	PLUG VALVE	SE	TEMPORARY STORM DRAIN	TRM	TRANSMITTER
ADPT	ADAPTER	CONST	CONSTRUCTION	FDR	FEEDER	HTV	HIGH TEMPERATURE VENT	MJ	MISCELLANEOUS MECHANICAL JOINT	PLY	PLYWOOD	SE	SOUTHEAST	TRN	TRANSDUCER
AFF	ABOVE FINISH FLOOR	CP	COMPRESSOR, CENTER POINT,	FE	FLOW ELEMENT, FIRE	HTV	HIGH TEMPERATURE VENT	ML	MILLILITER	PNEU	PNEUMATIC	SEC	SECOND	TRS	TRANSFER SWITCH
AHJ	AUTHORITY HAVING JURISDICTION		CATHODIC PROTECTION, CONTROL	FF	FLAT FACE, FINISH FLOOR	HV	HAND VALVE	MLLW	MEAN LOWER LOW WATER	PNL	PANEL, PANELBOARD	SECT	SECTION	TS	TEMPERATURE SWITCH
AHU	AIR HANDLING UNIT		COUPLING	F/F	FACE TO FACE	H/V	HEATING AND VENTILATING	MLW	MEAN LOW WATER	PNT	PAINT	SECT	SECTION	TSE	THREADED SMALL END
ALT	ALTERNATE	CPLG	COMPRESSOR	FH	FIRE HYDRANT, FLATHEAD	H/VAC	HEATING, VENTILATING, AND	MLW	MOTOR OPERATOR,	POC	POINT OF CONNECTION	SEP	SEPARATOR	TU	TREE UNIT
ALUM	ALUM, ALUMINUM	CPR	CHLORINATED POLYVINYL	FH	FLATHEAD		AIR CONDITIONING	MO	MOTOR OPERATOR,	POE	PLAIN ONE END	SF	SQUARE FOOT	TV	THERMOSTATIC VALVE
ANC	ANCHOR	CPVC	CHLORIDE	FHD	FINISHED		MASONRY OPENING		MODULUS	POP	PNEUMATIC OPERATOR	SG	SUPPLY GRILLE, SLUICE GATE	TW	THERMOWELL, TOP OF WALL
APPX	APPROXIMATE(LY)		CHLORIDE	FIN	FINISHED	HW	HOT WATER	MOD	MOUNTED	PP	POWER POLE	SHT	SHEET	TWA	TEMPORARY WORK AREA
APN	ASSESSOR PARCEL NUMBER	CR	CONDUIT RACK	FL	FLOOR, FLOW LINE	HWH	HOT WATER HEATER	MTD	MOUNTED	PR	PAIR	SHTG	SHEATHING	TYP	TYPICAL
AR	AIR RETURN	CS	COMBINED SEWER	FLEX	FLEXIBLE	HWL	HIGH WATER LEVEL	MTL	METAL	PRD	PRESSURE RELIEF DAMPER	SIM	SIMILAR		
ARV	AIR RELEASE VALVE	CTR	CENTER	FLG(D)	FLANGE(D), FLAP GATE	HWTR	HIGH WATER	MTR	MOTOR	PRE	PRESSURE	SL	SLOPE	U,UD	UNDERDRAIN
ARCH	ARCHITECTURAL	CU	CONTROL UNIT, COPPER	FLP	FLUID POWER UNIT	HYD	HYDRAULIC	MUL/DIV	MULTIPLY/DIVIDE	PREFIN	PREFINISHED	SLG	SLIDE GATE	UG	UNDERGROUND
AS	AIR SUPPLY	CV	CONTROL VALVE	FLR	FLOOR	HYDT	HYDRANT	MX	MIXER, MISCELLANEOUS	PRS	PRESSURE REDUCING STATION	SLR	SEALER	UH	UNIT HEATER
ASSY	ASSEMBLY	C/W	COMPLETE WITH	FLT	FILTER	HZ	HERTZ (CYCLES PER SECOND)		EQUIPMENT	PRV	PRESSURE REGULATING	SN	SCREEN	UL	ULTIMATE LOAD
ATB	ASPHALT TREATED BASE	CYL	CYLINDER	FM	FORCE MAIN, FLOWMETER						(REDUCING) (RELIEF) VALVE	SP	SPACE, SET POINT,	UN	UNION
ATM	ATMOSPHERE			FMH	FLEXIBLE METAL HOSE	ID	INSIDE DIAMETER	N	NEUTRAL, NORTH	PS	PRESSURE SWITCH,		STATIC PRESSURE, STOP	UNO	UNLESS NOTED OTHERWISE
AUTO	AUTOMATIC	D	DRAIN	FMX	FLASH MIXER	IE	INVERT ELEVATION	NA	NONAUTOMATIC,		PRESSURE SENSOR	SO	SLIP-ON	U/P	UTILITY POLE
AUX	AUXILIARY	DB	DUCT BANK	FND	FOUNDATION	IF	INSIDE FACE		NOT APPLICABLE	PSE	PUGET SOUND ENERGY	SPCS	SPACES	UPS	UNINTERRUPTIBLE
AVE	AVENUE	DCV	DOUBLE CHECK VALVE	FNPT	FEMALE NATIONAL PIPE THREAD	IL	INDICATING LAMP	NC	NORMALLY CLOSED	PSF	POUNDS PER SQUARE FOOT	SPEC	SPECIFICATIONS		POWER SUPPLY
AWG	AMERICAN WIRE GAUGE	DEC	DECREASING	FO	FAIL OPEN	IN	INCH	NE	NORTHEAST	PSH	PRESSURE SWITCH HIGH	SPG	SPACING	UPO	UNIFORMED POLICE OFFICER
		DET	DETAIL	FOB	FLAT ON BOTTOM	INF	INFLUENT	NEG	NEGATIVE	PSI	POUNDS PER SQUARE	SPL	SPLICE	US	UTILITY STATION
B&B	BALLED AND BURLAPPED	DG	DOOR GRILLE	FOC	FACE OF CONCRETE	INSUL	INSULATE(D), INSULATION	NF	NONFUSED	PSIA	POUNDS PER SQUARE INCH	SQ	SQUARE	USACE	U.S. ARMY CORPS OF ENGINEERS
BBE	BEVEL BOTH ENDS	DIA	DIAMETER	FOD	FIBER OPTIC DUCT BANK	INST	INSTANTANEOUS	NIC	NOT IN CONTRACT		ABSOLUTE	SR	SPEED REDUCER	U/S	UNDERSIDE
BC	BEGINNING OF CURVE	DIAG	DIAGRAM, DIAGONAL	FOM	FACE OF MASONRY (OR BRICK)	INT	INTERIOR, INTERSECTION	NO	NORMALLY OPEN, NUMBER	PSIG	POUNDS PER SQUARE INCH	SRG	SPLIT-RANGING		
BCOP	BARE COPPER	DIFF	DIFFERENTIAL	FOT	FLAT ON TOP	INTER	INTERMEDIATE	NOM	NOMINAL		GAGE	SRV	SAFETY RELIEF VALVE	V	VALVE, VENT, VOLTS, VERTICAL
BD	BOARD	DIM	DIMENSION	FP	FILTER PRESS	INTLK	INTERLOCK	NP	NAMEPLATE			SS	STAINLESS STEEL,	VAC	VACUUM, VOLTS ALTERNATING
BF	BLIND FLANGE	DIP	DUCTILE IRON PIPE	FPC	FLEXIBLE PIPE COUPLING	INV	INVERT, INVERT ELEVATION	NPSH	NET POSITIVE SUCTION HEAD	PSL	PIPE SLEEVE,		SANITARY SEWER,	VAR	VARIABLE
BH	BORE HOLE	DIR	DIRECTION	FPM	FEET PER MINUTE	IRR	IRRIGATION	NPT	NATIONAL PIPE THREAD	PT	POINT, POINT OF TANGENCY		SPEED SELECTOR,	VB	VALVE BOX
BHP	BRAKE HORSEPOWER	DIS	DISPENSER	FPS	FEET PER SECOND			NRS	NONRISING STEM	PV	PLUG VALVE, PROCESS	SSC	SOLID STATE CONTROLLER	VC	VERTICAL CURVE
BK	BRICK	DISCH	DISCHARGE	FR	FRAME	JB	JUNCTION BOX	NS	NEAR SIDE		VARIABLE	SSFH	STAINLESS STEEL FLAT HEAD	VD	VOLUME DAMPER
BKR	BREAKER	DM	DAMPER MOTOR	FRP	FIBERGLASS REINFORCED PIPE	JCT	JUNCTION	NTS	NOT TO SCALE	PVC	POLYVINYL CHLORIDE,	SSMH	SANITARY SEWER MANHOLE	VDC	VOLTS DIRECT CURRENT
BLE	BEVEL LARGE END	DN	DOWN	FS	FAR SIDE, FLOW SWITCH,	JST	JOIST	NW	NORTHWEST		POINT OF VERTICAL CURVATURE	SSPE	SUBSURFACE PERMANENT	VERT(S)	VERTICAL(S)
BLDG	BUILDING	DNRP	DEPARTMENT OF	FT	FLASH TANK, FEET	JT	JOINT		OVER	PVI	POINT OF VERTICAL		EASEMENT	VFT	VACUUM FILTER
BLK	BLOCK, BLACK		NATURAL RESOURCES & PARKS	FTG	FOOTING			O/	OVERALL, OUTSIDE A.R.		INTERSECTION	SST	STAINLESS STEEL	VP	VAPOR PRESSURE,
BM	BEAM, BENCHMARK	DO	DISSOLVED OXYGEN, DITTO	FUT	FUTURE	K	KIP (1,000 POUNDS)	OA	OUTSIDE AIR INTAKE	PVL	PRESSURE VESSEL	ST	START, STREET	VACUUM PUMP	
BMP	BEST MANAGEMENT PRACTICE	DOE	DEPARTMENT OF ECOLOGY			KC	KING COUNTY	OAI	ON CENTERS	PVT	PAVEMENT,	STA	STATION, STARTING AIR	VPI	VERTICAL POINT OF
BOP	BOTTOM OF PIPE, BACK OF PIPE	DR	DRAIN ROCK, DRAINAGE, DOOR			KGV	KNIFE GATE VALVE	OC	OCCUPANTS		POINT OF VERTICAL INTERSECTION	STD	STANDARD, STUD		INTERSECTION
BOT	BOTTOM	DS	DOWNSPOUT	G	POWER ACTUATED GATE,	KV	KILOVOLT	OCC	ODOR CONTROL UNIT	Q	QUICK COUPLER VALVE	STG	STARTING AIR	VSC	VARIABLE SPEED COUPLING
BRDG	BRIDGING	DT	DRIP TRAP		GUTTER	KVA	KILOVOLT AMPERE	OD	ODOR REMOVAL FILTER	QCV	QUICK COUPLER VALVE	STL	STEEL	VTR	VENT THROUGH ROOF
BRG	BEARING	DWF	DRY WEATHER FLOW	GA	GAGE	KW	KILOWATT	OF	OUTSIDE FACE	QCPL	QUICK COUPLING	STR	STRONG	VWP	VIBRATING WIRE PIEZOMETER
BTU	BRITISH THERMAL UNIT	DWG(S)	DRAWING(S)	GAL	GALLON			OH	OVERHEAD, OPPOSITE HAND	QTY	QUANTITY	STRUCT	STRUCTURAL	W	WEST, WIDE, WOOD, WOMENS,
BTWN	BETWEEN	DWL	DOWEL	GALV	GALVANIZED	LAM	LANDSCAPE ARCHITECT	OHD	OVERHEAD			SUB	SUBSTITUTE	W	WASHER, WATER, WEST, CITY WATER
BUV	BUTTERFLY VALVE	E	EAST	GBR	GEOTECHNICAL BASELINE REPORT	LAT	LAMINATE(D)	OHW	ORDINARY HIGH WATER	R	RADIUS, RISER	SUPT	SUPPORT	W/	WITH
BV	BALL VALVE	EA	EXHAUST AIR, EACH	GBV	GLOBE VALVE	LB	POUND(S)	OHWM	ORDINARY HIGH WATER MARK	RA	RETURN AIR	SURF	SURFACE	WC	WATER COLUMN WALL
		EAT	ENTERING AIR TEMPERATURE	GD	GUARD	LCP	LOCAL CONTROL PANEL	O/O	OUT TO OUT	RAD	RADIUS	SUSP	SUSPENDED	WD	WOOD
C	CENTER LINE, CRANE, CASING	EAU	ENGINE ALTERNATOR UNIT	GDR	GEOTECHNICAL DATA REPORT	LEV	LEVEL	OPNG	OPENING	RAF	ROLL TYPE AIR FILTER	SV	SOLENOID VALVE	WEG	WALL EXHAUST GRILLE
CAB	DIRECT BURIAL CABLE, CABINET	EC	END OF CURVE	GFI	GROUND FAULT INTERRUPTER	LFL	LOWER EXPLOSIVE LIMIT	OPP	OPPOSITE	R/C	REINFORCED CONCRETE	SW	SOUTHWEST, SOCKET WELD	WER	WALL EXHAUST REGISTER
CAL	CALIPER	ECC	ECCENTRIC	GI	GALVANIZED IRON	LF	LINEAR FEET	ORF	ODOR REMOVAL FILTER	RCP	REINFORCED CONCRETE PIPE	SWB	SWITCHBOARD	WF	WIDE FLANGE
CAP	CAPACITY	ED	EXTRACTOR DAMPER,	GL	GLASS	LFBR	LINEAR FEET BASEBOARD	ORP	OXIDATION REDUCTION	RD	ROOF DRAIN, ROAD	SWGR	SWITCHGEAR, SWAGE	W/O	WITHOUT
CAV	COMBINATION AIR VACUUM RELIEF	EE	EACH END	GOX	GASEOUS OXYGEN	LG	LONG	OSC	POTENTIAL	RE	RIM ELEVATION	SYM	SYMMETRICAL, SYMBOL	WOL	WELDOLET
CB	CATCH BASIN	EF	EACH FACE	GPD	GALLONS PER DAY	LH	LEFT HAND	OUR	ODOR SCRUBBER	RF	RAISED FACE			WP	WORKING POINT, WEATHER
C/C	CENTER TO CENTER	EFF	EACH FACE	GPM	GALLONS PER MINUTE	LJ	LAP JOINT		OXYGEN UPTAKE RATE	REC	RECEIVED	T	TRAP, TOP, TANK		PROOF
CD	CEILING DIFFUSER	EG	EXHAUST GRILLE	GRD	GRADE	LLV	LONG LEG VERTICAL	P	PUMP, PAVEMENT ELEVATION	REC'D	RECEIVED	TA	TOP & BOTTOM TRANSFER AIR	WPJ	WEAKENED PLANE JOINT
CDR	CONDUCTOR	EG	EXHAUST GRILLE	GRDR	GRINDER	LO	LUBRICATING OIL	PAR	PARALLEL, PARAGRAPH	RECIRC	RECIRCULATION	TB	TERMINAL BOX,	WN	WELD NECK
CDU	CONDENSING UNIT	EJ	EXPANSION JOINT	GRT	GROUT	LOS	LOCKOUT STOP	PBE	PLAIN BOTH ENDS	RECP	RECEPTACLE	TBD	TO BE DETERMINED	WR	WASHROOM,
CEM	CEMENT	EL	ELEVATION (ELEV) ELECT	GRTG	GRATING	LP	LOW PRESSURE	PC	PIPE COUPLING, PRECAST,	RED	REDUCE(R)	T/B	TOP OF BANK		WATER RESISTANT
CF	CUBIC FEET		ELECTRICAL	GSKT	GASKET	LS	LIMIT SWITCH		PIECE, POINT OF CURVATURE,	REF	REFERENCE	TCE	TEMPORARY CONSTRUCTION	WS	WATER SURFACE
CFH	CUBIC FEET PER HOUR	ELL	ELBOW	GSP	GALVANIZED STEEL PIPE	LT	LEFT, LIGHT	P/C	PLAIN CONCRETE	REG	REGULATOR		EASEMENT	WSP	WELDED STEEL PIPE
CFM	CUBIC FEET PER MINUTE	EMB	EMBEDDED	GV	GATE VALVE	LTG	LIGHTING		(NO REINFORCING STEEL)	REINF	REINFORCED	T/C	TOP OF CURB	WSR	WALL SUPPLY REGISTER,
CFS	CUBIC FEET PER SECOND	EMER	EMERGENCY	GW	GYP	LV	LOW VOLTAGE		PORTLAND CEMENT CONCRETE	REL	RELAY	TCL	TOTALLY CLOSED	WS	WASHER
CH	CHANNEL	EOL	ELBOLET	LVR	LOUVER	LWL	LOW WATER LEVEL	PCC	PINCH VALVE	REM	REMOVABLE	TC	TEMPERED	WT	WATERSTOP
CHV	CHECK VALVE	EOMD	END OF METAL DECK	LWR	LOWER			PCHV	PLAIN CONCRETE PIPE	REQ'D	REQUIRED	TD	TEMPERED	WWF	WATERTIGHT, WEIGHT
CIP	CAST IN PLACE	EOP	END OF PIPE					PCP	PLAIN CONCRETE PIPE	RESIL	RESILIENT	TE	TOTALLY ENCLOSED		WELDED WIRE FABRIC, WET
CJ	CONSTRUCTION JOINT,	E/P	ELECTRIC/PNEUMATIC	H	HIGH, HORIZONTAL			PCS	PIECES	RE-STL	REINFORCING STEEL	TEMP	TEMPERED	WTD	WEATHER FLOW
	CONTROL JOINT,	EPDM	ETHYLENE PROPYLENE	H/A	HAND/AUTO	M	MOTOR	PC-T	PIPE COUPLING TO	RG	RETURN GRILLE	TESC	TEMPORARY EROSION AND		WASTEWATER TREATMENT
CK	CHECKER(ED)		DIENE MONOMER	HARBD	HARDBOARD	m	MILLIAMPERE		TAKE TENSION	RGS	RIGID GALVANIZED STEEL		SEDIMENTATION CONTROL	X	DIVISION
CKPL	CHECKER PLATE	EPR	EVAPORATOR	HAS	HEADED ANCHOR STUD	MAINT	MAINTENANCE		PHOTOELECTRIC CONTROL	RH	RIGHT HAND	TFR	TRANSFORMER		
CKT	CIRCUIT	EQ	EQUAL	HC	HEATING COIL	MAN	MANUAL	PCU	PLAIN END	RL	REDUCED LEVEL	TH	THERMOMETER		SPARE CONDUIT
CL	CENTERLINE	EQUIP	EQUIPMENT	HD	HEAVY DUTY	MAN	MATERIAL	PE	PERMANENT EASEMENT	RM	ROOM	THD'D	THREADED	XLP	(SUFFIX LETTER)
CL	CLEAR, CLEARANCE	EQUIV	EQUIVALENT	HDD	HORIZONTAL DIRECTIONAL DRILL	MAT'L	MATERIAL		PNEUMATIC/ELECTRIC	RO	ROUGH OPENINGS	THK	THICK	XP	CROSS LINKED POLYETHYLENE
CLG	CEILING	ESC	EROSION AND SEDIMENTATION	HDOT	HEAVY DUTY OILTIGHT	MAX	MAXIMUM	P/E	PENETRATION	RP	RADIUS POINT	THRESH	THRESHOLD	YCO	EXPLOSION PROOF
CLK	CLOCK			HDPE	HIGH DENSITY POLYETHYLENE	MB	MACHINE BOLT	PEN	PERFORATED	RPM	REVOLUTIONS PER MINUTE	THRU	THROUGH	YR	YARD CLEANOUT
CLR	CLEAR, CLEARANCE			HDR	HEADER	MCC	MOTOR CONTROL CENTER	PERF	PERFORATED	RS	RAW SEWAGE	TLE	THREAD LARGE END	ZS	YEAR
CM	MANUAL CONTROL STATION	EW	EACH WAY	HDWR	HARDWARE	MD	MASTER CONTROL UNIT	PERP	PERPENDICULAR	RT	RIGHT	TOA	TEST-OFF-AUTO	#	POSITION SWITCH
CMA	MANUAL-AUTO CONTROL	EX	EXTRA	HEX	HEXAGONAL	ME	MISCELLANEOUS MECHANICAL	PFP	POROUS FLEXIBLE PAVING	RTU	REMOTE TERMINAL UNIT	TOC	TOP OF CONCRETE	@	NUMBER, POUNDS
	STATION	EXIST	EXISTING	HG	MERCURY, HAND GRADE			PG	PRESSURE GAGE	RV	RELIEF VALVE	TOE	THREADED ONE END	Ø	DIAMETER,
CML	CEMENT MORTAR COATED	EXJ	EXPANSION JOINT	HGL	HYDRAULIC GRADE LINE			PH	PHASE	R/W	RIGHT OF WAY	TOL	THREDOLET		PHASE
CML	CEMENT MORTAR LINED	EXP	EXPANSION, EXPOSED	HHV	HEAT HOSE VALVE	MECH	MECHANICAL	PHC	POINT OF HORIZONTAL	RWP	RAINWATER PIPE	TOM	TOP OF MASONRY		
CMU	CONCRETE MASONRY UNIT	EXT	EXTERIOR	HM	HOLLOW METAL	MEE	MISCELLANEOUS ELECTRICAL	PHT	POINT OF HORIZONTAL TANGENT	S	SOUTH, SOLENOID VALVE SLOPE	TOS	TOP OF PIPE		
CND	CONDUIT			H/O/A	HAND-OFF-AUTO										
CNTL	CONTROL	F	FAHRENHEIT, FACE, FUSE(D),	HOR	HORIZONTAL	MFR	MANUFACTURER								

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NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
 LAND USE PERMIT**  
 DECEMBER 2015

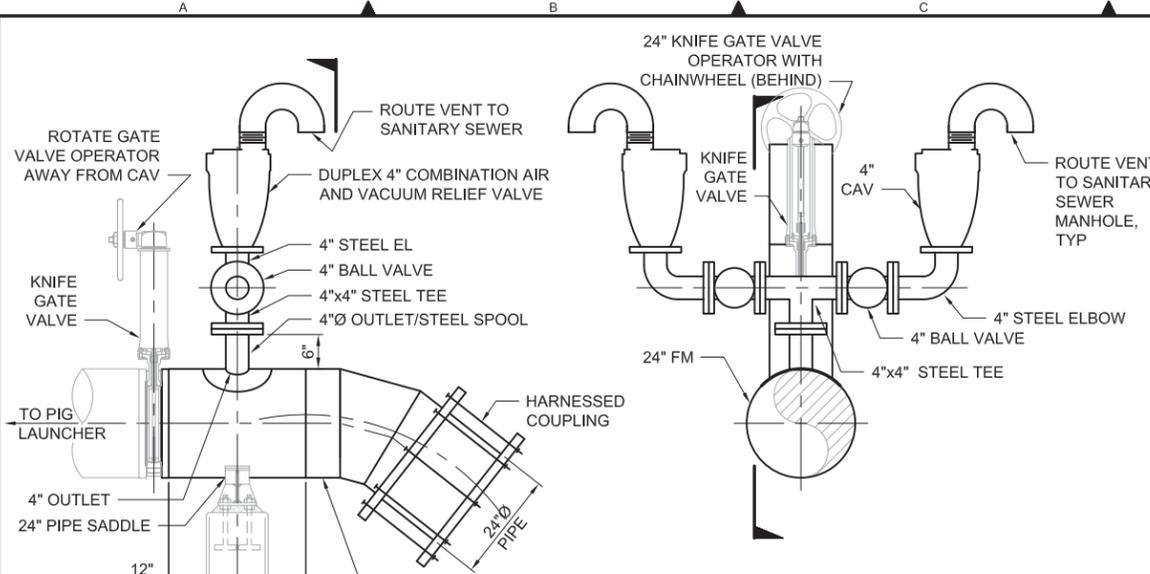


DESIGNED/DRAWN: S. FARNAM	SCALE: NO SCALE
PROJECT ENGINEER: L. STIEGLER	0 REFERENCE 1"
DESIGN APPROVAL: R. GAUFF	FACILITY NUMBER: 330-331
PROJECT ACCEPTANCE: S. NAMINI	CONTRACT NO: C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**GENERAL  
 ABBREVIATIONS**

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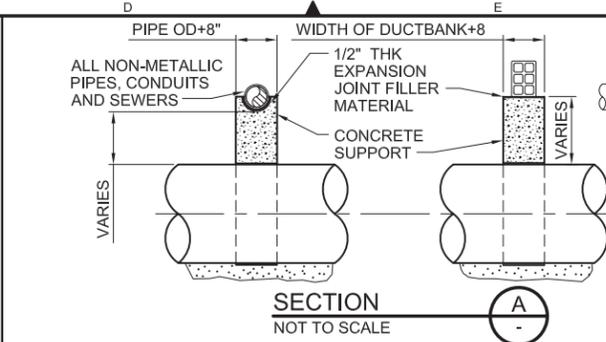


**NOTES:**

- FOR LOCATION OF CAV VALVE PIPE OUTLET SEE PLAN AND PROFILE DRAWINGS.
- THE CAV PIPING AND VALVE SHALL BE 4-INCH SIZE UNLESS OTHERWISE NOTED.
- PROVIDE PIPE OR FITTINGS NECESSARY FOR PROPER VALVE FUNCTION AND TO MEET MANUFACTURERS REQUIREMENTS.
- PROVIDE STEEL PIPE WITH BUTTSTRAP OR STEEL WRAPPER TO LOCATE VALVE, AS INDICATED IN THE DRAWINGS.
- INSTALLATION ON EXISTING 24" FM CAN BE MADE USING A 4" TAP AND COLLAR OR WRAPPER WELDED TO EXISTING STEEL PIPE.
- ORIENT VENT PIPE TO AVOID CONFLICTS WITH OTHER VALVES AND PIPING.

SCHEDULE OF CAV	
<b>SUNSET PUMP STATION</b>	
CAV 331 100A	- NEW 24" FM
CAV 331 100B	- NEW 24" FM
CAV 331 100C	- EXISTING 24" FM
CAV 331 100D	- EXISTING 24" FM
<b>HEATHFIELD PUMP STATION</b>	
CAV 330 100A	- NEW 24" FM
CAV 330 100B	- NEW 24" FM
CAV 330 100C	- EXISTING 24" FM
CAV 330 100D	- EXISTING 24" FM

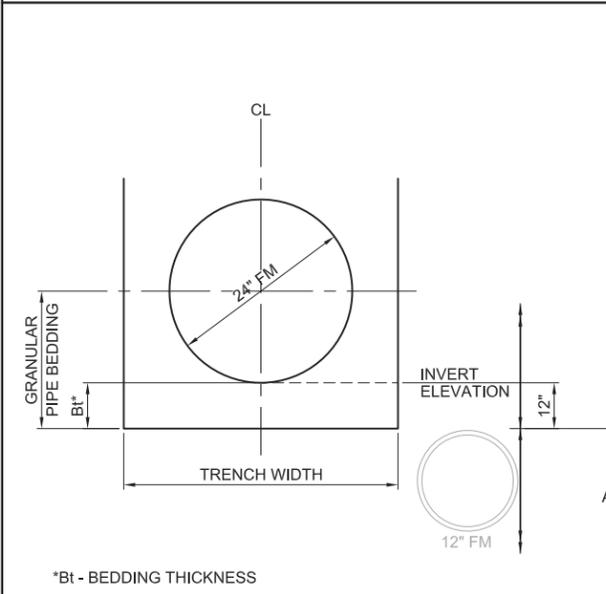
**DUPLUX COMBINATION AIR AND VACUUM RELIEF VALVE ASSEMBLY** C-221



**NOTES:**

- UNDERGROUND UTILITY SUPPORTS ARE TO BE PROVIDED WHEN MINIMUM CLEARANCE OF 12 INCHES CANNOT BE PROVIDED.
- EXISTING PIPE OR DUCT BANK SHALL BE FIRMLY SUPPORTED DURING INSTALLATION OF NEW PIPE AND SUPPORT.
- BACKFILL TO BE BROUGHT UP UNIFORMLY ON BOTH SIDES OF CONC SUPPORT

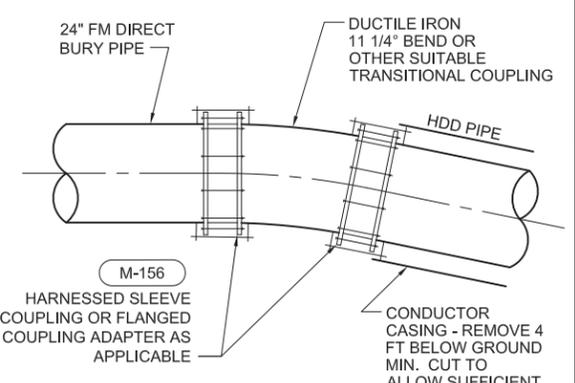
**UTILITY SUPPORT** C-608



**NOTES:**

- WHEN REMOVING PIPE, VOID SHALL BE BACKFILLED WITH BEDDING MATERIAL OR CONTROLLED DENSITY FILL (CDF).
- ABANDONMENT SHALL INCLUDE CUTTING, FILLING OF PIPE, AND CAPPING, IN ACCORDANCE WITH COB S-15.
- APPLIES ONLY TO EXISTING 12" FM PIPING WITHIN TRENCH WIDTH.
- REMOVE 12" FM IF IT FALLS WITHIN THE 12 INCHES HORIZONTAL OF THE 24" FM.
- REMOVAL OF 12" FM SHALL BE COORDINATED WITH CONTRACTOR'S PLAN FOR FIBER OPTIC SYSTEM SHOWN ON DWG C014.

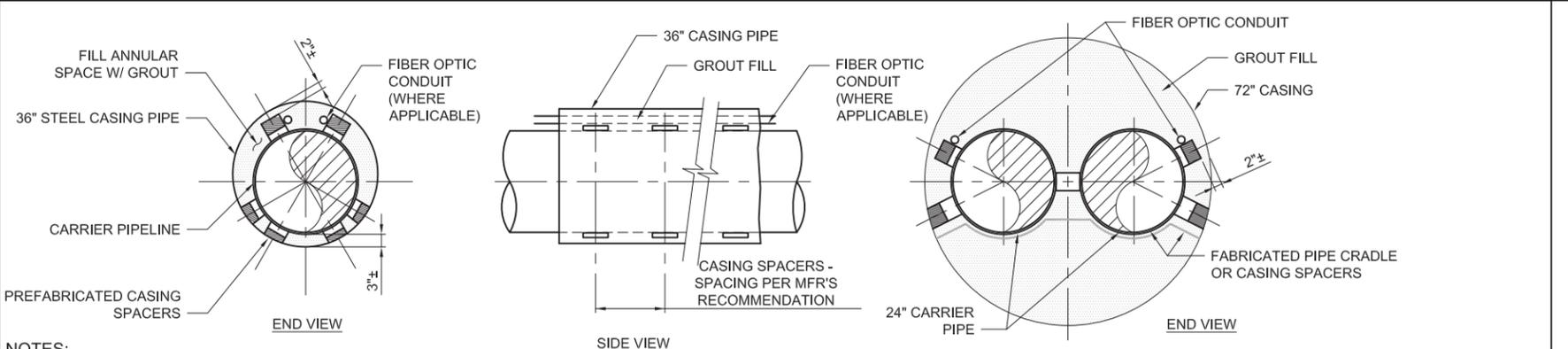
**12" FM PIPING REMOVAL & ABANDONMENT DETAIL** C-900



**NOTES:**

- EXACT COUPLING FOR TRANSITION FITTING TO BE DETERMINED BASED ON PIPE TYPES SELECTED FOR PROJECT.
- ADDITIONAL FITTINGS MAY BE REQUIRED TO ACCOMMODATE OD'S OF SELECTED PIPE.

**HDD/DIRECT BURY PIPE TRANSITION DETAIL** C-906



**NOTES:**

- CASING SPACERS SHALL BE DESIGNED TO SLIP OVER WELD SURFACE.
- ONE SPACER SHALL BE PLACED NOT MORE THAN TWO FEET FROM EACH END OF CASING. ONE SPACER SHALL BE PLACED ON THE SPIGOT END OF EACH PIPE SEGMENT.
- SEE PLAN AND PROFILE DRAWINGS FOR CARRIER PIPE INVERT ELEVATION.
- 72" CROSSING PIPE SPACERS LONGITUDINAL SECTION SIMILAR TO 36" CASING PIPE.

**CASING/CARRIER PIPE DETAIL** C-909

NO	REVISION DESCRIPTION	BY	APVD	DATE

**MWH**

CITY OF BELLEVUE

**CRITICAL AREAS**

**LAND USE PERMIT**

DECEMBER 2015

DESIGNED/DRAWN:  
S. FARNAM

PROJECT ENGINEER:  
L. STIEGLER

DESIGN APPROVAL:  
R. GAUFF

PROJECT ACCEPTANCE:  
S. NAMANI

SCALE:  
NO SCALE

REFERENCE  
0 1"

FACILITY NUMBER:  
330-331

CONTRACT NO:  
C01008C16

DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION

SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE

**CIVIL**

**STANDARD DETAILS 1**

DCN:

DATE:  
DECEMBER 2015

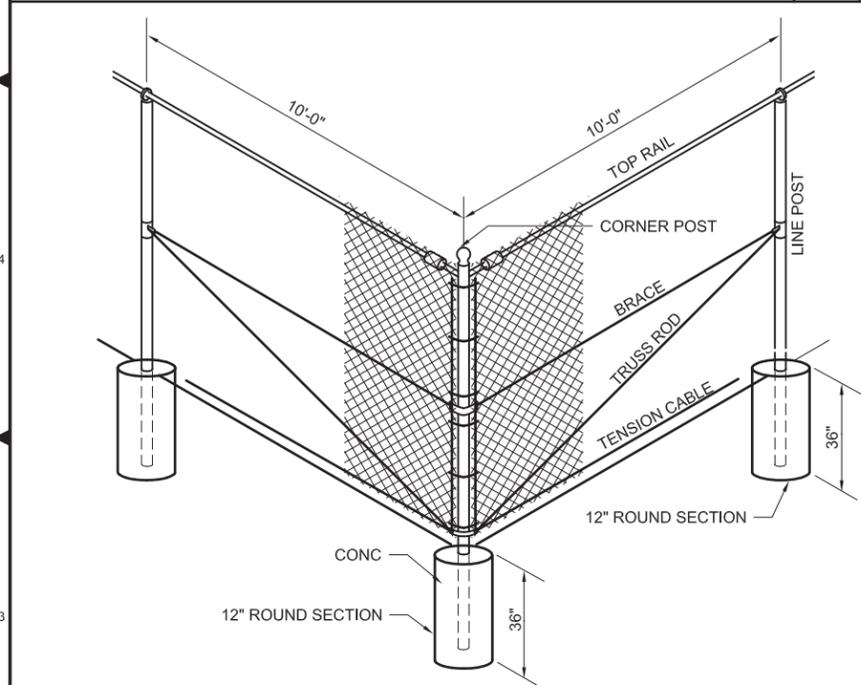
PROJECT FILE NO:  
1038122

DRAWING NO:  
**C002**

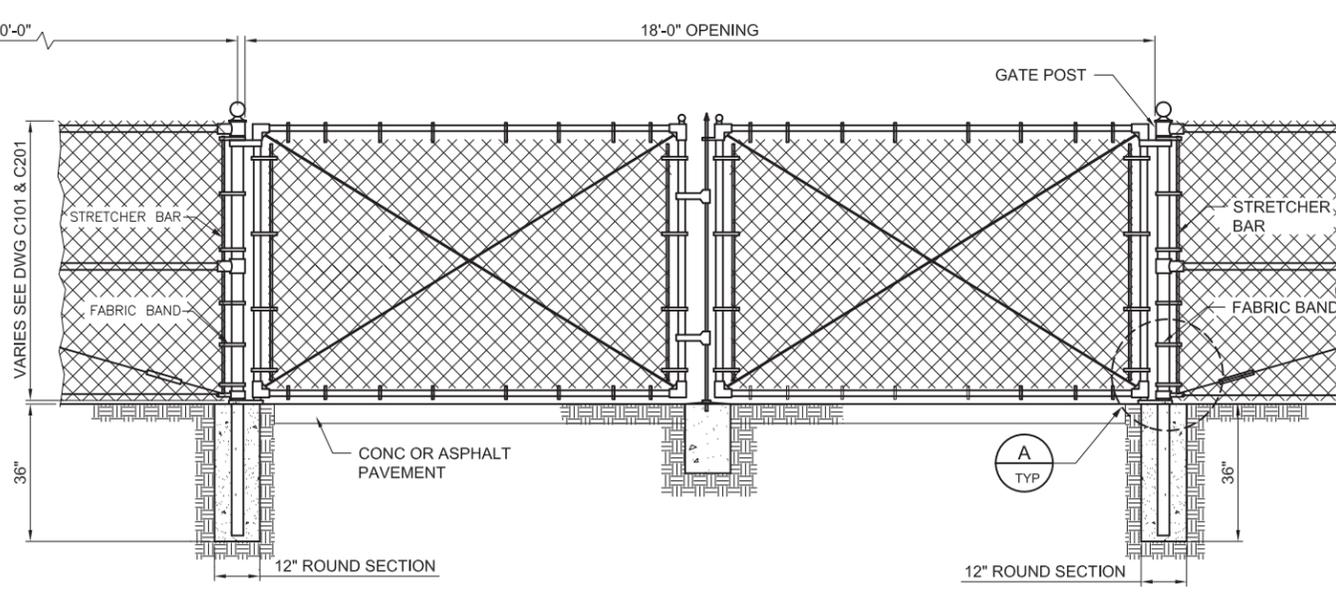
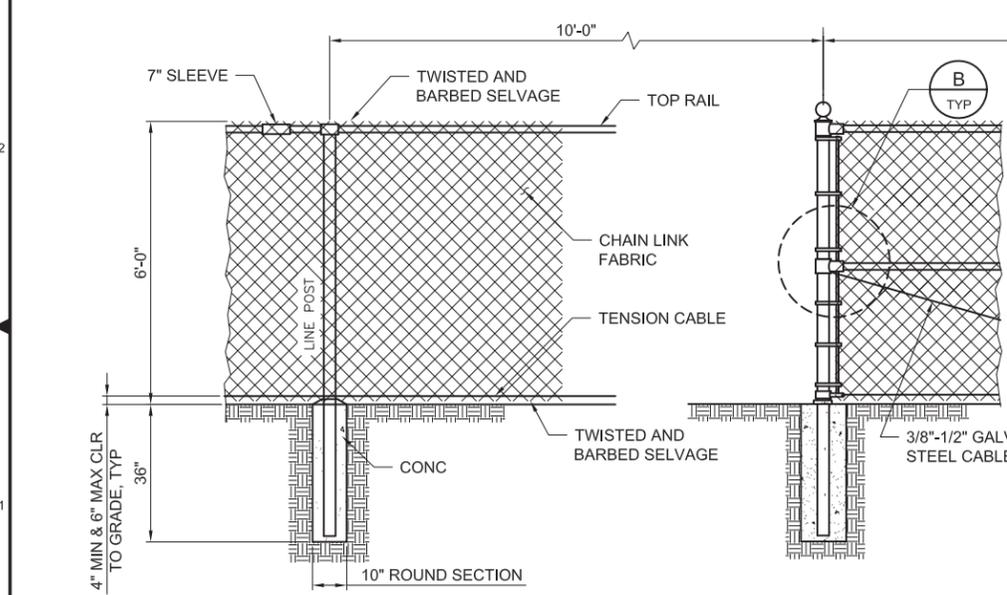
SHT NO 7 / TOTAL 41 REV NO: 0

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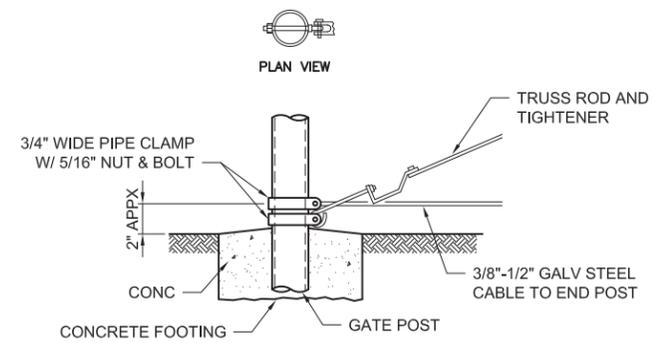
MEMBER												
BRACE OR TOP RAIL			LINE POST				END, CORNER & PULL POST		GATE POST		OPENING	
ROUND		HIGH COLUMN	ROUND		HIGH COLUMN	ROUND		ROUND				
OD	WEIGHT #/FT	SIZE	WEIGHT #/FT	OD	WEIGHT #/FT	OD	WEIGHT #/FT	OD	WEIGHT #/FT			
1-5/8"	2.27			2-3/8"	3.65			2-7/8"	5.79	6-5/8"	18.97	NOT TO EXCEED 20' FOR SINGLE GATE 40' FOR DOUBLE GATE
								2-7/8"	5.79			3'



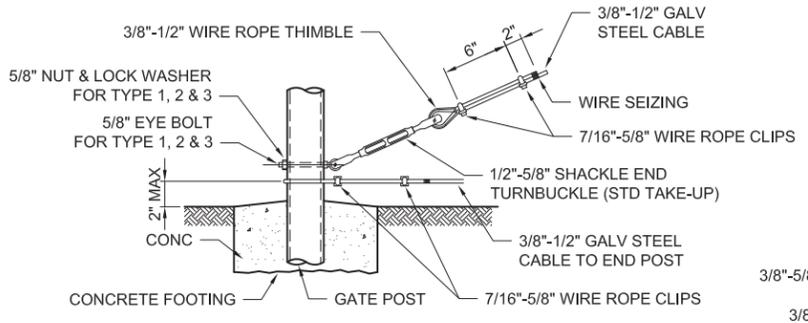
**CORNER BRACING**  
(ALL ANGLES 30 DEGREES AND OVER)



**TYPICAL FENCE AND GATE**

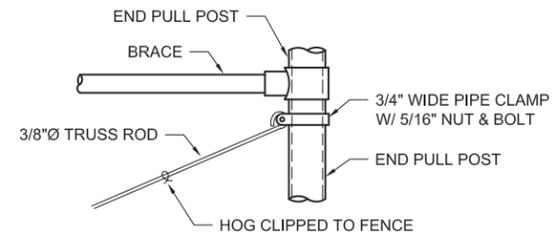


**OPTIONAL BRACE AND TRUSS CONNECTION**



**CABLE FASTENING TO POST BASE**

**DETAIL A**



**TOP CABLE ATTACHMENT END PULL POST**

**DETAIL B**

- NOTES:**
- INSTALL TWO 9'-0" AND TWO 3'-0" GATES AT THE LOCATIONS AS SHOWN ON DWG C201 WITH LOCKING DEVICES.
  - FENCING AT HEATHFIELD PUMP STATION TO INCLUDE PRIVACY FENCE SLATS.

**FENCE DETAILS 020101**

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NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
 LAND USE PERMIT**  
 DECEMBER 2015



DESIGNED/DRAWN:  
 S. FARNAM  
 PROJECT ENGINEER:  
 L. STIEGLER  
 DESIGN APPROVAL:  
 R. GAUFF  
 PROJECT ACCEPTANCE:  
 S. NAMANI

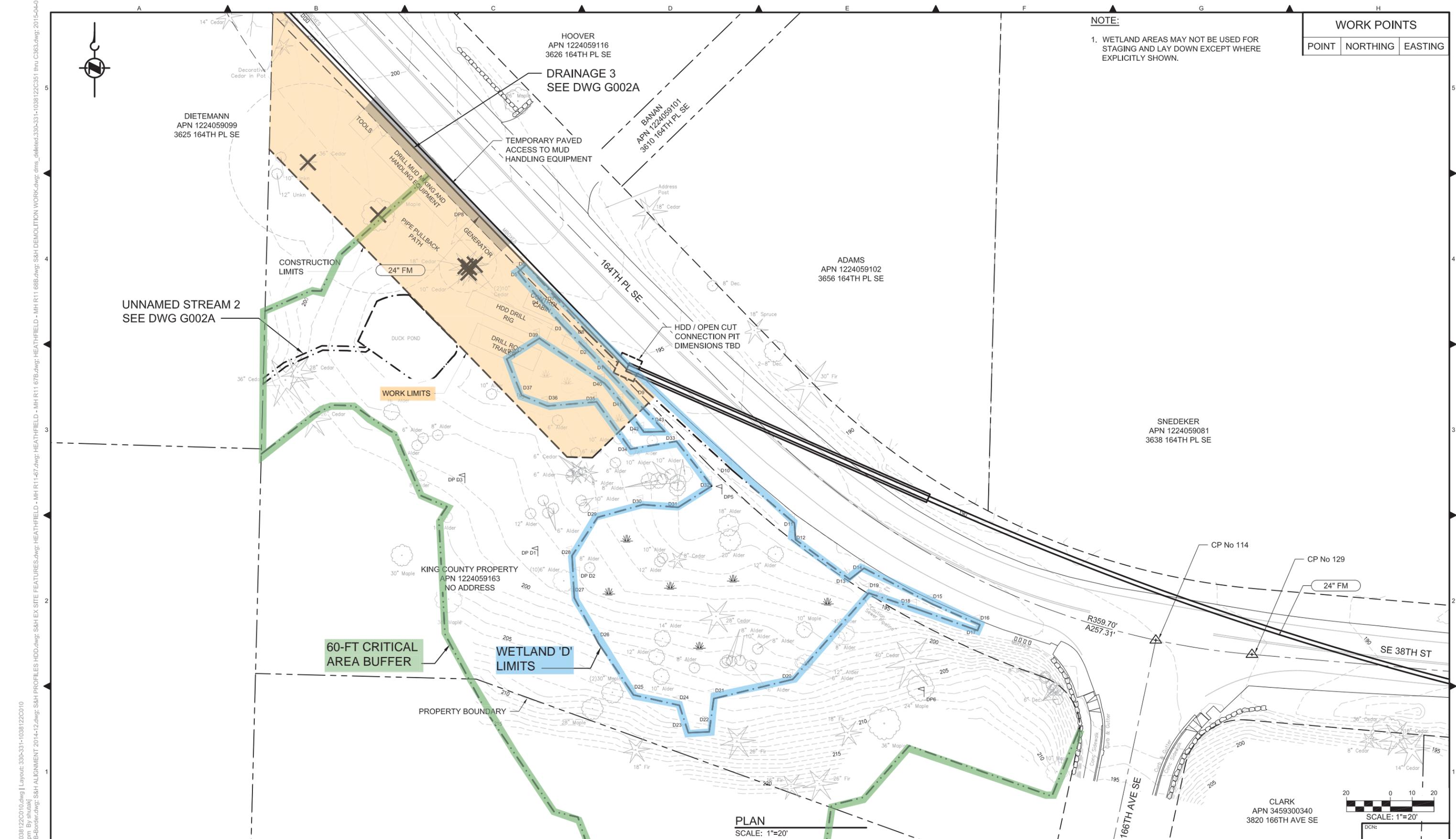
SCALE:  
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 FACILITY NUMBER:  
 330-331  
 CONTRACT NO:  
 C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**CIVIL  
 STANDARD DETAILS 4**

DCN:	
DATE:	DECEMBER 2015
PROJECT FILE NO:	1038122
DRAWING NO:	<b>C005</b>
SHT NO / TOTAL	8 / 41
REV NO:	0





**NOTE:**  
 1. WETLAND AREAS MAY NOT BE USED FOR STAGING AND LAY DOWN EXCEPT WHERE EXPLICITLY SHOWN.

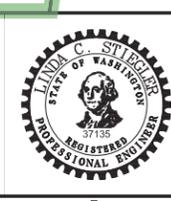
WORK POINTS		
POINT	NORTHING	EASTING

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 IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



**CITY OF BELLEVUE**  
**CRITICAL AREAS**  
**LAND USE PERMIT**  
 DECEMBER 2015



DESIGNED/DRAWN:  
**S. FARNAM**  
 PROJECT ENGINEER:  
**L. STIEGLER**  
 DESIGN APPROVAL:  
**R. GAUFF**  
 PROJECT ACCEPTANCE:  
**S. NAMINI**



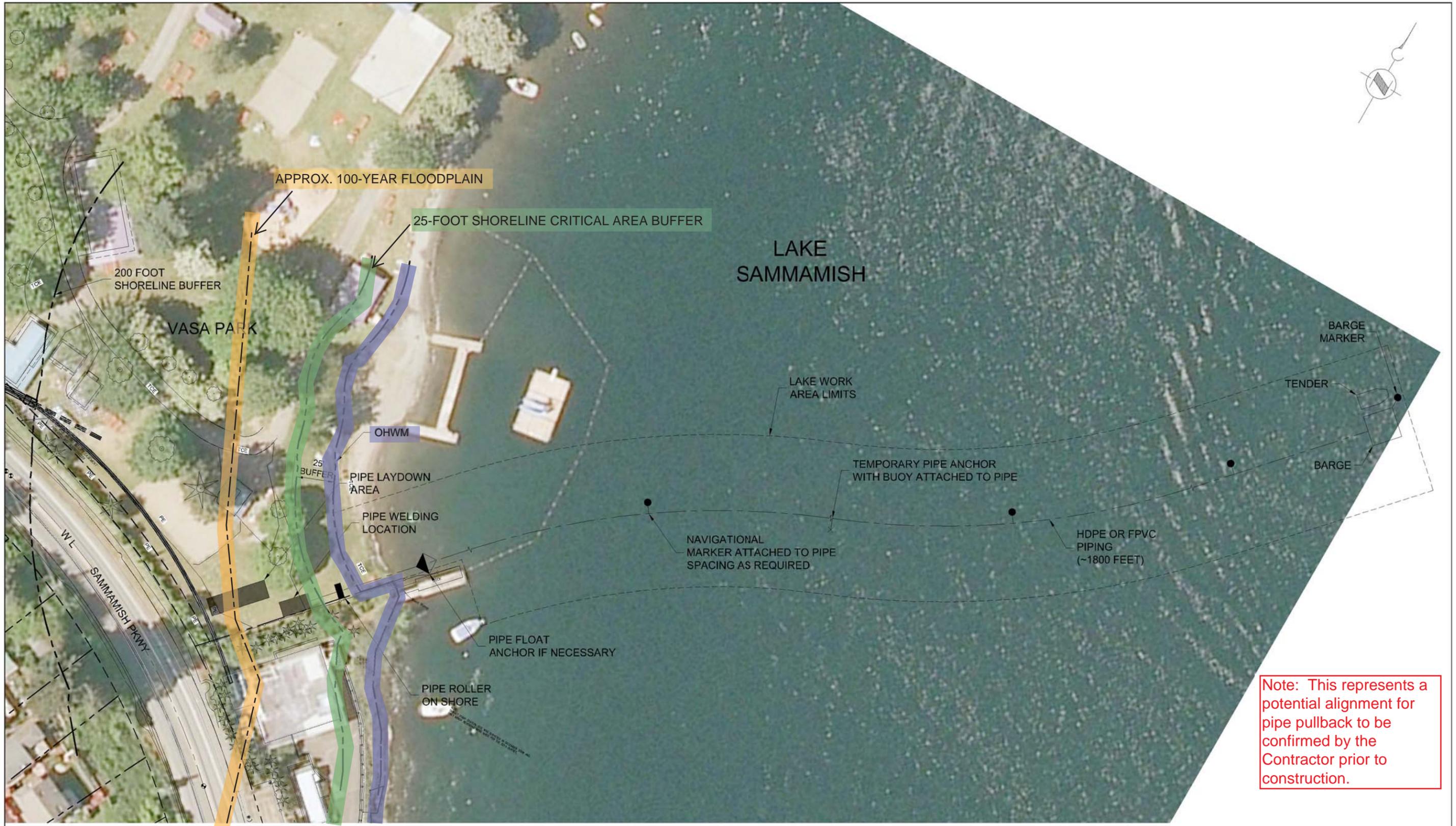
DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
**SUNSET TO HEATHFIELD PUMP STATIONS**  
**AND FORCE MAIN UPGRADE**  
**HDD PULLBACK AREAS**  
**KING COUNTY PROPERTY**

DATE:	DECEMBER 2015
PROJECT FILE NO.:	1038122
DRAWING NO.:	<b>C010</b>
SHT NO / TOTAL	10 / 41
REV NO.:	<b>0</b>



**PLAN**  
 SCALE: 1"=20'



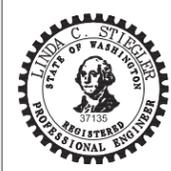


Note: This represents a potential alignment for pipe pullback to be confirmed by the Contractor prior to construction.

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
 LAND USE PERMIT**  
 DECEMBER 2015



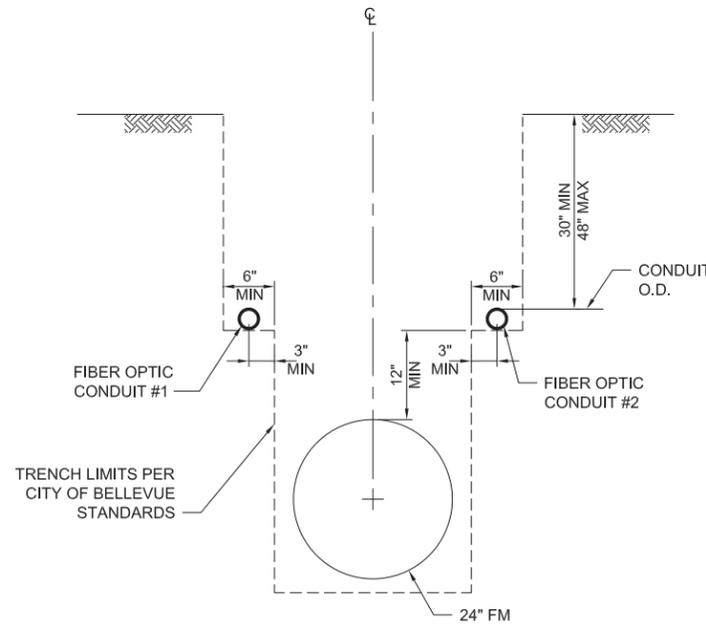
DESIGNED/DRAWN:  
S. FARNAM  
 PROJECT ENGINEER:  
L. STIEGLER  
 DESIGN APPROVAL:  
R. GAUFF  
 PROJECT ACCEPTANCE:  
S. NAMINI

SCALE:  
NO SCALE  
 REFERENCE 1"  
 FACILITY NUMBER:  
330-331  
 CONTRACT NO:  
C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**POTENTIAL HDD PIPE  
 ASSEMBLY AND PULLBACK**

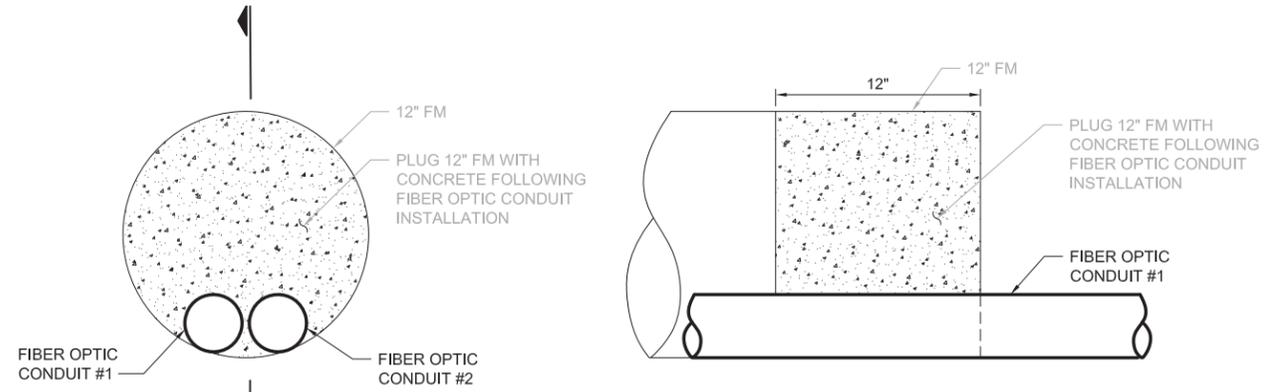
DATE:  
DECEMBER 2015  
 PROJECT FILE NO:  
1038122  
 DRAWING NO:  
**C011A**  
 SHT NO / TOTAL REV NO:  
12 / 41 0



LOOKING UP STATION  
DETAIL 1

**NOTES:**

1. TRENCH BACKFILL AND PIPE BEDDING REQUIREMENTS PER CITY OF BELLEVUE STANDARDS.
2. INSTALL THREE FIBER OPTIC CABLES. TWO IN CONDUIT #1 AND ONE IN CONDUIT #2.
3. SEE DETAIL C-909 FOR FIBER OPTIC CONDUIT/CABLE INSTALLATION IN CASING PIPE.



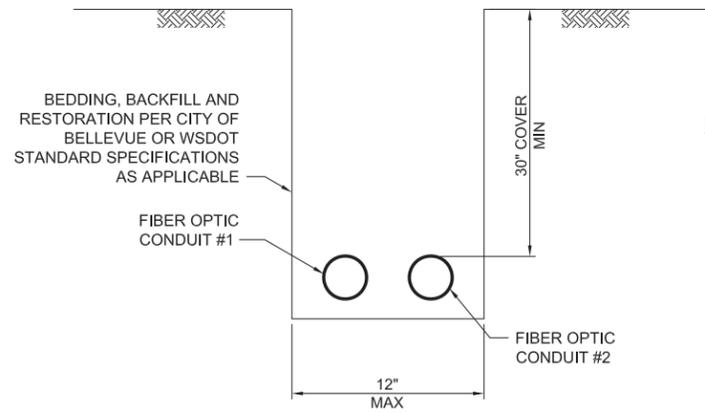
LOOKING UP STATION

DETAIL 2

**NOTES:**

1. EXPOSE, (CUT AND REMOVE) EXISTING 12" FM PIPING AND FITTINGS AS REQUIRED TO INSTALL FIBER OPTIC CONDUITS.
2. INSTALL THREE FIBER OPTIC CABLES, TWO IN CONDUIT #1 AND ONE IN CONDUIT #2.

FIBER OPTIC INSTALLATION SCHEDULE		
FROM	TO	DETAIL
SUNSET PUMP STATION	STA 3+20	1
STA 3+20	STA 4+30, 23' RT	3
STA 4+30, 23' RT	STA 20+60	2
STA 20+60	STA 25+90	1
STA 25+90	STA 26+48	C-909 (DWG C002)
STA 26+48	STA 29+93	1
STA 29+93	STA 32+53	C-909 ( DWG C002)
STA 32+25	HEATHFIELD PUMP STATION	3
HEATHFIELD PUMP STATION	STA 50+25	2
STA 50+25	STA 63+65	1
STA 63+65	MH R11-65B	3



LOOKING UP STATION  
DETAIL 3

**NOTES:**

1. INSTALL THREE FIBER OPTIC CABLES, TWO IN CONDUIT #1 AND ONE IN CONDUIT #2.

C:\pwworking\0167684130-331-1038122C014.dwg | Layout: 330-331-1038122C014  
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NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
LAND USE PERMIT**  
DECEMBER 2015



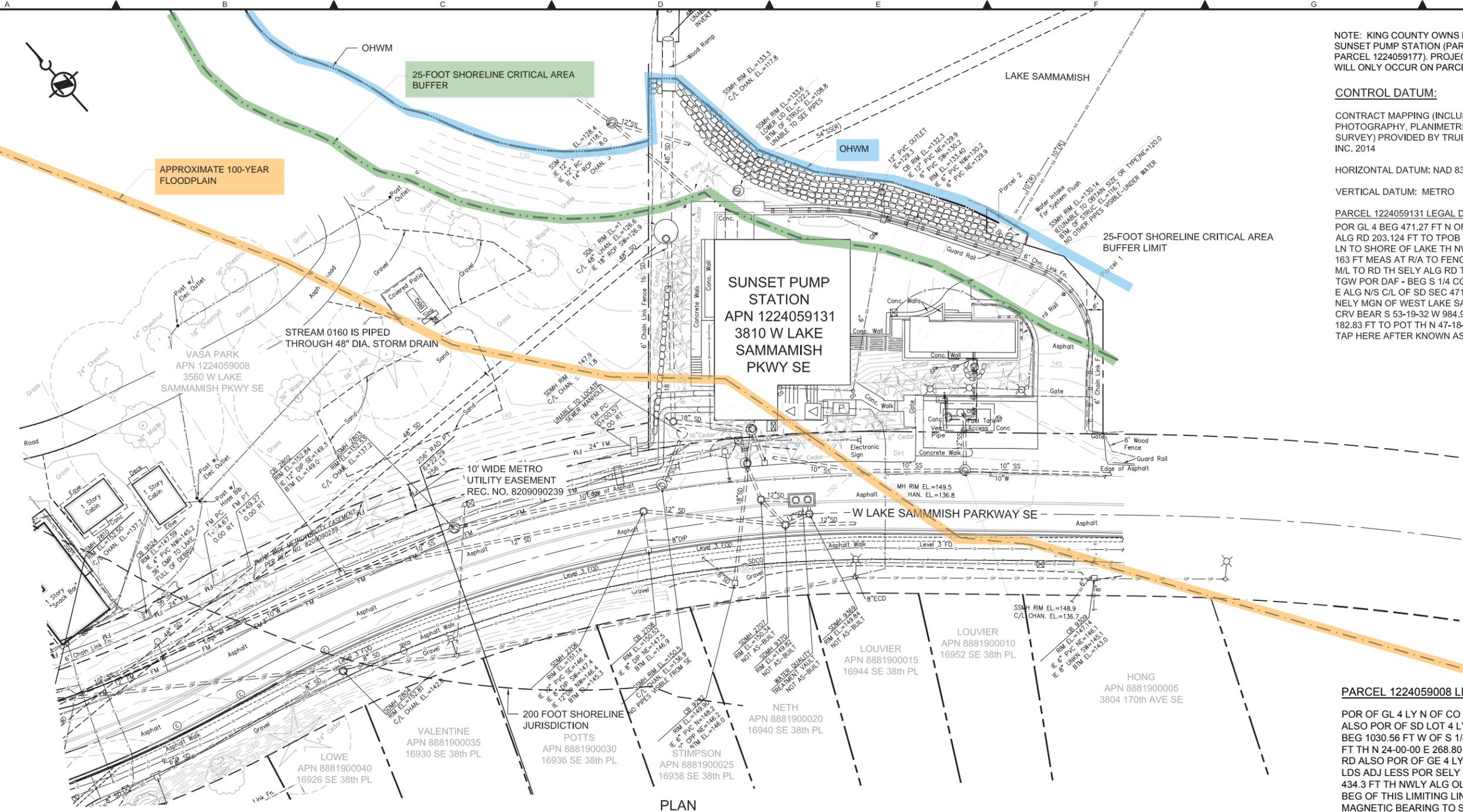
DESIGNED/DRAWN:  
S. FARNAM  
PROJECT ENGINEER:  
L. STIEGLER  
DESIGN APPROVAL:  
R. GAUFF  
PROJECT ACCEPTANCE:  
S. NAMINI

SCALE:  
NO SCALE  
REFERENCE  
1"  
FACILITY NUMBER:  
330-331  
CONTRACT NO:  
C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION  
SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE  
**CIVIL  
FIBER OPTIC CONDUIT  
INSTALLATION DETAILS**

DCN:
DATE: DECEMBER 2015
PROJECT FILE NO: 1038122
DRAWING NO: <b>C014</b>
SHT NO / TOTAL 13 / 41
REV NO: 0



NOTE: KING COUNTY OWNS BOTH PARCELS SHOWN AT SUNSET PUMP STATION (PARCEL 1224059131 AND PARCEL 1224059177). PROJECT ACTIVITIES AT THIS SITE WILL ONLY OCCUR ON PARCEL 1224059131.

CONTROL DATUM:  
CONTRACT MAPPING (INCLUDING AERIAL PHOTOGRAPHY, PLANIMETRIC MAPPING AND GROUND SURVEY) PROVIDED BY TRUE NORTH LAND SURVEYING, INC. 2014

HORIZONTAL DATUM: NAD 83(NSRS2007)  
VERTICAL DATUM: METRO

PARCEL 1224059131 LEGAL DESCRIPTION  
POR GL 4 BEG 471.27 FT N OF S 1/4 COR OF SEC TH NWLY ALG RD 203.124 FT TO TPOB TH N 42-05-16 E ALG FENCE LN TO SHORE OF LAKE TH NWLY ALG SHORE LN TO PT 163 FT MEAS AT R/A TO FENCE LN TH S 42-05-16 W 137 FT ML TO RD TH SELY ALG RD TO TPOB TGW SH LDS ADJ TGW POR DAF - BEG S 1/4 COR OF SD SEC TH N 01-33-28 E ALG N/S C/L OF SD SEC 471.47 FT TAP ON A CRV OF NELY MGN OF WEST LAKE SAMMAMISH BLVD CTR SD CRV BEAR S 53-19-32 W 984.93 FT TH NWLY ALG SD MGN 182.83 FT TO POT TH N 47-18-35 W ALG SD MGN 19.86 FT TAP HERE AFTER KNOWN AS PT A & TPOB TH N 42-02-37

PARCEL 1224059008 LEGAL DESCRIPTION  
POR OF GL 4 LY N OF CO RD & W OF SHORELINE RD ALSO POR OF SD LOT 4 LY S OF CO RD & W OF A LN BEG 1030.56 FT W OF S 1/4 COR TH N 06-00-00 E 351.40 FT TH N 24-00-00 E 268.80 FT TH N 03-33-18 W TO CO RD ALSO POR OF GE 4 LY E OF SHORELINE RD & SH LDS ADJ LESS POR SELY OF A LN BEG S 1/4 COR TH N 434.3 FT TH NWLY ALG OLD CO RD 201 FT TO TRUE BEG OF THIS LIMITING LINE TH N 10-25-00 W MAGNETIC BEARING TO SHORE OF LAKE LESS FOLG INC SH LDS ADJ BEG 471.27 FT N OF S 1/4 COR OF SEC TH NWLY ALG RD 203.124 FT TO TPOB TH N 42-05-16 E ALG FENCE LN TO SHORE OF LAKE TH NWLY ALG SHORE LN TO PT 163 FT MEAS AT R/A TO FENCE LN TH S 4E-05-16 W 137 FT ML TO RD TH SELY ALG RD TO TPOB LESS POR LY WITHIN FOLG - BEG S 1/4 COR OF SD SEC TH N 01-33-28 E ALG N/S C/L OF SD SEC 471.47 FT TAP ON A CRV OF NELY MGN OF WEST LAKE SAMMAMISH BLVD CTR SD CRV BEARS S 53-19-32 W 984.93 FT TH NWLY ALG SD MGN 182.83 FT TO POT TH N 47-18-35 W ALG SD MGN 19.86 FT TO TPOB TH N 42-02-37 E 56.11 FT TH S 00-32-37 W 9.06 FT TH S 42-02-37 W 49.39 FT TAP ON NELY MGN OF SD BLVD TH N 47-18-35 W ALG SD MGN 6 FT TO TPOB CLASSIFIED AS "OPEN SPACE" OPEN SPACE LAND PURSUANT TO RCW 84.34.050

PLAN  
SCALE: 1"=20'

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 IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE

	CITY OF BELLEVUE <b>CRITICAL AREAS          LAND USE PERMIT</b> DECEMBER 2015		DESIGNED/DRAWN: S. FARNAM	SCALE: 1"=20' REFERENCE 		DEPARTMENT OF NATURAL RESOURCES & PARKS WASTEWATER TREATMENT DIVISION SUNSET AND HEATHFIELD PUMP STATIONS AND FORCE MAIN UPGRADE	DATE: DECEMBER 2015
			PROJECT ENGINEER: L. STIEGLER	FACILITY NUMBER: 331			PROJECT FILE NO: 1038122
			DESIGN APPROVAL: R. GAUFF	CONTRACT NO: C01008C16	<b>PROJECT          TOPOGRAPHIC SURVEY</b>		DRAWING NO: <b>C020</b>
			PROJECT ACCEPTANCE: S. NAMANI		SHT NO / TOTAL 14 / 41		REV NO: <b>0</b>



**CONTROL DATUM:**

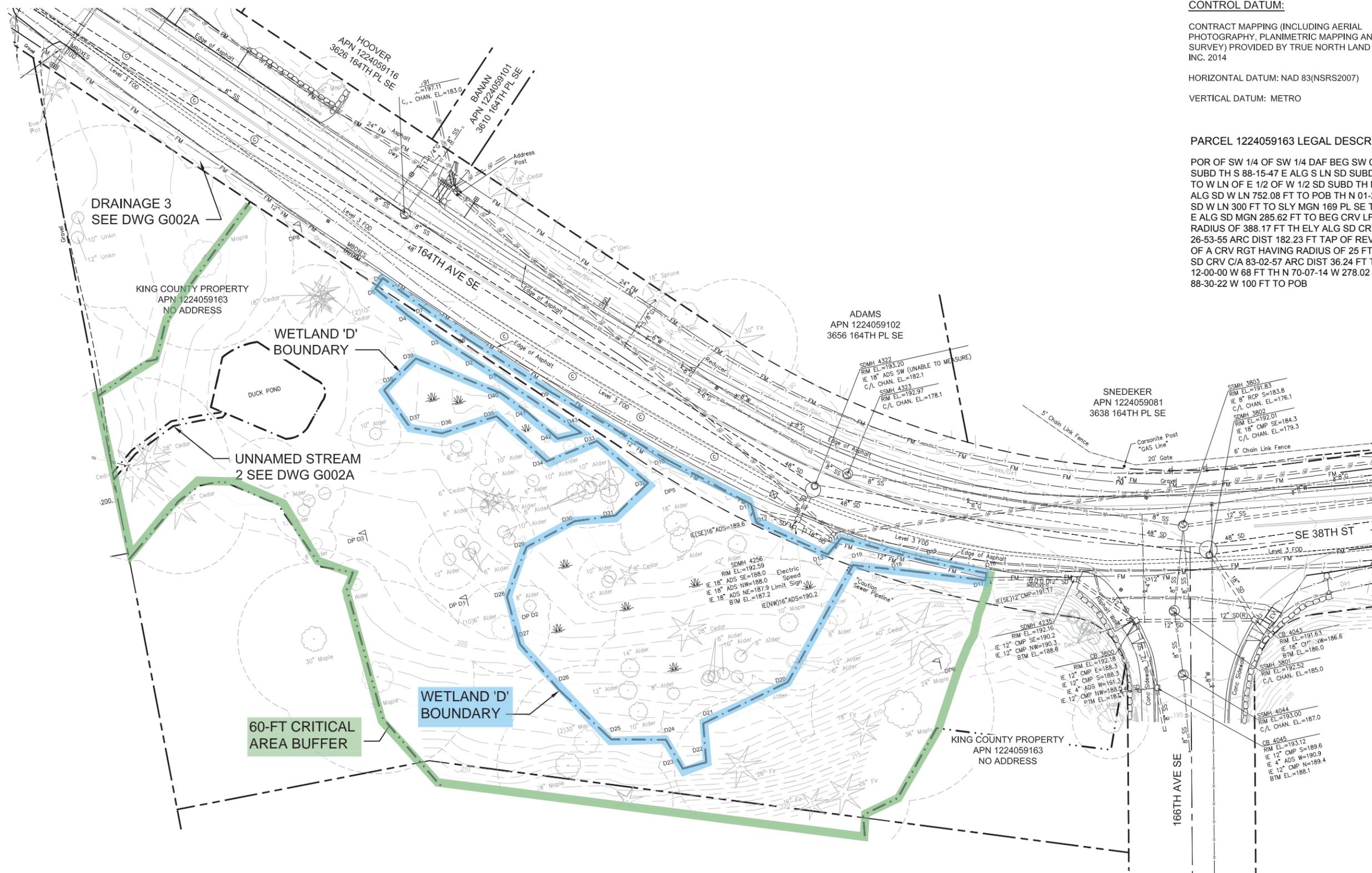
CONTRACT MAPPING (INCLUDING AERIAL PHOTOGRAPHY, PLANIMETRIC MAPPING AND GROUND SURVEY) PROVIDED BY TRUE NORTH SURVEYING, INC. 2014

HORIZONTAL DATUM: NAD 83(NSRS2007)

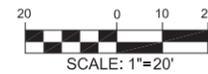
VERTICAL DATUM: METRO

**PARCEL 1224059163 LEGAL DESCRIPTION**

POR OF SW 1/4 OF SW 1/4 DAF BEG SW COR SD SUBD TH S 88-15-47 E ALG S LN SD SUBD 331.74 FT TO W LN OF E 1/2 OF W 1/2 SD SUBD TH N 01-29-28 E ALG SD W LN 752.08 FT TO POB TH N 01-29-38 E ALG SD W LN 300 FT TO SLY MGN 169 PL SE TH S 44-09-02 E ALG SD MGN 285.62 FT TO BEG CRV LFT HAVING RADIUS OF 388.17 FT TH ELY ALG SD CRV C/A OF 26-53-55 ARC DIST 182.23 FT TAP OF REV CRV & BEG OF A CRV RGT HAVING RADIUS OF 25 FT S ELY ALG SD CRV C/A 83-02-57 ARC DIST 36.24 FT TPOB TH S 12-00-00 W 68 FT TH N 70-07-14 W 278.02 FT TH N 88-30-22 W 100 FT TO POB



**PLAN**  
SCALE: 1"=20'



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IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
LAND USE PERMIT**  
DECEMBER 2015



DESIGNED/DRAWN:  
**S. FARNAM**  
PROJECT ENGINEER:  
**L. STIEGLER**  
DESIGN APPROVAL:  
**R. GAUFF**  
PROJECT ACCEPTANCE:  
**S. NAMINI**

SCALE:  
**1"=20'**  
0 REFERENCE 1"  
FACILITY NUMBER:  
**331**  
CONTRACT NO:  
**C01008C16**



DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION  
SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE  
**PROJECT  
TOPOGRAPHIC SURVEY**

DCN:	DATE: <b>DECEMBER 2015</b>
PROJECT FILE NO: <b>1038122</b>	DRAWING NO: <b>C023</b>
SHT NO / TOTAL <b>15 / 41</b>	REV NO: <b>0</b>



**CONTROL DATUM:**

CONTRACT MAPPING (INCLUDING AERIAL PHOTOGRAPHY, PLANIMETRIC MAPPING AND GROUND SURVEY) PROVIDED BY TRUE NORTH LAND SURVEYING, INC. 2014

HORIZONTAL DATUM: NAD 83(NSRS2007)

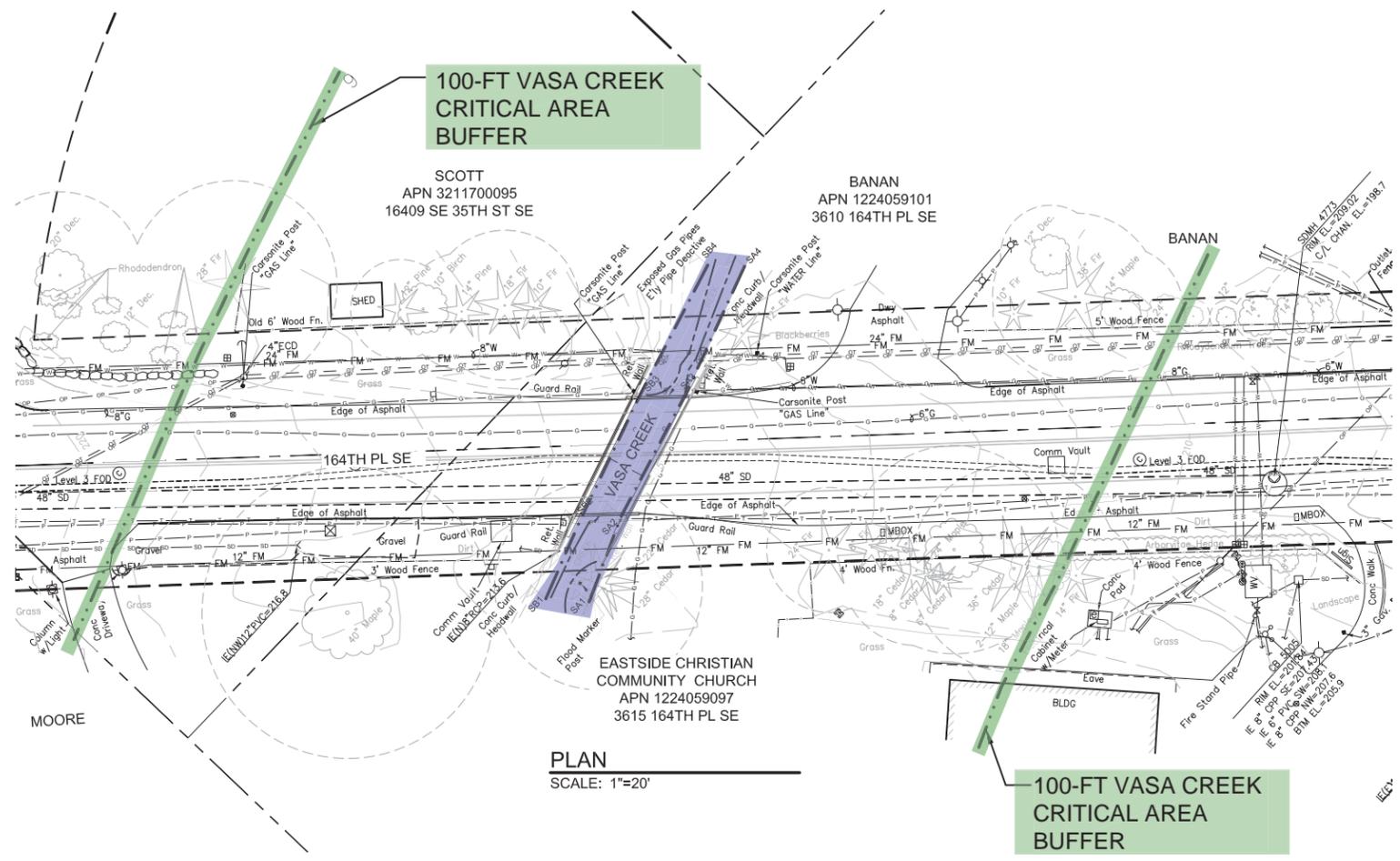
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(TO CONVERT FROM METRO TO NAVD88 SUBTRACT 96.43' FROM METRO ELEVATION)

TO CONVERT FROM NAVD29 TO NAVD47, ADD 0.09 FEET.

TO CONVERT FROM NAVD47 TO METRO, ADD 100.0 FEET.

**LEGAL DESCRIPTION**

NO LEGAL DESCRIPTION; PROJECT AREA LOCATED WITHIN CITY OF BELLEVUE RIGHTS-OF-WAY



C:\pwworking\0269162\330-331-1038122\020\1mo\_C029.dwg | Layout: 330-331-1038122C024  
 PLOTTED: Dec 11, 2015 04:40:00pm By: shuakj  
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 IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
LAND USE PERMIT**  
DECEMBER 2015



DESIGNED/DRAWN:  
S. FARNAM  
PROJECT ENGINEER:  
L. STIEGLER  
DESIGN APPROVAL:  
R. GAUFF  
PROJECT ACCEPTANCE:  
S. NAMANI

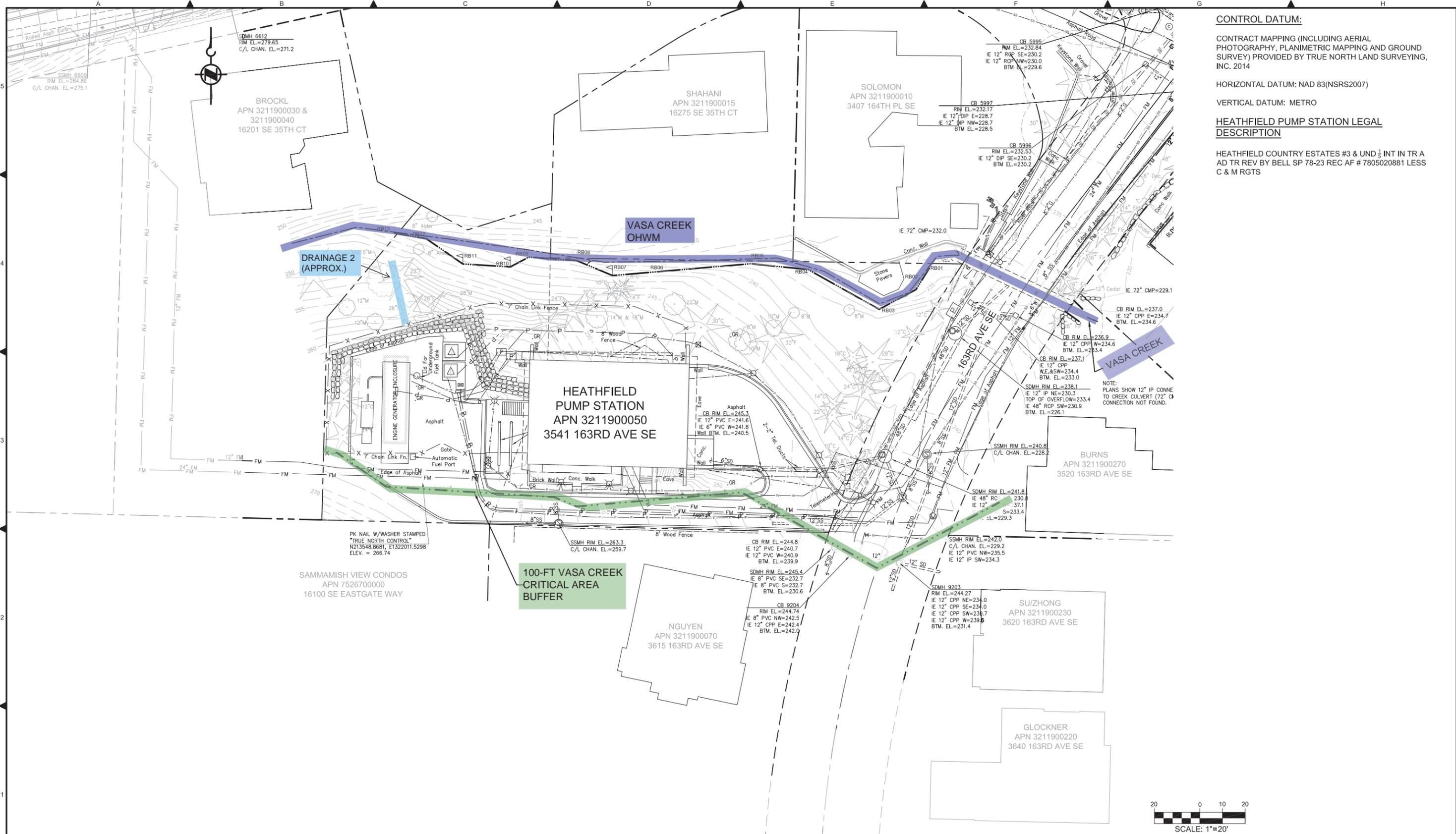
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0 REFERENCE 1"  
FACILITY NUMBER:  
331  
CONTRACT NO:  
C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION  
SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE

**PROJECT  
TOPOGRAPHIC SURVEY**

DCN:	
DATE:	DECEMBER 2015
PROJECT FILE NO.:	1038122
DRAWING NO.:	<b>C024</b>
SHT NO / TOTAL	16 / 41
REV NO.:	<b>0</b>



**CONTROL DATUM:**

CONTRACT MAPPING (INCLUDING AERIAL PHOTOGRAPHY, PLANIMETRIC MAPPING AND GROUND SURVEY) PROVIDED BY TRUE NORTH LAND SURVEYING, INC. 2014

HORIZONTAL DATUM: NAD 83(NSRS2007)

VERTICAL DATUM: METRO

**HEATHFIELD PUMP STATION LEGAL DESCRIPTION**

HEATHFIELD COUNTRY ESTATES #3 & UND 1/3 INT IN TR A AD TR REV BY BELL SP 78-23 REC AF # 7805020881 LESS C & M RGTS



**PLAN**  
SCALE: 1"=20'

C:\pwworking\0269162\330-331-1038122\020\110\_C026.dwg | Layout: 330-331-1038122\020  
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 IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
 LAND USE PERMIT**  
 DECEMBER 2015



DESIGNED/DRAWN:  
S. FARNAM  
 PROJECT ENGINEER:  
L. STIEGLER  
 DESIGN APPROVAL:  
R. GAUFF  
 PROJECT ACCEPTANCE:  
S. NAMANI

SCALE:  
1"=20'  
 REFERENCE  
 FACILITY NUMBER:  
330  
 CONTRACT NO:  
C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE

**PROJECT  
 TOPOGRAPHIC SURVEY**

DCN:
DATE: DECEMBER 2015
PROJECT FILE NO: 1038122
DRAWING NO: <b>C026</b>
SHT NO / TOTAL 17 / 41
REV NO: <b>0</b>



**CONTROL DATUM:**

CONTRACT MAPPING (INCLUDING AERIAL PHOTOGRAPHY, PLANIMETRIC MAPPING AND GROUND SURVEY) PROVIDED BY TRUE NORTH LAND SURVEYING, INC. 2014

HORIZONTAL DATUM: NAD 83(NSRS2007)

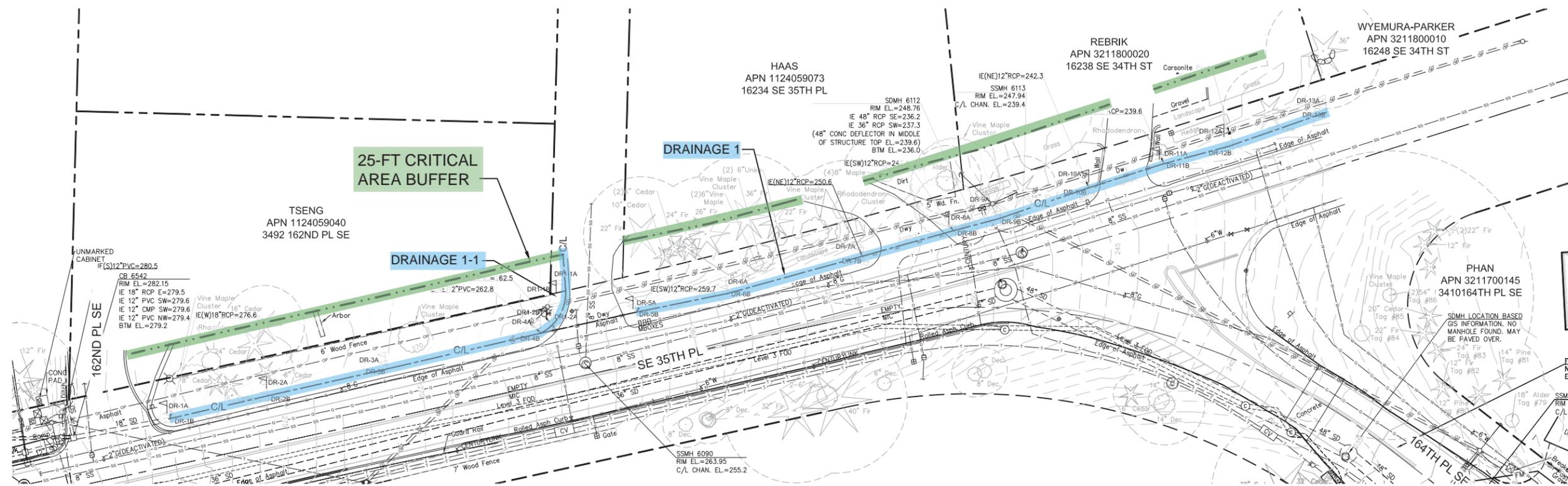
VERTICAL DATUM: METRO  
(TO CONVERT TO FROM METRO TO NAVD88 SUBTRACT 96.43' FROM METRO ELEVATION)

TO CONVERT FROM NAVD29 TO NAVD47, ADD 0.09 FEET.

TO CONVERT FROM NAVD47 TO METRO, ADD 100.0 FEET.

**LEGAL DESCRIPTION**

NO LEGAL DESCRIPTION; PROJECT AREA LOCATED WITHIN CITY OF BELLEVUE RIGHTS-OF-WAY



PLAN  
SCALE: 1"=20'

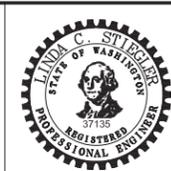


C:\pwworking\02691629\330-331-1038122\020\1m\ C027.dwg | Layout: 330-331-1038122\027  
 PLOTTED: Dec 11, 2015 04:45:08pm By: shuakj  
 XREFS: SunsetHeathfield-Daize-TB-Border.dwg; S&H EX SITE FEATURES.dwg; S&H EX GEN FUEL STORAGE UPGRADES.dwg; 2015-04-01 J126001.dwg; FEMA Floodplain.dwg  
 IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
LAND USE PERMIT**  
DECEMBER 2015



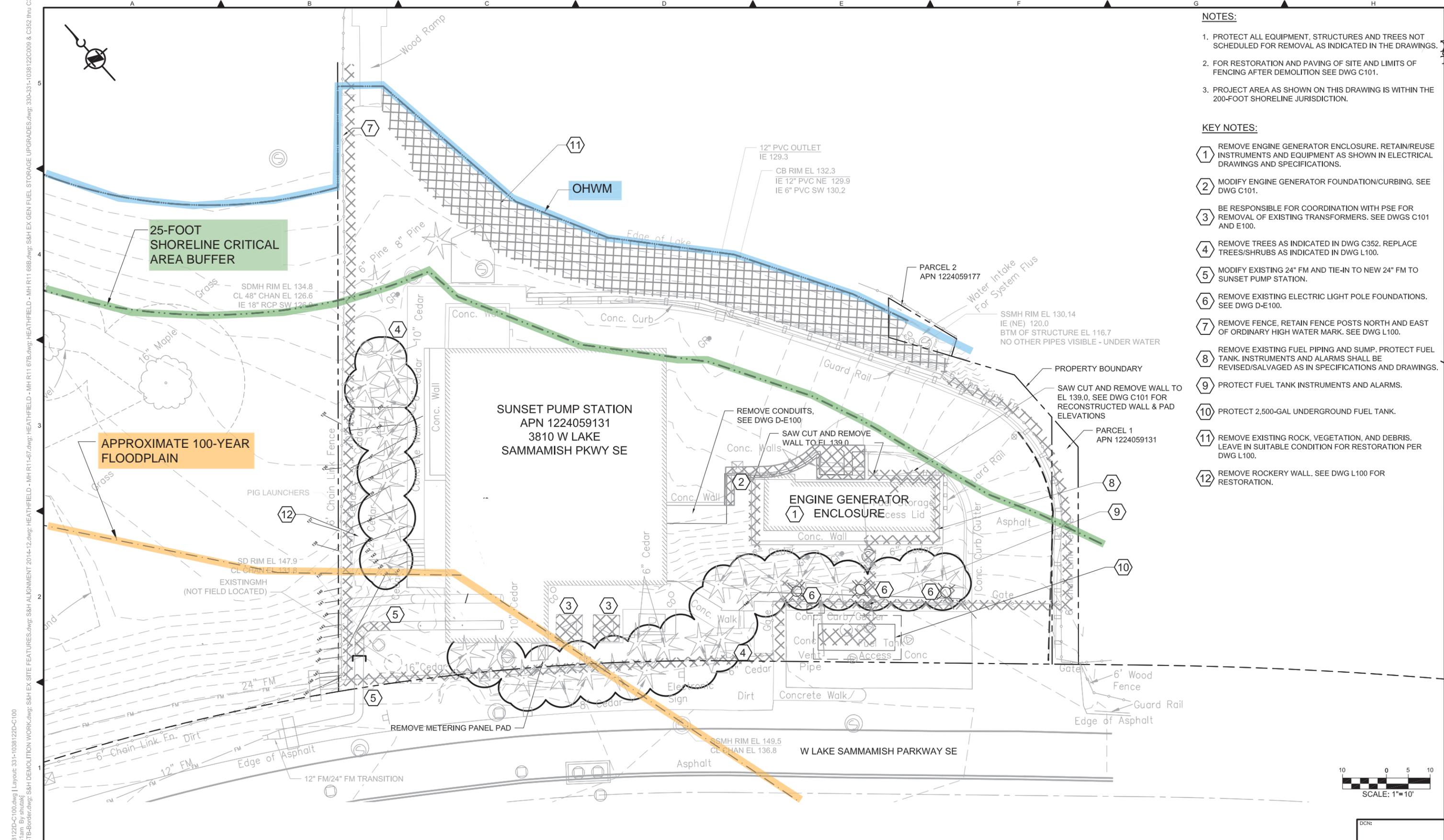
DESIGNED/DRAWN:  
S. FARNAM  
PROJECT ENGINEER:  
L. STIEGLER  
DESIGN APPROVAL:  
R. GAUFF  
PROJECT ACCEPTANCE:  
S. NAMINI

SCALE:  
1"=20'  
0 REFERENCE 1"  
FACILITY NUMBER:  
330  
CONTRACT NO:  
C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION  
SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE  
**PROJECT  
TOPOGRAPHIC SURVEY**

DCN:
DATE: DECEMBER 2015
PROJECT FILE NO: 1038122
DRAWING NO: <b>C027</b>
SHT NO / TOTAL 18 / 41
REV NO: 0



- NOTES:**
1. PROTECT ALL EQUIPMENT, STRUCTURES AND TREES NOT SCHEDULED FOR REMOVAL AS INDICATED IN THE DRAWINGS.
  2. FOR RESTORATION AND PAVING OF SITE AND LIMITS OF FENCING AFTER DEMOLITION SEE DWG C101.
  3. PROJECT AREA AS SHOWN ON THIS DRAWING IS WITHIN THE 200-FOOT SHORELINE JURISDICTION.

- KEY NOTES:**
- 1 REMOVE ENGINE GENERATOR ENCLOSURE. RETAIN/REUSE INSTRUMENTS AND EQUIPMENT AS SHOWN IN ELECTRICAL DRAWINGS AND SPECIFICATIONS.
  - 2 MODIFY ENGINE GENERATOR FOUNDATION/CURBING. SEE DWG C101.
  - 3 BE RESPONSIBLE FOR COORDINATION WITH PSE FOR REMOVAL OF EXISTING TRANSFORMERS. SEE DWGS C101 AND E100.
  - 4 REMOVE TREES AS INDICATED IN DWG C352. REPLACE TREES/SHRUBS AS INDICATED IN DWG L100.
  - 5 MODIFY EXISTING 24" FM AND TIE-IN TO NEW 24" FM TO SUNSET PUMP STATION.
  - 6 REMOVE EXISTING ELECTRIC LIGHT POLE FOUNDATIONS. SEE DWG D-E100.
  - 7 REMOVE FENCE, RETAIN FENCE POSTS NORTH AND EAST OF ORDINARY HIGH WATER MARK. SEE DWG L100.
  - 8 REMOVE EXISTING FUEL PIPING AND SUMP. PROTECT FUEL TANK. INSTRUMENTS AND ALARMS SHALL BE REVISED/SALVAGED AS IN SPECIFICATIONS AND DRAWINGS.
  - 9 PROTECT FUEL TANK INSTRUMENTS AND ALARMS.
  - 10 PROTECT 2,500-GAL UNDERGROUND FUEL TANK.
  - 11 REMOVE EXISTING ROCK, VEGETATION, AND DEBRIS. LEAVE IN SUITABLE CONDITION FOR RESTORATION PER DWG L100.
  - 12 REMOVE ROCKERY WALL. SEE DWG L100 FOR RESTORATION.

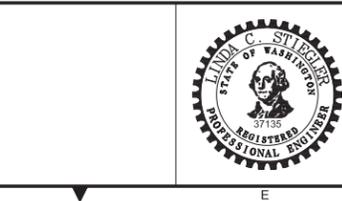


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 IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
 LAND USE PERMIT**  
 DECEMBER 2015



DESIGNED/DRAWN:  
 S. FARNAM  
 PROJECT ENGINEER:  
 L. STIEGLER  
 DESIGN APPROVAL:  
 R. GAUFF  
 PROJECT ACCEPTANCE:  
 S. NAMANI

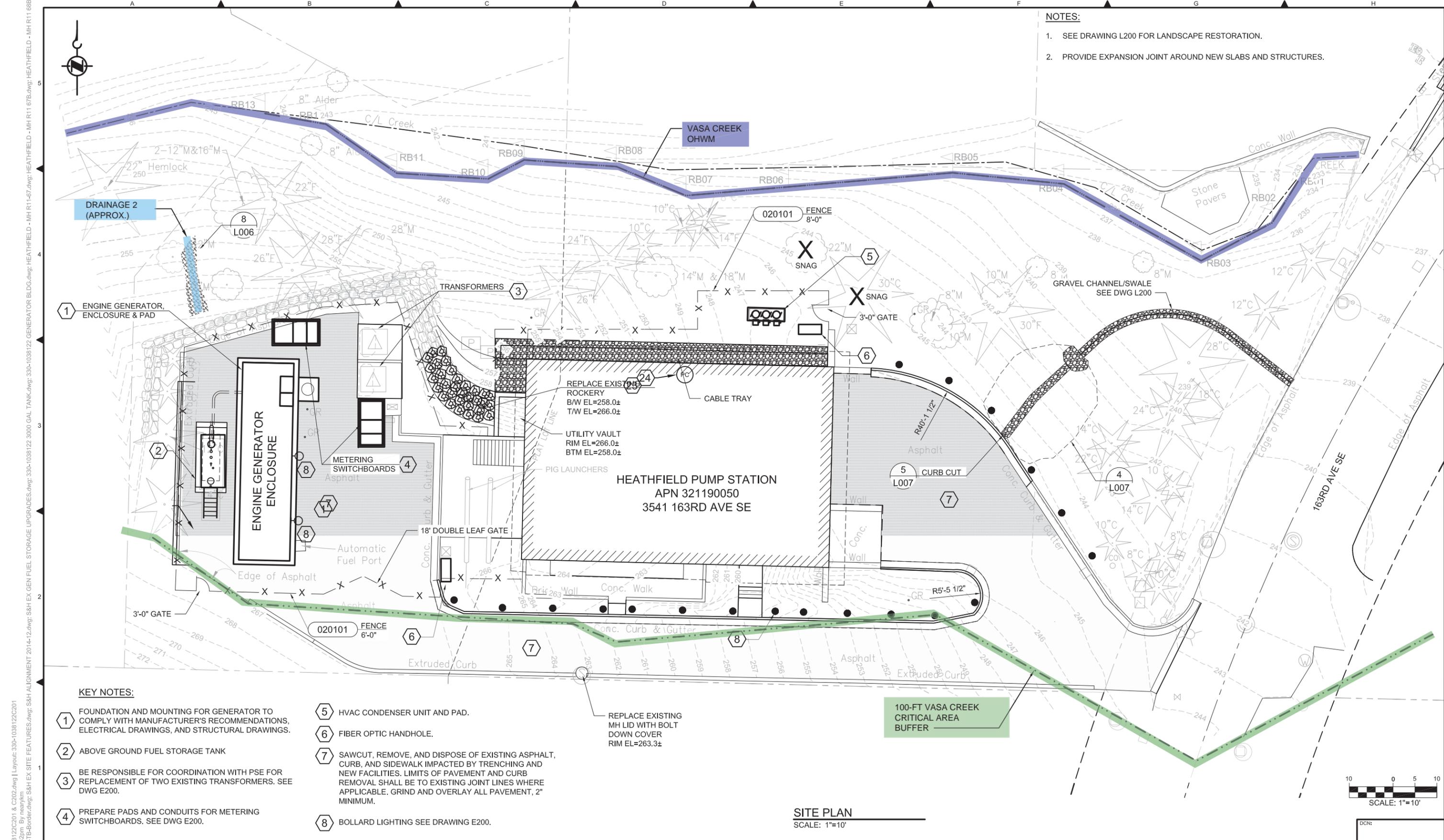
SCALE:  
 1"=10'  
 REFERENCE  
 FACILITY NUMBER:  
 331  
 CONTRACT NO. C01008C16

DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**SUNSET  
 CIVIL DEMOLITION PLAN**

DCN:	DATE: DECEMBER 2015
PROJECT FILE NO: 1038122	DRAWING NO: <b>D-C100</b>
SHT NO / TOTAL 19 / 41	REV NO: <b>0</b>







- NOTES:**
- SEE DRAWING L200 FOR LANDSCAPE RESTORATION.
  - PROVIDE EXPANSION JOINT AROUND NEW SLABS AND STRUCTURES.

**KEY NOTES:**

- 1 FOUNDATION AND MOUNTING FOR GENERATOR TO COMPLY WITH MANUFACTURER'S RECOMMENDATIONS, ELECTRICAL DRAWINGS, AND STRUCTURAL DRAWINGS.
- 2 ABOVE GROUND FUEL STORAGE TANK
- 3 BE RESPONSIBLE FOR COORDINATION WITH PSE FOR REPLACEMENT OF TWO EXISTING TRANSFORMERS. SEE DWG E200.
- 4 PREPARE PADS AND CONDUITS FOR METERING SWITCHBOARDS. SEE DWG E200.
- 5 HVAC CONDENSER UNIT AND PAD.
- 6 FIBER OPTIC HANDHOLE.
- 7 SAWCUT, REMOVE, AND DISPOSE OF EXISTING ASPHALT, CURB, AND SIDEWALK IMPACTED BY TRENCHING AND NEW FACILITIES. LIMITS OF PAVEMENT AND CURB REMOVAL SHALL BE TO EXISTING JOINT LINES WHERE APPLICABLE. GRIND AND OVERLAY ALL PAVEMENT, 2" MINIMUM.
- 8 BOLLARD LIGHTING SEE DRAWING E200.

**SITE PLAN**  
SCALE: 1"=10'



C:\pwworking\0269162\330-1038122\C201 & C202.dwg | Layout: 330-1038122\C201  
 PLOTTED: Dec 17, 2015 10:24:14 AM By: nearykm  
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 IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
 LAND USE PERMIT**  
 DECEMBER 2015



DESIGNED/DRAWN:  
S. FARNAM  
 PROJECT ENGINEER:  
L. STIEGLER  
 DESIGN APPROVAL:  
R. GAUFF  
 PROJECT ACCEPTANCE:  
S. NAMINI

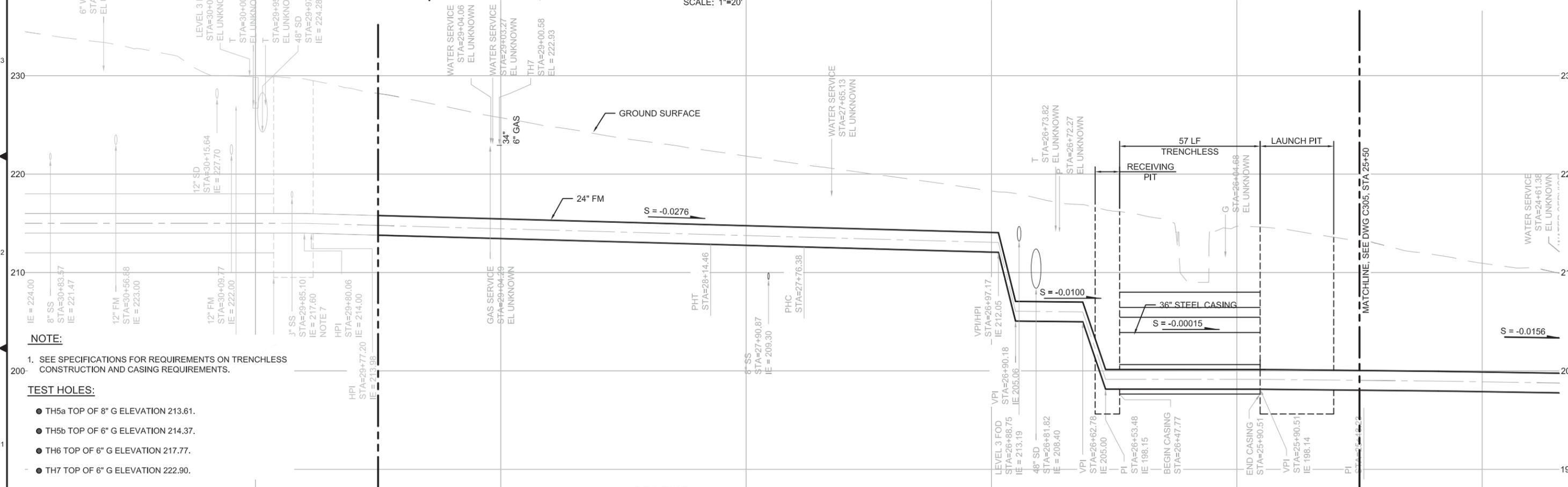
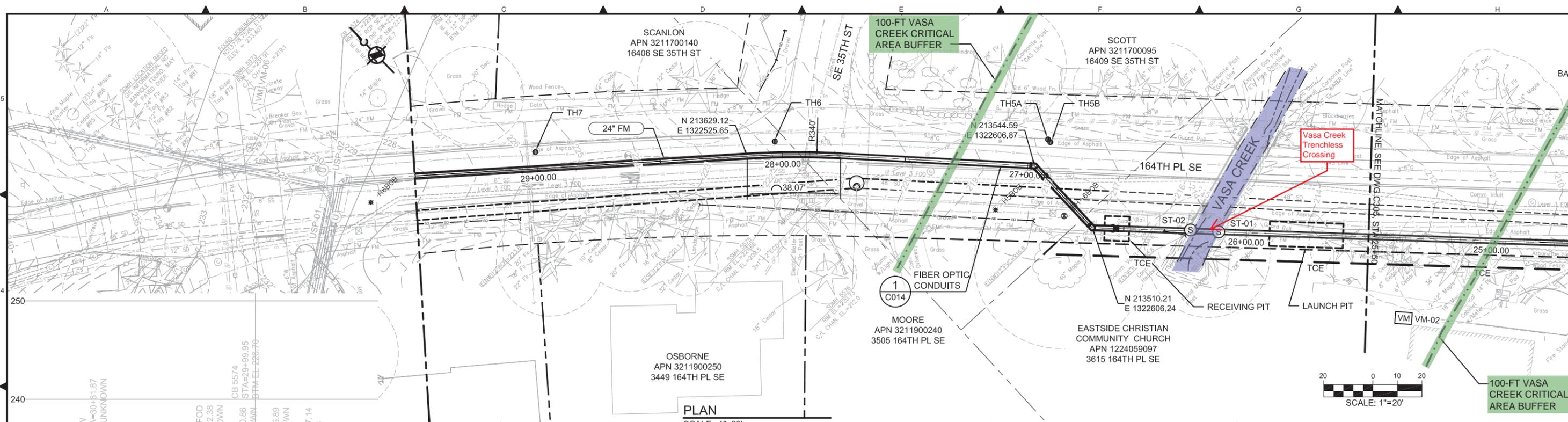
SCALE:  
1"=10'  
 REFERENCE  
 FACILITY NUMBER:  
330  
 CONTRACT NO:  
C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**HEATHFIELD CIVIL  
 SITE GRADING PLAN**

DCN:	DATE: DECEMBER 2015
PROJECT FILE NO: 1038122	DRAWING NO: <b>C201</b>
SHT NO / TOTAL 22 / 41	REV NO: 0

C:\pwworking\0269162\330-331-1038122\C306-1038122\C306-1038122.dwg | Layout: 330-331-1038122C306  
 PLOTTED: Dec 11, 2015 05:14:59pm By shunaki  
 XREFS: SunsetHeathfield-Daize-TB-Header.dwg; HEATHFIELD - SECTIONS\_EXIST.dwg; S&H PROFILES OPEN CUT.dwg; S&H PROFILES HDD.dwg; S&H EX SITE FEATURES.dwg; HEATHFIELD - MH R11-67.dwg; HEATHFIELD - MH R11-67.dwg; HEATHFIELD - MH R11-67.dwg; HEATHFIELD - MH R11-67.dwg; S&H GEOTECH MOI



**NOTE:**  
 1. SEE SPECIFICATIONS FOR REQUIREMENTS ON TRENCHLESS CONSTRUCTION AND CASING REQUIREMENTS.

**TEST HOLES:**

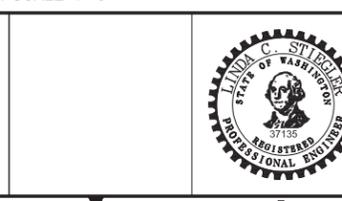
- TH5a TOP OF 8" G ELEVATION 213.61.
- TH5b TOP OF 6" G ELEVATION 214.37.
- TH6 TOP OF 6" G ELEVATION 217.77.
- TH7 TOP OF 6" G ELEVATION 222.90.

31+00 30+00 29+00 28+00 27+00 26+00 25+00  
 PROFILE  
 HORZ SCALE: 1"=20'  
 VERT SCALE: 1"=5'

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
 LAND USE PERMIT**  
 DECEMBER 2015



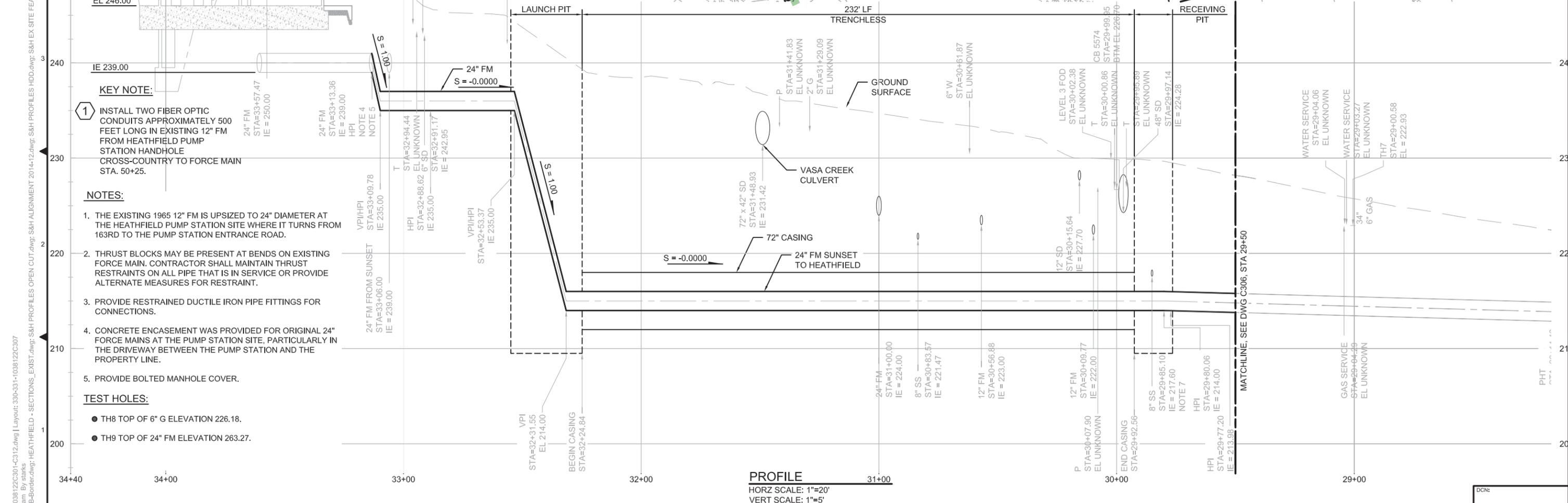
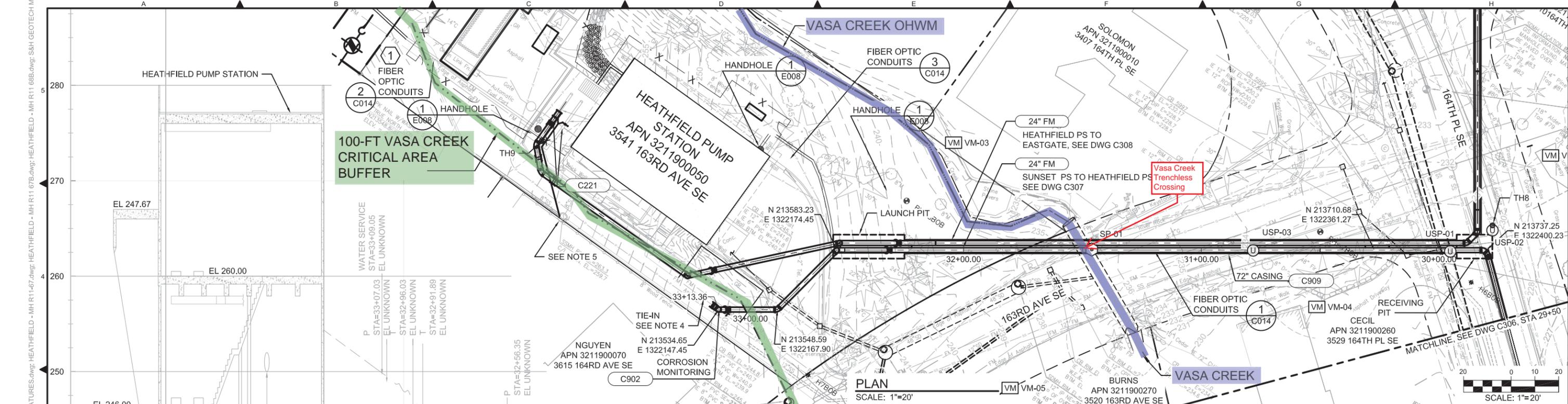
DESIGNED/DRAWN:  
 S. FARNAM  
 PROJECT ENGINEER:  
 L. STIEGLER  
 DESIGN APPROVAL:  
 R. GAUFF  
 PROJECT ACCEPTANCE:  
 S. NAMINI

SCALE:  
 AS NOTED  
 REFERENCE  
 FACILITY NUMBER:  
 331  
 CONTRACT NO:  
 C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**SUNSET TO HEATHFIELD  
 FORCE MAIN PLAN & PROFILE  
 STA 25+50 TO 29+50**

DCN:	DATE:
	DECEMBER 2015
PROJECT FILE NO:	DRAWING NO:
1038122	<b>C306</b>
SHT NO / TOTAL	REV NO:
23 / 41	0



**KEY NOTE:**

1. INSTALL TWO FIBER OPTIC CONDUITS APPROXIMATELY 500 FEET LONG IN EXISTING 12" FM FROM HEATHFIELD PUMP STATION HANDHOLE CROSS-COUNTRY TO FORCE MAIN STA. 50+25.

- NOTES:**
1. THE EXISTING 1965 12" FM IS UPSIZED TO 24" DIAMETER AT THE HEATHFIELD PUMP STATION SITE WHERE IT TURNS FROM 163RD TO THE PUMP STATION ENTRANCE ROAD.
  2. THRUST BLOCKS MAY BE PRESENT AT BENDS ON EXISTING FORCE MAIN. CONTRACTOR SHALL MAINTAIN THRUST RESTRAINTS ON ALL PIPE THAT IS IN SERVICE OR PROVIDE ALTERNATE MEASURES FOR RESTRAINT.
  3. PROVIDE RESTRAINED DUCTILE IRON PIPE FITTINGS FOR CONNECTIONS.
  4. CONCRETE ENCASUREMENT WAS PROVIDED FOR ORIGINAL 24" FORCE MAINS AT THE PUMP STATION SITE, PARTICULARLY IN THE DRIVEWAY BETWEEN THE PUMP STATION AND THE PROPERTY LINE.
  5. PROVIDE BOLTED MANHOLE COVER.

- TEST HOLES:**
- TH8 TOP OF 6" G ELEVATION 226.18.
  - TH9 TOP OF 24" FM ELEVATION 263.27.

NO	REVISION DESCRIPTION	BY	APVD	DATE

**MWH**

CITY OF BELLEVUE

**CRITICAL AREAS  
LAND USE PERMIT**

DECEMBER 2015

DESIGNED/DRAWN:  
S. FARNAM

PROJECT ENGINEER:  
L. STIEGLER

DESIGN APPROVAL:  
R. GAUFF

PROJECT ACCEPTANCE:  
S. NAMINI

SCALE:  
AS NOTED

0 REFERENCE 1"

FACILITY NUMBER:  
331

CONTRACT NO:  
C01008C16

**King County**

DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION

SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE

**SUNSET TO HEATHFIELD  
FORCE MAIN PLAN & PROFILE**  
STA 29+50 TO 33+13

DCN:

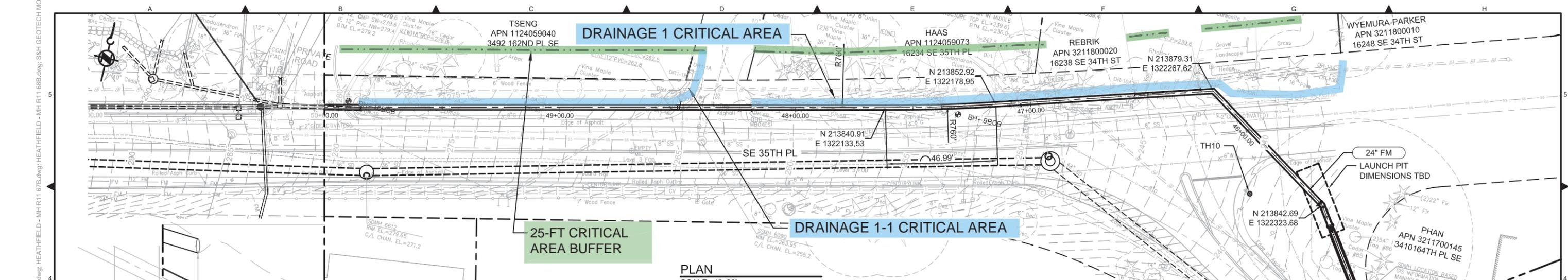
DATE:  
DECEMBER 2015

PROJECT FILE NO:  
1038122

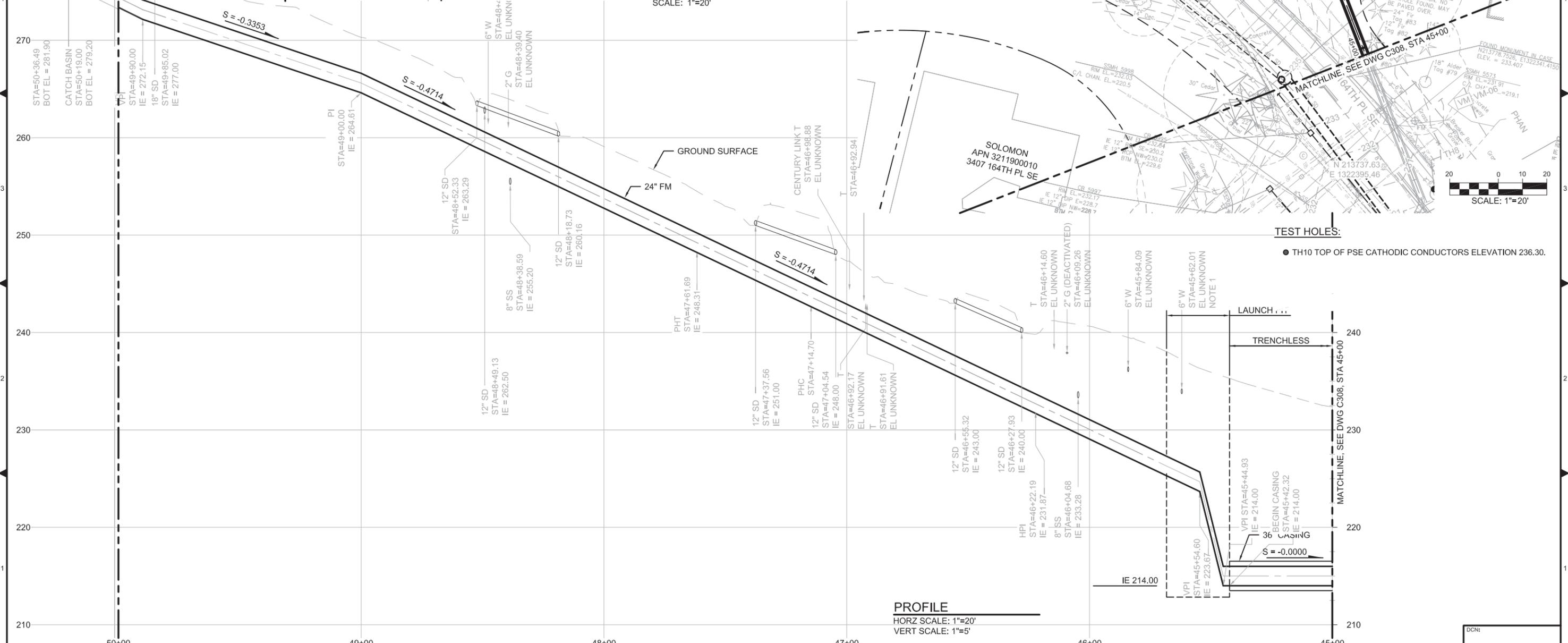
DRAWING NO:  
**C307**

SHT NO 24 / 41 TOTAL  
REV NO: 0

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 PLOTTED: Dec 11, 2015, 10:37:11am. By starks  
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PLAN  
SCALE: 1"=20'



PROFILE  
HORZ SCALE: 1"=20'  
VERT SCALE: 1"=5'

TEST HOLES:  
● TH10 TOP OF PSE CATHODIC CONDUCTORS ELEVATION 236.30.

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
LAND USE PERMIT**  
DECEMBER 2015



DESIGNED/DRAWN:  
S. FARNAM  
PROJECT ENGINEER:  
L. STIEGLER  
DESIGN APPROVAL:  
R. GAUFF  
PROJECT ACCEPTANCE:  
S. NAMINI

SCALE:  
AS NOTED  
0 REFERENCE 1"  
FACILITY NUMBER:  
330  
CONTRACT NO:  
C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION  
SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE  
**HEATHFIELD TO EASTGATE  
FORCE MAIN PLAN & PROFILE**  
STA 45+00 TO 49+00

DCN:	DATE: DECEMBER 2015
PROJECT FILE NO: 1038122	DRAWING NO: <b>C309</b>
SHT NO / TOTAL 25 / 41	REV NO: <b>0</b>

C:\pwworking\0269162\330-331-1038122\C309-C312.dwg | Layout: 330-331-1038122C309  
 PLOTTED: Dec 11, 2015 04:50:03pm By: shunaki  
 XREFS: SunsetHeathfield-Daize-TB-Boarder.dwg; HEATHFIELD - SECTIONS\_EXISIT.dwg; S&H PROFILES OPEN CUT.dwg; S&H ALIGNMENT 2014+12.dwg; S&H EX SITE FEATURES.dwg; HEATHFIELD - MH R11-67.dwg; HEATHFIELD - MH R11 67B.dwg; MH R11 68B.dwg; S&H GEOTECH MOI  
 IMAGES:

TREE TAG #	SPECIES	DBH (IN.)	TPZ (FT.)	DISPOSITION	DRAWING LOCATION
<b>SUNSET PUMP STATION</b>					
1	ALASKA CEDAR, CUPRESSUS NOOTKATENSIS	10.9	11	REMOVE TREE AND REPLACE*	C352
2	ALASKA CEDAR, CUPRESSUS NOOTKATENSIS	10	10	REMOVE TREE AND REPLACE*	C352
3	ALASKA CEDAR, CUPRESSUS NOOTKATENSIS	7.3	8	REMOVE TREE AND REPLACE*	C352
4	ALASKA CEDAR, CUPRESSUS NOOTKATENSIS	6.6	7	REMOVE TREE AND REPLACE*	C352
5	ALASKA CEDAR, CUPRESSUS NOOTKATENSIS	6.4	7	REMOVE TREE AND REPLACE*	C352
6	ALASKA CEDAR, CUPRESSUS NOOTKATENSIS	6	6	REMOVE TREE AND REPLACE*	C352
7	ALASKA CEDAR, CUPRESSUS NOOTKATENSIS	8.6	9	REMOVE TREE AND REPLACE*	C352
8	ALASKA CEDAR, CUPRESSUS NOOTKATENSIS	6.5	7	REMOVE TREE AND REPLACE*	C352
9	ALASKA CEDAR, CUPRESSUS NOOTKATENSIS	4.5	6	REMOVE TREE AND REPLACE*	C352
10	ALASKA CEDAR, CUPRESSUS NOOTKATENSIS	7.4	8	REMOVE TREE AND REPLACE*	C352
11	ALASKA CEDAR, CUPRESSUS NOOTKATENSIS	6.8	7	REMOVE TREE AND REPLACE*	C352
12	LAWSON CYPRESS, CHAMAECYPARIS LAWSONIANA	8	8	REMOVE TREE AND REPLACE*	C352
13	LAWSON CYPRESS, CHAMAECYPARIS LAWSONIANA	7	7	REMOVE TREE AND REPLACE*	C352
14	LAWSON CYPRESS, CHAMAECYPARIS LAWSONIANA	9	9	REMOVE TREE AND REPLACE*	C352
15	LAWSON CYPRESS, CHAMAECYPARIS LAWSONIANA	8	8	REMOVE TREE AND REPLACE*	C352
16	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	4	6	REMOVE TREE AND REPLACE*	C352
17	LAWSON CYPRESS, CHAMAECYPARIS LAWSONIANA	13.9	14	REMOVE TREE AND REPLACE*	C352
18	LAWSON CYPRESS, CHAMAECYPARIS LAWSONIANA	20.3	21	REMOVE TREE AND REPLACE*	C352
19	LAWSON CYPRESS, CHAMAECYPARIS LAWSONIANA	6.4, 5.1, 6.9, 10.7, 6.4 and 11	10	REMOVE TREE AND REPLACE*	C352
<b>KING COUNTY PARCEL</b>					
28	RED ALDER, ALNUS RUBRA	10.1	10	NO IMPACT	C362
29	RED ALDER, ALNUS RUBRA	9.7	10	NO IMPACT	C362
30	RED ALDER, ALNUS RUBRA	7	7	NO IMPACT	C362
31	RED ALDER, ALNUS RUBRA	9.9	10	NO IMPACT	C362
32	WESTERN RED CEDAR, THUJA PLICATA	12, 23, 11	23	REMOVE TREE AND REPLACE*	C362
33	WESTERN RED CEDAR, THUJA PLICATA	8.8	9	REMOVE TREE AND REPLACE*	C362
127	RED ALDER, ALNUS RUBRA	7.1	8	NO IMPACT	C362
128	RED ALDER, ALNUS RUBRA	7.7	8	NO IMPACT	C362
129	RED ALDER, ALNUS RUBRA	6.4	7	NO IMPACT	C362
130	RED ALDER, ALNUS RUBRA	10.5	11	NO IMPACT	C362
131	BIGLEAF MAPLE, ACER MACROPHYLLUM	34	34	NO IMPACT	C362
132	BIGLEAF MAPLE, ACER MACROPHYLLUM	28	28	NO IMPACT	C362
133	RED ALDER, ALNUS RUBRA	9.6	10	NO IMPACT	C362
134	RED ALDER, ALNUS RUBRA	7.8	8	NO IMPACT	C362
135	RED ALDER, ALNUS RUBRA	10.9	11	NO IMPACT	C362
136	RED ALDER, ALNUS RUBRA	7.8	8	NO IMPACT	C362
137	RED ALDER, ALNUS RUBRA	7.7, 6.6	8	NO IMPACT	C362
138	RED ALDER, ALNUS RUBRA	9.2	10	NO IMPACT	C362
139	RED ALDER, ALNUS RUBRA	16.4	17	NO IMPACT	C362
140	WESTERN RED CEDAR, THUJA PLICATA	23	24	NO IMPACT	C362
141	WESTERN RED CEDAR, THUJA PLICATA	29	30	NO IMPACT	C362
142	WESTERN RED CEDAR, THUJA PLICATA	22	23	NO IMPACT	C362
143	WESTERN RED CEDAR, THUJA PLICATA	29	30	REMOVE TREE AND REPLACE*	C362
144	BIGLEAF MAPLE, ACER MACROPHYLLUM	28	29	REMOVE TREE AND REPLACE*	C362
<b>DIETEMANN PROPERTY</b>					
34	WESTERN RED CEDAR, THUJA PLICATA	13.7	14	RETAIN AND PROTECT	C354
35	BIRD CHERRY, PRUNUS AVIUM	5.7, 8.5, 7.7	9	RETAIN AND PROTECT	C354
36	PACIFIC DOGWOOD, CORNUS NUTTALLII	11, 4.8, 4.4	11	REMOVE TREE AND REPLACE	C354
37	WESTERN RED CEDAR, THUJA PLICATA	24.9	25	RETAIN AND PROTECT (SPECIAL PROTECTION)	C354
38	WESTERN RED CEDAR, THUJA PLICATA	8.7	9	RETAIN AND PROTECT	C354
39	WESTERN RED CEDAR, THUJA PLICATA	12.8	13	RETAIN AND PROTECT	C354
<b>164TH PLACE SOUTHEAST</b>					
40	BIGLEAF MAPLE, ACER MACROPHYLLUM	20.5	20	REMOVE TREE AND REPLACE	C355
41	SITKA SPRUCE, PICEA SITCHENSIS	5.2	6	REMOVE TREE AND REPLACE	C355
42	SITKA SPRUCE, PICEA SITCHENSIS	6.5	6	REMOVE TREE AND REPLACE	C355
43	SITKA SPRUCE, PICEA SITCHENSIS	20.1	20	REMOVE TREE AND REPLACE	C355

TREE TAG #	SPECIES	DBH (IN.)	TPZ (FT.)	DISPOSITION	DRAWING LOCATION
<b>HEATHFIELD PUMP STATION</b>					
44	WESTERN RED CEDAR, THUJA PLICATA	20	20	REMOVE TREE AND REPLACE*	C356
45	WESTERN RED CEDAR, THUJA PLICATA	33.4	33	RETAIN AND PROTECT (SPECIAL PROTECTION)	C356
46	WESTERN RED CEDAR, THUJA PLICATA	14.7	15	REMOVE TREE AND REPLACE*	C356
47	WESTERN RED CEDAR, THUJA PLICATA	21.3	21	RETAIN AND PROTECT (SPECIAL PROTECTION)	C356
48	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	30.1	30	RETAIN AND PROTECT (SPECIAL PROTECTION)	C356
49	WESTERN RED CEDAR, THUJA PLICATA	16.5	16	RETAIN AND PROTECT, PERFORM CROWN REDUCTION PRUNING (SPECIAL PROTECTION)	C356
50	WESTERN RED CEDAR, THUJA PLICATA	25.4	25	RETAIN AND PROTECT (SPECIAL PROTECTION)	C356
51	BIGLEAF MAPLE, ACER MACROPHYLLUM	10.3	10	RETAIN AND PROTECT (SPECIAL PROTECTION)	C356
52	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	34.1	34	RETAIN AND PROTECT, PERFORM CROWN REDUCTION PRUNING (SPECIAL PROTECTION)	C356
53	BIGLEAF MAPLE, ACER MACROPHYLLUM	11.5	11	RETAIN AND PROTECT	C356
54	WESTERN RED CEDAR, THUJA PLICATA	6	6	RETAIN AND PROTECT	C356
55	BIGLEAF MAPLE, ACER MACROPHYLLUM	19.7, 21.5	22	RETAIN AND PROTECT	C356
56	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	28.9	29	RETAIN AND PROTECT	C356
57	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	33.4	34	RETAIN AND PROTECT	C356
58	LAWSON CYPRESS, CHAMAECYPARIS LAWSONIANA	9.7	10	RETAIN AND PROTECT	C356
59	LAWSON CYPRESS, CHAMAECYPARIS LAWSONIANA	12.1	12	RETAIN AND PROTECT	C356
60	LAWSON CYPRESS, CHAMAECYPARIS LAWSONIANA	17.1	17	RETAIN AND PROTECT	C356
61	LAWSON CYPRESS, CHAMAECYPARIS LAWSONIANA	21	21	RETAIN AND PROTECT	C356
62	WESTERN RED CEDAR, THUJA PLICATA	17	17	NO IMPACT	C356
<b>HEATHFIELD PUMP STATION</b>					
63	BIGLEAF MAPLE, ACER MACROPHYLLUM	6	6	NO IMPACT	C356
64	WESTERN RED CEDAR, THUJA PLICATA	40	40	CUT TO A SNAG	C356
65	BIGLEAF MAPLE, ACER MACROPHYLLUM	30	30	CUT TO A SNAG	C356
66	BIGLEAF MAPLE, ACER MACROPHYLLUM	14.8	15	NO IMPACT	L200
67	BIGLEAF MAPLE, ACER MACROPHYLLUM	13.3	14	NO IMPACT	L200
68	BIGLEAF MAPLE, ACER MACROPHYLLUM	11.5, 13, 10, 6, 4, 6	14	CUT TO A SNAG	L200
<b>EASTSIDE CHRISTIAN COMMUNITY CHURCH PROPERTY</b>					
69	SWEETGUM, LIQUIDAMBAR STYRACIFLUA	8	8	RETAIN AND PROTECT	C355
70	SITKA SPRUCE, PICEA SITCHENSIS	14	14	RETAIN AND PROTECT	C355
71	WESTERN RED CEDAR, THUJA PLICATA	38.9	39	RETAIN AND PROTECT (SPECIAL PROTECTION)	C355
72	BIGLEAF MAPLE, ACER MACROPHYLLUM	19, 13.1, 14.3	19	REMOVE TREE AND REPLACE	C355
73	WESTERN RED CEDAR, THUJA PLICATA	29	29	REMOVE TREE AND REPLACE	C355
74	ENGLISH HOLLY, ILEX AQUIFOLIUM	8.3	9	RETAIN AND PROTECT	C355
75	WESTERN RED CEDAR, THUJA PLICATA	14.7	15	RETAIN AND PROTECT	C355
76	WESTERN RED CEDAR, THUJA PLICATA	21, 31	31	RETAIN AND PROTECT	C355
<b>MOORE PROPERTY</b>					
77	BIGLEAF MAPLE, ACER MACROPHYLLUM	42.2	42	RETAIN AND PROTECT, PERFORM CROWN REDUCTION PRUNING (SPECIAL PROTECTION)	C355

**NOTES:**

- \* DENOTES TREE REPLACEMENTS ARE INCORPORATED IN THE SUNSET PUMP STATION OR HEATHFIELD PUMP STATION RESTORATION DESIGN
- TREES LISTED IN THE INVENTORY TABLE ARE SHOWN AND IDENTIFIED ON THE DWGS C350 TO C362.
- PROTECTION MEASURES INDICATED FOR TREES MARKED "SPECIAL PROTECTION" MAY REQUIRE WORK WITHIN TPZ. ARBORIST SHALL DETERMINE APPROPRIATE ALTERNATE PROTECTION MEASURES. TREE HEALTH SHALL BE MONITORED DURING AND AFTER CONSTRUCTION.

C:\projects\20160730\331-038\220350 & C51.dwg | Layout: C350  
 PLOTTED: Apr 29 2016 11:45:50am By: radford  
 XREFS: SunsetHeathfield331c-15-Board.rvt  
 IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



DESIGNED/DRAWN:  
**A. FRISK**  
 PROJECT ENGINEER:  
**S. RADFORD**  
 DESIGN APPROVAL:  
**R. GAUFF**  
 PROJECT ACCEPTANCE:  
**S. NAMINI**

SCALE:  
 NO SCALE  
 0 REFERENCE 1'  
 FACILITY NUMBER:  
 330-331  
 CONTRACT NO:  
 C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**EXISTING TREE INVENTORY  
 SHEET 1**

DCN:  
 DATE:  
 APRIL 2016  
 PROJECT FILE NO:  
 1038122  
 DRAWING NO:  
**C350**  
 SHT NO / TOTAL / REV NO:  
 / 449 / 0

TREE TAG #	SPECIES	DBH (IN.)	TPZ (FT.)	DISPOSITION	DRAWING LOCATION
<b>LOC PHAN PROPERTY</b>					
78	NORWAY MAPLE, ACER PLATANOIDES	14.5	15	NO IMPACT	C356
79	BIGLEAF MAPLE, ACER MACROPHYLLUM	17.4	17	NO IMPACT	C357
80	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	10.6	11	NO IMPACT	C357
81	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	12.7	13	NO IMPACT	C357
82	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	11.5	12	NO IMPACT	C357
83	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	24.3	24	NO IMPACT	C357
84	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	21.2	22	NO IMPACT	C357
85	WESTERN RED CEDAR, THUJA PLICATA	19.7	20	NO IMPACT	C357
86	BIGLEAF MAPLE, ACER MACROPHYLLUM	24, 26	26	REMOVE TREE AND REPLACE	C357
<b>SOUTHEAST 35TH PLACE</b>					
87	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	16	16	REMOVE TREE AND REPLACE	C357
88	WESTERN RED CEDAR, THUJA PLICATA	16	16	RETAIN AND PROTECT	C358
89	WESTERN RED CEDAR, THUJA PLICATA	10	10	RETAIN AND PROTECT	C358
90	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	18.8	19	RETAIN AND PROTECT	C358
91	WESTERN RED CEDAR, THUJA PLICATA	26	26	RETAIN AND PROTECT	C358
92	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	11.3	12	RETAIN AND PROTECT	C358
93	RED MAPLE, ACER RUBRUM	6	6	REMOVE TREE AND REPLACE	C359
94	MOUNTAIN ASH CULTIVAR, SORBUS AUCUPARIA CV.	1.2, 1.7, 1.5	6	REMOVE TREE AND REPLACE	C359
95	MOUNTAIN ASH CULTIVAR, SORBUS AUCUPARIA CV.	1.8	6	REMOVE TREE AND REPLACE	C359
96	BIGLEAF MAPLE, ACER MACROPHYLLUM	13.1	13	RETAIN AND PROTECT	C360
97	BIGLEAF MAPLE, ACER MACROPHYLLUM	6.2, 9.3, 12.5, 7.8, 10, 14, 8	14	RETAIN AND PROTECT	C360
98	RED MAPLE, ACER RUBRUM	5	6	RETAIN AND PROTECT	C360
99	RED MAPLE, ACER RUBRUM	4.5	6	RETAIN AND PROTECT	C360
100	RED MAPLE, ACER RUBRUM	3.2	6	RETAIN AND PROTECT	C360
101	RED MAPLE, ACER RUBRUM	2.7	6	RETAIN AND PROTECT	C360
102	BIGLEAF MAPLE, ACER MACROPHYLLUM	14.3	14	RETAIN AND PROTECT	C360
103	BIGLEAF MAPLE, ACER MACROPHYLLUM	23.5	23	RETAIN AND PROTECT	C360
104	BIGLEAF MAPLE, ACER MACROPHYLLUM	6.4, 5, 8.1, 6.7	10	RETAIN AND PROTECT	C360
105	NORWAY MAPLE, ACER PLATANOIDES	6	6	NO IMPACT	C360
106	WESTERN RED CEDAR, THUJA PLICATA	9, 4	10	NO IMPACT	C360
107	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	6, 5.3	10	NO IMPACT	C360
<b>VASA PARK</b>					
20	BIGLEAF MAPLE, ACER MACROPHYLLUM	8.5	9	RETAIN AND PROTECT, PERFORM CROWN RAISE PRUNING (SPECIAL PROTECTION)	C352
21	WESTERN RED CEDAR, THUJA PLICATA	55.1	55	REMOVE TREE AND REPLACE	C352
22	BIGLEAF MAPLE, ACER MACROPHYLLUM	31.9	32	RETAIN AND PROTECT, PERFORM CROWN RAISE PRUNING (SPECIAL PROTECTION)	C352
23	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	12.8	13	RETAIN AND PROTECT, PERFORM CROWN RAISE PRUNING (SPECIAL PROTECTION)	C352
108	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	10.3	11	REMOVE TREE AND REPLACE	C352
109	DOUGLAS FIR, PSEUDOTSUGA MENZIESII	10.3	11	REMOVE TREE AND REPLACE	C352
110	NORWAY MAPLE, ACER PLATANOIDES	19.5	20	RETAIN AND PROTECT	C352
111	NORWAY MAPLE, ACER PLATANOIDES	14.6	15	RETAIN AND PROTECT, PERFORM CROWN REDUCTION PRUNING (SPECIAL PROTECTION)	C352
112	HORSE CHESTNUT, AESCULUS HIPPOCASTANUM	17.6	18	NO IMPACT	C352
113	HORSE CHESTNUT, AESCULUS HIPPOCASTANUM	19.1	20	NO IMPACT	C352
114	HORSE CHESTNUT, AESCULUS HIPPOCASTANUM	14.2	15	NO IMPACT	C352
115	HORSE CHESTNUT, AESCULUS HIPPOCASTANUM	23.2	24	NO IMPACT	C352
116	BIGLEAF MAPLE, ACER MACROPHYLLUM	31.3	32	RETAIN AND PROTECT, PERFORM STRUCTURAL PRUNING (SPECIAL PROTECTION)	C352
117	BIGLEAF MAPLE, ACER MACROPHYLLUM	30	30	RETAIN AND PROTECT, AND PERFORM CROWN CLEAN PRUNING	C352
118	BIGLEAF MAPLE, ACER MACROPHYLLUM	23.2	24	NO IMPACT, PERFORM CROWN CLEAN PRUNING	C352
119	BIGLEAF MAPLE, ACER MACROPHYLLUM	22.8	23	NO IMPACT, PERFORM CROWN CLEAN PRUNING	C352
120	BIGLEAF MAPLE, ACER MACROPHYLLUM	20.8	21	NO IMPACT	C352
121	BIGLEAF MAPLE, ACER MACROPHYLLUM	21.9	22	NO IMPACT	C352
122	BIGLEAF MAPLE, ACER MACROPHYLLUM	22.9	23	NO IMPACT	C352
123	BIGLEAF MAPLE, ACER MACROPHYLLUM	24.8	25	NO IMPACT	C352
124	BIGLEAF MAPLE, ACER MACROPHYLLUM	23.2	24	NO IMPACT	C352
125	BIRD CHERRY, PRUNUS AVIUM	6.5, 7.2	10	NO IMPACT	C352
126	PAPER BIRCH, BETULA PAPHYRIFERA	21.3	22	NO IMPACT	C352
127	BIGLEAF MAPLE, ACER MACROPHYLLUM	24	24	RETAIN AND PROTECT, PERFORM CROWN RAISE PRUNING (SPECIAL PROTECTION)	C352

**NOTES:**

- TREES LISTED IN THE INVENTORY TABLE ARE SHOWN AND IDENTIFIED ON THE DWGS C350 TO C362.

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NO	REVISION DESCRIPTION	BY	APVD	DATE

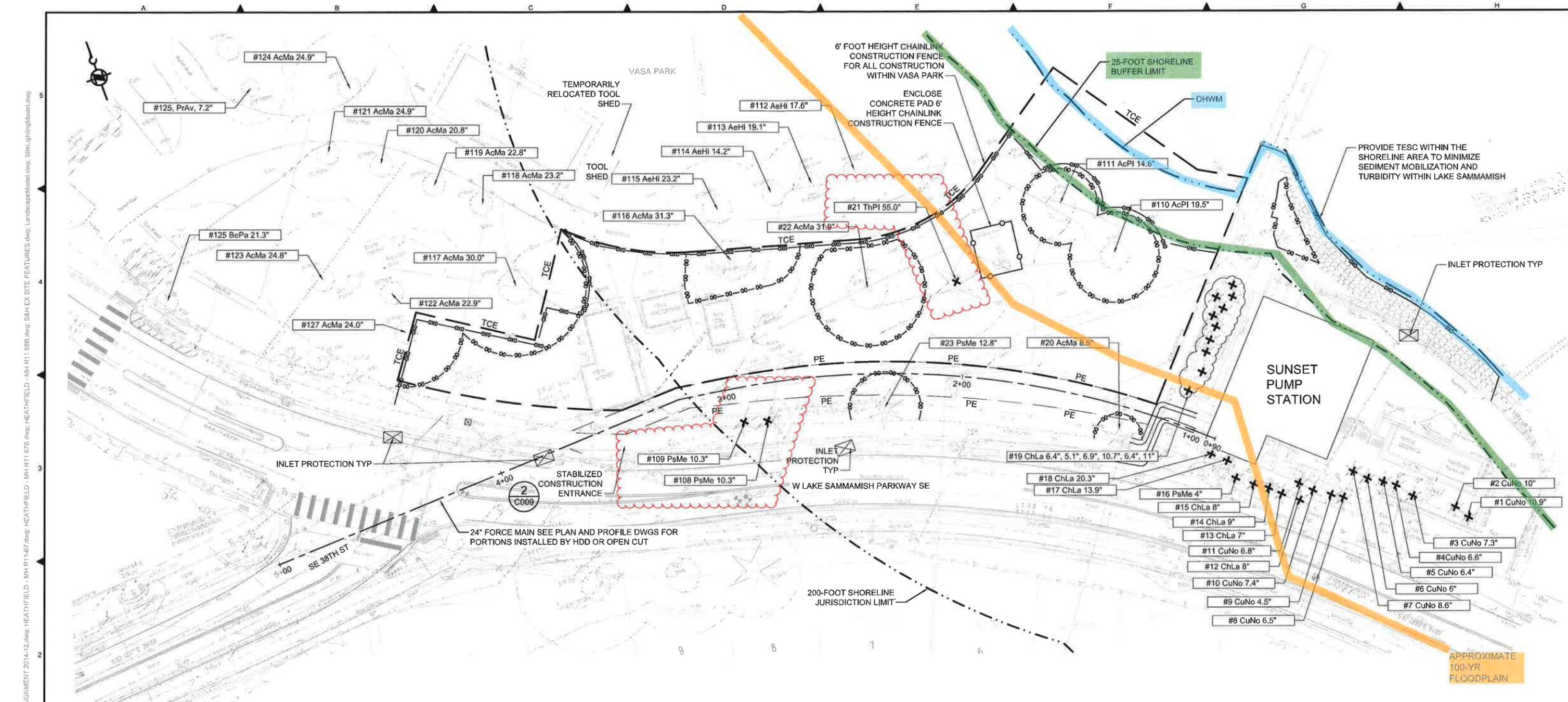


DESIGNED/DRAWN: <b>A. FRISK</b>	SCALE: <b>NO SCALE</b>
PROJECT ENGINEER: <b>S. RADFORD</b>	<b>0</b> REFERENCE <b>1'</b>
DESIGN APPROVAL: <b>R. GAUFF</b>	FACILITY NUMBER: <b>330-331</b>
PROJECT ACCEPTANCE: <b>S. NAMINI</b>	CONTRACT NO: <b>C01008C16</b>



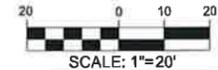
DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**EXISTING TREE INVENTORY  
 SHEET 2**

DATE: <b>APRIL 2016</b>
PROJECT FILE NO: <b>1038122</b>
DRAWING NO: <b>C351</b>
SHT NO / TOTAL <b>  / 449</b>
REV NO: <b>0</b>



**GENERAL ESC DRAWING NOTES:**

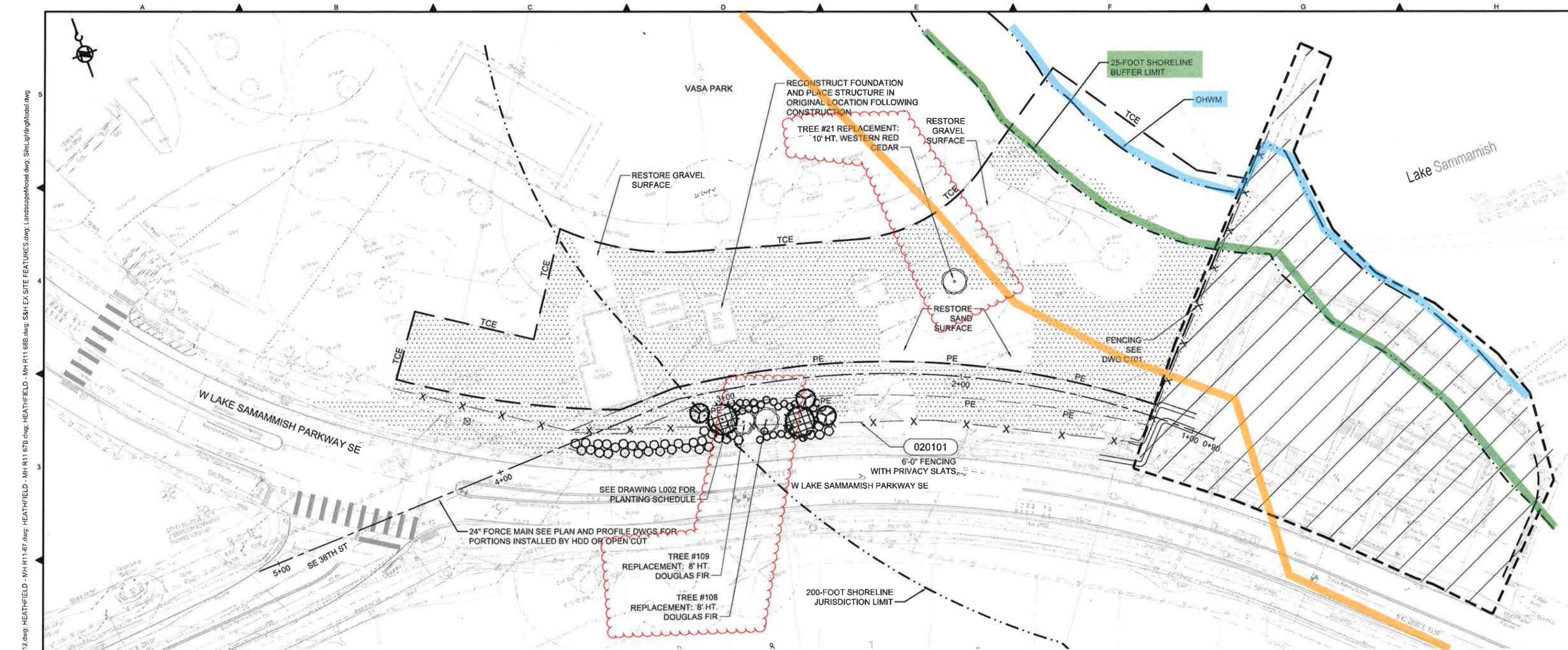
1. SEE DWG C009 FOR STANDARD EROSION CONTROL NOTES AND DETAILS.
2. THE TEMPORARY CONSTRUCTION EASEMENT (TCE) LINE INDICATES THE LIMIT OF CONTRACTOR DISTURBANCE. SEE PLAN AND PROFILE DWGS FOR COORDINATES OF TEMPORARY CONSTRUCTION EASEMENT.
3. LOCATE CONSTRUCTION FENCE AND SEDIMENT BARRIER AT THE TEMPORARY CONSTRUCTION EASEMENT (TCE), TYPICAL. UNO. CONSTRUCTION FENCE AND SEDIMENT BARRIERS SHOWN INSIDE TCE FOR CLARITY.
4. SEE DWGS C350 AND C351 FOR TREE INVENTORY TABLE. SEE EROSION CONTROL/TREE PROTECTION & RESTORATION DWGS FOR EXISTING TREE INVENTORY CALL OUT LABELS.
5. SEE PLAN AND PROFILE DRAWINGS FOR PIPELINE ALIGNMENT.
6. EMPLOY TREE PROTECTION MEASURES WITHIN CONSTRUCTION AND STAGING AREAS. SEE DETAILS AND SPECIFICATIONS.
7. CONTRACTOR SHALL MAINTAIN EXISTING STORMWATER FLOW PATTERNS, PARTICULARLY ALONG LAKE SAMMAMISH PARKWAY, AND INCORPORATE ALL SUCH DRAINAGE INTO ITS STORMWATER MANAGEMENT PLAN.



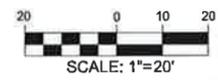
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 Plot Date: 2016-03-23 4:49pm By: sradford  
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 IMAGES: MDTGS

NO	REVISION DESCRIPTION	BY	APVD	DATE

	<p>Scott W. Radford CERTIFICATE NO. 088 EXPIRES 12/31/17</p>	DESIGNED/DRAWN: <b>A. FRISK</b> PROJECT ENGINEER: <b>S. RADFORD</b> DESIGN APPROVAL: <b>R. GAUFF</b> PROJECT ACCEPTANCE: <b>S. NAMINI</b>	SCALE: <b>1"=20'</b> REFERENCE FACILITY NUMBER: <b>331</b> CONTRACT NO.: <b>C01008C16</b>		DEPARTMENT OF NATURAL RESOURCES & PARKS WASTEWATER TREATMENT DIVISION <b>SUNSET TO HEATHFIELD</b> <b>EROSION CONTROL &amp; TREE PROTECTION PLAN</b> <b>STA 01+00 TO 05+00</b>	DATE: <b>APRIL 2016</b> PROJECT FILE NO.: <b>1038122</b> DRAWING NO.: <b>C352</b> SHT NO / TOTAL <b>  / 449</b> REV NO: <b>0</b>
--	--	--	---	--	---	---



- GENERAL RESTORATION DRAWING NOTES:**
- RESTORE ALL DISTURBED LANDSCAPE AREAS TO PRE-PROJECT CONDITIONS OR BETTER.
  - LANDSCAPE RESTORATION SHALL BE PER SPECIFICATIONS.
  - REFER TO LANDSCAPE PLANTING LEGEND FOR LANDSCAPE PLANTING RESTORATION SYMBOLOLOGY AND PLANT PALETTE
  - RESTORE PAVED AREAS TO PRE-PROJECT CONDITIONS OR BETTER.
  - RESTORE ROADWAY PAVEMENTS, STRIPING AND ROADWAY MARKERS PER CITY OF BELLEVUE ENGINEERING STANDARDS AND AND TRANSPORTATION DEPARTMENT DESIGN MANUAL AND STANDARD DETAILS FOR FOR ALL WORK WITHIN THE CITY OF BELLEVUE RIGHT OF WAY.



C:\pwworking\0212519130-331-1038122C352.lhu: C351.dwg [Layout: 330-331-1038122C352] PLOTTED: Apr 05, 2016 03:25:11pm By: swardford XREFS: SunsetHeathfield-Deize-TB-Border.dwg; ESC\_Model.dwg; RESTORATION\_Model.dwg; S&H ALIGNMENT 2014-12.dwg; HEATHFIELD - NH R11 67B.dwg; HEATHFIELD - NH R11 67B.dwg; S&H EX SITE FEATURES.dwg; LandscapeModel.dwg; SiteLightingModel.dwg

NO	REVISION DESCRIPTION	BY	APVD	DATE



DESIGNED/DRAWN:  
**A. FRISK**  
 PROJECT ENGINEER:  
**S. RADFORD**  
 DESIGN APPROVAL:  
**R. GAUFF**  
 PROJECT ACCEPTANCE:  
**S. NAMINI**

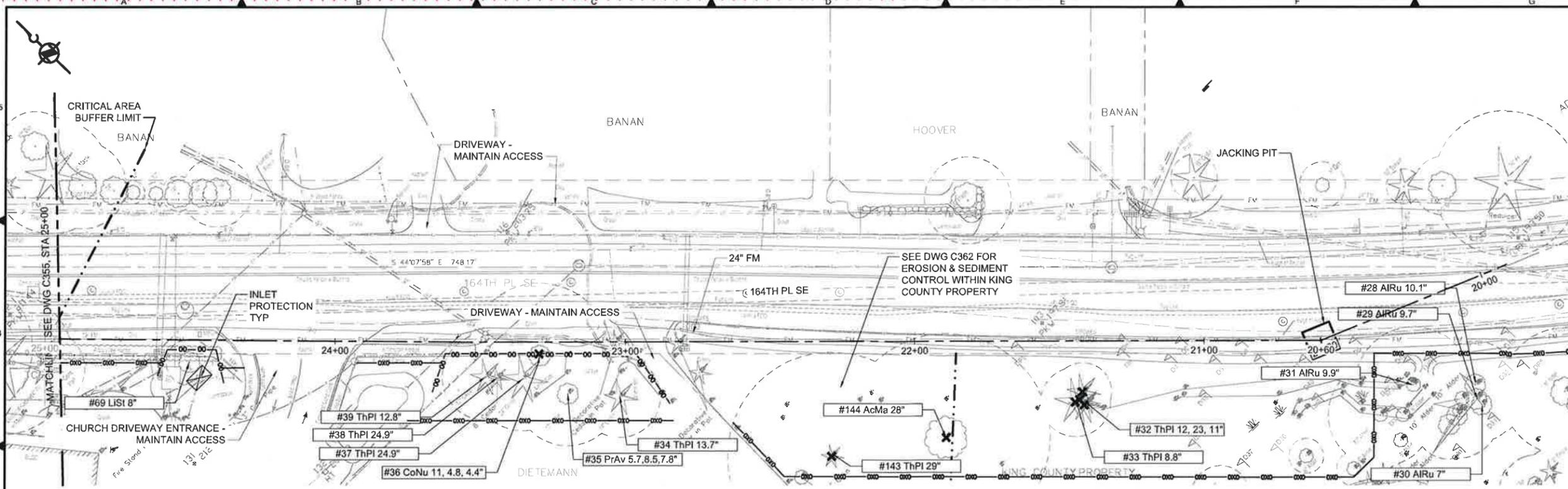
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 FACILITY NUMBER:  
**331**  
 CONTRACT NO:  
**C01008C16**



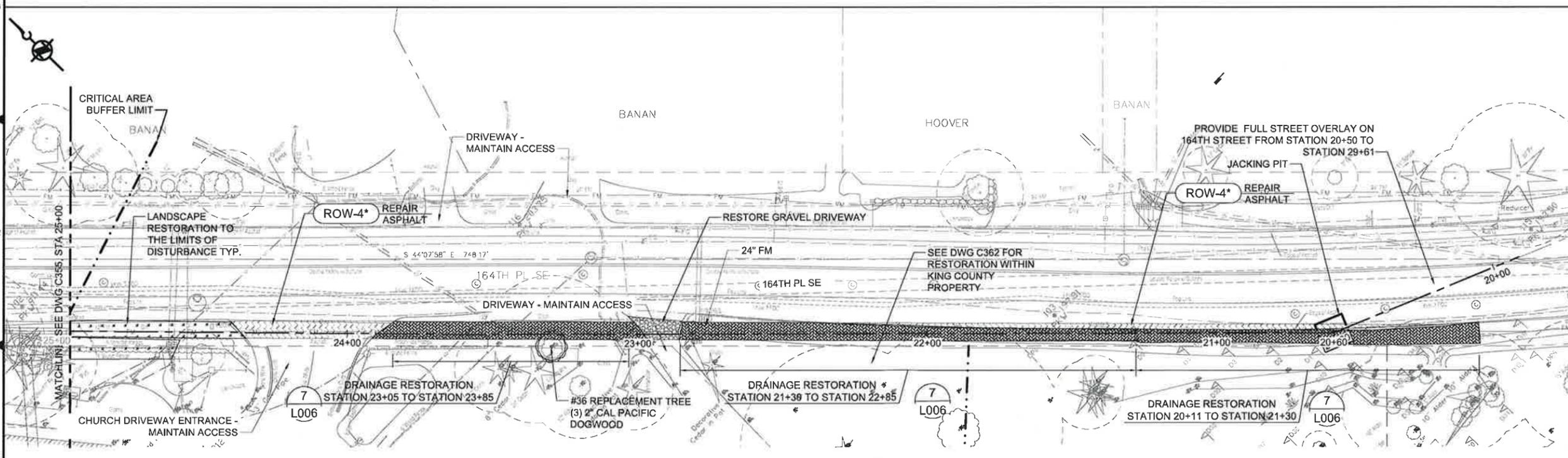
DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**SUNSET TO HEATHFIELD  
 RESTORATION PLAN  
 STA 01+00 TO 05+00**

DATE:	APRIL 2016
PROJECT FILE NO:	1038122
DRAWING NO:	<b>C353</b>
SHT NO. / TOTAL	/ 449
REV NO.	<b>0</b>

- NOTES:**
- SEE DWG C352 FOR GENERAL ESC DRAWING NOTES.
  - SEE DWG C353 FOR GENERAL RESTORATION NOTES.
  - SEE DWG L001 FOR MITIGATION AREA NOTES AND PLANTING SCHEDULE



**EROSION CONTROL & TREE PROTECTION PLAN**



**RESTORATION PLAN**



C:\pwworking\0212515\330-331-1038122\C352.dwg (Layout: 330-331-1038122C354) 11/17/2016 10:58:11 AM

NO	REVISION DESCRIPTION	BY	APVD	DATE



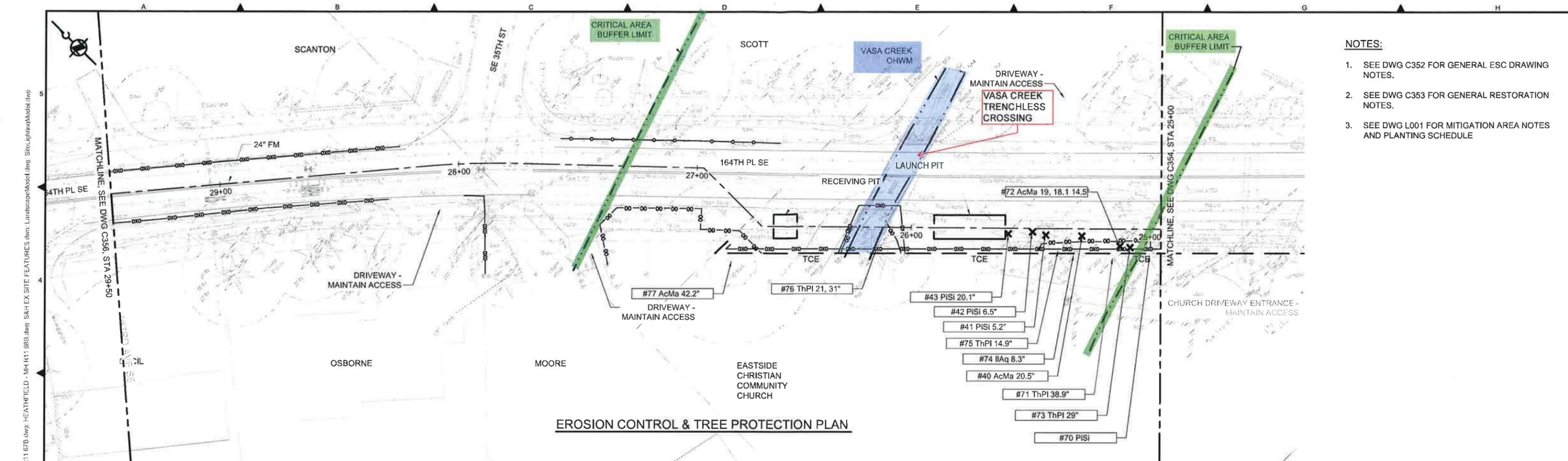
DESIGNED/DRAWN: A. FRISK  
 PROJECT ENGINEER: S. RADFORD  
 DESIGN APPROVAL: R. GAUFF  
 PROJECT ACCEPTANCE: S. NAMINI

SCALE: 1"=20'  
 0 REFERENCE 1"  
 FACILITY NUMBER: 331  
 CONTRACT NO: C01008C16

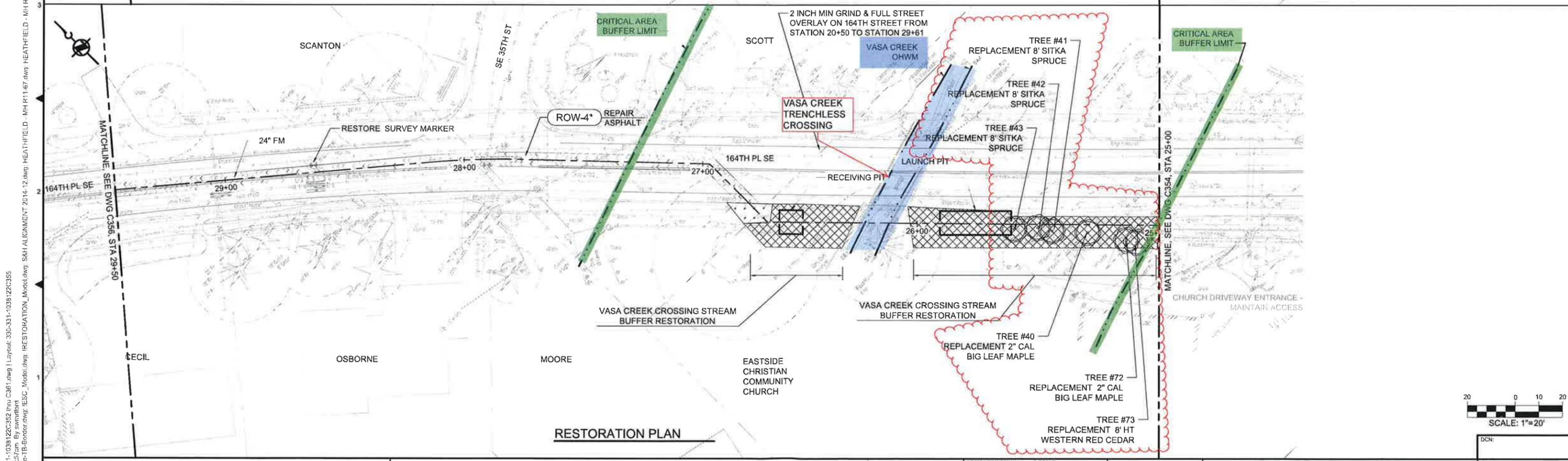


DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**SUNSET TO HEATHFIELD**  
 EROSION CONTROL/TREE PROTECTION & RESTORATION PLAN  
**STA 20+00 TO 25+00**

DATE: APRIL 2016  
 PROJECT FILE NO: 1038122  
 DRAWING NO: **C354**  
 SHEET NO / TOTAL: 449 / 449  
 REV NO: 0



**EROSION CONTROL & TREE PROTECTION PLAN**



**RESTORATION PLAN**

- NOTES:**
1. SEE DWG C352 FOR GENERAL ESC DRAWING NOTES.
  2. SEE DWG C353 FOR GENERAL RESTORATION NOTES.
  3. SEE DWG L001 FOR MITIGATION AREA NOTES AND PLANTING SCHEDULE



C:\pwworking\mwh\212519\30-331-1038122\C352.lnu C351.dwg | Layout: 335-331-1038122C355  
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NO	REVISION DESCRIPTION	BY	APVD	DATE



STATE OF WASHINGTON  
REGISTERED  
LANDSCAPE ARCHITECT

Scott W. Radford  
CERTIFICATE NO. 688  
EXPIRES 6/29/2017

DESIGNED/DRAWN:  
A. FRISK  
PROJECT ENGINEER:  
S. RADFORD  
DESIGN APPROVAL:  
R. GAUFF  
PROJECT ACCEPTANCE:  
S. NAMINI

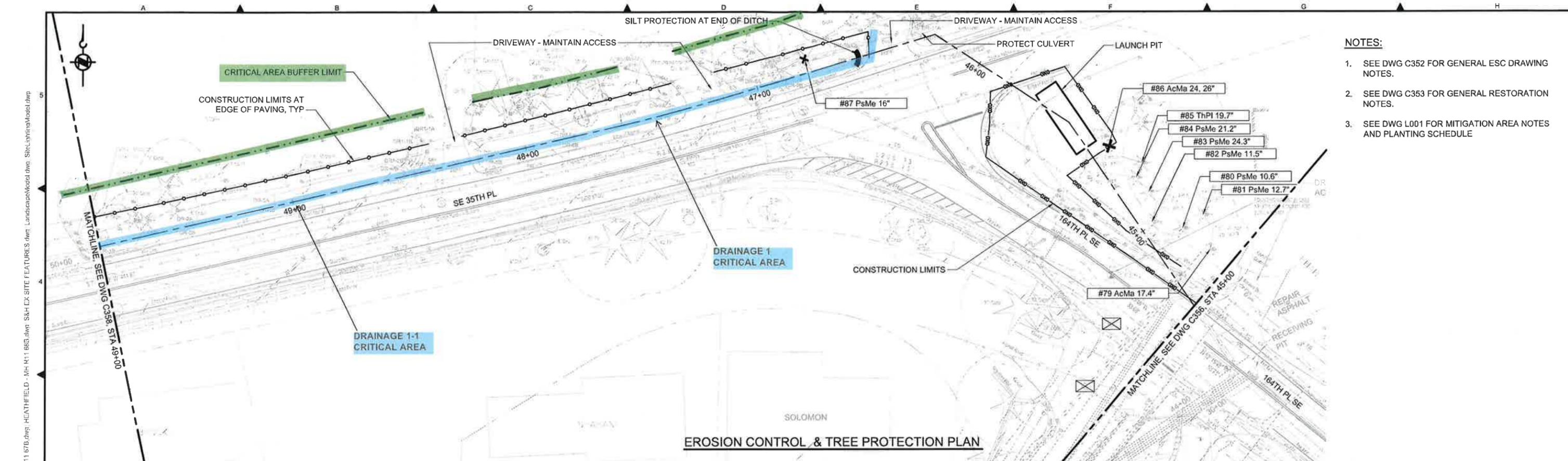
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FACILITY NUMBER:  
331  
CONTRACT NO:  
C01008C16



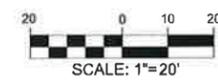
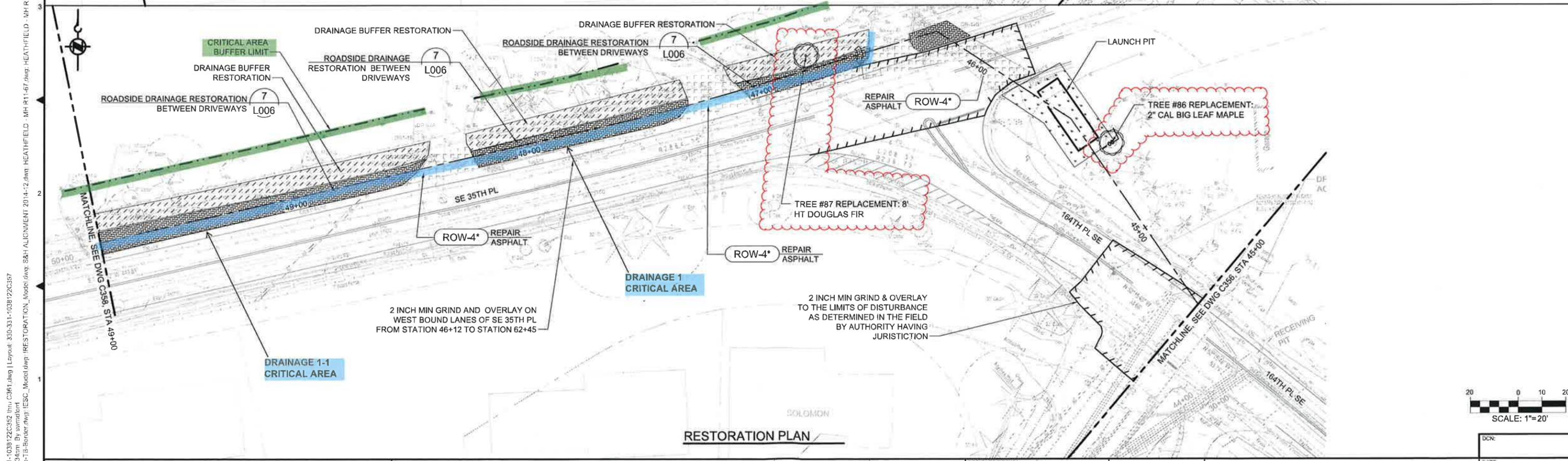
DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION  
SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE  
**SUNSET TO HEATHFIELD**  
EROSION CONTROL / TREE PROTECTION & RESTORATION PLAN  
**STA 25+00 TO 30+00**

DCN:  
DATE:  
APRIL 2016  
PROJECT FILE NO:  
1038122  
DRAWING NO:  
**C355**  
SHT NO. / TOTAL  
/ 449  
REV NO:  
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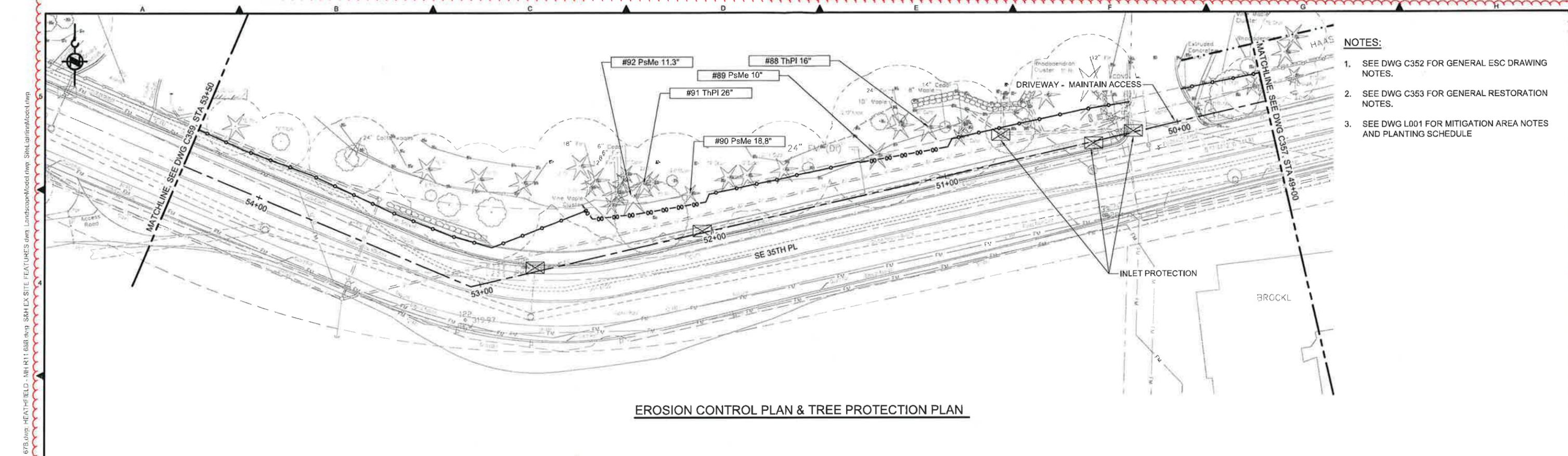
- NOTES:**
1. SEE DWG C352 FOR GENERAL ESC DRAWING NOTES.
  2. SEE DWG C353 FOR GENERAL RESTORATION NOTES.
  3. SEE DWG L001 FOR MITIGATION AREA NOTES AND PLANTING SCHEDULE



NO	REVISION DESCRIPTION	BY	APVD	DATE

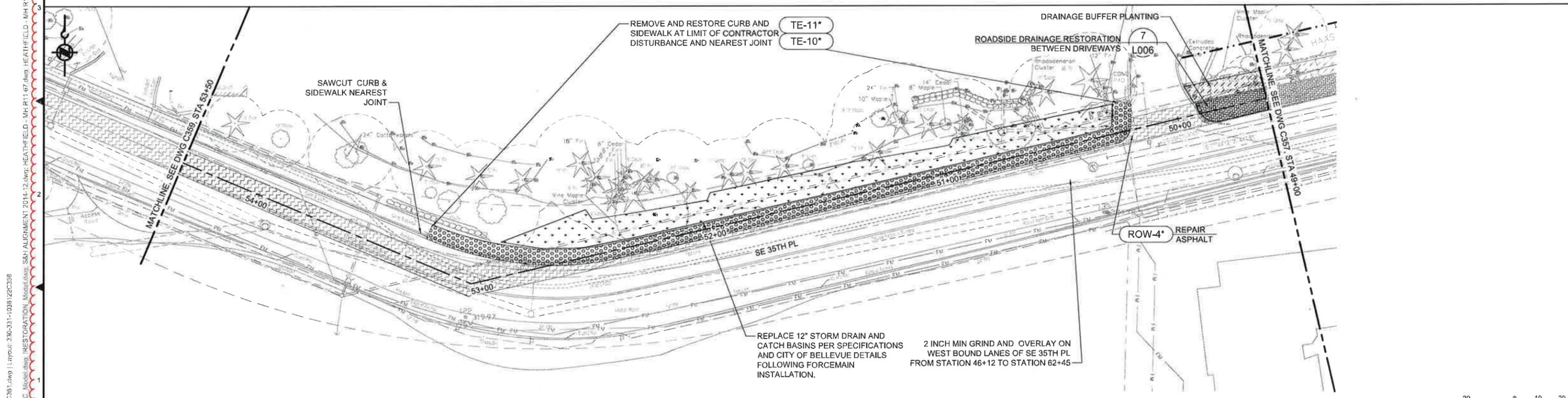
		STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT  Scott W. Radford CERTIFICATE NO. 588 EXPIRES 6/29/2017	DESIGNED/DRAWN: <b>A. FRISK</b>	SCALE: <b>1"=20'</b> 		DEPARTMENT OF NATURAL RESOURCES & PARKS WASTEWATER TREATMENT DIVISION SUNSET AND HEATHFIELD PUMP STATIONS AND FORCE MAIN UPGRADE <b>HEATHFIELD TO EASTGATE</b> EROSION CONTROL/TREE PROTECTION & RESTORATION PLAN <b>STA 44+00 TO 49+00</b>	DATE: <b>APRIL 2016</b>
			PROJECT ENGINEER: <b>S. RADFORD</b>				FACILITY NUMBER: <b>330</b>
DESIGN APPROVAL: <b>R. GAUFF</b>						<b>C357</b>	DRAWING NO:
PROJECT ACCEPTANCE: <b>S. NAMINI</b>							CONTRACT NO: <b>C01008C16</b>

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 PLOTTED: May 30, 2016 10:00:00 AM By: sradford  
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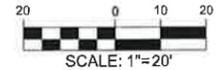


- NOTES:**
1. SEE DWG C352 FOR GENERAL ESC DRAWING NOTES.
  2. SEE DWG C353 FOR GENERAL RESTORATION NOTES.
  3. SEE DWG L001 FOR MITIGATION AREA NOTES AND PLANTING SCHEDULE

**EROSION CONTROL PLAN & TREE PROTECTION PLAN**



**RESTORATION PLAN**



NO	REVISION DESCRIPTION	BY	APVD	DATE



STATE OF WASHINGTON  
REGISTERED  
LANDSCAPE ARCHITECT

Scott W. Radford  
CERTIFICATE NO. 688  
EXPIRES 5/28/2017

DESIGNED/DRAWN:  
**A. FRISK**

PROJECT ENGINEER:  
**S. RADFORD**

DESIGN APPROVAL:  
**R. GAUFF**

PROJECT ACCEPTANCE:  
**S. NAMINI**

SCALE:  
**1"=20'**

0 REFERENCE 1"

FACILITY NUMBER:  
**330**

CONTRACT NO:  
**C01008C16**



DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION

SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE

**HEATHFIELD TO EASTGATE**  
EROSION CONTROL/TREE PROECTION & RESTORATION PLAN

**STA 49+00 TO 53+50**

DATE:  
**APRIL 2016**

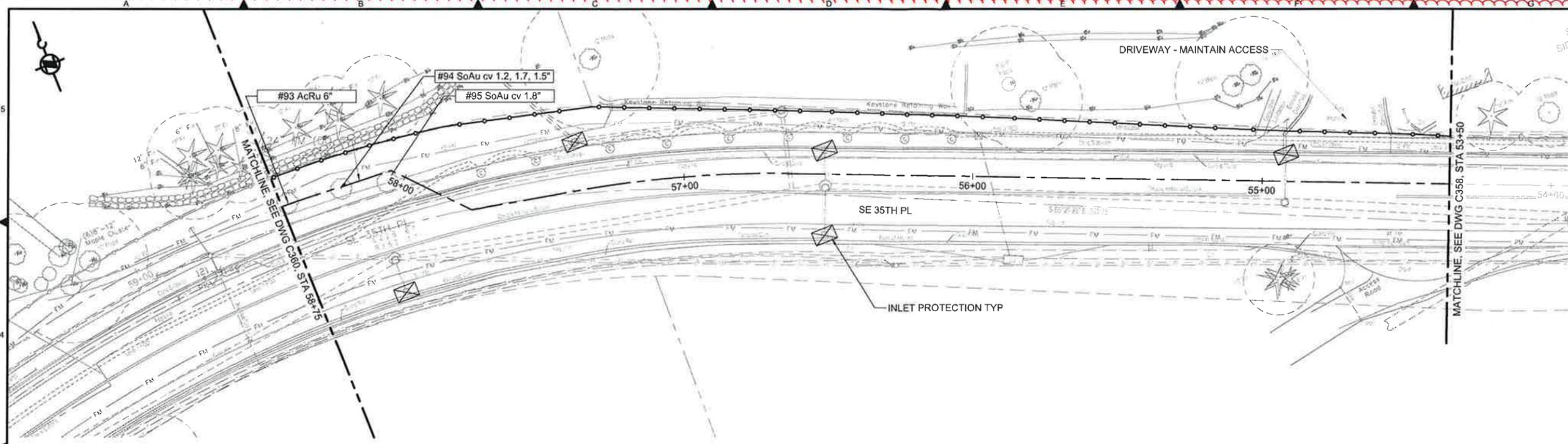
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**1038122**

DRAWING NO:  
**C358**

SHT NO / TOTAL  
**449**

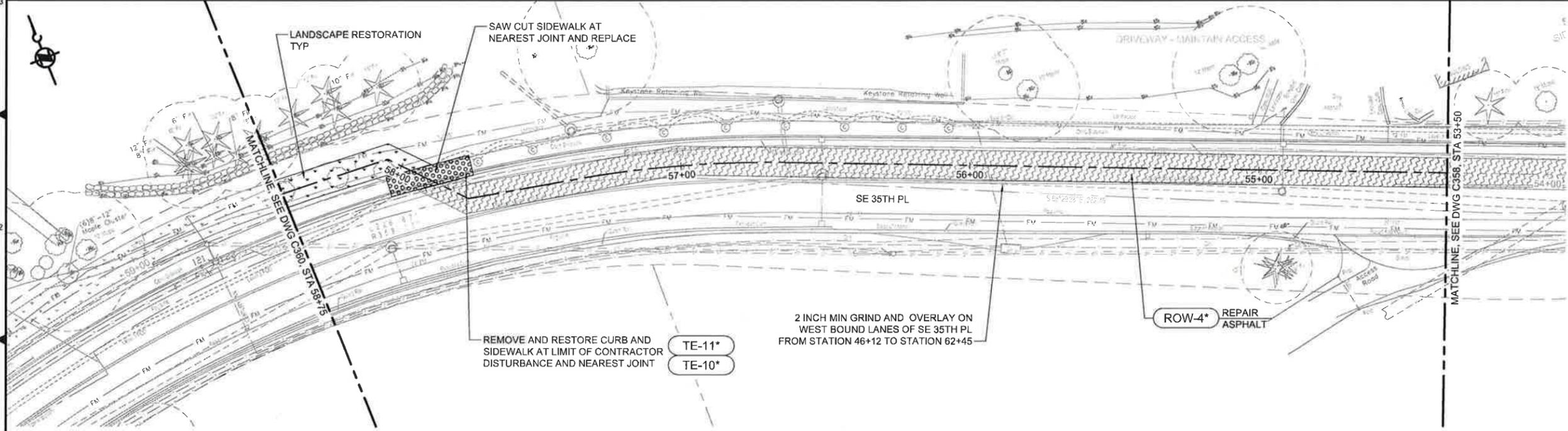
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 ESC Model.dwg  
 Address: 1000 1st Ave, Seattle, WA 98101



**EROSION CONTROL & TREE PROTECTION PLAN**

- NOTES:**
- SEE DWG C352 FOR GENERAL ESC DRAWING NOTES.
  - SEE DWG C353 FOR GENERAL RESTORATION NOTES.



**RESTORATION PLAN**



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 PLOTTED: Mar 30, 2016 10:00:04am By: swardford  
 IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



STATE OF WASHINGTON  
 REGISTERED  
 LANDSCAPE ARCHITECT  
  
 Scott W. Radford  
 CERTIFICATE NO. 688  
 EXPIRES 6/29/2017

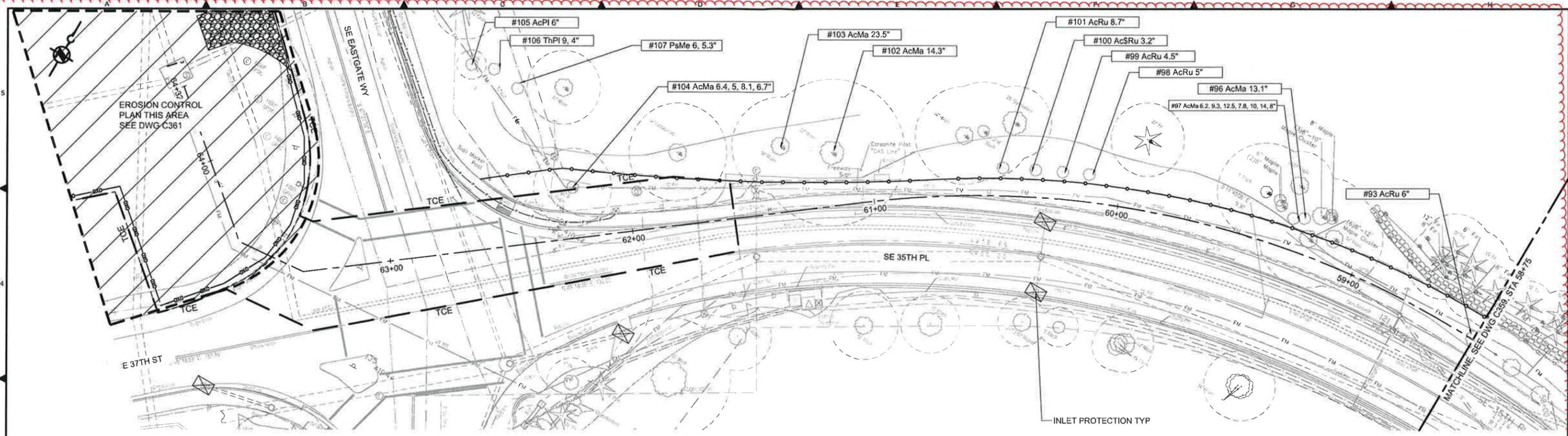
DESIGNED/DRAWN:  
**A. FRISK**  
 PROJECT ENGINEER:  
**S. RADFORD**  
 DESIGN APPROVAL:  
**R. GAUFF**  
 PROJECT ACCEPTANCE:  
**S. NAMINI**

SCALE:  
**1"=20'**  
 REFERENCE  
 FACILITY NUMBER:  
**330**  
 CONTRACT NO:  
**C01008C16**

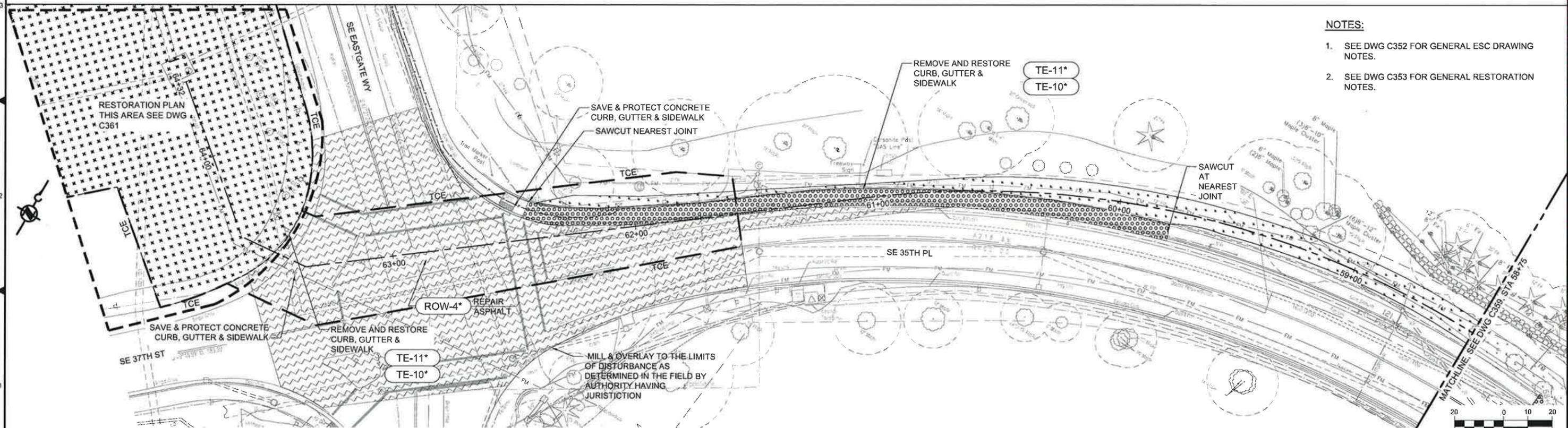


DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**HEATHFIELD TO EASTGATE**  
 EROSION CONTROL/TREE PROTECTION & RESTORATION PLAN  
**STA 53+50 TO 58+75**

DCN:  
 DATE:  
**APRIL 2016**  
 PROJECT FILE NO:  
**1038122**  
 DRAWING NO:  
**C359**  
 SHEET NO. / TOTAL REV NO. / 449 / **0**



**EROSION CONTROL & TREE PROTECTION PLAN**



**RESTORATION PLAN**

- NOTES:**
- SEE DWG C352 FOR GENERAL ESC DRAWING NOTES.
  - SEE DWG C353 FOR GENERAL RESTORATION NOTES.



NO	REVISION DESCRIPTION	BY	APVD	DATE

**MWH**

**King County**

STATE OF WASHINGTON  
REGISTERED  
LANDSCAPE ARCHITECT

Scott W. Radford  
CERTIFICATE NO. 686  
EXPIRES 6/29/2017

DESIGNED/DRAWN:  
**A. FRISK**

PROJECT ENGINEER:  
**S. RADFORD**

DESIGN APPROVAL:  
**R. GAUFF**

PROJECT ACCEPTANCE:  
**S. NAMINI**

SCALE:  
**1"=20'**

REFERENCE

FACILITY NUMBER:  
**330**

CONTRACT NO:  
**C01008C16**

DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION

SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE

**HEATHFIELD TO EASTGATE**  
EROSION CONTROL/TREE PROTECTION & RESTORATION PLAN

**STA 58+75 TO 64+32**

DATE:  
**APRIL 2016**

PROJECT FILE NO:  
**1038122**

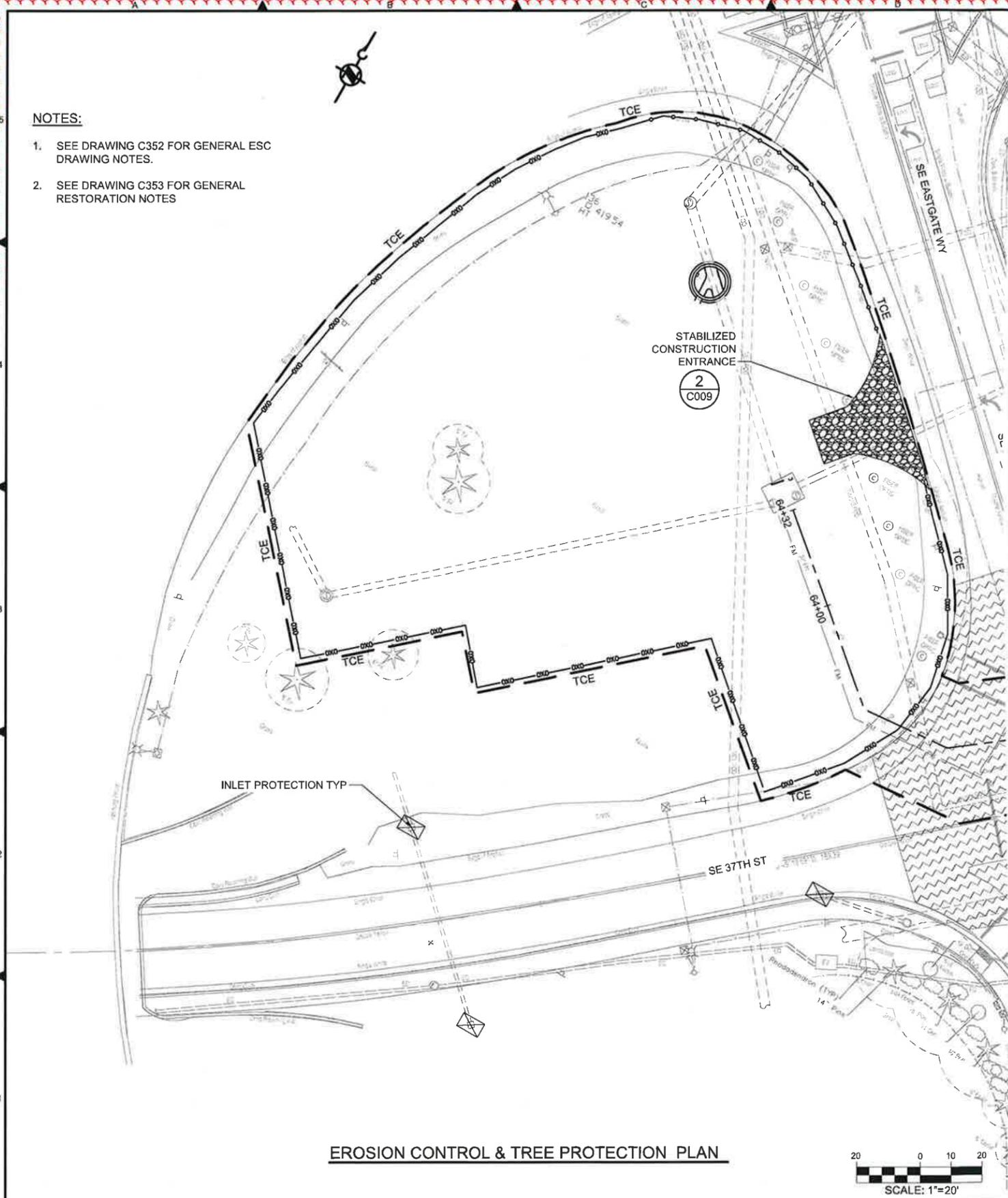
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SHT NO / TOTAL  
**449**

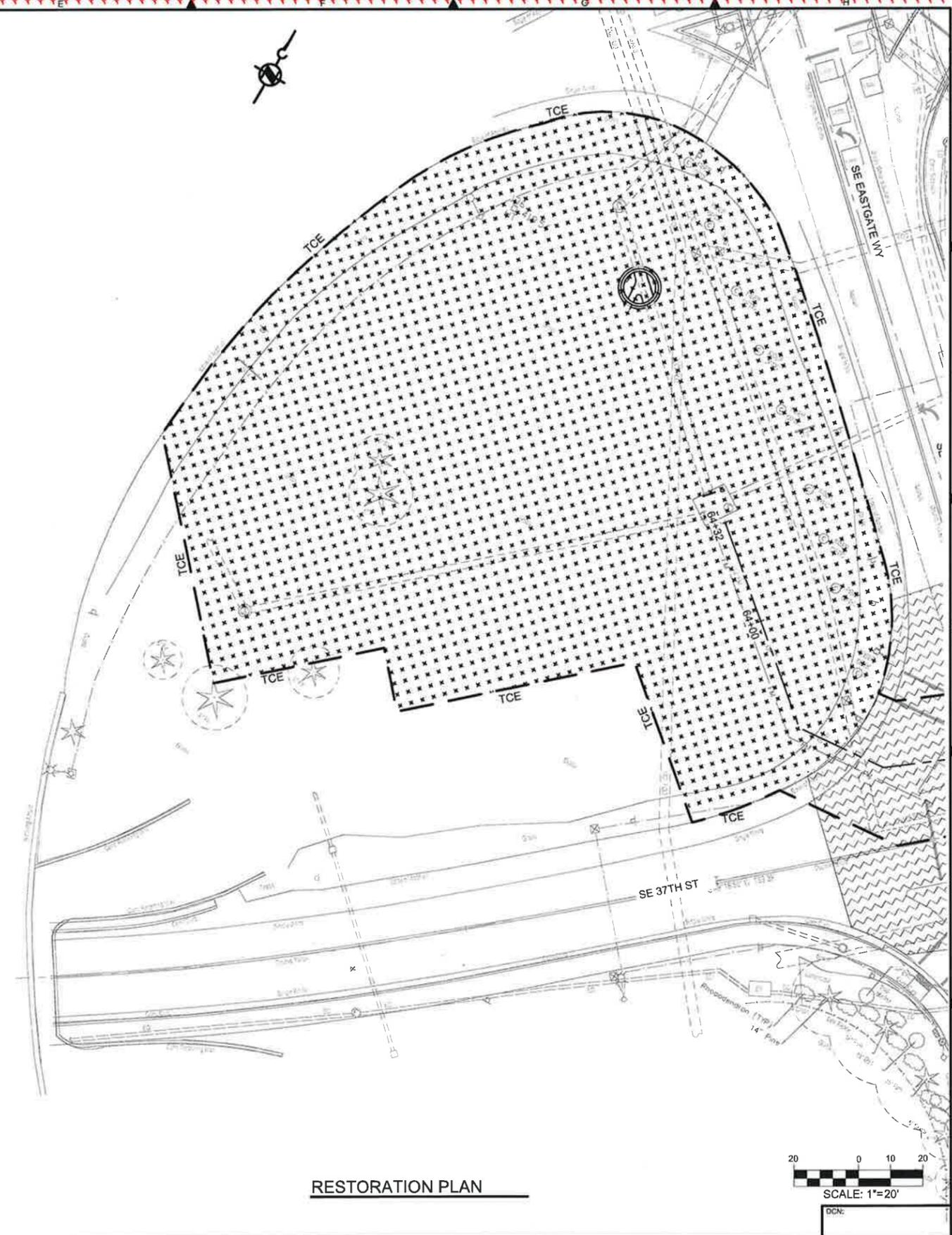
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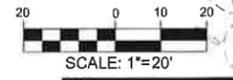
- NOTES:**
1. SEE DRAWING C352 FOR GENERAL ESC DRAWING NOTES.
  2. SEE DRAWING C353 FOR GENERAL RESTORATION NOTES



**EROSION CONTROL & TREE PROTECTION PLAN**



**RESTORATION PLAN**



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NO	REVISION DESCRIPTION	BY	APVD	DATE



STATE OF WASHINGTON  
 REGISTERED  
 LANDSCAPE ARCHITECT  
  
 Scott W. Radford  
 CERTIFICATE NO. 586  
 EXPIRES 12/31/17

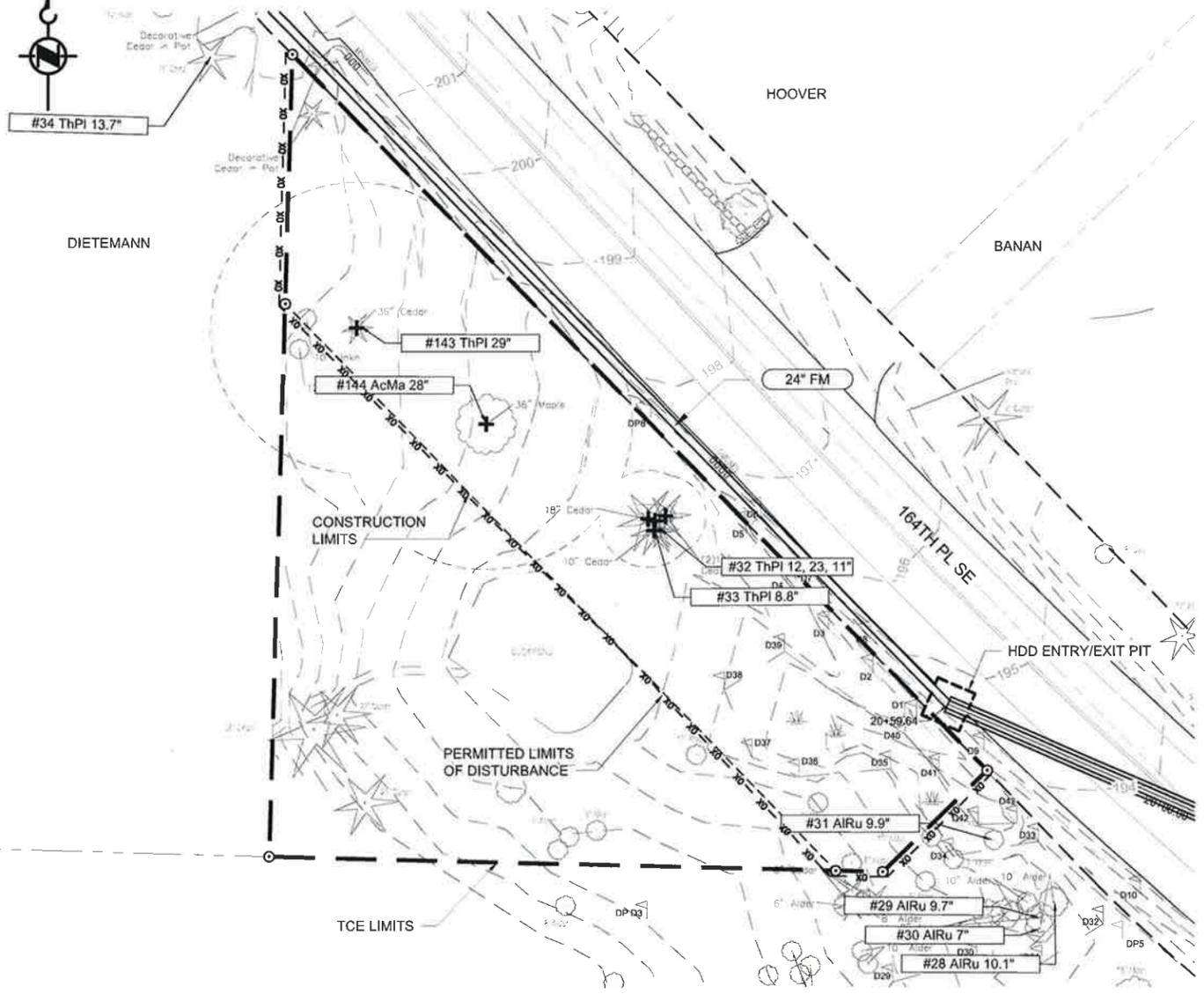
DESIGNED/DRAWN:  
**A. FRISK**  
 PROJECT ENGINEER:  
**S. RADFORD**  
 DESIGN APPROVAL:  
**R. GAUFF**  
 PROJECT ACCEPTANCE:  
**S. WALSH**

SCALE:  
**1"=20'**  
 REFERENCE  
 FACILITY NUMBER:  
**331**  
 CONTRACT NO:  
**C01608C16**



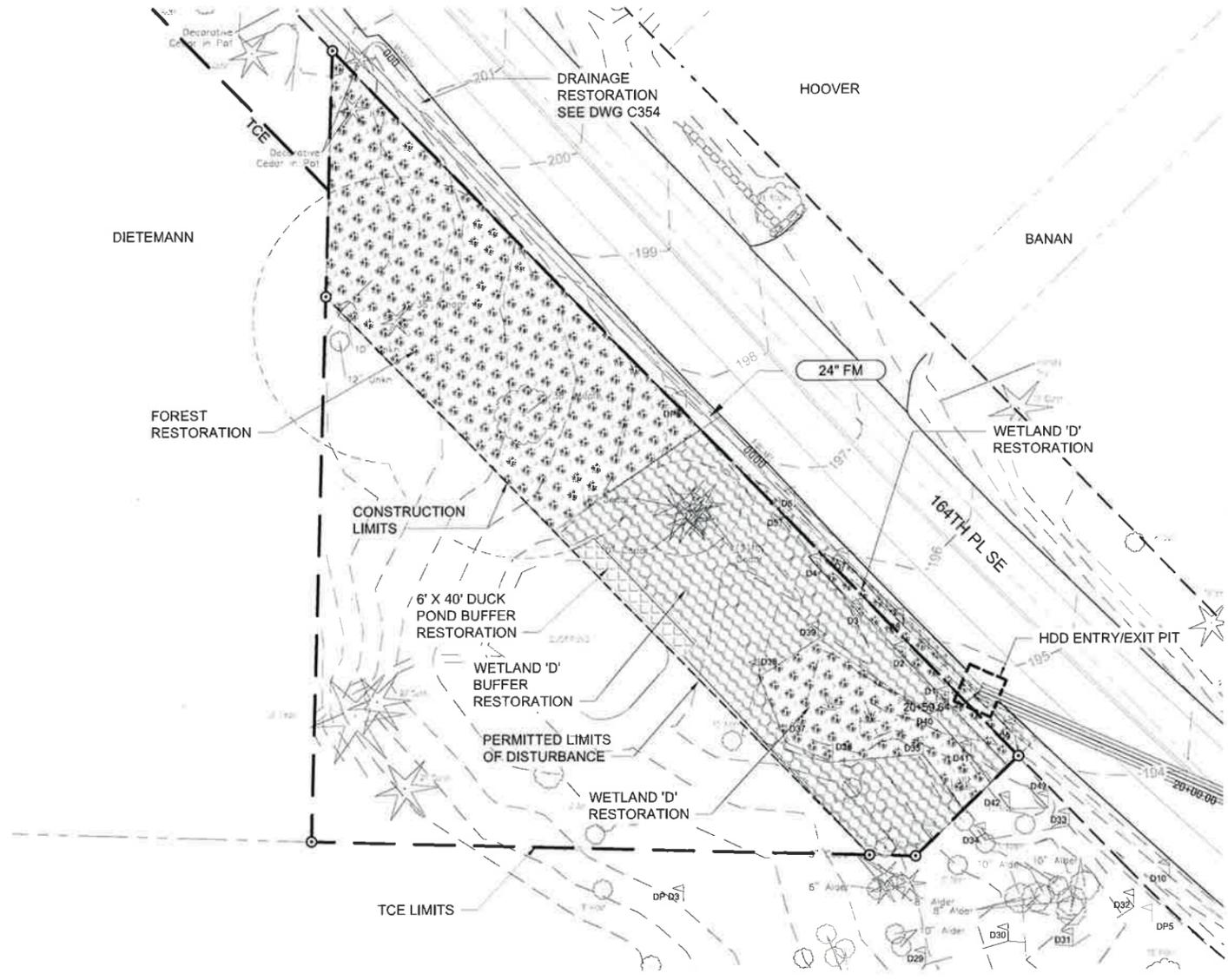
DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**HEATHFIELD TO EASTGATE**  
 EROSION CONTROL/TREE PROTECTION & RESTORATION PLAN  
**EASTGATE LAYDOWN AREA**

DATE:  
**APRIL 2016**  
 PROJECT FILE NO:  
**1038122**  
 DRAWING NO:  
**C361**  
 SHT NO / TOTAL REV NO:  
**1 / 440 0**



**EROSION CONTROL & TREE PROTECTION PLAN**

- NOTES:**
- SEE DWG C352 FOR GENERAL EROSION AND SEDIMENT CONTROL DRAWING NOTES.
  - SEE DWG C353 FOR GENERAL RESTORATION NOTES
  - SEE DWG L001 FOR WETLAND & DRAINAGE RESTORATION SYMBOLOLOGY



**RESTORATION PLAN**

- NOTES:**
- SEE DRAWING L001 FOR WETLAND & DRAINAGE RESTORATION SYMBOLOLOGY



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NO	REVISION DESCRIPTION	BY	APVD	DATE



STATE OF WASHINGTON  
 REGISTERED  
 LANDSCAPE ARCHITECT  
  
 Scott W. Radford  
 CERTIFICATE NO. 688  
 EXPIRES 6/29/2017

DESIGNED/DRAWN: <b>A. FRISK</b>	SCALE: <b>1"=20'</b>
PROJECT ENGINEER: <b>S. RADFORD</b>	REFERENCE 
DESIGN APPROVAL: <b>R. GAUFF</b>	FACILITY NUMBER: <b>330-331</b>
PROJECT ACCEPTANCE: <b>S. NAMINI</b>	CONTRACT NO: <b>C01008C16</b>



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**SUNSET TO HEATHFIELD**  
 EROSION CONTROL / TREE PROTECTION & RESTORATION PLAN  
**KING COUNTY PROPERTY**

DATE: <b>APRIL 2016</b>
PROJECT FILE NO: <b>1038122</b>
DRAWING NO: <b>C362</b>
SHT NO / TOTAL <b>/ 449</b>
REV NO: <b>0</b>

**GENERAL HABITAT RESTORATION NOTES**

**HABITAT RESTORATION AREAS WORK SEQUENCE**

**HEATHFIELD PUMP STATION HABITAT RESTORATION**

COMPLETE THE FOLLOWING ACTIVITIES TO RESTORE THOSE PORTIONS OF THE VASA CREEK BUFFER DISTURBED BY PROJECT CONSTRUCTION.

1. COMPLETE THE REMOVAL OF ANY NOXIOUS WEEDS (PARTICULARLY ENGLISH IVY AND HIMALAYAN BLACKBERRY).
2. COVER BARE SOIL AREAS WITH WOOD CHIP MULCH TO PREVENT EROSION, RETAIN MOISTURE, AND SUPPRESS WEEDS.
3. INSTALL NATIVE TREE AND SHRUB SPECIES.

**FORCE MAIN CONSTRUCTION HABITAT RESTORATION AREAS**

FOLLOWING INSTALLATION OF THE NEW FORCE MAIN WITHIN DRAINAGE 1, DRAINAGE 1-1, DRAINAGE 3, AND THE ROADSIDE DITCH PORTION OF WETLAND D, THE TRENCH SHALL BE BACKFILLED WITH SUITABLE MATERIAL PER ENGINEERING REQUIREMENTS AND GRADED TO MATCH PRE-CONSTRUCTION CONDITIONS. COBBLE SHALL BE PLACED IN THE BED OF DRAINAGE 1, SIMILAR TO EXISTING CONDITIONS. THE DISTURBED PORTION OF THE DRAINAGES AND THE DITCH PORTION OF WETLAND D SHALL BE SEEDED WITH HABITAT RESTORATION AREA SEED MIX. NATIVE SHRUB SPECIES SHALL BE INSTALLED BETWEEN THE RESTORED DITCH AND THE ADJACENT PROPERTIES.

**VASA CREEK BUFFER AT THE 164TH PLACE SE CROSSING**

FOLLOWING INSTALLATION OF THE NEW FORCE MAIN WITHIN AREA OF THE VASA CREEK BUFFER COMPLETE THE FOLLOWING ACTIVITIES:

1. MULCH BARE SOILS.
2. APPLY MITIGATION SEED MIX.
3. INSTALL NATIVE TREE AND SHRUB SPECIES.

**KING COUNTY PROPERTY HABITAT RESTORATION**

RESTORE THE PORTION OF THE KING COUNTY PROPERTY INCLUDING THE WETLAND D AND WETLAND BUFFER USED FOR CONSTRUCTION PURPOSES. COMPLETE THE FOLLOWING ACTIVITIES:

1. REMOVE ALL EQUIPMENT, MATERIALS, AND DEBRIS FROM THE SITE.
2. REMOVE ANY GRAVEL OR OTHER SURFACING MATERIAL THAT HAS BEEN APPLIED AND DISPOSE OF IT PROPERLY OFFSITE.
3. DECOMPACT ALL DISTURBED SOILS.
4. APPLY AN ORGANIC SOIL AMENDMENT.
5. INSTALL PLANT MATERIALS.
6. APPLY A LAYER OF WOOD CHIP MULCH ACROSS THE RESTORED AREA.

HEATHFIELD PUMP STATION (VASA CREEK STREAM BUFFER) 4,920 SF						
SYMBOL	STRATUM	COMMON NAME	SCIENTIFIC NAME	SIZE	QUANTITY	SPACING (OC)
▽▽▽	TREE	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	1 GAL	5	12 Ft
		SITKA SPRUCE	PICEA SITCHENSIS	1 GAL	5	12 Ft
▽▽▽	SHRUB	SNOWBERRY	SYMPHORICARPUS ALBA	1 GAL	8	6 Ft
		VINE MAPLE	ACER CIRCINATUM	1 GAL	8	6 Ft
		INDIAN PLUM	OEMLERIA CERASIFORMIS	1 GAL	8	6 Ft
▽▽▽		NOOTKA ROSE	ROSA NUTKANA	1 GAL	8	6 Ft
	HERB	SWORD FERN	POLYSTICHUM MUNITUM	1 GAL	42	3 Ft
▽▽▽		LOW OREGON GRAPE	MAHONIA NERVOSA	1 GAL	42	3 Ft
WETLAND D BUFFER 3,800 SF						
SYMBOL	STRATUM	COMMON NAME	SCIENTIFIC NAME	SIZE	QUANTITY	SPACING (OC)
□	TREE	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	1 GAL	13	12 Ft
		WESTERN RED CEDAR	THUJA PLICATA	1 GAL	13	12 Ft
□	SHRUB	SNOWBERRY	SYMPHORICARPUS ALBA	1 GAL	21	6 Ft
		SALMONBERRY	RUBUS SPECTABILIS	1 GAL	21	6 Ft
		NOOTKA ROSE	ROSA NUTKANA	1 GAL	21	6 Ft
□	HERB	HAZELNUT	CORYLUS CORNUTA	1 GAL	21	6 Ft
□		SWORD FERN	POLYSTICHUM MUNITUM	1 GAL	21	3 Ft
DUCK POND (BUFFER) 185 SF						
SYMBOL	STRATUM	COMMON NAME	SCIENTIFIC NAME	SIZE	QUANTITY	SPACING (OC)
□	TREE	PACIFIC WILLOW	SALIX LUDICA	LIVE STAKE	7	6 Ft
	SHRUB	SITKA WILLOW	SALIX SITCHENSIS	LIVE STAKE	7	6 Ft
□		RED OSIER DOGWOOD	CORNUS SERICEA	1 GAL	7	6 Ft
□	EMERGENT HERBS	SMALL-FRUITED BUL RUSH	SCIRPUS MICROCARPUS	PLUG	160	.5 FT
		SLOUGH SEDGE	CAREX OBNUPTA	PLUG	160	.5 FT
WETLAND D & FOREST RESTORATION WETLAND D: 1,012 SF, FOREST: 4,723 SF						
SYMBOL	STRATUM	COMMON NAME	SCIENTIFIC NAME	SIZE	QUANTITY	SPACING (OC)
□	TREE	WESTER RED CEDAR	THUJA PLICATA	1 GAL	15	12 Ft
	TREE	SITKA SPRUCE	PICEA SITCHENSIS	1 GAL	15	12 Ft
□	SHRUB	SITKA WILLOW	SALIX SITCHENSIS	LIVE STAKE	15	3 Ft
	SHRUB	RED OSIER DOGWOOD	CORNUS SERICEA	LIVE STAKE	15	3 Ft
□	SHRUB	INDIAN PLUM	OEMLERIA CERASIFORMIS	1 GAL	15	6 Ft
	SHRUB	BLACK TWINBERRY	LONICERA INVOLURATA	1 GAL	60	6 Ft
VASA CREEK CROSSING (STREAM BUFFER) 2,170 SF						
SYMBOL	STRATUM	COMMON NAME	SCIENTIFIC NAME	SIZE	QUANTITY	SPACING (OC)
□	SHRUB	SNOWBERRY	SYMPHORICARPUS ALBA	1 GAL	15	6 Ft
		TALL OREGON GRAPE	MAHONIA AQUIFOLIUM	1 GAL	15	6 Ft
		NOOTKA ROSE	ROSA NUTKANA	1 GAL	15	6 Ft
		PACIFIC WAX MYRTLE	MYRICA CALIFORNICA	1 GAL	15	6 Ft
□	HERB	SWORD FERN	POLYSTICHUM MUNITUM	1 GAL	15	3 Ft
DRAINAGE BUFFER 2,390 SF						
SYMBOL	STRATUM	COMMON NAME	SCIENTIFIC NAME	SIZE	QUANTITY	SPACING (OC)
□	SHRUB	SNOWBERRY	SYMPHORICARPUS ALBA	1 GAL	27	6 Ft
		TALL OREGON GRAPE	MAHONIA AQUIFOLIUM	1 GAL	27	6 Ft
		NOOTKA ROSE	ROSA NUTKANA	1 GAL	27	6 Ft
		RED FLOWERING CURRANT	RIBIES SANGUINEUM	1 GAL	27	6 Ft
□	HERB	SWORD FERN	POLYSTICHUM MUNITUM	1 GAL	53	3 Ft
HABITAT RESTORATION SEED MIX (ROADSIDE DITCH OF WETLAND 'D', DRAINAGE 1, DRAINAGE 1-1, DRAINAGE 3) 4,240 SF						
SYMBOL				QUANTITY		
□	30% BLUE WILD RYE/ELYMUS GLAUCUS			5% MEADOW BARLEY/HORDEUM BRACHYANTHERUM		
	30% TUFTED HAIRGRASS/DESCHAMPsia CAESPITOSA			5% AMERICAN SLOUGHGRASS/BECKMANNIA SYZIGACHNE		
	30% WESTERN MANNAGRASS/GLYCERIA OCCIDENTALIS			APPLICATION RATE = 40LBS./ACRE		

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NO	REVISION DESCRIPTION	BY	APVD	DATE



STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT  
 Scott W. Radford  
 CERTIFICATE NO. 688  
 EXPIRES 6/30/2017

DESIGNED/DRAWN: A. FRISK  
 PROJECT ENGINEER: S. RADFORD  
 DESIGN APPROVAL: R. GAUFF  
 PROJECT ACCEPTANCE: S. NAMINI

SCALE: NO SCALE  
 REFERENCE  
 FACILITY NUMBER: 330-331  
 CONTRACT NO: C01008C16

DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**HABITAT RESTORATION NOTES & PLANT SCHEDULE**

DATE: APRIL 2016  
 PROJECT FILE NO: 1038122  
 DRAWING NO: **L001**  
 SHEET NO: 449 / TOTAL: 449

**GOALS**

THE OVERALL GOAL OF THE RESTORATION PLAN IS TO RESTORE ALL WETLAND, STREAM, AND BUFFER AREAS AND WILDLIFE HABITATS THAT ARE TEMPORARILY IMPACTED BY PROJECT CONSTRUCTION AND PROVIDE ADDITIONAL HABITAT ENHANCEMENTS AT THE TWO PUMP STATIONS.

**OBJECTIVES**

KING COUNTY PROPOSES TO MONITOR AND MAINTAIN THE PLANTING AREAS FOR A PERIOD OF FIVE YEARS. IN ORDER TO EVALUATE WHETHER THE ABOVE OBJECTIVES HAVE BEEN MET, THE FOLLOWING PERFORMANCE STANDARDS WILL APPLY DURING THE FIVE-YEAR MONITORING PERIOD:

**ALL UPLAND BUFFER AREAS AND WETLAND D RESTORATION AREA:**

- 100% SURVIVAL OF ALL INSTALLED PLANT MATERIAL WITHIN FIRST YEAR (CONTRACTOR'S GUARANTEE PERIOD).
- ALL PLANTED DISTURBED AREAS WILL HAVE 20% COVER WITHIN 2 YEARS, 40% COVER WITHIN 3 YEARS, 60% COVER WITHIN 4 YEARS AND 100% COVER WITHIN 5 YEARS OF BEING PLANTED.
- FOUR INCHES OF WOOD CHIP MULCH WILL BE MAINTAINED OVER THE PLANTED AREA DURING YEARS 1-5.
- ALL MONITORING YEARS: NO MORE THAN 5% TOTAL COVER OF NONNATIVE INVASIVE VEGETATION WITHIN THE PLANTING AREA. INVASIVE SPECIES TO BE MONITORED WILL INCLUDE HIMALAYAN AND CUT-LEAF BLACKBERRY, BINDWEED (MORNING GLORY), ENGLISH IVY, ENGLISH HOLLY, NONNATIVE LAUREL SPECIES, SCOT'S BROOM, REED CANARYGRASS, AND ANY OTHER SPECIES LISTED ON THE KING COUNTY NOXIOUS WEED LIST. THERE SHALL BE ZERO TOLERANCE FOR KNOTWEED.

**DITCHES:**

- ALL MONITORING YEARS: DITCH BANKS SHALL BE STABLE, WITH GOOD ESTABLISHMENT OF SEED MIX AND NO AREAS OF BARE OR ERODING SOIL.

**GENERAL WORK SEQUENCE**

**HEATHFIELD PUMP STATION RESTORATION**

THE COUNTY WILL COMPLETE THE FOLLOWING ACTIVITIES TO RESTORE THOSE PORTIONS OF THE VASA CREEK BUFFER DISTURBED BY PROJECT CONSTRUCTION. 1,400 sf

1. COMPLETE THE REMOVAL OF ANY NONNATIVE INVASIVE VEGETATION (PARTICULARLY ENGLISH IVY AND HIMALAYAN BLACKBERRY).
2. COVER BARE SOIL AREAS WITH ARBORIST MULCH TO PREVENT EROSION, RETAIN MOISTURE, AND SUPPRESS WEEDS.
3. INSTALL NATIVE TREE AND SHRUB SPECIES.

IN ADDITION, TO COMPENSATE FOR THE PERMANENT IMPACT OF INSTALLING THE HVAC CONDENSER UNIT, THE COUNTY WILL USE SIMILAR MEASURES TO RESTORE ADDITIONAL STREAM BUFFER AREA OUTSIDE OF THE CONSTRUCTION DISTURBANCE AREA. THE PERMANENT BUFFER IMPACT AREA IS SMALL (24 SQUARE FEET) AND THERE IS AMPLE SPACE ONSITE TO PROVIDE ADDITIONAL RESTORATION TO COMPENSATE FOR THIS IMPACT.

**FORCE MAIN CONSTRUCTION RESTORATION AREAS**

FOLLOWING INSTALLATION OF THE NEW FORCE MAIN WITHIN DRAINAGE 1, DRAINAGE 1-1, DRAINAGE 3, AND THE ROADSIDE DITCH PORTION OF WETLAND D, THE TRENCH WILL BE BACKFILLED WITH SUITABLE MATERIAL PER ENGINEERING REQUIREMENTS AND GRADED TO MATCH PRE-CONSTRUCTION CONDITIONS. COBBLE WILL BE

Project Component	Temporary Impact Areas	Permanent Impact Areas
<b>Heathfield Pump Station</b>		
Pump station improvements and force main	Vasa Creek buffer: 4,784 sf	Vasa Creek buffer: 24 sf
<b>Sunset Pump Station</b>		
Bank restoration and native landscaping	Lake Sammamish Shoreline Critical Area buffer: 300 sf	None (permanent effects will be beneficial)
<b>New Force Main</b>		
Pipe assembly and pullback	Lake Sammamish Shoreline Critical Area buffer: area unknown (minimum area needed to pull back pipe)	None
New force main along SE 35 <sup>th</sup> Place	Drainage 1 and Drainage 1-1 channel: 1,100 sf Drainage 1 buffer: 2,925 sf	None
New force main crossing of Vasa Creek (164 <sup>th</sup> Place SE)	Vasa Creek buffer: 1,275 sf	None
New force main along 164th Place SE and adjacent King County-owned parcel	Wetland D: 1,512 sf Drainage 3: 915 sf Buffer of Wetland D: 5,090 sf	None
<b>Construction Staging</b>		
Construction staging/laydown on King County-owned parcel along 164 <sup>th</sup> Place SE	Same as above for 'new force main along 164 <sup>th</sup> Place SE' Wetland D: 1,512 sf Buffer of Wetland D: 5,063 sf)	None

PLACED IN THE BED OF DRAINAGE 1, SIMILAR TO EXISTING CONDITIONS. THE DISTURBED PORTION OF THE DRAINAGES AND THE DITCH PORTION OF WETLAND D WILL BE SEEDED WITH A WEST-AREA SEED MIX. NATIVE SHRUB SPECIES WILL BE INSTALLED BETWEEN THE RESTORED DITCH AND THE ADJACENT PROPERTIES.

TO RESTORE THE BUFFER OF VASA CREEK AT THE 164TH PLACE SE CROSSING, THE COUNTY WILL MULCH BARE SOILS WITH A NATIVE SEED MIX AND INSTALL NATIVE TREE AND SHRUB SPECIES.

**KING COUNTY PROPERTY RESTORATION**

TO RESTORE THE PORTION OF THE WETLAND D AND WETLAND BUFFER USED FOR CONSTRUCTION STAGING/LAYDOWN, THE COUNTY WILL COMPLETE THE FOLLOWING ACTIVITIES:

1. REMOVE ALL EQUIPMENT, MATERIALS, AND DEBRIS FROM THE SITE.
2. REMOVE ANY GRAVEL OR OTHER SURFACING MATERIAL THAT HAS BEEN APPLIED AND DISPOSE OF IT PROPERLY OFFSITE.
3. DECOMPACT ALL DISTURBED SOILS.
4. APPLY AN ORGANIC SOIL AMENDMENT.
5. PLANT NATIVE TREE, SHRUB AND GROUND COVER SPECIES.
6. APPLY A LAYER OF ORGANIC MULCH ACROSS THE RESTORATION SITE.

**MAINTENANCE AND MONITORING PLAN**

THIS SECTION DESCRIBES THE PROPOSED MONITORING AND MAINTENANCE OF THE RESTORATION AREAS. THREE YEARS OF MONITORING AND MAINTENANCE WILL BE THE RESPONSIBILITY OF KING COUNTY. A PROFESSIONAL BIOLOGIST OR LANDSCAPE ARCHITECT WILL PERFORM ALL MONITORING.

**PRE-CONSTRUCTION**

MONITORING OF THE RESTORATION AREAS WILL BEGIN PRIOR TO CONSTRUCTION OF THE PROJECT. AT THIS TIME, THE COUNTY WILL MEET WITH THE CONSTRUCTION CONTRACTOR TO DEFINE AND CLEARLY MARK THE LIMITS OF WORK AND TESC MEASURES.

**POST-CONSTRUCTION AND BEFORE PLANT INSTALLATION**

AFTER THE PROJECT IS INSTALLED, THE TESC MEASURES WILL BE REMOVED. AT THIS TIME, KING COUNTY ECOLOGIST WILL MEET WITH THE LANDSCAPE CONTRACTOR TO DISCUSS SITE PREPARATION PRIOR TO INSTALLATION OF PLANTINGS. SHOULD ANY PLANT SPECIES SUBSTITUTIONS BE NECESSARY, THE PROJECT BIOLOGIST AND CONTRACTOR WILL DISCUSS AND DOCUMENT THESE FOR APPROVAL BY KING COUNTY AND CITY OF BELLEVUE. THE BIOLOGIST WILL ALSO INSPECT THE PLANT MATERIAL AND ASSIST WITH PLACEMENT OF PLANT SPECIES IN THE FIELD.

**AS-BUILT INSPECTION**

AFTER THE PLANTS ARE INSTALLED IN THE RESTORATION AREAS, THE LANDSCAPE CONTRACTOR WILL PROVIDE AN AS-BUILT OR RECORD DRAWING. KING COUNTY ECOLOGIST WILL VISIT THE SITE WITH THE KING COUNTY REPRESENTATIVE TO ENSURE THE PLANTS HAVE BEEN INSTALLED PROPERLY, MULCH AND SEED HAVE BEEN APPLIED, AND THERE ARE NO OTHER ISSUES THAT NEED TO BE ADDRESSED.

KING COUNTY ECOLOGIST WILL VERIFY THE AS-BUILT CONDITIONS, INSPECT THE PLANTS, RECOMMEND REPLACEMENT IF NECESSARY, AND ESTABLISH SAMPLE TRANSECTS AND PHOTO POINT LOCATIONS. PERMANENT TRANSECTS FOR MONITORING WILL BE SELECTED TO REPRESENT THE PLANTING AREAS. THE APPROPRIATE NUMBER AND LOCATION OF TRANSECTS WILL BE DETERMINED ON SITE DURING THE AS-BUILT SITE INSPECTION. PERMANENT PHOTO POINTS WILL BE LOCATED TO PROVIDE A REPRESENTATIVE VISUAL DOCUMENTATION OF

SITE PROGRESS. THE PHOTO POINTS AND SAMPLE TRANSECTS WILL BE SHOWN ON THE AS-BUILT DRAWING.

MONITORING OF THE RESTORATION AREAS WILL BEGIN UPON KING COUNTY AND CITY OF BELLEVUE ACCEPTANCE OF THE AS-BUILT OR RECORD DRAWING, AND WILL CONTINUE FOR FIVE YEARS.

**PERFORMANCE MONITORING**

THE SITES WILL BE MONITORED ACCORDING TO THE SCHEDULE AND METHODS SHOWN IN TABLE 10. DURING EACH YEAR OF THE MONITORING PERIOD, THE SITE WILL BE MONITORED IN THE SPRING FOR THE PRESENCE OF NON-NATIVE INVASIVE VEGETATION. THIS WILL ALLOW TIME FOR MAINTENANCE OF THE SITE IF NEEDED TO REMOVE WEEDS DURING THE EARLY GROWING SEASON BEFORE SEED SET. A SECOND SITE VISIT IN THE LATE SUMMER OR EARLY FALL WILL BE MADE TO ASSESS VEGETATION COVER AND SURVIVAL AGAINST THE PROJECT PERFORMANCE STANDARDS.

Monitoring Element	Location & Methods	Year 1	Year 2	Years 3-5
Vegetation survival	Comprehensive count of installed plants (Year 1 only).			
	Count of installed plants along a transect (Years 2 and 3).	Late Summer or Early Fall	Late Summer or Early Fall	Late Summer or Early Fall
Non-native invasive vegetation	General observations of invasive species.	Early Spring	Early Spring	Early Spring
	Percent cover data collected along a transect.	Late Summer or Early Fall	Late Summer or Early Fall	Late Summer or Early Fall
Ditch stability	General observations of ditch bank stability at restoration locations.	Early Spring	Early Spring	Early Spring
		Late Summer or Early Fall	Late Summer or Early Fall	Late Summer or Early Fall

**MONITORING REPORTS**

AN AS-BUILT OR RECORD DRAWING WILL BE PROVIDED TO CITY OF BELLEVUE WITHIN 90 DAYS OF COMPLETION OF THE MITIGATION INSTALLATION.

MONITORING REPORTS WILL BE PREPARED DURING YEARS 1, 2, 3 AND 5 TO DOCUMENT THE FINDINGS OF THE MONITORING SITE VISITS. THE REPORTS WILL BE SUBMITTED TO CITY OF BELLEVUE BY OCTOBER 31 OF EACH MONITORING YEAR. THE MONITORING REPORTS WILL INCLUDE:

- PROJECT BACKGROUND AND MONITORING SCHEDULE;
- RESTORATION GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS;
- QUANTITATIVE PLANT SURVIVAL AND COVER ASSESSMENT AGAINST PERFORMANCE STANDARDS;
- GENERAL OBSERVATIONS OF SITE CONDITIONS AND PLANT HEALTH ACROSS THE RESTORATION AREAS;
- GENERAL OBSERVATIONS OF DITCH BANK STABILITY;
- USE OF BUFFER AREAS BY HUMANS AND WILDLIFE;
- DOCUMENTATION OF COMPLETED MAINTENANCE ACTIVITIES;
- PHOTOGRAPHS TAKEN FROM ESTABLISHED PHOTOPPOINTS;
- RECOMMENDATIONS FOR ADDITIONAL MAINTENANCE ACTIONS OR CONTINGENCY MEASURES;
- VEGETATION MONITORING DATA (INCLUDED AS AN APPENDIX).

**MAINTENANCE AND CORRECTIVE ACTION**

KING COUNTY WILL COMMENCE MAINTENANCE OF THE RESTORATION AREAS AFTER ACCEPTANCE OF THE AS-BUILT REPORT AND CONTINUE FOR FIVE YEARS. MAINTENANCE WILL INCLUDE, BUT IS NOT LIMITED TO:

- INSTALLATION OF ADDITIONAL PLANTINGS IF THE COMBINATION OF INSTALLED PLANTS AND REGROWTH OF NATIVE VOLUNTEER SPECIES DOES NOT MEET THE MINIMUM PERFORMANCE STANDARDS DISCUSSED ABOVE. ALL PLANTS THAT DIE PRIOR TO YEAR 1 MONITORING MUST BE REPLACED.
- WEEDING WILL BE PERFORMED MONTHLY DURING THE MAINTENANCE PERIOD TO REMOVE INVASIVE, NON-NATIVE PLANT SPECIES IN THE RESTORATION AREAS.
- ADDING ADDITIONAL WOOD FIBER MULCH ACROSS THE ENTIRE RESTORATION AREAS TO MAINTAIN AT LEAST FOUR INCHES DEPTH OF MULCH.
- STABILIZING ERODED AREAS USING BIOENGINEERING TECHNIQUES THAT ARE APPROPRIATE IF MULCHING, SEEDING OR OTHER STANDARD EROSION CONTROL METHODS FAIL.
- REMOVING FROM THE SITE ALL LITTER AND NON-NATIVE INVASIVE VEGETATION.

**CONTINGENCY PLAN**

SHOULD ANY MONITORING REPORT REVEAL THE MITIGATION HAS FAILED IN WHOLE OR PART, AND SHOULD THAT FAILURE BE BEYOND THE SCOPE OF ROUTINE MAINTENANCE, KING COUNTY WILL PREPARE A CONTINGENCY PLAN. ONCE APPROVED BY THE CITY OF BELLEVUE, THE CONTINGENCY PLAN WILL BE INSTALLED AND WILL REPLACE THE APPROVED MITIGATION PLAN. IF THE FAILURE IS SUBSTANTIAL, THE CITY MAY EXTEND THE MONITORING PERIOD.

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CITY OF BELLEVUE  
**CRITICAL AREAS  
LAND USE PERMIT**  
DECEMBER 2015

DESIGNED/DRAWN: S. RADFORD	SCALE: NO SCALE
PROJECT ENGINEER: S. RADFORD	0 REFERENCE 1"
DESIGN APPROVAL: R. GAUFF	FACILITY NUMBER: 330-331
PROJECT ACCEPTANCE: S. NAMINI	CONTRACT NO: C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION  
SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE

**MITIGATION  
NOTES**

DATE: DECEMBER 2015
PROJECT FILE NO: 1038122
DRAWING NO: <b>L001A</b>
SHT NO / TOTAL 34 / 41
REV NO: <b>0</b>

PLANT SCHEDULE SUNSET PUMP STATION

3,400 SF

PLANT SCHEDULE HEATHFIELD PUMP STATION

700 SF

PLANT SCHEDULE SHORELINE RESTORATION

1,485 SF

TREES	BOTANICAL NAME / COMMON NAME	CONT	QTY	
	ACER CIRCINATUM / VINE MAPLE	15 GAL	5	
	BETULA JACQUEMONTII / JACQUEMONTII BIRCH	15 GAL	1	
	OEMLERIA CERASIFORMIS / INDIAN PLUM	15 GAL	7	
	PICEA SITCHENSIS / SITKA SPRUCE	B & B	3	
	PRUNUS EMARGINATA / BITTER CHERRY	15 GAL	3	
	THUJA OCCIDENTALIS 'EMERALD' / EMERALD ARBORVITAE	15 GAL	34	
	X CUPRESSOCYPARIS LEYLANDII / LEYLANDI CYPRESS	24"BOX	1	
SHRUBS	BOTANICAL NAME / COMMON NAME	SIZE	QTY	
	ARBUTUS UNEDO / STRAWBERRY TREE SHRUB	5 GAL	4	
	CISTUS X HYBRIDUS / WHITE ROCKROSE	5 GAL	21	
	MAHONIA AQUIFOLIUM / OREGON GRAPE	2 GAL	41	
	MYRICA CALIFORNICA / PACIFIC WAX MYRTLE	5 GAL	6	
	POLYSTICHUM MUNITUM / WESTERN SWORD FERN	5 GAL	43	
	ROSA NUTKANA / NOOTKA ROSE	5 GAL	21	
	RUBUS SPECTABILIS / SALMONBERRY	5 GAL	13	
	VACCINIUM OVATUM / EVERGREEN HUCKLEBERRY	2 GAL	25	
GROUND COVERS	BOTANICAL NAME / COMMON NAME	CONT	SPACING	QTY
	FRAGARIA CHILOENSIS 'LIPSTICK' / BEACH STRAWBERRY	4"POT	18" o.c.	185
	GAULTHERIA SHALLON / SALAL	1 GAL	18" o.c.	171
	RUBUS PENTALOBUS 'EMERALD CARPET' / BRAMBLE	4"POT	12" o.c.	263
	SEDUM SP. / PREVEGETATED MAT	FLAT	12" o.c.	1,785

TREES	BOTANICAL NAME / COMMON NAME	CONT	QTY	
	ACER CIRCINATUM / VINE MAPLE	15 GAL	7	
	OEMLERIA CERASIFORMIS / INDIAN PLUM	15 GAL	2	
	THUJA PLICATA / WESTERN RED CEDAR	15 GAL	2	
SHRUBS	BOTANICAL NAME / COMMON NAME	SIZE	QTY	
	ARBUTUS UNEDO / STRAWBERRY TREE SHRUB	5 GAL	10	
	CISTUS X HYBRIDUS / WHITE ROCKROSE	5 GAL	27	
	MAHONIA AQUIFOLIUM / OREGON GRAPE	2 GAL	19	
	POLYSTICHUM MUNITUM / WESTERN SWORD FERN	5 GAL	27	
	ROSA NUTKANA / NOOTKA ROSE	5 GAL	24	
	SALIX LUCIDA / PACIFIC WILLOW	5 GAL	3	
	SYMPHORICARPOS ALBUS / COMMON WHITE SNOWBERRY	5 GAL	17	
	VACCINIUM OVATUM / EVERGREEN HUCKLEBERRY	2 GAL	3	
GROUND COVERS	BOTANICAL NAME / COMMON NAME	CONT	SPACING	QTY
	CAREX OBNUPTA / SLOUGH SEDGE	4"POT	12" o.c.	69
	GAULTHERIA SHALLON / SALAL	1 GAL	18" o.c.	21
	JUNCUS BALTICUS / BALTIC RUSH	4"POT	12" o.c.	137
	JUNCUS PATENS 'ELK BLUE' / SPREADING RUSH	4"POT	12" o.c.	77
	RUBUS PENTALOBUS 'EMERALD CARPET' / BRAMBLE	4"POT	12" o.c.	335
	SALIX LUCIDA / PACIFIC WILLOW	LIVE STAKE	6" o.c.	150

SHRUBS	BOTANICAL NAME / COMMON NAME	SIZE	QTY	
	LONICERA INVOLUCRATA / TWINBERRY	1 GAL	27	
	PHYSOCARPUS CAPITATUS / PACIFIC NINEBARK	1 GAL	45	
	ROSA NUTKANA / NOOTKA ROSE	5 GAL	38	
	RUBUS SPECTABILIS / SALMONBERRY	5 GAL	8	
	SALIX LUCIDA / PACIFIC WILLOW	5 GAL	12	
GROUND COVERS	BOTANICAL NAME / COMMON NAME	CONT	SPACING	QTY
	SALIX LUCIDA / PACIFIC WILLOW	LIVE STAKE	6" o.c.	321
	SCHOENOPLECTUS ACUTUS / HARDSTEM BULRUSH	2" PLUG	9" o.c.	101

PLANT SCHEDULE VASA PARK RESTORATION

LANDSCAPE RESTORATION: 1,300 SF  
SOD RESTORATION: 23,900 SF  
TOTAL RESTORATION: 25,200 SF

TREES	BOTANICAL NAME / COMMON NAME	CONT	QTY
	ACER CIRCINATUM / VINE MAPLE	15 GAL	3
	PSEUDOTSUGA MENZIESII / DOUGLAS FIR	15 GAL	2
SHRUBS	BOTANICAL NAME / COMMON NAME	SIZE	QTY
	CISTUS X HYBRIDUS / WHITE ROCKROSE	5 GAL	35
	ROSA NUTKANA / NOOTKA ROSE	5 GAL	27

OTHER LANDSCAPE SYMBOLS

- ROCKERY WALL
- LAWN RESTORATION
- SOD GRASS RESTORATION
- LANDSCAPE RESTORATION
- REPLACEMENT TREE (SEE DRAWING C350 & C351 FOR EXISTING TREE INVENTORY AND REPLACEMENTS)

LANDSCAPE GENERAL NOTES

- BE RESPONSIBLE FOR COMPUTING SPECIFIC QUANTITIES OF GROUND COVERS AND PLANT MATERIALS UTILIZING ON-CENTER SPACING FOR PLANTS AND MINIMUM PLANTING DISTANCES AS INDICATED IN THE DRAWINGS.
- GROUND COVERS SHALL BE PLANTED IN AN EQUILATERAL TRIANGULAR SPACING PATTERN AT THE ON CENTER DISTANCES INDICATED IN THE DRAWINGS. WHERE GROUND COVER ABUTS CURBING, WALKWAYS, SIGNS OR POLES, MINIMUM PLANTING DISTANCES SHALL BE 12" FROM CENTER OF PLANT TO CURB, WALKWAY, ETC, MINIMUM PLANTING DISTANCE SHALL BE 14" FROM CENTER OF TREES.
- INSTALL EROSION CONTROL MATTING ON ALL SLOPES 4H:1V OR GREATER.

IRRIGATION GENERAL NOTES

- THE IRRIGATION WORK INCLUDES ABANDONMENT AND REMOVAL OF EXISTING IRRIGATION PIPING, HEADS AND ASSOCIATED IRRIGATION EQUIPMENT TO FACILITATE THE WORK. VERIFY EXTENT OF EXISTING IRRIGATION SYSTEMS AT THE SUNSET AND HEATHFIELD PUMP STATION SITES. CONDUCT A MEETING WITH THE PROJECT REPRESENTATIVE PRIOR TO STARTING WORK TO VERIFY THE EXTENT OF EXISTING IRRIGATION SYSTEMS.
- PROTECT EXISTING TREES; ALL TRENCHES UNDER DRIP LINE OF TREES SHALL BE HAND DUG.
- VERIFY CONDITIONS AND NOTIFY PROJECT REPRESENTATIVE OF ANY DISCREPANCIES BEFORE BEGINNING ANY WORK.

- THESE DRAWINGS DO NOT SHOW ALL OFFSETS AND FITTINGS REQUIRED FOR A COMPLETE SYSTEM.
- INSTALLATION OF IRRIGATION SYSTEM SHALL CONFORM TO ALL LOCAL, CITY AND COUNTY CODES.
- SLEEVE ALL LINES UNDER PAVING.
- LOCATE PIPING IN PLANTING AREAS WHENEVER POSSIBLE.
- SEE ELECTRICAL DRAWINGS FOR POWER CONNECTIONS
- PLACE VALVES IN VALVE BOXES PER DETAILS SHOWN ON DWGS L003 AND L004. LOCATE VALVES, INCLUDING QUICK COUPLER VALVES, IN SHRUB/GROUND COVER PLANTING AREAS.

- ALL NEW IRRIGATION VALVE BOX COVERS SHALL BE FITTED WITH LOCKING LIDS.

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NO	REVISION DESCRIPTION	BY	APVD	DATE



STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT  
Scott W. Radford  
CERTIFICATE NO. 688  
EXPIRES 6/30/2017

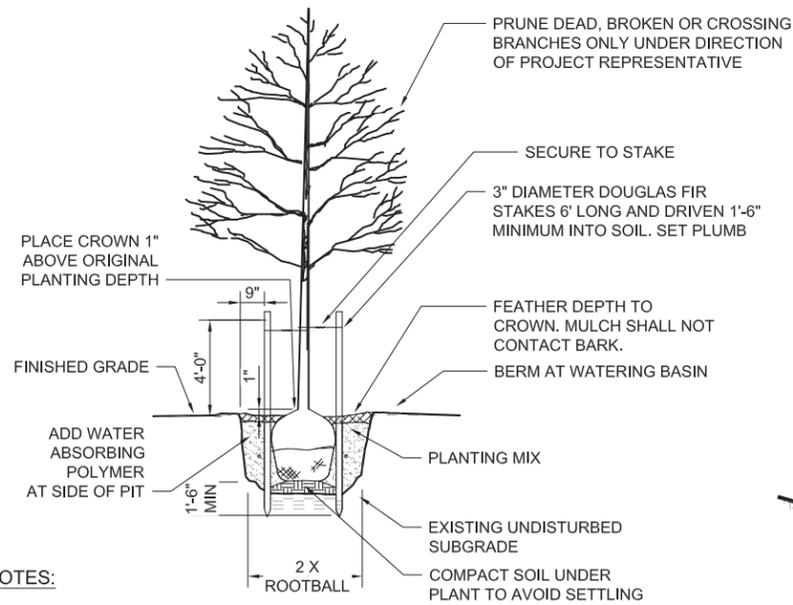
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PROJECT ENGINEER: S. RADFORD  
DESIGN APPROVAL: R. GAUFF  
PROJECT ACCEPTANCE: S. NAMINI

SCALE: NO SCALE  
0 REFERENCE 1'  
FACILITY NUMBER: 330-331  
CONTRACT NO: C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION  
SUNSET AND HEATHFIELD PUMP STATIONS AND FORCE MAIN UPGRADE  
**LANDSCAPE & IRRIGATION NOTES & LEGEND**

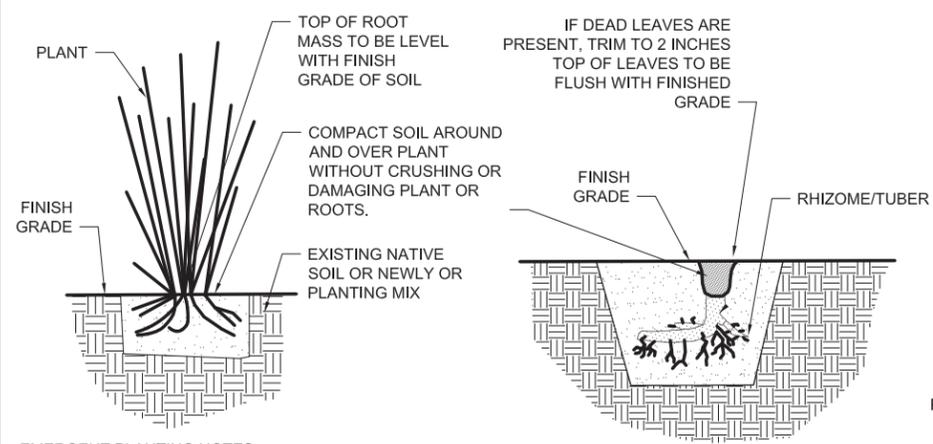
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PROJECT FILE NO: 1038122	DRAWING NO: L002
SHT NO / TOTAL: / 449	REV NO: 0



- NOTES:**
- CAREFULLY CUT THE TWINE OR WIRE WRAPPED AROUND THE STEM AT THE TOP OF THE ROOTBALL.
  - REMOVE:
    - BURLAP FROM TOP HALF OF THE ROOTBALL AFTER TREE IS PLACED IN HOLE.
    - ANY CONTAINER HOLDING THE ROOT SYSTEM.
    - ALL TAGS, LABELS, AND INORGANIC TIES AND WRAPS.
  - PRUNE DEAD OR BROKEN ROOTS.
  - SLICE THROUGH ROOTS CIRCLING THE BALL. SPREAD ("BUTTER-FLY") ROOTS.
  - WIRE TREE BASKETS MAY REMAIN IN PLACE IF THE WIRE IS FOLDED OUTWARD AND COVERED BY SOIL WHEN INSTALLED. SNIP WIRE AT JOINTS AND LEAVE NO WIRE SHARPS EXPOSED.

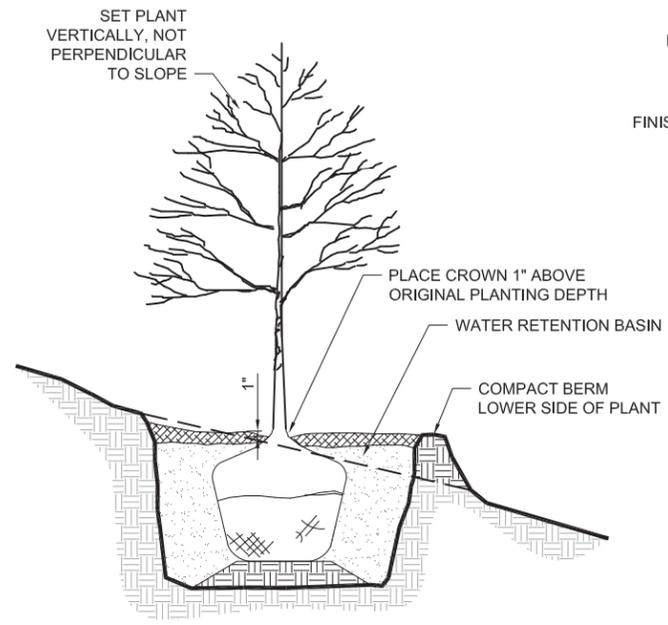
**TREE PLANTING & STAKING  
(DECIDUOUS & EVERGREEN)**

**DETAIL 1**  
NOT TO SCALE



- EMERGENT PLANTING NOTES:**
- MAKE PLANTING HOLE WITH PLANTING BAR OR SHOVEL. SIZE HOLE TO BE LARGE ENOUGH ONLY TO ACCOMMODATE RHIZOME AND ROOTS. DO NOT OVER EXCAVATE FOR PLANTING.
  - SOIL SHALL BE VERY MOIST TO WET AT TIME OF PLANTING.

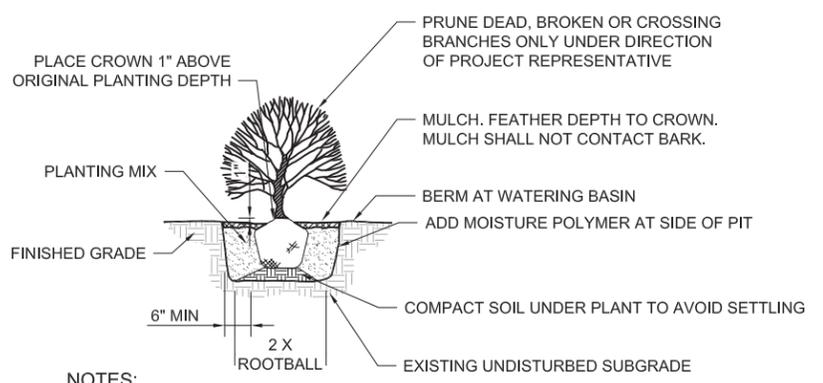
**EMERGENT PLANTING  
DETAIL 5**  
NOT TO SCALE



- NOTE:**
- SEE SHRUB PLANTING DETAIL 3 AND TREE PLANTING & STAKING DETAIL 1, THIS DRAWING.

**PLANTING ON SLOPE**

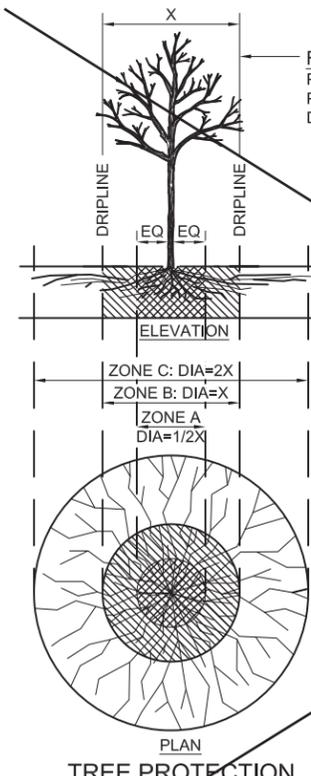
**DETAIL 2**  
NOT TO SCALE



- NOTES:**
- CAREFULLY CUT THE TWINE OR WIRE WRAPPED AROUND THE STEM AT THE TOP OF THE ROOTBALL.
  - REMOVE:
    - BURLAP FROM TOP HALF OF THE ROOTBALL AFTER SHRUB IS PLACED IN HOLE.
    - ANY CONTAINER HOLDING THE ROOT SYSTEM.
    - ALL TAGS, LABELS, AND INORGANIC TIES AND WRAPS.
  - PRUNE DEAD OR BROKEN ROOTS.
  - SLICE THROUGH ROOTS CIRCLING THE BALL. SPREAD ("BUTTER-FLY") ROOTS.

**SHRUB PLANTING**

**DETAIL 3**  
NOT TO SCALE

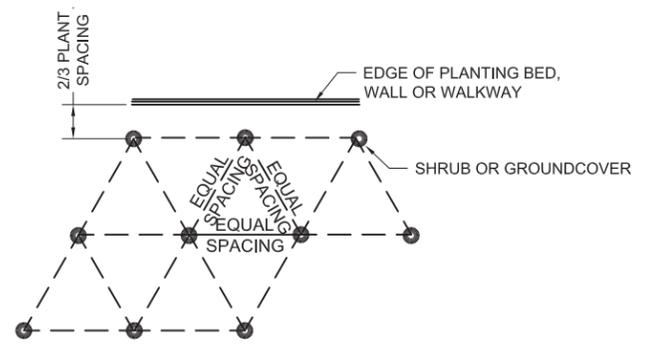


**TRENCHING/EXCAVATION**

- ZONE A (CRITICAL ROOT ZONE)**
- NO DISTURBANCE ALLOWED WITHOUT SITE/SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE.
  - SEVERANCE OF ROOTS LARGER THAN 2" DIA REQUIRES PROJECT ARBORIST APPROVAL.
  - TUNNELING REQUIRED TO INSTALL LINES 3'-0" BELOW GRADE OR DEEPER.
- ZONE B (DRIPLINE)**
- OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO PROJECT ARBORIST APPROVAL.
  - SURFACE PROTECTION MEASURES REQUIRED. SEE DETAIL 8/L002
  - TRENCHING ALLOWED AS FOLLOWS:
    - EXCAVATION BY HAND OR WITH HAND-DRIVEN TRENCHER MAY BE REQUIRED.
    - LIMIT REACH WIDTH. DO NO DISTURB ZONE A. MAINTAIN 2/3 OR MORE OF ZONE B IN UNDISTURBED CONDITION.
  - TUNNELING MAY BE REQUIRED FOR TRENCHES DEEPER THAN 3'-0".
- ZONE C (FEEDER ROOT ZONE)**
- OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIAL SUBJECT TO PROJECT ARBORIST APPROVAL AND PER DETAIL 8/L002.
  - SURFACE PROTECTION MEASURES MAY BE REQUIRED. TRENCHING WITH HEAVY EQUIPMENT ALLOWED AS FOLLOWS:
    - MINIMIZE TRENCH WIDTH
    - MAINTAIN 2/3 OR MORE OF ZONE C IN UNDISTURBED CONDITION.

**TREE PROTECTION**

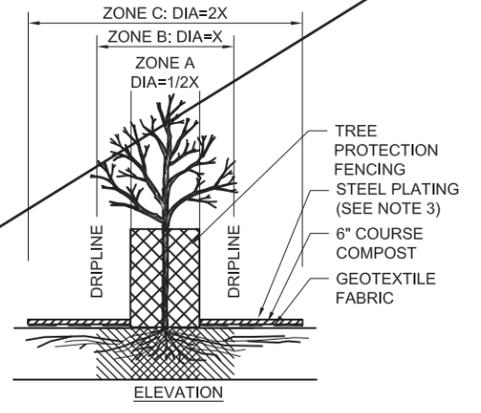
**DETAIL 7**  
NOT TO SCALE



- NOTES:**
- REFER TO PLANTING SCHEDULE FOR SPACING

**TYPICAL PLANT SPACING**

**DETAIL 4**  
NOT TO SCALE



- NOTES:**
- GEOTEXTILE SHALL BE ROLLED OUT AND OVERLAIN ON THE EXISTING SURFACE.
  - A 6-INCH LAYER OF COURSE COMPOST SHALL BE SPREAD OVER THE FABRIC. LIGHT WEIGHT EQUIPMENT, SUCH AS PICKUP TRUCKS, FORK LIFTS, CAN MOVE OVER THIS SURFACE WITHOUT SOIL DISTURBANCE.
  - FOR HEAVY EQUIPMENT USE, SUCH AS LARGE CRANES AND SEMI-TRACTORS INSTALL STEEL PLATING OVER THE COURSE COMPOST.
  - AFTER COMPLETION OF CONSTRUCTION ACTIVITIES, ALL PROTECTIVE MEASURES SHALL BE REMOVED.

**ROOT ZONE PROTECTION**

**DETAIL 8**  
NOT TO SCALE

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NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
 LAND USE PERMIT**  
 DECEMBER 2015



STATE OF WASHINGTON  
 REGISTERED  
 LANDSCAPE ARCHITECT  
 Scott W. Radford  
 CERTIFICATE NO. 688  
 EXPIRES 9/29/2017

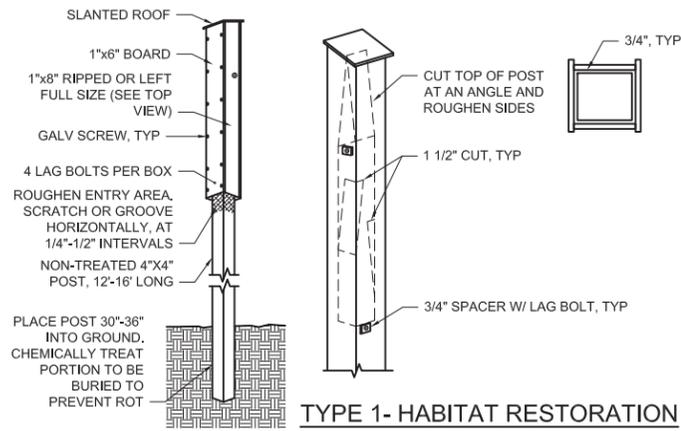
DESIGNED/DRAWN:  
 S. RADFORD  
 PROJECT ENGINEER:  
 S. RADFORD  
 DESIGN APPROVAL:  
 R. GAUFF  
 PROJECT ACCEPTANCE:  
 S. NAMINI

SCALE:  
 NO SCALE  
 0 REFERENCE 1"  
 FACILITY NUMBER:  
 330-331  
 CONTRACT NO:  
 C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**LANDSCAPE & IRRIGATION  
 DETAILS 1**

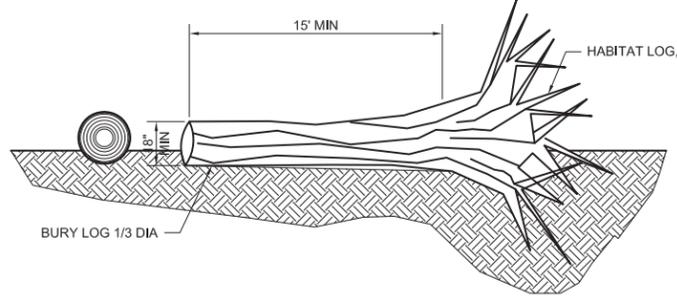
DCN:	DATE: DECEMBER 2015
PROJECT FILE NO: 1038122	DRAWING NO: <b>L003</b>
SHT NO / TOTAL 36 / 41	REV NO: <b>0</b>



**TYPE 1 - HABITAT RESTORATION  
BAT HOUSE**

DETAIL  
NOT TO SCALE

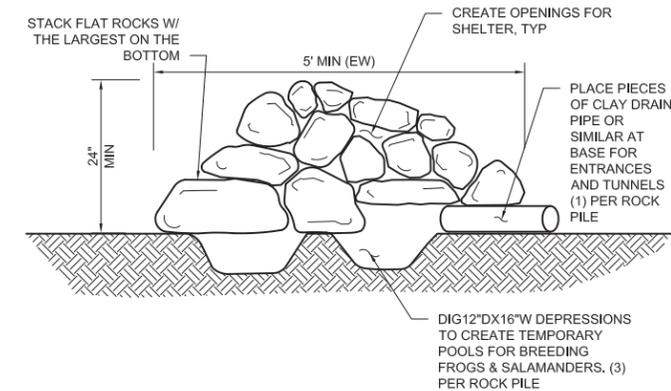
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**TYPE 3 - HABITAT RESTORATION  
ROOT WAD**

DETAIL  
NOT TO SCALE

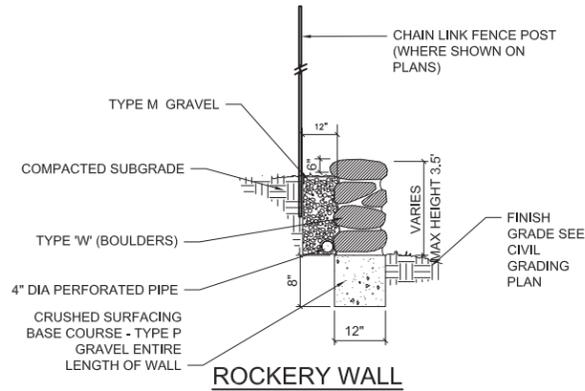
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**TYPE 5 - HABITAT RESTORATION  
ROCK PILE**

DETAIL  
NOT TO SCALE

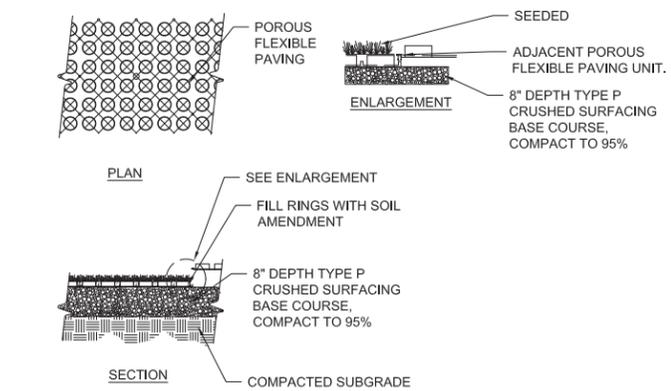
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**ROCKERY WALL**

DETAIL  
NOT TO SCALE

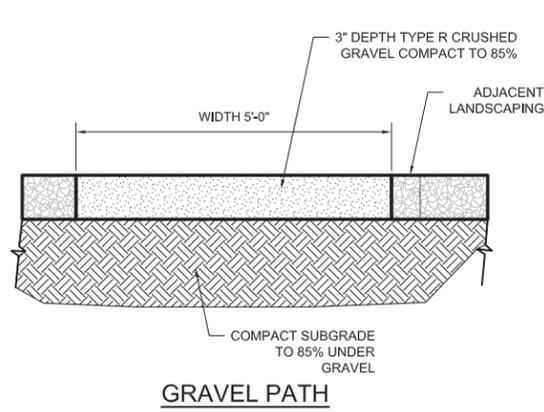
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**POROUS FLEXIBLE PAVING SYSTEM**

DETAIL  
NOT TO SCALE

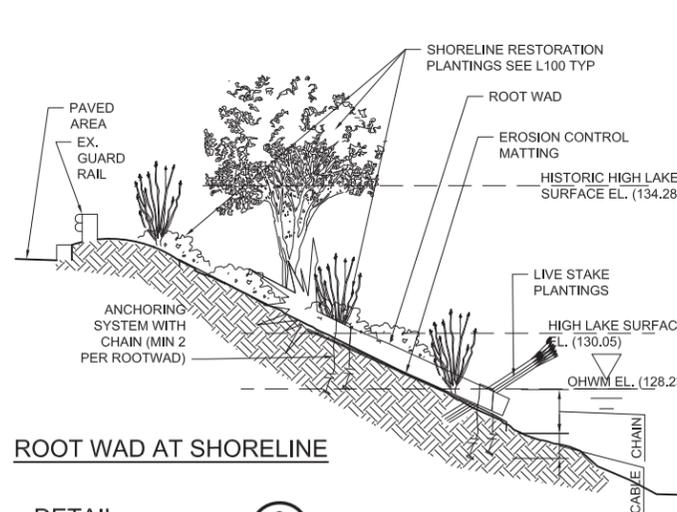
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**GRAVEL PATH**

DETAIL  
NOT TO SCALE

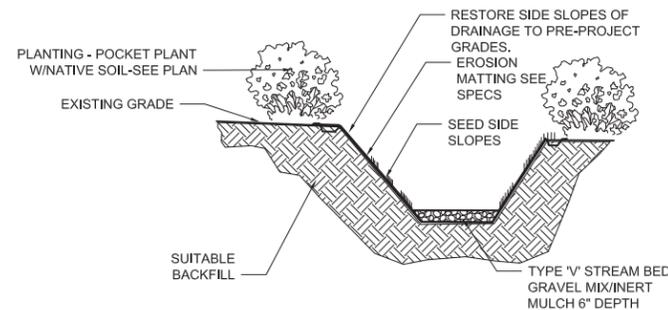
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**ROOT WAD AT SHORELINE**

DETAIL  
NOT TO SCALE

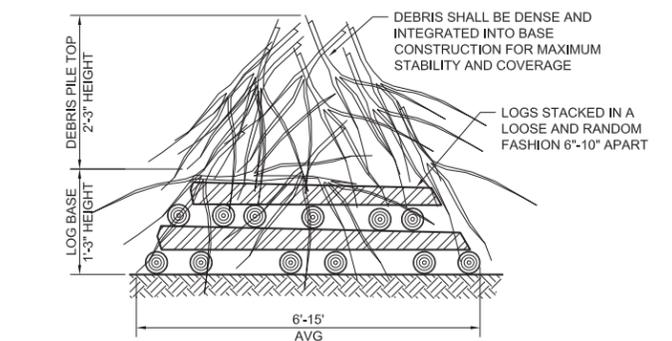
3  
L100



**ROADSIDE DRAINAGE  
RESTORATION**

DETAIL  
NOT TO SCALE

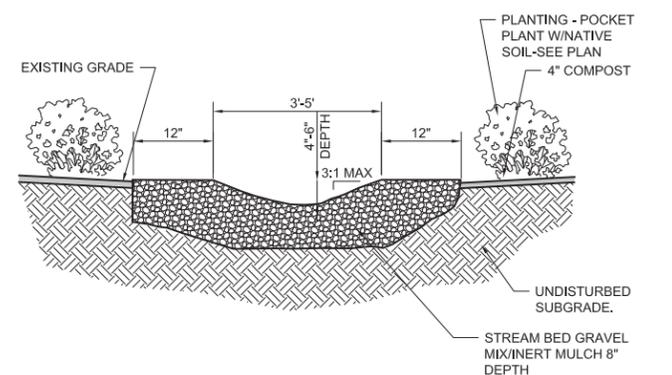
7  
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**TYPE 2 - HABITAT RESTORATION  
BRUSH PILE**

DETAIL  
NOT TO SCALE

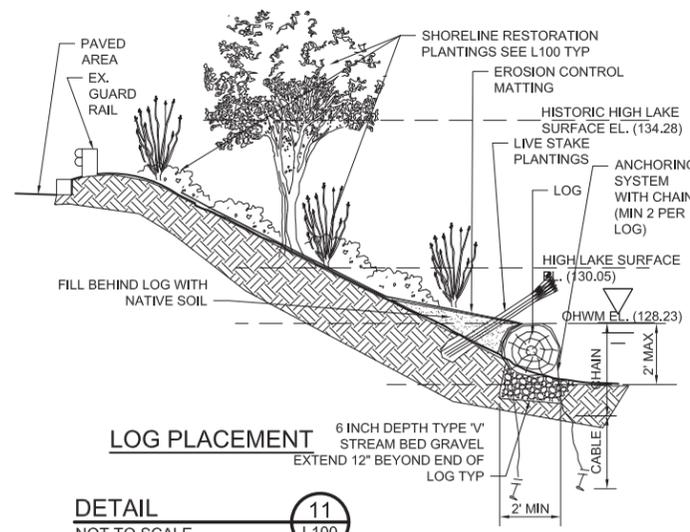
4  
L200



**CASCADE  
DRAINAGE SWALE**

DETAIL  
NOT TO SCALE

8  
L200, C201



**LOG PLACEMENT**

DETAIL  
NOT TO SCALE

11  
L100

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CITY OF BELLEVUE  
**CRITICAL AREAS  
 LAND USE PERMIT**  
 DECEMBER 2015



STATE OF WASHINGTON  
 REGISTERED  
 LANDSCAPE ARCHITECT  
 Scott W. Radford  
 CERTIFICATE NO. 688  
 EXPIRES 9/29/2017

DESIGNED/DRAWN:  
 S. RADFORD  
 PROJECT ENGINEER:  
 S. RADFORD  
 DESIGN APPROVAL:  
 R. GAUFF  
 PROJECT ACCEPTANCE:  
 S. NAMINI  
 SCALE:  
 NO SCALE  
 0 REFERENCE 1"  
 FACILITY NUMBER:  
 330-331  
 CONTRACT NO:  
 C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
 WASTEWATER TREATMENT DIVISION  
 SUNSET AND HEATHFIELD PUMP STATIONS  
 AND FORCE MAIN UPGRADE  
**LANDSCAPE & IRRIGATION  
 DETAILS 4**

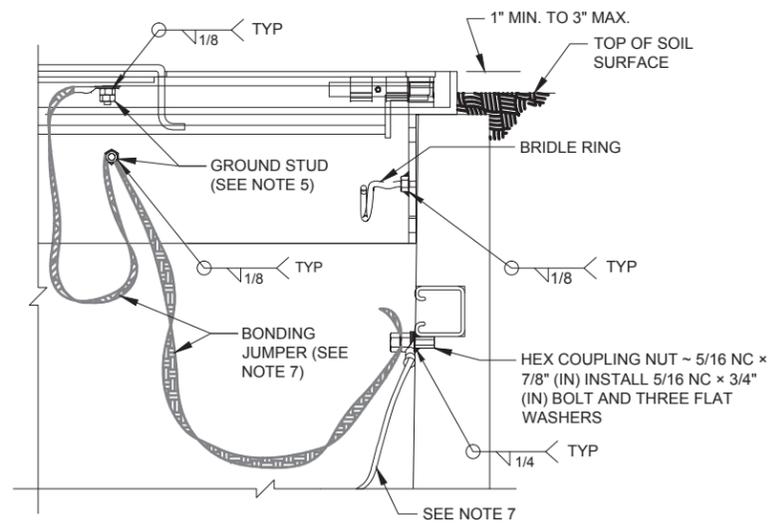
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PROJECT FILE NO: 1038122	DRAWING NO: <b>L006</b>
SHT NO / TOTAL 37 / 41	REV NO: 0

NO	REVISION DESCRIPTION	BY	APVD	DATE

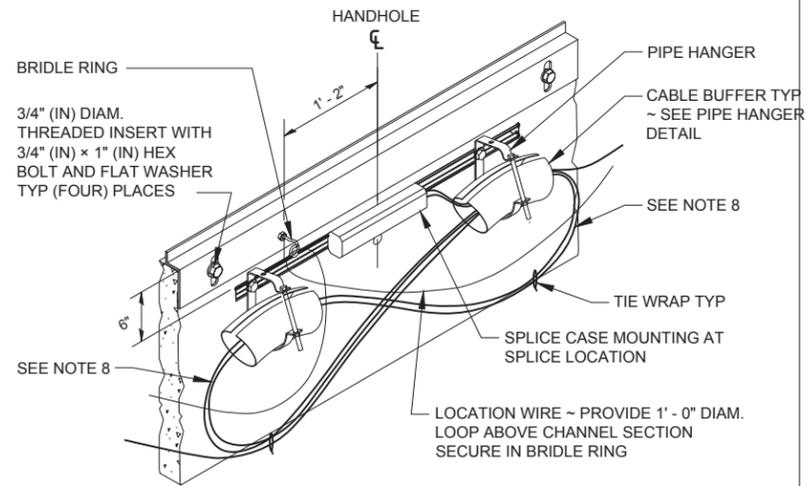




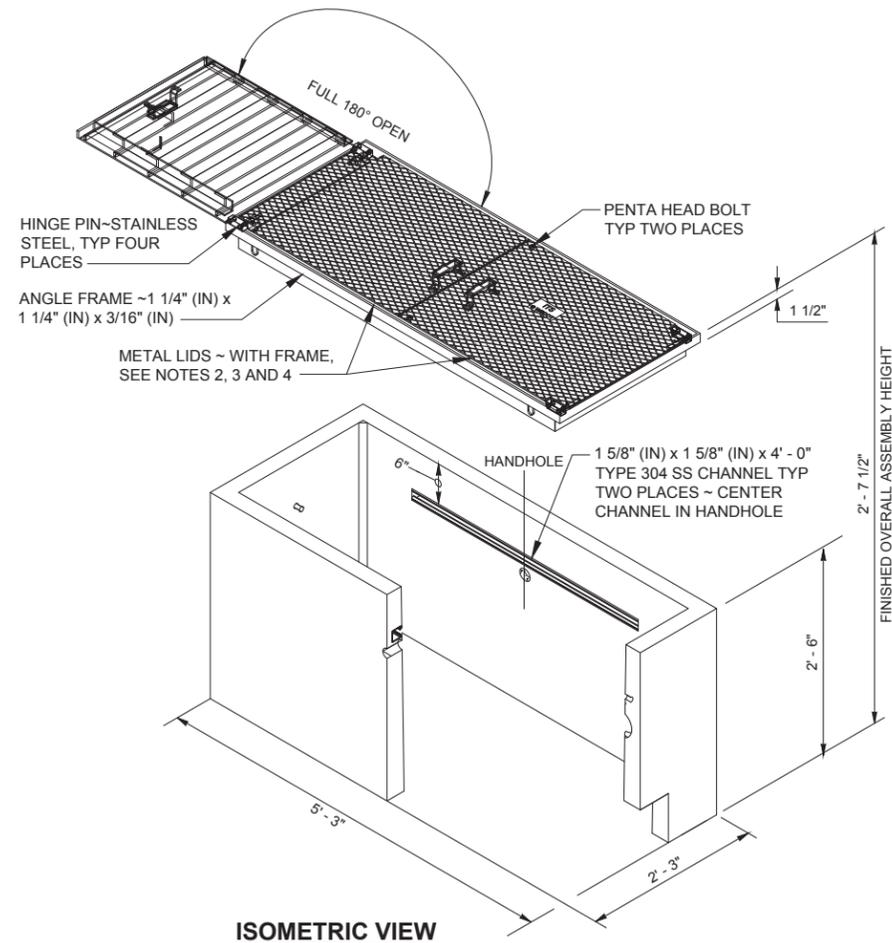




**DETAIL**



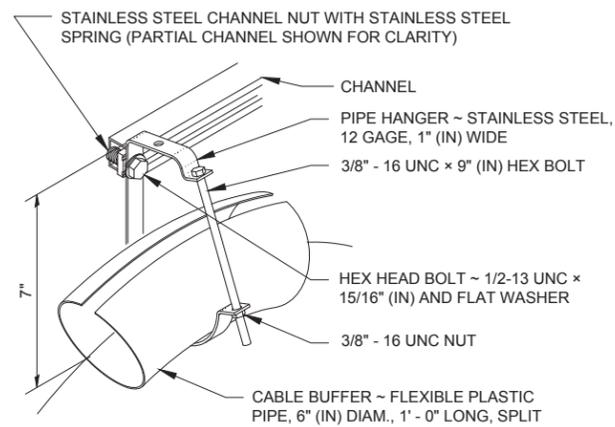
**INTERNAL ISOMETRIC VIEW**



**ISOMETRIC VIEW**

**FIBER OPTIC HANDHOLE OPEN BOTTOM**

**DETAIL**  
NOT TO SCALE



**PIPE HANGER DETAIL**

**NOTES:**

1. USE FIBER OPTIC HANDHOLE IN UNPAVED AREAS, NOT TO BE INSTALLED ON PAVED SHOULDERS OR TRAVELED WAY. USE IN SIDEWALKS, WALKWAYS, AND SHARED USE PATHS.
2. DIAMOND PATTERN SHALL BE MINIMUM 3/32" THICK.
3. INSTALLED WITH THE SURFACE FLUSH WITH AND MATCHED TO GRADE OF THE SIDEWALK, WALKWAY, AND SHARED USE PATHS.
4. THE NON-SLIP LID SHALL BE IDENTIFIED WITH PERMANENT MARKING 1/8" LINE THICKNESS FORMED WITH A STAINLESS STEEL WELD BEAD AND SHALL BE PLACED PRIOR TO HOT-DIP GALVANIZING.
5. PROVIDE 1/4-20 UNC X 3/4" GROUND STUD WITH TWO NUTS AND TWO FLAT WASHERS WELDED TO EACH LID AND COATED WITH ANTI-SEIZE COMPOUND.
6. OPEN BOTTOM HANDHOLE SHALL BE INSTALLED ON 12" BED OF TYPE E FILL MATERIAL FOR DRAINAGE.
7. THE BONDING JUMPER SHALL BE 1#8 MINIMUM X 4' OF TINNED BRAIDED COPPER. TIE GROUNDING CONDUCTOR TO ARMOR OF FIBER OPTIC CABLE AND TO 3/4" INCH DIAMETER BY 10' FEET LONG GROUND ROD.
8. AT NO TIME SHALL THE CABLE'S MINIMUM BENDING RADIUS LIMITATIONS BE COMPROMISED.

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IMAGES:

NO	REVISION DESCRIPTION	BY	APVD	DATE



CITY OF BELLEVUE  
**CRITICAL AREAS  
LAND USE PERMIT**  
DECEMBER 2015



DESIGNED/DRAWN: E. PILAPIL	SCALE: NO SCALE
PROJECT ENGINEER: K. MCGOWAN	0 REFERENCE 1"
DESIGN APPROVAL: R. GAUFF	FACILITY NUMBER: 330-331
PROJECT ACCEPTANCE: S. NAMINI	CONTRACT NO.: C01008C16



DEPARTMENT OF NATURAL RESOURCES & PARKS  
WASTEWATER TREATMENT DIVISION  
SUNSET AND HEATHFIELD PUMP STATIONS  
AND FORCE MAIN UPGRADE  
**FIBER OPTIC HANDHOLE  
DETAILS**

DCN:
DATE: DECEMBER 2015
PROJECT FILE NO: 1038122
DRAWING NO: <b>E008</b>
SHT NO / TOTAL 41 / 41
REV NO: <b>0</b>