DESIGN COMMISSION REGULAR VIDEO MEETING

AGENDA

Wednesday, October 28, 2020

Zoom Virtual Platform
9611 SE 36th Street | Mercer Island, WA 98040
Phone: 206.275.7706 | www.mercerisland.gov

DESIGN COMMISSIONERS:
Chair: Richard Erwin
Vice Chair: Colin, Brandt
Commissioners: Traci Granbois, Claire McPherson, Anthony Perez, Tom Soeprono, Suzanne Zahr

In compliance with the Americans with Disabilities Act, those requiring accommodation for meetings should notify the Staff Liaison at least 24 hours prior to the meeting.

VIRTUAL MEETING NOTICE

The Design Commission meeting will be held virtually using video conferencing technology provided by Zoom, and the public will have the opportunity to provide comment during Appearances or during the Public Hearing by either calling in or logging onto the meeting as a Zoom attendee.

Registering to Speak: Individuals wishing to speak during live Appearances or wishing to provide comment during the Public Hearing will need to register their request with the Sr. Administrative Assistant at 206.275.7791 or email at andrea.larson@mercerisland.gov and leave a message before 4pm on the day of the Design Commission meeting. Please reference "Appearances" or "Public Hearing Public Comment". Each speaker will be allowed three (3) minutes to speak.

Public Comment by Video: Notify the Sr. Administrative Assistant in advance that you wish to speak on camera and staff will be prepared to permit temporary video access when you enter the live Design Commission meeting. Please remember to activate the video option on your phone or computer, ensure your room is well lit, and kindly ensure that your background is appropriate for all audience ages. Screen sharing will not be permitted, but documents may be emailed to the Design Commission.

Submitting Written Comments: The City will also accept written comments until such time that the public hearing is adjourned. Please send written comments to robin.proebsting@mercerisland.gov.

Join by Telephone at 7:00 pm: To listen to the hearing via telephone, please call 253.215.8782 and enter Webinar ID 976 9412 3994 and Passcode 019924 when prompted.

Join by Internet at 7:00 pm: To watch the hearing over the internet via your computer microphone/ speakers follow these steps:

1. Click this Link
2. If the Zoom app is not installed on your computer, you will be prompted to download it.
3. If prompted for Meeting ID, enter 976 9412 3994; Enter Passcode 019924

For the safety and wellbeing of the public and staff, the City strongly recommends that people attend the meeting by viewing it live on Zoom. Should restrictions on "in-person" meetings be lifted, opportunity to provide comment during either Appearances or the Public Hearing will be available at City Hall, located at 9611 SE 36th Street, Mercer Island, WA 98040. Strict social distancing requirements will be required of all in person attendees.

CALL TO ORDER & ROLL CALL, 7:00 PM

APPROVAL OF MINUTES

(1) Minutes from July 8, 2020

APPEARANCES

This is the time set aside for members of the public to speak to the Commission about issues of concern. If you wish to speak, please consider the following points:

- Speak audibly
- State your name and city of residence for the record
- Limit your comments to three minutes

The Commission may limit the number of speakers and modify the time allotted. Total time for appearances: 15 minutes

PUBLIC HEARING

DSR19-017 Public Hearing - King County Pump Station
Public hearing for review of a proposed rehabilitation of the existing regional wastewater pump station, including the addition of generator building and improvements to site access.

Staff Contact: Robin Proebsting

(2) Staff report with exhibits

REGULAR BUSINESS

DSR19-017 - King County Pump Station
Review and decision of a proposed rehabilitation of the existing regional wastewater pump station, including the addition of generator building and improvements to site access.

Staff Contact: Robin Proebsting

OTHER BUSINESS

(3) Directors Report

(4) Planned Absences for Future Meetings

(5) Announcements & Communications

(6) Next Scheduled Meeting- TBD

ADJOURN

DESIGN COMMISSION

MEETING MINUTES

Wednesday, July 8, 2020

CALL TO ORDER
Chair Richard Erwin called the meeting to order at 7:01PM in the Council Chambers, 9611 SE 36th Street, Mercer Island, Washington.

ROLL CALL
Chair Richard Erwin, Vice Chair Colin Brandt, Commissioners, Claire McPherson, Anthony Perez, Tom Soeprono and Suzanne Zahr were present. The seventh commission seat is vacant.

STAFF PRESENT
Evan Maxim, CPD Director and Andrea Larson, Senior Administrative Assistant were present.

SPECIAL BUSINESS
Agenda Item #1: Election of Chair and Vice-Chair

Evan Maxim, CPD Director, provided a brief explanation of the election process.

Election of Chair:
Brandt nominated Erwin for chair;

Vote Round 1:
Erwin 6-0

Erwin was elected chair

Election of Vice-Chair
Perez nominated Brandt for vice-chair;

Vote Round 1:
Brandt 6-0

Brandt was elected vice-chair

Agenda Item #2 Adoption of Design Commission Bylaws
The Commission reviewed the Design Commission Bylaws.

It was moved by McPherson; seconded by Brandt to:
Approve the Design Commission bylaws.
6-0

MEETING MINUTES APPROVAL
The Commission reviewed the minutes from the July 24, 2019

It was moved by Perez; seconded by Zahr to:

Approve the July 24, 2019 minutes
Passed 6-0

REGULAR BUSINESS
Agenda Item #3: DSR20-005 Mercer Park Building Renovation
Evan Maxim, CPD Director, gave a brief presentation on the study session to review the proposed exterior renovation of the Mercer Park office building.

The Commission reviewed and discussed the project to provide feedback to the applicant on their proposal.

Commission McPherson left at 8:08pm.

PLANNED ABSENCES FOR FUTURE MEETINGS
There were no planned absences.

OTHER BUSINESS
Evan Maxim, CPD Director, gave a brief department update to the Commission.

ANNOUNCEMENTS AND COMMUNICATIONS
The next Design Commission meeting is TBD

ADJOURNMENT
The meeting was adjourned at 8:35PM

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org

STAFF REPORT

DESIGN COMMISSION DESIGN REVIEW

Project No:	DSR19-017
Description:	Upgrades to North Mercer Pump Station (NMPS), including: 1. Upgrade and expansion of existing building; 2. Construction of a new building and concrete pad to house standby generator and fuel tank; 3. Installation a new restroom and odor control fan; and 4. Construction of a temporary pump station to manage flows during construction.
Applicant/ Owner:	King County Wastewater Treatment Division
Site Address:	7631 SE 22nd St (Parcel Number 531510-1946)
Zoning District	R-8.4
Staff Contact:	Robin Proebsting, Senior Planner
Exhibits:	1. Application 2. Plan set for North Mercer Pump Station (NMPS) Upgrade prepared by Tetra Tech and Jacobs, dated December 2019 3. Notice of Application, dated December 30, 2019 4. Notice of Public Hearing, dated September 28, 2020 5. Determination of Nonsignificance issued by Jim Sussex, King County Wastewater Treatment Division Water Quality Planner, dated May 23, 2019 6. SEPA Checklist prepared by Katherine Fischer, King County Wastewater Treatment Division Environmental Programs Managing Supervisor, dated May 13, 2019. 7. North Mercer Island Interceptor and Enatai Interceptor Upgrade Project – City of Mercer Island Design Commission Design Review Application (DSR19-017) - Request for Information 1 Responses prepared by Chris Dew, King County Wastewater Treatment Division, dated April 10, 2020 8. North Mercer Island Interceptor and Enatai Interceptor Upgrade Project – Response to City of Mercer Island Request for Information 2 (DSR19-017) prepared by Chris Dew, King County Wastewater Treatment Division, dated July 13, 2020

INTRODUCTION

I. Project Description

The applicant has applied for Design Commission Design Review in order to obtain approval of a proposed design for upgrades to the North Mercer Pump Station (NMPS), which is located in a residential neighborhood in north Mercer Island. The applicant completed a study session with the Design Commission in April of 2019, at which the Design Commission offered feedback and initial guidance on the proposed design. This guidance has been incorporated into the design shown on the revised plan set (Exhibit 2).

II. Site Description and Context

The subject site is located at 7631 SE 22nd St, in the Residential-R-8.4 zone. The site slopes downward from west to east, and there is a mapped Type F watercourse located along the eastern edge of the property. The site is currently developed with an existing wastewater pump station. The subject property is surrounded on all sides by single-family homes.

This project will require design review and approval by the Design Commission prior to issuance of any construction and/or building permits. An open record hearing with the Design Commission is required to obtain approval of a Design Commission Design Review.

Findings of Fact & Conclusions of Law

III. Application Procedure

1. The application for Design Commission Design Review approval was submitted on November 27, 2019.

2. A notice of application was issued December 30, 2019 and the 30-day public comment period took place between December 30, 2019 and January 29, 2020 (Exhibit 3).

3. A notice of public hearing was issued on September 28, 2020 (Exhibit 4).

4. MICC 19.15.030 establishes Design Commission Design Review as a Type IV land use review, for which the decision authority is the Design Commission.

5. No public comment was received for this project during project review.

IV. State Environmental Policy Act (SEPA)

6. A Determination of Nonsignificance was issued by King County on May 23, 2019 (Exhibit 5).

V. Consistency with Design Standards

7. MICC19.12.020(B)(1) and (2) – Site features and context

1. Site Features.

a. Landforms. Design and layout of the site should incorporate natural landforms such as trees, topography and watercourses into proposed developments. Cut and fill should be minimized and preservation of mature trees should be maximized, particularly adjacent to project boundaries and steep slopes. Natural contours should be respected and retained where feasible.

2. Sloped or Hillside Development.

a. Building development should generally occur on the least steep portions of the site in order to conserve the more fragile areas for landscaping or general open space.

b. Structures built on substantial slopes or hillsides should be designed to minimize their visual impact on surrounding areas. Ridgelines of major slopes should not be broken by structures or loss of vegetative cover. Acceptable methods to integrate structures into the hillside include, but are not limited to, height control, stepped construction, muted earth tone colors, and tree preservation.

c. Building Orientation. Buildings should respond in design to a prominent feature, such as a corner location, a street or the lake. Buildings and site design should provide inviting entry orientation. Buildings should not turn their backs to the street.

Staff Analysis: The proposed design incorporates natural landforms by proposing grading only within the footprint of the proposed generator building, which will be built partially into a slope, preserving natural landforms and topography (Exhibit 2, Sheet C101). Mature trees outside of the development area are proposed to be retained (Exhibit 2, Tree Removal Plan). These measures minimize site disturbance and limit cut and fill to areas of new construction.

The proposed new structures are located on the western portion of the property, where slopes are approximately 15%, which are the least steep portions of the site (Exhibit 2, Sheet G012). Building is not proposed in the steeper areas in the eastern portion of the property where slopes are approximately 20%. Further, the proposed construction will not affect the ridgeline of a major slope and is proposed to be surrounded by trees (Exhibit 2, Sheet A102).

The existing and proposed buildings will be oriented toward the existing driveway that connects to SE 22nd St. The landscaping is designed to provide an inviting entry and is proposed to be compatible with the residential neighborhood (Exhibit 2, Sheet L101).

8. *MICC 19.12.020(B)(3) – Relationship of Buildings to Site*

a. Site Design. Site design and architectural style shall be pedestrian in scale and address interface with public rights-of-way, vehicular and pedestrian circulation.

b. Architectural Context. New development should reflect important design elements of existing structures in the neighborhood, including but not limited to, roof forms, materials and colors.

c. Multiple Structures. Variable siting of individual buildings, heights of buildings, and building modulation should be used in order to provide variety in site and specific building design.

d. Transitions to Neighborhoods. Proposed developments should transition with and not overpower adjoining permitted land uses through modulation of building facades, use of established setbacks, and installation of landscape buffers. Building designs should step down to lower heights adjacent to surrounding buildings.

e. Decorative Landmarks. Imaginative exterior features that complement and are integrated into the building design and create visual focal points that give identity to an area, such as special paving in pedestrian areas, art features, decorative clocks, or water features should be provided.

Staff Analysis: The proposed entrance gate is adjacent to the turnaround area, and the distance from the gate to the proposed building is approximately 25 feet, a short walking distance. The proposed generator building has a footprint of 36 feet by 50 feet and height of 18 feet, a pedestrian scale. The existing and proposed buildings are approximately 120 feet from the front property line (Exhibit 2, Sheet A100), which is somewhat longer than the typical walk from the street to a building entrance, however, the pump station and proposed generator building are for the specific purpose of utility maintenance by King County and will not be accessed by the general public. The dimensions of the site design are appropriate for the infrequent vehicular and pedestrian access typical of this kind of use.

The proposed building will resemble a single-family residence, in keeping with the scale and context of the residential neighborhood (Exhibit 2, sheet A101). With the addition of the new generator building, there will be multiple structures on site. The new generator building has been designed to use existing topography to its advantage to keep the new roofline as low as possible and is similar to the existing pump station building in design. More detailing and material composition have been applied to the north elevation of the new building, as this will be the only side of the building facing the street (Exhibit 2, sheet A304a). The standing seam will also provide pattern and depth to the elevation facing west as a backdrop to the landscaping. A complimentary material palette has been selected to blend the new building with the existing one (Exhibit 2, page 36 of 47).

The project does not propose to include decorative landmarks, which would not be compatible with this land use and setting. However, the proposal meets the objectives in MICC 19.12.020(A) by utilizing design that respects natural landforms, mature trees and sensitive areas. Much of the property is vegetated with an understory of nuisance and noxious weeds, which presents an opportunity for enhancing the quality of the plant community and increasing the ecological and aesthetic value of the site, particularly within the stream buffer. The proposed landscaping enhancements will complement the site and provide natural screening for adjacent residents.

9. *MICC 19.12.030(B)(1): Scale, Form and Mass. Scale, form, massing, building proportions, spacing of windows and doorways, roof silhouette, facade orientations, and style of architecture shall have a unified character and, as to commercial, regulated residential and regulated public facilities, recognize pedestrian needs.*
   a. *Scale. Building scale should be proportional to other adjacent buildings, the street edge and, as to commercial, regulated residential and regulated public facilities, to the pedestrian environment.*
   b. *Form and Mass. Building forms should not present visual mass or bulk impacts that are out of proportion to adjacent structures, or that appear from the public way or surrounding properties as having unmodulated visual bulk.*

Staff Analysis: The two buildings (existing pump station and proposed generator building) will have similar color and material palettes, as well as similar massing and height, creating a unified character to blend in with the residential neighborhood. The use of the site is a wastewater pump station, which will be visited only by King County staff, not the general public; therefore, unlikely to generate any pedestrian trips (See facility renderings on Sheet A102 of Exhibit 2).

The massing of the proposed generator building will be similar to those of adjacent buildings and surrounding residential neighborhood, as shown in the table below.

	Width at front facade	Building footprint
King County NMPS and generator building	75 ft	2,600 sq ft
7621 SE 22nd St	75 ft	4,070 sq ft
7630 SE 22nd St	45 ft	2,040 sq ft
7638 SE 22nd St	72 ft	3,500 sq ft
7644 SE 22nd St	56 ft	3,730 sq ft

As demonstrated by the above comparison, the existing pump station and proposed new generator building will be proportional to adjacent structures.

10. *MICC 19.12.030(B)(2) Building Facades – Visual Interest*

(a): Facade Modulation. Building facade modulation shall break up the overall bulk and mass of the exterior of buildings and structures. Such modulation should always be addressed on the horizontal plane and the vertical plane. Large or massive buildings should integrate features along their facades that are visible from the public right-of-way, pedestrian routes and nearby structures to reduce the apparent building mass and achieve an architectural scale consonant with other nearby structures.

(b)(i): Horizontal building facade modulation should occur at no less than every 50 feet of wall length. Forms of both vertical and horizontal building modulation may include but are not limited to: facade indentations and extrusions; actual building separation; connecting atriums, courtyards and plazas; variable roof forms and overhangs; and decks and balconies.

(b)(ii): Building facades visible from public ways and public spaces should be stepped back or projected forward at intervals to provide a minimum of 40 percent overall facade modulation.

(c): Ground Level Facades. Blank walls at the ground level that may be visible from a public view should be avoided. Ground level facades should create visual interest by utilizing features such as windows, wall articulation, arcades, trellises or other plant features.

(d): Fenestration. Fenestration should be integrated in the overall building design and should provide variety in facade treatment

(e): Horizontal Variation and Emphasis. Building facades should be made more visually interesting through the use of reveals, medallions, belt courses, decorative tile work, clerestory windows, or other design features. The scale of the detail should reflect the scale of the building.

(f): Signs. Building design should allow space for a wall sign, consistent with the provisions of MICC 19.12.080, Signs, if it is anticipated that a wall sign will be used.

Staff Analysis: The proposed generator building is relatively small, with a footprint of approximately 1,100 sq ft, and conveys a sense of building mass that is consistent with other nearby structures. Additionally, the proposed generator building uses a mix of materials that avoids large, unmodulated building facades (Exhibit 2, Sheets A304a, A305a, 306a).

Courtyard fencing and modulation in materials along the front façade provide for vertical and horizontal modulation on the buildings. Horizontal modulation occurs at a maximum of 18 feet, consistent with this standard. The proposed generator building façade is not stepped back, but the proposed design meets the objectives in MICC 19.12.030(A) by using a coherent design that is consistent with the style and materials utilized in the neighboring pump station building (Exhibit 2, Site Photos, Sheets 206a, 207a, 208a, and 209a).

The largest area of blank wall that could be visible from public view would be a 25 square foot section on the north elevation of the proposed new generator building. The proposed generator building's north façade will have a variety of textures, colors and materials, creating visual interest. The applicant has also provided landscape screening around the perimeter of the site.

The proposed generator building's fenestration will consist of skylights integrated into the pitched roof. The long, rectangular skylights are congruent with the vertical articulation of the roof, consistent with this standard (Exhibit 2, A302, 306a).

The generator building proposes to use a variety of materials and textures (Exhibit 2, page 305a), including flush metal siding, brick, and louvered areas where needed for ventilation, providing visual interest and variation

No wall signs are proposed as part of the pump station design.

11. *MICC 19.12.030(B)(3): Building Articulation. Design shall articulate building facades by use of variations of color, materials or patterns, or arrangement of facade elements that are proportional to the scale of the building. Architectural details that are used to articulate the structure may include reveals, battens, and other three-dimensional details that create shadow lines and break up the flat surfaces of the facade.*

(a): Tripartite Articulation. Tripartite building articulation (building top, middle, and base) should be used to create human scale and architectural interest.

(b): Fenestration. Fenestration should be used in facades visible from public ways and public spaces visible from public ways for architectural interest and human scale. Windows should be articulated with treatments such as mullions or recesses and complementary articulation around doorways and balconies should be used.

(c): Architectural Elements. The mass of long or large scale buildings should be made more visually interesting by incorporating architectural elements, such as arcades, balconies, bay windows, dormers, and/or columns.

(d): Upper Story Setback. Upper stories should be set back to reduce the apparent bulk of a building and promote human scale. When buildings are adjacent to single-family residential dwellings, upper story setbacks shall be provided from property lines.

Staff Analysis: The proposed generator building proposes to use a variety of materials and textures (Exhibit 2, page 305a), including flush metal siding, brick, and louvered areas where needed for ventilation. Blank walls are avoided by using varied materials.

The building is only one story tall, which does not provide the vertical height typically needed for a top, middle, and base articulation. However, one of the objectives of this section is to ensure that building design is based on a strong, unified, coherent, and aesthetically pleasing architectural concept, which the proposed design achieves by using a material palette similar to the one used for the existing building to promote a harmonious, unified and coherent look. The building embodies the concept of an industrial building with a residential influence. The proposed building does not have blank area of wall greater than 25 feet.

The criterion pertaining to fenestration does not apply, as no windows proposed (Exhibit 2, A304a-A307a).

This is not a large-scale building, therefore the criterion pertaining to Architectural Elements do not apply.

The proposed new generator building will be one story and not have any upper stories, therefore the criterion pertaining to upper story setbacks does not apply.

12. *MICC 19.12.030(B)(4) Materials and Color*

(a): Durable Building Exteriors. Building exteriors should be constructed from high quality and durable materials that will weather well and need minimal maintenance.

(b): Consistency and Continuity of Design. Materials and colors generally should be used with consistency on all sides of a building.

(c): Material and Color Variation. Color and materials should highlight architectural elements such as doors, windows, fascias, cornices, lintels, sills and changes in building planes. Variations in materials and colors should generally be limited to what is required for contrast or to accentuate architectural features.

(d): Concrete Walls. Concrete walls should be architecturally treated. The enhancement may include textured concrete such as exposed aggregate, sand blasting, stamping or color coating.

(e): Bright Colors. Bright colors should be used only for trim and accents. Bright colors may be approved if the use is consistent with the building design and other design requirements. Fluorescent colors are prohibited.

Staff Analysis: The proposed new generator building will incorporate brick and flush metal siding that will weather well and require minimal maintenance (Exhibit 2, page 36 of 47). The same material palette will be used on all sides of the proposed generator building (Exhibit 2, Sheets 304a, 305a, 306a, and 307a).

Door, roof and louvered vent areas will be a different color from the brick walls, providing variation in materials and color. Concrete is proposed as an option (Exhibit 2, section 8). If used, it would use board forms, providing texture to concrete walls (Exhibit 2, page 36 of 47).

The proposed color palette will be gray and beige. No bright nor fluorescent colors are proposed (Exhibit 2, section 8).

13. *MICC 19.12.030(B)(5) Building Entrances*

(a): Architectural Features and Design. Special design attention should be given to the primary building entrance(s). A primary entrance should be consistent with overall building design, but made visually distinct from the rest of the building facade through architectural features. Examples include recessed entrances, entrances which roof forms that protrude from the building facade, and decorative awnings, canopies, porte-cocheres, and covered walkways.

(b): Entrance Connections. The primary entrance to a building should be easy to recognize and should be visible from the public way and/or physically connected to the public way with walkways. Landscaping should reinforce the importance of the entrance as a gathering place and create visual and physical connections to other portions of the site and to vehicular and pedestrian access points.

Staff Analysis: The primary entrance to the proposed generator building will be easy to recognize through the use of contrasting color and material for the doors (Exhibit 2, A304a-A5305a). The entrances will be physically connected to the public way via the existing driveway. The landscaping will maintain sight lines to the public street while screening the site from neighboring properties.

14. *MICC 19.12.030(B)(6) Rooflines*

(a): Roofline Variation, Interest, and Detail. Roofline variation, interest, and detail shall be used to reduce perceived building height and mass and increase compatibility with smaller scale and/or residential development. Roofline variation, interest and detail may be achieved through use of roofline features such as dormers, stepped roofs, and gables that reinforce a modulation or articulation interval, incorporation of a variety of vertical dimensions, such as multiplaned and intersecting rooflines, or flat-roofed designs that include architectural details such as cornices and decorative facings.

(b): Roofline Variation, Numeric Standard. Roof line variation shall occur on all multifamily structures with roof lines which exceed 50 feet in length, and on all commercial, office or public structures which exceed 70 feet in length. Roof line variation shall be achieved using one or more of the following methods: i. Vertical off-set ridge or cornice line; ii. Horizontal off-set ridge or cornice line; iii. Variations of roof pitch between 5:12 and 12:12; or iv. Any other approved technique which achieves the intent of this section.

Staff Analysis: The proposed building will have a roof similar in pitch to the roof on the existing building but providing a continuation from the existing building. Both buildings' roofs have a shallow pitch with edges at a varying pitch (Exhibit 2, Sheets A207a and 304a).

The proposed new generator building is 49 feet in length (Exhibit 2, A301), which is less than the minimum threshold of 70 feet at which roof line variation is required. This criterion pertaining to roofline variation does not apply.

15. *MICC 19.12.030(7): Additional Standards for Buildings Containing Residential Units. Buildings containing residential units should incorporate the following additional design elements to make them residential in character.*

    Staff Analysis: No residential units are proposed for the site. This criterion does not apply.

16. *MICC 19.12.030(8): Corporate Design. Building and site design for chain or franchise businesses should use customized components consistent with the objectives and standards of this chapter. Specific icons or trademarks of a company may be used, but the overall design of the building and site must represent a development compatible with the neighborhood including its colors, materials, textures and treatment of design.*

    Staff Analysis: No franchise business uses are proposed. This criterion does not apply.

17. *MICC 19.12.030(9): All-Weather Features. All-weather features at the sidewalk, courtyard or public gathering space areas of commercial and regulated public facilities, such as awnings, canopies, covered walkways, trellises, or covered patios, should be provided to make spending time outdoors feasible in all seasons*.

    Staff Analysis: The proposed generator building is for a utility use within a single-family residential zone. The generator building and adjacent existing pump station are not intended to be public gathering places, and in fact will be fenced-off to promote security. Therefore, no covered spaces intended for outdoor recreation are proposed. However, the design does meet the objectives of this code section by providing a coherent architectural concept for both the existing and proposed buildings, using high-quality and durable materials, and by avoiding blank walls.

18. *MICC 19.12.030(10): Public schools should respect privacy for adjacent residential properties by providing appropriate screening and placement of windows in buildings. Distance from residential property lines should also be considered when determining the appropriate amount of screening and the type and placement of windows.*

    Staff Analysis: The proposed use of the site is not a public school. This criterion does not apply.

19. *MICC 19.12.040(B)(1): Landscape Area. Landscape design shall address all areas of a site not covered by structures or used by automobiles. Landscape areas include open space, plantings, patios, plazas, pedestrian ways, trails, and other outdoor spaces. Surface parking lot planting and screening are required as set forth in MICC 19.12.040(B)(7), (8) and (9). Design review, however, shall be primarily concerned with: (a) areas of a site that require landscaping in order to address the impact of development on adjoining properties or public ways; and (b) parts of the development that are visible from adjoining properties or public ways.*

Staff Analysis: All areas of the site not covered by structures or used by automobiles are proposed to be landscaped (Exhibit 2, Sheet L101). Surface parking lot screening and visibility from adjoining properties are discussed below.

20. *MICC 19.12.040(B)(2). Outdoor spaces should be designed at a human scale and include hardscape spaces, spaces created by plant materials and combinations of the two.*

    (a): Strategically placed and useable pedestrian areas such as courtyards, plazas, outdoor seating or other gathering places should be provided for commercial, regulated residential and public facilities.

    (b): On-site recreation areas appropriate to the users should be provided for residential and public projects.

    (c): The design of outdoor spaces should combine necessary site functions, such as storm water detention, with open space and visual interest areas.

    Staff Analysis: The subject site is not a residential or public facility; therefore, on-site recreation is not provided and criteria (2)(a) and (2)(b) do not apply.

    The proposed landscaping incorporates the invasive removal and mitigation plantings around the Type F watercourse on the property, combining the landscape with ecological function enhancement (Exhibit 2, landscape plan).

21. *MICC 19.12.040(B)(3): Architectural Features. The design of landscape architectural features should be in scale with and complement the architecture of site structures and the visual character of the neighborhood.*

    (a): Use of architectural screens, arbors, trelliswork, art features, fountains and paving treatments such as wood, brick, stone, gravel and/or other similar methods and materials should be used in conjunction with native plant materials or in place of plant materials where planting opportunities are limited.

    (b): Fences should be made of ornamental metal or wood, masonry, or some combination of the three. The use of razor wire, barbed wire, chain link, plastic or wire fencing is prohibited if it will be visible from a public way or adjacent properties, unless there are security requirements which cannot feasibly be addressed by other means.

    (c): Fences should not create the effect of walled compounds that are isolated from adjacent developments and public ways.

    Staff Analysis: The landscaping on west property boundary is a combination of a decorative fence and trees (Exhibit 2, Sheet A10 and Exhibit 8). No razor wire, barbed wire, chain link, nor wire fencing is proposed. The proposed fencing on site will use decorative bars, which will provide effective screening when combined with the proposed trees, while still maintaining visibility between the subject and neighboring properties and avoiding the effect of a walled compound.

22. *MICC 19.12.040(B)(4)(a)(i): The following minimum areas shall be landscaped: Single-Family Residential (SF). For nonresidential uses in single-family residential zones (SF), a minimum of 35 percent of the gross lot area of shall be landscaped.*

    (b): Impervious Surfaces. For all zones, area landscaped by impervious surfaces should constitute no more than 25 percent of the total required landscape area;

    Staff Analysis: Approximately 67% of the site's gross lot area will be landscaped (Exhibit 2, Sheet L101), far exceeding the minimum landscaping requirement.

    The only proposed impervious surfaces within the landscaping area are from a retaining wall on the west edge of the site. The retaining wall visibly constitutes a very small percentage of the landscaped area (Exhibit 2, Sheet L101), consistent with this standard.

23. *MICC 19.12.040(B)(5): Entrance Landscaping. For commercial and regulated public facilities, landscaping at entrances should frame an outdoor space near the entrance and reinforce this important building feature as a gathering place.*

    Staff Analysis: The proposed buildings are neither commercial nor public facilities. Therefore, this criterion does not apply.

24. *MICC 19.12.040(B)(6): Planting Material, Types and Design. The following planting types should be used:*

    a. *Native or northwest-adapted plants should be used for all open space and buffer locations and drought tolerant plantings should be used in a majority of plantings.*

    b. *New plantings should complement existing species native to the Pacific Northwest.*

    c. *Ground cover should be used to ensure planting areas are attractive, minimize maintenance and the potential for encroachment of invasive plant material. Ground cover should be planted and spaced to achieve total coverage within three years after installation.*

    Staff Analysis: The watercourse buffer will be planted with Douglas Fir, Western Hemlock, Cascara, Pacific Wax Myrtle, and Western Red Cedar (Exhibit 2, Landscape Plan), which are all native plants. Nearly all of the species proposed for landscaping use are native, and those that are not would blend harmoniously with the rest of the plant palette, complementing species native to the Pacific Northwest.

    A variety of groundcover species are proposed to be incorporated into the landscaping (Exhibit 2, Landscape Plan). A condition of approval has been added to this recommendation, requiring that groundcover be installed in a manner that will provide total coverage within three years after installation.

25. *MICC 19.12.040(B)(7)(a): Required Screen Types and Widths. The following screen types and widths should be used:*

Use	***Adjacent to***	***Screen Type and Width***		
		Full	***Partial***	***Filtered***

Utility Development	*Public Way*		*10 feet*	
Commercial, Institutional, Utility or Public Facility	*Residential (Single or Multifamily)*	*20 feet*[1]		

[1] *Breaks in full or partial screen planting may be allowed for institutional and public facilities to create focal points, preserve views, and highlight the prominence of important buildings.*

MICC 19.12.040(B)(8): Perimeter Landscape Screens. Perimeter landscape screens should be consistent with the following definitions of screen types. Where existing undergrowth will be retained, the shrub and ground cover requirements for all screen types may be adjusted, provided the objectives of this section are met.

(a): Full Screen. A full screen provides a dense vegetated separation between dissimilar uses on adjacent properties. A full screen should block views from adjacent properties as seen at the pedestrian eye level in all seasons within three years of installation. The number of trees provided shall be proportionate to one tree for every 10 feet of landscape perimeter length.

Staff Analysis: Approximately 70 feet of landscaping is provided between the utility buildings on site and the public way to the north, exceeding the minimum landscaping width. Approximately 55 and 45 feet of full landscaping are provided to the east and south sides, which are adjacent to residential uses, exceeding the minimum landscaping width (Exhibit 2, Sheet L101).

On the west side of the property, which is adjacent to a residential use, there is an approximately 50-foot section of the property where--because the generator building and turnaround area are sited to be as far away from the watercourse as possible—less than the 20 feet of full screening this code section says should be. However, as a "should" statement, this specific standard can be adjusted if the proposed design meets the objectives of the code section. The proposed screening meets the objectives of this section by providing an effective vegetated screen between the proposed turnaround area and generator building and the adjacent residential use, composed of a decorative fence and a row of dense coniferous trees, which will screen the utility use from view (Exhibit 2, Landscape plan and Exhibit 7).

26. *MICC 19.12.040(B)(9): Surface Parking Lot Planting. Surface parking lot planting is required in addition to required perimeter landscape screens. The requirements for surface parking lot planting for new parking lots with fewer than 20 spaces and for additions or remodels may be waived or modified if the applicant can demonstrate that these standards would reduce the amount of parking below the minimum required for the site.*

    Staff Analysis: No surface parking lot is proposed for this site. Parking will consist of a driveway and turnaround (Exhibit 2, Sheet A100). The parking lot criteria do not apply.

27. *MICC 19.12.040(B)(10) Landscape Grading Standards*

(a): Slopes in Planting Areas. Graded slopes in planting areas should not exceed a 3(Horizontal): 1(Vertical) slope, in order to decrease erosion potential and to facilitate maintenance. Graded slopes planted with grass should not exceed a 4(H): 1(V) slope.

(b): Erosion Control. On ungraded slopes equal to or greater than 2(H): 1(V), erosion control netting or alternative procedures shall be used to prevent erosion.

(c): Guidelines. The obligation to install plants, shrubs and ground cover includes the obligation to utilize soil, planting practices and irrigation equipment that maximize the likelihood of their long-term survival.

Staff Analysis: Small areas of grading are proposed to accommodate the new generator building and turnaround; resulting graded areas will be approximately 20%, which is less than a 4(H):1(V) slope (Exhibit 2, Sheet C141). Temporary erosion control measures, including silt fencing on the downslope side of the proposed clearing limits, inlet protection around drainage systems, and sediment traps are proposed during construction (Exhibit 2, sheet C101). The site is proposed to be fully landscaped outside of buildings and paved surfaces (Exhibit 2, sheet L101).

28. *MICC 19.12.040(B)(11) General Planting, Irrigation and Maintenance Standards. The following standards apply to the planting requirements set forth above:*

    (a): Coverage. Planting areas should be completely covered with trees, shrubs, flowers, mulched areas, and/or ground covers.

    (b): Berms and Landforms. Earth berms and landforms in combination with shrubs and trees may be used to achieve the initial planting height requirement.

    (c): Minimum Width. All planting areas should be a minimum of five feet in width. Planting areas should be wider wherever possible.

    (d): Sight Clearance. At intersections, plantings shall not create sight obstructions that may compromise pedestrian or traffic safety.

    (e): Planting Coverage. All required planting areas should extend to the ditch slope, curb line, street edge, or area of sidewalk.

    Staff Analysis: The site is proposed to be fully landscaped outside of buildings and paved surfaces (Exhibit 2, sheet L101). No berms are proposed. A minimum of five feet of planting is maintained throughout the site and sight clearance around the driveway entrance will be preserved by using a plan mix that will reach about 3 feet at maturity (Exhibit 2, sheet L101). Plantings will extend to the edge of the ditch slope along SE 22nd (Exhibit 2, Landscape Plan).

29. *MICC 19.12.040(B)(11)(f): Curbs Required. Permanent curbs or structural barriers/dividers should enclose planting areas in vehicle use areas except when draining runoff from pavement to planting areas functioning as rain gardens or other low impact development facilities. Wheel stops should also be used to protect planting areas from damage due to cars overhanging the curb.*

Staff Analysis: Curbs enclose planning areas where adjacent to the driveway and turnaround, consistent with this criterion (Exhibit 2, Sheet L101).

30. *MICC 19.12.040(B)(11)(g): Plantings Near Utilities. Trees shall not be planted within eight feet of a water or sewer pipeline. Shrubs shall be at least four feet from hydrants. A full screen will be required to screen above-ground utilities from adjacent uses and public rights-of-way. Perimeter plantings shall be clustered in areas to screen structures, utility structures, loading areas, trash enclosures, storage areas and mechanical equipment. This subsection shall not apply to utilities, structures, loading areas, enclosures or equipment unless the utility, structure, loading area, enclosure or equipment is being added as part of the regulated improvement being reviewed.*

    Staff Analysis: Due to the large site area and number of trees and shrubs proposed to be planted, exact planting locations are not distinguished on the landscape plan; instead, general plantings zones are provided (Exhibit 2, Sheet L101). A recommended condition of approval has been added to this staff report requiring trees to be planted at least eight feet from water and sewer pipelines, and shrubs to be planted at least four feet from hydrants.

31. *MICC 19.12.040(B)(11)(h): Drainage. Planting areas shall be provided with adequate drainage*.

    MICC 19.12.040(B)(11)(i): Maintenance Requirements. All required landscaping shall be maintained in good condition. Plant material should be cared for in a way that allows their natural form to be maintained, even when the plant reaches maturity. Performance guarantees to ensure maintenance or required landscaping may be required pursuant to MICC 19.01.060.

    Staff Analysis: Soil preparation will be provided by decompacting soils and integrating amendments that will enhance drainage and support the long-term survival of new plants. Temporary irrigation is proposed, which will support the maintenance of plants in good condition. (Exhibit 7). Cities cannot require performance guarantees pursuant to RCW 35A.21.250.

32. *MICC 19.12.050(B)(1)(b): Loading Docks. Proposed development of features such as loading docks, and other features designed to support activities with a substantial likelihood of generating significant noise should be designed with noise attenuation walls and sited in a manner to limit impacts to adjacent properties and pedestrian areas.*

    Staff Analysis: No loading docks, nor features designed to support activities with a substantial likelihood of generating significant noise are proposed. The new equipment at NMPS is designed to be limited to 60 dB at the property line (Exhibit 6). This criterion does not apply.

33. *MICC 19.12.050(B)(2)(a): Pedestrian Improvements. All developments shall provide for pedestrian access including pedestrian walkways, sidewalks, and/or paths. Areas for sitting and gathering should be provided as an integral part of regulated public facilities, regulated residential and commercial building design. Pedestrian improvements should be separated from vehicular areas by physical barriers such as curbs or landscaping. This requirement for new parking lots with fewer than 20 spaces and for additions or remodels may be waived or modified where the applicant can demonstrate that these standards would reduce the amount of parking below what would be required for the site.*

    MICC 19.12.050(B)(2)(b): On-Site Circulation for Regulated Public Facilities and Commercial Buildings. Proposed development should be linked to existing and planned walkways and trails. Entrances of all

buildings should be linked to each other and to public ways and parking lots. Where possible and feasible, the pedestrian system shall connect to paths or sidewalks on neighboring properties.

Staff Analysis: Pedestrian access to the pump station is provided via the existing driveway; pedestrian improvements are not necessary for this site because the pump station and proposed generator building are for the specific purpose of utility maintenance by King County and will not be accessed by the general public. As a utility use, the criterion pertaining to on-site circulation for regulated public facilities and commercial buildings does not apply.

34. *MICC 19.12.060(B) Screening of service and mechanical areas*

(1) Accessory Buildings. Ground level outdoor storage buildings, mechanical equipment and utility vaults shall be screened from adjacent public ways.

(2) Rooftop Mechanical Equipment and Appurtenances. All rooftop mechanical equipment shall not be visible and shall be enclosed, hidden or screened from adjacent properties, public ways and parks. Rooftop appurtenances are allowed if there is a functional need for the appurtenance and that functional need cannot be met with an appurtenance of a lesser height. This provision shall not be construed to allow building height in excess of the maximum limit. Rooftop appurtenances should be located at least 10 feet from the exterior edge of any building, and shall not cover more than 20 percent of the rooftop area. Appurtenances shall not be located on the roof of a structure unless they are hidden or camouflaged by building elements that were designed for that purpose as an integral part of the building design. All appurtenances located on the roof should be grouped together and incorporated into the roof design and thoroughly screened. The screening should be sight-obscuring, located at least 10 feet from the exterior edge of any building; and effective in obscuring the view of the appurtenances from public streets or sidewalks or residential areas surrounding the building.

(3) Meters and Mechanical Units. Water meters, gas meters, electric meters, ground-mounted mechanical units and any other similar structures should be hidden from public view or screened.

(4) On-Site Service Areas. All on-site service areas, loading zones, outdoor storage areas, garbage collection and recycling areas and similar activities should be located in an area not visible from public ways. Service areas should accommodate loading, trash bins, recycling facilities, storage areas, utility cabinets, utility meters, transformers, etc. Service areas should be located and designed for easy access by service vehicles and for convenient access by all tenants. Loading activities should generally be concentrated and located where they will not create a nuisance for adjacent uses. Loading docks shall meet the standards identified in MICC 19.12.050(B)(1)(b).

(5) Garbage, Recycling Collection and Utility Areas. Garbage, recycling collection and utility areas shall be enclosed and screened around their perimeter by a wall or fence at least seven feet high, concealed on the top and must have self-closing doors. If the area is adjacent to a public way or pedestrian alley, a landscaped planting strip, minimum three feet wide, shall be located on three sides of such facility.

(6) Fence, Trellis and Arbor Standards. Fences, trelliswork and arbors shall meet the standards identified in MICC 19.12.040(B)(3).

(7) Noise, Vapor, Heat or Fumes. With respect to all aspects of the development referred to above in this section, emissions of noise, vapor, heat or fumes should be mitigated.

Staff Analysis: The proposed new generator building will be screened from SE 22nd St with the fence that borders the turnaround and landscaping, and mechanical equipment (including the RPBA enclosure and fill-station cabinet) will be screened by the wall containing the site address (Exhibit 2, Sheet A100). Rooftop mechanical equipment will not visible from the public way to the north and from adjacent properties (Exhibit 2, sheets A209a, A304a). Bioxide and fuel tanks stored outdoors will be screened by the fence (Exhibit 2, sheet A100). The proposed fence will meet the standards in MICC 19.12.040(B)(3)--please see item 21 above. Noise from the proposed generator building will be mitigated through the use of building materials, including solid masonry walls, concrete roof, internal acoustic absorbing panels, and sound traps at ventilation openings (Exhibit 6). Fumes are being mitigated through an odor control and carbon vessel (Exhibit 6).

35. *MICC 19.12.070(B): Lighting*

(1) Architectural Elements. Lighting should be designed as an integral architectural element of the building and site.

(2) Function and Security. On-site lighting shall be sufficient for pedestrian, bicyclist, and vehicular safety. Building entrances should be well lit to provide inviting access and safety. Building-mounted lights and window lights should contribute to lighting of walkways in pedestrian areas.

(3). Lighting Height. Freestanding, parking area, and building-mounted light fixtures shall not exceed 16 feet in height, including any standard or base.

(4) Shielding. All exterior lighting fixtures shall be shielded or located to confine light spread within the site boundaries. Full cut-off fixtures should be used. The use of unshielded incandescent lighting fixtures less than 160 watts and any unshielded lighting less than 50 watts may be allowed. Parking area light fixtures shall be designed to confine emitted light to the parking area.

(5)(a). Residential Zones. Structures in residential zones shall not be illuminated by uplighting. Limited uplighting of signs and plantings in residential zones may be approved provided there is no glare or spillover lighting off the site boundaries.

(6). Light Type. Lighting should use low wattage color-corrected sodium light sources, which give more "natural" light. Metal halide, quartz, neon and mercury vapor lighting are prohibited in residential zones. High pressure sodium lights may only be used as street lights and must be fully shielded.

Staff Analysis: Lighting fixtures are congruent with the architectural styles of the building. Building entrances will be lit with an illuminance of 6-8 foot-candles, sufficient for pedestrian, bicyclist and vehicular safety. Shielding is proposed to confine light spread to site boundaries. No uplighting is proposed. Light type will be LED with a color temperature of 3000'K, consistent with light type standards (Exhibit 2, Sign and Lighting Master Plan). A recommended condition of approval has been added to ensure compliance with the height standard.

36. *MICC 19.12.080(B)(3): Signs for Non-Single-Family-Dwelling Uses in Residential Zones. One wall sign and one freestanding ground sign are permitted on each separate public street frontage for non-single-family-dwelling uses in residential zones, such as apartment buildings, hospitals, assisted living and retirement facilities, churches, clubs, public facilities, schools, day cares, pre-schools, park and recreation facilities, assembly halls, libraries, pools or stadiums. A wall sign may be unlighted or*

exterior lighted, not to exceed 12 square feet. A free-standing ground sign shall be no larger than 18 square feet and shall not exceed a maximum height of 42 inches above grade. The location of any freestanding ground sign shall be subject to all setback requirements for the zone in which the sign is located.

Staff Analysis: One freestanding ground sign is proposed. It is approximately 7 sq ft (Exhibit 2, Sheet A102) and is less than 42 inches tall (Exhibit 2, code compliance narrative). The sign meets setback requirements for the R-8.4 zone by being under the height limit allowed for features pursuant to MICC 19.02.020(C)(3)(f).

37. MICC 19.12.080(B)(8) Street Numbers

(a) Use. City-assigned street numbers should be installed on all buildings.

(b) Effect on Permitted Sign Area. Street numbers will not be counted towards permitted sign area.

(c) Size. Street numbers for any building or building complex shall be no smaller than six inches in height.

Staff Analysis: The subject site already has an assigned street number, and this number is proposed to be used on the proposed sign (Exhibit 2, Sheet A102). The site address numbers are proposed to be 7 inches in height, exceeding the six-inch minimum. None of the sign types listed as prohibited in this subsection (B)(9) are proposed by the applicant.

RECOMMENDATION

Based upon the above noted Findings of Fact and Conclusions of Law included herein, staff recommends to the Design Commission the following:

Recommended Motion: Move to grant King County Wastewater Treatment Division design approval for the construction of a new generator building and associated site improvements on the site located at 7631 SE 22nd St, as shown in Exhibit 2, subject to the following conditions.

Alternative Recommended Motion: Move to grant King County Wastewater Treatment Division design approval for the construction of a new generator building and associated site improvements on the site located at 7631 SE 22nd St, as shown in Exhibit 2, subject to the following conditions, and further conditioned as follows [specify conditions]

RECOMMENDED CONDITIONS OF APPROVAL

1. All aspects of the proposed development shall be in substantial conformance with the detail information submitted with this application (i.e. elevations, perspective drawings, colors, materials, font, size of sign lettering and relationship and layout of the approved wording and graphics), as depicted by Exhibit 2.
2. If a building permit is required and the applicant has not submitted a complete application for a building permit within three years from the date of this notice, or within two years from the decision on appeal from the final design review decision, design review approval shall expire.
3. Lighting details demonstrating compliance with the height standards for freestanding and building-mounted light fixtures as described in MICC 19.12 shall be provided during building permit review.

4. Trees shall be planted at least eight feet from water and sewer pipelines, and shrubs shall be planted at least four feet from hydrants.
5. Ground cover shall be planted and spaced to achieve total coverage within three years after installation.

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org

CITY USE ONLY		
PROJECT#	RECEIPT #	FEE
Date Received:		
Received By:		

DEVELOPMENT APPLICATION

STREET ADDRESS/LOCATION	ZONE
7631 SE 22nd Street	R-8.4
COUNTY ASSESSOR PARCEL #'S	PARCEL SIZE (SQ. FT.)
5315101945	37,265 (per Assessor)

PROPERTY OWNER *(required)*	ADDRESS *(required)*	CELL/OFFICE *(required)*
Chris Dew King County Wastewater Treatment Division	201 S Jackson Street, Rm 505 Seattle, WA 98104-3855	206-477-5458 E-MAIL *(required)* chris.dew@kingcounty.gov
PROJECT CONTACT NAME	ADDRESS	CELL/OFFICE
Kevin Goss Tetra Tech, Inc	1420 Fifth Ave, Suite 600 Seattle, WA 98101	206-883-9348 E-MAIL kevin.goss@tetratech.com
TENANT NAME	ADDRESS	CELL PHONE
N/A		E-MAIL

DECLARATION: I HEREBY STATE THAT I AM THE OWNER OF THE SUBJECT PROPERTY OR I HAVE BEEN AUTHORIZED BY THE OWNER(S) OF THE SUBJECT PROPERTY TO REPRESENT THIS APPLICATION, AND THAT THE INFORMATION FURNISHED BY ME IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

SIGNATURE

DATE 11/25/19

PROPOSED APPLICATION(S) AND CLEAR DESCRIPTION OF PROPOSAL (PLEASE USE ADDITIONAL PAPER IF NEEDED):

Rehabilitation of existing regional wastewater pump station, including addition of a generator building and improvements to site access.

ATTACH RESPONSE TO DECISION CRITERIA IF APPLICABLE

CHECK TYPE OF LAND USE APPROVAL REQUESTED:

APPEALS	DEVIATIONS	SUBDIVISION SHORT PLAT
☐ Building	☐ Changes to Antenna requirements	☐ Short Plat- Two Lots
☐ Code Interpretation	☐ Changes to Open Space	☐ Short Plat- Three Lots
☐ Land use	☐ Shoreline	☐ Short Plat- Four Lots
☐ Right-of-Way Use	☐ Seasonal Development Limitation Waiver	☐ Short Plat- Deviation of Acreage Limitation
CRITICAL AREAS	**ENVIRONMENTAL REVIEW (SEPA)**	☐ Short Plat- Amendment
☐ Critical Area Review 1 (Hourly Rate 2hr Min)	☐ SEPA Review (checklist)- Minor	☐ Short Plat- Final Plat
	☐ SEPA review (checklist)- Major	**OTHER LAND USE**
☐ Critical Area Review 2 (Determination)	☐ Environmental Impact Statement	☐ Accessory Dwelling Unit
	SHORELINE MANAGEMENT	☐ Code Interpretation Request
☐Reasonable Use Exception	☐ Exemption	☐ Comprehensive Plan Amendment (CPA)
DESIGN REVIEW	☐ Permit Revision	☐ Conditional Use (CUP)
☐ Pre Design Meeting	☐ Shoreline Variance	☐ Lot Line Revision
☐ Design Review (Code Official)	☐ Shoreline Conditional Use Permit	☐ Noise Exception
☐ Design Commission Study Session	☐ Substantial Development Permit	☐ Reclassification of Property (Rezoning)
☐ Design Review- Design Commission-Exterior Alteration	**SUBDIVISION LONG PLAT**	☐ Transportation Concurrency (see supplemental application form)
	☐ Long Plat- Preliminary	
■ Design Review- Design Commission-New Building	☐ Long Plat- Alteration	☐ Planning Services (not associated with a permit or review)
	☐ Long Plat- Final Plat	
WIRELESS COMMUNICATION FACILITIES	**VARIANCES (Plus Hearing Examiner Fee)**	☐ Zoning Code Text Amendment
☐ Wireless Communications Facilities-6409 Exemption	☐ Variance	☐ Request for letter
☐ New Wireless Communication Facility		

City of Mercer Island Design Commission

North Mercer Pump Station (NMPS) Upgrade

Design Commission Submittal

December 2019

Owner	Engineering Consultant	Architect	Landscape Architect
King County Wastewater Treatment Division Contact: Courtney Schaumberg King Street Center 201 S. Jackson Street, Room 507 Seattle, WA 98104 Phone: (206) 263-5776	**Tetra Tech** Contact: Kevin Goss 1420 Fifth Ave Suite 600 Seattle, WA 98101 Phone: (206) 883-9348	**Jacobs** Contact: Mark Sharp 1100 112th Ave NE Suite 500 Bellevue, WA 98004 Phone: (425) 453-5000	**Jacobs** Contact: Lorcan French 1100 112th Ave NE Suite 500 Bellevue, WA 98004 Phone: (425) 233-3281

Project No. 200-12539-18001
Site Address: 7631 SE 22nd Street

CONTENTS

PHOTOS

1. PROJECT NARRATIVE

PROJECT BACKGROUND

The King County Wastewater Treatment Division (WTD) is applying for various environmental and construction permits from the City of Mercer Island (City). King County's Conveyance System Improvements Program identified a need for capacity upgrades for the North Mercer Island and Enatai Interceptor sewers. The North Mercer Island Interceptor and Enatai Interceptor Upgrade Project (the Project) is intended to improve reliability and increase the capacity of the existing pump station facility and pipeline components of the regional wastewater system to convey the 20-year peak wastewater flows projected through the year 2060 from service areas in North Mercer Island, the southwest portion of Bellevue, and the Town of Beaux Arts Village.

The proposed Project would upgrade facilities associated with the North Mercer Pump Station (NMPS) on Mercer Island. The existing NMPS facility will be upgraded and expanded, including constructing a new building and concrete pads to house a standby generator, new electrical service equipment, and a new restroom. Site improvements will include a courtyard area to house an electrical transformer, fuel tank and odor control equipment. Other site work will include improving the existing access road and landscape improvements. Impervious surface area from newly constructed structures and surfaces will total 4,760 square feet. A temporary pump station (TPS) will be built near the entrance to the site to manage sewer flows during construction work inside the existing pump station.

Existing infrastructure (paved pump station access road and parking area) will be used for access and staging, which will limit the need for site preparation. Several trees will be removed during preparation of the NMPS site for facility improvements. Renderings of the NMPS improvements are provided in Section 7. Proposed screen walls and perimeter fencing, the existing odor control equipment cabinet, and proposed entrance wall are provided here and will be discussed with the Design Commission. Consistency with the design standard code (MICC 19.12) related to these building elements is discussed in Section 11.

BUILDING DESIGN

The new Generator Building has been designed around the new standby generator and electrical equipment required as part of the Pump Station upgrades. The floor area has been contained to ensure a minimal impact on the site and to maximize the potential for landscaping. A new restroom has been provided in the new building to provide basic facilities for operation and maintenance personnel while on-site.

The design sees the new Generator Building cut into the slope on the west side of the site to use existing topography to its advantage by keeping the new roof-line as low as possible. Sloping the roof back into the site will reduce the amount of below-grade drainage along the western boundary and offer an opportunity to incorporate a subtle contemporary roofline. The two rooflines are designed to complement one another and provide a flowing continuity between new and existing. Replacing the existing Pump Station roof covering and trim will provide a level of material continuity on the visible edges of the roofs.

More detailing and material composition have been applied to the north elevation of the new building, as this will be the only side of the building facing the street frontage. The roof-line turns vertical on the western edge facing the neighboring properties, which provides a wider planting buffer area. The standing seam will also provide pattern and depth to the elevation facing west as a backdrop to the landscaping.

A complementary material palette has been selected to blend the new building with the existing one. The palette includes face brick to match existing, flush metal doors, and air louvers in the same color and finish. A new metal standing seam roof has been selected for the new building to provide a longer lifespan and robust roof covering. The new roof will also include low-profile skylights to provide daylight into the generator room below, reducing the reliance on artificial light inside. The materials proposed for the new building are highlighted in Section 8.

Acoustics have been considered as an important factor in the design of the new Generator Building, with solid masonry walls, concrete roof, internal acoustic absorbing panels, and sound traps at ventilation openings to contain noise from the generator, should it be required during a power outage to maintain the station's operation.

Some minor alterations in the existing Pump Station are planned to facilitate the station's reliability and capacity upgrades. These are mainly minor internal alterations centered around the equipment and tanks in the building. Some existing louvers will be removed or altered to suit the reconfigured internal space requirements. Existing doors will be painted or replaced where damaged to match those in the new building.

LANDSCAPE DESIGN

The Pump Station property is in a heavily wooded residential neighborhood, with adjacent homes located near the proposed generator building to the south and to the west. Much of the property is vegetated with an understory of nuisance and noxious weeds (English ivy and patches of knotweed, respectively) with a sparse overstory of native and non-native trees. The vegetated condition, coupled with the presence of a stream running south to north through the eastern portion of the site, presents ample opportunity for enhancing the quality of the plant community, which will in turn increase the ecological and aesthetic value of the site. This understanding of the site's context and opportunities has informed the design, and the restoration is proposed as follows:

- Areas within the stream buffer offer the greatest opportunity for enhancement, due to the poor understory vegetation and sparseness of native tree canopy. Full restoration, including areas outside of the construction fencing, will include weed control, soil amendments, and restoration with native trees planted at 12 feet on center spacing and shrubs densely planted in order to achieve rapid canopy closure to reduce the re-establishment of weeds. Tree species will be mostly conifers, in order to maximize shading over the stream, and to mimic the process of natural forest succession.
- Along SE 22nd Street, the design will blend the area with the character of the surrounding residential neighborhood. This will include low understory shrubs with strategic siting of several small flowering trees, in order to maintain clear sight lines into the site from the road, while providing screening of the site from the property to the west.
- West of the new retaining wall and generator building, between the pump station facilities and the property to the west, restoration will revegetate with upright narrow conifers with an understory of medium evergreen shrubs to maximize screening of the new facilities from the property.
- Tree protection measures will be implemented site-wide in order to protect trees not identified for removal.

CIVIL DESIGN

Due to the increased impervious area, a new storm drainage system will be installed on the site. This system will capture runoff from the existing driveway was well as new hammerhead turn-around, courtyard area, and roof drains from the new generator building. The new system will route flows north toward the public right of way, then east to a replaced outfall to the stream that runs through the Pump Station site. Stormwater detention is currently not planned, as the City has confirmed this project will be eligible to pay a fee in lieu of providing detention.

Most utilities on-site will also be replaced or relocated. The existing 2-inch service line from the water meter to the pump station will be relocated to make room for the TPS. New electrical conduits and a vault near the entrance to the site will be installed as part of the new power feed to the Station. The installation of new dual force mains will also require a crossing of the on-site stream near the existing building. The crossing of this stream is currently being coordinated with the Washington Department of Fish and Wildlife as well as other permitting agencies.

COMMUNITY OUTREACH

King County has conducted extensive community outreach throughout the project area since 2014, including project-wide newsletters, open houses, community events and on-line open houses. In the vicinity of the Pump Station, they have conducted:

- A neighborhood walk-and-talk on March 3, 2018,
- A living room meeting with 15 nearby homes invited on October 17, 2018,
- An onsite meeting with the neighbors immediately to the west (David Sheldon and Jeremy Fan) on November 1, 2018, and
- A follow-up onsite meeting with David Sheldon on July 10, 2019.

Feedback from neighbors has been incorporated into the design. In particular, recognizing the direct proximity of the neighbors to the west, the fencing and landscape concepts for the western property boundary were updated based on their comments and accepted by them.

TEMPORARY PUMP STATION

While the existing Pump Station is being upgraded, a temporary pump station will be utilized to convey flow to the existing downstream piping system. This system will be located on the northwest corner of the site. See T-C101 in Section 6, Site Plans.

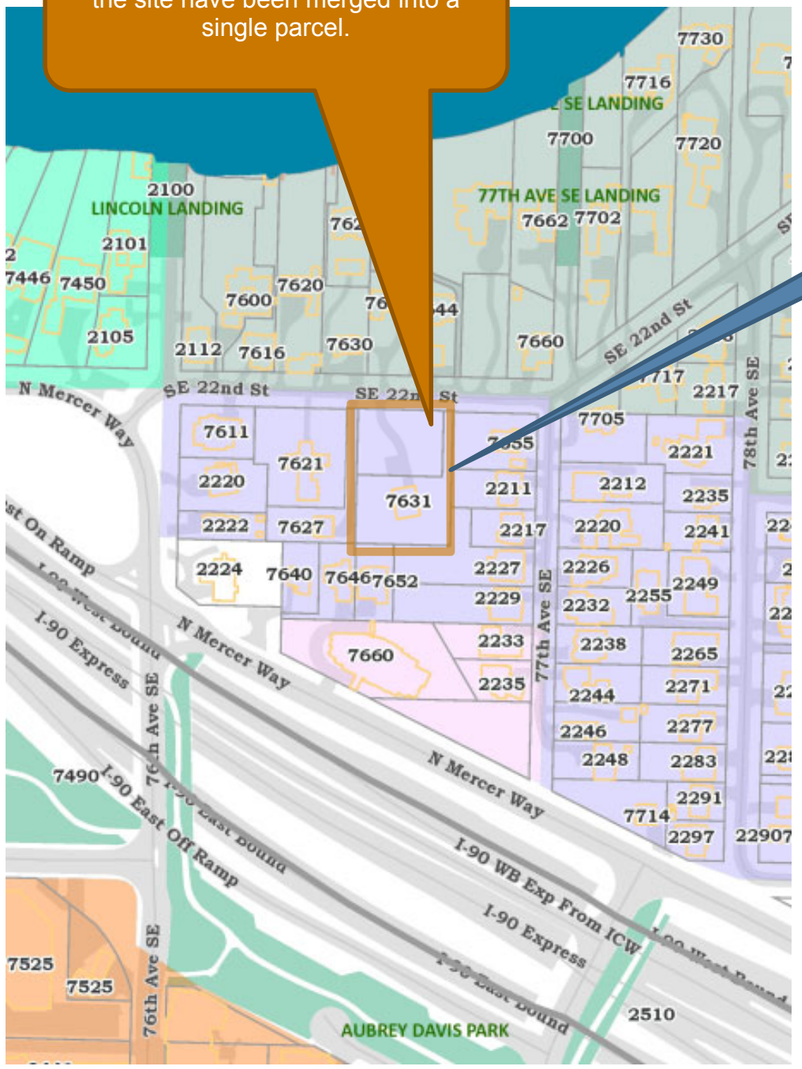
The pumps themselves will be located in a deep maintenance hole. Temporary valve and meter vaults will be constructed along with a short pipeline onsite to connect to the existing force main system. All of these facilities will be below grade. Above-grade supporting facilities will consist of a temporary electrical transformer, a temporary standby generator set, a power systems enclosure, a control system enclosure, a temporary odor control trailer and several odor control chemical storage containers. The power and control systems enclosures are expected to be in temporary trailers or possibly shipping containers.

The contract calls for temporary security fencing for the site. This will also enclose the temporary pump station area. Vinyl banners will be fitted to the fence on the north and west sides to provide a visual screen of the temporary equipment.

Temporary pump station equipment will meet the requirements of the City’s noise ordinance by including sound attenuating devices on

2. VICINITY MAP

Update: The two original parcels of the site have been merged into a single parcel.

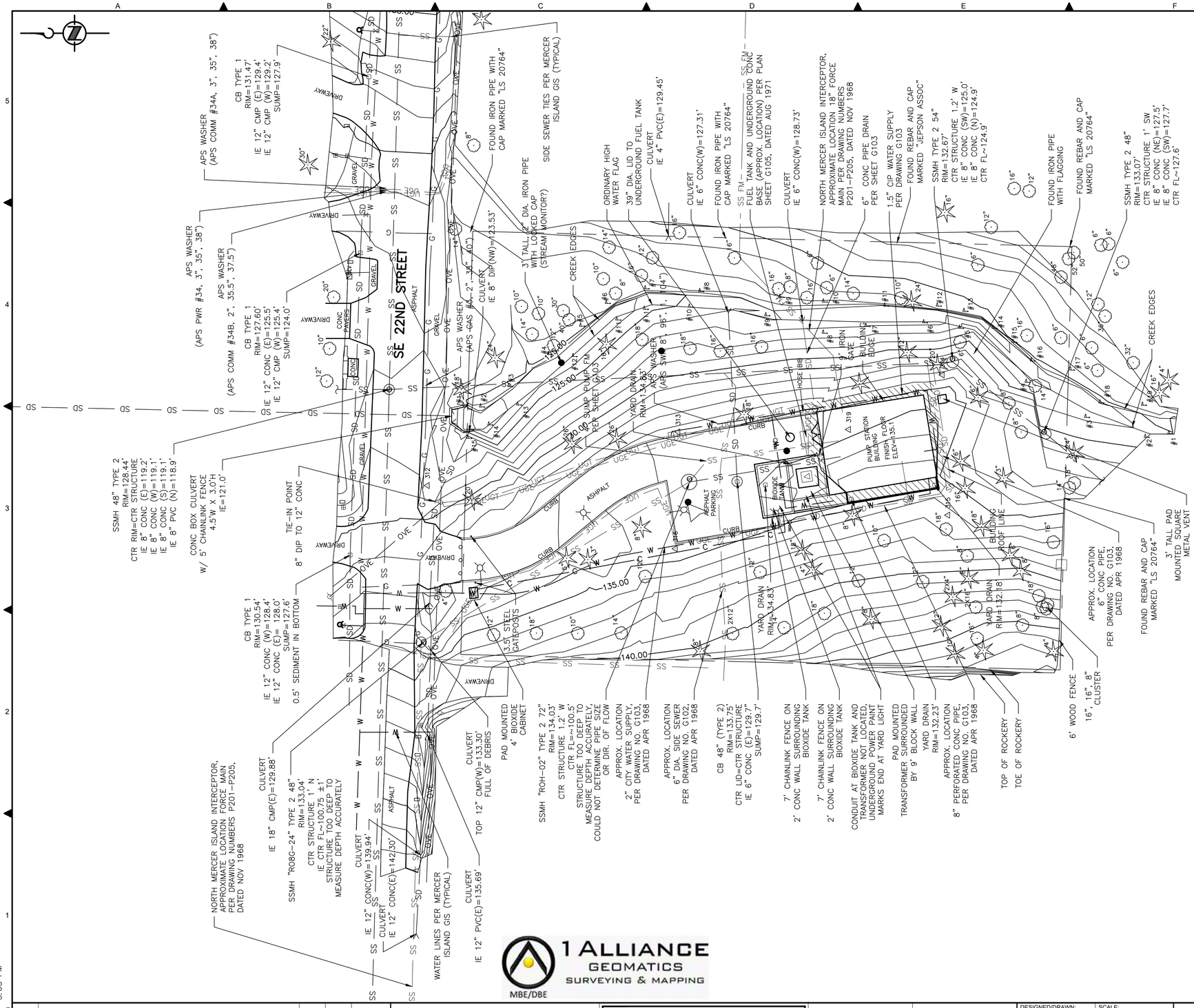


North Mercer Pump Station Site

Zoning

- B
- C-O
- PBZ
- R-12
- R-15
- MF-2
- MF-2L
- MF-3
- R-8.4
- R-9.6
- TC
- P

3. SITE SURVEY



NOTES:

1. BASE MAP WAS PROVIDED BY 1 ALLIANCE GEOMATICS, LLC.
2. THIS SHEET IS FOR GENERAL INFORMATION AND REFERENCE FOR THE PROJECT SITE LOCATION.
3. PARCEL SIZE EQUALS 37,265 SQUARE FEET.

1 ALLIANCE GEOMATICS SURVEYING & MAPPING MBE/DBE

NO	REVISION DESCRIPTION	BY	APVD	DATE

TETRA TECH
JACOBS

DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: E. VANBUSKIRK	SCALE: 1" = 20'
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1"
DESIGN APPROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE - PUMP STATION IMPROVEMENTS

TOPOGRAPHIC SURVEY

DCN:
DATE: 05/02/2019
PROJECT FILE NO:
DRAWING NO: G012
SHT NO / TOTAL: /
REV NO:

BORDER FILE EDITION: KCWTD-2012-Dsize-TB-Border
FILE LOCATION:P:\W3X67200\700CADD\702CIVIL\NMPS\E00306E13-NMPS-G012.dwg
PLOT DATE: 11/20/2019 5:05 PM
PLOTTED BY: Etulan, John

30

4. Site Photos

4-1. NMPS Entrance

4-2. East of NMPS Entrance

4-3. West of NMPS Entrance

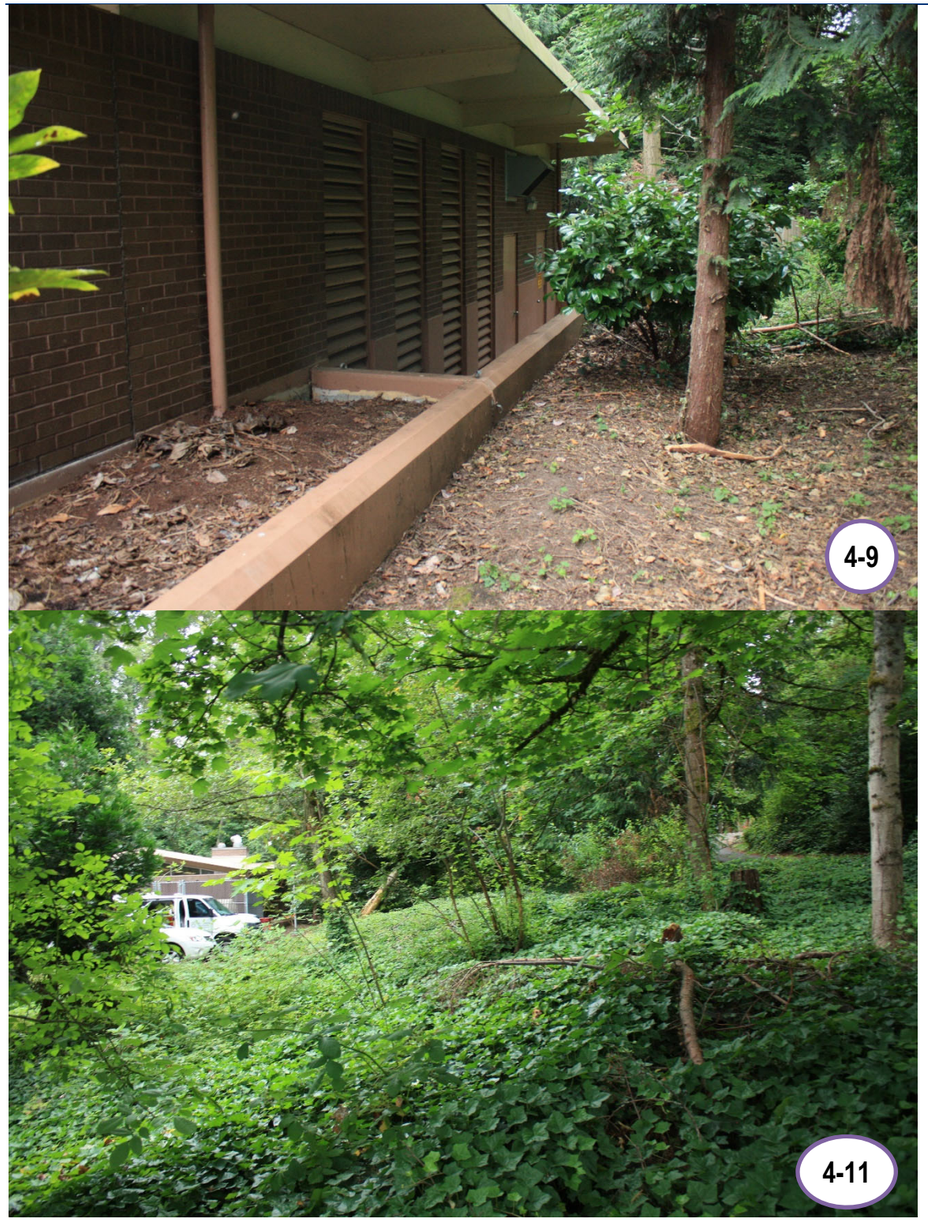
4-4. Driveway and Parking

4-5. Building Entrance and Equipment Enclosures

4-6. East Side of Building

4-7. South Side of Building

4-8. West Side of Building



4-9. West Side of Building

4-10. Bioxide Enclosure

4-11. Existing Site, West of Driveway

4-12. On-Site Stream, East of Driveway

5. PROJECT STATISTICAL INFORMATION

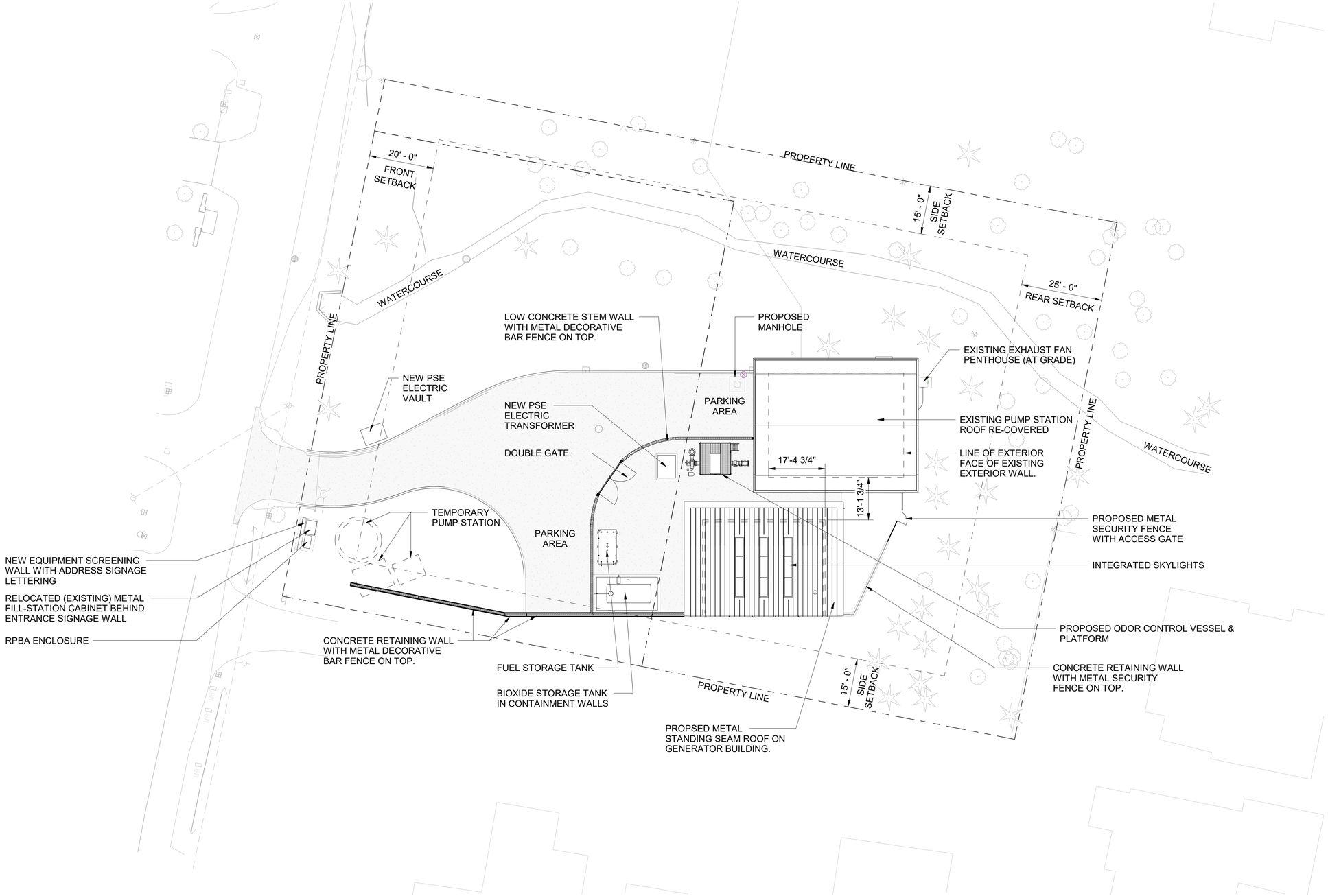
Dwelling Units per Acre	0
Area of proposed structure (Generator Building)	1,105 GSF (updated)
Lot Coverage by Structures (square feet/percent)	3,170 GSF / (8.5%) (updated)
Lot Coverage by Impervious Surface (square feet/percent)	10,553+/- (28.3%) (updated)
Average Building Elevation (see – for ABE calculations)**	135.15 +/-
Number of Parking Spaces	No public parking
Area of Existing Landscaping	30,244 sf (updated)
Area of Proposed Landscaping	25,484 sf (updated)

***Elevation is based on King County Metro Datum. Conversion to NAVD88 is minus 96.43 feet.*

6. SITE PLANS

NOTES:

1. PROPOSED LANDSCAPING NOT SHOW (FOR CLARITY) - SEE LANDSCAPE PLANS FOR DETAILS.
2. BOTH PARCEL PROPERTY LINES ARE SHOWN, THESE ARE IN THE PROCESS OF BEING CONSOLODATED INTO ONE PARCEL.



NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

TETRA TECH
JACOBS

DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

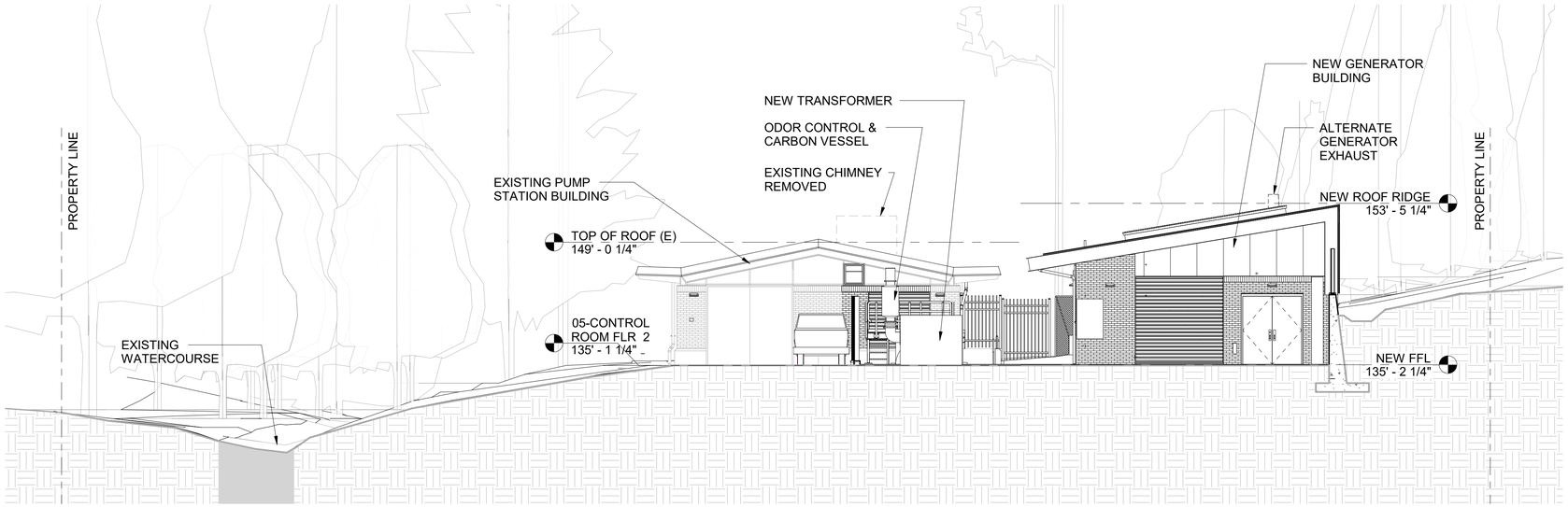
DESIGNED/DRAWN: A. COURT	SCALE: 1/16" = 1'-0"
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

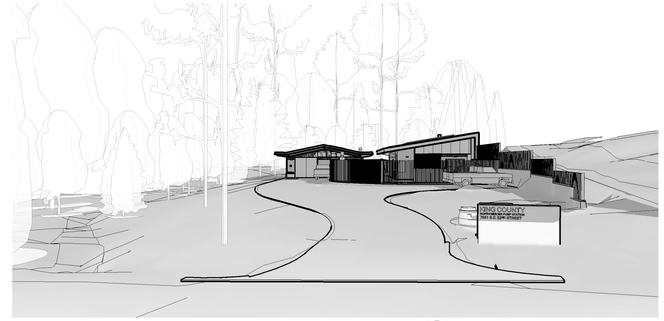
DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

ARCHITECTURAL SITE PLAN

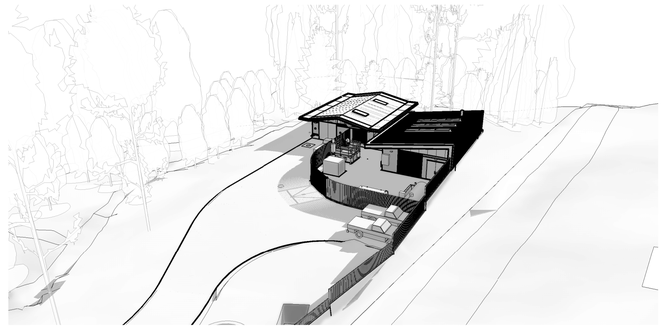
DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: A100
SHT NO / TOTAL: 129 /
REV NO:



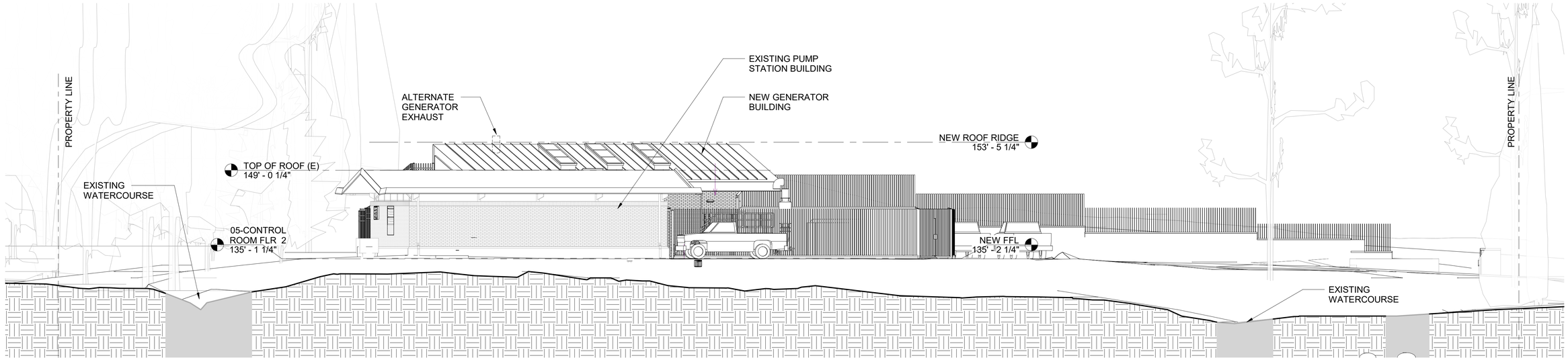
FACILITY SECTION - LOOKING SOUTH 2
SCALE: 1/8" = 1'-0"



PERSPECTIVE VIEW FROM ENTRANCE 3
NOT TO SCALE



PERSPECTIVE VIEW FROM ABOVE 4
NOT TO SCALE



FACILITY SECTION - LOOKING WEST 1
SCALE: 1/8" = 1'-0"

NEW PLANTING NOT SHOWN IN THESE VIEWS

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

TETRA TECH
JACOBS

DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: 1/8" = 1'-0"
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

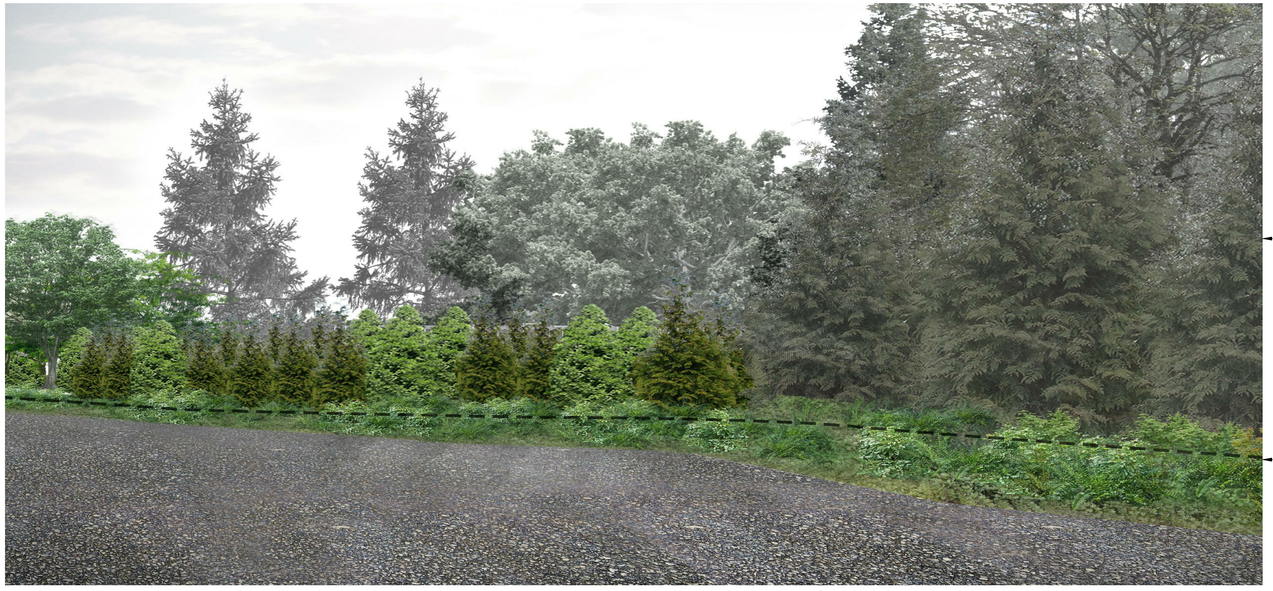
FACILITY SECTIONS & VIEWS

DCN:	
DATE:	12/16/2019
PROJECT FILE NO:	
DRAWING NO:	A101
SHT NO / TOTAL	130 /
REV NO:	

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:07 AM
PLOTTED BY: REVIT

NOTES:

1. RENDERED IMAGES ARE ILLUSTRATIVE OF THE PROPOSED WORK AND ARE AN APPROXIMATION OF THE CURRENT DESIGN INTENT AND MAY BE SUBJECT TO CHANGE OR REVISION.
2. RENDERED IMAGES ARE INTENDED TO ILLUSTRATE THE PROPOSED SITE VISUAL IMPACT FROM TWO CRITICAL VIEWPOINTS AT INSTALL DATE.



INDICATIVE PROPOSED PLANTING

DASHED LINE DENOTES APPROX. LOCATION OF THE PROPERTY LINE.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

TETRA TECH
JACOBS®

DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: 12" = 1'-0"
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

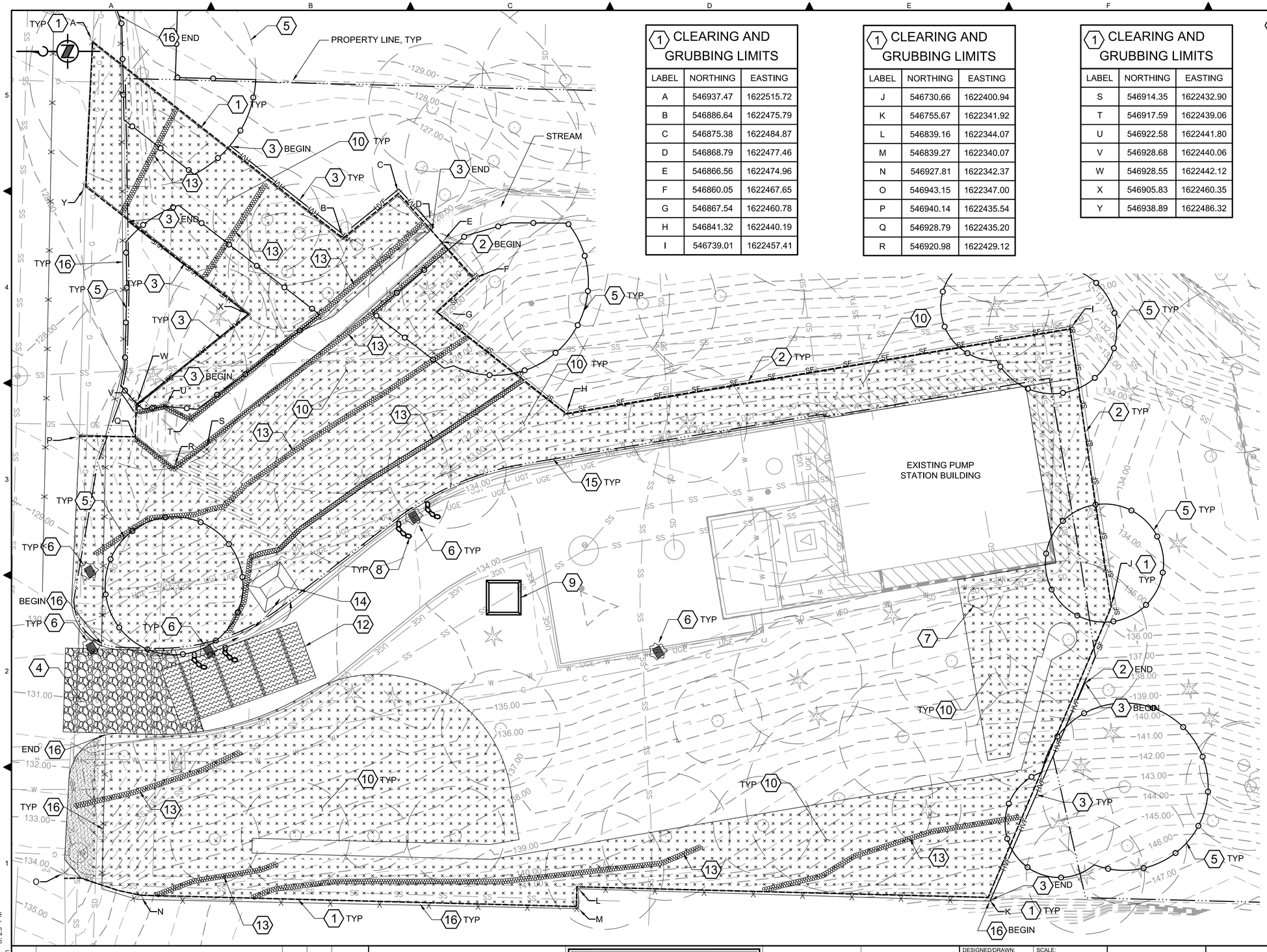
King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

FACILITY RENDERS

DCN:	
DATE:	12/16/2019
PROJECT FILE NO:	
DRAWING NO:	A102
SHT NO / TOTAL	131 /
REV NO:	

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:07 AM
PLOTTED BY: REVIT



1 CLEARING AND GRUBBING LIMITS

LABEL	NORTHING	EASTING
A	546937.47	1622515.72
B	546886.64	1622475.79
C	546875.38	1622484.87
D	546868.79	1622477.46
E	546866.56	1622474.96
F	546860.05	1622467.65
G	546867.54	1622460.78
H	546841.32	1622440.19
I	546739.01	1622457.41

1 CLEARING AND GRUBBING LIMITS

LABEL	NORTHING	EASTING
J	546730.66	1622400.94
K	546755.67	1622341.92
L	546839.16	1622344.07
M	546839.27	1622340.07
N	546927.81	1622342.37
O	546943.15	1622347.00
P	546940.14	1622435.54
Q	546928.79	1622435.20
R	546920.98	1622429.12

1 CLEARING AND GRUBBING LIMITS

LABEL	NORTHING	EASTING
S	546914.35	1622432.90
T	546917.59	1622439.06
U	546922.58	1622441.80
V	546928.68	1622440.06
W	546928.55	1622442.12
X	546905.83	1622460.35
Y	546938.89	1622486.32

KEY NOTES:

1. PROJECT SITE CLEARING AND GRUBBING LIMITS.
2. SILT FENCE, SEE DETAIL 1/C012.
3. HIGH VISIBILITY FENCE, SEE DETAIL 3/C012.
4. CONSTRUCTION ENTRANCE, SEE DETAIL 2/C015.
5. TREE PROTECTION, SEE DRAWING D-C101 AND DETAIL 4/C012.
6. STORM DRAIN INLET PROTECTION ON ALL NEW AND EXISTING CB'S, SEE DETAIL 2/C012.
7. YARD DRAIN INLET PROTECTION, SEE DETAIL 1/C015.
8. CURB & GUTTER BARRIER PROTECTION, SEE DETAIL 2/C013.
9. CONCRETE WASHOUT BASIN/STRUCTURE.
10. COMPOST COVER, SEE NOTE 2.
11. NOT USED.
12. CORRUGATED STEEL RUMBLE PLATE, SEE DETAIL 3/C015.
13. COMPOST SOCK, SEE DETAIL 1/C013.
14. SEDIMENT TRAP AS REQUIRED TO CONTAIN WASHOUT OF RUMBLE PLATE, SEE DETAIL 3/C014.
15. STREAM BUFFER LINE.
16. CONSTRUCTION FENCE W/ VINYL BANNER

NOTES:

1. SELECTIVE CLEARING IS PROPOSED OUTSIDE OF LIMITS SHOWN. SEE DRAWING L101.
2. COMPOST COVER SHALL BE ORGANIC AMENDMENT, SPREAD TO A 3" UNIFORM DEPTH IN THE AREAS SHOWN IN THE PLANS.
3. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THE SITE. UNDERGROUND UTILITY LOCATIONS SHOWN HEREON WERE TAKEN FROM A COMPILATION OF PUBLIC RECORDS, VISIBLE FIELD EVIDENCE, AND UTILITY LOCATE SURFACE MARKS.
4. UNDERGROUND UTILITY LOCATIONS ARE ONLY APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO AND/OR DURING CONSTRUCTION.
5. VINYL BANNER TO BE 6 FOOT IN WIDTH AND ATTACHED TO CONSTRUCTION FENCE TO ACT AS SCREEN. BANNER TO BE ATTACHED TO FENCE ALONG SE 22ND STREET AND ALONG WEST DRIVEWAY. BANNER TO BE PRINTED WITH DESIGN THAT IS TO BE DETERMINED.

NO	REVISION DESCRIPTION	BY	APVD	DATE

TETRA TECH
JACOBS

DESIGN COMMISSION SUBMITTAL

DECEMBER 2019

DESIGNED/DRAWN: R. LUDWIG	SCALE: 1" = 10'
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1"
DESIGN APPROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE - PUMP STATION IMPROVEMENTS

TESC SURFACE RUNOFF MANAGMENT PLAN

DCN:
DATE: 05/02/2019
PROJECT FILE NO:
DRAWING NO: C101
SHT NO / TOTAL: XXX /
REV NO:

BORDER FILE EDITION: KCWTD-2012-Dsize-TB-Border
FILE LOCATION:P:\W3X67200\700CADD\702CIVIL\NMPS\E00306E13-NMPS-C101.dwg
PLOT DATE: 11/21/2019 3:29 PM
PLOTTED BY: Etulain, John

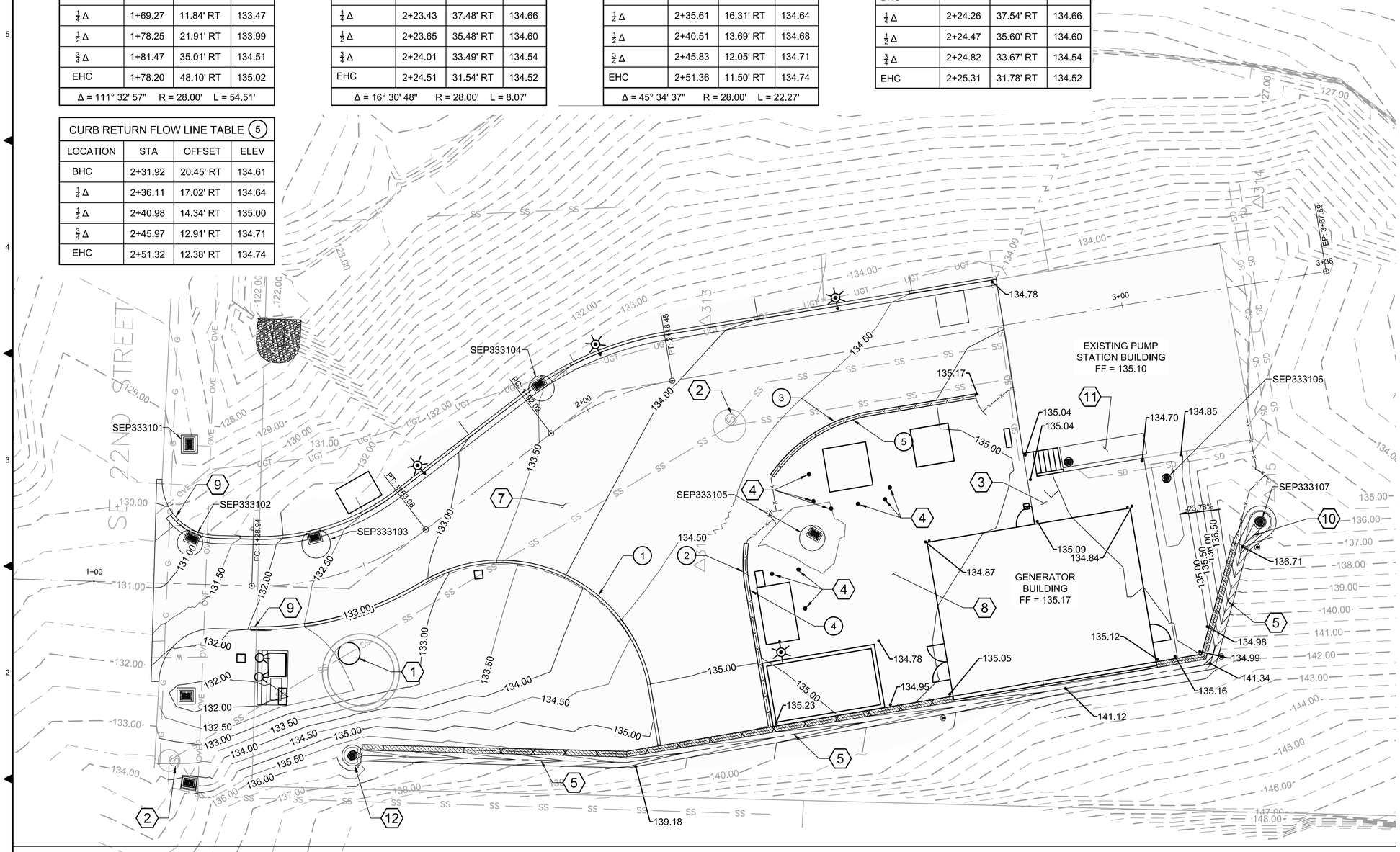
CURB RETURN FLOW LINE TABLE 1			
LOCATION	STA	OFFSET	ELEV
BHC	1+57.45	7.51' RT	133.00
¼ Δ	1+69.27	11.84' RT	133.47
½ Δ	1+78.25	21.91' RT	133.99
¾ Δ	1+81.47	35.01' RT	134.51
EHC	1+78.20	48.10' RT	135.02
Δ = 111° 32' 57" R = 28.00' L = 54.51'			

CURB RETURN FLOW LINE TABLE 2			
LOCATION	STA	OFFSET	ELEV
BHC	2+23.31	39.50' RT	134.72
¼ Δ	2+23.43	37.48' RT	134.66
½ Δ	2+23.65	35.48' RT	134.60
¾ Δ	2+24.01	33.49' RT	134.54
EHC	2+24.51	31.54' RT	134.52
Δ = 16° 30' 48" R = 28.00' L = 8.07'			

CURB RETURN FLOW LINE TABLE 3			
LOCATION	STA	OFFSET	ELEV
BHC	2+31.36	19.90' RT	134.61
¼ Δ	2+35.61	16.31' RT	134.64
½ Δ	2+40.51	13.69' RT	134.68
¾ Δ	2+45.83	12.05' RT	134.71
EHC	2+51.36	11.50' RT	134.74
Δ = 45° 34' 37" R = 28.00' L = 22.27'			

CURB RETURN FLOW LINE TABLE 4			
LOCATION	STA	OFFSET	ELEV
BHC	2+24.19	39.50' RT	134.72
¼ Δ	2+24.26	37.54' RT	134.66
½ Δ	2+24.47	35.60' RT	134.60
¾ Δ	2+24.82	33.67' RT	134.54
EHC	2+25.31	31.78' RT	134.52

CURB RETURN FLOW LINE TABLE 5			
LOCATION	STA	OFFSET	ELEV
BHC	2+31.92	20.45' RT	134.61
¼ Δ	2+36.11	17.02' RT	134.64
½ Δ	2+40.98	14.34' RT	135.00
¾ Δ	2+45.97	12.91' RT	134.71
EHC	2+51.32	12.38' RT	134.74



KEY NOTES:

1. ADJUST MANHOLE RIM TO FINISH GRADE, SEE DETAIL 1/T-M904.
2. ADJUST MANHOLE RIM TO FINISH GRADE
3. CONCRETE SIDEWALK, SEE DETAIL 1/C053.
4. BOLLARD TYPE 1, SEE DETAIL 1/C052.
5. CONCRETE SWALE, SEE DETAIL 3/C051.
6. FRONTAGE SWALE, SEE DETAIL 4/C051.
7. VEHICLE ACCESS ROAD HMA PAVEMENT, SEE DETAIL 1/C051.
8. SERVICE YARD HMA PAVEMENT, SEE DETAIL 1/C051.
9. CONCRETE CURB TRANSITION, SEE DETAIL 2/C051.
10. SWALE YARD DRAIN, SEE DETAIL 2/C052.
11. REPAIR CONCRETE SLAB AND WALL AS REQUIRED FOR UTILITY INSTALLATION.
12. SWALE YARD DRAIN SIMILAR TO DETAIL 2/C052. AMEND DESIGN BY MATCHING INTO EXISTING SLOPE WITHOUT 1 FT SHELF FOR FILL GRADE.
13. TEMPORARY RETAINING WALL OR SHORING METHOD DETERMINED BY CONTRACTOR TO BE REMOVED FOLLOWING CONSTRUCTION OF PERMANENT CONCRETE RETAINING WALL.

NOTES:

1. ELEVATIONS SHOWN ARE TO TOP OF FINISHED GRADE.
2. SEE DRAWING C133 FOR RETAINING WALL, STEM WALL AND SEGMENTAL CONCRETE BLOCK WALL INFORMATION.
3. SEE DRAWING A307 FOR FENCE INFORMATION.
4. SEE DRAWING A103 FOR GATE INFORMATION.
5. SEE DRAWING C131 FOR STATION ALIGNMENT INFORMATION.

NO	REVISION DESCRIPTION	BY	APVD	DATE

TETRA TECH
JACOBS

DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: R. LUDWIG	SCALE: 1" = 10'
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1"
DESIGN APPROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE - PUMP STATION IMPROVEMENTS

GRADING & PAVING PLAN

DCN:
DATE: 05/02/2019
PROJECT FILE NO:
DRAWING NO: C141
SHT NO / TOTAL: XXX /
REV NO:

BORDER FILE EDITION: KCWTD-2012-Dsize-TB-Border
FILE LOCATION: C:\Users\daurias\Documents\W3X67200 - NME\E00306E13-NMPS-C141.dwg
PLOT DATE: 12/16/2019 1:04 PM
PLOTTED BY: Daurio, Isaac

NOTES:

1. SEE DWG T-M901 AND T-M902 FOR TPS PLAN AND SECTIONS.
2. ITEMS SHOWN IN GRAY SHALL BE REMOVED FROM THE SITE UPON DECOMMISSIONING OF TPS. TEMPORARY ELECTRICAL, CONTROLS AND ODOR UNIT TRAILERS SHALL BE RETURNED TO KING COUNTY SOUTH PLANT.

KEY NOTES:

1. PROTECT EXISTING UTILITIES IN PLACE OR RELOCATE AS REQUIRED.
2. UPON DECOMMISSIONING OF TPS, REMOVE TEMPORARY FORCE MAIN.
3. CONTRACTOR PROVIDED TEMPORARY EQUIPMENT.
4. CONTRACTOR SHALL USE COUNTY PROVIDED MOBILE ODOR UNIT AND CONTROL TRAILER. CONTRACTOR RESPONSIBLE FOR MODIFYING THESE FACILITIES TO MEET THE TPS REQUIREMENTS.
5. TEMPORARY CONSTRUCTION EASEMENT IS 4' WIDE BY 86' LONG

NOTE TO REVIEWER

6. NEED TO CONFIRM WITH COUNTY HOW EXISTING FORCE MAIN SHOULD BE DECOMMISSIONED AT PUMP STATION TO ALLOW FUTURE INSPECTION AND ASSESSMENT

SE 22ND STREET

STREAM DIVERSION DAM 3
STREAM DIVERSION STANDBY PUMPS 3
18" SS EXIST.
CONNECTION TO EXIST. FORCEMAIN SEE DWG T-M901 6
TEMPORARY GRAVITY DIVERSION PIPES (TYP) 3
16" SS PROP.
16" SS TEMPORARY 2 3
EXIST. WATER AND TELECOM 1
18" SS PROP.
D T-M903
EXISTING PUMP STATION
STREAM DIVERSION DAM 3
MH RO8H-02
16" SS RECIRCULATION LINE (ABOVE GRADE)
EXISTING UNDERGROUND POWER 1
PSE UTILITY POLE 1
30" SS EXIST.
PSE JUNCTION BOX (MH)
48" SS EXIST.
EXISTING WATER 1
SERVICE YARD
GENERATOR BUILDING
3 TPS MAINTENANCE HOLE (MH RO8G-24A)
4 CONTROL TRAILER
MOBILE ODOR CONTROL UNIT 4
BIOXIDE TOTES
TPS GENERATOR 3
TPS TRANSFORMER
MH RO8G-24
14" FA
ELECTRICAL TRAILER 3
TEMPORARY RETAINING WALL
TEMPORARY CONSTRUCTION EASEMENT 5
TPS METER VAULT 3
TPS VALVE VAULT 3

N

NO	REVISION DESCRIPTION	BY	APVD	DATE

TETRA TECH

DESIGN COMMISSION SUBMITTAL

DECEMBER 2019

DESIGNED/DRAWN: E. SCHEY	SCALE: 1"=10'
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1"
DESIGN APPROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

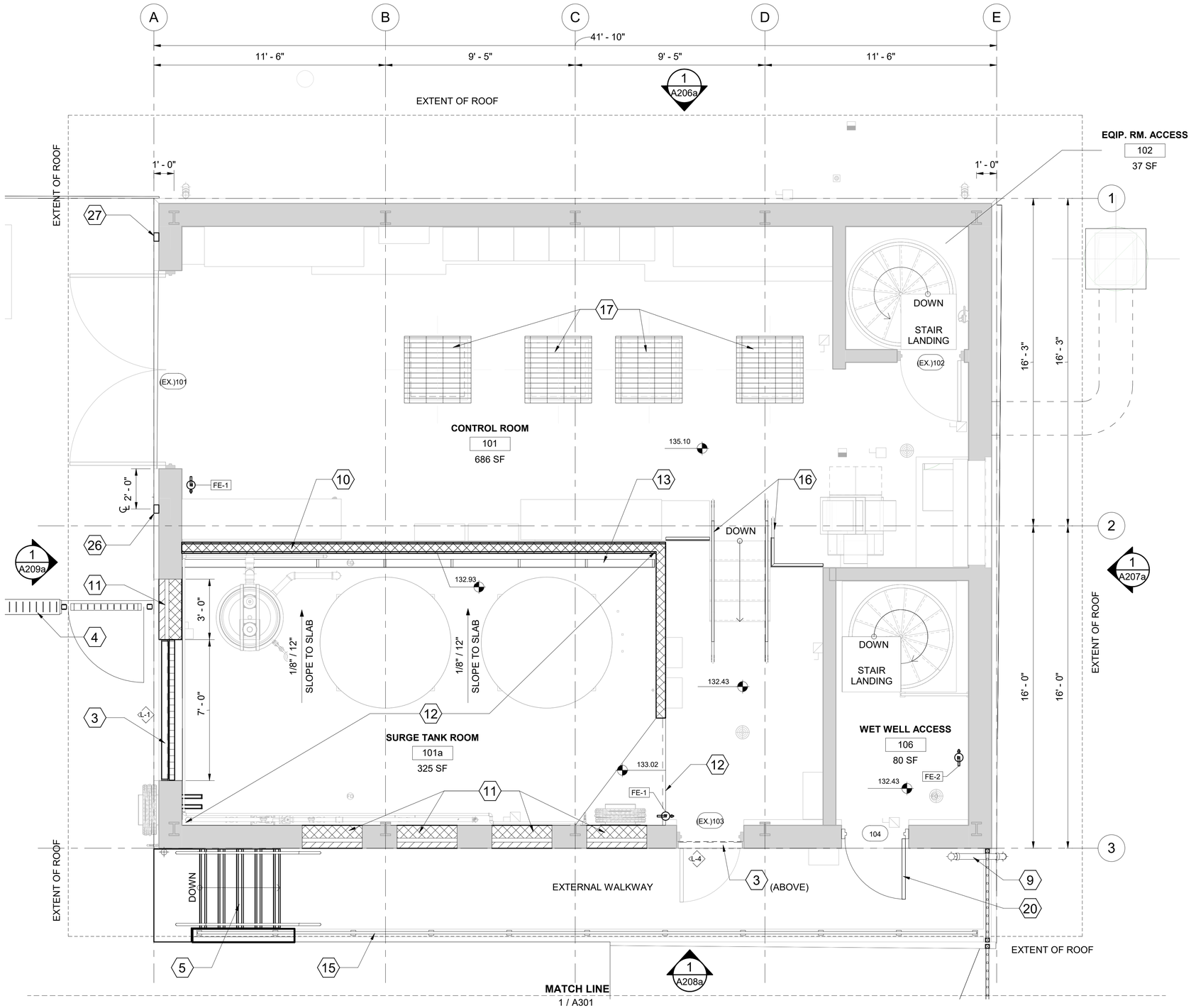
DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE - PUMP STATION IMPROVEMENTS

TEMPORARY FACILITIES CIVIL SITE PLAN

DCN:
DATE: 05/02/2019
PROJECT FILE NO:
DRAWING NO: T-C101
SHT NO / TOTAL: /
REV NO:

BORDER FILE EDITION: KCWTD-2012-Dsize-TB-Border
FILE LOCATION:P:\125391\35-12539-16001\CAD\SheetFiles\333-E00306E13TC101.dwg
PLOT DATE: 12/16/2019 3:31 PM
PLOTTED BY: Der, Alexandra

7. ARCHITECTURAL PLANS



KEY NOTES:

PUMP STATION

1. DEMO EXISTING BRICK CHIMNEY AND CONCRETE FILL WITHIN AT LOWER LEVEL. ROOF SURFACE PATCH-REPAIRED.
2. NEW / EXTENDED SOLDIER COURSE TO MATCH EXISTING.
3. NEW ALUMINUM LOUVER
4. NEW SERVICE YARD FENCE WITH CONCRETE STEM WALL FOUNDATION.
5. NEW CONCRETE STAIRS WITH HANDRAILS TO LOWER WALKWAY.
9. ADAPT EXISTING DUCTILE IRON DOWNSPOUTS AS INDICATED.
10. NEW INTERNAL CMU WALL WITH EPOXY PAINT FINISH (PAINT UP MIN. 6" AFF) TO 'WET-AREAS' AROUND SURGE TANK AREA
11. INFILL EXISTING LOUVER OPENING WITH WALL CONSTRUCTION TO MATCH EXISTING.
12. EXTENT OF NEW SLAB - FALLS TOWARDS FLOOR DRAIN.
13. INSET LINEAR FLOOR DRAIN.
14. EXISTING ACCESS HATCH COVER TO LOWER LEVELS. CONCRETE COVERS TO BE REPLACED WITH GRATING.
15. NEW EXTERIOR 1-1/2" DIA. GALVANIZED GUARDRAIL AT MIN. 3'-6" ABOVE GRADE.
16. NEW INTERIOR HANDRAIL / GUARDRAIL WITH KICKPLATES ON LANDINGS.
17. NEW REMOVABLE FLOOR GRATING, FLUSH WITH FLOOR IN NEW S.STEEL ANGLE TRIM.
20. NEW FRP DOOR AND FRAME.
21. NEW MECHANICAL CONDENSER UNIT.
26. NEW WALL MOUNTED KNOXBOX 3200 WITH ALARM CONTACT FOR POWER COMPANY.
27. NEW WALL MOUNTED KNOXBOX 3200 WITH ALARM CONTACT FOR FIRE DEPARTMENT.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

TETRA TECH
JACOBS

DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

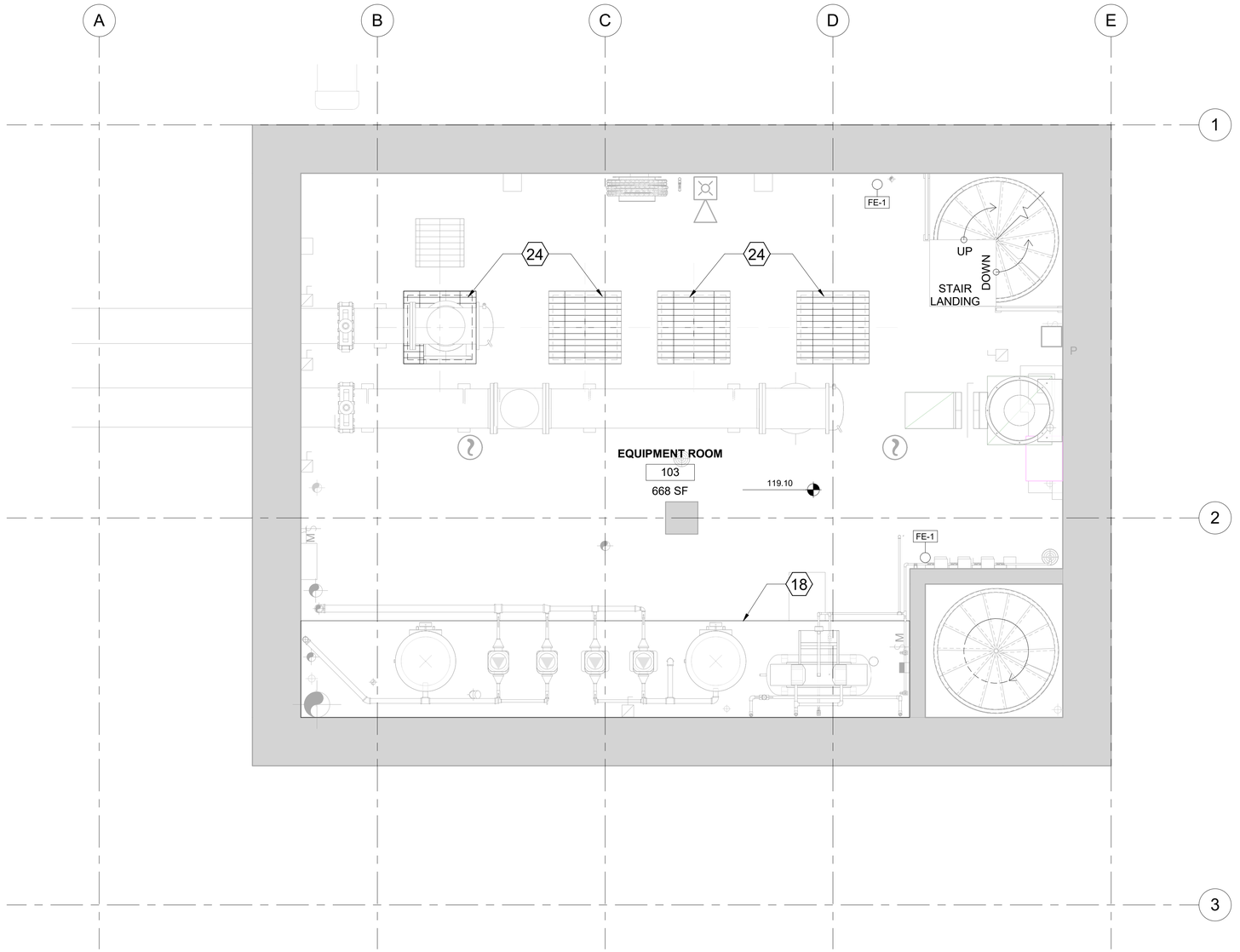
PUMP STATION - CONTROL ROOM PLAN

DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: A201
SHT NO / TOTAL: 133 /
REV NO:

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:11 AM
PLOTTED BY: REVIT

NOTES:

1. THE EXISTING PUMPING STATION BUILDING WAS COMPLETED IN AUGUST 1971 AND WAS PERMITTED UNDER THE UNIFORM BUILDING CODE IN EFFECT AT THE TIME - THERE ARE NO RECORDS AVAILABLE.



KEY NOTES:

PUMP STATION

18. NEW CONCRETE EQUIPMENT PAD, REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
24. NEW REMOVABLE FLOOR GRATING, FLUSH WITH FLOOR.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

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DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

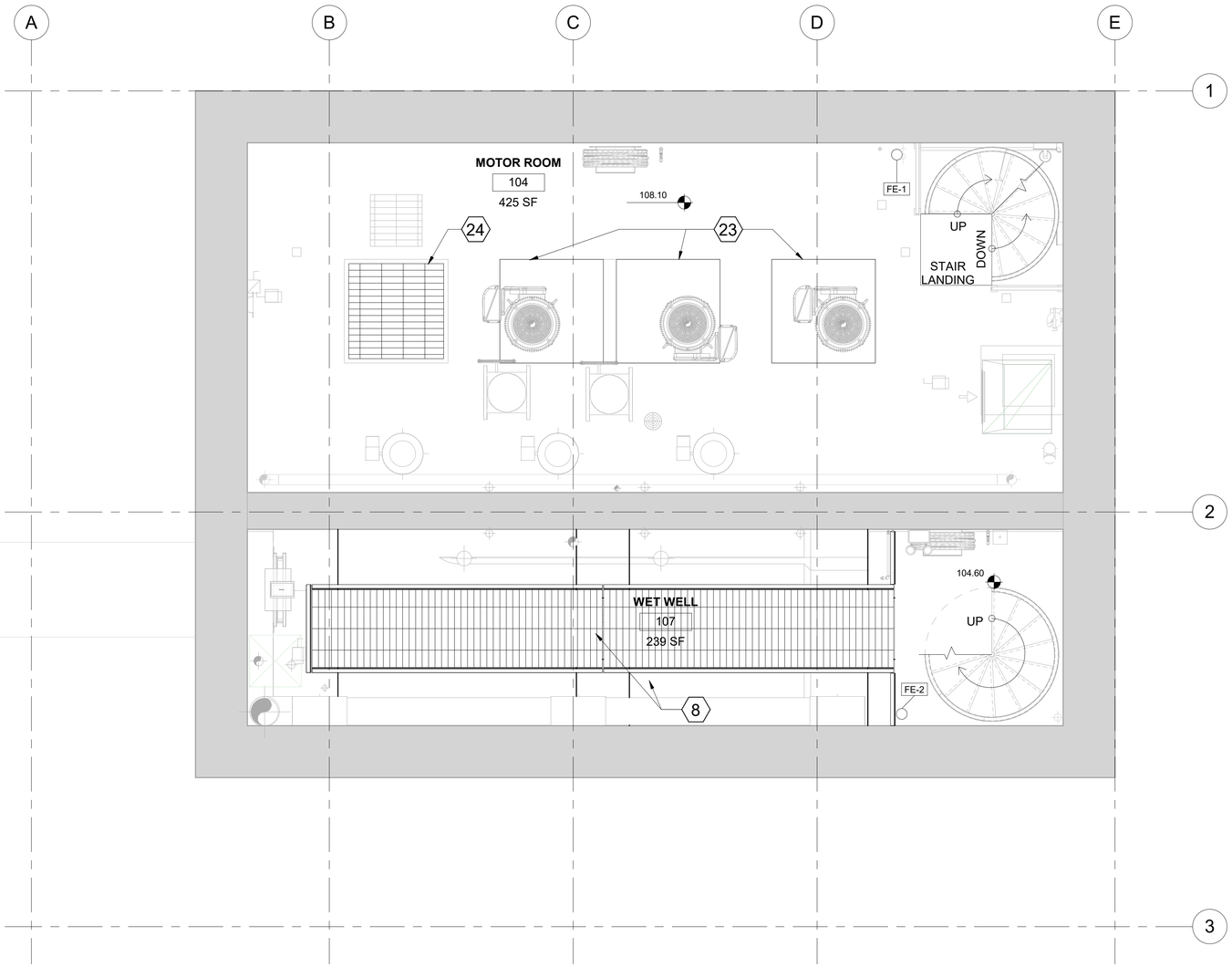
King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

PUMP STATION - EQUIPMENT ROOM PLAN

DCN:	
DATE:	12/16/2019
PROJECT FILE NO:	
DRAWING NO:	A202
SHT NO / TOTAL	134 /
REV NO:	

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:13 AM
PLOTTED BY: REVIT



KEY NOTES:

PUMP STATION

8. NEW WET WELL CATWALK - SEE SHEET **S205** FOR DETAILS.
23. NEW REMOVABLE METAL PLATE, FLUSH WITH FLOOR.
24. NEW REMOVABLE FLOOR GRATING, FLUSH WITH FLOOR.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

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DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

PUMP STATION - MOTOR ROOM PLAN

DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: **A203**
SHT NO / TOTAL: 135 /
REV NO:

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:17 AM
PLOTTED BY: REVIT

KEY NOTES:

PUMP STATION

18. NEW CONCRETE EQUIPMENT PAD, REFER TO STRUCTURAL DRAWINGS FOR DETAILS.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

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DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

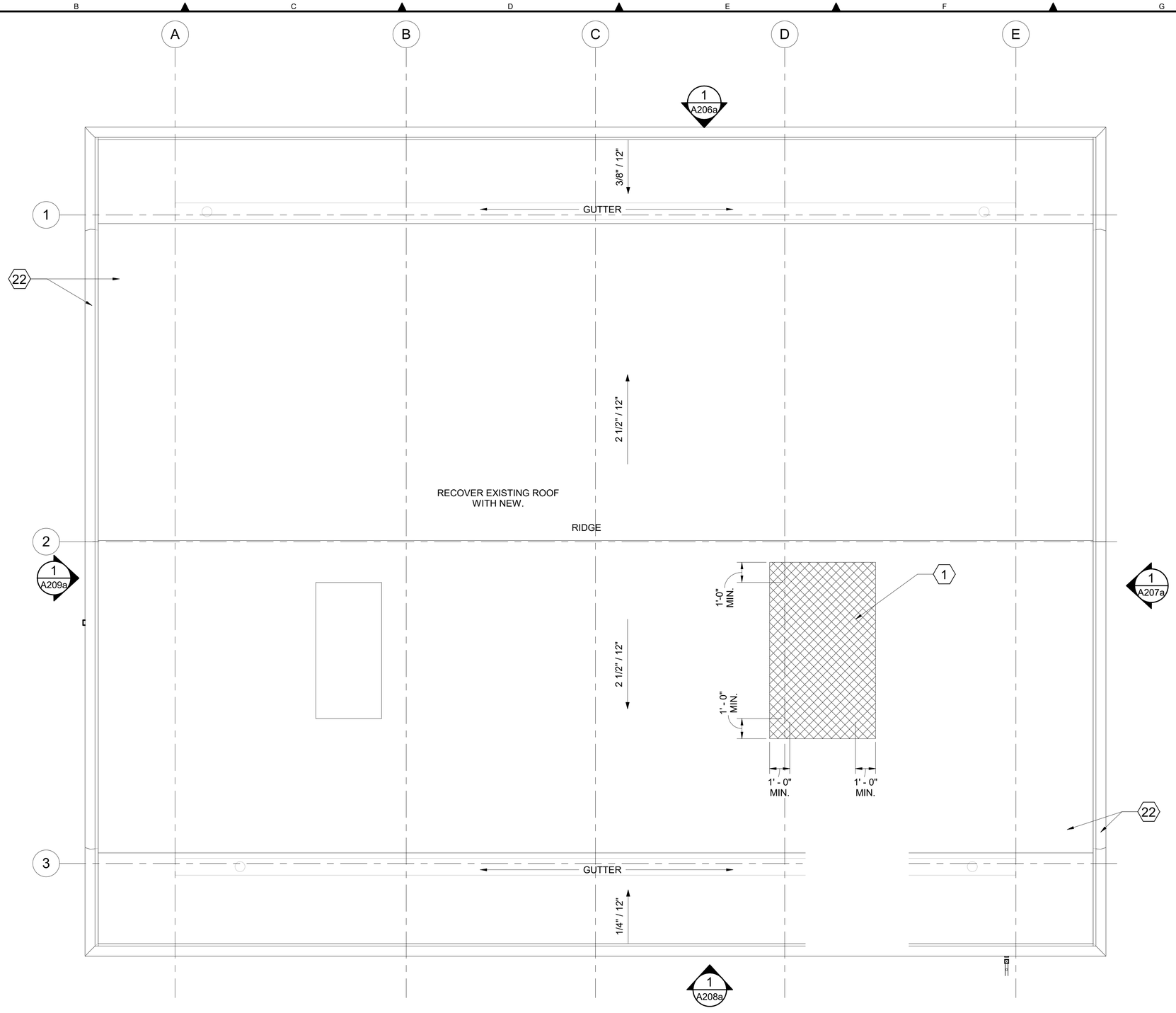
PUMP STATION - PUMP ROOM PLAN

DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: A204
SHT NO / TOTAL: 136 /
REV NO:

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:20 AM
PLOTTED BY: REVIT

NOTES:

1. THE EXISTING PUMPING STATION BUILDING WAS COMPLETED IN AUGUST 1971 AND WAS PERMITTED UNDER THE UNIFORM BUILDING CODE IN EFFECT AT THE TIME - THERE ARE NO RECORDS AVAILABLE.



KEY NOTES:

PUMP STATION

1. DEMO EXISTING BRICK CHIMNEY AND CONCRETE FILL WITHIN AT LOWER LEVEL.
22. REPLACEMENT ROOF COVERING WITH NEW ROOF EDGE TRIMS.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

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DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

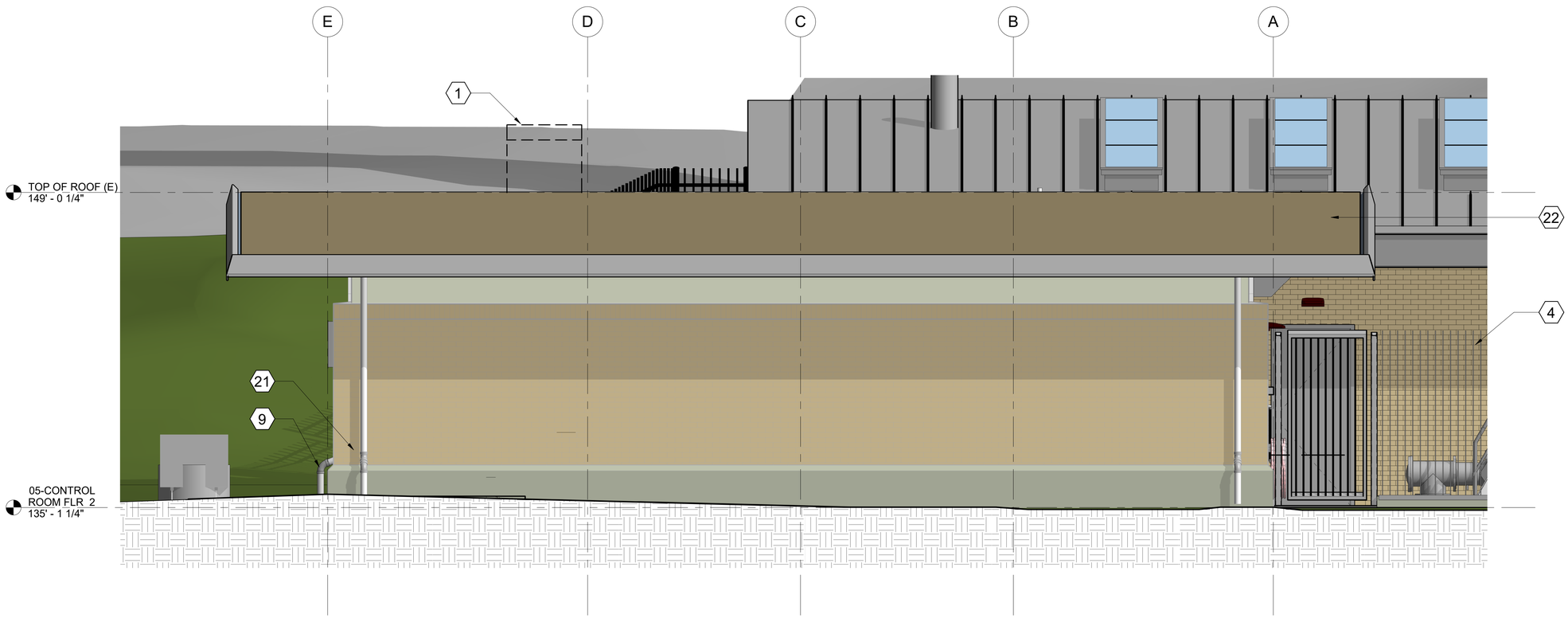
King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

PUMP STATION - ROOF PLAN

DCN:	
DATE:	12/16/2019
PROJECT FILE NO:	
DRAWING NO:	A205
SHT NO / TOTAL	137 /
REV NO:	

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:20 AM
PLOTTED BY: REVIT



PUMP STATION - EAST ELEVATION 1
SCALE: 3/8" = 1'-0" A201

KEY NOTES:

PUMP STATION

1. DEMO EXISTING BRICK CHIMNEY AND CONCRETE FILL WITHIN AT LOWER LEVEL.
2. NEW / EXTENDED SOLDIER COURSE TO MATCH EXISTING.
3. NEW ALUMINUM LOUVER
4. NEW SERVICE YARD FENCE WITH CONCRETE STEM WALL FOUNDATION
5. NEW CONCRETE STAIRS WITH HANDRAILS TO LOWER WALKWAY
6. NEW 'STANDARD' METAL PANEL FENCE
7. NEW CRANE RAIL IN CONTROL ROOM
8. NEW WET WELL GANTRY
9. ADAPT EXISTING DUCTILE IRON DOWNSPOUTS AS INDICATED.
10. NEW INTERNAL CMU WALL WITH EPOXY PAINT FINISH TO 'WET-AREAS' AROUND SURGE TANK AREA.
11. INFILL EXISTING LOUVER OPENING WITH WALL CONSTRUCTION TO MATCH EXISTING.
12. EXTENT OF NEW SLAB - FALLS TOWARDS FLOOR DRAIN.
13. INSET LINEAR FLOOR DRAIN.
14. EXISTING ACCESS HATCH COVER TO LOWER LEVELS.
15. NEW EXTERIOR 1-1/2" DIA. GALVANIZED GUARDRAIL AT MIN. 3'-6" ABOVE GRADE.
16. NEW INTERIOR HANDRAIL / GUARDRAIL WITH KICKPLATES ON LANDINGS.
17. NEW REMOVABLE FLOOR GRATING, FLUSH WITH TOP OF CONCRETE IN NEW S.STEEL ANGLE TRIM.
18. NEW CONCRETE EQUIPMENT SLAB, REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
19. 2" THICK SURFACE MOUNTED ACOUSTIC NOISE ABSORPTION PANELS (U/S ROOF).
20. NEW FRP DOOR AND FRAME.
21. NEW MECHANICAL CONDENSER UNIT ON CONCRETE PAD.
22. REPLACEMENT ROOF COVERING WITH NEW ROOF EDGE TRIMS.
23. NEW SIDE-WALL FAN IN EXISTING OPENING. GLASS REMOVED AND REPLACE WITH INSULATED SPANDREL PANEL.
25. NEW WALL MOUNTED HOSE BIB RACK.
26. NEW WALL MOUNTED KNOXBOX 3200 WITH ALARM CONTACT FOR POWER COMPANY.
27. NEW WALL MOUNTED KNOXBOX 3200 WITH ALARM CONTACT FOR FIRE DEPARTMENT.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

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DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

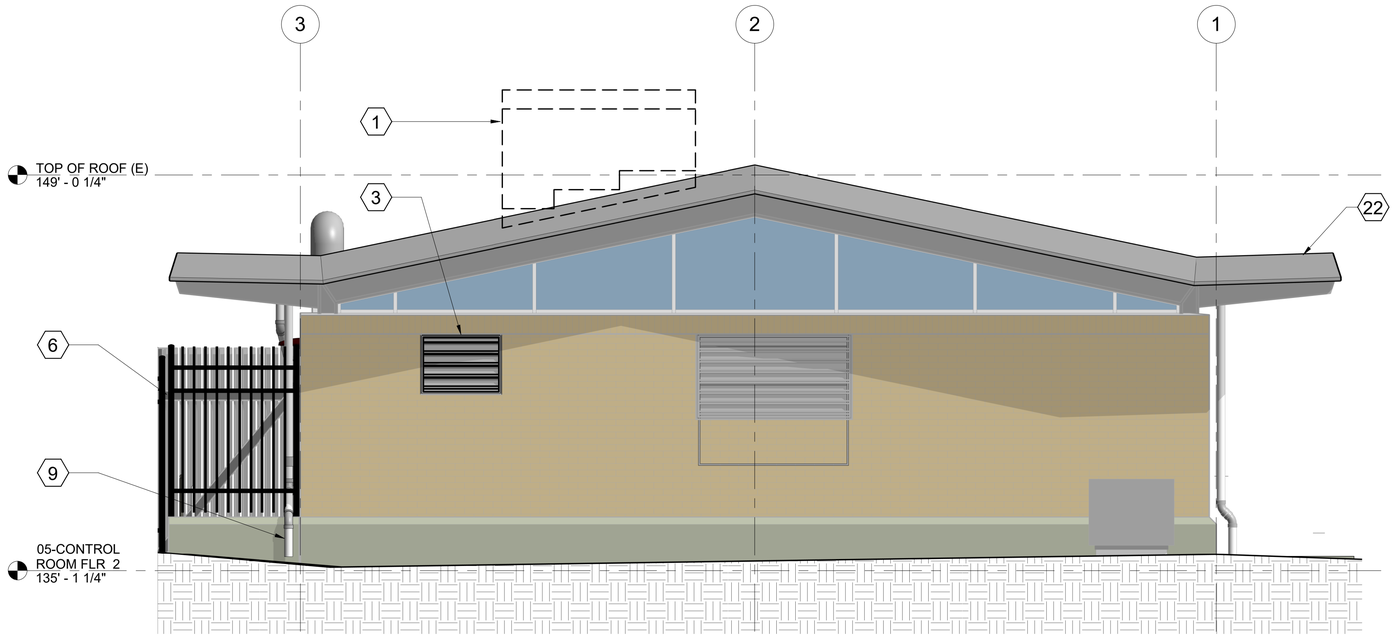
King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

PUMP STATION - EAST ELEVATION

DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: A206a
SHT NO / TOTAL /
REV NO:

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:30 AM
PLOTTED BY: REVIT



PUMP STATION - SOUTH ELEVATION (1 / A201)
SCALE: 3/8" = 1'-0"

KEY NOTES: (#)

PUMP STATION

1. DEMO EXISTING BRICK CHIMNEY AND CONCRETE FILL WITHIN AT LOWER LEVEL.
2. NEW / EXTENDED SOLDIER COURSE TO MATCH EXISTING.
3. NEW ALUMINUM LOUVER
4. NEW SERVICE YARD FENCE WITH CONCRETE STEM WALL FOUNDATION
5. NEW CONCRETE STAIRS WITH HANDRAILS TO LOWER WALKWAY
6. NEW 'STANDARD' METAL PANEL FENCE
7. NEW CRANE RAIL IN CONTROL ROOM
8. NEW WET WELL GANTRY
9. ADAPT EXISTING DUCTILE IRON DOWNSPOUTS AS INDICATED.
10. NEW INTERNAL CMU WALL WITH EPOXY PAINT FINISH TO 'WET-AREAS' AROUND SURGE TANK AREA.
11. INFILL EXISTING LOUVER OPENING WITH WALL CONSTRUCTION TO MATCH EXISTING.
12. EXTENT OF NEW SLAB - FALLS TOWARDS FLOOR DRAIN.
13. INSET LINEAR FLOOR DRAIN.
14. EXISTING ACCESS HATCH COVER TO LOWER LEVELS.
15. NEW EXTERIOR 1-1/2" DIA. GALVANIZED GUARDRAIL AT MIN. 3'-6" ABOVE GRADE.
16. NEW INTERIOR HANDRAIL / GUARDRAIL WITH KICKPLATES ON LANDINGS.
17. NEW REMOVABLE FLOOR GRATING, FLUSH WITH TOP OF CONCRETE IN NEW S.STEEL ANGLE TRIM.
18. NEW CONCRETE EQUIPMENT SLAB, REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
19. 2" THICK SURFACE MOUNTED ACOUSTIC NOISE ABSORPTION PANELS (U/S ROOF).
20. NEW FRP DOOR AND FRAME.
21. NEW MECHANICAL CONDENSER UNIT ON CONCRETE PAD.
22. REPLACEMENT ROOF COVERING WITH NEW ROOF EDGE TRIMS.
23. NEW SIDE-WALL FAN IN EXISTING OPENING. GLASS REMOVED AND REPLACE WITH INSULATED SPANDREL PANEL.
25. NEW WALL MOUNTED HOSE BIB RACK.
26. NEW WALL MOUNTED KNOXBOX 3200 WITH ALARM CONTACT FOR POWER COMPANY.
27. NEW WALL MOUNTED KNOXBOX 3200 WITH ALARM CONTACT FOR FIRE DEPARTMENT.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

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DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

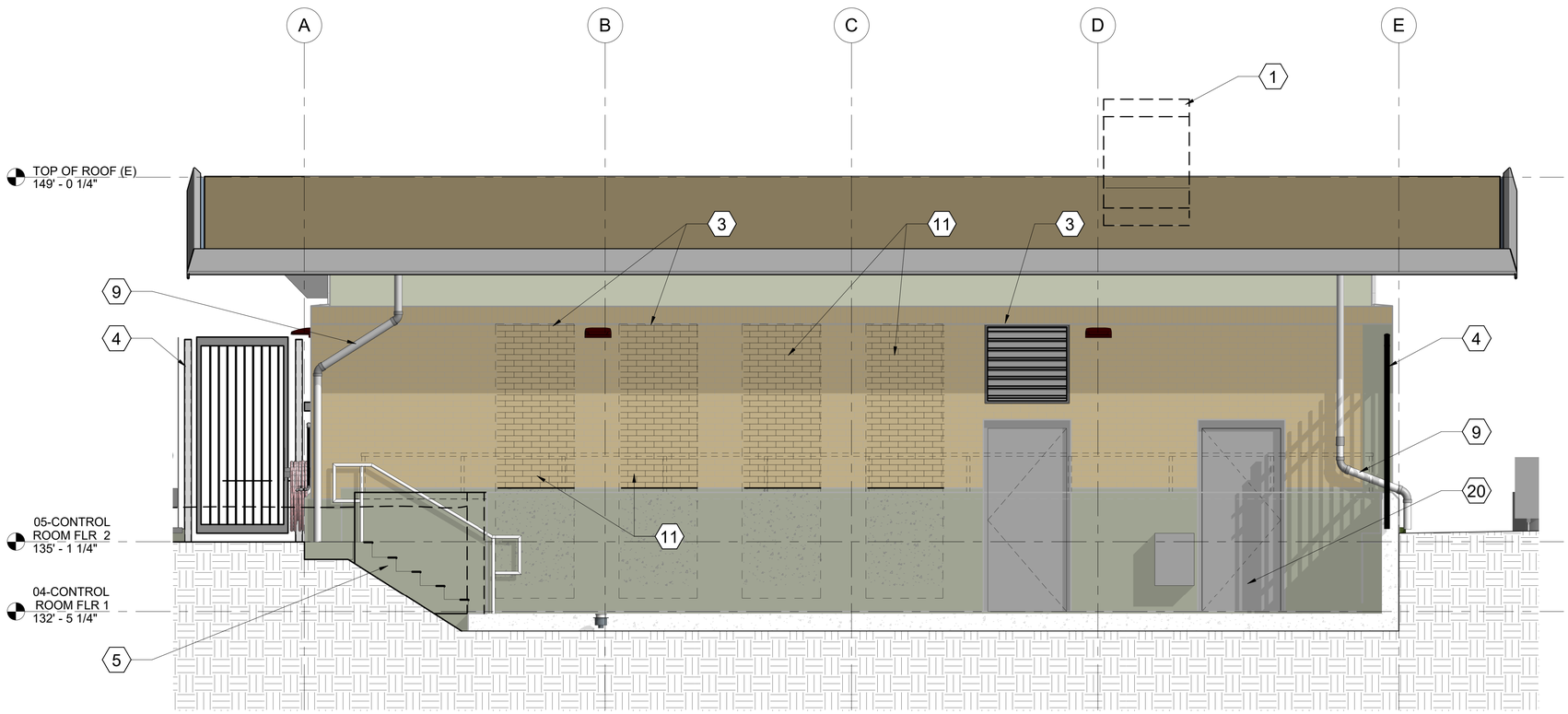
King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

PUMP STATION - SOUTH ELEVATION

DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: A207a
SHT NO / TOTAL: /
REV NO:

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:36 AM
PLOTTED BY: REVIT



PUMP STATION - WEST ELEVATION (1 / A103)
SCALE: 3/8" = 1'-0"

KEY NOTES: (#)

PUMP STATION

1. DEMO EXISTING BRICK CHIMNEY AND CONCRETE FILL WITHIN AT LOWER LEVEL.
2. NEW / EXTENDED SOLDIER COURSE TO MATCH EXISTING.
3. NEW ALUMINUM LOUVER
4. NEW SERVICE YARD FENCE WITH CONCRETE STEM WALL FOUNDATION
5. NEW CONCRETE STAIRS WITH HANDRAILS TO LOWER WALKWAY
6. NEW 'STANDARD' METAL PANEL FENCE
7. NEW CRANE RAIL IN CONTROL ROOM
8. NEW WET WELL GANTRY
9. ADAPT EXISTING DUCTILE IRON DOWNSPOUTS AS INDICATED.
10. NEW INTERNAL CMU WALL WITH EPOXY PAINT FINISH TO 'WET-AREAS' AROUND SURGE TANK AREA.
11. INFILL EXISTING LOUVER OPENING WITH WALL CONSTRUCTION TO MATCH EXISTING.
12. EXTENT OF NEW SLAB - FALLS TOWARDS FLOOR DRAIN.
13. INSET LINEAR FLOOR DRAIN.
14. EXISTING ACCESS HATCH COVER TO LOWER LEVELS.
15. NEW EXTERIOR 1-1/2" DIA. GALVANIZED GUARDRAIL AT MIN. 3'-6" ABOVE GRADE.
16. NEW INTERIOR HANDRAIL / GUARDRAIL WITH KICKPLATES ON LANDINGS.
17. NEW REMOVABLE FLOOR GRATING, FLUSH WITH TOP OF CONCRETE IN NEW S.STEEL ANGLE TRIM.
18. NEW CONCRETE EQUIPMENT SLAB, REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
19. 2" THICK SURFACE MOUNTED ACOUSTIC NOISE ABSORPTION PANELS (U/S ROOF).
20. NEW FRP DOOR AND FRAME.
21. NEW MECHANICAL CONDENSER UNIT ON CONCRETE PAD.
22. REPLACEMENT ROOF COVERING WITH NEW ROOF EDGE TRIMS.
23. NEW SIDE-WALL FAN IN EXISTING OPENING. GLASS REMOVED AND REPLACE WITH INSULATED SPANDREL PANEL.
25. NEW WALL MOUNTED HOSE BIB RACK.
26. NEW WALL MOUNTED KNOXBOX 3200 WITH ALARM CONTACT FOR POWER COMPANY.
27. NEW WALL MOUNTED KNOXBOX 3200 WITH ALARM CONTACT FOR FIRE DEPARTMENT.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

TETRA TECH
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DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

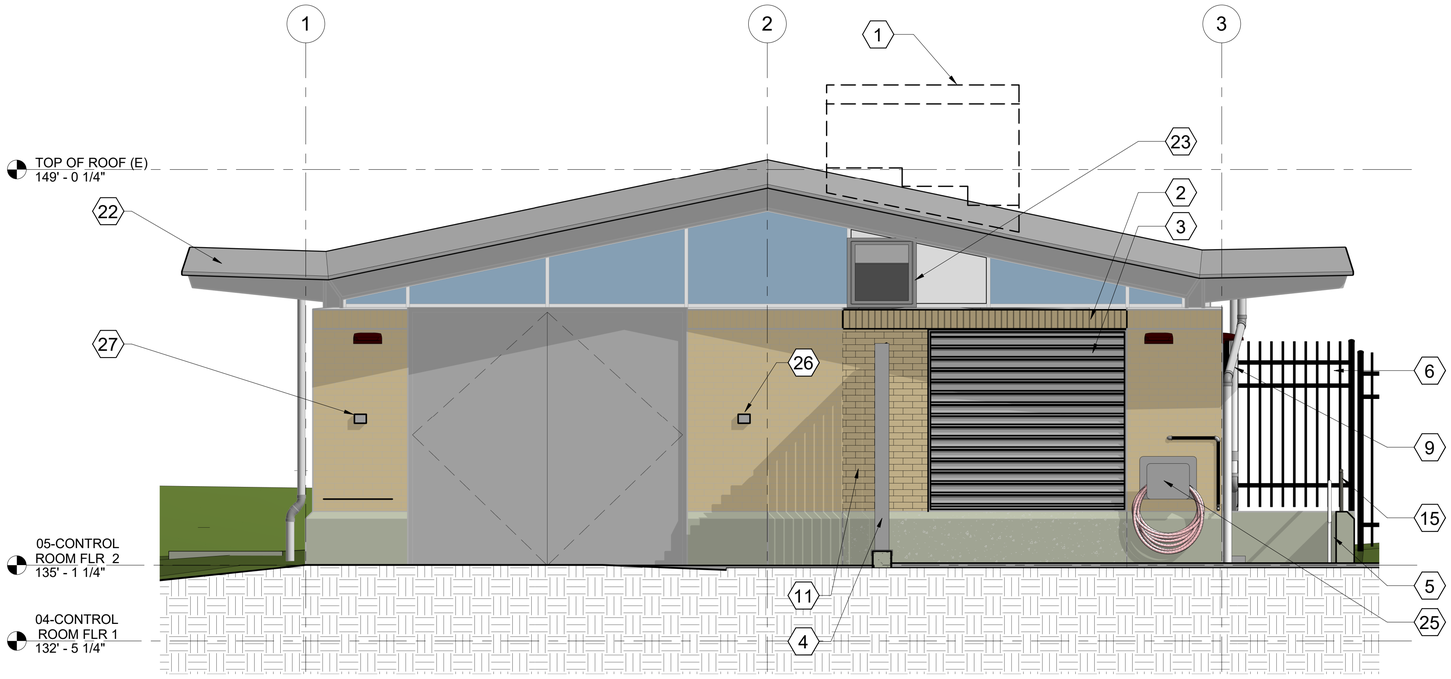
King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

PUMP STATION - WEST ELEVATION

DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: A208a
SHT NO / TOTAL: /
REV NO:

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:43 AM
PLOTTED BY: REVIT



PUMP STATION - NORTH ELEVATION (1 / A201)
SCALE: 3/8" = 1'-0"

KEY NOTES: (#)

PUMP STATION

1. DEMO EXISTING BRICK CHIMNEY AND CONCRETE FILL WITHIN AT LOWER LEVEL.
2. NEW / EXTENDED SOLDIER COURSE TO MATCH EXISTING.
3. NEW ALUMINUM LOUVER
4. NEW SERVICE YARD FENCE WITH CONCRETE STEM WALL FOUNDATION
5. NEW CONCRETE STAIRS WITH HANDRAILS TO LOWER WALKWAY
6. NEW 'STANDARD' METAL PANEL FENCE
7. NEW CRANE RAIL IN CONTROL ROOM
8. NEW WET WELL GANTRY
9. ADAPT EXISTING DUCTILE IRON DOWNSPOUTS AS INDICATED.
10. NEW INTERNAL CMU WALL WITH EPOXY PAINT FINISH TO 'WET-AREAS' AROUND SURGE TANK AREA.
11. INFILL EXISTING LOUVER OPENING WITH WALL CONSTRUCTION TO MATCH EXISTING.
12. EXTENT OF NEW SLAB - FALLS TOWARDS FLOOR DRAIN.
13. INSET LINEAR FLOOR DRAIN.
14. EXISTING ACCESS HATCH COVER TO LOWER LEVELS.
15. NEW EXTERIOR 1-1/2" DIA. GALVANIZED GUARDRAIL AT MIN. 3'-6" ABOVE GRADE.
16. NEW INTERIOR HANDRAIL / GUARDRAIL WITH KICKPLATES ON LANDINGS.
17. NEW REMOVABLE FLOOR GRATING, FLUSH WITH TOP OF CONCRETE IN NEW S.STEEL ANGLE TRIM.
18. NEW CONCRETE EQUIPMENT SLAB, REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
19. 2" THICK SURFACE MOUNTED ACOUSTIC NOISE ABSORPTION PANELS (U/S ROOF).
20. NEW FRP DOOR AND FRAME.
21. NEW MECHANICAL CONDENSER UNIT ON CONCRETE PAD.
22. REPLACEMENT ROOF COVERING WITH NEW ROOF EDGE TRIMS.
23. NEW SIDE-WALL FAN IN EXISTING OPENING. GLASS REMOVED AND REPLACE WITH INSULATED SPANDREL PANEL.
25. NEW WALL MOUNTED HOSE BIB RACK.
26. NEW WALL MOUNTED KNOXBOX 3200 WITH ALARM CONTACT FOR POWER COMPANY.
27. NEW WALL MOUNTED KNOXBOX 3200 WITH ALARM CONTACT FOR FIRE DEPARTMENT.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

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DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

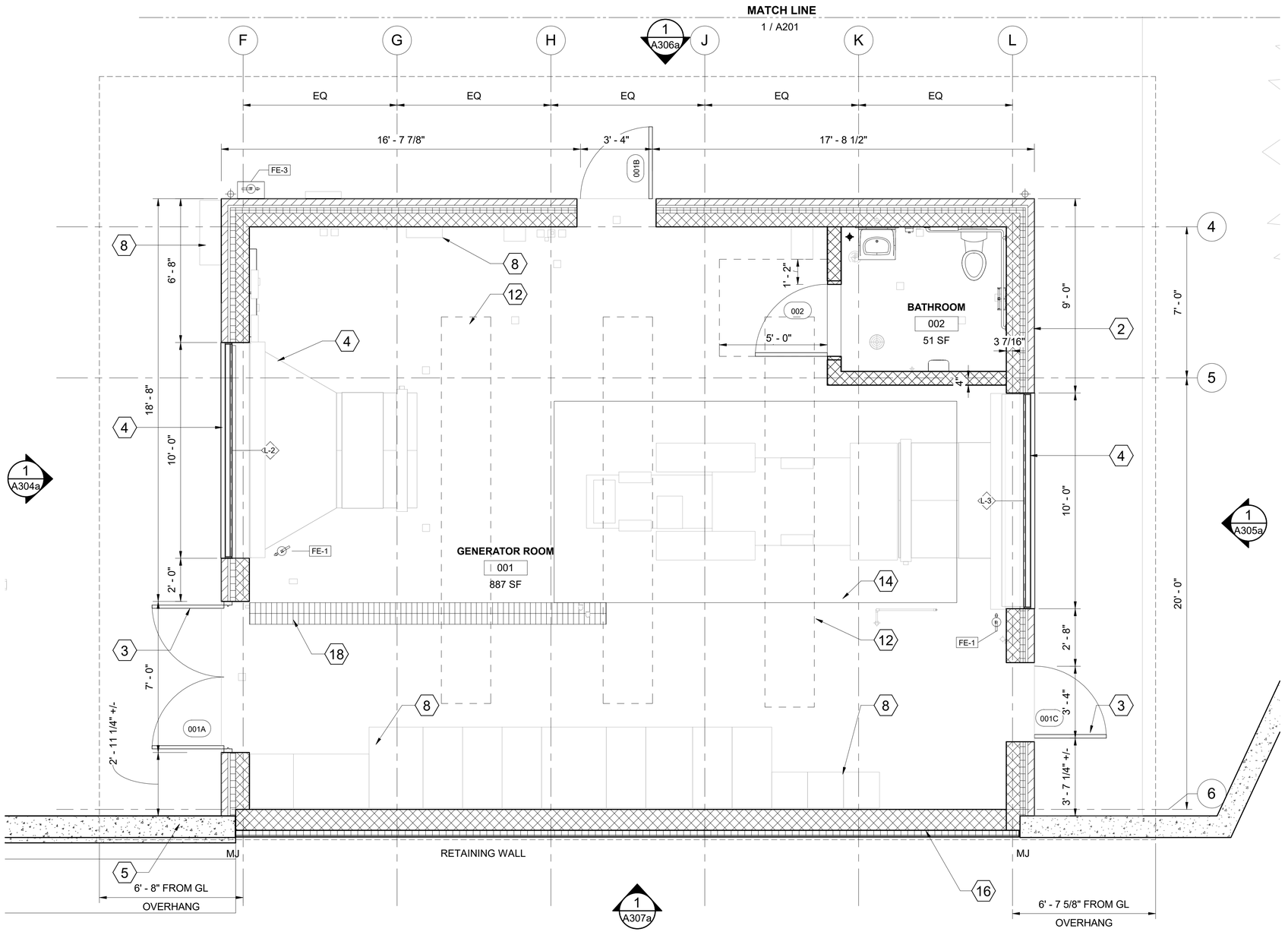
King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

PUMP STATION - NORTH ELEVATION

DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: A209a
SHT NO / TOTAL: /
REV NO:

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:49 AM
PLOTTED BY: REVIT



KEY NOTES:

GENERATOR BUILDING

2. EXTERNAL WALL - FACE BRICK.
3. FRP EXTERNAL DOORS - SEE SHEET **A002** FOR DETAILS.
4. NEW LOUVERS FOR GENERATOR AIR INTAKE & EXHAUST - SEE SHEET **A002** FOR DETAILS.
5. ALUMINUM GUTTERS/ROOF EDGE/SOFFIT SYSTEM TO EDGE OF ROOF.
6. 3" DIA. ALUMINUM DOWNSPOUTS.
8. ELECTRICAL EQUIPMENT.
9. NEW CONCRETE STAIRS WITH HANDRAILS TO LOWER WALKWAY - SEE SHEET **A314** FOR DETAILS.
10. EXISTING PUMP STATION ROOF.
12. SKYLIGHTS - 18'x20" NOM. OPENING SIZE - SEE SHEET **A002** FOR DETAILS.
14. NEW CONCRETE EQUIPMENT SLAB, REFER TO STRUCTURAL DRAWINGS FOR DETAILS (SIZE TO BE COORDINATED WITH EQUIPMENT MANUFACTURERS DETAILS).
16. EXTERNALLY INSULATED 12" CMU WALL WITH WATERPROOFING AND DRAINAGE BOARD TO OUTSIDE FACE.
18. 10"x4" FUEL PIPE TRENCH WITH GRATING COVER.

NO	REVISION DESCRIPTION	BY	APVD	DATE
1	ISSUE FOR PERMIT			Dec 2019
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

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DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

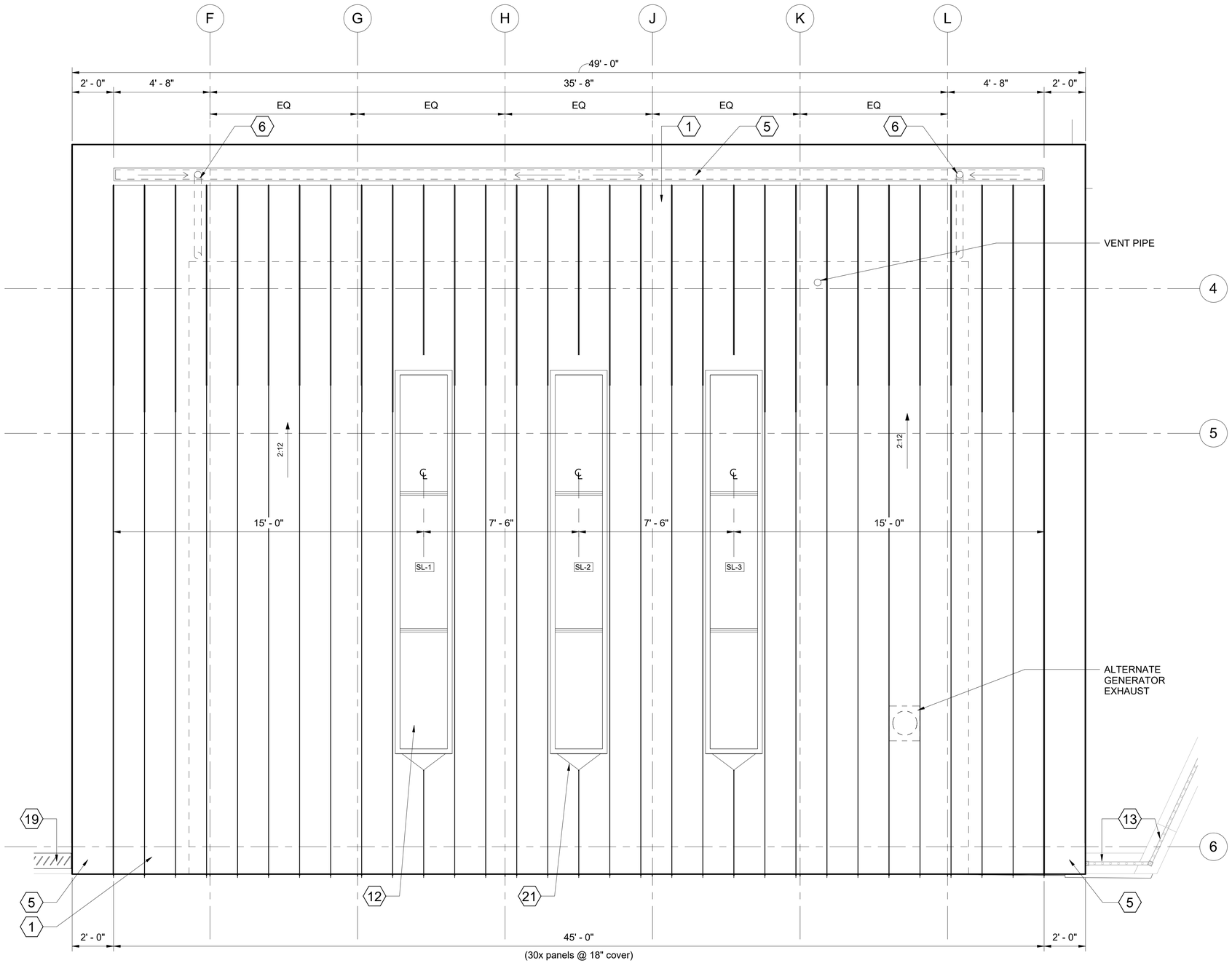
King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

GENERATOR BUILDING - FLOOR PLAN

DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: **A301**
SHT NO / TOTAL: 149 /
REV NO:

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 11:59:50 AM
PLOTTED BY: REVIT



KEY NOTES:

GENERATOR BUILDING

1. INSULATION OVER METAL/CONCRETE DECK WITH STANDING SEAM ROOF.
5. ALUMINUM GUTTERS/ROOF EDGE/SOFFIT SYSTEM TO EDGE OF ROOF.
6. 3" DIA. ALUMINUM DOWNSPOUTS.
12. SKYLIGHTS - 18'x20" NOM. OPENING SIZE - SEE SHEET **A002** FOR DETAILS.
13. METAL SECURITY FENCE - 7' TALL.
19. METAL DECORATIVE BAR FENCE - 5" TYP.
21. ROOF CRICKET, TYP.

NO	REVISION DESCRIPTION	BY	APVD	DATE
1	ISSUE FOR PERMIT			Dec 2019
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

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DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

GENERATOR BUILDING - ROOF PLAN

DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: A302
SHT NO / TOTAL: 150 /
REV NO:

BORDER FILE: KCWTD-2017-Dsize-TB-Border
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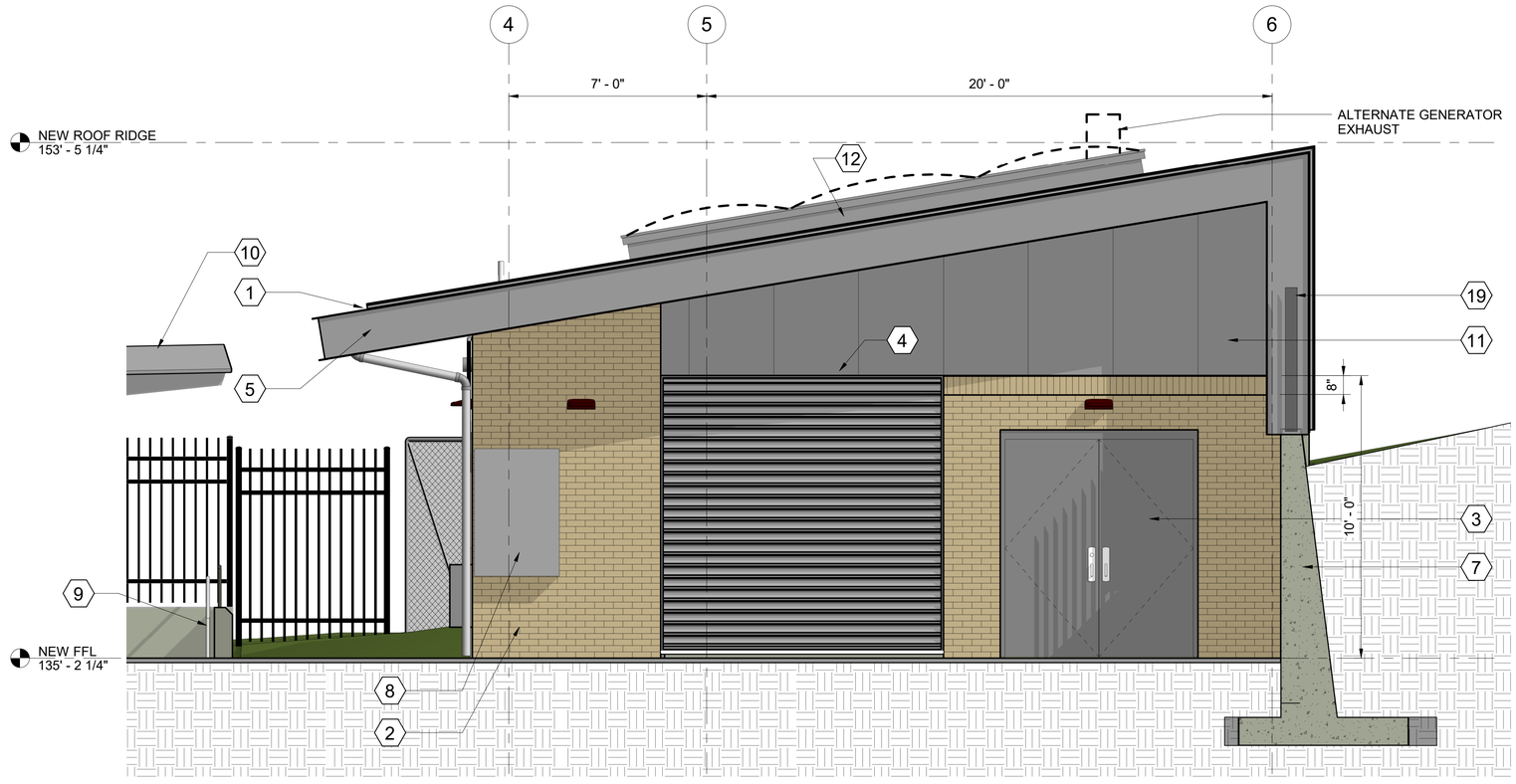

GENERATOR BUILDING - NORTH ELEVATION
SCALE: 3/8" = 1'-0"
1 / A301

KEY NOTES:

GENERATOR BUILDING

1. INSULATION OVER METAL/CONCRETE DECK WITH STANDING SEAM ROOF.
2. EXTERNAL WALL - FACE BRICK.
3. FRP EXTERNAL DOORS.
4. NEW LOUVERS FOR GENERATOR AIR INTAKE & EXHAUST.
5. ALUMINUM GUTTERS/ROOF EDGE/SOFFIT SYSTEM TO EDGE OF ROOF.
6. 3" DIA. ALUMINUM DOWNSPOUTS.
7. CAST IN-PLACE CONCRETE RETAINING WALL..
8. WALL MOUNTED ELECTRICAL EQUIPMENT.
9. NEW CONCRETE STAIRS WITH HANDRAILS TO LOWER WALKWAY.
10. EXISTING PUMP STATION ROOF.
11. EXTERNAL WALL - FLUSH METAL SIDING WITH CONSEALED FASTENERS, COLOR TO MATCH ROOF OVERHANG & SOFFIT PANELS.
12. SKYLIGHTS - 18'x20" NOM. OPENING SIZE.
13. METAL SECURITY FENCE - 7' TALL.
14. NEW CONCRETE EQUIPMENT SLAB, REFER TO STRUCTURAL DRAWINGS FOR DETAILS (SIZE TO BE COORDINATED WITH EQUIPMENT MANUFACTURERS DETAILS).
15. FULL-HEIGHT INTERNAL 8" CMU WALLS - PAINT FINISH.
16. EXTERNALLY INSULATED 12" CMU WALL WITH WATERPROOFING AND DRAINAGE BOARD TO OUTSIDE FACE.
17. 4" THICK SURFACE MOUNTED ACOUSTIC NOISE ABSORPTION PANELS.
18. 10"x4" FUEL PIPE TRENCH WITH GRATING COVER.
19. METAL DECORATIVE BAR FENCE - 5" TALL.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

TETRA TECH
JACOBS®

DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

GENERATOR BUILDING - NORTH ELEVATION

DCN:	
DATE:	12/16/2019
PROJECT FILE NO:	
DRAWING NO:	A304a
SHT NO / TOTAL	/
REV NO:	

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station\333-E00306E13-PS-A-2019.rvt
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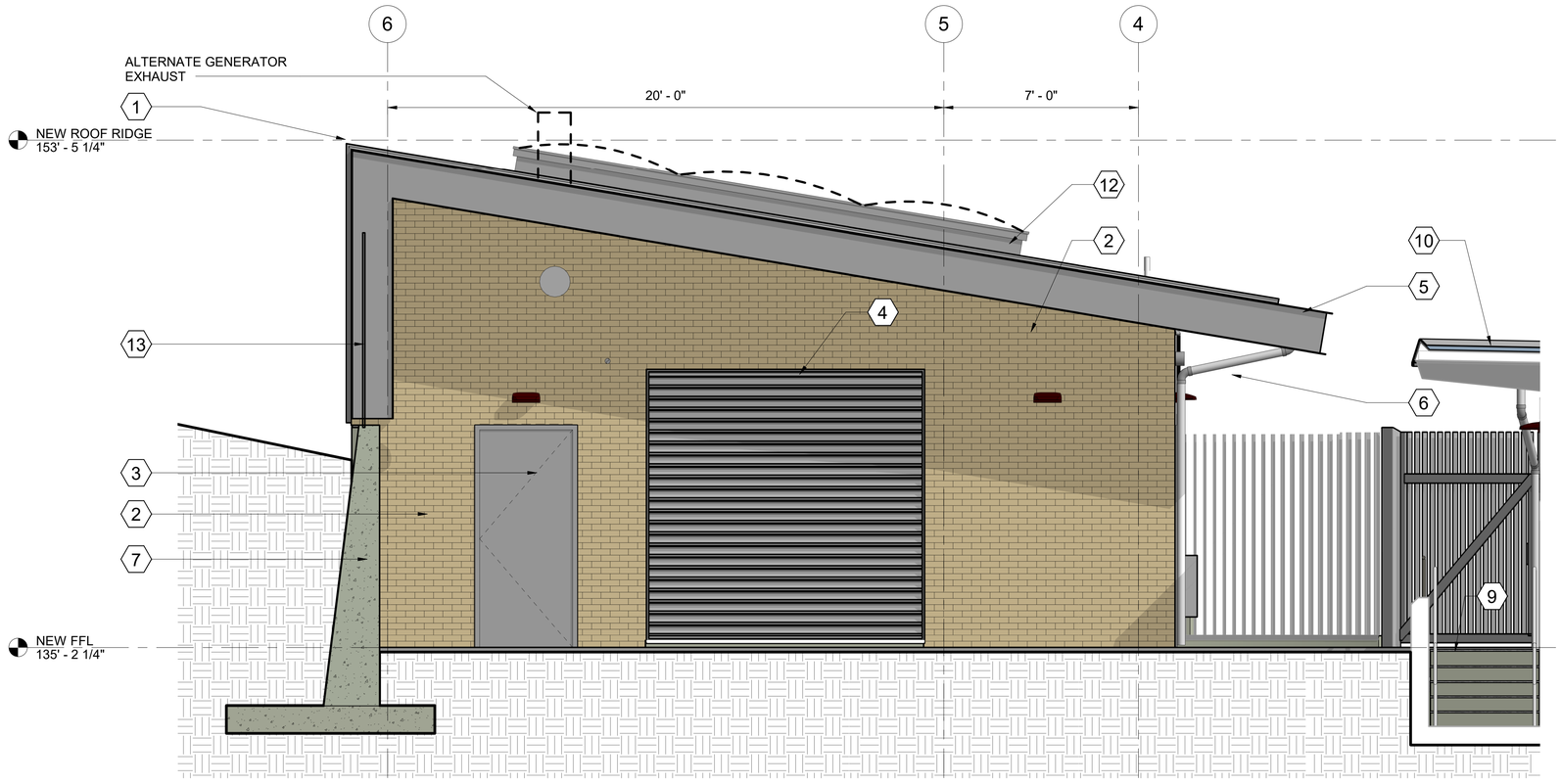

GENERATOR BUILDING - SOUTH ELEVATION
SCALE: 3/8" = 1'-0"

1 / A201

KEY NOTES:

GENERATOR BUILDING

1. INSULATION OVER METAL/CONCRETE DECK WITH STANDING SEAM ROOF.
2. EXTERNAL WALL - FACE BRICK.
3. FRP EXTERNAL DOORS.
4. NEW LOUVERS FOR GENERATOR AIR INTAKE & EXHAUST.
5. ALUMINUM GUTTERS/ROOF EDGE/SOFFIT SYSTEM TO EDGE OF ROOF.
6. 3" DIA. ALUMINUM DOWNSPOUTS.
7. CAST IN-PLACE CONCRETE RETAINING WALL..
8. WALL MOUNTED ELECTRICAL EQUIPMENT.
9. NEW CONCRETE STAIRS WITH HANDRAILS TO LOWER WALKWAY.
10. EXISTING PUMP STATION ROOF.
11. EXTERNAL WALL - FLUSH METAL SIDING WITH CONSEALED FASTENERS, COLOR TO MATCH ROOF OVERHANG & SOFFIT PANELS.
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17. 4" THICK SURFACE MOUNTED ACOUSTIC NOISE ABSORPTION PANELS.
18. 10"x4" FUEL PIPE TRENCH WITH GRATING COVER.
19. METAL DECORATIVE BAR FENCE - 5" TALL.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

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JACOBS®

DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

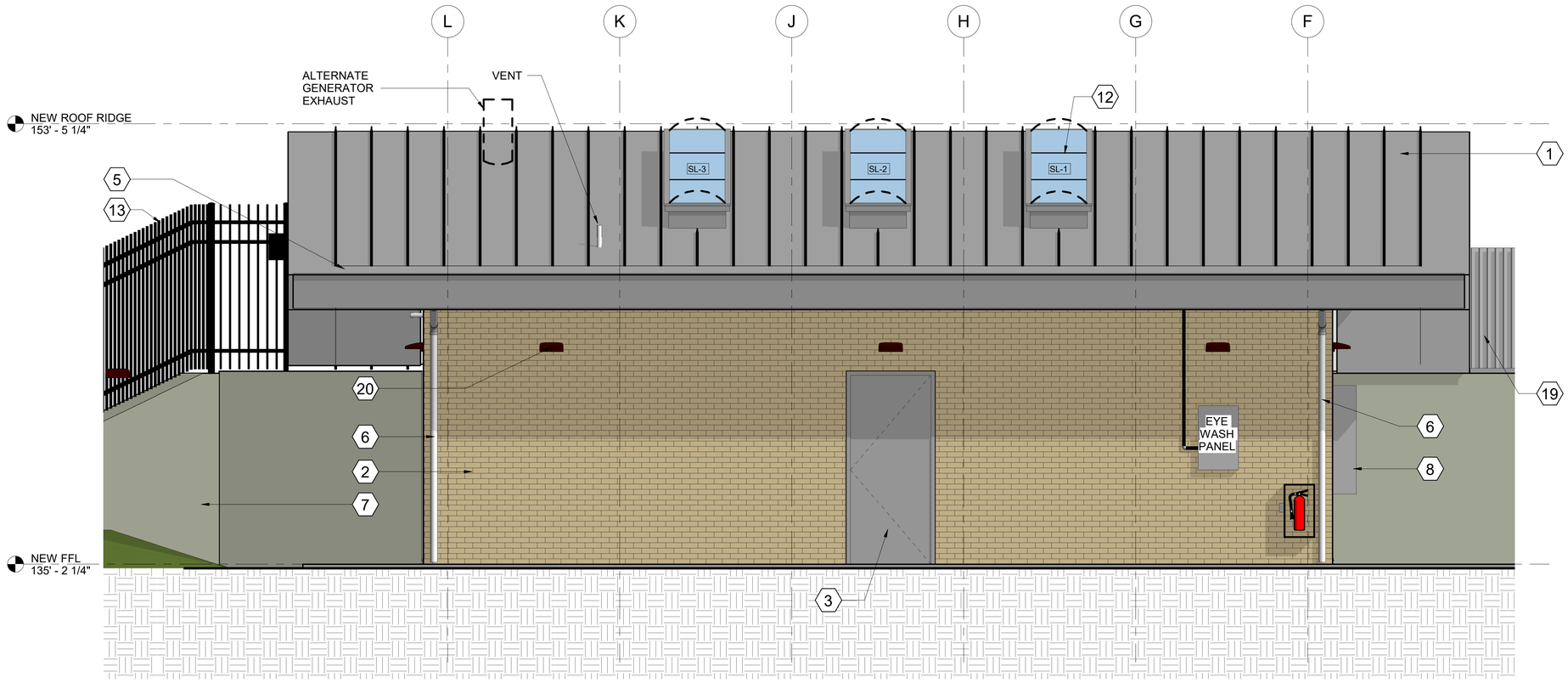
King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

GENERATOR BUILDING - SOUTH ELEVATION

DCN:	
DATE:	12/16/2019
PROJECT FILE NO:	
DRAWING NO:	A305a
SHT NO / TOTAL	/
REV NO:	?

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
PLOT DATE: 12/14/2019 12:00:02 PM
PLOTTED BY: REVIT



GENERATOR BUILDING - EAST ELEVATION
SCALE: 3/8" = 1'-0"
1 / A301

KEY NOTES: (#)

GENERATOR BUILDING

1. INSULATION OVER METAL/CONCRETE DECK WITH STANDING SEAM ROOF.
2. EXTERNAL WALL - FACE BRICK.
3. FRP EXTERNAL DOORS.
4. NEW LOUVERS FOR GENERATOR AIR INTAKE & EXHAUST.
5. ALUMINUM GUTTERS/ROOF EDGE/SOFFIT SYSTEM TO EDGE OF ROOF.
6. 3" DIA. ALUMINUM DOWNSPOUTS.
7. CAST IN-PLACE CONCRETE RETAINING WALL..
8. WALL MOUNTED ELECTRICAL EQUIPMENT.
9. NEW CONCRETE STAIRS WITH HANDRAILS TO LOWER WALKWAY.
10. EXISTING PUMP STATION ROOF.
11. EXTERNAL WALL - FLUSH METAL SIDING WITH CONSEALED FASTENERS, COLOR TO MATCH ROOF OVERHANG & SOFFIT PANELS.
12. SKYLIGHTS - 18'x20" NOM. OPENING SIZE.
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17. 4" THICK SURFACE MOUNTED ACOUSTIC NOISE ABSORPTION PANELS.
18. 10"x4" FUEL PIPE TRENCH WITH GRATING COVER.
19. METAL DECORATIVE BAR FENCE - 5" TALL.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

TETRA TECH
JACOBS

DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

GENERATOR BUILDING - EAST ELEVATION

DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: A306a
SHT NO / TOTAL: /
REV NO: ?

BORDER FILE: KCWTD-2017-Dsize-TB-Border
FILE LOCATION: BIM 360://North Mercer Pump Station/333-E00306E13-PS-A-2019.rvt
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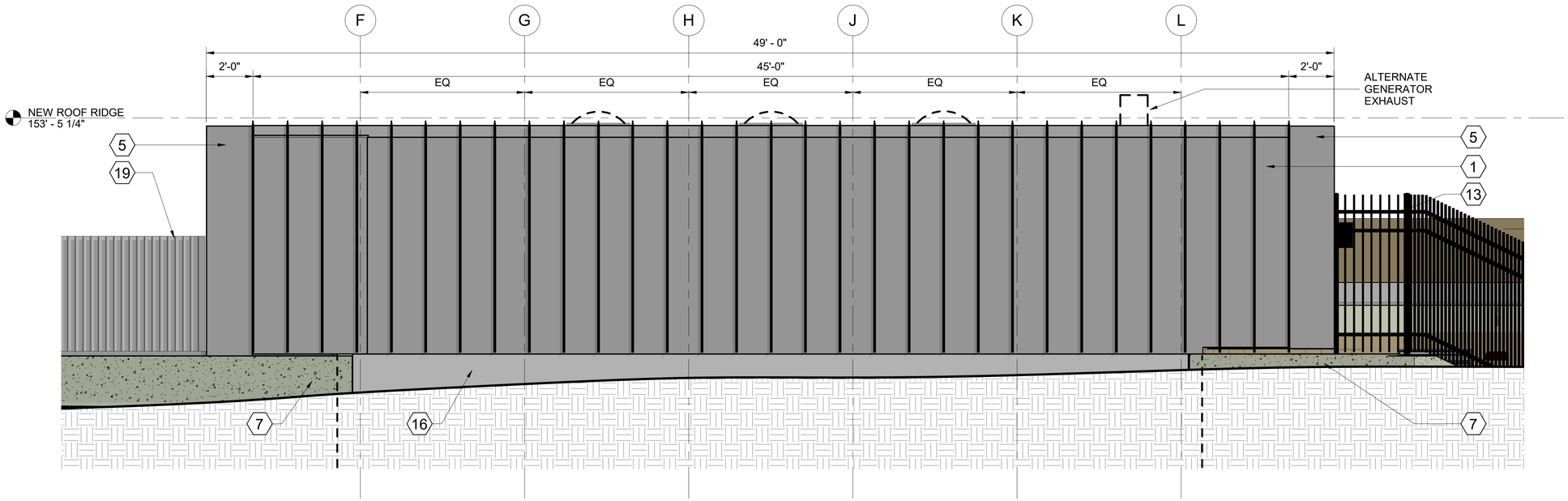

GENERATOR BUILDING - WEST ELEVATION
SCALE: 3/8" = 1'-0"
1 / A301

KEY NOTES:

GENERATOR BUILDING

1. INSULATION OVER METAL/CONCRETE DECK WITH STANDING SEAM ROOF.
2. EXTERNAL WALL - FACE BRICK.
3. FRP EXTERNAL DOORS.
4. NEW LOUVERS FOR GENERATOR AIR INTAKE & EXHAUST.
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6. 3" DIA. ALUMINUM DOWNSPOUTS.
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12. SKYLIGHTS - 18'x20" NOM. OPENING SIZE.
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18. 10"x4" FUEL PIPE TRENCH WITH GRATING COVER.
19. METAL DECORATIVE BAR FENCE - 5" TALL.

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			Dec 2019

TETRA TECH
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DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: A. COURT	SCALE: As indicated
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1
DESIGN APROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

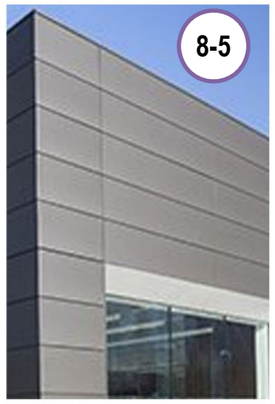
King County

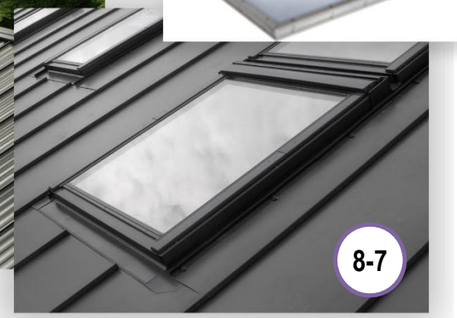
DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER ISLAND INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE – PUMP STATION IMPROVEMENTS

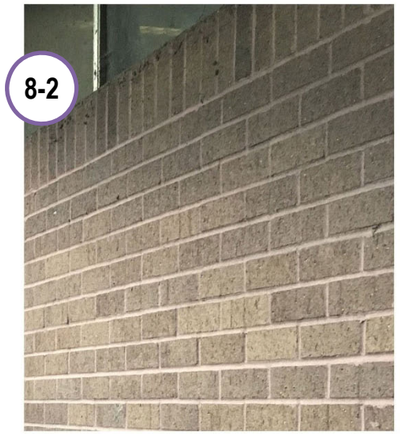
GENERATOR BUILDING - WEST ELEVATION

DCN:
DATE: 12/16/2019
PROJECT FILE NO:
DRAWING NO: A307a
SHT NO / TOTAL: /
REV NO:

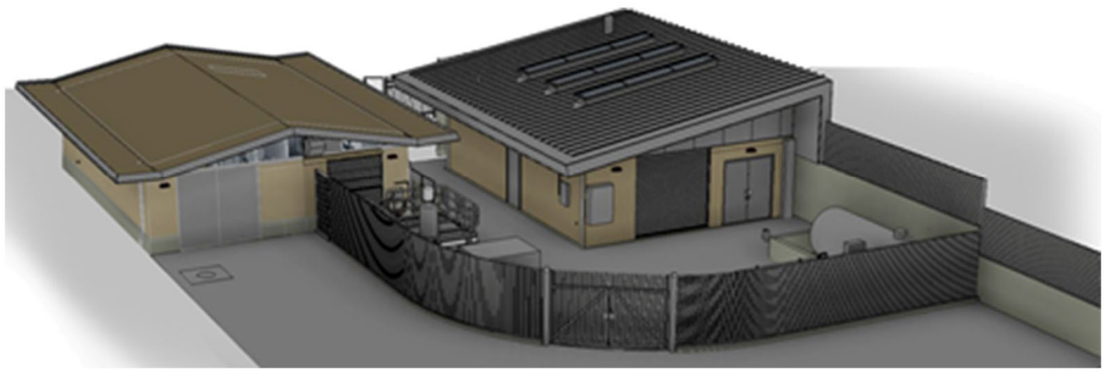
8. SAMPLES OF MATERIALS

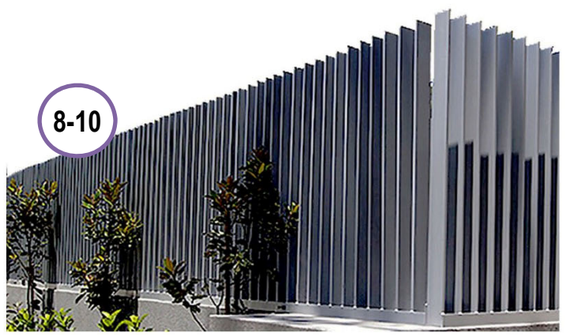




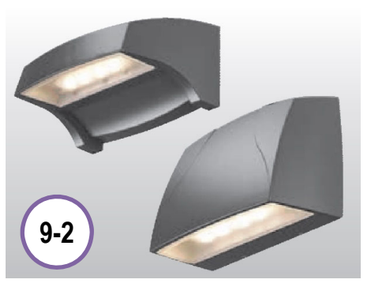


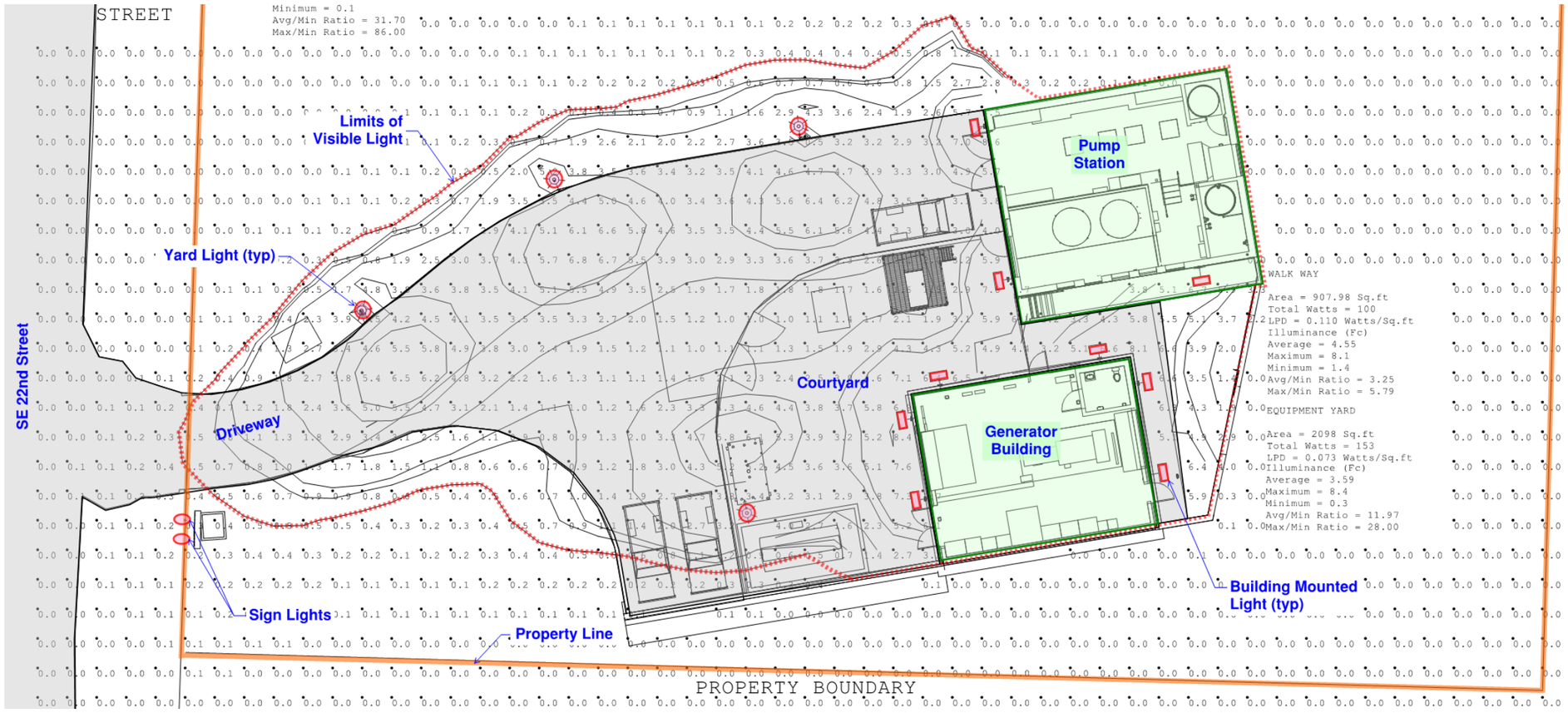
8-1. Metal Louvers
8-2. Face Brick (match existing)
8-3. Flush Doors
8-4. Replacement roof on Pump Station
8-5. Flush Metal Siding
8-6. Standard Seam Roof
8-7. Low-profile Skylights
8-8. Standard Fencing
8-9. Board-form Concrete Wall (options)
8-10. Vertical Pale Feature Fence





9. SIGN AND LIGHTING MASTER PLAN





9-1. Yard Light

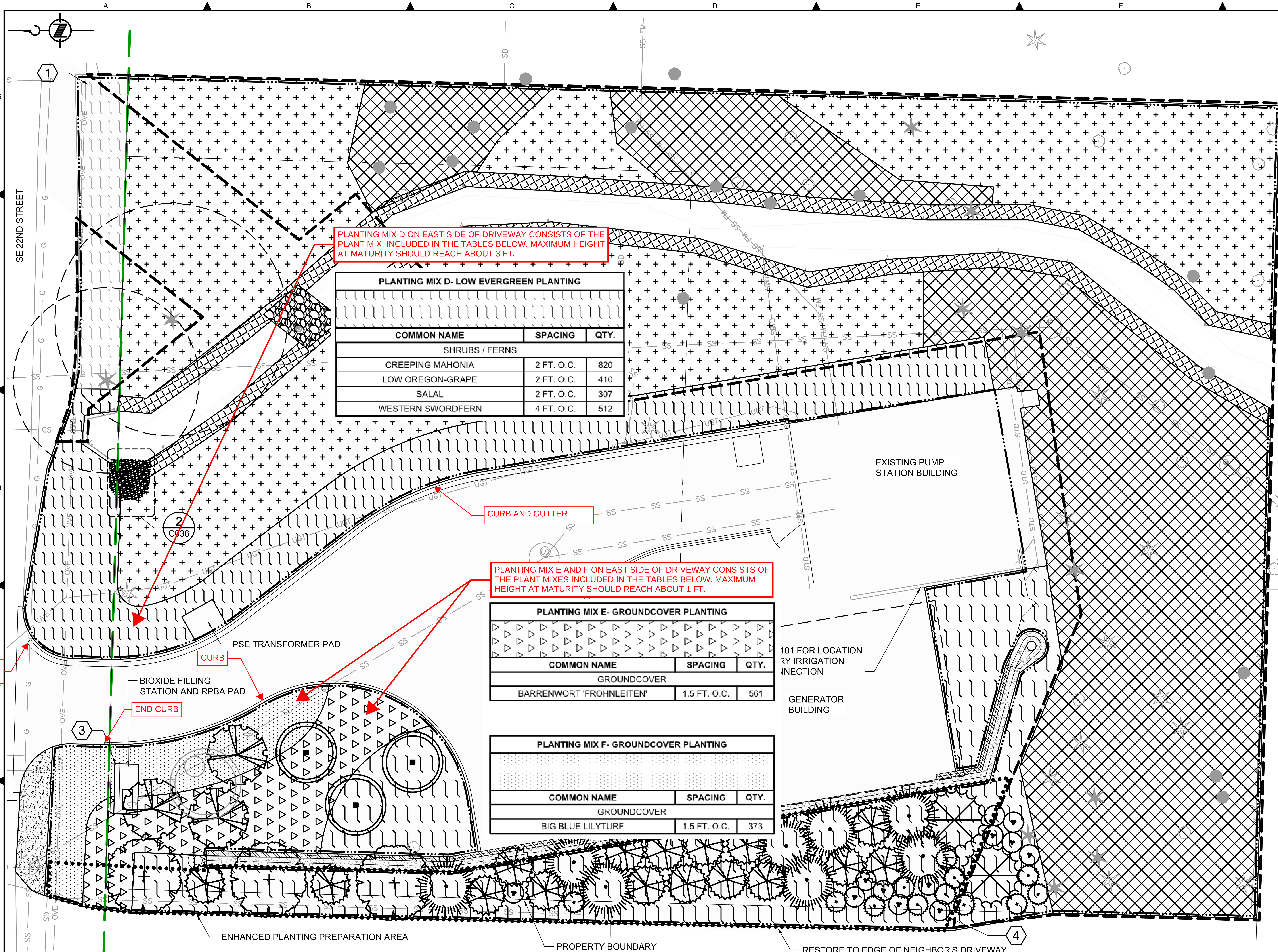
9-2. Building Mounted Light

9-3. Sign Light

All exterior lights to be LED with temperature of 3000 K. All site lights will be controlled via photocell.

`

10. LANDSCAPING AND TREE REMOVAL PLANS



PLANTING MIX D- LOW EVERGREEN PLANTING		
COMMON NAME	SPACING	QTY.
SHRUBS / FERNS		
CREEPING MAHONIA	2 FT. O.C.	820
LOW OREGON-GRAPE	2 FT. O.C.	410
SALAL	2 FT. O.C.	307
WESTERN SWORDFERN	4 FT. O.C.	512

PLANTING MIX E- GROUNDCOVER PLANTING		
COMMON NAME	SPACING	QTY.
GROUNDCOVER		
BARRENWORT 'FROHNLEITEN'	1.5 FT. O.C.	561

PLANTING MIX F- GROUNDCOVER PLANTING		
COMMON NAME	SPACING	QTY.
GROUNDCOVER		
BIG BLUE LILYTURF	1.5 FT. O.C.	373

NOTES:

1. SEE DWG L102 FOR PLANTING NOTES, SCHEDULE AND SETBACKS.
2. SEE DWG L103 FOR PLANTING DETAILS.
3. SEE DWG L104 FOR PLANT MIX LAYOUT AND DESCRIPTIONS.
4. PLANT MIXES A, B, C AND PORTIONS OF D ARE DEFINED AS BUFFER ENHANCEMENT AREAS. WORK SHALL BE PERFORMED AS STATED IN SPECIFICATION SECTION 32 76 00. THE PORTION OF MIX D BETWEEN THE WESTERN RETAINING WALL AND WESTERN PROPERTY BOUNDARY FALLS OUTSIDE OF THE STREAM BUFFER ENHANCEMENT AREA.
5. WORK PERFORMED IN THE L.O.D OF PROTECTED TREES SHALL BE DONE IN ACCORDANCE WITH THE APPROVED TREE PROTECTION PLAN.

KEY NOTES:

1. PLANTING BY OTHERS.
2. CONCRETE-LINED DITCH, SEE CIVIL DRAWINGS.
3. ENTRANCE SIGN WALL, SEE DETAIL ON SHEET A314.
4. ENHANCED PLANTING PREPARATION AREA SHALL RECEIVE A 3 FT DEPTH OF PLANTING SOIL MIX. SEE SHEET C141 FOR FINAL GRADES.

LEGEND:

- MIX A
- MIX B
- MIX C
- MIX D
- MIX E
- MIX F
- STREAM BED MATERIAL, SEE DWG. C123
- SELECTIVE CLEARING
- ENHANCED PLANTING PREPARATION AREA
- STREAM BUFFER
- CRUSHED GRAVEL
- LEGACY SUGAR MAPLE
- CHINESE FRINGE TREE
- VANESSA PERSIAN IRONWOOD
- WESTERN REDCEDAR
- INCENSE CEDAR
- EXCELSA WESTERN REDCEDAR
- EVERGREEN HUCKLEBERRY
- ARTHUR MENZIES HYBRID MAHONIA

0 10 FEET 1"

NO	REVISION DESCRIPTION	BY	APVD	DATE

TETRA TECH
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PRELIMINARY ISSUE DRAWING
INFORMATION ONLY
90% REVIEW
MAY 2019

STATE OF WASHINGTON, LORCAN BRIAN FRENCH, LICENSED LANDSCAPE ARCHITECT, NO. 1465 EXP. 12/03/20

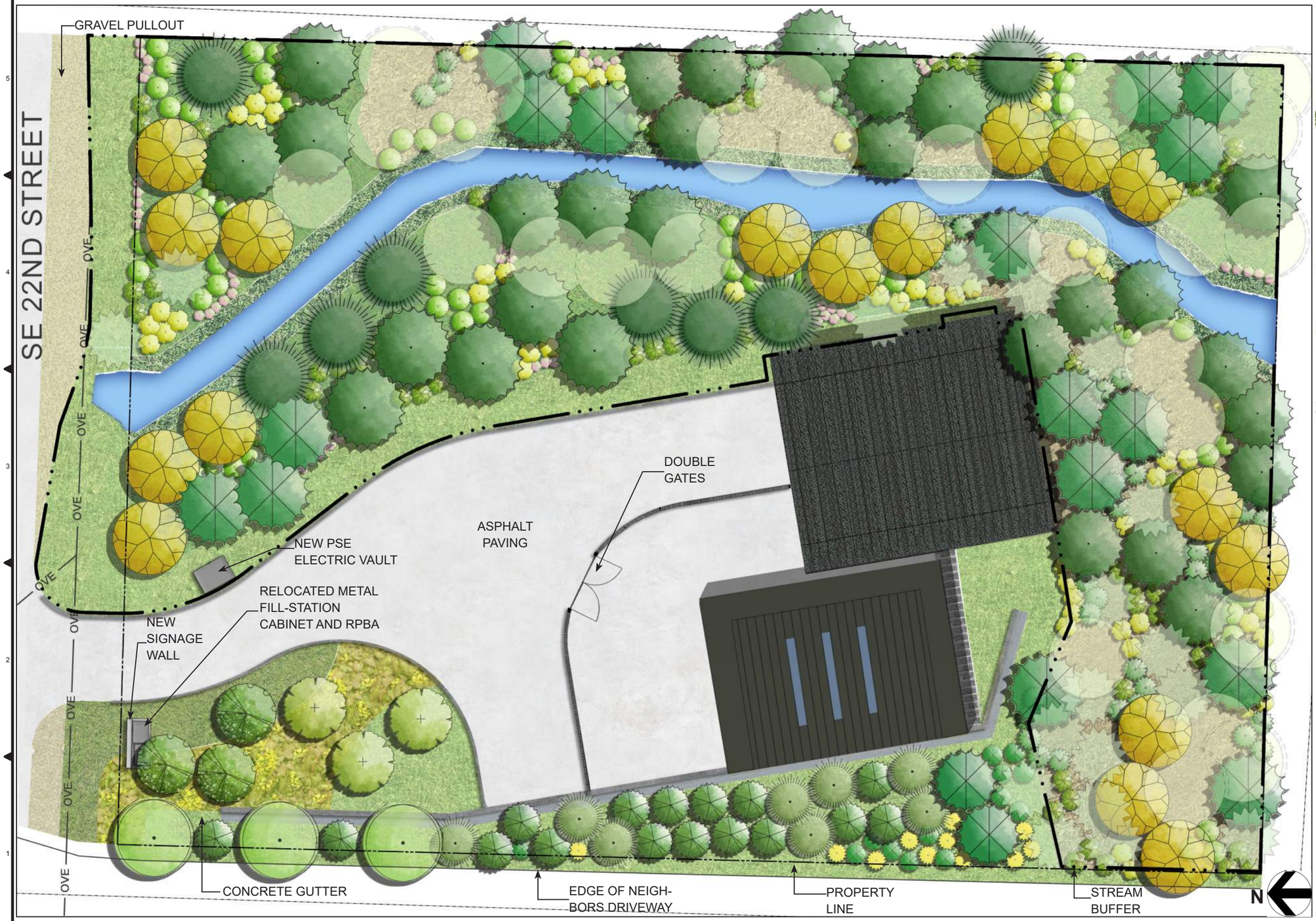
DESIGNED/DRAWN: L. FRENCH	SCALE: 1" = 10'
PROJECT ENGINEER: J. CHAE	0 REFERENCE 1"
DESIGN APPROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE - PUMP STATION IMPROVEMENTS

LANDSCAPE PLAN

DCN:
DATE: 05/02/2019
PROJECT FILE NO:
DRAWING NO: L101
SHT NO / TOTAL: 122 / 347
REV NO:



LEGEND:

Exhibit 2

Item (2)

- LEGACY SUGAR MAPLE
- CHINESE FRINGE TREE
- VANESSA PERSIAN IRONWOOD
- WESTERN REDCEDAR
- INCENSE CEDAR
- EXCELSA WESTERN REDCEDAR
- CASCARA
- DOUGLAS FIR
- WESTERN HEMLOCK
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE
- INDIAN PLUM
- PACIFIC WAX MYRTLE
- VINE MAPLE
- TALL OREGON-GRAPE
- AUTHOR MENZIES MAHOINA
- EVERGREEN HUCKLEBERRY
- BALDHIP ROSE
- CREEPING MAOHONIA
  WESTERN SWORDFERN
  SALAL
- RED-TWIG DOGWOOD
  SITKA WILLOW
  SLOUGH SEDGE
- CREEPING MAHONIA
  LOW OREGON-GRAPE
  SALAL
  WESTERN SWORDFERN
- BARRENWORT ‘FROHNLEITEN‘
- BIG BLUE LILYTURF

NO	REVISION DESCRIPTION	BY	APVD	DATE
0	DESIGN COMMISSION SUBMITTAL			DEC 2019

TETRA TECH
JACOBS

DESIGN COMMISSION SUBMITTAL

DECEMBER 2019

DESIGNED/DRAWN:	SCALE:
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1"
DESIGN APPROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
PUMP STATION IMPROVEMENTS

LANDSCAPE PLAN

DATE:	06/27/2018
PROJECT FILE NO:	
DRAWING NO:	
SHT NO / TOTAL	/
REV NO:	

Exhibit 2

Item (2)

PLANT SCHEDULE:

	BOTANICAL NAME	COMMON NAME	QTY	SPACING
	ACER SACCHARUM ‘LEGACY‘	LEGACY SUGAR MAPLE	3	AS SHOWN
	CHIONANTHUS RETUSUS	CHINESE FRINGE TREE	3	AS SHOWN
	PARROTIA PERSICA “VANESSA”	VANESSA PERSIAN IRONWOOD	3	AS SHOWN
	RHAMNUS PURSHIANA	CASCARA	21	10 or 14 FT. O.C.
	THUJA PLICATA	WESTERN RED CEDAR	58	10 or 14 FT. O.C.
	CALOCEDRUS DECURRENS	INCENSE CEDAR	8	AS SHOWN
	THUJA PLICATA VAR. EXCELSA	EXCELSA WESTERN REDCEDAR	16	AS SHOWN
	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	35	10 FT. O.C.
	TSUGA HETEROPHYLLA	WESTERN HEMLOCK	37	10 or 14 FT. O.C.
	OEMLERIA CERASIFORMIS	INDIAN PLUM	120	5 or 7 FT. O.C.
	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	245	5 or 7 FT. O.C.
	ACER CIRCINATUM	VINE MAPLE	172	5 or 7 FT. O.C.
	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	34	7 FT. O.C.
	MAHONIA MEDIA ‘AUTHOR MENZIES‘	AUTHOR MENZIES MAHONIA	12	AS SHOWN
	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	13	4 FT. O.C.
	ROSA GYMNOCARPA	BALDHIP ROSE	230	2.5 FT. O.C.
	CORNUS SERICEA	RED-TWIG DOGWOOD	68	3 FT. O.C.
	SALIX SITCHENSIS	SITKA WILLOW	204	3 FT. O.C.
	CAREX OBNUPTA	SLOUGH SEDGE	631	1.5 FT. O.C.
	MAHONIA REPENS	CREEPING MAHONIA	1419	2 FT. O.C.
	GAULTHERIA SHALLON	SALAL	930	2 FT. O.C.
	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	1195	4 FT. O.C.
	MAHONIA NERVOSA	LOW OREGON GRAPE	392	2 FT. O.C.
	EPIMEDIUM X PERRALCHICUM “FROHNLEITEN”	BARRENWORT “FROHNLEITEN”	532	1.5 FT. O.C.
	LIRIOPE MUSCARI “BIG BLUE”	BIG BLUE LILYTURF	400	1.5 FT. O.C.

PLANT MATERIAL IMAGES


SUGAR MAPLE


WESTERN RED CEDAR


EXCELSA WESTERN RED CEDAR


INCENSE CEDAR


DOUGLAS FIR


CASCARA


CHINESE FRINGE TREE


VANESSA PERSIAN IRONWOOD


INDIAN PLUM

WESTERN HEMLOCK

PACIFIC WAX MYRTLE

VINE MAPLE

CREEPING MAHONIA

SITKA WILLOW


EVERGREEN HUCKLEBERRY


AUTHOR MENZIES MAHONIA


RED-TWIG DOGWOOD


BALDHIP ROSE

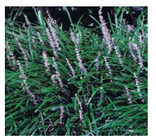

LOW OREGON GRAPE


SLOUGH SEDGE


SALAL


BARRENWORT “FROHNLEITEN”


WESTERN SWORD FERN


BIG BLUE LILY-TURF

NO	REVISION DESCRIPTION	BY	APVD	DATE

TETRA TECH

JACOBS

DESIGN COMMISSION SUBMITTAL

DECEMBER 2019

DESIGNED/DRAWN:

SCALE:

PROJECT ENGINEER: J. CHAE

REFERENCE 0 1"

DESIGN APPROVAL: R. BROWNE

FACILITY NUMBER: 333

PROJECT ACCEPTANCE: S. YILDIZ

CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
PUMP STATION IMPROVEMENTS

DCN: TBD

DATE: 11/04/2019

PROJECT FILE NO:

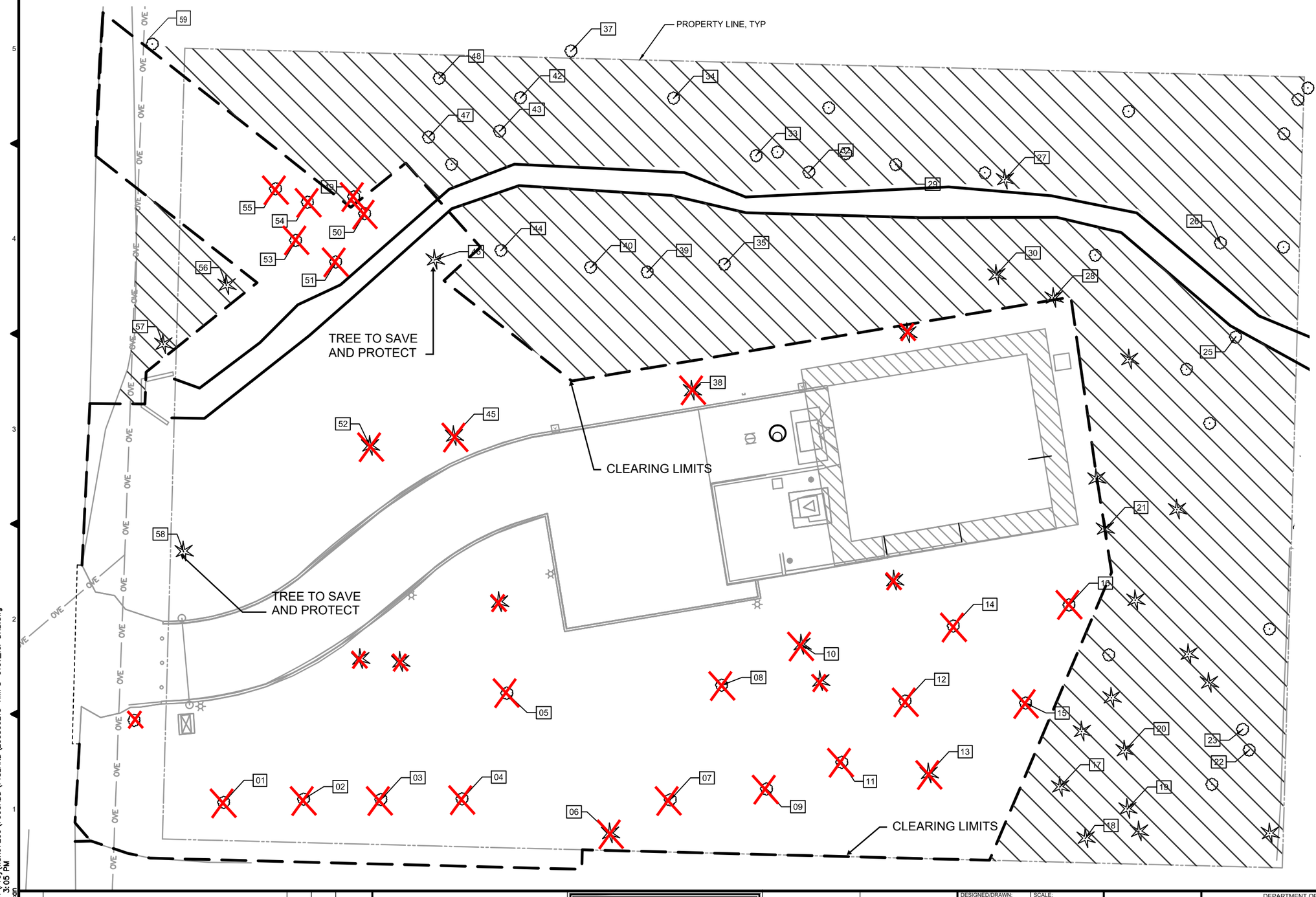
DRAWING NO:

SHT NO / TOTAL: /

REV NO:

Exhibit 2

Item (2)



LEGEND

- REGULATED CONIFEROUS TREE TO RETAIN AND PROTECT
- REGULATED DECIDUOUS TREE TO RETAIN AND PROTECT
- REGULATED CONIFEROUS TREE TO REMOVE, 6 TREES TOTAL
- REGULATED DECIDUOUS TREE TO REMOVE, 18 TREES TOTAL
- NON REGULATED CONIFEROUS TREE, TO RETAIN
- NON REGULATED DECIDUOUS TREE, TO RETAIN
- NON REGULATED CONIFEROUS TREE, TO REMOVE
- NON REGULATED DECIDUOUS TREE, TO REMOVE
- SELECTIVE CLEARING AND INTERPLANTING WITHIN EXISTING DESIRABLE VEGETATION

NOTES:

1. REGULATED TREES DEFINED PER CITY OF MERCER ISLAND TREE CODE, CHAPTER 19.10
2. SEE SHT. D-C102 EXISTING SIGNIFICANT TREE INVENTORY TABLE FOR TREE SPECIES AND SIZES

TREE REMOVAL QUANTITIES

REGULATED DECIDUOUS TREES	18
REGULATED CONIFEROUS TREES	6
NON REGULATED DECIDUOUS TREES	1
NON REGULATED CONIFEROUS TREES	6
TOTAL	**31**

NO	REVISION DESCRIPTION	BY	APVD	DATE

TETRA TECH

JACOBS

DESIGN COMMISSION SUBMITTAL

DECEMBER 2019

DESIGNED/DRAWN:	SCALE: 1" = 10'
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1"
DESIGN APPROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
PUMP STATION IMPROVEMENTS

TREE REMOVAL PLAN

DCN:	TBD
DATE:	06/27/2018
PROJECT FILE NO:	
DRAWING NO:	
SHT NO / TOTAL	/
REV NO:	

TREE TAG	SPECIES	DBH (in.)	LOD (ft.)	DRIP-LINE (ft.)	DISPOSITION	EXCEPTIONAL
1	NORWAY MAPLE, *ACER PLATANOIDES*	14.0	9	20	REMOVE	NO
2	NORWAY MAPLE, *ACER PLATANOIDES*	17.2	11	24	REMOVE	NO
3	NORWAY MAPLE, *ACER PLATANOIDES*	10.5	7	15	REMOVE	NO
4	NORWAY MAPLE, *ACER PLATANOIDES*	15.0	10	15	REMOVE	NO
5	RED ALDER, *ALNUS RUBRA*	12.0	12	15	REMOVE	NO
6	WESTERN REDCEDAR, *THUJA PLICATA*	12.1	12	16	REMOVE	NO
7	NORWAY MAPLE, *ACER PLATANOIDES*	20.2	13	20	REMOVE	NO
8	PORTUGUESE LAUREL, *PRUNUS LUSITANICA*	14.0	9	10	REMOVE	NO
9	NORWAY MAPLE, *ACER PLATANOIDES*	15.5	10	18	REMOVE	NO
10	GRAND FIR, *ABIES GRANDIS*	19.5	13	15	REMOVE	NO
11	RED ALDER, *ALNUS RUBRA*	19.0	19	15	REMOVE	NO
12	RED ALDER, *ALNUS RUBRA*	13.4	13	12	REMOVE	NO
13	DOUGLAS-FIR, *PSEUDOTSUGA MENZIESII*	10.0	7	12	REMOVE	NO
14	RED ALDER, *ALNUS RUBRA*	12.0	12	14	REMOVE	NO
15	RED ALDER, *ALNUS RUBRA*	10.0	10	15	REMOVE	YES
16	RED ALDER, *ALNUS RUBRA*	15.5	16	25	REMOVE	NO
17	WESTERN REDCEDAR, *THUJA PLICATA*	17.0	11	15	PROTECT	NO
18	WESTERN REDCEDAR, *THUJA PLICATA*	11.5	12	13	NO IMPACT	NO
19	BIGLEAF MAPLE, *ACER MACROPHYLLUM*	18.2	12	20	NO IMPACT	NO
20	BIGLEAF MAPLE, *ACER MACROPHYLLUM*	25.5	17	30	PROTECT	NO
21	GRAND FIR, *ABIES GRANDIS*	18.2	12	12	PROTECT	NO
22	BIGLEAF MAPLE, *ACER MACROPHYLLUM*	19.8	13	20	NO IMPACT	NO
23	BIGLEAF MAPLE, *ACER MACROPHYLLUM*	14.0	9	20	NO IMPACT	NO
24	BIGLEAF MAPLE, *ACER MACROPHYLLUM**	18.1	12	20	NO IMPACT	NO
25	RED ALDER, *ALNUS RUBRA*	17.0	17	18	NO IMPACT	NO
26	RED ALDER, *ALNUS RUBRA*	17.0	17	20	NO IMPACT	NO
27	BLACK COTTONWOOD, *POPULUS TRICHOCARPA**	78.1	60	35	NO IMPACT	NO
28	GRAND FIR, *ABIES GRANDIS*	20.0	13	12	PROTECT	NO
29	RED ALDER, *ALNUS RUBRA*	19.0	19	40	NO IMPACT	NO
30	GRAND FIR, *ABIES GRANDIS*	16.1	11	12	PROTECT	NO
31	BIGLEAF MAPLE, *ACER MACROPHYLLUM**	10.5	7	30	NO IMPACT	NO
32	RED ALDER, *ALNUS RUBRA*	12.0	12	10	NO IMPACT	NO
33	RED ALDER, *ALNUS RUBRA*	17.6	18	30 TO W	NO IMPACT	NO
34	RED ALDER, *ALNUS RUBRA*	17.0	17	20	NO IMPACT	NO
35	RED ALDER, *ALNUS RUBRA*	17.1	17	25	NO IMPACT	NO
36	WESTERN REDCEDAR, *THUJA PLICATA**	11.8	12	15	NO IMPACT	NO
37	OREGON ASH, *FRAXINUS LATIFOLIA*	14.4	10	15	NO IMPACT	NO
38	GRAND FIR, *ABIES GRANDIS*	17.3	12	12	REMOVE	NO
39	RED ALDER, *ALNUS RUBRA*	14.8	15	25	NO IMPACT	NO
40	RED ALDER, *ALNUS RUBRA*	16.6	17	25	NO IMPACT	NO
41	RED ALDER, *ALNUS RUBRA*	16.6	17	20 TO E, 10 TO W	NO IMPACT	NO
42	RED ALDER, *ALNUS RUBRA*	13.1	13	15	NO IMPACT	NO
43	RED ALDER, *ALNUS RUBRA*	17.5	18	20	NO IMPACT	NO
44	RED ALDER, *ALNUS RUBRA*	19.1	19	30	PROTECT	NO
45	GRAND FIR, *ABIES GRANDIS*	18.7	12	15	REMOVE	NO
46	WESTERN REDCEDAR, *THUJA PLICATA*	18.0	12	20	PROTECT	NO
47	RED ALDER, *ALNUS RUBRA*	10.0	10	30 TO E	NO IMPACT	NO
48	RED ALDER, *ALNUS RUBRA*	13.0	13	30 TO E	NO IMPACT	NO
49	BLACK COTTONWOOD, *POPULUS TRICHOCARPA*	53.6	54	30	REMOVE	YES
50	BLACK COTTONWOOD, *POPULUS TRICHOCARPA*	0 (SEE #49)	N/A	N/A	0	N/A
51	RED ALDER, *ALNUS RUBRA*	12.0	12	20 TO W	REMOVE	YES
52	GRAND FIR, *ABIES GRANDIS*	26.5	18	20	REMOVE	YES
53	RED ALDER, *ALNUS RUBRA*	12.2	12	25 TO W	REMOVE	YES
54	RED ALDER, *ALNUS RUBRA*	10.3	10	15 TO N	REMOVE	YES
55	RED ALDER, *ALNUS RUBRA*	10.5	11	15 TO E	REMOVE	YES
56	WESTERN REDCEDAR, *THUJA PLICATA*	23.2	10	17	PROTECT	NO
57	WESTERN REDCEDAR, *THUJA PLICATA*	18.5	19	15	PROTECT	NO
58	GRAND FIR, *ABIES GRANDIS*	20.7	14	10	PROTECT	NO
59	BLACK COTTONWOOD, *POPULUS TRICHOCARPA*	23.0	10	15	PROTECT	NO

*SEE NOTE 1

NOTES:

1. TREES #'S 24, 27, 31 AND 36 ARE LOCATED OUTSIDE OF THE VIEW SHOWN ON DWG D-C101, BUT ARE LOCATED A SUFFICIENT DISTANCE OUTSIDE OF CONSTRUCTION LIMITS TO AVOID BEING IMPACTED.

NO	REVISION DESCRIPTION	BY	APVD	DATE

TETRA TECH
JACOBS

DESIGN COMMISSION SUBMITTAL
DECEMBER 2019

DESIGNED/DRAWN: L. FRENCH
PROJECT ENGINEER: J. CHAE
DESIGN APPROVAL: R. BROWNE
PROJECT ACCEPTANCE: S. YILDIZ
SCALE: NTS
REFERENCE 0 1"
FACILITY NUMBER: 333
CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
PUMP STATION IMPROVEMENTS

EXISTING TREE INVENTORY TABLE

DCN: TBD
DATE: 06/27/2018
PROJECT FILE NO:
DRAWING NO: D-C102
SHT NO / TOTAL: 23 / 347
REV NO:

11. Compliance with Mercer Island City Code

MICC Section	Code Standard	NME Project Documented Compliance
MICC 19.12.030 Building design and visual interest.	*B.4. Materials and Color.* a. Durable Building Exteriors. Building exteriors should be constructed from high quality and durable materials that will weather well and need minimal maintenance. b. Consistency and Continuity of Design. Materials and colors generally should be used with consistency on all sides of a building. c. Material and Color Variation. Color and materials should highlight architectural elements such as doors, windows, fascias, cornices, lintels, sills and changes in building planes. Variations in materials and colors should generally be limited to what is required for contrast or to accentuate architectural features. d. Concrete Walls. Concrete walls should be architecturally treated. The enhancement may include textured concrete such as exposed aggregate, sand blasting, stamping or color coating. e. Bright Colors. Bright colors should be used only for trim and accents. Bright colors may be approved if the use is consistent with the building design and other design requirements. Fluorescent colors are prohibited.	The façade and roof of the generator building of the NMPS would be constructed with similar brick to the existing building, with metal siding on the north side, and metal standing seam roof in a dark bronze color similar to the brick façade.
	B.6. Rooflines. *a. Roofline Variation, Interest, and Detail*. Roofline variation, interest, and detail shall be used to reduce perceived building height and mass and increase compatibility with smaller scale and/or residential development. Roofline variation, interest and detail may be achieved through use of roofline features such as dormers, stepped roofs, and gables that reinforce a modulation or articulation interval, incorporation of a variety of vertical dimensions, such as multiplaned and intersecting rooflines, or flat-roofed designs that include architectural details such as cornices and decorative facings. *b. Roofline Variation, Numeric Standard.* Roof line variation shall occur on all multifamily structures with roof lines which exceed 50 feet in length, and on all commercial, office or public structures which exceed 70 feet in length. Roof line variation shall be achieved using one or more of the following methods: i. Vertical off-set ridge or cornice line; ii. Horizontal off-set ridge or cornice line; iii. Variations of roof pitch between 5:12 and 12:12; or iv. Any other approved technique which achieves the intent of this section.	The new roofline of the generator building is intended to act as an intersection and continuation of the existing roofline.
MICC 19.12.040 Landscape design and outdoor spaces.	*B.3. Architectural Features.* The design of landscape architectural features should be in scale with and complement the architecture of site structures and the visual character of the neighborhood. *b. Fences* should be made of ornamental metal or wood, masonry, or some combination of the three. The use of razor wire, barbed wire, chain link, plastic or wire fencing is prohibited if it will be visible from a public way or adjacent properties, unless there are security requirements which cannot feasibly be addressed by other means. *c. Fences* should not create the effect of walled compounds that are isolated from adjacent developments and public ways.	The courtyard fence around the NMPS and the perimeter fence on the west property line north of the generator building would be a vertical bar fence, used to partially screen equipment in the service yard and still allow a visual connection through for security. The Project is using this more aesthetic fence due to is prominent location on site. South of the generator building, the perimeter fence would be an ornamental metal fence for security. Overall the Project is trying not to give the site a walled compound feel but address screening requests from local residents.
	B.4. Minimum Landscape Area Requirements. *a. Total Landscaped Area.* The following minimum areas shall be landscaped: i. Single-Family Residential (SF). For nonresidential uses in single-family residential zones (SF), a minimum of 35 percent of the gross lot area of shall be landscaped. ii. Multifamily Residential (MF). In multifamily residential zones (MF-2, MF-2L, MF-3), a minimum of 40 percent of the gross lot area shall be landscaped. iii. Planned Business Zone (PBZ). In the planned business zone (PBZ) landscape area requirements shall be as set forth in MICC 19.04.010. iv. Commercial Office (CO). In commercial office (CO) zones, a minimum of 40 percent of the gross lot area shall be landscaped. v. Business (B). In business (B) zones, a minimum of 25 percent of the gross lot area shall be landscaped; provided, for fuel stations, a minimum of 10 percent of the gross lot area shall be landscaped. *b. Impervious Surfaces.* For all zones, area landscaped by impervious surfaces should constitute no more than 25 percent of the total required landscape area; provided, for multifamily residential zones, area landscaped by impervious surfaces should constitute no more than 10 percent of the total required landscape area.	The NMPS site would exceed the minimum 35% lot coverage for landscaping. The NMPS landscape area will achieve over 65% coverage. There would be no impervious surfaces incorporated into the landscaping plan.
	B.6. Planting Material, Types and Design. The following planting types should be used:a. Native or northwest-adapted plants should be used for all open space and buffer locations and drought tolerant plantings should be used in a majority of plantings.b. New plantings should complement existing species native to the Pacific Northwest.c. Ground cover should be used to ensure planting areas are attractive, minimize maintenance and the potential for encroachment of invasive plant material. Ground cover should be planted and spaced to achieve total coverage within three years after installation.	Plant selection for the NMPS site would consist of the following 4 categories: 1) native riparian restoration area, 2) a native interplanting, with existing vegetation 3) an evergreen screen of native conifers and facing the neighboring driveway, and 4) two groupings of small flowering trees with an understory mix of low growing native plants and ornamentals in the street frontage.

MICC Section	Code Standard	NME Project Documented Compliance
MICC 19.12.60 Screening of service and mechanical areas	*B. Standards.* *1. Accessory Buildings*. Ground level outdoor storage buildings, mechanical equipment and utility vaults shall be screened from adjacent public ways. *6. Fence, Trellis and Arbor Standards.* Fences, trelliswork and arbors shall meet the standards identified in MICC 19.12.040(B)(3).	The courtyard fence around the NMPS would be used to partially screen equipment in the service yard and still allow a visual connection through for security. The same approach has been taken at the site entrance with the bioxide fill cabinet and RPBA enclosure behind the concrete screening wall.
MICC 19.12.070 Lighting	*B. Standards.* *1. Architectural Elements.* Lighting should be designed as an integral architectural element of the building and site. *2. Function and Security.* On-site lighting shall be sufficient for pedestrian, bicyclist, and vehicular safety. Building entrances should be well lit to provide inviting access and safety. Building-mounted lights and window lights should contribute to lighting of walkways in pedestrian areas. *3. Lighting Height*. Freestanding, parking area, and building-mounted light fixtures shall not exceed 16 feet in height, including any standard or base. *4. Shielding.* All exterior lighting fixtures shall be shielded or located to confine light spread within the site boundaries. Full cut-off fixtures should be used. The use of unshielded incandescent lighting fixtures less than 160 watts and any unshielded lighting less than 50 watts may be allowed. Parking area light fixtures shall be designed to confine emitted light to the parking area. *5. Uplighting of Structures and Signs* - a. Residential Zones. Structures in residential zones shall not be illuminated by uplighting. Limited uplighting of signs and plantings in residential zones may be approved provided there is no glare or spillover lighting off the site boundaries. *6. Light Type*. Lighting should use low wattage color-corrected sodium light sources, which give more “natural” light. Metal halide, quartz, neon and mercury vapor lighting are prohibited in residential zones. High pressure sodium lights may only be used as street lights and must be fully shielded. (Ord. 04C-08 § 1).	The NMPS site and building lights would use LED lights, a color temperature of 3000^{o}K, and would include shielding to confine light spread within the site boundaries.
MICC 19.12.080 Signs	*A. Objectives.* 2. Signs shall be designed for the purpose of identifying the facility or establishment in an attractive and functional manner and to help customers find the specific establishment and location; signs in residential zones should not serve as general advertising. 4. Signs shall be integrated into both the site design and building design, shall be compatible with their residential, office, or business, or public park or open space surroundings, and clearly inform viewers of building or activity use, but shall not detract from the architectural quality of individual buildings or park surroundings.	The NMPS site sign would identify the site and the address and be composed of metal text and metal address on the concrete screening wall at the site entrance which will also screen two equipment cabinets.
	B. Standards. *3. Signs for Non-Single-Family-Dwelling Uses in Residential Zones.* One wall sign and one freestanding ground sign are permitted on each separate public street frontage for non-single-family-dwelling uses in residential zones, such as apartment buildings, hospitals, assisted living and retirement facilities, churches, clubs, public facilities, schools, day cares, pre-schools, park and recreation facilities, assembly halls, libraries, pools or stadiums. A wall sign may be unlighted or exterior lighted, not to exceed 12 square feet. A free-standing ground sign shall be no larger than 18 square feet and shall not exceed a maximum height of 42 inches above grade. The location of any freestanding ground sign shall be subject to all setback requirements for the zone in which the sign is located. *8. Street Numbers.* *a. Use. City-assigned street numbers should be installed on all buildings;* *b. Effect on Permitted Sign Area. Street numbers will not be counted towards permitted sign area;* *c. Size. Street numbers for any building or building complex shall be no smaller than six inches in height.*	The NMPS screening wall and sign would use 4 inch stainless steel lettering, be approx. 38 square feet, and sit 42 inches or less above grade. Site address would appear directly below the site sign and be 7 inches in height. Primary purpose of sign is to screen equipment cabinets which requires that it be larger than the 12 square feet identified in the code. Fire Marshal also requested site address be located on the sign.
MICC 19.02.020.C Yard Requirements	*1.a. Front Yard depth: 20 feet or more* *Rear Yard depth: 25 feet or more* *Side Yard: Sum of side yards shall be a width that is equal to at last 17% of the lot width*	Figure A100 shows yard depths as noted in section 19.02.020.C. Note that fences and retaining wall are allowed in yard areas per section 19.02.050. Retaining walls in yard areas must be less than 144 inches in height per section 19.02.050.D.4.a. Max height of the proposed retaining wall is 83 inches. Lot width is approximately 162-feet, making total side yard required 27.54-feet. A100 currently shows two 15 foot deep side yards, for 30 feet total.

<table>
<tr><th>MICC Section</th><th>Code Standard</th><th>NME Project Documented Compliance</th></tr>
<tr><td>MICC 19.10.070 Tree replacement</td><td>
Tree Replacement ratio.
A. Tree Replacement Ratio. Removed trees shall have the following base replacement ratio:
<table>
<tr><th>Diameter of removed tree</th><th>Number of replacement trees required</th></tr>
<tr><td>Less than 10 inches</td><td>1</td></tr>
<tr><td>10 inches up to 24 inches</td><td>2</td></tr>
<tr><td>24 inches up to 36 inches</td><td>3</td></tr>
<tr><td>More than 36 inches and any exceptional tree(s)</td><td>6</td></tr>
</table>
B. Replacement Trees.
1. Location. Replacement trees shall be located in the following order of priority from most important to least important:
a. On-site replacement adjacent to or within critical tree areas as defined in Chapter 19.16 MICC;
b. On-site replacement outside of critical tree areas adjacent to other retained trees making up a grove or stand of trees;
c. On-site replacement outside of critical tree areas; and
d. Off-site in adjacent public right-of-way where explicitly authorized by the city.
2. Species. Replacement trees shall primarily be those species native to the Pacific Northwest. In making a determination regarding the species of replacement trees, the city arborist shall defer to the species selected by the property owner unless the city arborist determines that the species selected is unlikely to survive for a period of at least 10 years, represents a danger or nuisance, would threaten overhead or underground utilities or would fail to provide adequate protection to any critical tree area.
3. Size.
a. Coniferous trees shall be at least six feet tall; and
b. Deciduous trees shall be at least one and one-half inches in caliper.
The city arborist may authorize the planting of smaller-sized replacement trees if the applicant can demonstrate that smaller trees are more suited to the species, the site conditions, neighborhood character, and the purposes of this section, and that such replacement trees will be planted in sufficient quantities to meet the intent of this section. The city arborist shall not authorize the planting of shrubs or bushes in lieu of required replacement trees.
</td><td>The NMPS site improvements will impact trees by removing 6 significant coniferous and 18 significant deciduous trees. Based on these impacts, the required replacement quantity is 74 trees to be planted. The Landscape Plan proposed to plant a total of 188 trees, broken down as such:
9- 2” cal. Deciduous trees (updated)
26 – 12-14 ft. ht. Conifer trees (updated)
149 – 2 gal. conifer trees (updated)
24- 2 gal. deciduous trees. (updated)
The smaller sized material is being installed within the riparian buffer as part of the buffer enhancement effort. The landscape will receive temporary irrigation and will be maintained for 5 years in order to ensure their successful establishment.</td></tr>
<tr><td>MICC 19.12.040</td><td>
7. Perimeter Screen Types and Widths by Use and Location.
a. Required Screen Types and Widths. The following screen types and widths should be used:
<table>
<tr><th rowspan="2">Use</th><th rowspan="2">Adjacent to</th><th colspan="2">Screen type and Width</th></tr>
<tr><th>Full</th><th>Filtered</th></tr>
<tr><td rowspan="3">Commercial, Institutional, Utility or Public Facility</td><td>Residential (Single or Multifamily)</td><td>20 feet [1]</td><td></td></tr>
<tr><td>Institutional, Commercial, Utility, Public Facility</td><td></td><td>10 feet</td></tr>
<tr><td>Public Park</td><td>20 feet</td><td></td></tr>
</table>
[1] Breaks in full or partial screen planting may be allowed for institutional and public facilities to create focal points, preserve views, and highlight the prominence of important buildings.
b. Perimeter Width Averaging. Averaging of screen widths may be allowed, if the objectives of this section, the minimum landscape area requirements set forth in MICC 19.12.040(B)(4) and the following criteria are met:
i. Plant material is clustered to more effectively screen parking areas and structures; and
ii. Significant trees are retained.
8. Perimeter Landscape Screens. Perimeter landscape screens should be consistent with the following definitions of screen types. Where existing undergrowth will be retained, the shrub and ground cover requirements for all screen types may be adjusted, provided the objectives of this section are met.
a. Full Screen. A full screen provides a dense vegetated separation between dissimilar uses on adjacent properties. A full screen should block views from adjacent properties as seen at the pedestrian eye level in all seasons within three years of installation. The number of trees provided shall be proportionate to one tree for every 10 feet of landscape perimeter length.
</td><td>NMPS perimeter screen meets this requirement on all sides, except for the western edge. Here it ranges from 27.5 feet to 9.5 feet at its narrowest. In order to increase the functional width, the project is proposing to plant the approximately 3 ft width on the neighbor’s property between the property boundary and their driveway, increasing the width to 12.5 feet at the pinch point. The screen is narrow at this location in order to provide a vehicle turn-around. Locating the turn-around further into the interior would encroach into the riparian buffer. The project intends to maximize the screening function by planting a tree every 4.5 linear feet, adding a midstory layer of evergreen shrubs and installing a vertical bar fence that, combined with the evergreen trees and shrubs, would providing full screening of the pump station property at pedestrian eye level. The project is specifying large coniferous trees to be used for the evergreen screen at 12-14 ft height at time of installation to achieve effective screening on day one after planting.</td></tr>
</table>

12. Design Commission Discussion Items

The design team would like to discuss the following items with the City of Mercer Island Design Commission during the session:

1. Proposed approach for screening along western property line in response to neighbor's comments.

2. A temporary (above-grade) irrigation system is planned for the site to aid plant establishment. In general, plants are native and drought-tolerant, so long term irrigation is not required. Does the City have any other irrigation or plant establishment requirements we should be aware of?

3. Proposed screening for the Temporary Pump Station near the site frontage.

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org

PUBLIC NOTICE OF APPLICATION

NOTICE IS HEREBY GIVEN for the application described below:

File No:	DSR19-017
Permit Type:	Type IV
Description of Request:	A request for Design Commission Design Review for a proposed rehabilitation of the existing regional wastewater pump station, including the addition of generator building and improvements to site access.
Applicant/ Owner:	King County Wastewater Treatment Division / King County
Location of Property:	7631 SE 22nd St, Mercer Island WA 98040 Identified by King County Assessor tax parcel number: 531510-1945
SEPA Compliance:	A Determination of Nonsignificance was issued by King County on May 23, 2019.
Project Documents:	Please follow this file path to access the associated documents for this project: https://mieplan.mercergov.org/public/DSR19-017
Written Comments:	**This may be the only opportunity to comment on the environmental impacts of the proposal.** Written comments on this proposal may be submitted to the City of Mercer Island either by email, in person, or by mail to the City of Mercer Island, 9611 SE 36th Street, Mercer Island, WA 98040-3732. Anyone may comment on the application, receive notice, and request a copy of the decision once made. Only those persons who submit written comments or participate at the public hearing (if a hearing is required) will be parties of record; and only parties of record will have the right to appeal.
Public Hearing and Public Meeting:	Pursuant to MICC 19.15.030 Table B, the applicant is required to participate in an open record public hearing in front of the Design Commission. The public hearing and the public meeting are not scheduled at this time. Once scheduled, public notice for the hearing will be provided at least 30 days in advance of the hearing, in accordance with MICC 19.15.100(B).
Applicable Development Regulations	Applications for Design Commission Design Review are required to be processed as Type IV land use reviews pursuant to Mercer Island City Code (MICC) 19.15.030. Processing requirements for Type IV land use reviews are further detailed in MICC 19.15.030. Design Standards for Zones Outside Town Center are contained in MICC 19.12.
Other Associated Permits:	PAE19-001. A future building permit is also anticipated.

Environmental Documents:	Copies of all studies and / or environmental documents are available through the above project documents link.
Application Process Information:	Date of Application: November 27, 2019 Determined to Be Complete: December 27, 2019 Bulletin Notice: December 30, 2019 Date Mailed: December 30, 2019 Date Posted on Site: December 30, 2019 Comment Period Ends: 5:00PM on January 29, 2020

The project is available for review at the City of Mercer Island, Community & Planning Development, 9611 SE 36th Street, Mercer Island, Washington.

Project Contact:
Robin Proebsting / Senior Planner
Community Planning & Development
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040
(206) 275-7717
robin.proebsting@mercergov.org

CITY OF MERCER ISLAND

COMMUNITY PLANNING & DEVELOPMENT
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org

PUBLIC NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the City of Mercer Island Design Commission will hold a public hearing at 7:00pm on October 28, 2020 for the design review application described below:

File No:	DSR19-017
Permit Type:	Type IV
Description:	A request for Design Commission Design Review for a proposed rehabilitation of the existing regional wastewater pump station, including the addition of generator building and improvements to site access.
Representative / Property Owner:	King County Wastewater Treatment Division / King County
Location of Property:	7631 SE 22nd St, Mercer Island WA 98040 Identified by King County Assessor tax parcel number: 531510-1945
SEPA Compliance:	A Determination of Nonsignificance was issued by King County on May 23, 2019.
Project Documents:	Please follow this file path to access the associated documents for this project: https://mieplan.mercergov.org/public/DSR19-017 Documents will continually be added to this file as the process moves forward.
Time, Date and Location of Public Hearing:	Pursuant to MICC 19.15.030(F) Table A, applications for design commission design review are required to be processed as a Type IV action, with the Design Commission as the decision authority. The public hearing is scheduled for October 28, 2020 at 7:00pm. The public hearing will be held virtually using video conferencing technology provided by Zoom, and the public will have the opportunity to testify during the public hearing by either calling in or logging onto the meeting as a Zoom attendee. The City will also accept public comment until the public hearing is adjourned. Please send written comment to robin.proebsting@mercergov.org. For the safety and wellbeing of the public and staff, the City strongly recommends that people attend the meeting via Zoom. Should restrictions on "in-person" attendance of open public meetings be lifted, opportunity to testify during the public hearing will be available at City Hall, located at 9611 SE 36th Street, Mercer Island, WA 98040. Strict social distancing requirements will be required of all in person attendees.

To attend the hearing, please use the following Zoom link:
https://zoom.us/j/97694123994?pwd=UkczVWVBRDJWME80aUdtS1BFemdXQT09

Applicable Development Regulations	Pursuant to Mercer Island City Code (MICC) 19.15.030(F) Table A, design commission design review applications are required with be processed as a Type IV action, with the Design Commission as the decision authority. The applicable design review standards are located in MICC 19.12 – Design Standards for Zones Outside Town Center.
Other Associated Permits:	PAE19-001; building permit 1912-136.

Written testimony and/or requests for additional information should be referred to:

Project Contact:
Robin Proebsting / Senior Planner
Community Planning & Development
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040
(206) 275-7717


N Mercer Way
SE 22nd St
SE 22nd St
77th Ave SE
N Mercer Way
I-90 West Bound
76th Ave SE
N Mercer Way

King County
Department of Natural Resources and Parks • Wastewater Treatment Div
Environmental Services • 201 South Jackson Street, MS KSC-NR-0505
Seattle, WA 98104-3855

DETERMINATION OF NONSIGNIFICANCE

TITLE OF PROPOSAL: North Mercer Island Interceptor and Enatai Interceptor Upgrade Project

DESCRIPTION OF PROPOSAL: The King County Wastewater Treatment Division proposes to construct upgrades to King County's North Mercer Pump Station (NMPS) in Mercer Island, WA, and the City of Mercer Island's Lift Station 11; and use a combination of open-cut trenching, horizontal directional drilling, and pipe re-lining to construct approximately 17,210 linear feet of new or rehabilitated sewer pipeline and related features in Mercer Island and Bellevue, WA. The project is necessary to improve reliability, performance, and efficiency of the existing components of the regional wastewater system. Project construction is expected to begin in 2020 and last through 2024.

LOCATION OF PROPOSAL, INCLUDING STREET ADDRESS, IF ANY: North Mercer Pump Station is located at 7627 SE 22nd Street, Mercer Island, WA 98040. Lift Station 11 is located at 97th Avenue SE and SE 34th Street, Mercer Island, WA 98040. The new sewer pipeline will run from NMPS proceeding on an alignment that generally follows the I-90 greenway trail/park. The pipeline will enter Lake Washington immediately north of I-90 and run several feet under the lakebed from Mercer Island, across the East Channel of Lake Washington, to Enatai Beach Park in Bellevue, WA. From Enatai Beach Park, the new pipeline will run under the Enatai hillside to King County's Sweyolocken Pump Station, adjacent to Mercer Slough (3000 Bellevue Way SE, Bellevue, WA 98004). The project will also rehabilitate the existing Enatai Interceptor pipeline that is located in Lake Washington, from Enatai Beach Park, through Mercer Slough, to Sweyolocken Pump Station.

SEPA Responsible Official:	Mark Isaacson
Position/Title:	Director, King County Wastewater Treatment Division
Address:	201 South Jackson Street, MS KSC-NR-0501 Seattle, WA 98104-3855
Date: 5-23-19	**Signature:**
Proponent and Lead Agency:	King County Department of Natural Resources and Parks Wastewater Treatment Division
Contact Person:	Jim Sussex, Water Quality Planner King County Wastewater Treatment Division 201 South Jackson Street, MS KSC-NR-0505 Seattle, WA 98104 phone: (206) 477-3556; e-mail: jim.sussex@kingcounty.gov
Issue Date:	**May 23, 2019**

The State Environmental Policy Act (SEPA) lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist, the environmental reports listed in Section A.8 of the environmental checklist, and other information on file with the lead agency. This information is available to the public on request.

☒ This Determination of Nonsignificance (DNS) is issued under WAC 197-11-340 (2); the lead agency will not act on this proposal for 14 days from the issue date. **Comments must be submitted by June 8, 2019.** Submit comments to Katherine Fischer, Supervisor, Environmental Services, King County Wastewater Treatment Division, 201 South Jackson Street, MS KSC-NR-0505, Seattle, WA 98104-3855. Contact Jim Sussex, Water Quality Planner, at (206) 477-3556 or jim.sussex@kingcounty.gov for questions or information on how to submit comments electronically.

☒ The King County Wastewater Treatment Division recently submitted land use permit applications for this project to the City of Bellevue. Therefore, there is no administrative appeal of this DNS pursuant to RCW 43.21C.075, WAC 197-11-680, KCC 20.44.120, and King County Public Rule 7-4-1. The public rule may be viewed at http://www.kingcounty.gov/about/policies/rules/utilities/put741pr.aspx or contact Jim Sussex, Water Quality Planner, at (206) 477-3556 or jim.sussex@kingcounty.gov to obtain a copy of the rule.

ory authority: RCW 43.21C.110. 84-05-020 (Order DE 83-39), §197-11-970, filed 2/10/84, effective 4/4/84.]

King County
Department of Natural Resources and Parks
Wastewater Treatment Division
King Street Center, KSC-NR-0505
201 South Jackson Street
Seattle, WA 98104

Environmental Checklist

for

North Mercer Island Interceptor and Enatai Interceptor Upgrade Project

May 13, 2019

Prepared in compliance with the State Environmental Policy Act (SEPA) (RCW 43.21C), the SEPA Rules (WAC 197-11), and Chapter 20.44 King County Code, implementing SEPA in King County procedures.

This information is available in accessible formats upon request at (206) 477-5371 (voice) or 711 (TTY).

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

North Mercer Island Interceptor and Enatai Interceptor Upgrade Project (the Project)

2. Name of applicant:

King County Department of Natural Resources and Parks, Wastewater Treatment Division (WTD)

3. Address and phone number of applicant and contact person:

King County Wastewater Treatment Division
201 South Jackson Street, Mailstop: KSC-NR-0505
Seattle, WA 98104-3855

CONTACT: Jim Sussex, Water Quality Planner/Project Manager
Phone: (206) 447-3556
Email: Jim.Sussex@kingcounty.gov

4. Date checklist prepared:

May 13, 2019

5. Agency requesting checklist:

King County Wastewater Treatment Division

6. Proposed timing or schedule (including phasing, if applicable):

Project construction is expected to begin in 2020 and last through 2024. The timing and duration of construction for specific project segments will vary within that overall timeframe.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

There are no plans for future additions, expansion, or further activity connected with this proposal.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Environmental information prepared for and related to this proposal is included in the reference list at the end of this document (Section D).

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No pending approvals have been identified for other project applications that will directly affect the properties associated with this proposal. There is ongoing coordination with Sound Transit, Washington State Department of Transportation (WSDOT), and the cities of Mercer Island and Bellevue to avoid conflicts with other foreseeable projects. Bellevue is developing an update to the master plan associated with future improvements to Enatai Beach Park, and Mercer Island is developing a master plan associated with Aubrey Davis Park that includes the I-90 Trail. There are no immediate plans to apply for government approvals to implement either of these master plans; however, King County is coordinating with both cities to ensure that relevant Project design elements are compatible with the respective master plans. In particular, King County will continue to coordinate with Mercer Island and WSDOT regarding trail restoration designs for pertinent segments of the I-90 Trail that will satisfy WSDOT requirements, as well as the anticipated design for the Aubrey Davis Park Trail Master Plan to the maximum extent practicable. There is also ongoing coordination with Mercer Island to include the installation of a fiber optic cable along part of King County's proposed pipeline alignment under the I-90 Trail when those Project segments are constructed, although Mercer Island has not yet applied for the necessary government approvals.

10. List any government approvals or permits that will be needed for your proposal, if known.

- Federal
  - Department of the Army (DA) Permit, Clean Water Act (CWA) Section 404 and Rivers and Harbors Act (RHA) Section 10.
  - Endangered Species Act (ESA) Compliance (Section 7)
  - Section 106 of National Historic Preservation Act (NHPA)
  - Dredged Material Management Program (DMMP) Authorization
  - Federal Navigation: Local Notice to Mariners (LNM) and Private Aids to Navigation (PATON)

- State
  - Water Quality Certification (WQC), CWA Section 401 Permit
  - Coastal Zone Management (CZM) Consistency
  - Hydraulic Project Approval (HPA)
  - Department of Natural Resources (DNR) Aquatic Lands Lease
  - DNR Open Water Disposal Site Authorization
  - Recreation and Conservation Office (RCO) Approval
  - WSDOT Utility Franchise Agreement

- Local
  - King County
    - Industrial Wastewater Discharge Authorization
  - City of Bellevue
    - Critical Areas Land Use Permit (CALUP)
    - Conditional Use Permit (CUP)
    - Shoreline Conditional Use Permit (SCUP)
    - Substantial Shoreline Development Permit (SSDP)

- Clearing and Grading Permit
- Minor Project Building Permit
- Developer Extension Agreement
- Right of Way (ROW) Permit
- Parks Special Use Agreement

- City of Mercer Island
  - Critical Areas Land Use Approval
  - Substantial Shoreline Development Permit (SSDP)
  - Building Permit
  - Right of Way (ROW) Permit
  - Tree Permit
  - Parks Use Agreement

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

The King County Wastewater Treatment Division's (WTD) Conveyance System Improvements Program identified a need for capacity upgrades for the North Mercer Island and Enatai interceptors. The Project will improve reliability, performance, and efficiency of the existing components of the regional wastewater system to convey the 20-year peak wastewater flows projected through the year 2060 from sewer basins in North Mercer Island, the southwest portion of the City of Bellevue, and the Town of Beaux Arts Village. The existing system is not providing a level of service that meets the County standards.

Project construction will include approximately 17,210 linear feet of new sewer pipeline and related features starting at King County's North Mercer Pump Station (NMPS) in Mercer Island, and proceeding through an upland alignment on a portion of Mercer Island mostly following the I-90 greenway trail/park (I-90 Trail). The pipeline will then enter Lake Washington and run several feet under the lakebed from north Mercer Island, across the East Channel of Lake Washington, to Enatai Beach Park in Bellevue. From Enatai Beach Park, a new sewer pipeline will be installed using horizontal directional drilling (HDD) technology under the Enatai hillside to King County's Sweyolocken Pump Station (PS) adjacent to Mercer Slough. The Project will also rehabilitate the existing Enatai Interceptor pipeline that is located in Lake Washington, from Enatai Beach Park, through Mercer Slough, to the Sweyolocken PS. The NMPS will be upgraded in order to support the new pipeline, and Mercer Island's Lift Station 11 and some Mercer Island-owned local sewer lines will be modified in order to continue to convey flows from Mercer Island's sewer system.

An overview of the Project and the existing pipeline alignment are shown in Figure 1. The main components of the Project are described in greater detail below.

<u>North Mercer Pump Station</u>
The existing NMPS facility will be upgraded to accommodate the increased flow and pumping head that will be required for the proposed pipeline improvements. In addition to installing new pumps, other NMPS improvements will include upgrading the electrical service, heating, ventilation, and air conditioning (HVAC), water system, odor control, and stormwater management. A new structure and concrete pad will be constructed adjacent to the existing pump station building to house a new standby generator and fuel tank, electrical service equipment, and

restroom. The fuel tank and odor control will be located outside the new structure within a fenced enclosure. A temporary pump station will be built to manage flows during construction. Access improvements into the facility from SE 22nd Street will also be constructed. Areas disturbed during construction will be fully restored with suitable landscaping and habitat restoration.

Mercer Island Conveyance

A new pipeline will be constructed generally adjacent to Interstate 90 (I-90) on Mercer Island. This will replace the existing King County pipeline that largely runs under Lake Washington along the northeast shoreline of Mercer Island. The general means of construction for the new pipeline will be open-cut and cover trenching methods along the upland alignment areas from the NMPS to the Mercer Island shoreline near the I-90 East Channel Bridge.

The existing single-pipe force main at NMPS will be replaced with two parallel pipe force mains (approximately 16-inch and 18-inch diameters). From their connection at the NMPS, the new North Mercer Island Force Mains will continue predominantly southeast for approximately 7,100 linear feet, generally parallel to I-90, to the east end of 90th Place SE. From a below-grade structure at that location, the conveyance transitions to become the new North Mercer Island Interceptor, a single-pipe gravity sewer (24-inch to 30-inch diameter), that will continue eastward, primarily along the I-90 Trail, to a below-grade siphon inlet structure at SE 35th Street just west of East Mercer Way where it transitions into the East Channel Siphon. Along the way, the interceptor will receive additional flow from a siphon pipe that crosses I-90 from the south, and from the City of Mercer Island's Lift Station-11.

The alignment of the new North Mercer Island Interceptor will necessitate some modifications to the City of Mercer Island's sewer system that contributes flows to the County system. An existing pipeline segment will be converted to a sewer siphon, identified as the 96th Avenue Siphon, to convey flows from east Mercer Island into the new North Mercer Island Interceptor. Mercer Island's Lift Station 11 (LS-11), in Fruitland Landing Park at the end of 97th Avenue SE, will be modified to pump flows to the new North Mercer Island Interceptor. These improvements to LS-11 will redirect flows away from the existing County pipeline in Lake Washington, which will allow the existing pipe to be decommissioned.

East Channel Siphon

New pipes will be installed across the East Channel of Lake Washington, identified as the East Channel Siphon. From the new siphon inlet structure noted above, the East Channel Siphon (consisting of three parallel pipes approximately 12-inch to 16-inch diameter) will be installed parallel to north side of the I-90 East Channel Bridge across the East Channel to Enatai Beach Park in Bellevue. The pipes will be installed using open-cut-and-cover trenching in both upland and in-water areas.

Upland areas on either side of the channel crossing, in both Mercer Island and Bellevue, will be restored with landscaping. Portions of the existing concrete bulkhead along the Mercer Island shoreline will be replaced with a more natural shoreline stabilization system. New natural shoreline stabilization will be installed on the Bellevue side. Below the ordinary high water mark (OHWM) of Lake Washington, all disturbed areas of the lake bed will be restored with fish mix gravels.

Bellevue Conveyance

Enatai Siphon

A new siphon pipe, the Enatai Siphon, will be installed between Enatai Beach Park and Sweyolocken PS. The Enatai Siphon will convey flows from the East Channel Siphon. The Enatai Siphon will be an approximately 36-inch, high-density polyethylene (HDPE) pipe installed under the Enatai hillside using horizontal directional drilling (HDD) methods. The drilling process will be primarily staged from Sweyolocken PS. Drilling will start with a pilot bore, which will then be progressively reamed by multiple drill passes to incrementally expand the diameter for pipe installation. The 36-inch-diameter HDPE siphon pipe will be welded together and floated into place temporarily on Lake Washington before being pulled back through the bore hole from Enatai Beach Park to the Sweyolocken PS.

Enatai Beach Park Connections

At the eastern terminus of the East Channel Siphon, Project facilities will be installed to connect the East Channel Siphon to new siphon outlet and flow diversion structures in Bellevue's Enatai Beach Park, which will route low flows to the existing Enatai Interceptor and high flows to the new Enatai Siphon. This construction will occur within and adjacent to Enatai Beach Park generally under the overhead spans of the I-90 East Channel Bridge. The main components that will be constructed include three new below-grade vaults, including an odor control vault, a siphon outlet and flow diversion combined vault. Some above-grade features will be visible following installation, such as a fresh air intake, vent stack, and access hatch. In addition, a maintenance access road will be installed that will provide permanent access to the new facilities from the park entrance area.

Enatai Interceptor

The County's existing Enatai Interceptor will continue to carry flows from portions of western Bellevue and the low flows from Mercer Island, flowing eastward and discharging to the Sweyolocken PS. The proposed rehabilitation will use three different approaches to extend the service life of the Enatai Interceptor: replacement, sliplining, and ultraviolet (UV) cast-in-place-pipe (CIPP) lining.

A 120-linear-foot section of the Enatai Interceptor alignment will be replaced at the Enatai Beach Park swim beach. This work will require temporarily isolating and dewatering a work zone below the OHWM of Lake Washington.

Just east of the replaced section described above, a 100-linear-foot section of the existing Enatai Interceptor will be sliplined with a smaller diameter HDPE pipe. To allow for sliplining, the pipe will need to be accessed from an existing angle structure and an existing maintenance hole.

East of Enatai Beach Park, portions of the existing CIPP liner will be removed and rehabilitate the sections of the existing pipeline with a UV-CIPP liner technique. Lining the existing pipeline will occur at various locations along the Enatai shoreline and through Mercer Slough. The CIPP rehabilitation process uses a fabric sock saturated with polyester resin that is inserted into a dry sewer pipe through existing maintenance holes and expanded to the pipe wall. This new CIPP liner will be pulled into the existing pipe using a winch, inflated to the full diameter of the pipe, and cured at a rate of a few feet per minute using a UV light train.

Construction staging and access for the CIPP work will be provided by barges at some locations, and via the I-90 Trail (primarily from the east end of SE Lake Rd). Construction will require vegetation clearing and temporary ground stabilization in some areas adjacent to the I-90 Trail. Most of the relining work will occur by access through existing maintenance holes that do not require containment for in-water excavation, although up to two angle structures on the existing Enatai Interceptor will need to be accessed using temporary containment areas in Mercer Slough. Some existing maintenance holes are currently covered by docks. Portions of the decking associated with existing docks will need to be removed to access these locations and then restored following construction. Temporary sewer bypass systems will be installed during construction to maintain sewer service to affected homes along the Enatai shoreline as necessary.

Sweyolocken Pump Station

The Sweyolocken PS sends wastewater from Bellevue and Mercer Island to a major wastewater pipeline called the Eastside Interceptor. That pipeline then carries wastewater from all Eastside communities to King County's South Treatment Plant in Renton. The Project will make minor upgrades to the pump station. Following completion of the HDD construction activities for the new Enatai Siphon, a maintenance hole will be installed at its terminus and new pipe with access maintenance holes will be installed using open-cut and cover methods to connect the new Enatai Siphon to the Sweyolocken PS.

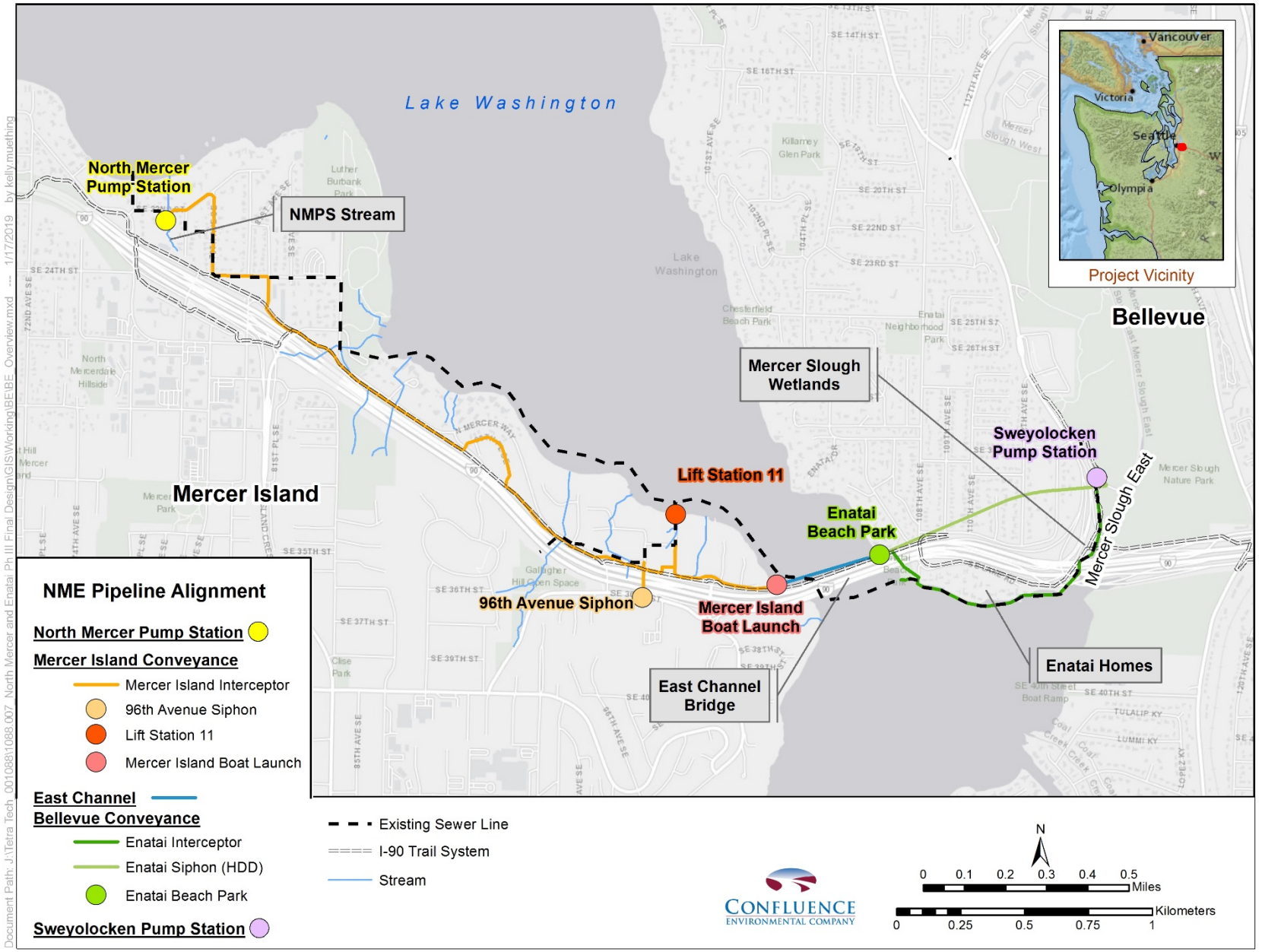


Figure 1. Project Overview

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The Project spans multiple private and public tax parcels, occurring at the following land survey quarters: SE ¼, sec. 7, T. 24 N, R. 5 E; SE ¼, sec. 8, T. 24 N, R. 5 E; SE ¼, sec. 1, T. 24 N, R. 4 E; NE ¼, sec. 12, T. 24 N, R. 4 E; NW ¼, sec. 7, T. 24 N, R. 4 E; NW ¼, sec. 7, T. 24 N, R. 5 E; SW ¼, sec. 8, T. 24 N, R. 5 E; NE ¼, sec. 8, T. 24 N, R. 5 E.

As depicted in Figure 1, the Project is a linear pipeline, generally extending from west to east, and divided into the following construction segments:

- **NMPS**
  - NMPS: 7627 SE 22nd Street, Mercer Island, WA 98040
- **Mercer Island Conveyance (Starting from NMPS)**
  - From NMPS: along streets and the I-90 Trail
  - Lift Station 11: 97th Avenue SE & SE 34th Street, Mercer Island, WA 98040
  - 96th Ave Siphon: 96th Ave SE and SE 36th St, Mercer Island, WA 98040
  - Mercer Island Boat Launch (eastern extent): 3600 East Mercer Way, Mercer Island, WA 98040
  - Mercer Island Boat Launch (western extent): 3600 East Mercer Way, Mercer Island, WA 98040
- **Bellevue Conveyance**
  - Enatai Beach Park (eastern extent): 3519 108th Avenue SE, Bellevue, WA 98004
  - Enatai Beach Park (western extent): 3519 108th Avenue SE, Bellevue, WA 98004
  - Sweyolocken PS (eastern extent): 3000 Bellevue Way SE, Bellevue, WA 98004

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

Mercer Island: The steepest slopes along the pipeline alignment are on Mercer Island between 97th Ave SE and SE 35th Pl, and then south of 90th Pl SE; both of these are approximately 50% slopes. There is also an approximately 36% slope along the pipeline alignment at the shoreline near the Mercer Island Boat Launch.

Bellevue: The Enatai Siphon (HDD) segment of the Project intersects some relatively small, isolated areas mapped as "steep slope" (i.e., greater than 40%), between 112th Ave SE and the Sweyolocken PS. The HDD installation methods avoid risk associated with steep slopes because the pipeline installation work all occurs subsurface. There are also steep slopes along Mercer Slough where access and staging is proposed to support the Enatai Interceptor (CIPP) work.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Soils along the upland portions of the pipeline alignment consist of Holocene deposits as well as Vashon and Pre-Vashon units (glacial and non-glacial). Holocene units include fill, alluvium, peat, and landslide deposits. Vashon units include recessional outwash, ice-contact deposits, recessional lacustrine deposits, ablation till, till, advance outwash, glaciolacustrine deposits, and till-like deposits (diamict). Pre-Vashon units include fluvial deposits, lacustrine deposits, till-like deposits (diamict), glaciolacustrine deposits, outwash, and till (Shannon & Wilson 2018a).

The Natural Resources Conservation Service (NRCS) has mapped the soils in the area adjacent to Mercer Slough as Snohomish silt loam, classified as a hydric/non-hydric soil.

There is no agricultural land of long-term commercial significance along the pipeline alignment or at either of the pump stations.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No surface indications of unstable soils are visible along the pipeline alignment, and no history of unstable soils is known. The City of Mercer Island (2018) has identified erosion hazard areas (known and suspected) along the Mercer Island Conveyance (overlapping with class ix [40-79%] and class v [>80%] slope areas), but does not map any areas along the pipeline alignment as potential slide areas. The City of Bellevue (2018) has identified areas (mostly along Lake Washington's shoreline) of moderate to high liquefaction hazard within the project area, but does not map any areas of very severe soil erosion hazard within the Project site.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

The Project's total affected area is estimated to be 924,100 square feet or approximately 21 acres, including: approximately 811,000 square feet of disturbance to install the new North Mercer Island Interceptor and East Channel pipeline, approximately 77,200 square feet to rehabilitate the existing Enatai Interceptor and install the new Enatai Siphon (HDD), and approximately 35,900 square feet of grading associated with other areas (facility improvements at NMPS and LS-11, access improvements at NMPS and Enatai Beach Park, and the installation of new odor control vaults).

Construction in upland areas (above OHWM) for the entire Project will require the excavation of approximately 52,630 cubic yards of soil. Fill in these areas will include approximately 41,820 cubic yards and will be clean excavated materials or clean material from off-site sources. The excavated materials from areas above the OHWM that are not reused as backfill will be transferred to an approved upland disposal location.

At NMPS, the North Mercer Island Force Mains will be installed using open-cut-and cover trenching across an unnamed stream, referred to as the NMPS stream. The NMPS stream crossing will include approximately 20 cubic yards of excavation below the OHWM, and approximately the same amount to fill. Fill will include clean backfill materials or clean material from off-site sources. For locations below OHWM in Lake Washington and Mercer Slough, approximately 13,140 cubic yards of dredged materials will be temporarily stored on barges and transported to Elliott Bay for open-water disposal pursuant to applicable requirements (e.g., DNR Site Use Authorization and DMMP approval for unconfined open-water disposal). Excavated areas will be backfilled, as necessary, with approximately 12,600 cubic yards of new clean fill material.

At a minimum, the top six-inches of backfill material in Lake Washington will be Washington Department of Fish and Wildlife (WDFW)-approved gravel substrate, to improve habitat conditions for fish species in the lake.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

There is potential for erosion to occur during construction, primarily in areas where temporary clearing, grading, and excavation will occur in various locations throughout the project area. According to the cities of Bellevue and Mercer Island Critical Areas and Shorelines Ordinances, portions of the Project are located within areas mapped as particularly susceptible to increased erosion as a result of development. Potential site erosion will be prevented or minimized through the use of suitable best management practices (BMPs) throughout Project construction described in section B.1.h below. Erosion is not expected to occur from the use of the Project following the completion of construction.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Changes to impervious surface area are expected to be relatively minor compared to the existing baseline conditions with the exception of changes at NMPS. Overall, there is a total net increase in impervious surface area above existing baseline conditions of approximately 4,510 square feet at NMPS and 10,030 square feet along the pipeline alignment. Most of the areas along the new pipeline alignment already have impervious surfaces, so the additional impervious surface area represents an approximately 12% increase at NMPS and an approximately 1% increase along the pipeline alignment.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

The BMPs for erosion control include, but are not limited to the following:

- A Temporary Erosion and Sediment Control Plan and a Construction Stormwater Pollution Prevention Plan (CSWPPP) Source Control Plan will be developed and implemented to

ensure the risk of erosion is avoided and minimized during all clearing, vegetation removal, grading, ditching, filling, soil compaction, or excavation. The BMPs in the plans will be used to control sediments from all vegetation removal or ground disturbing activities. These plans will be evaluated for consistency with design practices specific to each construction segment.

- Qualified project staff will develop the Erosion and Sediment Control Plan and construction.
- The contractor will designate at least one employee as the erosion and spill control (ESC) lead. The ESC lead will be responsible for the installation and monitoring of erosion control measures and maintaining spill containment and control equipment. The ESC lead will also be responsible for ensuring compliance with all local, state, and federal erosion and sediment control requirements.
- All temporary and permanent erosion and sedimentation control measures will be inspected, maintained, and repaired on a regular basis to assure continued performance of their intended function. Silt fences will be inspected immediately after substantial rainfall, and at least daily during prolonged rainfall. Sediment will be removed as it collects behind the silt fences and prior to their final removal.
- Regular street cleaning will occur where necessary to control mud and dust, and measures will be taken to minimize tracking of sediment onto public roadways by construction vehicles.
- Erosion control blankets will be installed on steep slopes that are susceptible to erosion and where ground-disturbing activities have occurred. This will prevent erosion and assist with establishment of native vegetation.
- All exposed soils will be stabilized during the first available period, and no soils will remain without stabilization for more than two days from October 1 to April 30, and for more than seven days from May 1 to September 30.
- Should any BMPs not function as intended, additional action will be taken to minimize erosion, maintain water quality, and achieve the intended environmental performance.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Construction of the Project will involve temporary construction-related air emissions, particularly from the use of various types of heavy equipment that will be required to construct the Project. These include: excavators, backhoes, dump trucks with trailers, vactor trucks, trench compactors, and construction barges. Heavy equipment will be used for various periods at various locations throughout the 4 year construction period along the pipeline alignment.

Preventing nuisance odor impacts is a major goal for the operation of this project. The existing odor control system at NMPS will be replaced with a more reliable carbon scrubber system. The carbon scrubber system combined with the existing injection of inorganic salt solution into the wastewater at NMPS will control and treat odors at the pump station site.

Several new odor control facilities will be installed at key locations along the pipeline alignment (within underground vault structures) in order to minimize odors from emissions

during the operation phase. Two passive odor control systems will treat potential emissions from air release valves along the force main portion of the pipeline. Three active odor control systems will be located along the pipeline to treat potential odors from the hydraulic structures with turbulent flows, such as the force main discharge and siphon inlet and outlet structures. The active odor control facilities, located at 90th Place cul-de-sac, Mercer Island shoreline and Enatai Beach Park, will consist of forced ventilation through carbon scrubbers, to ensure odors are not expelled. Each of these facilities will be located primarily below grade, with above-grade odor control stacks. The above grade portion will be located above the nearest odor receptors (more than 6 feet in height).

A King County Greenhouse Gas Emissions Worksheet is attached (Appendix A).

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known off-site air emissions or odors that may affect the Project.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

BMPs will be implemented for the proper use, storage, and disposal of equipment and materials within the construction limits. These BMPs will minimize or eliminate the discharge of potential pollutants that may contribute to exceeding applicable air quality standards.

Structures and pipelines will be hydraulically designed to reduce potential emissions during operation, particularly by reducing turbulence in waste water conveyance components, thus reducing the release of dissolved hydrogen sulfide (the primary source of odors) at the force main discharge and siphon structures.

Operational and maintenance practices that will be implemented to control odor and emissions include the following:

- Operate pumps daily at a high capacity to produce scouring velocities in the pump station force mains
- Use fresh water to scour and flush the force mains
- Ensure force main check valves are leak tight
- Install pigging (i.e., pipeline cleaning) station in the force mains

Active odor control systems will be installed at four locations to minimize air impacts to the community: NMPS, at the force main discharge near 90th Place SE Place (Mercer Island), at the East Channel Inlet near the I-90 Trail close to SE 35th Place (Mercer Island), and at the Enatai Beach Park (Bellevue). Carbon scrubber odor control systems will be designed to ensure high level odor prevention and ensure emission levels are held below the existing conditions. The carbon media proposed to be used in these systems is a highly reliable odor control technology with minimal risk and is effective for removal of the hydrogen sulfide gases.

3. Water

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Portions of the Project are located in and adjacent to Lake Washington and Mercer Slough. The Project will also temporarily affect an unnamed tributary to Lake Washington (Type S Stream; identified as the NMPS stream). There are seven other tributary streams (City of Mercer Island Stream Classification Type 1 and Type 2) crossing beneath the proposed pipeline alignment on Mercer Island as they flow from the south side of I-90 into Lake Washington on the north side of I-90 (see Figure 1). These streams will not be impacted, because they are piped below ground where they intersect with the new pipeline. The mainstem of Mercer Slough (Type S Stream) is also a tributary to Lake Washington. Wetland areas along Mercer Slough (Category II; known as Mercer Slough Wetland) that will be temporarily impacted are within the Mercer Slough Wetland Complex.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

The Project will require work in, over, and adjacent to Lake Washington, Mercer Slough and the NMPS stream for which there will be unavoidable temporary construction impacts. There will be no permanent adverse impacts to surface waters from work in Lake Washington, Mercer Slough, or the NMPS stream.

The following construction components are related to work in, over, or adjacent to (within 200 feet) surface waters:

<u>NMPS Stream Crossing</u>
The NMPS stream is expected to have an extremely low likelihood of salmonid presence due to poor water quality (headwaters are primarily stormwater runoff), channelized and armored banks and bed, and challenges to anadromy (including a 700-foot culvert from Lake Washington to the NMPS parcel). Dewatering of the NMPS stream work area will be used to establish a dry work zone and avoid releasing excessive turbidity during open-cut and cover pipeline installation through the stream channel. Prior to excavation, the stream will be isolated using block nets and fish will be removed from the construction area using a seine. Barriers will be installed upstream and downstream of the excavation area to isolate the construction area from the surrounding environment. A gravity bypass system will be installed in the construction and flow will be returned downstream of the construction area. The timing for the work will be during the approved in-water work window, targeting the low flow period when fish are unlikely to be present.

<u>Lift Station-11</u>
Lift station improvement activities will require construction within five feet of the OWHM of Lake Washington; however, the work will be done almost entirely below ground and

largely within existing structures. Consequently, it will not affect Lake Washington or any shoreline features, such as riparian vegetation.

Mercer Island Boat Launch Shoreline

Within 200 feet of the Lake Washington shoreline on Mercer Island, construction of the East Channel Siphon will involve open-cut and cover trenching as well as clearing, grading within the adjacent work areas. A portion of the existing concrete bulkhead will be replaced with more natural shoreline stabilization, and disturbed lakebed areas along the shoreline will be restored with suitable gravel to enhance fish spawning habitat. Work required below OHWM will occur during approved in-water work windows.

East Channel Crossing

The East Channel Siphon will be constructed across the East Channel of Lake Washington near its narrowest point (approximately 1,400 feet) using open-cut and cover construction methods with special considerations for in-water work. Suitable BMPs will be used to minimize potential impacts to water quality, particularly during dredging and backfilling activities from barges, and at the shoreline transition work areas. Timing of this work will be during approved in-water work windows.

Enatai Beach Park Shoreline

Within 200 feet of Lake Washington shoreline at the Enatai Beach Park, construction of the East Channel Siphon and new pipe connections and appurtenances will involve open-cut and cover trenching as well as clearing, grading within the adjacent work areas. A portion of the shoreline will be restored with bio-engineered shoreline stabilization restoration landscaping in adjacent upland areas. Areas of lakebed excavated near the shoreline will be restored with suitable gravel to enhance fish spawning habitat. Work required below OHWM will occur during approved in-water work windows.

Enatai Beach Park Swim Beach

Reconfiguring the existing sewer pipelines that are within the swim beach of Enatai Beach Park will require open-cut and cover trenching and sliplining work below and adjacent to the OHWM of Lake Washington. Directly following construction activities, the temporarily affected shoreline area will be restored to original conditions. Work required below OHWM will occur during approved in-water work windows.

Enatai Interceptor

Rehabilitation work to reline the existing Enatai Interceptor pipeline will occur within and adjacent to Lake Washington and Mercer Slough. Relining work for the buried pipeline will be primarily occur at existing maintenance holes and angle structures located along the existing pipeline within Lake Washington and Mercer Slough. The work areas will be accessed using barges or from adjacent shoreline areas. Suitable BMPs such as turbidity curtains and silt fences will be used to control turbidity and erosion respectively. Access to maintenance holes and angle structures in Mercer Slough will require clearing of vegetation and the placement of swamp mats during construction with 200 feet of the shoreline. In addition, up to two angle structures on the existing Enatai Interceptor will need to be accessed using temporary in-water containment areas in Mercer Slough. Work below OHWM that is not fully isolated from adjacent water (e.g., within existing pipeline structures, or temporary containment features) will occur during permitted in-water work windows.

Sweyolocken PS

Project construction activities will occur at Sweyolocken PS located upland of Mercer Slough in Bellevue that is within 200 feet of the shoreline of Mercer Slough and within the Mercer Slough Wetland Complex. These activities will include HDD staging and installation for the new Enatai Siphon, trenching to connect the new Enatai Siphon to the pump station, and restoration of disturbed areas following construction.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

The Project will require the excavation of approximately 13,100 cubic yards in Lake Washington (including the East Channel and Bellevue Conveyance segments), 40 cubic yards in Mercer Slough, and 20 cubic yards in the NMPS stream. The pipe will occupy a portion of the excavation area, and therefore less fill will be placed back in the area excavated compared to the volume removed. In addition, appropriately sized, clean, rounded gravels (i.e., fish mix) will be placed in areas of Lake Washington to improve fish habitat. The fill material for these areas will be obtained from a King County approved off-site source.

The approximate areas of the water bodies that will be directly affected is as follows: 116,350 square feet in Lake Washington (including the East Channel and Bellevue Conveyance segments), 2,300 square feet in Mercer Slough, and 580 square feet in the NMPS stream. All impacts will be temporary during construction, and the sites will be restored to baseline (or better conditions).

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

Two types of surface water withdrawals or diversions are proposed during construction: (1) the temporary bypass of the NMPS stream, and (2) temporary dewatering of isolated work areas in Lake Washington.

The bypass of the NMPS stream work area is necessary to establish a dry work zone and avoid siltation and turbidity effects to the stream during open-cut and cover pipeline installation across the stream channel. The work area will be isolated by diverting stream flows around the work area through a temporary bypass pipe system.

Dewatering will be needed within isolated areas of Lake Washington along the existing Enatai Interceptor for pipeline access and construction at Enatai Beach Park and to provide dry construction access at existing angle structures in Mercer Slough. Each area will be isolated from Lake Washington by a containment system in order to conduct replacement of the existing pipeline (i.e., at the Enatai Beach Park swim beach) or the UV-CIPP rehabilitation work (in Mercer Slough) along the existing pipeline route.

Proposed methods of dewatering include pumping of water out of the primary isolation area before discharging back into Lake Washington or Mercer Slough within the turbidity curtain. Any discharges to surface waters will comply with State Water Quality standards.

For fish-bearing waterbodies, fish exclusion from the dewatered area, and pump intake screening will be done in accordance with applicable regulations. The contractor will be responsible for determining the exact method for establishing a dewatering zone as part of the dewatering plan to be submitted in the CSWPPP and criteria established by Ecology through the Section 401 water quality certification permitting process. The anticipated methods of containment and disposal for each location are described below in Section 4.d.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Lake Washington is a controlled system, and is not considered to be within a 100-year floodplain. Portions of the existing Enatai Interceptor pipeline alignment, on the east side of Lake Washington along Mercer Slough, are located in a 100-year floodplain. Since these portions of the pipeline alignment are almost entirely buried below ground, and are not being reconfigured, the Project will not affect floodplain function or be affected by flooding.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No waste material will be discharged to surface waters. The sewer pipeline is a closed system.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

Groundwater withdrawals during dewatering will be necessary at several points along the pipeline alignment in Mercer Island and Bellevue during the open-cut and cover construction. Sump pumps and wells may be used at the discretion of the contractor to temporarily dewater these work areas where the excavation depths are within approximately three feet below the groundwater table. In limited areas where the depth below the water table exceeds three feet, dewatering will most likely be done with well points. Turbid water will be held in Baker tanks before discharge in accordance with applicable permit requirements.

Dewatering discharges will be made to storm drains or the sanitary sewer according to local area permit conditions. No discharges will be made into the groundwater.

The approximate total quantity of groundwater estimated to be withdrawn for work on Mercer Island is 14,702,000 gallons. The approximate total quantity of groundwater estimated to be withdrawn for work in the City of Bellevue is 7,783,000 gallons.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste material is anticipated to be discharged into the ground. The Project involves the installation of a fully contained replacement sewer line.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Stormwater runoff during construction will occur at semi-pervious and impervious areas within the limits of construction, and in some locations from adjacent upland areas. Quantities will vary based on precipitation events, and when construction will occur at various locations during the four years of construction. Stormwater runoff will discharge to surface drainage features, such as streams and ditches and ultimately flow into stormwater conveyance systems and/or Lake Washington.

The increase of impervious surface area associated with the NMPS facility improvements will result in a minor increase in stormwater runoff that flows into the NMPS stream and then into Lake Washington. Based on initial calculations for the 100-year flow using the Western Washington Hydrology Model (WWHM2012) with an hour time step, the increase in stormwater is likely to be less than 0.1 cubic feet per second, which is a negligible increase.

The increase of impervious area associated with the changes that the Project will be making along the I-90 Trail will result in an increase in stormwater runoff. Stormwater runoff will infiltrate, discharge to surface drainage features, or be collected in a conveyance system and ultimately flow into existing stormwater conveyance systems and/or Lake Washington.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No waste material will be intentionally discharged into the ground. The Project involves the installation and rehabilitation of an existing sewer line. BMPs will be in place to avoid unanticipated releases of sewage during construction.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

The Project is not anticipated to affect drainage patterns in the vicinity of the pipeline alignment after construction is complete. Minor changes to drainage patterns will occur temporarily in small areas during construction; however, these will generally be restored to their existing patterns following construction.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

The following BMPs, in addition to what is identified in Section B.1.h, will be implemented to reduce or control surface, ground, and runoff water, and drainage impacts:

- Storing fuels and other potential contaminants in secured containment areas.
- Containing equipment, materials, and wash water associated with construction.
- Conducting regular inspections, maintenance, and repairs of fuel hoses, hydraulically operated equipment, lubrication equipment, and chemical/petroleum storage containers.
- Maintaining spill containment and clean up material at construction sites.
- Establishing a communication protocol for handling spills (e.g., ESC lead).
- If warranted, an impervious material will be placed over concrete or asphalt after pouring to avoid direct contact with stormwater as the pavement cures.
- Washout from concrete trucks will not be dumped into storm drains or onto soil or pavement that carries stormwater runoff.
- During construction, the contractor will control stormwater so that peak and base flows in potentially impacted streams are not adversely affected by treated stormwater discharge from the expanded impervious surface areas created by the Project.
- During the Enatai Interceptor rehabilitation component, a damaged pipe contingency plan will be developed by the contractor that outlines responses should there be unexpected damage to the pipeline during the rehabilitation process. The contingency plan will include additional materials and methods to repair any unexpected pipe damage.
- During Enatai Siphon HDD construction activities, a mud pit will be established outside of sensitive areas to contain the borehole drilling materials. Mud pumps and a solids control/drilling fluid filter system will remove excess mud from the borehole, and a pressure relief well will be installed to ensure that the surrounding area is not contaminated from a hydrofracture during HDD work.
- In addition to the above BMPs, the contractor will be responsible for submitting the CSWPPP according to the criteria established by Ecology through the Section 401 permitting process.

4. Plants

a. Check the types of vegetation found on the site:

x deciduous tree: alder, maple, aspen, other
x evergreen tree: fir, cedar, pine, other
x shrubs
x grass
__ pasture
__ crop or grain
__ Orchards, vineyards or other permanent crops.
x wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
x water plants: water lily, eelgrass, milfoil, other
x other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Construction of the Project will temporarily impact up to approximately 300,000 square feet of vegetated area and permanently remove up to approximately 2,000 square feet of vegetated area. The Project will remove up to approximately 200 trees. The exact extent of tree and vegetation removal or alteration will be based on construction methods and surface restoration requirements from regulatory agencies and local jurisdictions. In particular, the County is coordinating with the City of Mercer Island and WSDOT to establish a restoration plan for the areas of the Project that will affect the I-90 Trail on Mercer Island, consistent with WSDOT standards and City of Mercer Island's Aubrey Davis Park Master Plan. Habitat enhancements to account for these impacts are discussed in Section B.4.d below.

Existing vegetation that will be removed or altered by Project construction varies across the project area for which the main locations are described below.

Mercer Island: The island is surrounded by Lake Washington, and the shoreline is nearly completely developed with residential properties. The riparian vegetation associated with the stream adjacent to NMPS consists of native and invasive species. Several large coniferous and deciduous trees are present in the riparian corridor, including red alder (*Alnus rubra*), western red cedar (*Thuja plicata*), and Douglas fir (*Pseudotsuga menziesii*). The understory is dominated by Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*), and Japanese knotweed (*Polygonum cuspidatum*). Proposed restoration will include clearing the streambanks will be cleared of invasive vegetation and replanted with native vegetation.

The vegetation along the Mercer Island Interceptor is primarily associated with the I-90 Trail. The tree species along the I-90 Trail were identified and characterized in the Arborist Report (Tree Solutions 2019a), and primarily include western red cedar, incense cedar (*Calocedrus decurrans*), Douglas fir, katsura tree (*Cercidiphyllum japonicum*), and Norway maple (*Acer platanoides*). There are also areas within residential and urban centers that also have native trees.

Bellevue: The shoreline of Lake Washington between Enatai Beach Park and the mouth of Mercer Slough contains single-family residences with armored shorelines and very little overhanging vegetation. Vegetation in the area is primarily lawn, ornamental shrubs and trees, and invasive Himalayan blackberry and English ivy. Some large trees are present along the shoreline, including Douglas fir and western red cedar. To the east of this residential area, approaching Mercer Slough, the shoreline is within the I-90 ROW. In this area, I-90 is elevated, and the shoreline has herbaceous and woody (mostly willow [*Salix* spp.] species) vegetation growing underneath. Large patches of Himalayan blackberry are present between I-90 and the I-90 Trail.

The Mercer Slough East shoreline along the pipeline alignment is mostly wetland and a significant portion of the shoreline is located within the Mercer Slough Wetland Complex. At the mouth of Mercer Slough in Lake Washington, residential impacts give way to a more natural area before the slough riparian corridor is bisected by I-90. The natural area riparian vegetation is dominated by invasive shrubs and grasses, primarily Himalayan blackberry and reed canarygrass (*Phalaris arundinacea*). Further backshore, there are several clumps of large trees, including western red cedar, Douglas fir, red alder, and big-leaf maple (*Acer macrophyllum*).

Directly upstream of the I-90 East Channel Bridge, the riparian vegetation is similar to the mouth of Mercer Slough, with reed canarygrass and Himalayan blackberry adjacent to the slough, and red alder and western red cedar further upland. Further upstream, and adjacent to the Mercer Slough wetlands, the riparian habitat is dominated by red-osier dogwood (*Cornus sericea*) and salmonberry (*Rubus spectabilis*).

The Project is developing arborist reports for the City of Mercer Island (Tree Solutions 2019a) and the City of Bellevue (Tree Solutions 2019b). Trees that will be protected and removed will be documented in the arborist reports for review by the respective jurisdictions.

c. List threatened and endangered species known to be on or near the site.

No threatened or endangered plant species are known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

King County is working with Bellevue, Mercer Island, and WSDOT on tree replacements and other habitat enhancements at NMPS and along the pipeline alignment. All temporarily disturbed vegetation areas will be graded to pre-Project contours and replanted with native vegetation suitable for site conditions. Permanent impacts will be mitigated per the applicable local codes and WSDOT requirements.

There are several locations proposed for habitat enhancements that go beyond standard site restoration following construction activities. The enhancements will use native plants to off-set potential Project impacts and preserve, restore or enhance existing vegetation of the site (Figure 2). Overall, there will be more than a 1:1 ratio of site restoration activities within the limits of construction that include planting native vegetation, including trees, and removing non-native or invasive plant species intended to improve ecological conditions.

Construction activities will follow vegetation protection BMPs including:

- Minimizing clearing to the extent necessary to complete the project.
- Clearly marking the extent of clearing before construction begins.
- Installing and maintaining tree protection fencing to protect the critical root zone of all trees to be retained.
- Replanting vegetated areas as soon as practicable after construction activities are complete.

e. List all noxious weeds and invasive species known to be on or near the site.

Himalayan blackberry, English ivy, Japanese knotweed, reed canarygrass, Eurasian watermilfoil, hydrilla, and Brazilian elodea.

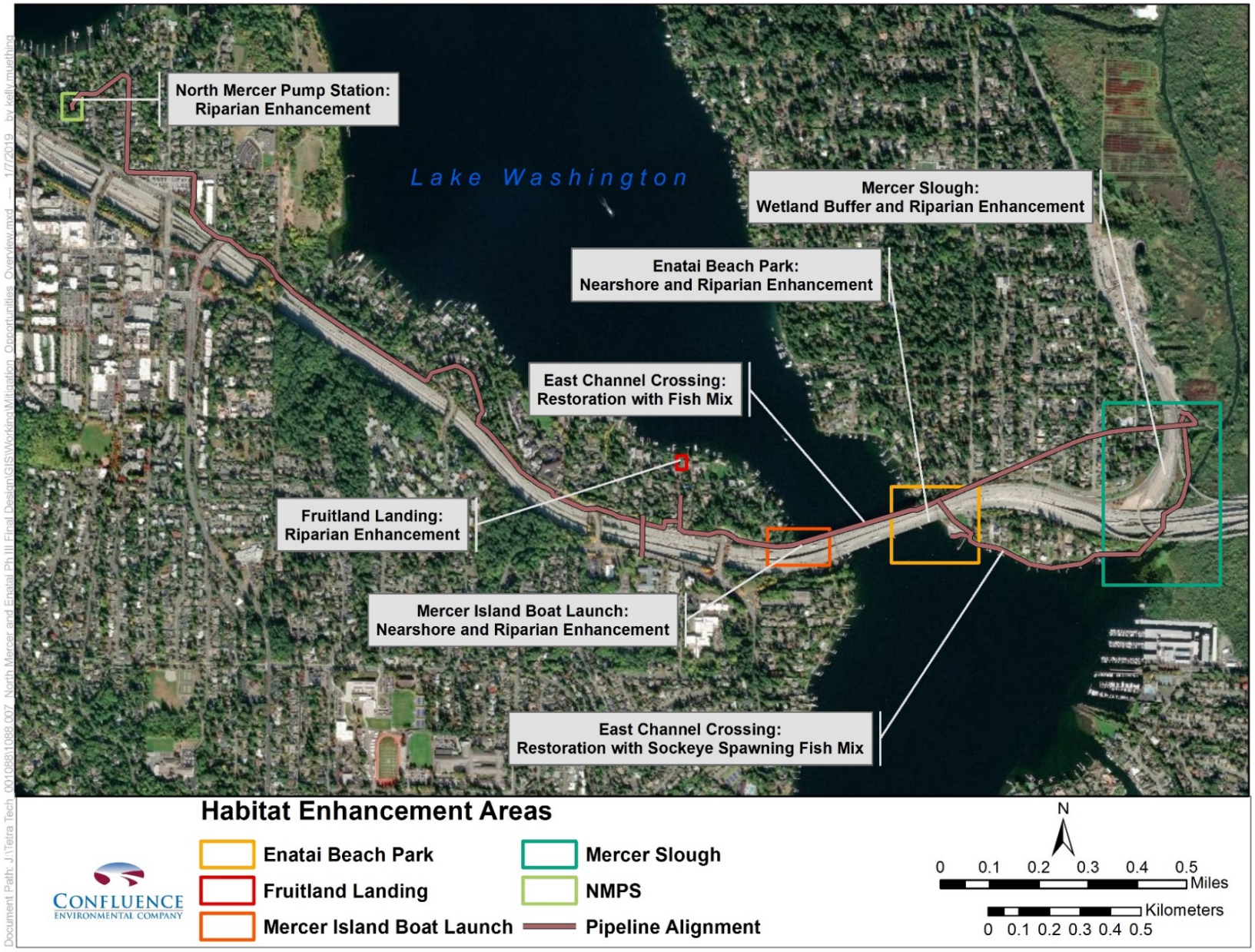


Figure 2. Habitat Enhancement Areas

5. Animals

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include (applicable species along the pipeline alignment are **bolded and underlined** below):

birds: **hawk, heron, eagle, songbirds, other: waterfowl**
mammals: **deer**, bear, elk, **beaver, other: coyote, squirrel, racoon**, etc.
fish: **bass, salmon, trout**, herring, shellfish, other _____

Documented animals along the pipeline alignment include:

- **Birds:** Great blue heron, bald eagle, peregrine falcons, pileated woodpecker, Vaux's swift, purple martin, osprey, green heron, red-tailed hawk, and various other songbirds and waterfowl.
- **Mammals:** Long-legged myotis, long-eared myotis, western big-eared bat, coyote, eastern gray squirrel, racoon, striped skunk, black rat.
- **Fish:** Puget Sound Chinook salmon, Puget Sound steelhead, bull trout/ dolly varden, coho salmon, rainbow trout, resident coastal cutthroat trout, and sockeye salmon.
- **Amphibians:** Western toad and the common bullfrog.
- **Invertebrates** (near the pipeline alignment): crayfish.

b. List any threatened and endangered species known to be on or near the site.

Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*; threatened), Puget Sound steelhead (*O. mykiss*; threatened), and bull trout (*Salvelinus confluentus*; threatened).

c. Is the site part of a migration route? If so, explain.

This site is used for migration by salmonids. The documented presence of salmonids in the Lake Washington and Mercer Slough means that both adults and juveniles periodically use the nearshore for migration. Migratory birds, such as waterfowl and songbirds, also migrate through the area.

d. Proposed measures to preserve or enhance wildlife, if any:

The BMPs identified above in Sections B.1.b, B.2.c, B.3.d, and B.4.d will also be proposed measures to preserve or enhance wildlife. In addition, the following BMPs will be implemented during construction to avoid and minimize construction related impacts to fish, wildlife, and their habitats:

- Turbidity curtains will be used for all in-water work to confine the impact to the local area and exclude fish from the work area as outlined below. Turbidity curtain removal will only occur after water quality sampling shows that water quality has returned to allowable limits according to the WAC 173-201A-200 (1)(e) Table 200.
- Turbidity monitoring will occur during dredging and filling of the pipeline alignment zone to ensure that water quality standards are met.

- Seasonal restrictions (i.e., in-water construction periods) will be applied to the project to avoid or minimize potential impacts on fish species, following approval from the regulatory agencies.
- Riprap and other bank stabilizing materials will be installed from the banks or outside the wetted perimeter as much as possible.
- Disturbance to riparian vegetation will be minimized by straddling the vegetation with heavy equipment (or by pruning it without damaging the roots) to allow for the operation of heavy equipment.
- Riparian vegetation outside of the approved work area will not be disturbed.

Habitat enhancement measures that will also enhance wildlife habitat include the areas identified for restoration under B.4.d and Figure 2.

e. List any invasive animal species known to be on or near the site.

There are no invasive fish or other aquatic vertebrates known to occur along the pipeline alignment. Invasive crayfish of the northern, red swamp, and rusty varieties may also be found at or near the site in freshwater.

One invasive invertebrate species, the New Zealand mudsnail, is known to occur in Lake Washington and its tributaries, although it has not been documented in the specific areas of Lake Washington that will be disturbed by the Project. The nearest observation of New Zealand mudsnail is in Mercer Slough, greater than 800 feet from the proposed pipeline alignment. On-site surveys conducted in 2017 for inspections of existing structures to support Project design did not find evidence of New Zealand mudsnails in Mercer Slough along or near the pipeline alignment. The Project will adhere to the permit conditions that are anticipated related to the control and containment of New Zealand mudsnails or other invasive species during in-water construction.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

The completed Project will continue to rely primarily on electricity to meet its energy needs, which are predominantly for continuous operation of pump station facilities.

In the event of a power failure, Project pump stations (e.g., NMPS and Sweyolocken PS) will be powered by a diesel standby generator. Periodic visits by operations and maintenance staff will require vehicles powered primarily by gasoline or diesel.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No. The Project will entail the repair, replacement, and rehabilitation of an existing sewer line that is located below ground. The height and location of the above ground improvements at the NMPS facility will not affect potential use of solar energy by adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Specific elements that were added to NMPS for energy conservation include photo cells to control exterior lights and unit heaters to limit how much and how often heaters are running. In addition, older equipment will be replaced with newer, more energy efficient equipment.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

1) Describe any known or possible contamination at the site from present or past uses.

Materials will be excavated throughout the proposed conveyance pipeline alignment. No evidence of known or possible contamination along the upland pipeline alignment was discovered. For in-water portions of the alignment, based on a review of Ecology's Lake Washington water and sediment surveys, the likelihood of occurrence of contaminated materials during Project excavation is expected to be very low (Ecology 2018). The chemical analytical results of the East Channel sediment sampling concluded that none of the samples analyzed exceeded any of the DMMP Marine Guideline screening levels and are considered safe for unconfined open water disposal in Elliott Bay in accordance with applicable regulations (Shannon & Wilson 2018b). If encountered, contaminated materials will be handled using BMPs, as described in Section B.5.d.; however, contaminated materials are not expected to occur along the pipeline alignment.

Based on a review of the Environmental Data Resources reports for the NMPS site, there were two reported incidences of diesel spills on the site. For planning purposes, it has been assumed that diesel-contaminated soils will be encountered in all excavations along the existing driveway, parking area, and along the force main excavation beneath the NMPS stream. It has also been assumed that the soils encountered in the upper 10 feet of the temporary pump station excavation will be diesel-contaminated. Diesel-contaminated soils are not expected in excavations for the generator building and retaining walls to the west of the driveway and parking area. Excavated soils that are contaminated will require special handling and disposal in a Resource Conservation and Recovery Act Subtitle D facility.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

No known contamination exists along the project alignment beyond those described above. The properties impacted by the Project are generally in the same land use type as they have been for several decades (e.g., residential, parks, transportation infrastructure, utilities).

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Construction-related materials such as fuel and hydraulic fluid will be stored and used on site during construction. BMPs will be implemented during construction to minimize the potential for spills or mechanical failures to occur, and to minimize the potential for adverse effects from hazardous chemicals to workers or nearby residents.

The completed project will convey untreated wastewater. Exposure to untreated wastewater can be hazardous, but the risk of exposure to members of the public will be negligible.

4) Describe special emergency services that might be required.

No special emergency services will be required beyond those currently available in the area: City of Mercer Island Fire Department, City of Bellevue Fire Department, and Department of Ecology (spill of oil or hazardous material: 1-800-645-7911).

5) Proposed measures to reduce or control environmental health hazards, if any:

During construction, BMPs will be implemented to minimize the potential for spills or mechanical failures to occur, and to minimize the potential for adverse effects from fuels, fluids, and lubricants to workers, nearby residents, or the environment. During construction, the contractor will be responsible for complying with all applicable regulations.

Applicable Project BMPs identified above will also reduce or control environmental health hazards. Additionally, the Project will comply with following regulations by the cities of Bellevue and Mercer Island: fire code, wastewater treatment codes, and construction spill protocols.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Vehicle traffic noise from I-90, Lake Washington boat traffic, and typical urban noises (e.g., lawn mowers) are audible from the Project site, but will have no impact on the Project.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Short-term Noise Impacts: Construction noise transmission is not expected to exceed ambient terrestrial and underwater noise levels. Common construction impacts, including in-water noise, have been avoided and/or minimized to the extent practicable.

All construction activities that produce noise above local ordinance nighttime thresholds will be limited to the weekday times of 7AM and 10PM (Mercer Island) and 7 AM to 6 PM (Bellevue) to reduce construction noise levels during sensitive nighttime hours, unless a noise variance is approved by the local jurisdiction.

Specific construction methods (e.g., impact driving of sheet piling) are being avoided to reduce noise impacts. Trenching equipment (e.g., vacuum excavator, concrete saws, dump trucks, backhoes) will produce the loudest noise levels of all the Project equipment on land.

The loudest three pieces of terrestrial equipment used for construction will be the concrete saw at a noise level of 90 A-weighted decibels (dBA) at a distance of 50 feet, the vacuum excavator at 85 dBA at 50 feet, and a backhoe at 78 dBA at 50 feet. The HDD drilling and pull-back process includes equipment such as a drill rig, pumps, excavator, cranes, soil separation plant, dump trucks, generators, Baker tanks, and derrick with barge. Similar noise levels will be generated for the UV-CIPP lining technique used during the Enatai Interceptor rehabilitation and for the pull-back process during the HDD work. These noise levels will range from approximately 65 dBA (pumps) to approximately 85 dBA (vacuum/sewer cleaning) at a distance of 50 feet. These noise levels are all below general construction noise generation levels.

Two proposed in-water activities in the action area will have the potential to increase underwater noise levels: trenching equipment and vessel operations. The loudest components of the trenching equipment will be stationed above the waterline on construction barges; thus, in-water noise from this equipment is expected to be negligible.

The operation of tugboats or self-propelled work barges will produce in-water noise disturbance. However, vessel operation is likely to result in noise levels that are less than the injury effects threshold for fish (i.e., 206 dBPEAK [maximum decibel value reached by the sound pressure]) and composed of a substantially different sound signature (e.g., distribution of sound energy levels across variable frequencies) compared to impact pile driving for which the 206 dBPEAK sound level threshold was established. In addition, the ambient underwater noise level is assumed to be at least 120 dBRMS (decibel root mean square) based on the presence of commercial and recreational vessels in Lake Washington.

Lake Washington is located in an urban setting with high vessel traffic and associated underwater noise. Overall, the disturbances generated by Project-related vessels and construction equipment are expected to be within the range of baseline conditions.

Long-term Noise: There are no long-term noise sources associated with operation of the Project that are above existing baseline conditions or above conditions allowed within the local code. The new equipment at NMPS is designed to be limited to 60 dB at the property line (background conditions). There are odor control fans along the conveyance, although these will have acoustic attenuation devices to limit the noise and not exceed conditions under the local jurisdiction code for noise levels.

3) Proposed measures to reduce or control noise impacts, if any:

Noise Control Measures: BMPs that will be used to reduce noise generated from equipment used during construction activities:

- The contractor will equip construction equipment engines with adequate mufflers, intake silencers, and engine enclosures to reduce their noise by 5 to 10 dBA.
- The contractor will turn off construction equipment during prolonged periods of non-use to eliminate extraneous noise.
- The contractor will maintain all equipment and train equipment operators in good practices to reduce noise levels.
- Temporary diesel generators and temporary pumping equipment to be operated at night will be required to be fitted with sound attenuation equipment.
- Sound enclosures for the fan in the odor control vaults and silencers on the exhaust stacks if the acoustical analysis identifies a need.
- NMPS will be equipped with sound traps at building penetrations to limit noise transmission outside of the buildings.
- NMPS walls and ceilings are designed to absorb or limit noise transmission.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

Mercer Island: The Project sites within the City of Mercer Island are zoned and used as residential, WSDOT ROW, parks, or aquatic (i.e., Lake Washington). Mercer Island is surrounded by Lake Washington, and the shoreline is nearly completely developed with residential properties. The Mercer Island Boat Launch is a waterfront park featuring lawn, parking area, and a boat ramp to Lake Washington. Lift Station 11 at Fruitland Landing has a small picnic area. Common activities within the Mercer Island portion of the Project area include residential activities, boating, waterfront city park activities, and biking and walking along the I-90 Trail.

Bellevue: The Project sites within the City of Bellevue are zoned as single family residential, open/park space, or aquatic. Enatai Beach Park is a waterfront park featuring multiple picnic areas, a lawn, a swimming beach, a boat house, a snack shack, restrooms, a parking lot, and a small playground. Mercer Slough Nature Park includes a canoe trail, blueberry farm, an environmental education center, picnic area, and waterfront access. Common activities within the Bellevue portion of the Project area include residential activities, waterfront city park activities, boating (both motorized and non-motorized), and biking and walking along the I-90 Trail.

The Project will not affect land use on nearby or adjacent properties, and is intended to maintain sewer service to the area.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or non-forest use?

The project site has not been used as working farmlands or forest lands in recent decades. The Project area is currently developed and no agricultural or forest land will be converted or impacted as a result of the Project.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

The project will not affect or be affected by surrounding working farms or forest land normal business operations.

c. Describe any structures on the site.

The main building structures on the site are located in two locations: (1) NMPS, and (2) Sweyolocken PS. The structures associated with these areas are described below.

- **NMPS:** NMPS consists of the existing building, which houses pump and generator machinery, a paved driveway, and parking area. NMPS receives gravity flow from the West Trunk and discharges to the North Mercer Force Main. NMPS is operational, but requires upgrades to support current and future flows.

- **Sweyolocken PS:** Sweyolocken PS, located next to Bellevue Way and the Mercer Slough Nature Park, sends wastewater from Bellevue and Mercer Island to a major wastewater pipeline called the Eastside Interceptor which terminates in Renton. The site includes the pump station and associated structures, gravel driveway and parking areas, and a hand boat launch.

d. Will any structures be demolished? If so, what?

No structures, as described above, will be demolished as part of the Project. There is a private dock located to the north of the Enatai Beach Park that is not permitted and is located partly on WSDOT property. This dock will be removed and demolished.

e. What is the current zoning classification of the site?

The project intersects the following land use zones in the City of Mercer Island:

- Single-family Residential (R-8.4, R-9.6, R-12, R-15)
- Business (B)
- Commercial Office Zone (C-O)
- Multi-Family (MF-2L, MF-3)
- Public Institution (PI)

The Project intersects the following land use zones in the City of Bellevue:

- Single-Family Residential (R-1, R-2.5, R-3.5, R-4, R-5)
- Multi-Family Residential (R15, R20)
- Park

f. What is the current comprehensive plan designation of the site?

See zoning classifications above, which are reflective of city comprehensive plans (City of Bellevue 2018, City of Mercer Island 2018).

g. If applicable, what is the current shoreline master program designation of the site?

City of Mercer Island:

- Urban Park Environment (Lift Station 11)
- Urban Residential Environment (Mercer Island Boat Launch)

City of Bellevue:

- Shoreline Residential (North of I-90 & Between Enatai Beach Park and Mercer Slough)
- Urban Conservancy (I-90 and Enatai Beach Park)
- Urban Conservancy—Open Space (Mercer Slough)

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Mercer Island: Critical areas are defined in the Mercer Island City Code (MICC) under 19.07. Critical areas within the Mercer Island portion of the Project area include streams and stream buffers, shorelines and shoreline buffers, geologic hazard areas, and fish and wildlife conservation areas. The stream adjacent to NMPS has a standard buffer width of 75 feet. Lake Washington's shoreline has a buffer width of 50 feet. There are no wetland or wetland buffer impacts on Mercer Island within the Project area.

Bellevue: Critical areas are defined in the City of Bellevue Land Use Code (LUC) under 20.25H. Critical areas within the City of Bellevue portion of the Project area include streams and stream buffers, wetlands and wetland buffers, geologically hazardous areas, and habitat for species of local importance. Mercer Slough East stream has a standard buffer width of 100 feet. Mercer Slough Wetland Complex has a standard buffer width of 110 feet. There are no areas of special flood hazard impacts on Bellevue within the Project area.

i. Approximately how many people would reside or work in the completed project?

Both NMPS and Sweyolocken are automatically controlled and remotely monitored by County operations and maintenance staff; therefore, no County employees are dedicated to either site and are only on-site to perform regular maintenance activities and troubleshoot and operational issues as they arise. It is not anticipated that this project will substantially change the number of trips County staff make to each facility on an annual basis.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The Project is undergoing coordination and review with local, state, and federal jurisdictions to obtain all necessary approvals and permits to ensure compatibility with existing and projected land uses and plans. This includes coordination with WSDOT and Sound Transit to address compatibility with their nearby projects and facilities.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

No measures are proposed since no agricultural and forest lands exist along the project alignment.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None, as there is no housing associated with the project.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None

c. Proposed measures to reduce or control housing impacts, if any:

Not Applicable

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The only location where buildings are being proposed is at the NMPS. Current and proposed structures on the site are one story or less. Building material includes wood, concrete, and metal. There are also minor structures associated with the odor control vaults (e.g., odor control stack), which will be at least 6 feet in height. The exact locations are not fully determined, but will be prioritized in locations that naturally screen the structures (e.g., in areas with trees).

When trees are not around, stacks are typically disguised to look like trees or other natural structures. The final design will be determined during the final design phases.

As described in Section B.2.c above, odor control stacks are anticipated at the following locations:

- NMPS (on Mercer Island)
- East Channel Inlet (near SE 35th Place on Mercer Island)
- Force Main Discharge (near 90th Place SE on Mercer Island)
- Enatai Beach Park (Bellevue)

b. What views in the immediate vicinity would be altered or obstructed?

The Project will result in the removal of trees which will alter views at the NMPS and some locations along the conveyance pipeline, including along the Aubrey-Davis section of the I-90 Trail in Mercer Island. King County is working with residents, WSDOT, and the cities of Mercer Island and Bellevue to provide replacement trees in accordance with applicable regulations. The proposed building modifications at NMPS and the odor control structures will not appreciably alter or obstruct existing views.

c. Proposed measures to reduce or control aesthetic impacts, if any:

At the NMPS site, the design of the new generator building carefully considered the proximity of adjacent property to the west, and a priority was placed on maintaining an adequate landscaped area between the new building and the property line to provide visual screening from the neighboring properties. The new above-ground structures were also sited further south on the property in order to minimize the visual impact from the SE 22nd Street and help maintain the residential character of the neighborhood. Design elements have also been incorporated around the courtyard area to screen the view of equipment from the street. The proposed NMPS improvements will undergo design review by the City of Mercer Island to ensure compatibility with the local setting and reduce and control any aesthetic impacts. Odor control vaults are considered minor structures that do not require additional measures to control aesthetic impacts.

The remaining aesthetic impacts will be controlled through replanting trees and native vegetation along the pipeline alignment.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Project construction will take place largely during daylight hours. Temporary site lighting may be used at the beginning and end of work days during construction when daylight hours are short.

Lighting will be interior to the odor control sites in both Mercer Island and Bellevue. There will be new exterior lighting associated with the NMPS improvements, although it will remain similar to existing conditions at the site. The City of Mercer Island requires zero light leaving the property, and the new lighting for the facility has been designed to meet those requirements.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

No existing off-site sources of light or glare will affect the proposed project.

d. Proposed measures to reduce or control light and glare impacts, if any:

During construction, all exterior lights will be focused or shielded as necessary to cast light only in areas that require it and to minimize light spilling onto neighboring properties. Downcast light will be used in the NMPS design to control for light and glare impacts to adjacent properties. No other new lighting is proposed.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Recreational opportunities in the immediate vicinity of the Project include:

- The I-90 Trail that runs parallel to I-90 along most of the proposed pipeline alignment.
- Fruitland Landing, a City of Mercer Island street-end park located at the north end of 97th Avenue SE that provides public access to Lake Washington.
- Lake Washington, particularly the East Channel and then areas to the east to Mercer Slough.
- Mercer Island Boat Launch, Enatai Beach Park, and the Mercer Slough Nature Park, which are all waterfront parks that offer access to Lake Washington or Mercer Slough. There is also a small boat launch site near the Sweyolocken Pump Station.

b. Would the proposed project displace any existing recreational uses? If so, describe.

During Project construction, public access will be temporarily displaced for various segments of the I-90 Trail for bicycling and walking/running. Access to swimming, boating and other shoreline recreational uses of Lake Washington will be temporarily affected at several public parks along the pipeline alignment. These include portions of the Mercer Slough Nature Park and at the Sweyolocken hand held boat launch, Enatai Beach Park, the Mercer Island Boat Launch, and Fruitland Landing. Private access to swimming and boating will also be temporarily affected during construction, primarily along Lake Washington between Enatai Beach Park and Mercer Slough for rehabilitation of the Enatai Interceptor.

Although the construction schedule for the various Project components is subject to change by the contractor, the estimated timing and duration of intermittent disruptions to existing recreational uses due to Project construction are as follows:

- The I-90 Trail (Mercer Island): approximately 17 months from summer 2021 through late 2022.
- Fruitland Landing: approximately 14 months from spring 2021 to late spring 2022.
- Mercer Island Boat Launch: Partial use of parking area for staging will begin in summer 2021 and may extend for approximately 18 months through late 2022. The access road will be more directly affected by pipeline construction (e.g., lane closure) for approximately 3 months during late summer to fall of 2021.
- Lake Washington: approximately 5 months from July through November 2022 within East Channel, and approximately 2 months during fall 2023 for the Enatai shoreline.
- Enatai Beach Park: Construction may begin by summer 2021 although it will generally occur on the north side away from recreational uses through 2022. Construction activities will extend more directly into active park use areas for approximately 3 months during late summer and fall of 2022. Construction will occur within the swim beach area for approximately 3 months during late summer and early fall 2023.
- Mercer Slough Trail (Bellevue): approximately 5 months from summer 2023 through late 2023, and approximately 1 month during spring 2024.
- Mercer Slough Nature Park (from the mouth of Mercer Slough to Sweyolocken PS) and the Sweyolocken boat launch: primary construction activity for approximately 8 months from summer 2021 through early 2022 will take the boat launch out of service. Other Project work during the latter half of 2023 and spring 2024 is not expected to prevent boat launch access.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The Project construction will avoid high use times for Lake Washington (e.g., SeaFair) to the extent practical, and only block portions of public access locations when necessary. During work along the I-90 Trail or surface streets, traffic will be rerouted via detour routes that will be finalized prior to construction based on information in the Transportation Study (Jacobs 2018a). Boat docks on private property will only temporarily be affected, and equipment will be removed as soon as practical.

13. Historic and cultural preservation

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

Various buildings and structures are located near the Project site that are over 45 years old. Based on a cultural resources study for the Project completed by Jacobs (2018b) no buildings or structures either listed in or eligible for the listing in the National Register of Historic Places were observed within the Area of Potential Effect (APE) for the Project. Therefore, a finding of "no effect to historic properties" was recommended for the Project.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

Based on the cultural resources study for the Project completed by Jacobs (2018b), no landmarks, archaeological features or deposts were identified in the APE, and there is limited potential for the APE to contain intact archaeological deposits. No other notable evidence of Indian or historic use or occupation has been identified or documented in the Project area.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

Jacobs (2018b) conducted background research (including ethnographic records, archeological and historical records, environmental data, and LiDAR imagery from WADNR), archaeological monitoring of geotechnical borings, and a field survey to determine if the APE is at risk of impacting any existing cultural resources. Research and fieldwork were conducted by archaeologists that meet the Secretary of Interior's Professional Qualifications for archaeology (Jacobs 2018b).

The Project was screened by the King County Historic Preservation Program for the presence of cultural and historic resources within the project area and the probability of an inadvertent discovery of cultural resources during project construction. This screening included a review of historic registers, databases including the DAHP records database ("WISAARD"), historic maps and reports, and predictive GIS modeling.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

The Project will comply with the requirements of the National Historic Preservation Act, particularly the requirements for consultation under Section 106 of the Act. The Section 106 consultation process will include the preparation and approval of an archaeological monitoring and inadvertent discovery plan that will be implemented during project construction to ensure that the Project complies with all applicable regulations pertaining to cultural and historic resources. No other specific measures are proposed to reduce impacts to cultural or historic resources given that no cultural or historic resources have been identified within the APE.

14. Transportation

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The Project area generally parallels I-90 from the City of Mercer Island to the City of Bellevue. At the west end, NMPS can be accessed from SE 22nd St. 76th Ave SE. Proceeding east, the conveyance pipeline on Mercer Island follows 78th Ave. SE, SE 24th St., 81st Ave. SE., N.

Mercer Way, Shorewood Drive, SE 89th Place SE, 90th Place SE, and via E. Mercer Way and Frontage Road to the Mercer Island Boat Launch area. In Bellevue, access from I-90 is primarily via Bellevue Way SE, with other connections to the Project via 108th Ave SE, SE Lake Road, 113th Ave. SE, and SE 34th St. as well as others (See Figure 1).

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

Mercer Island Park and Ride is located southwest of the proposed pipeline alignment. There are two bus stops adjacent to the park and ride: N Mercer Way and 80th Ave SE- Bay 1 and Bay 2. Bay 1 currently serves routes 201, 204, 216, 550, 554, 630, and 989. Bay 2 currently serves routes 892 and 981 in addition to the routes served by Bay 1. Additionally, route 894 extends across City of Mercer Island, and there is a stop located at SE 26th St & 82nd Pl SE and multiple stops adjacent to the alignment along N Mercer Way. Within Mercer Island, minimal impacts to public transit are anticipated. The project area within the City of Bellevue is currently served by public transit. Impacts to traffic and public transit in Bellevue area are expected to be minimal as Project work will not be occurring directly in through streets (Jacobs 2018a).

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

Street parking throughout the proposed pipeline alignment will be temporarily impacted by construction activities at various times. These impacts will generally be limited to the time it takes the contractor to complete work in specific segments of the Project. However, some shoulder parking on North Mercer Way (between SE 26th Street and SE 35th St) will be impacted for a longer duration as it will serve as a bike/detour route while work is being done along portions of the I-90 Trail. Approximately half of the parking at the Mercer Island Boat Launch, and all of the parking at the Enatai Beach Park and the Sweyolocken Boat Launch, will be temporarily impacted by construction activities at various times (Jacobs 2018a). The construction of a new access road to allow for maintenance of the new structures at Enatai Beach Park could result in the loss of two existing parking spaces at the park, although that will not be confirmed until the completion of the final design.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No improvements to existing roads and streets are proposed for the Project other than what is required by WSDOT and the Cities of Bellevue and Mercer Island to restore portions of streets where excavation is necessary.

Sections of the I-90 Trail that are excavated during Project construction will be restored in accordance with applicable WSDOT requirements and site constraints. At a minimum, the trail will be restored to its existing width. To the extent feasible, however, the trail will generally be restored to meet the WSDOT trail width standard of 12 feet with 2 feet of gravel on both sides. For pedestrians and bicycling facilities, the Aubrey Davis Park Master Plan, which is currently in progress, will be developing a comprehensive plan for programmatic improvements along the I-90 Trail (a portion of the Mountains-to-Sound Greenway) along the pipeline alignment.

Coordination meetings with the project team have taken place with both the Cities of Mercer Island and Bellevue and WSDOT, and other potential trail improvements and/or restoration will continue to be discussed as details of the Master Plan are developed and made available.

A new access road will be constructed in Enatai Beach Park (beneath the overhead spans of I-90) to provide maintenance access to the new odor control vault. King County has been coordinating the road design with the Bellevue Parks Department to address Enatai Beach Park Master Plan considerations.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Project construction will occur near public water access facilities at Mercer Island Boat Launch, Enatai Beach Park, and the Sweyolocken hand held boat launch. See the response to B.12.b for more details. In-water construction will occur within navigable areas of Lake Washington.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?

Vehicular tips generated by the Project following completion are anticipated to remain similar to the current number of occasional trips associated with operation and maintenance of the facilities as noted in response to B.8.i.

Truck traffic generated by the Project during construction will vary based on the different Project components. The construction of the Mercer Island conveyance pipeline is anticipated to require the most truck traffic for a sustained period of time; however, this will occur in localized work segments involving an estimated 13 to 21 truck trips per day. The average daily truck trips for work on other Project components are generally anticipated to be lower.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No, the Project will not affect or be affected by the movement of agricultural and forest products on roads or streets in the area.

h. Proposed measures to reduce or control transportation impacts, if any:

Pipeline construction will be transient in nature with the contractor generally completing construction within a local area as they advance along the alignment (i.e., rolling work zones). This will lead to construction activities being concentrated in a specific area for a relatively short portion of the total construction duration and then moving on to an adjacent segment of street or series of streets. While work is being completed within a particular area, vehicular, pedestrian, or bicycle traffic may need to be controlled through the work zone using traffic control devices, flaggers, and/or using a detour. Construction will generally occur during the normal work hours allowed by the local permitting agencies (WSDOT, City of Mercer Island, or City of Bellevue). Traffic will be flagged through work zones during construction. Flagging,

signage, and lane closures during construction hours will be used to detour vehicle traffic and pedestrians (Jacobs 2018a).

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No, the Project will not increase a need for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Not Applicable

16. Utilities

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

The purpose of the Project is to upgrade existing sanitary sewer service on north Mercer Island and Bellevue through modifications to existing sewer infrastructure in order to meet regional wastewater system requirements projected through the year 2060. Other utilities now serving the existing Project components will continue to be used. There will be electrical service upgrades, additional electrical connections at various locations along the new pipeline, and additional temporary electrical service during construction. Puget Sound Energy is the electricity service provider. Impacts to other non-Project utilities during construction will be avoided to the extent possible; however, appropriate measures will be taken in consultation with relevant service providers to protect, temporarily relocate, and restore their affected utilities, as needed, in order to avoid or minimize service interruptions.

King County is also coordinating with the City of Mercer Island to include their installation of a fiber optic cable along a segment of the new pipeline alignment under the I-90 Trail during Project construction.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Katherine Fischer

Katherine Fischer, Environmental Programs Managing Supervisor
King County WTD

Date Submitted: 5/13/19

D. REFERENCES

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Appendix A. King County Greenhouse Gas Emissions Worksheet

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions Per Unit or Per Thousand Square Feet (MTCO2e)			Lifespan Emissions (MTCO2e)
			Embodied	Energy	Transportation	
Single-Family Home	0		98	672	792	0
Multi-Family Unit in Large Building	0		33	357	766	0
Multi-Family Unit in Small Building	0		54	681	766	0
Mobile Home	0		41	475	709	0
Education		0.0	39	646	361	0
Food Sales		0.0	39	1,541	282	0
Food Service		0.0	39	1,994	561	0
Health Care Inpatient		0.0	39	1,938	582	0
Health Care Outpatient		0.0	39	737	571	0
Lodging		0.0	39	777	117	0
Retail (Other Than Mall)		0.0	39	577	247	0
Office		0.0	39	723	588	0
Public Assembly		0.0	39	733	150	0
Public Order and Safety		0.0	39	899	374	0
Religious Worship		0.0	39	339	129	0
Service		0.0	39	599	266	0
Warehouse and Storage		0.0	39	352	181	0
Other		0.0	39	1,278	257	0
Vacant		0.0	39	162	47	0

Section II: Pavement

Pavement		14.54				727

Total Project Emissions: 727

Note: King County calculated CO2 emissions for this project based on the following general project parameters (for the Building Type "Other"): "Buildings that are industrial or agricultural with some retail space; buildings having several different commercial activities that, together, comprise 50 percent or more of the floorspace, but whose largest single activity is agricultural, industrial / manufacturing, or residential; and all other miscellaneous buildings that do not fit into any other category."
You can find more details on how CO2 emissions were calculated at
http://www.kingcounty.gov/depts/permitting-environmental-review/info/SiteSpecific/ClimateChange.aspx

King County
Department of Natural Resources and Parks
Wastewater Treatment Division
Regulatory Compliance and Land Acquisition Services
King Street Center, KSC-NR-0505
201 South Jackson Street
Seattle, WA 98104-3855

April 10, 2020

Robin Proebsting, Senior Planner
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040

North Mercer Island Interceptor and Enatai Interceptor Upgrade Project – City of Mercer Island Design Commission Design Review Application (DSR19-017) - Request for Information 1 Responses

Dear Ms. Proebsting:

This letter is in response to your request for comments after the completion of the City's first review for compliance with Title 19 of the Mercer Island City Code (MICC) for the Design Commission Review of Application DSR19-017.

DESIGN COMMISSION PACKAGE

The Design Commission package was originally submitted on February 26, 2019 in preparation for the Design Commission Study Session. The Final Design Commission Design Review application was then submitted in November 26th, 2019. The following are the responses to the Request for Information of the package submitted in November.

Mercer Island Comment #1: The screening requirements list in MICC 19.12.040(B)(7) are not met on the west side of the property, which abuts a residential use and therefore should have 20 feet of full screening. The code allows alternate means of meeting standards when the word "should" is used within a standard, if it can be demonstrated that an equal or better means of satisfying the standard and objective is proposed. Please describe how the proposed landscaping and fence provide equal or better screening than the 20-ft full screening standard in this section.

Response: *The project intends to maximize the screening function by planting an evergreen tree every 4.5 linear feet, adding a mid-story layer of evergreen shrubs and installing a vertical bar fence that, combined with the evergreen trees and shrubs, would providing full screening of the pump station property at pedestrian eye level. The project is specifying coniferous trees to be used for the evergreen screen at 12-14 ft height at time of installation to achieve effective screening on day one after planting.*

We've met with the neighbor and received written acceptance of the proposed screening. Please see attached email.

Attachments: *Pdf Emails: Subject "Follow up from 7-10 Meeting_20190731" and "Follow up from 7-10 Meeting_01072020"*

Mercer Island Comment #2: MICC 19.12.040(B)(10) requires plants to be installed utilizing soil, planting practices and irrigation equipment that maximize the likelihood of their long-term survival. Please provide a description and/or planting detail demonstrating how this standard will be met.

Response: *Requirements for soil prep within the Stream Buffer are found within spec section 32 76 00 Critical Areas Restoration, Enhancement and Habitat Improvement. Requirements for soil prep in landscape areas outside of the Stream Buffer are found within spec section 32 91 00 Planting Preparation. Irrigation requirements for all landscape areas are found within spec section 32 76 00 Critical Areas Restoration, Enhancement and Habitat Improvement. Requirements for plant installation and maintenance procedures are found within spec section 32 93 00 Plants. Plant installation details that supplement these requirements are found in the landscape details, sheet L102 and L103. Each spec section, along with the plant installation detail, has been included as attachments with the relevant text highlighted.*

Attachments: *see four pdf attachments with titles beginning with "comment 2…"*

Mercer Island Comment #3: Please provide information on the plant type and height for the plant mixes proposed near the site entrance, confirming that plantings will not create sight obstructions, pursuant to MICC 19.12.040(11)(d).

Response: *See marked up planting plan L101 with planting mixes and heights at site entrance.*

Attachments: *see pdf attachment with title beginning with "comment 3 and 4…"*

Mercer Island Comment #4: Please call out curb locations on one of the landscaping sheets, if proposed, demonstrating how MICC 19.12.040(11)(f) will be met.

Response: *See marked up planting plan L101 with curbs called out. Permanent curbs enclose all planting areas in vehicle use areas per MICC 19.12.040(11)(f).*

Attachments: *see pdf attachment with title beginning with "comment 3 and 4…"*

Mercer Island Comment #5: The landscaping plan shows plantings on the property to the west of the site. Please provide documentation indicating the neighboring property owner agrees to and will maintain the proposed plantings.

Response: *All trees and most of the plants are on County property, and will be maintained by the County. A narrow strip of property owned by the homeowner that is currently overgrown with English Ivy will be cleared during planting, and will be restored with a native evergreen understory consisting of Low Oregon-grape (Mahonia nervosa), Salal (Gaultheria shallon), Creeping Oregon-grape (Mahonia repens) (native range east of the Cascades), and Western swordfern (Polystichum munitum). The County will provide 3 years of plant establishment using irrigation for all new trees and plants.*

After this 3 year establishment period, County will maintain all trees and plants within County property. The narrow strip of native plantings on the homeowners property will be well established and not need irrigation after 3 years of establishment. See attached email for owner agreement of plantings.

Attachments: *Pdf Emails: Subject "Follow up from 7-10 Meeting_20190731" and "Follow up from 7-10 Meeting_01072020"*

Mercer Island Comment #6: The landscaping plan shows several large tree species in the northeast portion of the property, in the same location as the proposed 16" and 18" sanitary sewer lines. Large trees in the vicinity of the sewer lines have the potential to damage the lines and cause maintenance challenges over time. Please provide a revised landscaping plan, showing the trees relocated.

Response: *Based on the groundwater evaluation, the sanitary sewer is located within the groundwater table which will act as a barrier to prevent root growth down to a depth to reach the sewer casing. See the attached exhibit showing ground water depth from boring hole locations, and those elevations marked on the sewer pipe profile. The narrow strip of native plantings on the homeowners property will be well established and not need irrigation after 3 years of establishment. See attached email for owner agreement of plantings.*

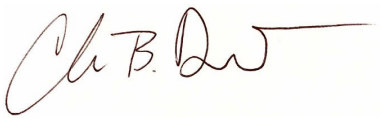
Attachments: *see pdf attachment with title beginning with "comment 6…"*

SUMMARY

Overall, the comments from Mercer Island do not change the overall conclusions in the Design Commission Design Review application materials.

If you have any questions, please contact me at 206-477-5458, or email me at chris.dew@kingcounty.gov.

Sincerely,



Christopher Dew

Water Quality Planner/Project Manager

Enclosure(s): Attachments as identified in letter

SECTION 32 76 00

CRITICAL AREAS RESTORATION, ENHANCEMENT, AND HABITAT IMPROVEMENT

PART 1 GENERAL

1.01 SUMMARY

A. This Section specifies landscaping and maintenance for critical area enhancement areas.

B. Buffer Enhancement areas are identified in the Drawings as:
   1. Areas within the Stream Buffer

1.02 QUALITY ASSURANCE

A. Referenced Standards: This Section incorporates by reference the latest revision of the following documents. These references are a part of this Section as specified and modified. In case of conflict between the requirements of this Section and those of the listed documents, the requirements of this Section shall prevail.

Reference	Title
ANSI Z60.1	American Standard for Nursery Stock
AOSA	Association of Official Seed Analysts, Rules for Testing Seeds
King County	King County Noxious Weed List
WSDA	Washington State Department of Agriculture Rules for Seed Certification

B. Qualifications:
   1. Commercial Pesticide Applicator: WSDA licensed.
   2. Irrigation System Designer: Minimum two years of experience and four similar projects.
   3. Irrigation System Installer: Minimum of two years of experience and four similar projects.
   4. Suppliers: Materials to be provided under this Section are to be the products of firms regularly engaged in the cultivation of the specified species or manufacture of a specified material.
   5. Installers: by specialists possessing sufficient technical competence, skills, resources and ability to complete the work specified.
   6. Landscape Superintendent: Shall have similar experience on a minimum of eight projects in the last five years.

1.03 SUBMITTALS

A. Procedures: Section 01 33 00.

B. Qualifications.
   1. Submit no later than 60 days after Notice to Proceed.
   2. Landscape Superintendent: List of project experience and owner contact information.

C. Enhancement Construction Plan.

D. Plant Material Documentation:
   1. Submit no later than 90 days after Notice to Proceed to verify availability of plant materials at time of planting:
      a. List suppliers' names, addresses, and phone numbers.

b. List respective growing and storage locations.
2. Count of plants supplied and installed by species

E. Invoices for Plant Material
1. Submit at time of each delivery to the Site
2. Itemized list of quantities and sizes per plant species

F. Seed Mixes: Product Data including supplier's weed free test data and certification for the current year

G. Fertilizer Tea Bags: Product Data.

H. Mycorrhizal Inoculant: Product Data.

I. Herbicide: Product Data

J. Temporary Irrigation Plan

1.04 ENHANCEMENTCONSTRUCTION PLAN

A. Work plan, procedures, and schedule of activities for weed eradication, site preparation; planting operations; mulching; and ground woody debris and habitat improvement measures placement. At a minimum include:
1. Erosion and Sedimentation Control: Section 31 25 00.
a. Include description of surface and groundwater management methods and materials: Section 31 25 40.
2. Weed eradication layout and methods, including methods for accomplishing the Selective Clearing work:
a. Hand and/or mechanized weeding:
1) Show areas where weed and grass eradication will occur by hand or mechanized means.
2) Describe equipment use and method of hand or mechanized weeding.
3) Describe how re-sprouted or new weeds and grasses will be eradicated.
b. Herbicide application:
1) Show areas where herbicide will be used for weed and grass eradication
a) Application of herbicide over large stands of weeds and/or grasses requires approval from the Project Representative.
2) Describe methods of herbicide application.
3) Describe how re-sprouted or new weeds and grasses will be eradicated
3. Site preparation methods:
a. Describe equipment use and methods of scarifying soils compacted and/or compressed from construction activities
b. Describe methods to protect scarified soils from re-compaction or re-compression during installation of Planting Soil, Wood Chip Mulch, ground woody debris, and/or habitat improvement measures.
c. Describe methods to apply Organic Amendment and perform required work by hand in the Selective Clearing areas and within the Tree Protection Fencing.
4. Mulching
a. Describe equipment use and methods of Wood Chip Mulch installation.
b. Show locations of proposed Wood Chip Mulch stockpiles.
c. Describe how Wood Chip Mulch will be protected from deleterious contamination materials.
5. Planting and/or seeding
a. Describe equipment use and methods planting and or seeding
6. Clean up and demobilization methods.

1.05 TEMPORARY IRRIGATION PLAN

A. Design Criteria and Plans:

1. Temporary above-ground system.
2. Sprinklers designed to provide head to head coverage of all planting areas within the North Mercer Pump Station property.
3. Riser assemblies attached to steel stakes such that sprinkler head is a minimum of three feet above the ground and fully supported.
4. Tree bubblers designed to run on a separate zone from sprinklers shall be used to provide water to large balled and burlapped trees. Install a minimum of two bubblers per tree.
5. Pressure throughout system complies with manufacturer's recommended minimum requirements.
6. Backflow prevention systems per water supplier standards.
7. Design for prevailing wind of 5 mph and local soil types.
8. Adjust sprinkling time to soil type to avoid water runoff.
9. Avoid overspray onto adjacent sidewalks, driveways and trails.
10. Design for automatic operation using a battery operated automatic controller and automatic remote control valves.
11. Design for winterizing such that water in irrigation pipes may be removed effectively to prevent water freezing and cracking pipes:
    a. Shutoff valve
    b. Drain valve (gravity) location
12. Schedule 40 PVC pipe.
13. Major components manufactured by one manufacturer.
14. Accurately scaled irrigation plans showing locations connections, backflow prevention controllers, sprinkler heads, pipes, valves, electrical supply, and connection points. The irrigation plan shall be accompanied by a list of all irrigation equipment that Contractor proposes using.
15. Operating, programming, and maintenance data.
16. As-built drawings of installed irrigation system with time and flow rates of each station.
17. Copies of Contractor obtained permits.

B. Watering Schedule:
1. Provide water quantities and a schedule of watering plants for planted areas.

PART 2 PRODUCTS

2.01 GENERAL

A. Purchased materials are to be the product of firms regularly engaged in the cultivation of the specified species or manufacture of a specified material.

B. For native plants, refer to the following documents:
1. Botanical identification and nomenclature of plant materials shall be based on descriptions by Hitchcock and Cronquist in “Flora of the Pacific Northwest.”
2. Botanical identification and nomenclature of plant material not found in “Flora of the Pacific Northwest” shall be based on Bailey in “Hortus Third.”

2.02 HERBICIDE

A. Non-selective and non-residual herbicide shall have the following formulation:

B. Active Ingredient *Glyphosate, N- (phosphonomethyl) glycine, 53.8% in the form of its isopropylamine salt.

C. Inert Ingredients (including surfactant) 46.2% TOTAL 100.00% *Contains 5.4 pounds per gallon glyphosate, isopropylamine salt (4 pounds per gallon glyphosate acid).

D. Acceptable Manufacturer:
1. Rodeo Aquatic Herbicide, Dow Gro
2. RoundUp Custom Herbicide for Aquatic and Terrestrial Applications, Monsanto

3. Approved Equal

2.03 ENHANCEMENT MATERIALS

A. Plants:
   1. Size, genus, species, variety/cultivar, and quantity indicated and complying with recommendations and requirements of ANSI Z60.1.
   2. Grown in the states of Washington or Oregon in nurseries west of the Cascade Mountain range and/or in nurseries in British Columbia, Canada, south of the 51st parallel and west of the Coast Mountain Range.
   3. Live Stakes:
      a. Live stakes shall be sized 24-36" in length, ¾ to 1-1/2" diameter
      b. No leaf buds shall have initiated growth beyond ¼ inch and the cambium layer shall be moist, green, and healthy.
      c. Material shall be maintained in a continuously cool, covered, and moist state prior to use and be in good condition when installed.
      d. Nursery grown material shall be maintained in a moist condition until installed.
      e. If live stakes as specified are not available, then substitute one gallon potted plant for each five live stakes of the same species.
      f. Stakes shall be harvested from healthy plants while dormant.
   4. Emergent Plugs:
      a. Several leaf shoots present
      b. Vigorous root growth at least four inches in length.
   5. Trees:
      a. Single leader, straight trunk (unless otherwise indicated in plant list)
      b. Well branched, free of branches up to 5 feet high (unless otherwise indicated in plant list)
      c. Symmetrical growth
   6. Shrubs and Ground cover:
      a. Numerous vigorous branches
      b. Symmetrical growth
   7. Herbaceous Perennials:
      a. Main stem vigorous
      b. Side stems numerous
      c. Symmetrical growth
   8. Plant substitutions will not be allowed without written approval of the Project Representative.

B. Planting Soil, see Section 32 91 00

C. Organic Amendment, see Section 32 91 00

D. Fertilizer Tea Bags:
   1. Shall be a 10-gram biodegradable planting packet containing a blend of 16% total nitrogen(N), 6% available phosphoric acid (P205), and 8% soluble potash (K2O).
   2. Nitrogen, phosphorus, and potassium sources shall be polyurethane coated to provide slow release.
   3. Packets shall contain approximately: 7% combined sulfur(S), 0.5% zinc (ZN), 0.5% iron (FE), 0.5% magnesium (MG), 0.25% copper (CU), 0.05% boron (B), and 0.5% manganese (MN).

E. Mycorrhizal Inoculant:
   1. Contains:
      a. Endospores: Minimum six Glomulus spp.
      b. Ecotospores:
         1) Pisolithus tinctorius.
         2) Minimum of four Rhizopogon spp.
         3) Minimum two Scleroderma spp.
      c. Composed of dry powder or granular material.
      d. Acceptable Products:

1) BioOrganics LLC: Mycorrhizal Landscape Inoculant
2) Horticultural Alliance, Inc.: DIEHARD Mycorrhizal Inoculant
3) Approved Equal

F. Wood Chip Mulch:
1. Acceptable Manufacturers:
   a. Pacific Topsoils DOT Wood Chip Mulch.
   b. Cedar Grove Compost Landscape Mulch.
   c. Approved Equal

PART 3 EXECUTION

3.01 GENERAL

A. Implement the requirements in the Tree Protection Plan prior to commencement of the Work of this Section.

B. Water:
1. See Section 01 52 00 for availability of water.
2. Provide water as needed to complete the work until Substantial Completion.
3. Re-assign water service to King County after Substantial Completion pursuant to 01 52 00.
4. Implement requirements of the water provider.
5. Provide necessary hose, equipment, attachments, and accessories for the adequate watering of planted areas during planting operations and maintenance;
6. Provide 1 inch of water per week from June 1st to July 15th and 2 inches of water per week from July 16th to October 1st. This amount can be offset by the amount of rainfall that fell within the time frame herein specified. Contract shall submit the following evidence to the Project Representative:
   a. Rainfall data from the nearest weather station to the area in question. Data available from Weather Underground: http://www.wunderground.com/
7.
8. Install and operate temporary irrigation system, if specified in this Section.

3.02 HERBICIDE APPLICATION

A. Use only the herbicide specified in this Section.

B. Shall eradicate King County Noxious Weed List Class A, B, and C weeds and non-native grasses and other plants as directed by the Project Representative within restoration and enhancement areas.

C. May be used to spot spray persistent noxious weeds and non-native grasses in restoration and enhancement areas that re-sprout after grubbing, mulching, and/or planting and until Substantial Completion is granted.

D. May be used to eradicate noxious weeds and non-native grasses prior to planting or seeding where large stands of each exist in restoration, enhancement, and/or habitat improvement areas with approval from the Project Representative.

E. Scheduling:
1. Spraying shall not be allowed:
   a. When temperatures exceed 85º F or are under 50º F.
   b. When wind velocities exceed 10 miles per hour.
   c. When foliage is wet, when it is raining, or rain is imminent.
   d. During legal holiday periods.
2. Allow five days after chemical application before the installation of any seeding, trees, or other plantings.

F. Application:
1. Qualified WSDA-licensed Commercial Pesticide Applicator only.
2. Apply according to manufacturer's recommendations.

G. Equipment:
1. Shall consist of a back-pack sprayer,
2. Shall consist of injection system for knotweeds.

H. Protection:
1. Exercise extreme caution to prevent damage to residential plantings, flower or vegetable gardens, vegetable crops, farm crops, orchards, ornamental landscaping, or desirable plants adjacent to the roadside.
2. Spraying shall occur at the minimum height possible and still maintain effectiveness of the herbicide.
3. Spraying shall occur pursuant to the manufacturer's recommendations labeled on the herbicide container.
4. The accepted herbicide used must have the manufacturer's label on the container at all times it is on-site and/or being used.
5. Mark areas where herbicide is applied.
   a. Use blue dye spray indicator in water and herbicide mixtures during application.
   b. Post markers at the time of application.
   c. Place markers at points of entry to the area.
      1) Markers must be a minimum of 4 inches by 5 inches and contain the words: "THIS LANDSCAPE HAS BEEN TREATED BY" as the headline and "FOR MORE INFORMATION PLEASE CALL" as the footer.
      2) The company name and service mark with the applicator's telephone number where information can be obtained shall be included between the headline and the footer on the marker.
      3) The letters and service marks shall be printed in colors contrasting to the background colors in the areas.
      4) Markers must be weather resistant.
   d. Remove markers no more than five days after each herbicide application.

3.03 SITE PREPARATION PRIOR TO PLANTING

A. Buffer Enhancement Areas
1. Mark buffer enhancement areas in the field prior to starting Site Preparation.
2. Areas to be Cleared and Grubbed as shown in the Contract Drawings:
   a. Remove all aboveground growth of non-native vegetation to within 1 inch of the soil surface.
   b. Remove the top twelve inches of the existing soil.
   c. Scarify the top twelve remaining inches of soil to loosen soil prior to placing Planting Soil
   d. Place twelve inches of Planting Soil in four inch lifts, rototilling each lift into the underlying soil before placing an additional four inch lift, until the final or pre-existing grade is attained, per the Contract Drawings.
   e. Compact planting soil such that a person stepping on the soil depresses it no more than one inch.
3. Areas to be Selectively Cleared or areas within the Tree Protection Fencing, as shown in the Contract Drawings:
   a. Selective Clearing should be done per the approved Enhancement Construction Plan.
   b. Place 4 inch depth organic amendment to cover the entire area.
   c. Hand till and thoroughly mix the 4 inch depth of organic amendment into the subgrade to a depth of 8 inches, using care to protect existing tree roots.
4. All Buffer Enhancement areas:
   a. Place 4 inches of Wood Chip Mulch on top of soil surface after non-native vegetation removal and/or soil preparation for fill soils.
   b. Maintain areas free of weeds.

3.04 PLANTING

A. Plants:
   1. Provide the quantity and sizes of trees, shrubs, and herbs required to cover the habitat restoration indicated in the Drawings per the habitat restoration plant schedule and details.
   2. Quantities based on grid spacing where the on-center spacing indicated in the Drawings is one side of the square.
   3. Confirm plant quantities by size and species for each habitat restoration area
   4. Provide plant quantities as required to obtain full coverage of habitat restoration.
   5. Plants shall be in vigorous health and free of pests, disease, fungus, disfiguring knots, sun scalds, abrasions of bark, broken tops, torn roots and other objectionable features.
   6. Plants cut back or pruned from large sizes to meet specified size will not be accepted.
   7. Plants, except for live stakes or live poles, shall not have cuts over 1/4-inch in diameter that have not healed over.

B. Tagging:
   1. Legibly tag.
   2. Tagging may be by species or variety with a minimum of one tag per 10 trees or shrubs.
   3. Emergent Herb plugs shall have one tag per 100 plants.

C. Constraints: Planting.
   1. Shall occur between October 15 to November 30 and February 15 to March 31.
   2. Planting outside of specified dates will not be allowed without written approval of the Project Representative.

D. Planting Operations:
   1. Deliver plants following requirements of the supplier.
   2. Obtain Project Representative approval of plant material prior to planting.
   3. Remove rejected plants from the Site immediately and replace with specified plant materials.
   4. Prior to planting:
      a. Survey and stake all plant material locations and layout planting bed lines prior to beginning installation.
      b. Confirm plant quantities by size and species for each planting zone.
      c. For each planting zone, locate trees first, followed by shrubs, followed by groundcovers, live stakes and plugs.
         1) Place all plants as indicated on the Contract Drawings, or mark each location with wood stakes or color wire flags marked with the first two letters of both plant genus and species (e.g. PH CA for *Physocarpus capitatus*). No holes shall be dug or backfilled without prior approval of Project Landscape Architect/Biologist. Notify Project Landscape Architect/Biologist a minimum of 72 hours before planting to allow Project Landscape Architect/Biologist ample time to adjust plant locations. Provide extra stakes or flags sufficient to mark locations of plants not located on the Contract Drawings.
      d. Adjust quantities as required to obtain full coverage of the planting zones. Notify Project Representative of any discrepancy between quantities in the field and in the Contract Drawings.
   5. Install plants as indicated in the Drawings.

E. Pruning:
   1. When delivered, no pruning shall be necessary for the newly installed trees and shrubs.
   2. However, if pruning becomes necessary to improve plant health, prune as requested by the Project Representative.
   3. Cut branches with sharp pruning instruments; do not break or chop.

F. Emergent Herb Plugs:
   1. Install plugs only after soil has been prepared and Wood Chip Mulch has been installed.
   2. Install plugs through mulch into native or prepared soil.
   3. Feather mulch from plug. Mulch shall not come in contact with stems of plugs.

G. Planting Trees, Shrubs, Ground Cover, and Herbaceous Perennials:
   1. Transport plant materials to their final location with care.
   2. Plant material shall not be removed from the containers until immediately before they are planted. Root systems shall be kept covered and damp at all times.
   3. Install plantings only after the area has been prepared and Wood Chip Mulch has been installed.
   4. Apply Mycorrhizal Inoculant per manufacturer's recommendation for size of plant container.
   5. Under no circumstances will planting be permitted during unsuitable soil or weather conditions as determined by the Project Representative. Unsuitable conditions include frozen soil, high winds, heavy rains, and high water levels.

H. Planting Live Stakes:
   1. Install live stakes as indicated in the Contract Drawings.
   2. Contactor shall follow the steps outlined in the King County Guide found at the following website: https://www.kingcounty.gov/services/environment/stewardship/nw-yard-and-garden/live-stake-plantings.aspx

I. Planting in Pits:
   1. Rake back Wood Chip Mulch to expose an amount of soil surface two times the diameter of the planting pit.
   2. Excavate pit for trees and shrubs so that the vertical sides are twice the width of the root ball and the same depth of the root ball from each plant container, unless directed otherwise in the Contract Drawings.
   3. Scarify the pit sides to allow for root expansion and tamp bottom to prevent plants from settling.
   4. Apply Mycorrhizal Inoculant per manufacturer's recommendation for size of plant container.
   5. Add one tea bag fertilizer pack to each pit.
   6. Set plant material in the pit to proper grade and alignment. Plants shall be upright and plumb and the top of the surface of the soil in the container must be flush with the planting bed surface.
   7. Backfill pit and tamp into place with foot. If more soil is needed to meet final grade in the pit, Planting Soil Mix may be added.
   8. Replace and feather Wood Chip Mulch around each plant and do not let mulch come in contact with the plant stem.
   9. If mulch layer is less than 4-inches thick, supplement Wood Chip Mulch around each plant to achieve a 4-inch minimum thickness.
   10. In their final position, plants shall have their top true root (not adventitious root) no more than 1-inch below the soil surface, no matter where that root was located in the original root ball or container
   11. Backfill material and root ball shall be thoroughly watered on the same day that planting occurs regardless of season.
   12. Do not stake trees and shrubs unless the plant cannot remain straight and upright without staking.

J. Inspection:
   1. Following the installation completion of at least one area in each planting zone, notify the Project Representative. The Project Representative will make an inspection of the planting work within two business days of notification and will notify the Contractor in writing of any corrective action necessary.
   2. Correct unsatisfactory conditions and request re-inspection.

3.05 TEMPORARY IRRIGATION SYSTEM

A. Work shall include designing and furnishing complete, fully functional, temporary aboveground irrigation systems in areas indicated on the Drawings.

B. Work includes obtaining all necessary permits from agencies with jurisdiction over the Project Site.

C. Installation:
   1. Confirm existence and location of all existing and newly installed utilities prior to the commencement of work.

2. Provide protection at all times ample to keep rock, dirt, gravel, debris, and other foreign materials from entering piping, valves, and other irrigation equipment.
3. All plastic valve boxes in planting areas shall be installed 2 inches above finished grade.
4. Valves to be located for water drainage. Pipes and valves to be located away from trees to prevent root damage.
5. Weld pipe only during non-freezing weather and cover work during rainy weather.
6. End drains (quick coupler) for winterization shall be located at the end of main lines.
7. Isolation valves shall be installed upstream of each control valve.
8. Add two or more extra control wires to valve clusters.
9. Cover or enclose work only after it has been fully inspected and tested, and after project Representative has accepted the irrigation systems.
10. Until the end of Substantial Completion, ensure the irrigation system works as specified and repair as necessary.
11. Temporary piping and sprinklers shall be installed above ground.

D. Flushing and Testing:
1. Submit plan to Project Representative for inspections related to flushing, water pressure, irrigation coverage, and overall operation. Conduct tests in presence of Project Representative. Notify Project Representative at least 48 hours prior to all tests.
2. Provide all necessary equipment and perform all work associated with the testing.
3. Irrigation main lines must withstand a pressure test of 100 psi for five minutes and the system must pass an electrical test by testing wires for conductivity with a multimeter.
4. Test backflow prevention devices and provide certification.

E. Warranty:
1. The irrigation system shall be guaranteed by the Contractor to give complete and satisfactory service from time of installation until Substantial Completion.

F. Operation:
1. Starting at the time of planting and ending at Substantial Completion, irrigate all planted areas with 1 inch of water per week, in at least two equal increments, to be scheduled at intervals of twice a week or more frequently, unless otherwise directed by the Project Representative. Pay for water use until Substantial Completion.
2. The County shall assume responsibility for operating the irrigation system after Substantial Completion.

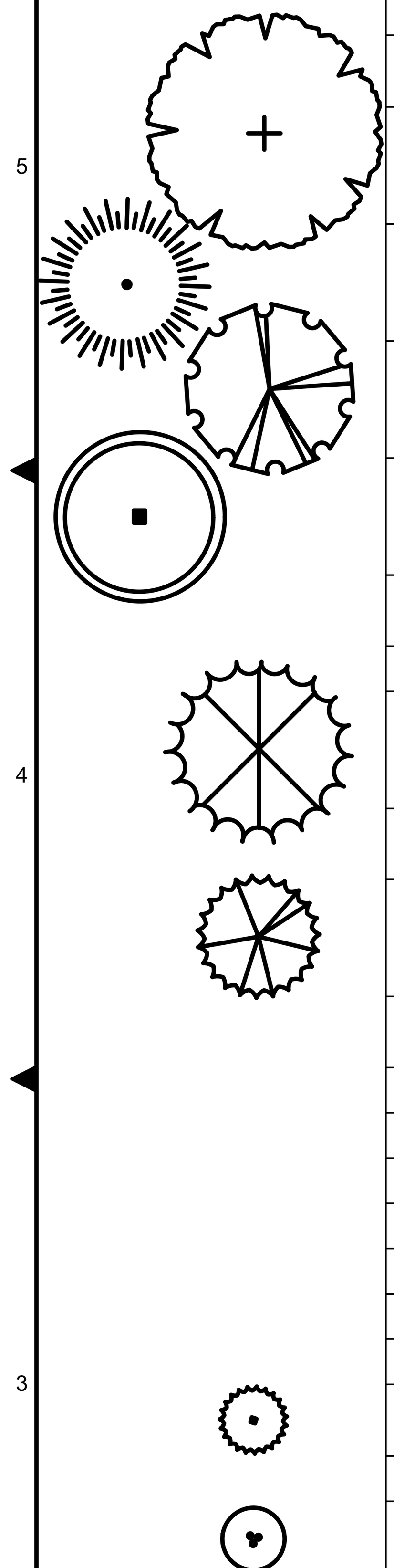
G. Plant Disturbance or Damage Caused by Irrigation System Repair:
1. If in the opinion of the Project Representative, irrigation system or repair work has damaged plants installed as part of the irrigation system installation or repair, Contractor shall replace the damaged plants at Contractor's expense.
2. All planting work resulting from irrigation system installation or repair work shall comply with the Contract Documents.

3.06 MAINTENANCE AND PLANT REPLACEMENT

A. Until Substantial Completion, maintain the restoration, enhancement, and/or habitat improvement areas:
1. Free of weeds.
   a. Do not leave weed plant residues in landscaped areas.
   b. Dispose of weed plant residues in a legal landfill and/or composting facility.
   c. Do not allow weeds to form seeds before removing them.
   d. Remove weeds in seeded areas no later than two weeks after they germinate.
   e. At no time shall weed plant areal leaf coverage exceed 10% of the total planted area.
2. In a clean, neat, and orderly manner at all times.
3. In a manner to promote plant health.
4. Water plants regularly as described in this Section.
5. Maintain Wood Chip Mulch at a 4-inch depth.

6. Replace plants that do not meet the requirements for new plants as described in this Section.

END OF SECTION



PLANT SCHEDULE

TYPE	QUANTITY	BOTANICAL NAME	COMMON NAME	ROOT CONDITION	SIZE	REMARKS
TREE	3	ACER SACCHARUM 'LEGACY'	LEGACY MAPLE	B&B	2 INCH CAL.	STREET TREE GRADE
TREE	8	CALOCEDRUS DECURRENS	INCENSE CEDAR	4 INCH CAL.	12-14 FT.	NATURAL FORM; SINGLE LEADER
TREE	3	CHIONANTHUS RETUSUS	CHINESE FRINGE TREE	2 INCH CAL.	2 INCH CAL.	STREET TREE GRADE
TREE	3	PARROTIA PERSICA 'VANESSA'	PERSIAN IRONWOOD	2 INCH CAL.	2 INCH CAL.	STREET TREE GRADE
TREE	35	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	#1 CONT.	18 INCH	NATURAL FORM; SINGLE LEADER
TREE	21	RHAMNUS PURSHIANA	CASCARA	#1 CONT.	18 INCH	MIN. 5 BRANCHES
TREE	2	THUJA PLICATA	WESTERN REDCEDAR	4 INCH CAL.	12-14 FT.	NATURAL FORM; SINGLE LEADER
TREE	56	THUJA PLICATA	WESTERN REDCEDAR	#1 CONT.	18 INCH	NATURAL FORM; SINGLE LEADER
TREE	16	THUJA PLICATA 'EXCELSA'	EXCELSA WESTERN REDCEDAR	4 INCH CAL.	12-14 FT.	NATURAL FORM; SINGLE LEADER
TREE	37	TSUGA HETEROPHYLLA	WESTERN HEMLOCK	#1 CONT.	18 INCH	NATURAL FORM; SINGLE LEADER
LARGE SHRUB	218	ACER CIRCINATUM	VINE MAPLE	#1 CONT.	12 INCH	MIN. 3 BRANCHES
LARGE SHRUB	102	CORNUS SERICEA	RED TWIG DOGWOOD	LIVE STAKE	24 INCH	SEE DETAIL L103
LARGE SHRUB	77	MAHONIA AQUIFOLIUM	TALL OREGON-GRAPE	#1 CONT.	12 INCH	MIN. 3 CANES
LARGE SHRUB	290	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	#1 CONT.	12 INCH	MIN. 3 CANES
LARGE SHRUB	159	OEMLERIA CERASIFORMIS	INDIAN PLUM	#1 CONT.	12 INCH	MIN. 3 BRANCHES
LARGE SHRUB	238	SALIX SITCHENSIS	SITKA WILLOW	LIVE STAKE	24 INCH	SEE DETAIL L103
LARGE SHRUB	12	MAHONIA X. MEDIA 'ARTHUR MENZIES'	ARTHUR MENZIES HYBRID MAHONIA	#5 CONT.	30 INCH	MIN. 5 BRANCHES
SHRUB	230	ROSA GYMNOCARPA	BALDHIP ROSE	#1 CONT.	12 INCH	MIN. 3 CANES
SHRUB	12	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	#5 CONT.	24 INCH	MIN. 5 BRANCHES
GROUNDCOVER	373	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILYTURF	#1 CONT.		
GROUNDCOVER	561	EPIMEDIUM X PERRALCHICHUM 'FROHNLEITEN'	BARRENWORT 'FROHNLEITEN'	#1 CONT.	9 INCH	
GROUNDCOVER	767	GAULTHERIA SHALLON	SALAL	#1 CONT.	6 INCH	
GROUNDCOVER	410	MAHONIA NERVOSA	LOW OREGON GRAPE	#1 CONT.	6 INCH	
GROUNDCOVER	1456	MAHONIA REPENS	CREEPING MAHONIA	#1 CONT.	6 INCH	
GROUNDCOVER	178	ASARUM CAUDATUM	WESTERN WILD GINGER	#1 CONT.		
EMERGENT	263	CAREX OBNUPTA	SLOUGH SEDGE	PLUGS	20 CU. IN.	
EMERGENT	262	JUNCUS EFFUSUS	COMMON RUSH	PLUGS	20 CU. IN.	
FERN	1218	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	#1 CONT.	-	MIN. 3 FRONDS

PLANT SCHEDULE NOTES:

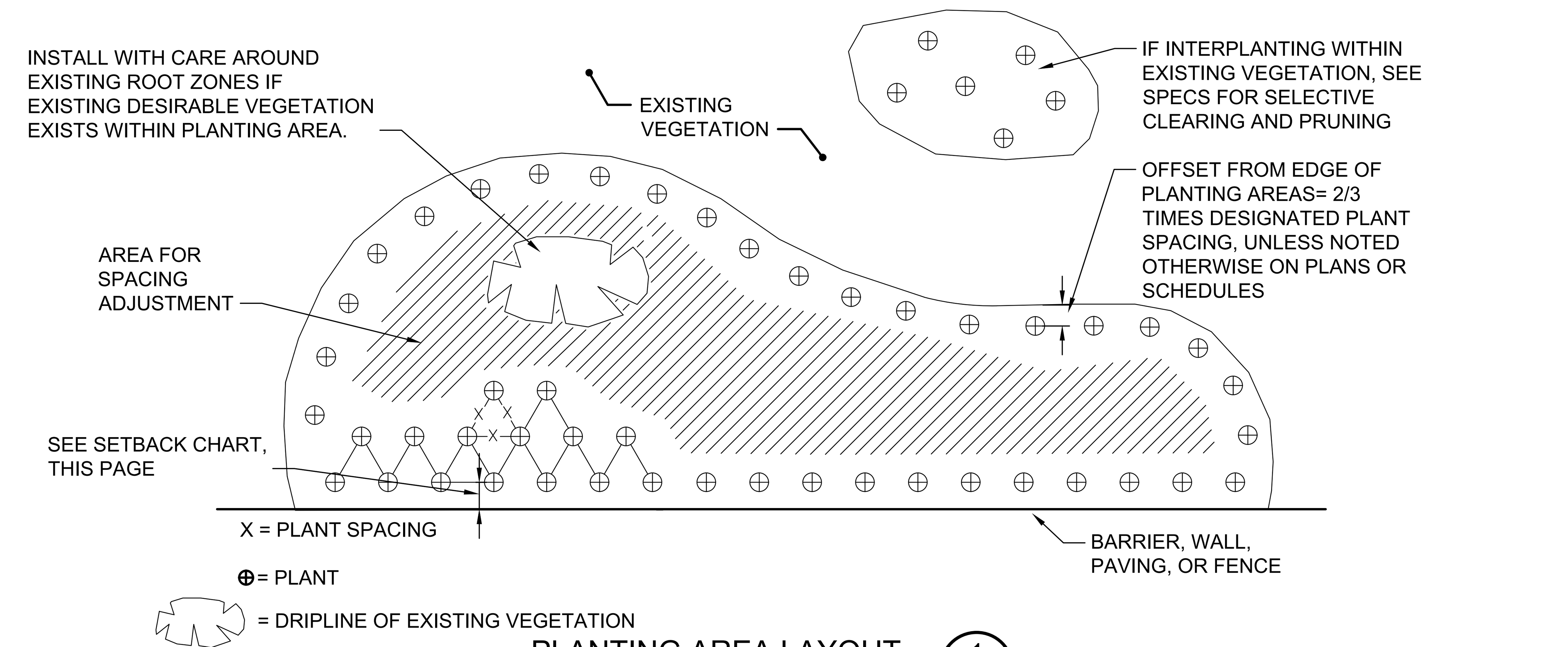
1. ALL PLANT MATERIAL SPECIFICATIONS FOR SIZE AND CONDITION ARE MINIMUM REQUIREMENTS, AND ARE IN ACCORDANCE WITH THE CURRENT EDITION OF "AMERICAN STANDARDS FOR NURSERY STOCK". IF A CONFLICT OCCURS BETWEEN THESE SPECIFICATIONS AND THE "A.S.N.S.", THESE SPECIFICATIONS SHALL APPLY.
2. ALL CONTAINERIZED PLANTS SHALL HAVE ROOT SYSTEMS WHICH FULLY FILL THE CONTAINER WITHOUT HAVING ROOTS THAT CIRCLE THE POT. CONTAINERIZED AND B&B TREES SHALL NOT HAVE TAP ROOTS THAT FORM A "J" SHAPE.
3. IMMEDIATELY BEFORE INSTALLATION, PLANT'S ROOTS THAT ARE BROKEN, DAMAGED, OR TWISTED SHALL BE PRUNED. MATTED OR CIRCLING ROOTS OF CONTAINERIZED PLANTS MUST BE PRUNED OR STRAIGHTENED AND THE SIDES OF THE ROOTBALL SHALL BE ROUGHENED FROM TOP TO BOTTOM TO A DEPTH OF APPROXIMATELY ONE HALF INCH IN TWO TO FOUR PLACES.
4. WHILE INSTALLING NEW PLANTINGS, USE CARE TO PROTECT ROOTS OF EXISTING TREES.
5. STREET TREE GRADE- TRUNK FREE OF BRANCHES TO 5 -7 FOOT HEIGHT, STREET TREES SHALL BE STAKED AND SECURED WITHIN 48 HOURS AFTER PLANTING,
6. CONIFERS SHALL HAVE A NATURAL FORM (NO SHEARING) AND A SINGLE LEADER.
7. TYPICAL SETBACKS FOR PLANT MATERIAL UNLESS OTHERWISE ADJUSTED BY THE PROJECT REPRESENTATIVE DURING LAYOUT AND STAKING OF PLANT LOCATIONS.

PLANT MATERIAL SETBACK CHART

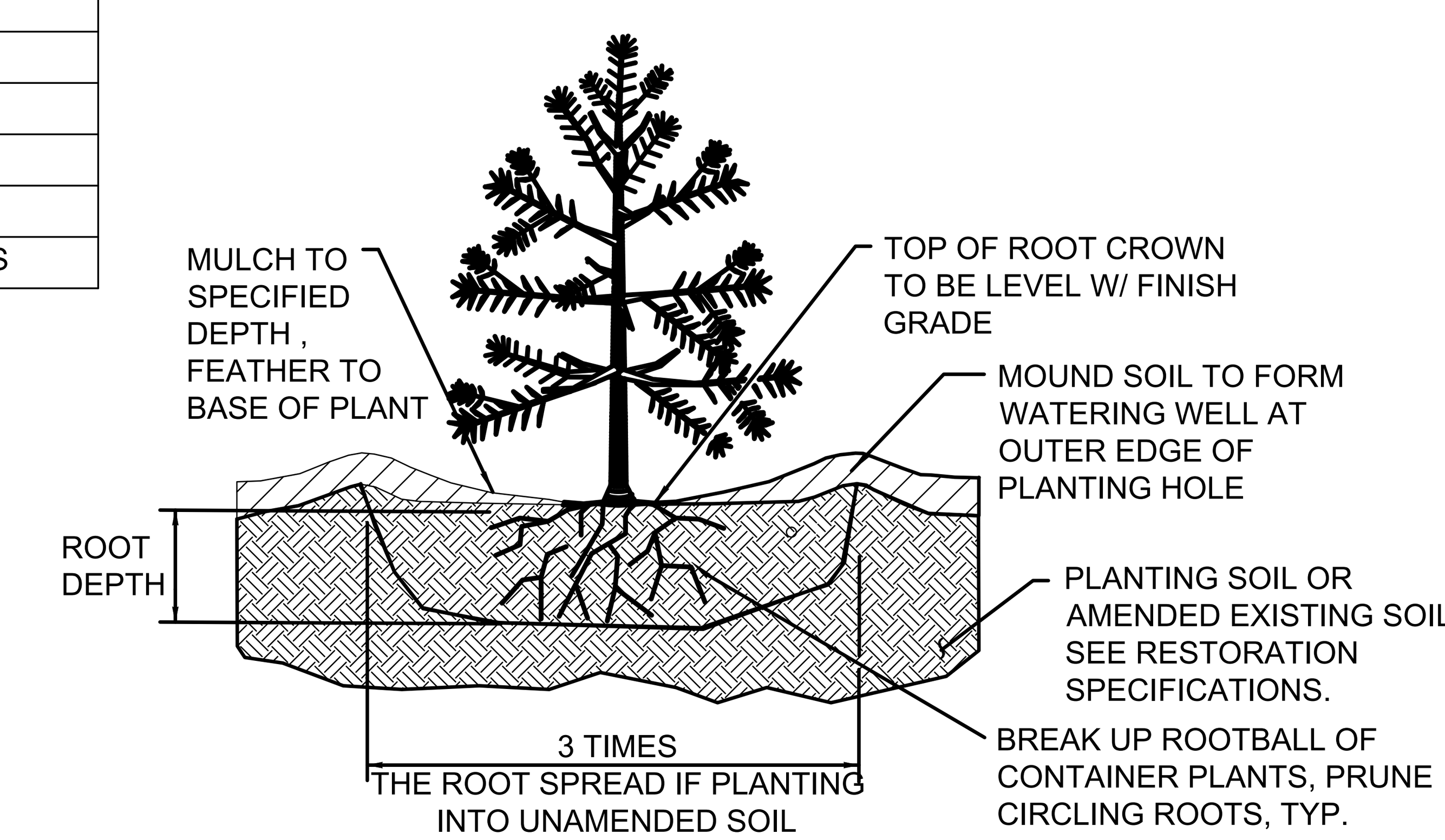
	BACK OF CURB	EDGE OF PAVEMENT	WALL	FENCE	LIGHT POLE	OVERHEAD POWER CENTERLINE	DRAINAGE STRUCTURE	UNDERGROUND SEWER/WATER LINE
GROUNDCOVER	1'	2'	0.5'	0.5'	0.5'	-	-	-
SMALL SHRUB/FERN (< 3 FT TALL)	1.3'	3.7'	3'	3'	3'	-	2.5'	2.5'
MEDIUM SHRUB (4-8 FT TALL)	2.8'	5'	5'	3'	5'	-	2.5'	2.5'
TALL SHRUB (9-15 FT TALL)	5'	5'	5'	5'	12'	-	5'	5'
TREE	per plan	per plan	per plan	per plan	15'	20'	5'	5'

SETBACK NOTES:

1. THE SETBACKS ABOVE ARE MINIMUM SETBACKS FROM CENTER OF PLANT MATERIAL (TRUNK OR STEM) TO FEATURE LISTED IN EACH COLUMN.
2. IN AREAS WHERE SMALL SHRUBS AND GROUNDCOVERS ARE SHOWN ON PLANTING PLAN, BUT THEY CANNOT BE PLANTED WITH REQUIRED SETBACKS, A MIN. OF ONE ROW OF PLANTS SHALL BE PLANTED AT THE SPECIFIED SPACING CENTERED IN THE MIDDLE OF PLANTING AREA.
3. TREE LOCATIONS SHOWN ON PLANTING PLANS ARE APPROXIMATE; IF FIELD ADJUSTMENTS ARE NECESSARY, THE SETBACKS ABOVE SHALL APPLY. PROJECT REPRESENTATIVE WILL APPROVE FINAL LOCATION.



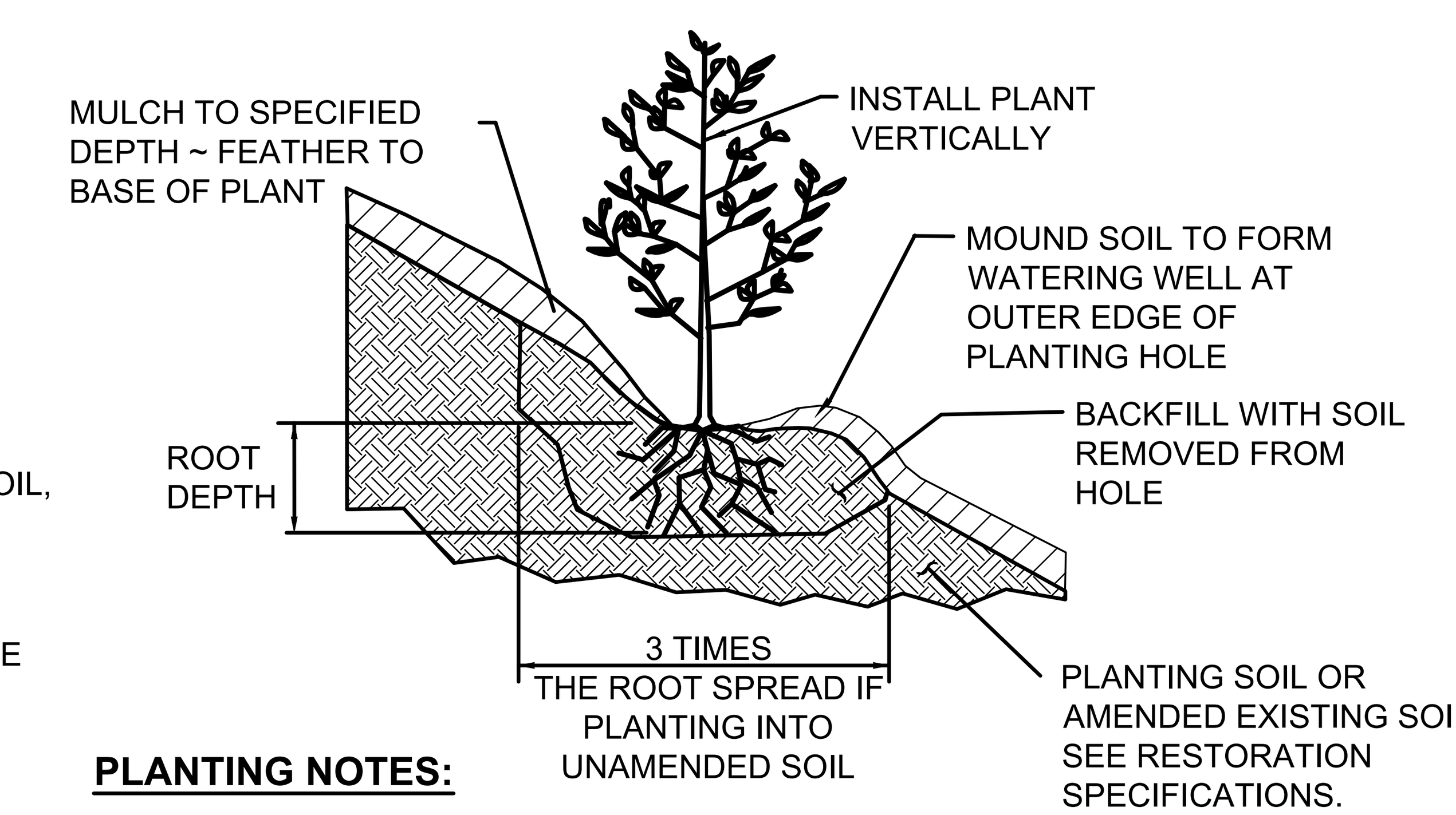
PLANTING AREA LAYOUT 1 VAR
SCALE: NTS



PLANTING NOTES:

1. ADD MANUFACTURER-RECOMMENDED AMOUNT OF MYCORRIZAL INOCULANT.
2. DETAIL APPLIES TO ALL CONTAINERIZED PLANTS

PLANTING DETAIL 2 VAR
SCALE: NTS



PLANTING NOTES:

1. ADD MANUFACTURER-RECOMMENDED AMOUNT OF MYCORRIZAL INOCULANT.
2. DETAIL APPLIES TO ALL CONTAINERIZED PLANTS

PLANTING ON SLOPES 3 VAR
SCALE: NTS

NO	REVISION DESCRIPTION	BY	APVD	DATE

TETRA TECH
JACOBS

PRELIMINARY ISSUE DRAWING
INFORMATION ONLY
90% REVIEW
MAY 2019

STATE OF WASHINGTON — LORCAN BRIAN FRENCH — LICENSED LANDSCAPE ARCHITECT — NO. 1465 EXP. 12/03/20

DESIGNED/DRAWN: L. FRENCH	SCALE: NTS
PROJECT ENGINEER: J. CHAE	REFERENCE 0 1"
DESIGN APPROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

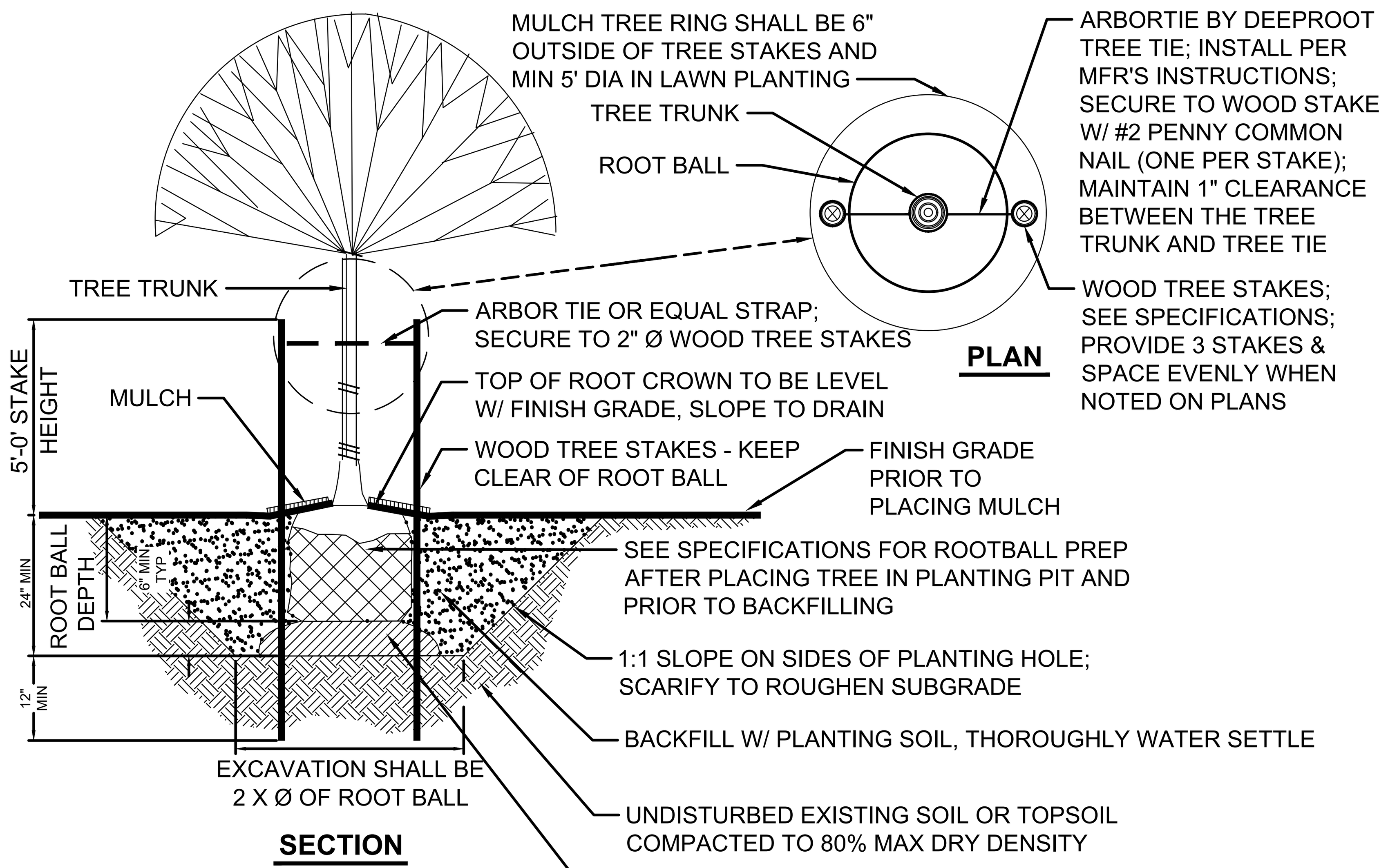
King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE - PUMP STATION IMPROVEMENTS

LANDSCAPE DETAILS

DCN:
DATE: 05/02/2019
PROJECT FILE NO:
DRAWING NO: L102
SHT NO / TOTAL: 123 / 347
REV NO:

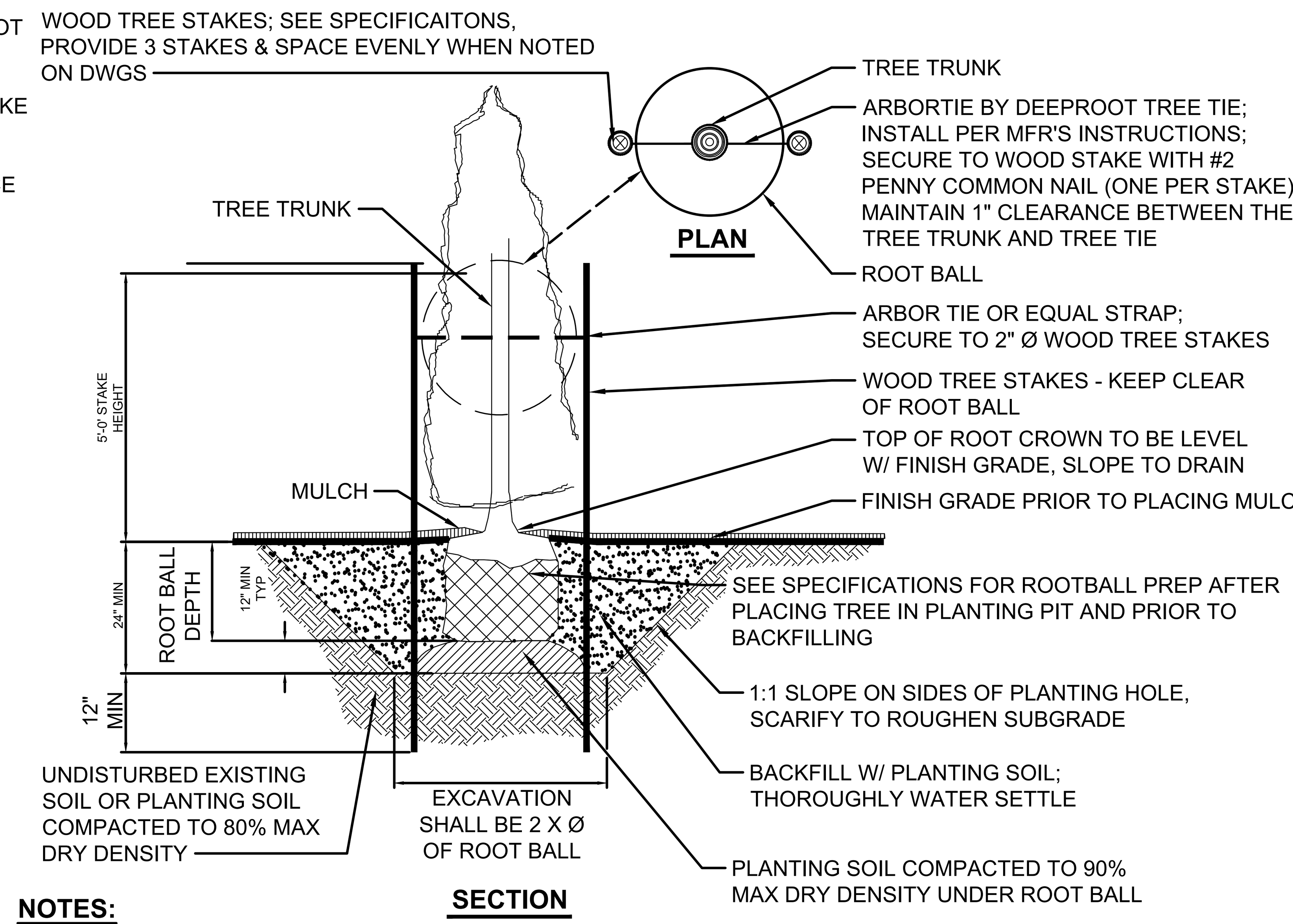
BORDER FILE EDITION: KCWTD-2012-Dsize-TB-Border
FILE LOCATION:P:\W3X67200\700CADD\715LAND\E00306E13-NMPS-L102.dwg
PLOT DATE: 3/18/2020 9:04 PM
PLOTTED BY: D'Auria, Isaac



NOTES:

1. SEE SPECIFICATIONS FOR SOIL PLACEMENT DEPTH.
2. PROVIDE 24" MIN DEPTH OF TOPSOIL AT DECIDUOUS TREE EXCAVATION.
3. ROTATE TREES IN PLANTING AREAS ADJACENT TO VEHICULAR ZONES SO THAT THE DOMINANT BRANCHES ALIGN PARALLEL TO THE VEHICULAR ZONES.
4. ADD MANUFACTURER-RECOMMENDED AMOUNT OF MYCORRIZAL INOCULANT.

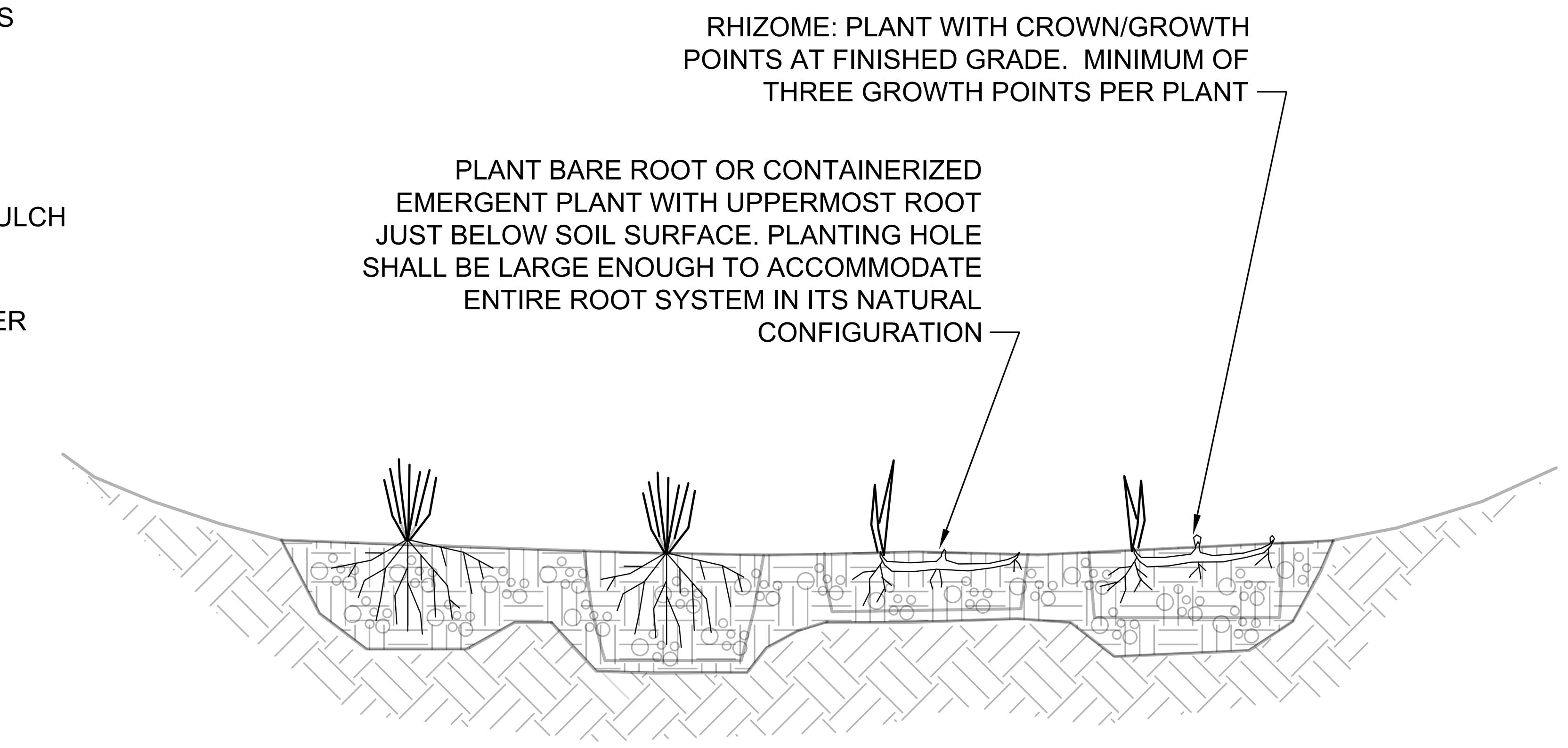
B & B DECIDUOUS TREE PLANTING (1 / VAR)
SCALE: NTS



NOTES:

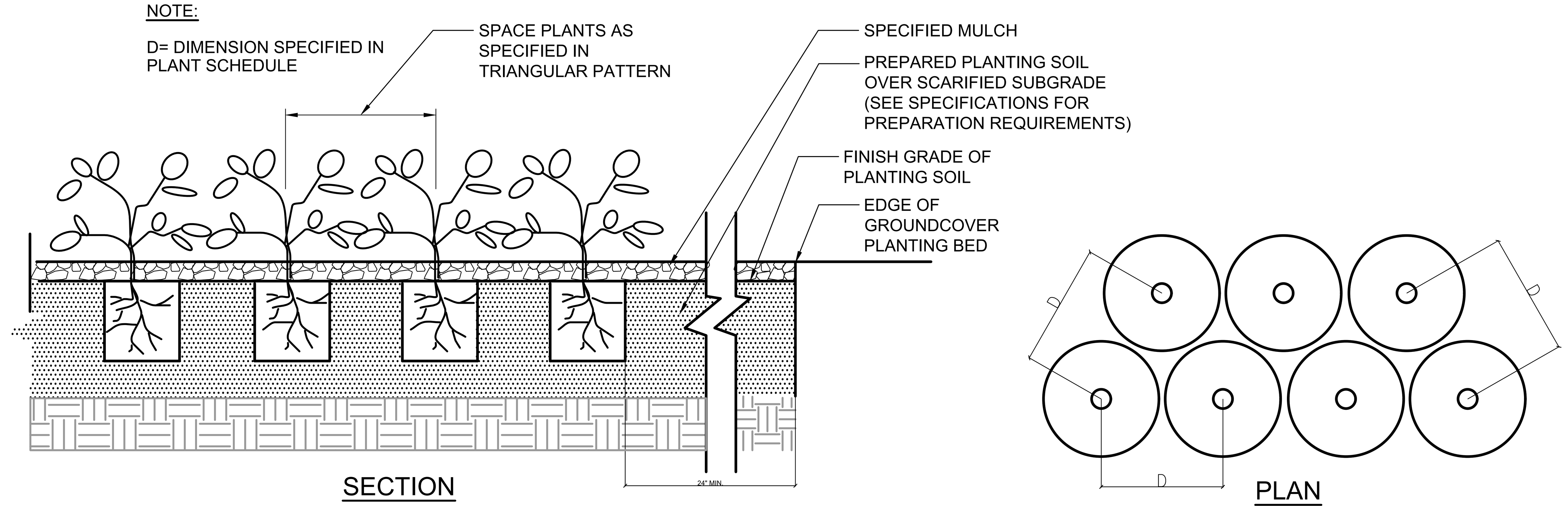
1. SEE SPECIFICATIONS FOR SOIL PLACEMENT DEPTH.
2. PROVIDE 24" MIN DEPTH OF TOPSOIL AT CONIFER TREE EXCAVATION.
3. FOR CONIFER TREES LESS THAN 6' IN HEIGHT, ONE TREE STAKE AT AN ANGLE IS ACCEPTABLE
4. ADD MANUFACTURER-RECOMMENDED AMOUNT OF MYCORRIZAL INOCULANT.

B & B CONIFER TREE PLANTING (2 / VAR)
SCALE: NTS

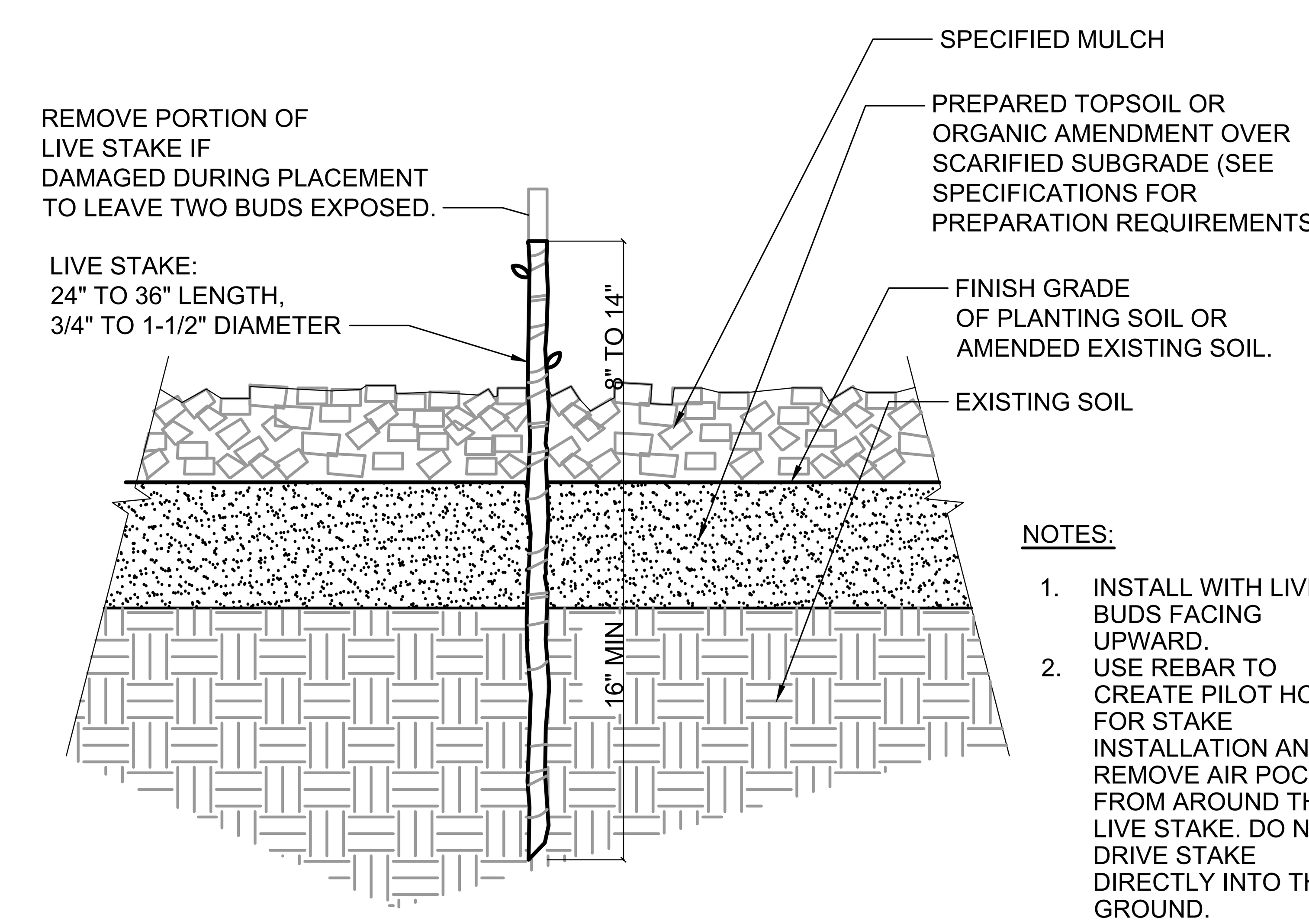


EMERGENT VEGETATION PLANTING (2 / VAR)
SCALE: NTS

NOTE:
D= DIMENSION SPECIFIED IN PLANT SCHEDULE



GROUNDCOVER PLANTING (3 / VAR)
SCALE: NTS



NOTES:

1. INSTALL WITH LIVE BUDS FACING UPWARD.
2. USE REBAR TO CREATE PILOT HOLE FOR STAKE INSTALLATION AND REMOVE AIR POCKETS FROM AROUND THE LIVE STAKE. DO NOT DRIVE STAKE DIRECTLY INTO THE GROUND.

LIVE STAKE INSTALLATION (4 / VAR)
SCALE: NTS

BORDER FILE EDITION: KCWTD-2012-Dsize-TB-Border
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PLOT DATE: 3/18/2020 9:05 PM
PLOTTED BY: D'Aurla, Isaac

NO	REVISION DESCRIPTION	BY	APVD	DATE

TETRA TECH
JACOBS

PRELIMINARY ISSUE DRAWING
INFORMATION ONLY
90% REVIEW
MAY 2019

STATE OF WASHINGTON LORCAN BRIAN FRENCH NO. 1465 EXP. 12/03/20 LICENSED LANDSCAPE ARCHITECT

DESIGNED/DRAWN: L. FRENCH	SCALE: NTS
PROJECT ENGINEER: J. CHAE	0 REFERENCE 1"
DESIGN APPROVAL: R. BROWNE	FACILITY NUMBER: 333
PROJECT ACCEPTANCE: S. YILDIZ	CONTRACT NO: C01339C20

King County

DEPARTMENT OF NATURAL RESOURCES & PARKS
WASTEWATER TREATMENT DIVISION
NORTH MERCER INTERCEPTOR AND ENATAI INTERCEPTOR UPGRADE - PUMP STATION IMPROVEMENTS

LANDSCAPE DETAILS

DCN:
DATE: 05/02/2019
PROJECT FILE NO:
DRAWING NO: L103
SHT NO / TOTAL: 124 / 347
REV NO:

SECTION 32 93 00

PLANTS

PART 1 GENERAL

1.01 SUMMARY

A. This Section specifies all landscaping except for lawns and grasses in areas outside of the buffer enhancement/restoration areas as indicated in the Contract Drawings. Lawns and Grasses, if any, are specified in Section 32 92 00. Work associated with buffer enhancement and restoration are specified in Section 32 76 00.

1.02 QUALITY ASSURANCE

A. Referenced Standards: This Section incorporates by reference the latest revision of the following documents. These references are a part of this Section as specified and modified. In case of conflict between the requirements of this Section and those of the listed documents, the requirements of this Section shall prevail.

Reference	Title
ANSI-Z 60.1	American Standard for Nursery Stock
Test Method T 123	Washington State Department of Transportation Method of Test for Bark Mulch
RCW 17.10	Washington State Noxious Weed Law
King County	King County Weed Lists: Noxious Weeds and Weeds of Concern
ANSI A300 Standards	Tree Care Industry Association Standards
Standard Plan Names	American Joint Committee on Horticultural Nomenclature

B. Supplier’s qualifications: Materials to be provided under this Section are to be the product of firms regularly engaged in the cultivation of the specified species or manufacture of a specified material.

C. Installers: by specialists possessing sufficient technical competence, skills, resources and ability to complete the work specified.

D. Landscape Superintendent: Shall have similar experience on a minimum of eight projects in the last five years.

E. Commercial Pesticide Applicator: Shall have license from the Washington State Department of Agriculture (WSDA) for applying pesticides.

F. Codes and standard specifications: Materials are specified by reference to the number, symbol, or title of a specific standard, such as commercial standard, federal specification, a trade association standard or other similar standard.

1.03 SUBMITTALS

A. Procedures: Section 01 33 00.

B. Supplier and supplier's type designation for all fertilizers, mycorrhizal inoculants and commercial products.

C. Qualifications:
   1. Submit no later than 60 days after Notice to Proceed.
   2. Landscape Superintendent: List of project experience and owner contact information.

D. Commercial Pesticide Applicator: WSDA license number. Plant material source:
   1. Submit no later than 60 days after Notice to Proceed to verify plant orders and availability of plant materials at time of planting.
   2. List quantities of plants for each species ordered from each nursery.
   3. List nursery names, addresses, and phone numbers.

E. Plant material delivery receipts:
   1. Submit at time of each plant delivery to the Site.
   2. Itemized list of quantities and sizes per plant species.

F. Planting schedule:
   1. Submit a minimum of 14 days prior to commencing planting operations.
   2. Scheduled dates for planting operations that correspond to plant zones and parcels indicated in the Drawings.

G. Analysis for Wood Chip Mulch
   1. Product data
   2. Submit one-pound sample a minimum of 14 day s in advance of delivery to the Site.

H. Weed and Pest Control plan:
   1. Submit a minimum of 60 days prior to commencing planting operations.
   2. Weed and pest control measures during planting operations and the Warranty Period:
      a. Integrated Pest Management approach.
      b. Physical and mechanical weed removal methods, equipment, and schedule.
      c. Chemical control methods including pesticide types, application rates, water dilution rates, surfactants, drift control agents, other additives, equipment, and schedule. Pesticides include insecticides, herbicides, fungicide, rodenticides, nematicides, disinfectants, germicides, biocides, plant regulators, defoliants, desiccants, and spray adjuvants.
      d. Proposed control methods for Japanese knotweed.
      e. Identify pesticide products proposed for specific plant and pest species.
      f. Identify pesticide products proposed for use in aquatic areas. Provide documentation of compliance with Washington State Department of Ecology Aquatic Pesticide General Permits.
      g. Weed control measures targeting specific weeds shall be in accordance with King County Noxious Weed Control Board's recommended BMP's.
   3. Material Safety Data Sheets, product labels, WSDA pesticide registration, and Environmental Protection Agency (EPA) pesticide registration.
   4. Signed by Commercial Pest Control Consultant.

I. Daily landscape maintenance reports.
   1. Submit within seven days of conducting Site maintenance activity.
   2. Indicate date of maintenance activity.
   3. Identify plant zones that were maintained per Drawings.
   4. Describe growing condition of shrubs and trees.
   5. Describe presence of weeds including identification of weeds.
   6. Describe soil moisture condition.
   7. Describe maintenance work performed.
   8. If pesticides applied, provide WSDA Pesticide Application Record.

1.04 PLANT PROCUREMENT PROCEDURES

A. Not less than 60 days prior to installation, furnish a written Plant Procurement Schedule including the following information.
   1. Latin and Common Names of each plant, including variety.

2. Plant source.
3. Root condition.
4. Plant size.
5. Indication of plants that must be reviewed, approved, and dug while dormant.

B. Arrange for Project Representative to visit the location(s) of the plants to be procured and verify that they meet Contract requirements.

C. Provide documentation to the Project Representative that the plant materials were grown in the states of Washington or Oregon in nurseries located west of the Cascade Mountains. Plants must be grown in the same or colder climatic zone as Site.

D. Comply with referenced standards for identification and grading of plant materials. All plants shall conform to the ANSI-Z 60.1 as to:
1. Health and vitality.
2. Condition of foliage.
3. Root system.
4. Freedom from pest or mechanical damage.
5. Plant form according to the accepted normal shape of the species.

E. Plant substitution requests:
1. Submit a minimum of 30 days prior to commencing planting operations.
2. Provide reason why specified plants cannot be obtained.
3. Provide evidence that specified plants and quantities cannot be obtained from a minimum of five nurseries.
4. Recommend similar plant species for substitution that are adapted to microclimatic conditions of Site.
5. Plant material source information for substitutes per specifications.

1.05 LANDSCAPE PRE-CONSTRUCTION MEETING

A. Arrange a pre-construction meeting at least 14 days prior to the start of work. Include the Project Representative, Landscape Architect, Contractor, Planting and Irrigation Subcontractors and relevant City representatives.

B. Discuss at minimum:
1. Contract requirements.
2. Schedule.
3. Submittals.
4. Temporary irrigation system installation (see Section 32 76 00 Restoration, Enhancement, Habitat Improvement).
5. Soil Preparation (see Section 32 91 00 Planting Preparation).
6. Work to occur within the Tree LOD and Selective Clearing limits.
7. Tree protection (see Section 01 56 02 Tree Management).
8. Local materials and planting methods.
9. Initial and Final Acceptance.
10. Warranty Period.

C. Provide meeting notes for approval by Project Representative.

1.06 DELIVERY, STORAGE AND HANDLING

A. Standard Products:
1. Furnish unopened in manufacturer’s standard containers bearing original labels showing quantity, analysis, and name of manufacturer.
2. Store products with protection from weather or other conditions which would damage or impair the effectiveness of the product.

B. Plant Delivery: Exercise care in transporting, handling, loading, and unloading plant material. Cover all plant materials to protect from wind, sun, heat damage, and drying out during transport. Plant materials damaged in any way shall be immediately removed from the Site and replaced.

C. Plant Selection and Inspection
1. Tagging Plant Material:
   a. Attach legible labels to each individual plant, or container containing one or more plants. Provide the necessary detailed information as to horticultural name, size, or other data required to identify as conforming to specifications on the label.
   b. Refer to American Standards for Nursery Stock regarding labeling of plant material.
   c. When the label is attached to a container containing more than one plant, mark quantity as well as other required information on the label.
   d. The Project Representative will reject plant material with illegible or missing tags.
2. Inspection of Plant Material:
   a. Allow the Project Representative opportunity to inspect plant material at nursery or offsite holding area prior to arrival on Site.
   b. All plant materials will be inspected by Project Representative after arrival on Site.
   c. Notify the Project Representative seven (7) days prior to the proposed arrival of plant materials on Site and submit an itemized list of plants in each delivery.
   d. Arrange for adequate labor and equipment on Site at the time of plant material inspection and unload, open, and handle plant material during inspection.
   e. Immediately remove plants not meeting the requirements herein specified or matching approved representative photographs from the Site.

D. Temporary Storage
1. Plant all material within 24 hours of being delivered. If planting is delayed more than 24 hours after delivery, set plants on the ground well protected by covering root ball with soil, compost, or other material acceptable to the Project Representative. Protect balls, burlapped roots, and container-grown material from freezing, sun, drying winds, standing water and mechanical or chemical damage.
2. Water as necessary until planted.
3. Plants stored under temporary conditions, whether accepted by the Project Representative or not, are the sole responsibility of the Contractor.
4. Plants temporarily stored are subject to inspection and approval prior to planting. Immediately remove rejected plant material from the Site.
5. Do not heel in plants for more than one (1) week.
6. Do not store chemicals (herbicides or pesticides) with any planting material.
7. Do not store fertilizer and lime with any planting material.
8. Protect packaged materials from deterioration during storage.
9. Do not remove container-grown stock from containers until planting time.
10. Do not prune plants prior to planting.

1.07 MAINTENANCE

A. Maintain and protect planted areas throughout the Warranty Period.

B. Maintenance of planted areas shall include but not be limited to protection from insects, disease and herbivory, weeding, fertilizing, cultivating, tightening and repairing of tree stakes and ties, removal of dead material, resetting plants to proper grades or upright position, and replacement of any plants which appear to be stressed and other operations necessary to the proper implementation of the project.

C. After Initial Acceptance of Planting, coordinate temporary irrigation system operation with Project Representative to ensure adequate water to planting areas.

1.08 MAINTENANCE TRANSFER MEETING

A. Schedule a meeting to be held at least 14 days prior to the end of the Warranty Period with the Project Representative at the Site.

B. Contractor shall be liable for damages or losses resulting from failure to schedule the maintenance transfer meeting.

C. Agenda:
   1. Review maintenance procedures for each plant type and location.
   2. Review watering requirements.
   3. Perform a site walk through to evaluate the condition of existing plantings. Tag plants which are immediately subject to warranty replacement based on conditions described below.

1.09 WARRANTY

A. Warranty period shall be one year from Initial Acceptance of Planting.

B. Remove and replace with new plants which are impaired, dead or dying during 1 year from initial acceptance.
   1. Tree and shrub material that is 25 percent or more dead, or disfigured, shall be considered dead, and shall be replaced. A tree is considered dead when the main leader is broken, has died back or there is 25 percent of the crown dead. Plants are considered disfigured when excessive dead wood had been removed or when the symmetry, typical habit of growth, or sculptured form has been impaired by the removal of dead wood.

C. Replacement materials and methods per original specifications.

D. Plants replaced under warranty will not have a second warranty, except as stated in paragraph E below.

E. If fall-planted material is dead or dying in the spring, replace material during that spring season. If said plants fail again during growing season, replace again in the fall. Every plant must leaf out and be in a healthy condition at beginning of growing season.

PART 2 PRODUCTS

2.01 MATERIALS

A. Soils and additives: per Section 32 91 00.

B. Plant materials:
   1. Species and size indicated.
   2. No substitutions without written approval of Landscape Architect.
   3. Sound, healthy, vigorous, with normal top and root systems.
   4. No substitution of root ball types are to be made without written approval of Landscape Architect.
   5. Free from diseases, insect pests or their eggs.
   6. Nursery grown stock, freshly dug.
   7. No heeled-in, cold storage or collected stock.

C. Trees:
   1. Single leader, straight trunk (unless otherwise indicated in plant list).
   2. Well branched, free of branches up to 5 foot high (unless otherwise indicated in plant list).
   3. Symmetrical growth.

D. Balled and burlapped plants (B&B): Firm, natural balls of soil wrapped with burlap or strong cloth and tied.

E. Container grown plants (CG):
   1. Roots well established in soil, but not root bound.
   2. Grown in container for at least one growing season.
   3. Bare root plants (BR): Intact root system cleaned of earth, wrapped immediately in wet straw, moss or other suitable material.

F. Wood Chip Mulch: Arborist wood chips or hog fuel free of deleterious material and invasive plant material. Coarsely chipped wood from site tree removals or Pacific Topsoils DOT Wood Chip Mulch is acceptable.

G. Herbicide: Pre-emergent/Post-emergent: Commercial grade conforming to State and Federal regulations.

H. Root barrier: DeepRoot UB 18-2 or approved equal.

I. Erosion control material: Heavy duty coir fabric mesh netting anchored with wire staples as per manufacturer's suggested recommendations.

J. Tree stakes: 8 foot, round pine stake with an outer diameter of 2 inches.

K. Tree ties: ArborTie by Deeproot or approved equal.

L. Street tree supplemental watering bag:
   1. 20 gallon Treegator.

M. Water: Provide clean, fresh water free from impurities injurious to vegetation. Supply water necessary to ensure an adequate supply for healthy growth.
   1. Provide necessary hose, equipment, attachments, and accessories for the adequate watering of plant areas as may be required to complete the work as specified.
   2. See Temporary Irrigation System in Section 32 76 00.

N. Mycorrhizal Inoculant:
   1. Contains:
      a. Endospores: Minimum six Glomulus spp.
      b. Ecotospores:
         1) Pisolithus tinctorius.
         2) Minimum of four Rhizopogon spp.
         3) Minimum two Scleroderma spp.
      c. Composed of dry powder or granular material.
      d. Acceptable Products:
         1) BioOrganics LLC: Mycorrhizal Landscape Inoculant
         2) Horticultural Alliance, Inc.: DIEHARD Mycorrhizal Inoculant
         3) Approved Equal

2.02 PLANT LIST

A. As indicated in the Contract Drawings.

PART 3 EXECUTION

3.01 SITE GRADING AND SOIL PREPARATION

A. See Section 32 91 00.

B. Remove existing weeds from plant zones per the Weed and Pest Control Plan.

3.02 PLANTING OPERATIONS

A. General:
1. Transport plant materials to their final location with care.
2. Tie down branches, if necessary, and protect bark with burlap bags to prevent damage from chafing by ropes and wires.
3. Do not drag plants on the ground.
4. Properly place in a manner which provides complete protection for the roots and branches.
5. Plant trees during normal periods for such work, as determined by the season, weather, and accepted practice.
6. Remove rejected plants from the site immediately.

B. Pruning:
1. Do not prune prior to delivery or after installation without authorization of the Project Representative. If approved the follow requirements apply:
   a. After planting, prune plant material in compliance with the best horticultural practice, appropriate to the type of plant.
   b. Top pruning shall remove damaged twigs and branches, and compensate for loss of roots during planting operation.
   c. Unless otherwise indicated, top growth removal to compensate for root loss shall not exceed 1/3 of the top growth.
   d. Remove top growth in such a manner as to retain the natural growth characteristics of the plant.
   e. Produce a clean cut without bruising or tearing the bark; living wood shall be left where the wound can heal over properly.
   f. Do not prune evergreen plants except to remove dead or broken branches.

C. Inspection and Approval of new plants: Required by the Project Representative prior to removal and transplanting.

D. Planting Season: Between October 1st and March 15 unless otherwise approved by Project Representative.

E. Planting Time: Planting of trees and shrubs shall be done only during periods that are normal for such work as determined by weather conditions and accepted practice.
1. Do not plant or work soils when there is a presence of ponded water in areas to be worked.
2. Do not plant when ground is frozen or temperature is below 32 degrees Fahrenheit.

F. Plant Layout:
1. Survey and stake all plant material locations and layout bedlines prior to beginning installation.
2. Confirm plant quantities by size and species for each planting zone.
3. For each plant zone locate trees first, followed by shrubs, followed by groundcover.
4. Adjust plant quantities as required to obtain full coverage of planting zones. Notify Project Representative of any discrepancy between quantities in the field and in the Contract plans.
5. Layout approval:
   a. The Project Representative may approve layout or make adjustments to plant material locations to meet field conditions.
6. Planting:
   a. Upon approval of the plant layout by the Project Representative, install plants per details.

b. When planting within the TPZ of protected trees, work must be done in accordance with the approved Tree Protection Plan and work must be reviewed and approved by Project Arborist prior to planting. See Section 01 56 02.
c. Apply Mycorrhizal Inoculant per manufacturer's recommendation for size of plant.
d. After planting has been completed, flood pit again so that backfill is thoroughly saturated and settled.
e. Water on the same day that planting occurs.

G. After planting is complete, form saucer 4 inches high around each plant extending to limit of plant pit using existing soil.

H. Mulching:
1. Mulch tree planting pit after saucer has been shaped to depth of 4 inch with Wood Chip Mulch.
a. Keep mulch off of plant stem or tree trunk.
2. In massed plantings, mulch entire area uniformly to depth of 4 inches with organic mulch.
3. If mulching is delayed and soil has dried out, water plants thoroughly before spreading mulch.

I. Staking:
1. Stake trees immediately after planting.
2. For deciduous trees 3 inch and larger and evergreen trees 10 feet and taller: Three stakes spaced equilaterally around tree.
3. For deciduous trees with trunk diameters smaller than 3 inches: Two stakes spaced opposite sides of tree.
4. Remove tree staking and ties after one year.

J. Street tree supplemental watering bag:
1. Install one 20 gallon Gatorbag per street tree in accordance with manufactures recommendations.
2. Provide 5 additional spare Gatorbag's to the Project Representative.

K. Root Barrier: Install root barrier in accordance with manufacturer's recommendations and as indicated on drawings.
1. Keep top of barrier recessed a minimum 1 inch below adjacent curbs or sidewalks surfaces.

3.03 MAINTENANCE

A. Preliminary inspection and approval:
1. Request a preliminary inspection of planting work upon completion of all planting.

B. Requirements:
1. Warranty Period will commence upon receiving Initial Acceptance of Planting and verification by Project Representative that automatic temporary irrigation systems are operational.
2. Warranty Period shall consist of providing adequate maintenance and proper care of all plant materials and planting zones to ensure the resumption of growth of transplanted material and weed free conditions.
3. Maintain trees and shrubs in a vigorous, thriving condition through watering, pruning, cultivating, spraying, and other necessary operations for the total period of time the plant material is temporarily held.
4. Fill street tree Gatorbags bi-weekly or as required to maintain trees in a vigorous condition through final inspection.
5. Maintain landscape area in a weed free condition through final inspection.
6. Protect trees and shrubs from damage by erosion or trespassing. Erect proper safeguards.

C. Regular inspections:
1. Meet monthly with Project Representative for the purpose of joint inspection of the planting zones on a mutually agreed up on schedule.
2. At a minimum, joint inspections shall occur monthly between March and the end of the Warranty Period.

3. Record punch list of observed unsatisfactory conditions requiring maintenance and submit to Project Representative.
4. Correct unsatisfactory conditions within a 10-day period immediately following the inspection.
5. Notify Project Representative after corrections are made.

D. Plant zones and location conditions:
1. Remove rocks, clods, and debris that appear on the surface. Restore heaved, settled, or eroded areas by excavating, addition of Planting Soil, filling, finish grading, and rolling, as required.
2. Protect trees and shrubs from damage by animals, erosion, and trespassing. Erect proper safeguards.
3. Maintain all mulched areas in a weed free condition.
4. Replenish mulch as necessary to maintain depths indicated elsewhere in the Contract Documents.
5. Reset plants that have settled below finish grade so that root collar is level with finished grade or one-half above.

E. Watering:
1. Water plants within planting zones designated in the Drawings as needed to keep them in a healthy and thriving growing condition throughout the Warranty Period.
2. Plants shall receive a minimum of one inch of water per week from May 1 to July 15 and a minimum of two inches of water per week from July 16 to October 1. This amount can be offset by the amount of rainfall that fell within the time frame in questions. Contract shall submit the following evidence to the Project Representative:
   a. Rainfall data from the nearest weather station to the area in question. Data available from Weather Underground: http://www.wunderground.com/
3. Fill street tree Gatorbags watering bags two times per week or as required to maintain trees in a vigorous condition through final inspection. Replace damaged tree watering bags.

F. Cleanup: Maintain landscaped and staging areas in a clean, neat, and orderly manner at all times. Remove liter and dispose offsite.

G. Final cleanup:
1. Remove deleterious material and debris from all areas.
2. Neatly rake planting areas to an even fine grade.
3. Wash and clean hard surfaces.

3.04 FINAL INSPECTION:

A. Final inspection:
1. Final inspection shall determine completion of Contract Work. Final inspection will be made by the Project Representative no earlier than two days after receipt of due notice requesting such inspection.
2. The Site shall be thoroughly cleaned and work shall be completed at the time of final inspection.
3. During inspection, the Contractor shall record a punch list of any observed unsatisfactory conditions.
4. Project Representative will grant Initial Final Acceptance of Planting once all unsatisfactory conditions are addressed.

END OF SECTION

SECTION 32 91 00

PLANTING PREPARATION

PART 1 GENERAL

1.01 SUMMARY

A. This Section specifies the planting soils for planting, lawn, and bioretention facilities.

1.02 QUALITY ASSURANCE

A. Referenced Standards: This Section incorporates by reference the latest revision of the following documents. These references are a part of this Section as specified and modified in case of conflict between the requirements of this Section and those of a listed document, the requirements of this Section shall prevail.

Reference	Title
ASTM D1557	Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3 (2,700 kN-m/m3))
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D422	Standard Test Method for Particle-Size Analysis of Soils
	North American Proficiency Testing Program (NAPT)
	USDA Textural Soil Classification

B. Control: Provide one individual who shall be present at all times during execution of this portion of the work, who is thoroughly familiar with the type of materials being installed, the proper materials and methods for their installation, and the proper timing for installation.

C. Manufacturer's qualifications: Materials to be provided under this Section are to be the product of firms regularly engaged in the manufacture of a specified material.

D. Installers: Specialists possessing sufficient technical competence, skills, resources and ability to complete the work specified.

1.03 SUBMITTALS

A. Procedures: Section 01 33 00.

B. Materials List: a complete list of proposed materials demonstrating conformance with the requirements specified. Include names and addresses of all suppliers.

C. Soil Materials: 0.25 cu.ft. representative samples of imported topsoils and organic amendment.

D. Fertilizers: manufacturer's analysis.

E. Certificates.

F. Laboratory testing documenting soil fertility and recommendations for soil additives.

G. Soil Preparation Plan:
   1. Submit a minimum of 30 days prior to commencing soil preparation.
   2. Schedule for soil preparation.
   3. Equipment.

4. Weed eradication methods and layout for accomplishing the Selective Clearing work:
   a. Hand and/or mechanized weeding:
      1) Show areas where weed eradication will occur by hand or mechanized means.
      2) Describe equipment use and method of hand or mechanized weeding.
   b. Herbicide application:
      1) Show areas where herbicide will be used for weed and grass eradication.
      2) Describe methods of herbicide application.
5. Soil preparation locations, placement, incorporation and compaction techniques for the following areas:
      1) Landscape Planting areas outside of Tree Protection Zone and Selective Clearing limits.
      2) Landscape Planting areas within Tree Protection Zones.
      3) Landscape Planting areas within Selective Clearing limits as shown on the Contract Drawings.
      4) Include proposed methods to protect existing desirable vegetation.
6. Material Safety Data Sheets.

1.04 TIMING OF WORK

A. Work shall proceed as rapidly as the site becomes available, consistent with specified seasonal limitations for the planting.

B. Soils shall not be worked in the presence of standing or ponding water.

1.05 LANDSCAPE PRE-CONSTRUCTION MEETING

A. See requirements in Section 32 93 00

1.06 PRODUCT HANDLING

A. Delivery and Storage:
   1. Furnishproducts in manufacturer's standard unopened containers bearing original labels showing quantity, analysis, and name of manufacturer.
   2. Store products with protection from weather or other conditions that would damage or impair the effectiveness of the product.

1.07 MATERIAL TESTING

A. Submit samples of existing site soil, imported topsoil mix, and mulch samples to a certified soil testing laboratory for analysis and soil amendment recommendations. Three existing site soil samples will be tested at locations directed by the Project Representative. Test soil components as follows:
   1. All stockpile sampling shall be per ASTM D 75 for securing samples from stockpiles. Stockpiles shall be made sufficiently in advance of testing so that pH, organic content, and carbon/nitrogen ratio have stabilized.
   2. Deliver all samples to an approved testing laboratory. Perform all tests for particle gradation, organic content, soil chemistry, and pH. Testing reports shall include the following tests and recommendations.
      a. Mechanical gradation (sieve analysis) shall be performed and compared to the USDA Textural Soil Classification System. Sieve analysis shall be in compliance with ASTM D 422 after destruction of organic matter by H2O2. To facilitate review and approval of sieve analysis, provide a computer generated gradation curve from Laboratory.
      b. Percent of organics shall be determined by the loss on ignition of oven-dried samples.
      c. Chemical analysis shall be undertaken for Nitrate Nitrogen, Ammonium Nitrogen, Phosphorus, Potassium, Calcium, Magnesium, extractable Aluminum, Lead, Zinc, Cadmium, Copper, Soluble Salts, and pH and buffer pH, and the Cation Exchange

Capacity (CEC). A Conductivity Meter shall be used to measure Soluble Salts in 1:2 soil/water (v/v). Except where otherwise noted, nutrient tests shall be for available nutrients.

3. Soil analysis shall show recommendations for soil additives to correct soil deficiencies and enhance fertility to accomplish planting work as specified.

PART 2 MATERIALS

2.01 PLANTING SOIL MIX (FOR LANDSCAPE PLANTING AREAS)

A. General: The Planting Soil Mix shall consist of 67% sandy loam and 33% composted Organic Amendment.
   1. The Sandy Loam or Loamy Sand component shall consist largely of sand, but with enough silt and clay present to give it a small amount of stability and shall meet the following sieve analysis:

Screen Size	Percent Passing
3/8”	100
1/4”	95-100
#10	85-95
#30	60-75
#60	50-60
#100	10-20
#200	0-10

   2. Individual sand grains can be seen and felt readily. On squeezing in the hand when dry, it shall form a cast that will not only hold its shape when the pressure is released, but shall withstand careful handling without breaking. The mixed loam shall meet the following:
      a. Shall have pH range of 5.5 - 7.5 with dolomite lime, sulfur or other amendments, added prior to delivery, as necessary to attain this range.
      b. Free from debris, deleterious material, weeds, weed seeds and foreign matter that is detrimental to plant growth
      c. The organic amendment component shall consist of composted organic material as described below.

B. Fertilizers:
   1. Add fertilizers of the types and quantity as recommended by the accredited soils testing laboratory to bring the planting mix to optimum long-term fertility.
   2. Fertilizers shall meet the general requirements of this Section and the recommendations of the testing laboratory.

2.02 ORGANIC AMENDMENT

A. Compost: The Compost (Organic Amendment) Component shall consist of 100 percent recycled organic feedstocks as defined in WAC 173-350 as “Wood waste”, “Yard debris”, “Post consumer food waste”, “Preconsumer animal-based waste”, and/or “Preconsumer vegetative waste”that have been sorted, ground up, aerated and aged and shall be fully composted, stable and mature (non-aerobic). The composting process shall be for at least six (6) months’ time and the organic amendment shall have a uniform dark, soil-like appearance. In addition, the compost shall have the following physical characteristics:
   1. Contractor shall use only Compost that has been tested within 90 days of Submittal and meets the requirements in this Section. Compost not conforming to these requirements or taken from a source other than those tested and accepted shall not be used and shall be removed from Site immediately.
   2. Compost shall be pure composted plant waste, a well decomposed, humus-like material derived from the decomposition of grass clippings, leaves, branches, wood, food waste, and other approved organic materials.

3. Compost shall be produced at a permitted solid waste-handling Site for Composting facility (Health Permit, Department of Ecology Storm Water Permit, PSCAA Facility and Equipment Registration).
4. Compost shall be mature with regard to its suitability for serving as a soil amendment. Maturity shall be greater than 80 percent in accordance with USCC TMECC 05.05-A.
5. The Compost must have a moisture content that has no visible free water or dust produced when handling the material.
6. Compost production and quality must be in compliance with WA Department of Ecology's specifications, which appear in WAC Chapter 173-350 Section 220, plus the following additional requirements.
7. Additional Requirements
   a. The carbon-to-nitrogen ratio of Compost shall be between 12:1 and 18:1, for plants not native to the Puget Sound Lowland region or between 18:1 and 35:1, if the proposed plantings are composed entirely of plants native to the Puget Sound Lowlands region.
   b. The Compost shall have a minimum organic matter content of 40 percent dry weight as determined by USCC TMECC 05.07-A.
   c. Soluble salt content shall be less than 4.0 mmhos/cm when tested in accordance with USCC TMECC 04.10.
   d. Shall be certified by the Process to Further Reduce Pathogens (PFRP) guideline for hot composting as established by the United States Environmental Protection Agency
   e. Compost shall meet the following gradation:

	Percent Passing	
Sieve Size	**Minimum**	**Maximum**
1 inch	100	
5/8 inch	85	100
1/4 inch	75	85

   f. The pH range shall be between 6.0 and 8.8 when tested in accordance with USCC TMECC 04.11-A.
   g. The material shall be certified free of all plant parasitic organisms, viable weed seeds, heavy metals, and parasitic residues. No more than 0.5 percent foreign material (plastic, concrete, ceramics, and metal) including no more than 0.1 percent film plastic, on a dry weight basis as determined by USCC TMECC 03.08-A.
   h. Stability shall be 7 mg CO_2-C/g OM/day or below in accordance with the USCC TMECC 05.08-B.
   i. Shall have heavy metal concentrations below the Washington State limits in accordance with WAC 173-350.

2.03 SAND

A. Sand shall meet the following specifications within reasonable variations:

Sieve Size	Percent Passing
3/8"	100
1/4"	95-100
No. 10	85-95
No. 30	60-75
No. 60	50-60
No. 100	20-30
No. 200	<5

2.04 MINERAL AGGREGATE

A. General:
1. Mineral aggregate shall be free of wood, waste, coating, or and deleterious material. All mineral aggregate passing the No. 200 sieve size shall be non-plastic.
2. Mineral Aggregate for rain garden soils shall be analyzed by an accredited lab using the sieve sizes noted below, and shall meet the following gradation:

Sieve Size	Percent Passing
1 inch	100
No. 4	60 - 100
No.10	40 - 100
No. 40	15 - 50
No. 200	2 - 5

3. Efforts should be made to have the Mineral Aggregate for rain garden soils meet the following gradation coefficients: Coefficient of Uniformity (Cu = D60/D10) equal to or greater than 6; and Coefficient of Curve (Cc = D302/D60D10) greater than or equal to 1 and less than or equal to 3.

2.05 FERTILIZERS

A. General:
1. Standard commercial grade of organic or inorganic fertilizer containing the amounts of total nitrogen, available phosphoric acid, and water-soluble potash specified below.
2. Furnish in standard unopened containers with weight, name of plant nutrients, and manufacturer's statement of analysis clearly marked, in accordance with state and federal laws.

B. Fertilizer:
1. General:
   a. 6-8-10 complete fertilizer, 50 percent of the nitrogen to be derived from natural organic sources or ureaform.
   b. Available phosphoric acid shall be from superphosphate, bone, or tankage.
   c. 50 percent of the potash shall be derived from sulfate of potash-magnesium.
      1) 6 percent nitrogen.
      2) 10 percent phosphoric acid.
      3) 8 percent potash.
2. Additives:
   a. F.T.E: 2 percent.
   b. Multiracin: 0.5 percent.
3. Gradation:
   a. No. 4 sieve retains 0 percent.
   b. No. 20 sieve retains 65 percent.
   c. No. 80 sieve retains 100 percent.

2.06 LIME

A. General:
1. Agricultural grade mineral soil conditioner containing 35 percent minimum magnesium carbonate and 49 percent minimum calcium carbonate, 100 percent passing No. 65 sieve.

B. Acceptable manufacturer:
1. Kaiser Dolomite 65 AG.
2. Approved equal.

2.07 PHOSPHORUS

A. Agricultural grade fertilizer providing the amount of available phosphoric acid specified below.

B. Bone Meal (1-23-0), superphosphate (0-20-0), or approved equal.

PART 3 EXECUTION

3.01 SELECTIVE CLEARING

A. Prior to Soil Preparation, the Contractor shall eradicate King County Noxious Weed List Class A, B, and C weeds and non-native grasses and other plants as directed by the Project Representative within the Selective Clearing limits shown in the Contract Drawings.
   1. Any physical, mechanical or chemical weed control methods shall be performed by hand equipment only.
   2. All weed control work shall be done in accordance with the Contractors' submitted and approved Weed and Pest Control Plan.
   3. All other existing vegetation to remain shall be considered desirable and the Contractor shall take care to protect and avoid damage

3.02 PREPARATION OF SUB-GRADE:

A. Rip, disc, or scarify sub-grade soils to a minimum depth of 12 inches. Sub-grade elevations shall be as follows:
   1. For Landscape Planting Areas - Sub-grade elevation 12 inches below finished grade, unless otherwise indicated in the Plans.
   2. At B&B Tree Planting Locations – Sub-grade elevation 24 inches below finished grade, unless otherwise indicated in the Plans.

3.03 SOIL PREPARATION

A. For Landscape Planting Areas:
   1. Scarify the top twelve inches of existing soil to loosen soil prior to placing Planting Soil
   2. Unless otherwise indicated in the Plans, place twelve inches of Planting Soil in four inch lifts, rototilling each lift into the underlying soil before placing an additional four inch lift, until the final grade is attained.
   3. At locations with other depths indicated, place the required depth of Planting Soil, following the same steps outlined in step 2, above.

B. For planting within tree protection fencing areas, place 4 inch depth organic amendment in areas to be planted.
   1. Hand till and thoroughly mix the 4 inch depth of organic amendment and the fertilizers (at manufacturer's recommended rate for plantings) into the subgrade to a depth of 8 inches.
   2. Work shall be performed in accordance with Section 01 56 02 and the approved Tree Protection Plan.

3.04 COMPACTION

A. Compact to 80 percent maximum density per ASTM D1557.

3.05 FINE GRADING

A. Perform fine grading to attain finish grades as shown on the Plans.

B. Rake out all rocks, roots, sticks and other debris larger than 2-inch diameter or sticks longer than 4 inches long. Leave surface even and readily able to accommodate plant installation.

END OF SECTION

King County
Department of Natural Resources and Parks
Wastewater Treatment Division
Regulatory Compliance and Land Acquisition Services
King Street Center, KSC-NR-0505
201 South Jackson Street
Seattle, WA 98104-3855

July 13, 2020

Robin Proebsting, Senior Planner
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040

North Mercer Island Interceptor and Enatai Interceptor Upgrade Project – Response to City of Mercer Island Request for Information 2 (DSR19-017)

Dear Ms. Proebsting:

This letter is in response to your request for information on the Design Commission Design Review (DSR19-017) application for the North Mercer Island Interceptor and Enatai Interceptor Upgrade Project (NME Project) on Mercer Island, Washington. This letter addresses comments from the City of Mercer Island (Mercer Island) Community Planning and Development Department on May 22, 2020.

The following is the Mercer Island comment and the response in *italics*. Please see below for responses to each comment.

Mercer Island Comment #1: Staff have concerns that the landscaped screening proposed for the northwest corner of the property, proposed to be partially on the property neighboring to the west, might not meet the standards in MICC 19.12.040(B)(7) and (8) long-term. It is noted that that King County will maintain the landscaping for three years, enabling it to get established, and that the neighboring property owner has provided written agreement for installation of the landscaping.

However, there are no provisions (e.g. easement, covenant) for long-term maintenance of the landscaping that would require the landscaping to remain in place more than three years after installation. This is important because the portion of the neighbor's property proposed to be landscaped is encumbered by an access easement (See Rand Short Plat, attached). If new improvements were to be constructed within the easement, trees installed near the shared property line might not survive construction, which would remove a key part of the screening. Note that a pre-application meeting regarding a potential three-lot short subdivision of the property at 7621 SE 22nd Street recently took place, proposing that two additional lots take access from the access easement. If this subdivision were to move forward, it is likely that this would necessitate new access improvements within the easement.

Please provide a landscaping plan that demonstrates how the provisions in MICC 19.12.040(B)(7) and (8) (i.e. 20 feet of full screening or equivalent) will be met. This can either be by: 1) demonstrating how

the current design provides for long-term survival of all landscaping, given the potential for new access improvements to be constructed on the neighboring property; or 2) by modifying the design.

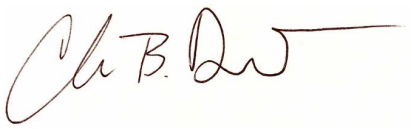
Response: *Plans will be modified to show a tightly spaced row of Arborvitae between the back of wall and property boundary along the narrow northern portion of the property boundary. This modification will allow for the screen to remain intact, even if the driveway was widened to the edge of the easement. This row of Arborvitae will replace the larger Incense and Excelsa cedars and three sugar maples, which would be incompatible with the widening of the driveway due to their large size at maturity.*

Mercer Island Comment #2: The large tree species proposed to be installed in the northeast portion of the property, over the proposed 16" and 18" sanitary sewer lines need to be relocated. Staff note documentation was provided showing that the presence of high groundwater makes it unlikely that tree roots will damage the proposed sanitary sewer lines. There remains a concern that future maintenance would necessitate removal of the trees in order to access the sewer lines. MICC 19.12.040(B)(11)(g) also requires trees to be planted at least eight feet away from a sewer pipeline. Since the mitigation plan submitted with PAE19-001 and CAO19-020 was reviewed assuming these trees would be included in the plantings, please indicate in the resubmittal letter whether the plant schedule will change.

Response: *Please note that the proposed 16-inch and 18-inch sewer lines will be owned and operated by King County; therefore, any future maintenance will be conducted by King County. In addition, the landscape plans are conceptual at this stage. Our understanding from recent communications is that eight feet separation will be a condition on approval, and this will be met with the current plant schedule on the permit drawings.*

If you have any questions, please contact me at 206-477-5458, or email me at chris.dew@kingcounty.gov.

Sincerely,



Christopher Dew

Water Quality Planner/Project Manager