



i-Vista@Alderwood

Preliminary Storm Drainage Report

April 2022 | Project Design Review



Preliminary Storm Drainage Report

April 2022

Prepared for:

Alderwood Professional Building LLC

Prepared by:

KPFF Consulting Engineers
1601 Fifth Avenue, Suite 1600
Seattle, WA 98101
KPFF Project No. 2200091

Project Engineer: Michael Clark, PE

Project Manager: Brady Retzlaff

Principal in Charge: Thaddeus Egging, PE, LEED AP BD+C



04/07/2022

Table of Contents

| | |
|---|---|
| 1. Project Overview | 1 |
| 2. Existing Conditions | 1 |
| 3. Proposed Conditions..... | 2 |
| 4. Minimum Requirements | 2 |
| MR No. 1 – Preparation of Stormwater Site Plan | 2 |
| MR No. 2 – Construction Stormwater Pollution Prevention (SWPP)..... | 3 |
| MR No. 3 – Source Control of Pollution..... | 3 |
| MR No. 4 – Preservation of Natural Drainage Systems and Outfalls..... | 3 |
| MR No. 5 – On-Site Stormwater Management..... | 3 |
| MR No. 6 – Runoff Treatment..... | 3 |
| MR No. 7 – Flow Control..... | 3 |
| MR No. 8 – Wetlands Protection | 4 |
| MR No. 9 – Operation and Maintenance | 4 |
| 5. Temporary Erosion and Sedimentation Control..... | 4 |

List of Figures

| | |
|---|---|
| Figure 1-1: Vicinity Map (Snohomish County Assessor)..... | 1 |
|---|---|

List of Tables

| | |
|---|---|
| Table 4-1: Summary of Applicable Minimum Requirements | 2 |
| Table 4-2: Summary of site areas | 4 |

Appendices

Appendix A – Existing and Proposed Drainage Areas

This page intentionally left blank.

1. Project Overview

The Alderwood Mixed Use Tower project consists of the redevelopment of parcel 00372800401301 with a total site area of 1.88 acres. The project is constructing a mixed-use tower with ground-level retail, 1 level of below-grade parking, 4 levels of above-grade parking, and 13 floors of apartments. The site is bounded by Alderwood Mall Parkway to the west, Beech Road to the east, and existing developments to the north and south.

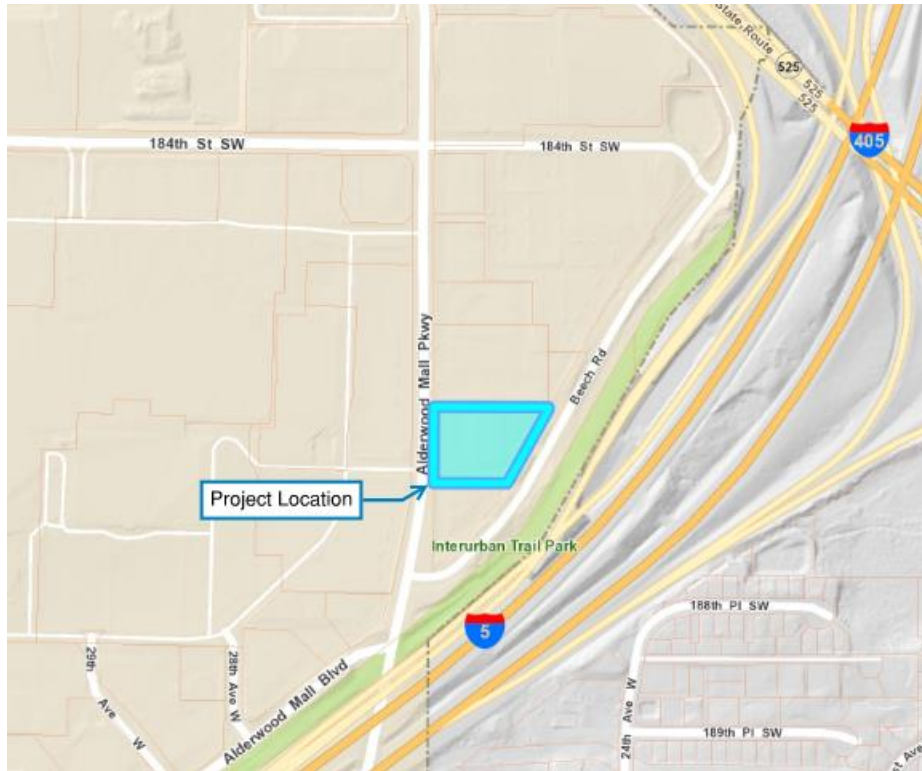


Figure 1-1: Vicinity Map (Snohomish County Assessor)

2. Existing Conditions

The existing site consists of an existing three-level medical office building with expansive surface parking with tree islands interspaced throughout. The site is generally flat with 2 feet of elevation change between the high point in the southwest and the low point to the northeast. Stormwater runoff from the parking lot sheet flows to low points where it is collected in catch basins and conveyed to an existing private 15-inch storm drain along the east side of the site. This main collects runoff from multiple private developments between Alderwood Mall Parkway and Beech Road, and ultimately discharges to Swamp Creek through an existing stormwater pond located near the intersection of Beech Road and 184th Street Southwest.

3. Proposed Conditions

The proposed project will construct a 19-floor mixed-use residential tower with ground-level retail and apartments above. The tower will have one level of below-grade parking, four levels of parking with ground-level retail, and apartments above.

Site development work includes a surface-level parking lot west of the proposed building, and driveways to Alderwood Mall Parkway and Beech Road. Landscaping wraps the east edge of the building and is interspersed within the parking area. Stormwater from the building will be collected and piped to an existing storm main along the east side of the project site. Stormwater from the surface parking lot will be collected through a series of catch basins and routed through a water quality facility before discharging to the existing private storm main on the east side of the project site.

The City of Lynnwood will be realigning Beech Road to the east and south under a separate permit. The new alignment of Beech Road will wrap the east and south sides of the proposed development, reducing the area of the project site via a property dedication.

4. Minimum Requirements

The Alderwood Tower project is classified as a Redevelopment Project under Ecology Manual requirements. Additionally, since the project includes more than 5,000 square feet of new plus replaced impervious surfaces, all 10 of the Ecology Minimum Requirements are to be met. Refer to Table 4-1 below for a summary of the applicable minimum requirements.

Table 4-1: Summary of Applicable Minimum Requirements

| Minimum Requirement | Alderwood Tower |
|---|---|
| No. 1 – Preparation of Stormwater Site Plans | Followed in accordance with SWMMWW |
| No. 2 – Construction Stormwater Pollution Plan (SWPPP) | Followed in accordance with SWMMWW |
| No. 3 – Source Control of Pollution | Followed in accordance with SWMMWW |
| No. 4 – Preservation of Natural Drainage Systems and Outfalls | Followed in accordance with SWMMWW |
| No. 5 – On-Site Stormwater Management | Followed in accordance with SWMMWW |
| No. 6 – Runoff Treatment | Followed in accordance with SWMMWW |
| No. 7 – Flow Control | Followed in accordance with SWMMWW |
| No. 8 – Wetland Protection | Not applicable – site is not in a wetland or its buffer |
| No. 9 – Operation and Maintenance | Followed in accordance with SWMMWW |

MR NO. 1 – PREPARATION OF STORMWATER SITE PLAN

This storm drainage report, the appendix, and the submitted plans represent the Stormwater Site Plan as outlined in the Ecology Manual.

MR NO. 2 – CONSTRUCTION STORMWATER POLLUTION PREVENTION (SWPP)

See Section 5 – Temporary Erosion and Sediment Control for discussion of construction stormwater pollution prevention.

MR NO. 3 – SOURCE CONTROL OF POLLUTION

The proposed project does not have any listed sources of pollutants; therefore, source control best management practices (BMPs) are not required.

MR NO. 4 – PRESERVATION OF NATURAL DRAINAGE SYSTEMS AND OUTFALLS

Stormwater runoff from the site will discharge to the existing 15-inch storm drain along the east side of the site, which conveys stormwater to an existing stormwater pond to the north. The project will reduce stormwater discharge to the mainline and maintains the existing discharge location; no adverse impacts to the drainage system are anticipated.

MR NO. 5 – ON-SITE STORMWATER MANAGEMENT

On-site stormwater management (OSM) BMPs are required to the greatest extent feasible for this project. The SWMMWW requires projects that trigger Minimum Requirements 1-9 to evaluate List No. 2: On-Site Stormwater Management BMPs for Projects Triggering Minimum Requirement No.1 through 9. To evaluate mitigation under List No. 2, proposed site surfaces are classified into three separate types: lawn and landscape, roofs, and other hard surfaces.

MR NO. 6 – RUNOFF TREATMENT

The proposed project results in greater than 5,000 square feet of pollution-generating hard surfaces (PGHS). Water quality BMPs will be implemented and sized to treat the PGHS areas as well as the areas that are tributary to the water quality treatment basin.

The eventual receiving water body for the project is Swamp Creek, a non-listed creek. The project will meet the requirements for enhanced water quality treatment per the SWMMWW.

MR NO. 7 – FLOW CONTROL

In the existing condition, flow control for the project site and the other private developments between Alderwood Mall Parkway and Beech Road is provided by the existing detention pond located near the intersection of Beech Road and 184th Street Southwest. Through dedication to the City of Lynnwood for the realignment of Beech Road, the project will reduce site area from the existing conditions. Runoff from the area to be dedicated will be collected with infrastructure in Beech Road that discharges west to the City of Lynnwood storm drainage system.

Due to the reduction in site area, the project will reduce stormwater discharge to the existing storm drain and downstream detention pond that provides flow control for the tributary basin. Therefore, no additional flow control BMPs are proposed by the project.

Refer to Table 4-2 below for a summary of project area and land cover pre- and post-development.

Table 4-2: Summary of site areas

| Land Coverage | Existing Condition | Proposed Condition |
|---|--------------------|--------------------|
| Roof Area (Square Feet) | 14,021 | 42,676 |
| Impervious Site Area (Square Feet) | 43,933 | 17,113 |
| Pervious Site Area (Square Feet) | 7,676 | 5,841 |
| Dedicated Impervious Area (Square Feet) | 12,742 | N/A |
| Dedicated Pervious Area (Square Feet) | 3,296 | N/A |
| Total Site Area (Square Feet) | 81,668 | 65,630 |
| Total Impervious Area (Square Feet) | 70,696 | 59,789 |

MR NO. 8 – WETLANDS PROTECTION

The project site does not discharge to a wetland or its buffer. Additionally, there are no wetlands in the project vicinity; therefore, no impacts to wetlands are anticipated.

MR NO. 9 – OPERATION AND MAINTENANCE

The proposed project does not have any listed sources of pollutants; therefore, source control BMPs are not required.

5. Temporary Erosion and Sedimentation Control

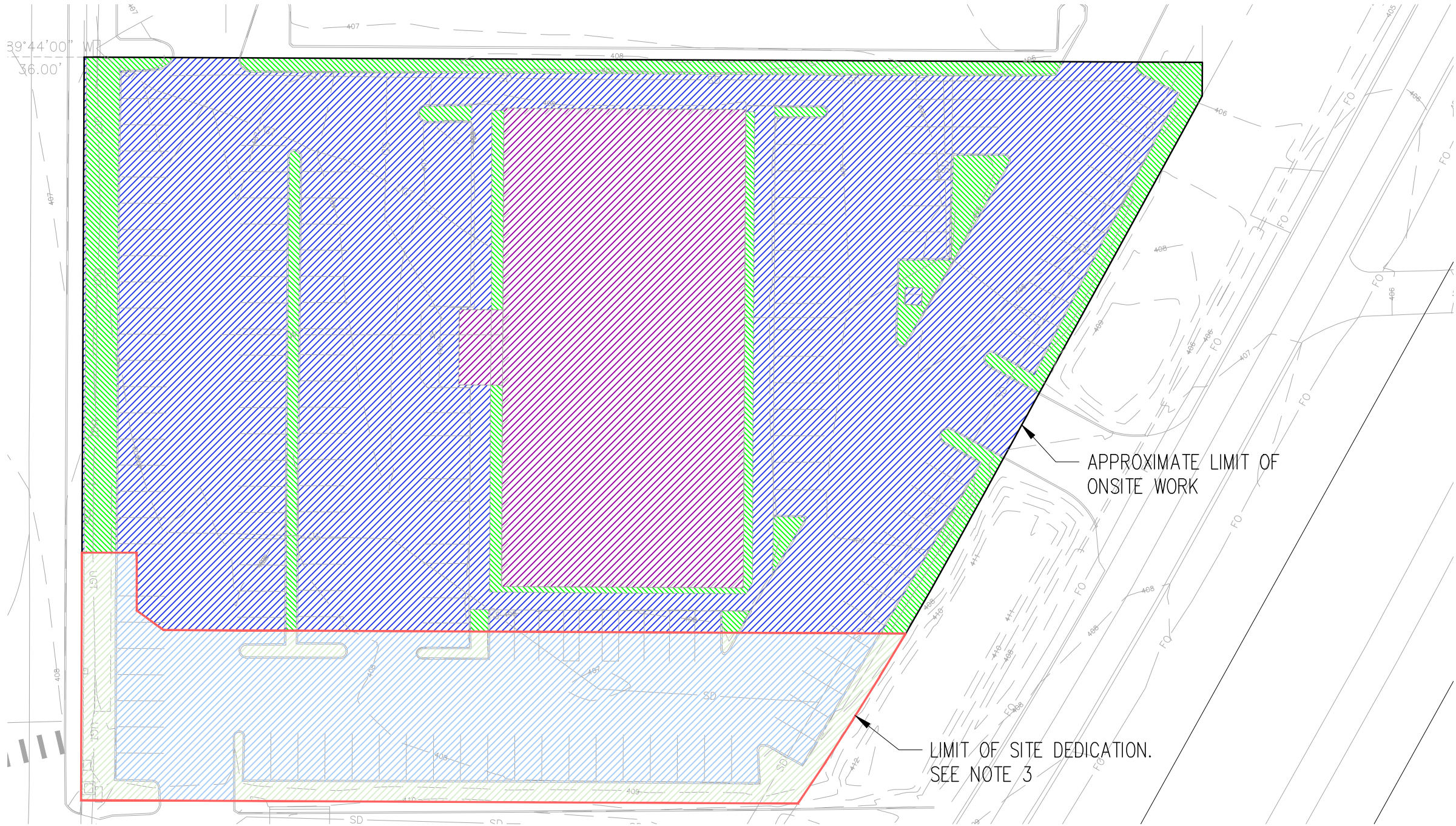
Temporary Erosion and Sediment Control (TESC) will be installed to prevent sediment-laden runoff from entering adjacent rights-of-way, surface waters, and storm and sewer systems. Runoff will be collected, stored, and treated within the site prior to being discharged to the existing storm system outfalls.

Storage and treatment of runoff will be provided to meet Department of Ecology requirements. TESC facilities will be provided for the project in accordance with City of Lynnwood standard BMPs. TESC facilities may include, but are not limited to construction entrances, construction fence, slope protection, interceptor swales, check dams, plastic covering, filter fabric fence, sump-pump basins, sediment tanks, and storm drain inlet protection.

Appendix A

Existing and Proposed Drainage Areas

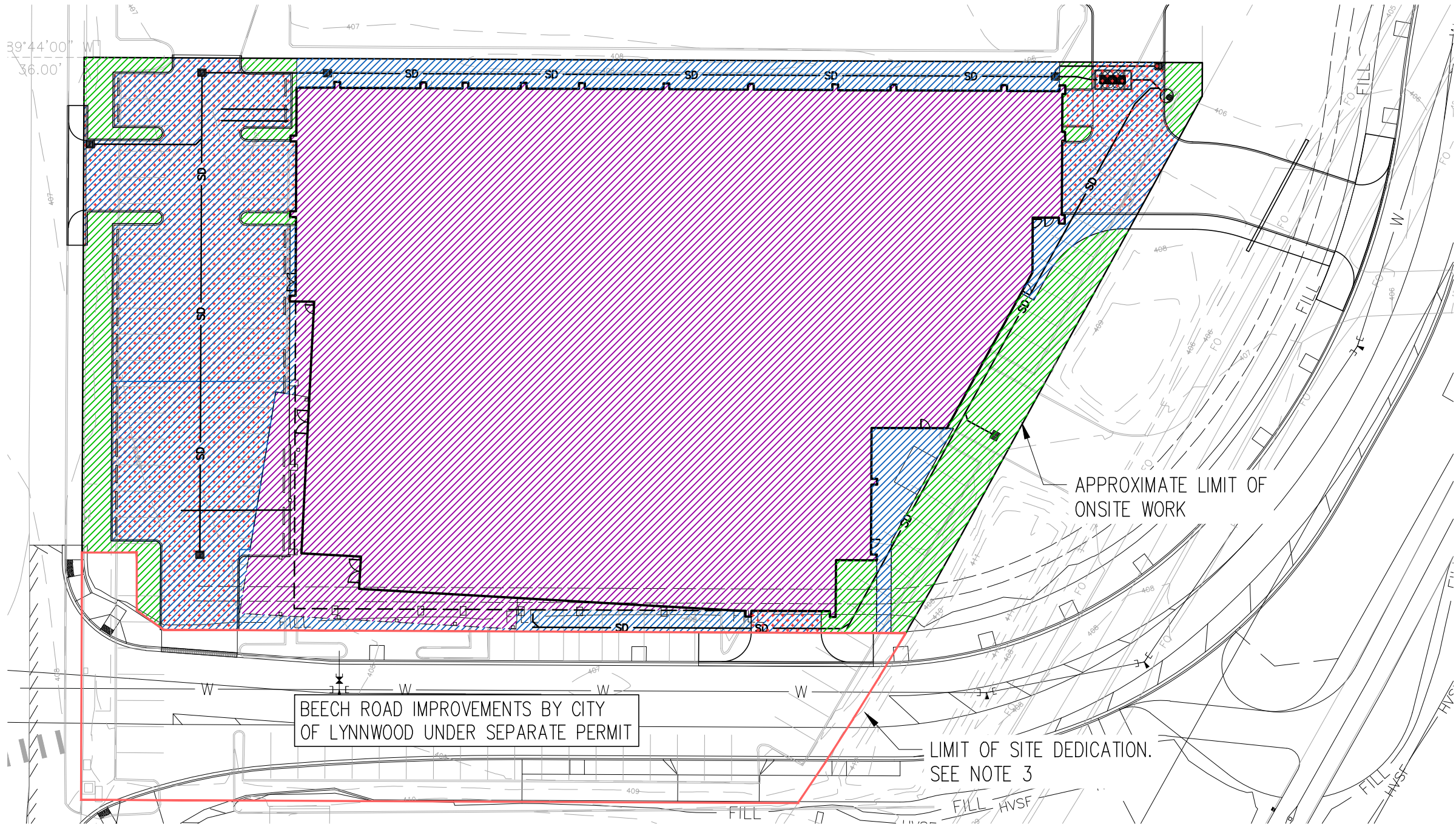
- CSK-A1 – Existing Drainage Areas
- CSK-A2 – Proposed Drainage Areas



- NOTES:
1. IMPERVIOUS AREA CONSISTS OF ASPHALT, CONCRETE, CURBS, AND SIDEWALKS.
 2. PERVIOUS AREA CONSISTS OF LAWN AND LANDSCAPE.
 3. THE STORM DRAIN MAINLINE RECEIVING DISCHARGE FROM THE DEDICATION AREA CURRENTLY DISCHARGES TO THE DETENTION POND AT THE INTERSECTION OF BEECH ROAD AND 184TH STREET SOUTHWEST. IN CONJUNCTION WITH THE BEECH ROAD IMPROVEMENT PROJECT, THE CITY WILL CONSTRUCT A NEW STORM DRAIN SYSTEM WHICH WILL REDUCE THE AREA TRIBUTARY TO THE EXISTING FLOW CONTROL FACILITY.

| ALDERWOOD MIXED USE TOWER | | |
|---------------------------|--------------------|--------------------|
| LAND USE | PERVIOUS AREA (SF) | PERVIOUS AREA (AC) |
| PERVIOUS AREA | 7,676 | 0.176 |
| IMPERVIOUS AREA | 43,964 | 1.009 |
| ROOF AREA | 14,021 | 0.322 |
| DEDICATED IMPERVIOUS | 14,021 | 0.322 |
| DEDICATED PREVIOUS | 14,021 | 0.322 |
| TOTAL | 65,661 | 1.507 |

NOT FOR CONSTRUCTION



NOTES:

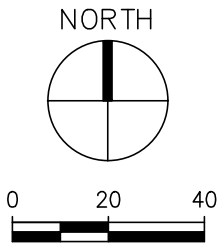
1. IMPERVIOUS AREA CONSISTS OF ASPHALT, CONCRETE, CURBS, AND SIDEWALKS.
2. PERVIOUS AREA CONSISTS OF LAWN AND LANDSCAPE.
3. THE STORM DRAIN MAINLINE RECEIVING DISCHARGE FROM THE DEDICATION AREA CURRENTLY DISCHARGES TO THE DETENTION POND AT THE INTERSECTION OF BEECH ROAD AND 184TH STREET SOUTHWEST. IN CONJUNCTION WITH THE BEECH ROAD IMPROVEMENT PROJECT, THE CITY WILL CONSTRUCT A NEW STORM DRAIN SYSTEM WHICH WILL REDUCE THE AREA TRIBUTARY TO THE EXISTING FLOW CONTROL FACILITY, NO ADDITIONAL FLOW CONTROL FACILITIES ARE PLANNED FOR THIS PROJECT.

LEGEND



POLLUTION GENERATING HARD SURFACE (PGHS)
11,971 SQUARE FEET

| ALDERWOOD MIXED USE TOWER | | |
|---------------------------|--------------------|--------------------|
| LAND USE | PERVIOUS AREA (SF) | PERVIOUS AREA (AC) |
| PERVIOUS AREA | 5,841 | 0.134 |
| IMPERVIOUS AREA | 17,113 | 0.393 |
| ROOF AREA | 42,676 | 0.980 |
| TOTAL | 65,630 | 1.507 |



NOT FOR CONSTRUCTION