HEARING EXAMINER
MEETING AGENDA

Online via Zoom and In Person at
Tumwater City Hall, Sunset Room, 555
Israel Rd. SW, Tumwater, WA 98501

Wednesday, April 24, 2024
6:00 PM

The Tumwater Hearing Examiner is an appointed official of the City, and rules upon land use and zoning matters. Within 10 business days of the conclusion of the hearing, the Examiner shall render a decision, including findings and conclusions. Questions on the operation and procedures of the Hearing Examiner may be directed to the Community Development Department at 360-754-4180.

1. Call to Order
2. Administrative Affairs
3. Public Hearing
   a. Littlerock Self-Storage – Site Plan Review, Conditional Use Permit and Variance Request
4. Adjourn

Meeting Information
All committee members will be attending remotely. The public is welcome to attend in person, by telephone or online via Zoom.

Watch Online
Go to http://www.zoom.us/join, and enter the Webinar ID 860 9326 5651 and Passcode 84354.

Listen by Telephone
Call (253) 215-8782, listen for the prompts and enter the Webinar ID 860 9326 5651 and Passcode 84354.

The City of Tumwater Hearing Examiner will hear testimony from interested parties in person, via computer audio or by telephone by registering in advance to provide comment.

Public Comment – Register in advance for this
webinar: https://us02web.zoom.us/webinar/register/WN_nLp6NFCTRuGROSRV9kkxqg

After registering, you will receive a confirmation email containing information about joining the webinar.

Written comments may be submitted to City of Tumwater, Community Development Department, 555 Israel Road SW, Tumwater, WA 98501, or by email at tmerriman@ci.tumwater.wa.us, and must be received by 5:00 p.m. on April 24, 2024.

Post Meeting
Audio of the meeting will be recorded and later available by request, please email CityClerk@ci.tumwater.wa.us

Accommodations
The City of Tumwater takes pride in ensuring that people with disabilities are able to take part in, and benefit from, the range of public programs, services, and activities offered by the City. To request an accommodation or alternate format of communication, please contact the City Clerk by calling (360) 252-5488 or email CityClerk@ci.tumwater.wa.us. For vision or hearing impaired services, please contact the Washington State Relay Services at 7-1-1 or 1-(800)-833-6384. To contact the City's ADA Coordinator directly, call (360) 754-4128 or email ADACoordinator@ci.tumwater.wa.us.

Exhibit 1

Community Development Department
555 Israel Road SW
Tumwater, WA 98501
Phone: (360) 754-4180

CITY OF TUMWATER
HEARING EXAMINER STAFF REPORT
Hearing Date: April 24, 2024

Project Name: Littlerock Self-Storage – Site Plan Review, Conditional Use Permit and Variance Request

Case Numbers: TUM-23-0650, TUM-24-0108, and TUM-24-0119

Applicant: Trevor Colby
3228 Crosby Blvd SW, Tumwater, WA 98512

Representative: Brandon Johnson, PE JSA Civil, LLC
111 Tumwater Blvd SE, Suite C210, Tumwater, WA 98501

Type of Action Requested: The applicant is requesting approvals of Site Plan Review (TUM-23-0650), Conditional Use Permit (TUM-24-0108) for a 4-Story 898-unit self-storage facility with leasing office, and a Variance (TUM-24-0119) from required zoning setbacks along the southern portion of their parcels.

Project Location: The site is located at 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512. The parcels are within Section 03, Township 17N, Range 2 W. W.M. Parcel Numbers 12703211802 & 12703211801 (Exhibit 4).

Public Notification: Public notification for this April 24, 2024, hearing was mailed to property owners within 300 feet of the subject property, various agencies, and published in The Olympian on April 12, 2024, in conformance with Tumwater Municipal Code (TMC) 14.06.070 (Exhibits 5 & 6).

Staff Recommendation: Approval, subject to conditions identified at the end of the staff report.

Staff Planner: Tami Merriman, Permit Manager
Phone: 360-754-4180
E-Mail: tmerriman@ci.tumwater.wa.us

I. BACKGROUND INFORMATION

A. Application and Review Process:

The applicant participated in preliminary and formal site plan review meetings. The application for a Formal Site Plan Review, Conditional Use Permit and Variance was submitted on January 3, 2024. The application was deemed complete on February 1, 2024 (Exhibit 6). Under TMC 2.58.090, Conditional Use Permits and Variances fall under the purview of the Hearing Examiner.

B. Existing Conditions:

The project is located at 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512. Section 03, Township 17, Range 2W. Tax Parcel No's 12703211801 & 12703211802. The two parcels equal approximately 1.77 acres, is relatively flat and currently developed as single-family homes.

C. Project Description:

The proposal is to construct a 4-story 898-unit self-storage facility with leasing office within a 112,413 square foot building, with associated parking and stormwater design. (Exhibit 3).

II. REGULATORY FRAMEWORK

The proposal is subject to the following policies and regulations:

A. <u>Tumwater Comprehensive Plan:</u>

The project site is in the Littlerock Neighborhood as designated by the Land Use Element of the City's Comprehensive Plan. The land use designation for the site is General Commercial (GC) (Exhibit 4).

Section 2.6 General Commercial in the Land Use Element of the Comprehensive Plan states:

"The intent of the General Commercial designation is to support and implement the goals of the Tumwater Economic Development Element, which was adopted in 1990. Among these goals are the establishment of a new commercial center for Tumwater, the preservation of areas for commercial facilities, which make use of the close proximity to Interstate 5 and minimizing the undesirable impacts of such uses on the residential neighborhoods, which they serve."

Section 5.8 General Commercial in the Littlerock Neighborhood section of the Neighborhood Appendix of the Land Use Element of the Comprehensive Plan states:

"The areas along the west side of I-5 from the vicinity of the Trosper Road/Littlerock

Road intersection to south of Tumwater Boulevard are designated General Commercial. These areas are characterized by the exposure to the freeway and the northern portion of this area already has intense commercial development including a Costco, Fred Meyer, Home Depot, Albertsons, Wal-Mart and a number of other smaller businesses."

"As commercial uses locate in this neighborhood, they should be designed to create as little impact as possible to residential uses on the west side of Littlerock Road. Please refer to the Littlerock Road Subarea Plan for recommendations regarding mitigation of commercial impacts on residential uses."

Staff Response and Recommended Finding:

The goals stated in the Comprehensive Plan to encourage the development of a freeway commercial business district consisting of retail/commercial and professional land uses is consistent with the proposed development.

This commercial development is proposed to be screened by perimeter landscaping. Impacts to residential zoning should be minimal as the property to the south is developed as a middle school, and the adjoining property to the west and north are zoned General Commercial. These parcels are under review for a mixed-use development. The property to the east across Littlerock Road has an approved Preliminary Binding Site plan for a mixed-use retail development.

Staff finds that the project is consistent with the Comprehensive Land Use Plan with the proposed conditions.

B. City of Tumwater Economic Development Plan:

Building off the goals and policies in the adopted Strategic Plan, the City adopted this plan to further define the City's vision related to economic development.

In crafting the Economic Development Plan, Tumwater's Economic Development Advisory Committee (EDAC) defined economic development as the effort to retain and attract capital and talent. The Plan therefore focuses on strengthening and enhancing the City's economic base by retaining existing firms and attracting new investment in a manner that is consistent with the City's vision. The anticipated benefits of these economic development efforts include a strong local job market; diverse local shopping and recreation opportunities; and a vibrant community with strong amenities. An ever-present consideration for the Committee was the need to strengthen the City's tax base and enable the City of Tumwater to continue to provide high quality services for residents and business or property owners. Below are several relevant excerpts from the City's Economic Development Plan.

- *Provide a predictable and efficient process for investors, allowing proposing development that is aligned with guiding regulations and codes.*
- *Meet the City's fiscal needs and follow citizen direction to respond with proactive economic development.*

- *Take advantage of locational, economic, and community strengths, including Tumwater's location along I-5, the diversity of its existing economic base, and a strong community character.*
- *Maintain and strengthen the diversity of Tumwater's economy, with pro-active efforts in office, light industrial and manufacturing, and retail sectors.*
- *Locate commercial users strategically, taking advantage of the City's large geography to create specialized business districts that minimize disruption to residents and other institutions or businesses.*
- *Establish a Development Climate that Stimulates Economic Activity and Desirable Investment.*
- *Encourage Economic Development that Strengthens the Tumwater Community.*

Staff Response and Recommended Finding:
Staff finds that the proposed project is consistent with the goals and policies of the Economic Development Plan.

C. Tumwater Transportation Plan:

The Transportation Plan includes language speaking to regional consistency and coordination to address both motorized and non-motorized transportation links and corridor. The plan includes goals and policies for connected streets, to design and construct multimodal, context-sensitive, complete streets and roads, to ensure pedestrian connections, and to meet peak Level of Service (LOS) standards:

Staff Response and Recommended Finding:
A Transportation Concurrency Application along with a Trip Distribution Diagram was submitted for review by the Transportation Manager and Transportation and Engineering Director and was incorporated as a part of the Transportation Concurrency and SEPA Review Mitigated Determination of Non-Significance. The transportation concurrency ruling indicates that one trip is proposed to be sent through the Tumwater Blvd – I-5 Interchange which will require payment of mitigation fee or construction of the required interchange improvements and construction of a temporary signal prior to issuance of each building permit (Exhibit 8).

Staff finds that with the required mitigation proposed in the Transportation Concurrency and MDNS this project will not adversely affect level of service standards and that the project is consistent with the Tumwater Transportation Plan.

D. Thurston Regional Trail Plan:

The City of Tumwater is a participating member of the Thurston Regional Planning Council (TRPC). TRPC adopted the Thurston Regional Trail Plan in December 2007.

The Regional Trails Plan defines a trail network blueprint and a set of guidelines and recommendations for all of Thurston County and its cities, towns and communities. The Goals and Policies section of the Plan serves to link local trail planning efforts within the broader context of planning the regional transportation network. The plan charts a

systematic path creating interconnected corridors that improve access to community destinations.

Staff Response and Recommended Finding:
The project site is not affected by the regional trail network outlined in the Thurston Regional Trail Plan.

Staff finds that approval of the project will not affect implementation of the Thurston Regional Trail Plan.

E. Hearing Examiner, TMC 2.58.090 and 14.08.020(A):
The Hearing Examiner has authority to review Conditional Use Permits and Variance Requests.

Staff Response and Recommended Finding:
Conditional use permit and variance requests require a public hearing and decision by the Tumwater Hearing Examiner.

Staff Response and Recommended Finding: Conditional Uses and Variances require a public hearing and decision by the Tumwater Hearing Examiner. Site Plan Review is being reviewed concurrently so all applications need to be considered by the Hearing Examiner per 14.08.020.A.

F. Public Notice TMC 14.06: Public Notice Requirements:
TMC Chapter 14.06 requires the City to provide public notification of certain application types by issuing a Notice of Application (TMC 14.06.010) and a Notice of Open Record Hearing (TMC 14.06.070).

Staff Response and Recommended Finding:
The applications were deemed complete on February 1, 2024. The Notice of Application *was mailed to property owners within 300 feet of the subject property and affected agencies, posted on-site, and published in the Olympian on February 9, 2024 (Exhibit 6).*

Comments were received by Washington State Department of Archaeology and Historic Preservation, and the Nisqually Indian Tribe concurring with the results of the Cultural Resource Assessment provided by the applicant (Exhibit 9).

Public notice for the April 24, 2024, public hearing was mailed to property owners within 300 feet of the subject property and affected agencies, posted on-site, and published in the Olympian on April 12, 2024, in conformance with TMC 14.06.070 (Exhibits 5 & 6).

G. State Environmental Policy Act – TMC 16.04:
The applicant submitted a SEPA Environmental Checklist with the project application. After consideration of comments received from interested agencies and citizens solicited from issuance of the Notice of Application for the project, review of the SEPA checklist and other technical reports, the City of Tumwater issued a Mitigated Determination of Non-significance on February 29, 2024 (Exhibit 7).

Comments received from the Washington State Department of Ecology relating to existing regulations in regard to solid waste management and toxic cleanup (Exhibit 9).

Staff Response and Recommended Finding:
The City of Tumwater Community Development Department, as lead agency, has completed environmental review in accordance with TMC 16.04, RCW 43-21C and WAC 197-11. The critical areas report showed no evidence of Mazama Pocket Gopher. The Department of Archaeology and Historic Preservation (DAHP) concurs with the results and recommendations made in the cultural survey report. Traffic mitigation for impacts to Tumwater Boulevard were identified, no endangered species or habitat were identified. No appeals of the SEPA threshold determination were filed (Exhibits 7, 8, & 9).

H. Transportation Concurrency:
The project is subject to the requirements of the City's transportation concurrency test outlined in TMC Chapter 15.48.

Staff Response and Recommended Finding:
The applicant submitted a Transportation Trip Distribution Report for the project. The Report was reviewed by the City's Transportation Manager who has issued a transportation concurrency ruling stating that the project is concurrent as long as 1) transportation impact fees are paid, and 2) payment of mitigation fee for one (1) trip through the Tumwater Boulevard/I-5 Interchange. This mitigation measure was included in the MDNS issued on February 29, 2024 (Exhibits 7, 8, & 9).

I. Tree Protection and Replacement Ordinance – TMC 16.08:
TMC Chapter 16.08 regulates the removal and preservation of existing trees on a site to be developed. TMC 16.08.070 (R) states "When land clearing is performed in conjunction with a specific development proposal not less than twenty percent of the trees, or not less than twelve trees per acre (whichever is greater), shall be retained." TMC 16.08.070 (R)94) further states; "In situations where a parcel of land to be developed does not meet the retention standards above in an undeveloped state, the applicant shall be required to reforest the site to meet the applicable standard outlined above at a 1:1 ratio as a condition of project approval."

Staff Response and Recommended Finding:
The site is currently developed as residential. The site does not meet the minimum requirement for tree retention in its current state. Replacement trees planted at a minimum 1:1 ration is required. The site is 1.77 acres and requires a minimum of 22 trees to be planted as part of development. The preliminary landscape plan shows 64 trees to be planted (Exhibit 10).

Staff finds that the proposed site and landscape plans are consistent with TMC 16.08.

J. Tumwater Zoning Code – TMC Title 18:

1. General Commercial (GC) Zone District TMC 18.22 and Aquifer Protection

Overlay (AQP) zone district TMC 18.39

Staff Response and Recommended Finding:
The parcel is located in the General Commercial (GC) zone district (Exhibit). TMC 18.22.040 lists mini storage facilities as a conditional use in the General Commercial (GC) zone district.

The maximum impervious surface in the General Commercial (GC) zone district according to TMC 18.22.050(B) is 85% of the lot area.

The maximum building height in the General Commercial (GC) zone district according to TMC 18.22.050(C) is 65 feet.

The minimum required setbacks for the General Commercial (GC) zone district are as follows:

a. *Zero feet along all public street frontages except where any structures or portions of structures are adjacent to any residential zoning district, the minimum structural setback shall be 20'. Where structures are constructed over one story, the setback of the structure from the adjacent property line or lines shall be increased by ten feet for every story above the ground level story of the proposed new building, and shall be screened from view in accordance with TMC Chapter 18.47.*

b. *Zero feet along the other boundaries.*

The parcel is bordered on the south by property zoned Single-Family Low-Density Residential (SFL). The applicant requests a variance from the residential setback requirements that necessitate that the project provide a minimum structural setback of 20 feet from the property line when general commercial development abuts a single-family zone, and where structures are constructed over one story, the setback of the structure from the adjacent property line or lines shall be increased by ten feet for every story above the ground level story of the proposed new building.

The variance requests the building setback requirements on the south property line be reduced.

The parcels to the south are zoned Single Family Low-Density Residential (SFL), however developed as a public school. The parcel directly adjacent to the southern border is a private access road and parking lot for the school. The likelihood of any future residential development on this parcel is extremely low.

The applicant has applied for a variance to reduce the required setback adjacent to the Single-Family Low-Density Residential (SFL) zone district. See the discussion Variances – TMC 18.58 below.

TMC 18.39 Aquifer Protection Overlay– Restricted Land Uses

Staff Response and Recommended Finding:
The intent of the aquifer protection (AQP) overlay zone district is to identify, classify, and

protect vulnerable and/or critical aquifer recharge areas within the city and urban growth area. Protection is to be accomplished by controlling the use and handling of hazardous substances.

Ministorage is not a restricted land use in the aquifer protection (AQP) overlay zone district.

2. Environmental Standards TMC 18.40 – Exterior Illumination:

Staff Response and Recommended Finding:
Artificial light sources are regulated under TMC 18.40.035, which requires site lighting to be directed downward and fully shielded. Parking lot light fixtures shall be limited to 24 feet in mounting height.

3. Citywide Design Guidelines - TMC 18.43:

Staff Response and Recommended Finding:
The project is subject to the Citywide Design Guidelines, Chapter 2, which regulates site planning, building architecture, and landscape. The applicant has provided a narrative stating how these design standards are met. Design review is a component of building permit submittal.

4. Signs TMC - 18.44:

Staff Response and Recommended Finding:
Signage is regulated by TMC Chapter 18.44, with specific regulation for the General Commercial GC zone district. Signs require separate permits.

5. Fencing - TMC 18.46:

Staff Response and Recommended Finding:
Fence height is regulated by TMC 18.46, which requires specific fence heights for front, side and rear yards. The Citywide Design Guidelines prohibit chain link fencing within 50 feet of a building's public entrance.

6. Landscaping - TMC 18.47:

Staff Response and Recommended Finding:
TMC 18.47 requires a Type 1 10-foot perimeter landscape between commercial and residential zones, a Type 2 8-foot perimeter landscape between nonconflicting zones, parking lot landscape, and the plan should include any required tree mitigation. The applicant has provided a conceptual landscape plan that meets this requirement. A detailed landscape plan is required as part of site development grading submittal.

7. Parking - TMC 18.50:

Staff Response and Recommended Finding:
Minimum parking requirements for mini-storage are 1 space for every 100 storage units and

2 spaces for permanent on-site managers with a minimum of 3.0 spaces for all facilities, regardless of size. Parking areas and all vehicle maneuvering is to be hard surfaced (asphalt, concrete or turfstone) and the spaces shall be defined by white striping a minimum of 4" wide. The proposed site plan shows parking meeting this requirement.

8. Conditional Use Permit- TMC 18.56:

TMC 18.56.035 outlines general criteria to be considered when reviewing a proposal categorized as a conditional use in the zoning ordinance. These criteria are as follows:

1. The proposed use shall be in keeping with the goals and policies of the Tumwater comprehensive plan, including subarea plans, and applicable ordinances.

2. The proposed use shall not be materially detrimental to the public health or welfare, the environment, or injurious to the property or improvements near the proposed use or in the zone district in which the subject property is situated. The following shall be considered in making a decision on a conditional use permit:

    a. The generation of noise, noxious or offensive odors or emissions, light, glare, traffic, surface water or groundwater pollution, electronic interference, impacts to environmentally sensitive areas or protected species, impacts to historic or cultural resources, or other impacts or nuisances that may be injurious to the public health or welfare or to property or improvements in the vicinity of the proposed use or in the district in which the subject property is situated;

    b. Availability of public services, which may be necessary or desirable for the support of the proposed use. These may include, but shall not be limited to, availability of utilities, transportation systems, education, police and fire facilities, and social and health services; and

    c. The adequacy of landscaping and screening consistent with TMC Chapter 18.47, yard setbacks, open spaces, or other development characteristics necessary to mitigate the impact of the proposed use upon neighboring properties;

3. The proposed use shall meet or exceed the performance standards that are required in the zone district it will occupy.

4. Any additional minimum conditions identified for a particular type of proposed use in TM C 18.56.100 through TMC 18.56.0350

Staff response to these general criteria are as follows:

Staff has reviewed all applicable elements of the City's Comprehensive Plan and finds no inconsistency between the proposed project and the goals and policies outlined in the Plan.

There are no apparent adverse impacts that will be caused as a result of the project related to noise, odors, light, glare, traffic, electrical interference, critical areas, sensitive species, ground

and surface water or historic and cultural resources.

Adequate water and sewer facilities are available to service the project (Exhibit 11).

Landscaping and screening will meet the requirements of TMC 18.47.

The project is consistent with all applicable performance standards outlined in the General Commercial zone district.

Under TMC 18.56.220 the following specific conditions shall be met to approve the requested Conditional Use Permit:

"Ministorage facilities" Minimum Conditions.

No off-street parking or loading areas will be allowed in any required yard area;

Screening located along all property lines shall be provided to lessen visual impacts to neighboring properties and street rights-of-way;

The minimum site area shall be adequate to provide for the required parking and yards.

Staff response to these specific criteria are as follows:

There are no off-street parking or loading areas proposed in any required yard areas.

The site meets minimum parking and landscape requirements.

Screening will be provided on all property lines to lessen visual impacts to neighboring properties.

9. Variances- TMC 18.58:

An application for a Variance accompanied the Site Plan and Conditional Use applications for this project. Under TMC 2.58.090, review authority for Variance applications fall under the purview of the Hearing Examiner.

The applicant is requesting approval of a Variance from zoning setbacks as required in TMC 18.22.050(D) Setbacks in the General Commercial zone are zero for front, side and rear, except where any structures or portions of structures are adjacent to any residential zoning district, the minimum structural setback shall be twenty feet. Where structures are constructed over one story, the setback of the structure from the adjacent property line or lines shall be increased by ten feet for every story above the ground level story of the proposed new building and shall be screened from view in accordance with TMC 18.47.

In accordance with TMC 18.58.040, a variance may be granted, after investigation, provided all the following findings of fact exist:

1. That special conditions exist which are peculiar to the land, such as size, shape, topography, or location, not applicable to other lands in the same district, and that literal interpretation of the provisions of this title would deprive the property owners of rights commonly enjoyed by other properties similarly situated in the same district under the terms of this title;

2. That the special conditions and circumstances are not the result of actions of the applicant;

3. That the granting of the variance requested will not confer a special privilege to the property that is denied other lands in the same district;

4. That the granting of the variance will not be materially detrimental to the public welfare or injurious to the property of improvements of the vicinity and zone in which the subject property is situated; and

5. That the reasons set forth in the application justify the granting of the variance, and that the variance, if granted, would be the minimum variance that will make possible the reasonable use of the land.

In no event may a variance be granted if it would permit a use that would not be permitted as a primary, accessory or conditional use in the district involved.

Staff findings:

1. That special conditions exist which are peculiar to the land, such as size, shape, topography, or location, not applicable to other lands in the same district, and that literal interpretation of the provisions of this title would deprive the property owners of rights commonly enjoyed by other properties similarly situated in the same district under the terms of this title.

Setbacks:
The intent of the code regarding setbacks (TMC 18.22.050(D)) is to provide additional separation between single-family residences and commercial buildings that are taller. In this case, a powerline easement along the northern side of the parcel limits how far the structure can be located away from the southern property line. The property to the south is owned by the Tumwater School District and it contains a parking lot for the Tumwater Middle School, but has no single-family residences.

The 4-story building would require a 40 foot setback from the southern property line. The applicant has proposed the structure be located approximately 37 ± feet from the property line, with the exception of the eastern 30 feet of the structure which is 27 ± from the property line. The applicant requests a variance to reduce the buffer to 37 feet along the southerly border, and 26 feet for the eastern 30 feet of the building.

In the City of Tumwater, zones separated by public streets are not considered abutting. In this instance, the parcel to the south includes a private drive and parking lot to serve the

Tumwater Middle School. This parcel is not likely to ever develop as residential. The drive and parking lot separate the uses. The private access road and parking are similar to the allowance for zones separated by public streets.

Due to the special conditions of this project, staff finds that allowing this variance is justified.

2. That the special conditions and circumstances are not the result of actions of the applicant.

Setbacks:
The special circumstances regarding the proximity of the General Commercial property adjacent to the Single Family Low Density zone district is not the result of actions by the applicant.

Due to the special conditions of this project, staff finds that allowing for this variance is justified.

3. That the granting of the variance requested will not confer a special privilege to the property that is denied other lands in the same district.

Setbacks:
Based on previous statements about the project, the intent of the code is met regarding setbacks complying with City standards, therefore not conferring any special privilege on this property.

4. That the granting of the variance will not be materially detrimental to the public welfare or injurious to the property of improvements of the vicinity and zone in which the subject property is situated.

Setbacks:
The intent of the code is met with this proposal and granting this variance will not be materially detrimental to the public welfare or injurious to the surrounding properties.

Allowing the building to be constructed at a +/- 3' reduced setback from the south property line is the minimum variance possible to reasonably accommodate for the special conditions that exist on-site due to the adjacent property zoned SFL and used as a public-school campus and the high voltage power lines to the north.

5. That the reasons set forth in the application justify the granting of the variance, and that the variance, if granted, would be the minimum variance that will make possible the reasonable use of the land.

Staff recommends approval of this Variance for the project. If approved, Staff finds that the project is consistent with the Tumwater Municipal Code with conditions listed at the end of this report.

K. Bonneville Power Administration:

Staff Response and Recommended Finding:

A portion of the parcel is encumbered by an easement for the Bonneville Power Administration (BPA). The BPA has easements throughout the city. In some instances, the easement requires development plans be reviewed and approved by BPA to assure the right to construct certain improvements within the easement. The applicant states this easement does not have that same requirement. The applicant has provided a draft indemnity agreement to the City to not require approval by BPA as a condition of approval for their development. The applicant owns and is currently developing parcels to the east of this site, across Littlerock Road. Those parcels are also encumbered by the same BPA easement. As part of that development, the applicant provided an indemnity agreement to the City, which was approved as part of its land use approval and signed by the City. It is anticipated that the City will agree to this indemnity agreement as well (Exhibit 13).

L. Lot Consolidation TMC 17.06:

Staff Response and Recommended Finding:

The applicant proposes development of two parcels. TMC 17.06 requires that in cases where multiple lots, parcels or tracts will all be used for one building site, and in particular those cases where a structure is proposed to be built across a property line, the lots, parcels or tracts shall be consolidated into one lot, parcel or tract.

A lot consolidation shall be prepared and recorded with Thurston County prior to issuance of any building permit.

2022 Drainage Design and Erosion Control Manual: The project shall comply with the 2022 Drainage Design and Erosion Control Manual for the City of Tumwater.

Staff Response and Recommended Finding:

The applicant submitted a preliminary storm drainage report that indicates compliance with the 2022 Drainage Design and Erosion Control Manual for the City of Tumwater (exhibit 12). A final drainage report is required as part of site development and grading application.

Staff Response and Recommended Finding:

Stormwater from existing and proposed pollution generating surfaces shall be collected, treated and infiltrated in accordance with the 2022 Drainage Design and Erosion Control Manual. The applicant has submitted a preliminary Stormwater report that shows Stormwater will be sent to an underground storm facility with storm filter technology (Exhibit).

As conditioned below, and with the approval of a Conditional Use Permit and Variance, Staff finds that the project is consistent with the external property setback requirements of TMC 18.22.050(D).

III. RECOMMENDATION

Pursuant to TMC 2.58.110, staff recommends approval of the Site Plan Review, Conditional Use and Variance requests described herein with the following conditions:

1. The Mitigated Determination of Nonsignificance issued February 29, 2024, is hereby referenced and considered conditions of this approval.
2. The building designs shall conform to the City of Tumwater's Citywide Design Guidelines. Architectural elevation drawings of each building-type and narrative description stating how the design guideline requirements are being met shall be submitted for review and approval prior to issuance of Building Permits.
3. The project shall meet the minimum parking requirements of TMC Chapter 18.50.
4. The project shall provide short and long term bicycle parking as required by TMC 18.50.
5. A photometric plan showing meeting the exterior lighting requirements of TMC 18.40 shall be submitted with building permit submittal.
6. A detailed landscape plan meeting the minimum requirements of TMC 18.47 and showing minimum tree mitigation planting at 1:1 is required as part of the Site Development Grading submittal.
7. Any signage shall be permitted under separate permits.
8. A lot consolidation is required prior to the issuance of the building permit.
9. An indemnity agreement shall be agreed upon and approved by the City to be recorded by the applicant against the subject property prior to site development grading permit issuance.
10. Barrier free van accessible parking space shall be provided in compliance with IBC Section 1106. Note: the stalls can't block the fire department equipment located on the building.

    All barrier free parking stalls shall be identified by a sign at the head of the parking space, 60 inches minimum above grade measured to the bottom of the sign. The sign shall be marked with the international symbol of access and shall bear the words: "State Disabled Parking Permit Required." Van stalls shall also state "VAN" ANSI A117.1 Chapter 502.6 & IBC Section 1101.2.9
11. The building and site are required to be accessible. An accessible route of travel shall be provided to all portions of the building, to accessible building entrances, and connecting the building and the public way.
12. A Site Development/Grading Permit will be required for this site. The permit application shall be accompanied by the application checklist and three sets of plans and specifications and supporting data consisting of a soils engineering report and engineering geology report prepared and signed by a licensed soils engineer. Inspection of the grading shall be provided by the civil engineer and Geotechnical engineer. In addition, special inspectors approved by the building official shall perform inspections of fill placement, compaction testing, and blasting. All special

inspections are to be performed by WABO registered labs and inspectors who have expertise in grading and earthwork.

13. When the grading work is complete and ready for final inspection the civil engineer of record is responsible for providing a final inspection report which will include the geotechnical engineers and special inspector's reports. In addition, as-built drawings for the site will be submitted in a PDF format. IBC Appendix J
14. Special inspectors may be required for the following types of work: concrete, bolts installed in concrete, special moment-resisting concrete, reinforcing steel and pre-stressing steel tendons, structural welding, high strength bolting, structural masonry, reinforced gypsum concrete, insulating concrete fill, special wood design, spray-applied fireproofing, piling, drilled piers and caissons, shot-crete, special (engineered) grading, excavation and filling, soils compaction testing, retaining walls and smoke-control systems. All special inspections are to be performed by WABO registered inspectors and at the expense of the owner. IBC Section 1704.1
15. Separate building permits are required for retaining walls or rockeries over four feet in height, measured from the bottom of the footing to the top of the wall or walls supporting a surcharge. A licensed structural engineer shall design the rockeries or concrete retaining walls. In addition to the engineers' design a full-time inspection by a WABO Special Inspector is required. Proposed walls shall be shown on the engineering and grading plans.
16. Please place the following note on the site development and grading plans:

    "The City of Tumwater requires that the firm providing the soils report (YOUR FIRM) conduct the site inspections as defined in the report. The City also requires that in addition to the soils engineering firm, a WABO registered special inspector with experience with soil grading be employed, by the owner, to conduct compaction testing for the building pads and the required fire lanes. The special inspector shall not be the geotechnical firm, the civil engineer of record or an employee of the contractor.

    All grading work shall be conducted in accordance with the soils report prepared by (YOUR FIRM). Compaction testing of the souls under the fire lanes and the building foundations and utility trenches shall be verified by (YOUR FIRM) and the WABO special inspector.
17. The owner will need to submit the name of the WABO registered firm who will conduct the special inspections, to the Building Official, prior to issuance of the site development/grading permits. That no vertical or combustible construction will be allowed on the construction site until the fire hydrants and paved roads are installed, tested and approved by the City of Tumwater. Note: testing will also include verification of fire flow by the fire department.
18. Construction of a III-B building limits combustible material used in the interior structure per IBC 603.1.
19. Demolition permits are required. A separate demolition permit is required for each structure.
20. Onsite hydrant(s) are required.

21. Buildings S-1 occupancy over 7,500 square feet in area are required to have a fire alarm system installed.
22. Buildings S-1 occupancy over 7,500 square feet or do not meet the requirements of IFC 503.1 are required to have a fire sprinkler system installed.
23. The required fire flow for this building is derived from Appendix B of the International Fire Code. Type II-B buildings of this size are required to have a fire flow of 1,750 gallons per minute at 20 psi.
24. Provide location of exits on plans and show landings and access (sidewalks) to the public way.
25. Aerial fire apparatus access shall be provided.
26. Gates blocking access to the site for fire department equipment shall be provided with a Knox Padlock. (Main entrance gate, fence at front of building restriction access to the rear of structure for fire fighters).
27. Restrooms will be required to meet the min. fixture count per WAC 51-50-2900 for the proposed structure due to office space.
28. The address for this site will be addressed by the Building Official before site development and grading permit is issued.
29. Building plans and specifications shall be prepared and stamped by an architect and engineer licensed to practice in the State of Washington. Steel structure will require separate engineered foundation to be added to plans.
30. A building permit application (including shell permits) shall include architectural, structural, plumbing, mechanical and energy plans and specifications. **No exceptions**. Fire sprinkler and fire alarm permits and plans may be submitted separately from the main permit application.
31. Fire sprinkler, fire alarm, sign and retaining walls require separate permits.
32. All new building projects are required to provide for the storage of recycled materials and solid waste. The storage area shall be designed to meet the needs of the occupancy, efficiency of pick-up, and shall be available to occupants and haulers. The location of this facility shall be shown on the site plan.
33. The applicant shall be responsible for providing the City with all costs associated with the installation of water, sewer, street and storm drainage systems that are dedicated to the City of Tumwater.
34. All designs/construction shall comply with the City of Tumwater's Development Guide and WSDOT standards.
35. The site plan shall show all existing and proposed utilities and easements including streetlights, street trees, water, sewer, storm, gas, cable, power, telephone, signage and striping. Provide street sections showing dimensions of existing and proposed improvements. Include the line sizes on the water and sewer mains and services. All rockeries proposed shall also be shown on the site plan.

36. All street construction, main installation and storm drainage work requires engineered plans certified by a professional engineer.
37. The applicant is responsible for all plan check, inspection and connection fees.
38. Any private or public utility relocation is the responsibility of the applicant.
39. The applicant shall be responsible for the maintenance and timely repair of all public improvements for a period of 30 months following final certification by the City and shall submit a surety for maintenance equal in value to fifteen (15) percent of the total value of the required public improvements certified by the Public Works Director. Please refer to Chapter 3 of the Development Guide for further clarification.
40. Provide all easements and bills-of-sale documents with the engineered plans.
41. All legal descriptions must be accompanied with an appropriate drawing that the City Surveyor can use to verify the legal description.
42. The owner or owner's representative is also responsible for furnishing the city with electronic files, compatible with release 2018 or newer Auto-CAD format. Provide individual drawings independent of x-refs. Include all non-standard font files and plot files. Also, please furnish PDF files printed from the Auto-CAD files 300 DPI or greater.
43. A storm water maintenance agreement, utility maintenance agreement, easements and bills-of-sale are required.
44. Site plan modifications may occur as a result of the engineering review process. For engineering issues, the approved engineering plans take precedence over the approved site plan.
45. All improvements are to be completed before a certificate of occupancy can be issued.
46. The city vertical and horizontal control datum is NGVD 29 and NAD 83(HARN) / Washington South U.S. Survey Feet respectively.
47. Testing shall be required at the developers or contractor's expense. The testing shall be ordered by the developer or contractor and chosen testing lab shall be approved by the City Construction inspector. Testing shall be done on all materials and construction as specified in the WSDOT/APWA Standard Specifications and with frequency as specified in the current City of Tumwater Development Guide.
48. All access to the property will be consistent with City standards and policies.
49. Street patching shall be per City of Tumwater standard detail.
50. This project is in an area of high groundwater review. The project shall confirm the max historic high groundwater elevation for the site. 6' of separation shall be required from the bottom of the stormwater facility to high groundwater or other low permeability layer. This separation may be reduced down to 3' with a successful mounding analysis reviewed and approved by the City designated third party reviewer.

51. A drainage design and erosion control plan will be required according to City's 2022 Drainage Design and Erosion Control Manual.
52. Maintenance of the on-site storm water system will be the responsibility of the property owner and a maintenance agreement will be recorded against the property.
53. This project will be paying a monthly storm water utility fee based on the amount of impervious surface per Tumwater Municipal Code 13.12.060.
54. Test pits conducted for stormwater design will comply with the 2022 Drainage Design and Erosion Control Manual for location and frequency. Test pits will be conducted between December and April to accommodate for seasonal high groundwater.
55. The professional engineer will need to provide calculations of the maximum monthly sanitary sewer discharge from the site. The City reserves the right to check the actual use in the future and charge additional connection fees if the actual use is greater than the estimated amount.
56. Any sewer main extension will require a minimum of an 8" system. The main size will depend on the requirements for this project. The system shall be designed per the City of Tumwater Development Guide and current Sewer Comprehensive Plan.
57. The project must meet minimum fire flow requirements.
58. Back flow prevention is required on all fire services and irrigation services and in accordance with the AWWA Cross Connection Control Manual. A reduced pressure backflow assembly is required on all commercial domestic services per WAC 246-290-490.
59. Any water main extension will require a minimum of an 8" system. The main size will depend on the fire flow requirements for this project. The system shall be designed per the City of Tumwater Development Guide and current Water Comprehensive Plan.
60. Water meters need to be placed in the public right-of-way or clustered on site within an easement. The professional engineer will need to provide calculations on the maximum instantaneous water demand and size of the meter for the project.

Submitted on behalf of
the Community Development
Department by:

Staff Contact: Tami Merriman, Permit Manager
Phone: 360-754-4180
E-Mail: tmerriman@ci.tumwater.wa.us

Report Issue Date: April 12, 2024

List of Exhibits:

Exhibit 1 Staff Report dated April 12, 2024
Exhibit 2 Site Plan Review, Conditional Use and Variance Applications dated 01-30-2024
Exhibit 3 Site Plans dated 12-13-2023
Exhibit 4 Zoning and Vicinity Map
Exhibit 5 Public Hearing Notice 04-12-2024
Exhibit 6 Public Notice Certification
Exhibit 7 MDNS with attachments
Exhibit 8 Concurrency Ruling 02-16-2024
Exhibit 9 Public Comments
Exhibit 10 Landscape Plans 12-05-2023
Exhibit 11 Water & Sewer Availability 11-21-2023
Exhibit 12 Preliminary Storm Drainage Report 12-13-2023
Exhibit 13 Draft Indemnity Agreement

EXHIBIT 2

CITY OF TUMWATER

555 ISRAEL RD. SW, TUMWATER, WA 98501
(360) 754-4180
Email: cdd@ci.tumwater.wa.us

FORMAL SITE PLAN REVIEW Application

TUM - 23-0650	DATE STAMP 12/14/2023
Kelly RCVD BY	

Application fee: $220.00 (one acre or less); $385.00 (greater than one acre)
Resubmittal application fee: $80.00 (one acre or less); $220.00 (greater than one acre)
In most cases, meetings will be scheduled on Thursdays of the following week, when applications are received prior to 5:00 p.m. on Wednesdays.

SUBJECT PROPERTY

ADDRESS OF PROPERTY (COMPLETE): 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512

PROJECT NAME: Littlerock Storage Center

PARCEL NUMBER(s): 12703211802, 12703211801

APPLICANT *(please print neatly)*

NAME OF APPLICANT: Trevor Colby

APPLICANT'S MAILING ADDRESS (COMPLETE): 6820 6th Avenue, Suite 201, Tacoma, WA 98406

APPLICANT'S TELEPHONE(S): 253-475-4363

APPLICANT'S E-MAIL: trevor@kciwa.com

PROJECT REPRESENTATIVE

NAME OF PROJECT REPRESENTATIVE: Brandon Johnson, PE | JSA Civil, LLC

REPRESENTATIVE'S MAILING ADDRESS (COMPLETE): 111 Tumwater Blvd SE, Suite C210, Tumwater, WA 98501

REPRESENTATIVE'S TELEPHONE(S): 360-515-9600

REPRESENTATIVE'S E-MAIL: brandon.johnson@jsa-civil.com

PROPERTY OWNER

NAME OF PROPERTY OWNER: John & Donna Barckley (6115) | Laurie Mischel (6119)

OWNER'S MAILING ADDRESS (COMPLETE): 3228 Crosby Blvd SW, Tumwater, WA 98512 | 159 Spring Street, Concord, NC 28025

OWNER'S TELEPHONE(S):

OWNER'S E-MAIL:

PROJECT DESCRIPTION *(attach additional sheets and documentation, as needed)*

Construct new 4-story self-storage facility. Project includes the new multi-story self-storage building, on-site parking, covered loading area, perimeter landscaping, underground utilities, on-site stormwater facilities, and secure perimeter fencing. The project will be developed in one phase of work. The existing residences and associated structures at the site will be removed for site redevelopment.

I affirm that all answers, statements, and information submitted with this application are correct and accurate to the best of my knowledge. I also affirm that I am the owner of the subject site or am duly authorized by the owner to act with respect to this application. Further, I grant permission to any and all employees and representatives of the City of Tumwater and other governmental agencies to enter upon and inspect said property as reasonably necessary to process this application. I agree to pay all fees of the City that apply to this application.

DocuSigned by: Trevor Colby — ED60664DBCBD437...
Signature of Applicant/Representative

12/1/2023
Date

Signature of Port of Olympia representative (if applicable)

Date

Please attach the **Formal Site Plan Review submittal checklist** to this Application.

Award-Winning Self-Storage Architecture
206.310.7770
17030 174th Ave NE
Woodinville, WA 98072
stephen.bourne@comcast.net

December 13, 2023

Design Narrative – Commercial Design Guidelines

Littlerock Storage Center
A New Self-Storage Development
Tumwater, WA

Existing Site Data

Project Address:	6115/6119 Little Rock Road SW, Tumwater
Total Site Area:	1.76 Acres (~77,046 SF)
Base Zone:	GC (General Commercial)
Adjacent Zones:	North/West/East = Same; South = SFL
ECA:	None
Max. Impervious:	85%
Base Height Limit:	65 feet
Min. Setbacks:	Front/Street = 0’ Side = 0’/ 40’+ (see below) Rear = 0’ *Where any structures or portions of structures are adjacent to any residential zoning district, the **minimum structural setback shall be twenty feet**. Where structures are constructed over one story, the setback of the structure from the adjacent property line or lines shall be **increased by ten feet for every story above the ground level story** of the proposed new building, and shall be screened from view in accordance with TMC Chapter 18.47.*
Parking Ratio:	1 per 100 Units/ 3 minimum (No residential manager)

General Project Description

We would like to present our proposal for a 898-unit, 112,413 GSF self-storage facility, located on the west side of Littlerock immediately north of Tumwater Middle School. Littlerock is a Signature Road at this location (but not a Pedestrian-Oriented Street) and the project will be subject to the Commercial Design Guidelines.

There will be one 4-story building in this proposal; the building will front Littlerock from the west, across the street from the future retail development. The building facades will be highly articulated creating a high-quality aesthetic when viewed from either direction along Littlerock Road. We are proposing to eliminate one existing curb cut from the existing street frontage, relocate a second existing curb cut, and upgrade a third. The site will be secured around the perimeter with a tamper-proof high-quality black fence system, and access will be controlled through two automatic rolling security gates.

SITE + PLAN + MIX LLC
AWARD-WINNING SELF-STORAGE ARCHITECTURE
206.310.7770
17030 174TH AVE NE
WOODINVILLE, WA 98072
stephen.bourne@comcast.net

Design Guidelines Narrative

This project falls under Chapter 2: Commercial of the City-wide Design Guidelines. The following itemizes how this design meets all applicable requirements.

2.B.1 Site Planning Dimensional Standards

Per Table 2.B.1-1, this project will be required to provide Public Open Space equal to at least 1% of the site area, plus 1% of building footprint.

Note: This calculation and assigned area are shown on the Site Plan.

2.B.2.2 Appearance

Per 2.B.2.2(b), this building must be located within 15' of the ROW and have:

i. at least 50% transparency on the ground floor between 3' and 8' above grade.
ii. Weather protection at least 4' deep.

Note: This building is as close to the ROW as possible due to a 15' utility easement, and it features 6' deep weather protection over the Leasing Office entry, and 3' deep weather protection over the ground level display windows.

2.B.2.3 Parking Orientation

Per 2.B.2.3(b), parking must be located beside, behind, underneath or above ground floor use facing the street, and is limited to 50% of the street frontage. Parking areas along the street must be screened.

Note: Parking for this building is shown on either side of the entry driveway, and both areas will be screened per 2.D.2.2. The total street frontage taken up by parking is 38' total (19% of total street frontage).

2.B.2.5 Space between building and street edge

Per 2.B.2.5(b), the maximum front setback is 10'. However, there is a 15' utility easement that runs the entire width of the street frontage on this property.

Note: This building is as close to the ROW as possible due to a 15' utility easement.

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2.B.2.6 Streetscape

Per 2.B.2.6(b), there must be a minimum 5' landscape strip adjacent to the street curb, and then a minimum 6' clear sidewalk.

Note: Due to the 15' utility easement, there is sufficient room for the landscape strip and sidewalk between the building and the street. Please see civil and architectural site plans, and the Landscape Plan.

2.B.3.1 Pedestrian circulation in non-residential and mixed-use projects.

Per 2.B.3.1, pedestrian and accessible access must be provided from the street to the primary building access, accessible parking, and any public open space.

Note: This project will provide a fully accessible access route from the street to the primary building entrance, from the street to the public open space, and from the accessible parking to the primary building entrance. This will include access to the interior storage area as well as the Leasing Office. No public access or connection to adjacent properties will be allowed from inside the security perimeter.

2.B.6.1 Service Areas

Per 2.B.6., service areas shall be located to avoid all negative impacts on the street or residentially zoned properties. This project will utilize the following to minimize the impact of the associated service areas:

- **i) The Customer Loading Bay is located on the north face of the building, opposite the residentially zoned property to the south.**
- **ii) The Customer Loading Bay is recessed into the building.**
- **iii) There will not be a visible trash enclosure on this property. Trash containers will be kept in the Manager's storage unit and will be rolled out to the curb for pick up.**
- **iv) There will not be any roof-mounted equipment on this building.**
- **v) All ground-mounted equipment will be screened with landscaping per 2.B.5.2.**

2.B.9 Non-residential Open Space

Per 2.B.9.1, this project will provide public Open Space area equal to 1% of the site area, plus 1% of the building footprint.

Note: This calculation and assigned area are shown on the Site and Landscape Plans.

SITE + PLAN + MELX LLC
AWARD-WINNING SELF-STORAGE ARCHITECTURE
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WOODINVILLE, WA 98072
stephen.bourne@comcast.net

2.B.10 Site Planning for Security

Per 2.B.10.1, this project will employ standard CPTED principles for the design of the building and landscape perimeter.

2.E.1.1 Architectural Character

Per 2.E.1.1a(3), the project will add to Tumwater's design character by featuring contemporary forms and treatments that have the following aspects:

i) High-quality aesthetic; the design features 'golden ratio' proportions

ii) Durability & longevity: the materials will last and look good for many decades.

iii) Authenticity: the materials and design application are authentic to the use (self-storage)

2.E.2.1 Human Scale Elements

Per 2.E.2.1(a), the project will address the relationship between the building and the human body by featuring the following four (4) human scale elements:

5) A Covered Entry

6) Spatially defining building elements: 2nd floor cantilever over entry sidewalk

9) Landscaping elements to reduce the scale (three-foot-high parking screen wall, trees and ground covering along the building frontage).

11) Pedestrian scale lighting will be mounted under the cantilever to illuminate the pedestrian space below.

2.E.3.1 Scale of Large Buildings

Per 2.E.3.1, the project will address the scale of the proposed building by using the following three (3) methods of modulation:

a) **Horizontal building modulation:**

- **i. 5' x 5' notches in the upper three stories at a maximum interval of 50' on both north and south elevations**
- **ii. Includes change in materials and colors.**

a) Change in materials with change in building plane.

- **i. Changes in material are determined by 'golden ratio' proportions.**
- **ii. Material changes are associated with changes in building plane when appropriate.**

b) Provide lighting fixtures within each interval.

Site+Plan+Mix LLC
Award-Winning Self-Storage Architecture
206.310.7770
17030 174th Ave NE
Woodinville, WA 98072
stephen.bourne@comcast.net

2.E.6.1 Design Details

Per 2.E.6.1, the project will include the following three (3) design features:

a) **Distinctive Rooflines: All Parapet coping will be a contrasting color and be min 8" wide.**

c) Decorative light fixtures: Two-way sconce lights will at regular intervals on the exterior

d) Decorative building materials: Integral-color masonry in both split-face and ground-face

2.E.7.1 Materials

Per 2.E.7.1, the project will address the metal siding design as follows:

a) Metal siding will be more than 25% of the facades.

a. All metal siding will be neutral "earth tone" colors.

b. Contrasting trim will be used where appropriate.

c. A continuous base of decorative CMU will be provided.

2.E.9.1 Principal Building Entrances

All required enhancements will be provided.

Per 2.E.9.1(h), the project will include the following enhancement at the principal building entry:

(2) Special Paving: the sidewalk approach from the street sidewalk to the main Leasing Office entry will be stamped and stained to resemble decorative tile work.

This concludes our proposal. We look forward to your responses.

Sincerely,

Stephen Bourne
Site+Plan+Mix LLC

CITY OF TUMWATER

555 ISRAEL RD. SW, TUMWATER, WA 98501
(360) 754-4180
Email: cdd@ci.tumwater.wa.us

CONDITIONAL USE PERMIT Application

TUM -	DATE STAMP
24-0108	01-30-2024
TRM	
RCVD BY	

Application fee: $2,090.00

SUBJECT PROPERTY

ADDRESS OF PROPERTY (COMPLETE): 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512

PROJECT NAME: Littlerock Storage Center

PARCEL NUMBER(S): 12703211802, 12703211801

APPLICANT *(please print neatly)*

NAME OF APPLICANT: Trevor Colby

APPLICANT'S MAILING ADDRESS (COMPLETE): 6820 6th Avenue, Suite 201, Tacoma, WA 98406

APPLICANT'S TELEPHONE(S): 253-475-4363

APPLICANT'S E-MAIL: trevor@kciwa.com

PROJECT REPRESENTATIVE

NAME OF PROJECT REPRESENTATIVE: Brandon Johnson, PE | JSA Civil, LLC

REPRESENTATIVE'S MAILING ADDRESS (COMPLETE): 111 Tumwater Blvd SE, Suite C210, Tumwater, WA 98501

REPRESENTATIVE'S TELEPHONE(S): 360-515-9600

REPRESENTATIVE'S E-MAIL: brandon.johnson@jsa-civil.com

PROPERTY OWNER

NAME OF PROPERTY OWNER: John & Donna Barckley (6115) | Laurie Mischel (6119)

OWNER'S MAILING ADDRESS (COMPLETE): 3228 Crosby Blvd SW, Tumwater, WA 98512 | 159 Spring Street, Concord, NC 28025

OWNER'S TELEPHONE(S):

OWNER'S E-MAIL:

PROJECT DESCRIPTION *(attach additional sheets and documentation, as needed)*

Construct new 4-story self-storage facility. Project includes the new multi-story self-storage building, on-site parking, covered loading area, perimeter landscaping, underground utilities, on-site stormwater facilities, and secure perimeter fencing. The project will be developed in one phase of work. The existing residences and associated structures at the site will be removed for site redevelopment.

I affirm that all answers, statements, and information submitted with this application are correct and accurate to the best of my knowledge. I also affirm that I am the owner of the subject site or am duly authorized by the owner to act with respect to this application. Further, I grant permission to any and all employees and representatives of the City of Tumwater and other governmental agencies to enter upon and inspect said property as reasonably necessary to process this application. I agree to pay all fees of the City that apply to this application.

DocuSigned by:
Trevor Colby
ED60664DBCBD437...

Signature of Applicant/Representative

10/6/2023

Date

Please attach the **Conditional Use Permit submittal checklist** to this Application.

CITY OF TUMWATER

555 ISRAEL RD. SW, TUMWATER, WA 98501
(360) 754-4180
Email: cdd@ci.tumwater.wa.us

VARIANCE
Application

TUM -	DATE STAMP
RCVD BY	

Application fee: $1000.00

SUBJECT PROPERTY

ADDRESS OF PROPERTY (COMPLETE): 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512

PROJECT NAME: Littlerock Storage Center

PARCEL NUMBER(S): 12703211802, 12703211801

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PROPERTY OWNER

NAME OF PROPERTY OWNER: John & Donna Barckley (6115) | Laurie Mischel (6119)

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OWNER'S TELEPHONE(S):

OWNER'S E-MAIL:

PROJECT DESCRIPTION *(attach additional sheets and documentation, as needed)*

Construct new 4-story self-storage facility. Project includes the new multi-story self-storage building, on-site parking, covered loading area, perimeter landscaping, underground utilities, on-site stormwater facilities, and secure perimeter fencing. The project will be developed in one phase of work. The existing residences and associates structures at the site will be removed for site redevelopment.

I affirm that all answers, statements, and information submitted with this application are correct and accurate to the best of my knowledge. I also affirm that I am the owner of the subject site or am duly authorized by the owner to act with respect to this application. Further, I grant permission to any and all employees and representatives of the City of Tumwater and other governmental agencies to enter upon and inspect said property as reasonably necessary to process this application. I agree to pay all fees of the City that apply to this application.

DocuSigned by:
Trevor Colby
ED60664DBCBD437...
Signature of Applicant

10/6/2023
Date

Please attach the **Variance submittal checklist** to this Application.

JSA CIVIL

Engineering | Planning | Management

November 22, 2023

City of Tumwater
Attn: Ms. Tami Merriman, Permit Manager
555 Israel Road SW
Tumwater, WA 98501

Re: Littlerock Storage Center: TUM-23-0650
Building Setback Reduction

Dear Ms. Merriman,

The purpose of this letter is to request a variance from the development standards that are defined in Tumwater Municipal Code (TMC) 18.22.050 Development Standards, Section D. The variance is being requested for the Littlerock Storage Center project at 6115 & 6119 Littlerock Road.

Description of Variance Request

Tumwater Municipal Code Section 18.22.050(D) requires a minimum structural setback of 20 feet from the property line when general commercial development abuts a single-family zone, and where structures are constructed over one story, the setback of the structure from the adjacent property line or lines shall be increased by ten feet for every story above the ground level story of the proposed new building. This variance proposal requests the building setbacks on the south property line be reduced.

The Littlerock Storage Center development project proposes construction of a new 4-story (+/- 45' high) commercial self-storage facility +/- 47'9" from the south property line abutting the Tumwater Middle School campus.

Findings of Fact

The City's Variance Checklist includes the following findings of fact, which must be met by the project:

A. That special conditions exist which are peculiar to the land, such as size, shape, topography, or location, not applicable to other lands in the same district, and that literal interpretation of the provisions of this Code would deprive the property owners of rights commonly enjoyed by other properties similarly situated in the same district under the terms of this Code.

Response: The project site is surrounded by General Commercial (GC) zoned properties to the north, east, and west. The property to the south is zoned Single-Family Low Density Residential (SFL). The special conditions that exist for the proposed development are that the SFL property to the south contains the Tumwater Middle School, a public-school facility. The primary access for the Middle School is also located at the north end of the campus, immediately along the project's southern property line. The school campus does not contain any residential units, and has minimal to no potential for development of single-family homes in the future.

B. That the special conditions and circumstances are not the result of actions of the applicant.

Response: There are no special conditions or circumstances that are a result of the actions of the applicant.

JSA CIVIL
Engineering | Planning | Management

C. That the granting of the variance requested will not confer a special privilege to the property that is denied to other lands in the same district.

Response: Granting of the variance will not confer a special privilege to the property. The variance seeks to loosen regulations which are set in place for the typical areas where General Commercial and Single-Family Zones meet. However, the existing use on the adjacent SFL-zoned property is not for purposes of residential use and it is unlikely that the school campus will be redeveloped for new single-family homes.

D. That the granting of the variance will not be materially detrimental to the public fare or injurious to the property of improvements of the vicinity and zone in which the subject property is situated.

Response: By granting the variance, it will not be materially detrimental to the public welfare or injurious to the property of improvements in the vicinity and zone in which the subject property is located. The proposed development is a conditional use in the General Commercial zone; however, it is not anticipated to produce noise, odor, or emission that could be considered a nuisance.

E. That the reasons set forth in the application justify the granting of the variance, and that the variance, if granted, would be the minimum variance that will make possible the reasonable use of the land.

Response: Allowing the building to be constructed at a +/- 3' reduced setback of +/- 47' from the south property line is the minimum variance possible to reasonably accommodate for the special conditions that exist on-site due to the adjacent property zoned SFL and used as a public-school campus.

Please contact me directly with any questions or comments at brandon.johnson@jsa-civil.com.

Respectfully,

Brandon Johnson, PE
Principal
JSA Civil, LLC

CITY OF TUMWATER

555 ISRAEL RD. SW, TUMWATER, WA 98501
(360) 754-4180
Email: cdd@ci.tumwater.wa.us

VARIANCE
Application

TUM -	DATE STAMP
RCVD BY	

Application fee: $1000.00

SUBJECT PROPERTY

ADDRESS OF PROPERTY (COMPLETE): 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512

PROJECT NAME: Littlerock Storage Center

PARCEL NUMBER(S): 12703211802, 12703211801

APPLICANT *(please print neatly)*

NAME OF APPLICANT: Trevor Colby

APPLICANT'S MAILING ADDRESS (COMPLETE): 6820 6th Avenue, Suite 201, Tacoma, WA 98406

APPLICANT'S TELEPHONE(S): 253-475-4363

APPLICANT'S E-MAIL: trevor@kciwa.com

PROJECT REPRESENTATIVE

NAME OF PROJECT REPRESENTATIVE: Brandon Johnson, PE | JSA Civil, LLC

REPRESENTATIVE'S MAILING ADDRESS (COMPLETE): 111 Tumwater Blvd SE, Suite C210, Tumwater, WA 98501

REPRESENTATIVE'S TELEPHONE(S): 360-515-9600

REPRESENTATIVE'S E-MAIL: brandon.johnson@jsa-civil.com

PROPERTY OWNER

NAME OF PROPERTY OWNER: John & Donna Barckley (6115) | Laurie Mischel (6119)

OWNER'S MAILING ADDRESS (COMPLETE): 3228 Crosby Blvd SW, Tumwater, WA 98512 | 159 Spring Street, Concord, NC 28025

OWNER'S TELEPHONE(S):

OWNER'S E-MAIL:

PROJECT DESCRIPTION *(attach additional sheets and documentation, as needed)*

Construct new 4-story self-storage facility. Project includes the new multi-story self-storage building, on-site parking, covered loading area, perimeter landscaping, underground utilities, on-site stormwater facilities, and secure perimeter fencing. The project will be developed in one phase of work. The existing residences and associates structures at the site will be removed for site redevelopment.

I affirm that all answers, statements, and information submitted with this application are correct and accurate to the best of my knowledge. I also affirm that I am the owner of the subject site or am duly authorized by the owner to act with respect to this application. Further, I grant permission to any and all employees and representatives of the City of Tumwater and other governmental agencies to enter upon and inspect said property as reasonably necessary to process this application. I agree to pay all fees of the City that apply to this application.

DocuSigned by:
Trevor Colby
ED60664DBCBD437...
Signature of Applicant

10/6/2023
Date

Please attach the **Variance submittal checklist** to this Application.

CITY OF TUMWATER

555 ISRAEL RD. SW, TUMWATER, WA 98501
(360) 754-4180
Email: cdd@ci.tumwater.wa.us

VARIANCE (ZONING)
Submittal Checklist

TUM -	DATE STAMP
RCVD BY	

APPLICANT INFORMATION *(please print neatly)*

NAME OF APPLICANT: Trevor Colby

SUBJECT PROPERTY INFORMATION

ADDRESS OF PROPERTY (COMPLETE): 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512

In order to deviate from the specific requirements of the zoning ordinance for a proposed development, a submittal for a zoning Variance shall consist of all items on this checklist unless waived by Staff.

A. APPLICATION	N/A	Provided	**Staff**
1. Provide a complete and signed (by owner or authorized representative) application and applicable fee.		■	☐
2. SEPA checklist and applicable fee.	☐	■	☐
3. Written statement for development setting out detailed information concerning, but not limited to, the following findings of fact:			☐
a. That special conditions exist which are peculiar to the land, such as size, shape, topography, or location, not applicable to other lands in the same district, and that literal interpretation of the provisions of this Code would deprive the property owners of rights commonly enjoyed by other properties similarly situated in the same district under the terms of this Code.		■	
b. That the special conditions and circumstances are not the result of actions of the applicant.		■	
c. That the granting of the variance requested will not confer a special privilege to the property that is denied other lands in the same district.		■	
d. That the granting of the variance will not be materially detrimental to the public fare or injurious to the property of improvements of the vicinity and zone in which the subject property is situated.		■	
e. That the reasons set forth in the application justify the granting of the variance, and that the variance, if granted, would be the minimum variance that will make possible the reasonable use of the land.		■	
4. Five copies of the proposed site plan(s).		■	☐
5. One reduced copy (11”x17”) of the site plan(s).		■	☐
B. SITE PLAN	N/A	Provided	**Staff**
1. The site plan(s) shall be on a minimum of 18”x24” to a maximum of 24”x36” sheet(s) drawn to a scale of no more than 1”=20’ and no less than 1”=100’, unless otherwise approved by the City. The plan(s) shall be a drawing of the entire contiguous parcel(s) showing the following:			☐
a. Date, scale and north arrow.		■	

B. SITE PLAN (CONTINUED)	N/A	Provided	Staff
b. Section, Township, Range and Sheet Number.		■	
c. Vicinity Map showing location of the site and its relationship to surrounding areas, including existing streets, driveways, major physiographic features such as railroads, lakes, streams, shorelines, schools, parks and other prominent features.		■	
d. Boundaries of the parcel(s) included in the application.		■	
e. Location and dimensions of any existing and proposed easements and right-of-way for public services or utilities contained within the parcel(s).		■	
f. Location of:			
- All existing (and if proposed to remain or be removed) and proposed structures, and distances to property lines.		■	
- Size (square footage) and height of each building (existing and proposed).		■	
- All on-site and off-site wells (within 200 feet) with their protective radii. If there are no on-site or off-site wells, a statement to that effect must be placed on the site plan.		■	
- On-site septic systems and reserve areas.		■	
- On-site utilities including existing and proposed storm-drainage systems.	☐	■	
- All parking spaces.		■	
- Percent of site covered with impervious surfaces.		■	
- Permanent features which will have an impact upon the application, such as all existing or platted streets, utility rights-of-way, etc.	☐	■	
- Wetlands with associated buffers.	■	☐	
- Riparian areas with associated buffers.	■	☐	
- Identified geological hazardous areas.	■	☐	
- Designated flood hazard areas with reference to the FIRM map and panel number	■	☐	
g. Project Information block shall also be placed on the face of the site plan as follows:			
- Applicant: name, address, telephone.		■	
- Representative: name, address, telephone.	☐	■	
- Assessor's parcel number(s).		■	
- Size (square footage) and height of each building (existing and proposed).		■	
- Total area (acreage and square-footage) of parcel.		■	
- Proposed use (single-family, duplex, etc.).		■	
- Number of parking spaces.	☐	■	
- Critical areas including buffers (acreage and square footage).	☐	■	
- Zoning.		■	
- Water provider.		■	
- Sewer provider.		■	
- Electricity provider.		■	

B. SITE PLAN (CONTINUED)	N/A	Provided	Staff
- Telephone provider.		■	
- Gas provider.		■	
- Refuse collection, including recycling.		■	
- School District.		■	
- Cable/TV provider.		■	
2. Five full-size copies of a conceptual utility plan on a minimum of 18"x24" to a maximum of 24"x36" sheet(s) drawn to a scale of no more than 1"=20' and no less than 1"=100', unless otherwise approved by the City. The plan shall include the location of existing and proposed water mains, fire hydrants (on-site and off-site with adjacent street right-of-way), sewer mains, water laterals/meters, sewer laterals, proposed grinder pump systems (if applicable), proposed sewer pump station (if applicable), storm water collection and retention/detention systems, and street lights (public and private).	☐	■	☐

C. OTHER DOCUMENTS	N/A	Provided	Staff
1. Wetland Report, prepared in accordance with TMC 16.28.140.C.	■	☐	☐
2. Fish and Wildlife Habitat Protection Plan, prepared in accordance with TMC 16.32.090.	■	☐	☐
3. Geologically Hazardous Areas Report, prepared in accordance with TMC 16.20.050.	■	☐	☐

D. ELECTRONIC SUBMITTAL	N/A	Provided	Staff
1. Submitting online: Upload documents, naming them with the project address and document name (project address – application, checklist, plans, etc).	☐	■	
Submitting in person: USB drive containing apps, checklist, plans, reports, etc. as outlined under B and C above, in PDF-file format. Maximum format shall be 300 dpi.	■	☐	

In accordance with TMC 14.02.070.A.1, prior to acceptance of the zoning Variance application, the applicant must complete Preliminary and Formal Site Plan Review.

I verify that all required documents associated with this application have been submitted.

DocuSigned by:
Trevor Colby
ED60664DBCBD437...
Signature of Applicant/Representative

10/6/2023
Date

EXHIBIT 3

LITTLEROCK STORAGE CENTER

6115 LITTLE ROCK ROAD, TUMWATER, WA

SITE PLAN LLC
AWARD-WINNING SELF-STORAGE ARCHITECTURE
206.310.7770
17050 174TH AVE NE
WOODINVILLE, WA 98072
stephen.bourne@comcast.net

LEGAL DESCRIPTION

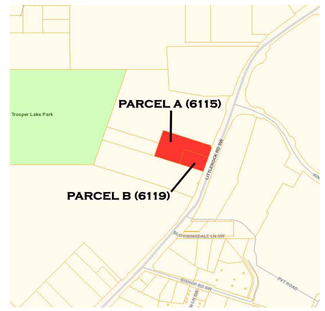
PARCEL A (6115):
Section 03 Township 17 Range 2W Quarter NW NW & NE SW SS-0955 LT 2 Document 1048623, EXC PTN FOR LITTLEROCK RD PER AFN:3868410.

PARCEL B (6119):
Section 03 Township 17 Range 2W Quarter NE NW & NW NW SS-0955 LT 1 Document 009/107 EX PTN TO LITTLEROCK RD #3914710

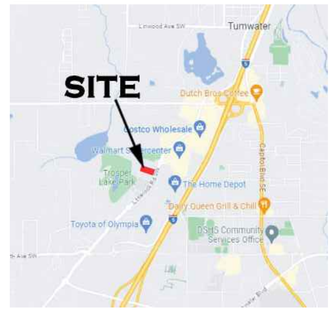
WELLHEAD PROTECTION STATEMENT

AS OF THIS PRINTING, THERE ARE NO KNOWN WELLS AND THEIR ASSOCIATED 200' PROTECTION ZONE WITHIN THE PERIMETER OF THIS PROPERTY.

PARCEL MAP

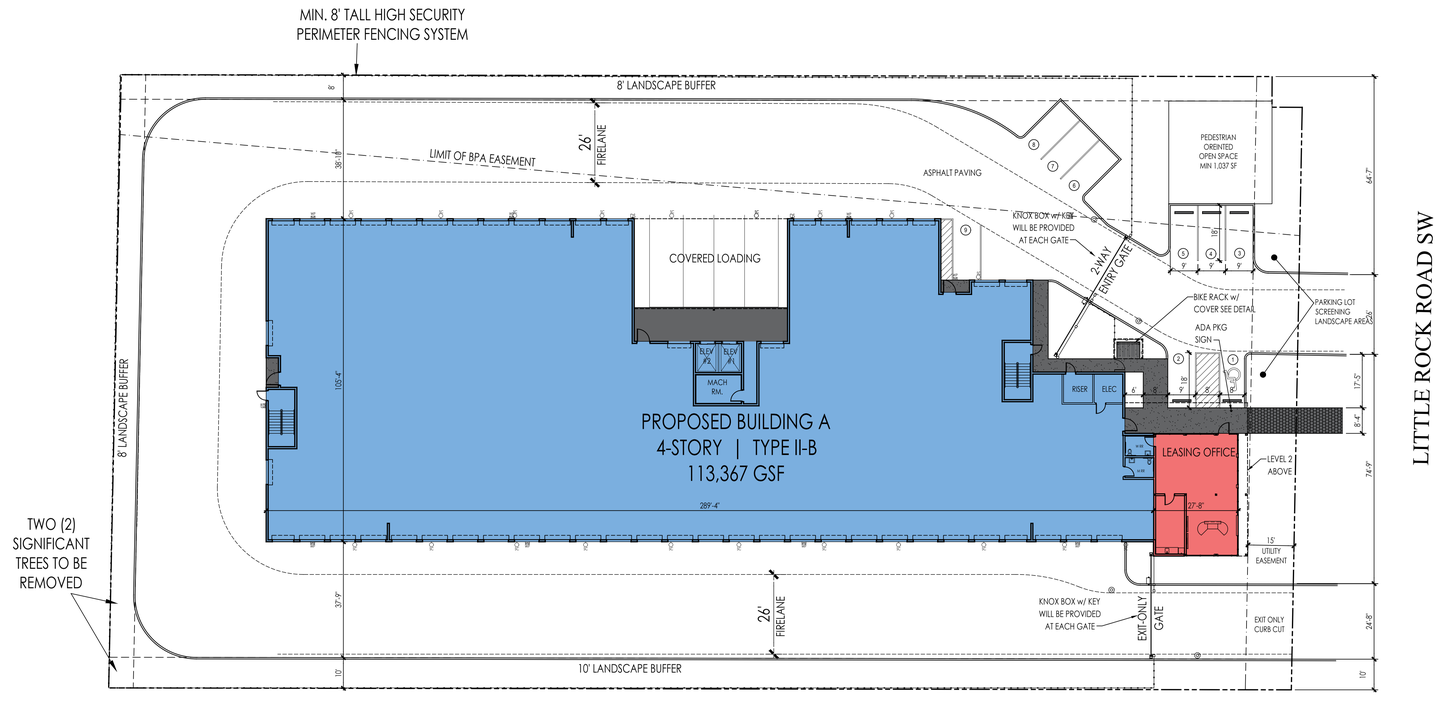


VICINITY MAP



Site Area							76,978
Building Footprint Area							26,718
Total Open Space Required							1,037

New Building Area					
4-story Building A				HEAT	SPRINKLER
Level One			26,754	Semi	Wet
Office	1,107			Full	Wet
Level Two			27,587	Semi	Wet
Level Three			29,056	Semi	Wet
Level Four			29,016	Semi	Wet
Total Enclosed GSF			112,413		
Total Project GSF - All Bldgs					112,413



1 PROPOSED SITE PLAN
SCALE: 1" = 20'-0"

PROJECT INFORMATION

EXISTING SITE:

ADDRESS:	6115/6119 LITTLE ROCK ROAD TUMWATER, WA THURSTON COUNTY
PARCEL NUMBERS:	12703211802, 12703211801
ZONING DISTRICT:	GC (GENERAL COMMERCIAL)
SITE AREA:	77,046 SF (1.77 ACRES)
WATER:	CITY OF TUMWATER
SEWER:	CITY OF TUMWATER

PROPOSED BUILDINGS:

OCCUPANCY/USE:	STORAGE (S-1) ACCESSORY OFFICE (B)
NO. OF BLDGS:	1
TOTAL BLDG AREA:	112,413 GSF
MAX. BLDG HEIGHT:	45'/ 4-STORIES
SETBACKS:	0'/ 20' TO SLF ZONE (SOUTH)
CONSTR. TYPE:	II-B
TOTAL UNITS:	898
FIRE PROTECTION:	FULLY SPRINKLED CH 13

SCOPE OF WORK

THE PROPOSED PROJECT IS FOR ONE (1) 4-STORY BUILDING WHICH WILL INCLUDE AN ASSOCIATED LEASING OFFICE AND AN COVERED LOADING AREA. ONE OF THE EXISTING CURB CUTS ON LITTLE ROCK WILL BE REMOVED, ONE WILL BE REBUILT AND ONE WILL BE RELOCATED FOR VEHICULAR ACCESS WITH 5 NEW PARKING SPACES OUTSIDE THE GATE AND 5 COVERED LOADING SPACES AT THE ELEVATOR CORE. PLEASE NOTE THE SOUTHERN CURB BUT WILL BE EXIT ONLY. THE ENTIRE BUILDING AREA TO BE SPRINKLED. ALL EXISTING RESIDENTIAL STRUCTURES ON THE PARCELS WILL BE DEMOLISHED AS PART OF THIS DEVELOPMENT.

PARKING CALCULATIONS

1 SPACE PER 100 UNITS
NO RESIDENTIAL MANAGER
TOTAL TEN (10) SPACES REQUIRED
TOTAL (10) PARKING SPACES PROVIDED
TOTAL (4) LOADING SPACES PROVIDED

IMPERVIOUS CALCULATIONS

MAX 85% IMPERVIOUS
TOTAL LANDSCAPE AREA: 12,163 SF
12,163 SF / 77,046 SF = 15.8%
ACTUAL IMPERVIOUS AREA = 84.2%

HYDROLOGY DESIGN

Stormwater flow control and water quality treatment will be in the form of an underground detention or infiltration system and vault type water quality units for enhanced treatment due to the commercial use of the proposed project. The project site will be designed to meet the requirements of the 2018 City of Tumwater Drainage Design and Erosion Control Manual. It is expected that infiltration can occur onsite so the LID performance standard can be met. Otherwise the Stormwater Management BMPs from List #2 will be evaluated as required.

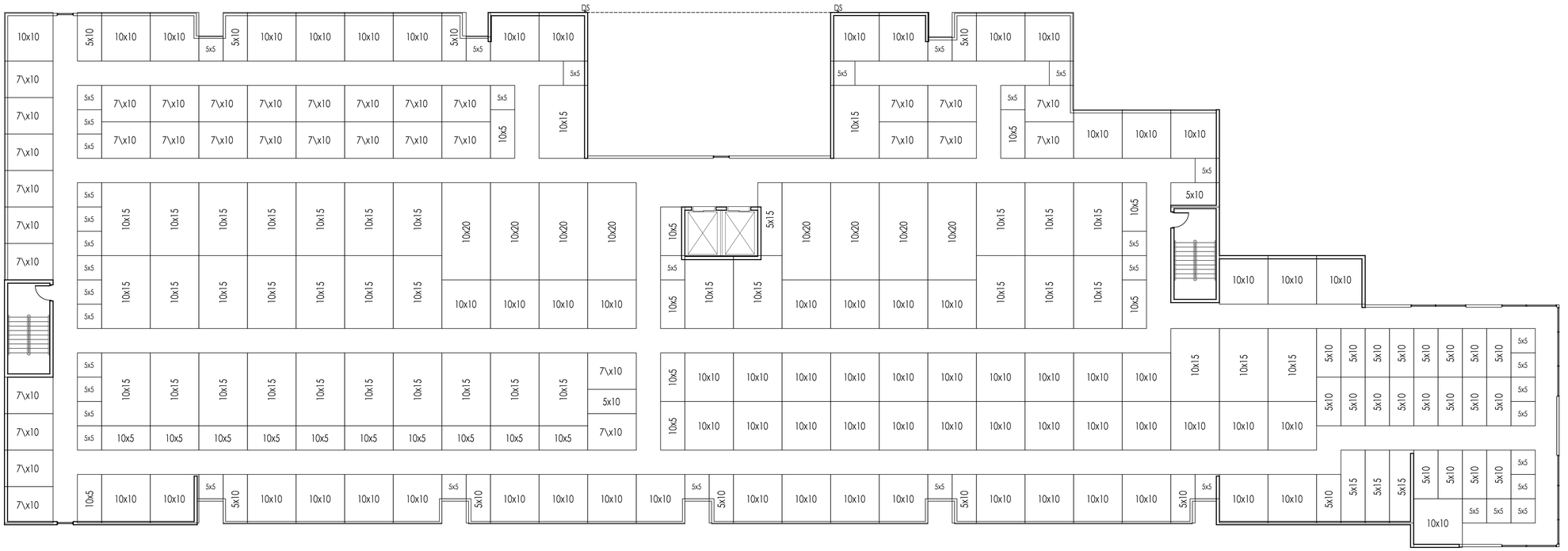
LITTLE ROCK STORAGE CENTER
A NEW SELF-STORAGE FACILITY
6115/6119 LITTLE ROCK ROAD
TUMWATER, WA

NO. DATE REVISION

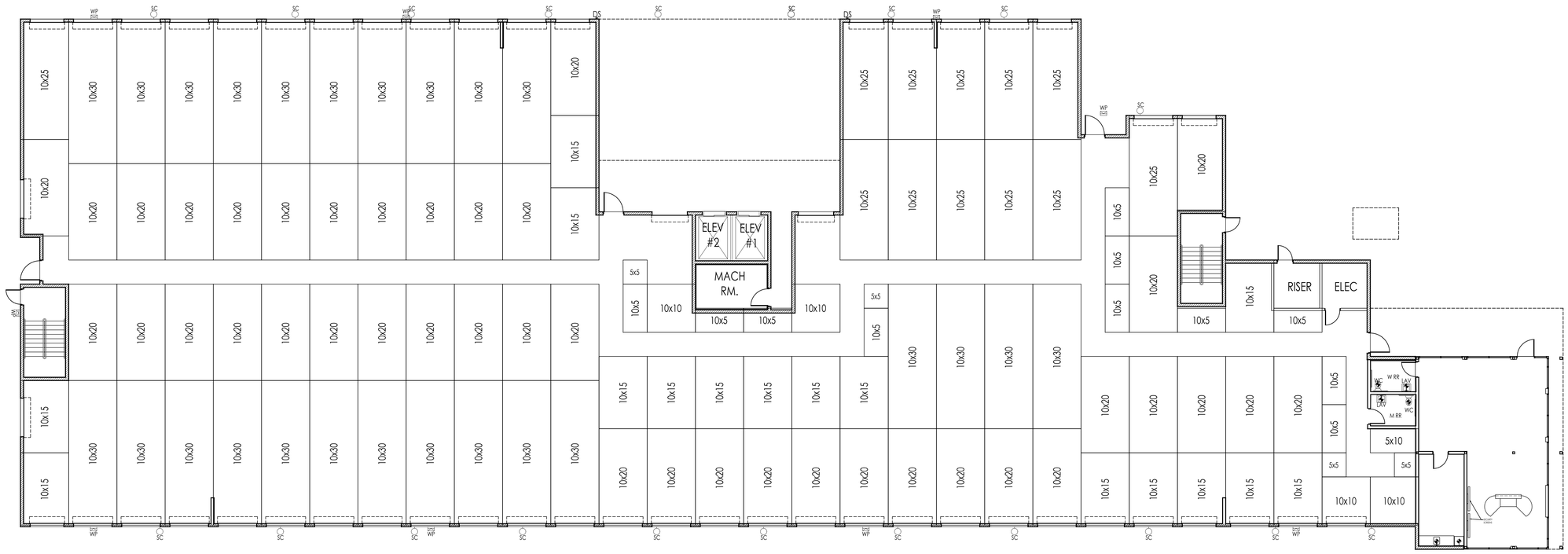
PROJECT ARCHITECT
DRAWN BY
CHECKED BY
STAMP

TITLE: SITE PLAN
SUBTITLE: PROJECT INFO
PROJECT REF:
DATE: 30 NOVEMBER 2023
ISSUE: FORMAL SITE PLAN REVIEW

SHEET NUMBER: A-1



2 LEVEL TWO UNIT MIX PLAN
SCALE: 1" = 10'-0"



1 LEVEL ONE UNIT MIX PLAN
SCALE: 1" = 10'-0"

SITE + PLAN LLC
AWARD-WINNING SELF-STORAGE ARCHITECTURE
206.310.7770
17050 174TH AVE NE
WOODINVILLE, WA 98072
stephen.bourne@comcast.net

LITTLE ROCK STORAGE CENTER

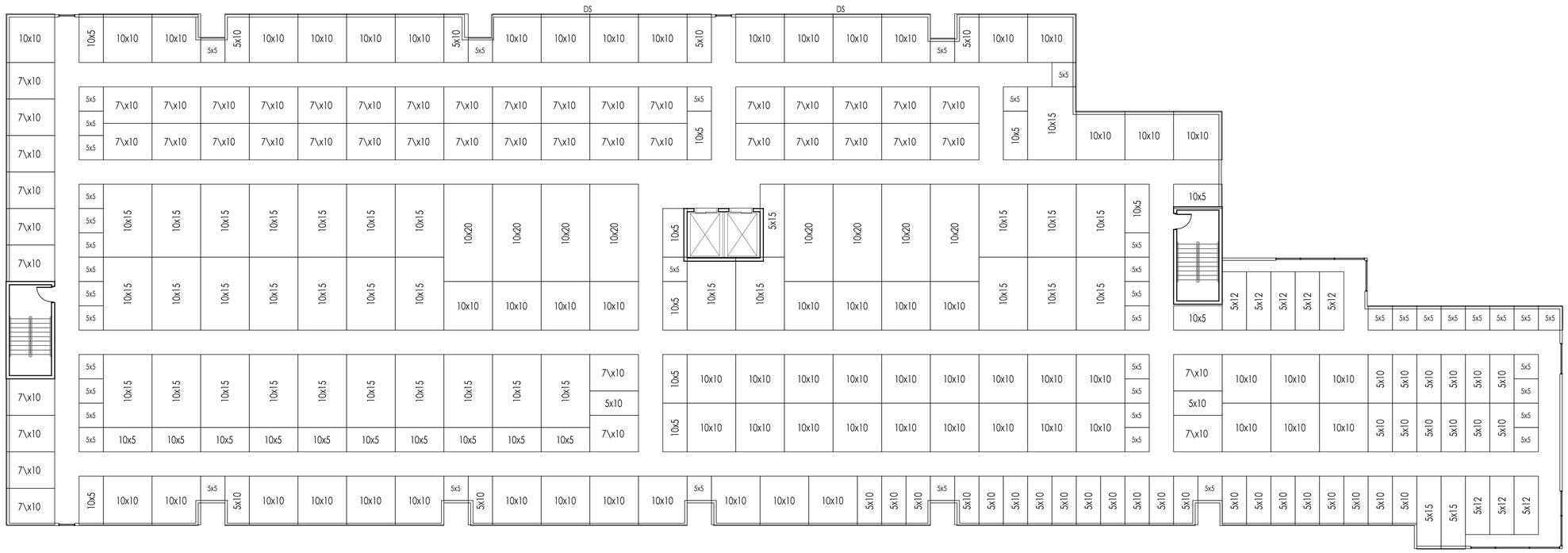
A NEW SELF-STORAGE FACILITY

6115/6119 LITTLE ROCK ROAD
TUMWATER, WA

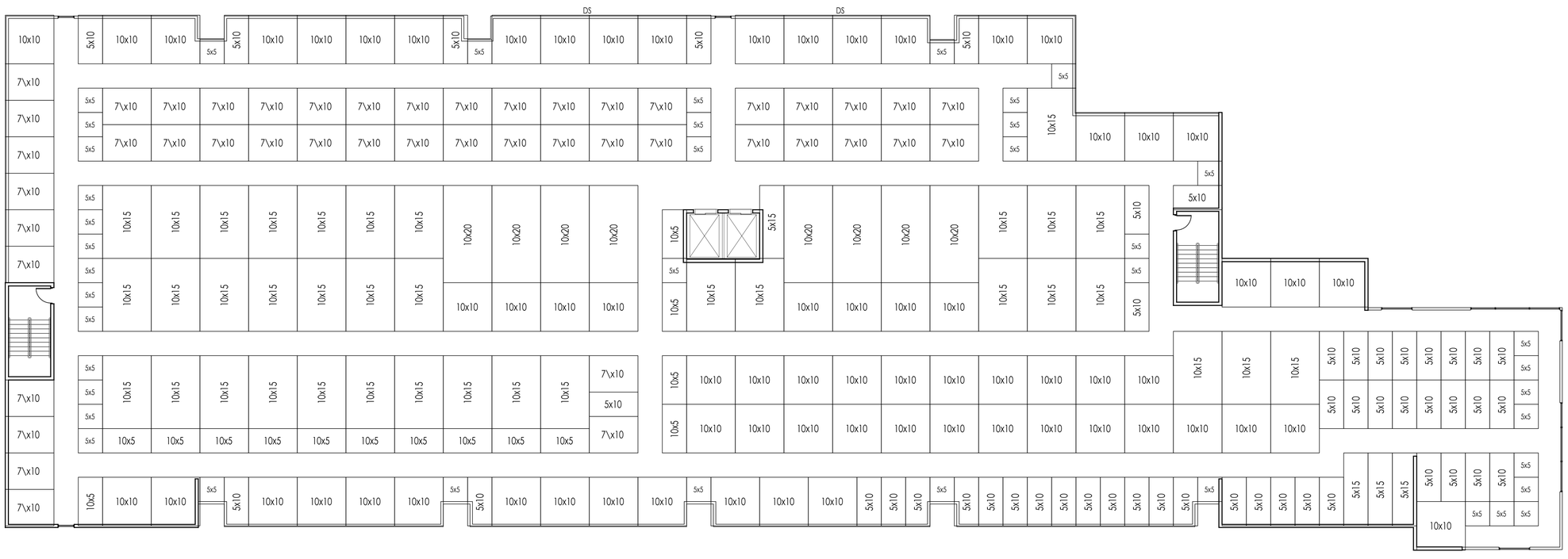
NO.	DATE	REVISION

PROJECT ARCHITECT
DRAWN BY
CHECKED BY
STAMP

TITLE
LEVELS 1 & 2 FLOOR PLANS
SUBTITLE
PROJECT REF.
DATE
16 NOVEMBER 2023
ISSUE
FORMAL SITE PLAN REVIEW
SHEET NUMBER
A-2



2 LEVEL FOUR UNIT MIX PLAN
SCALE: 1/16" = 1'-0"



1 LEVEL THREE UNIT MIX PLAN
SCALE: 1/16" = 1'-0"

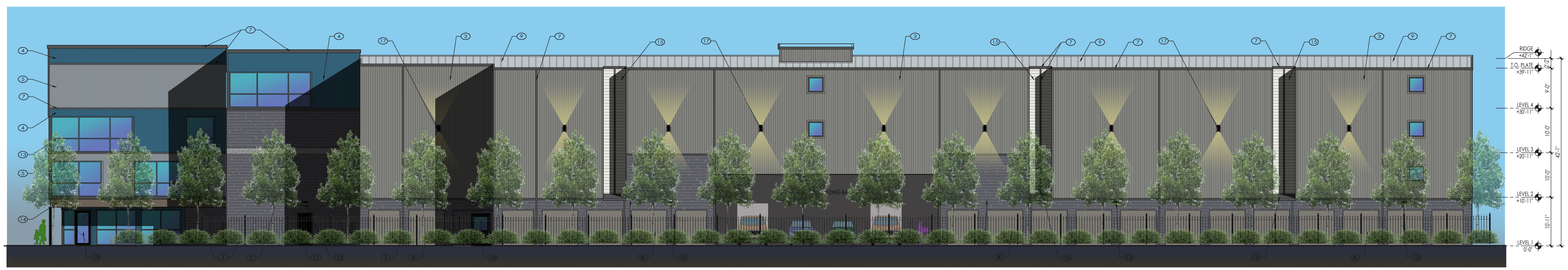
SITE + PLAN LLC
AWARD-WINNING SELF-STORAGE ARCHITECTURE
206.310.7770
17050 174TH AVE NE
WOODINVILLE, WA 98072
stephen.bourne@comcast.net

LITTLE ROCK STORAGE CENTER
A NEW SELF-STORAGE FACILITY
6115/6119 LITTLE ROCK ROAD
TUMWATER, WA

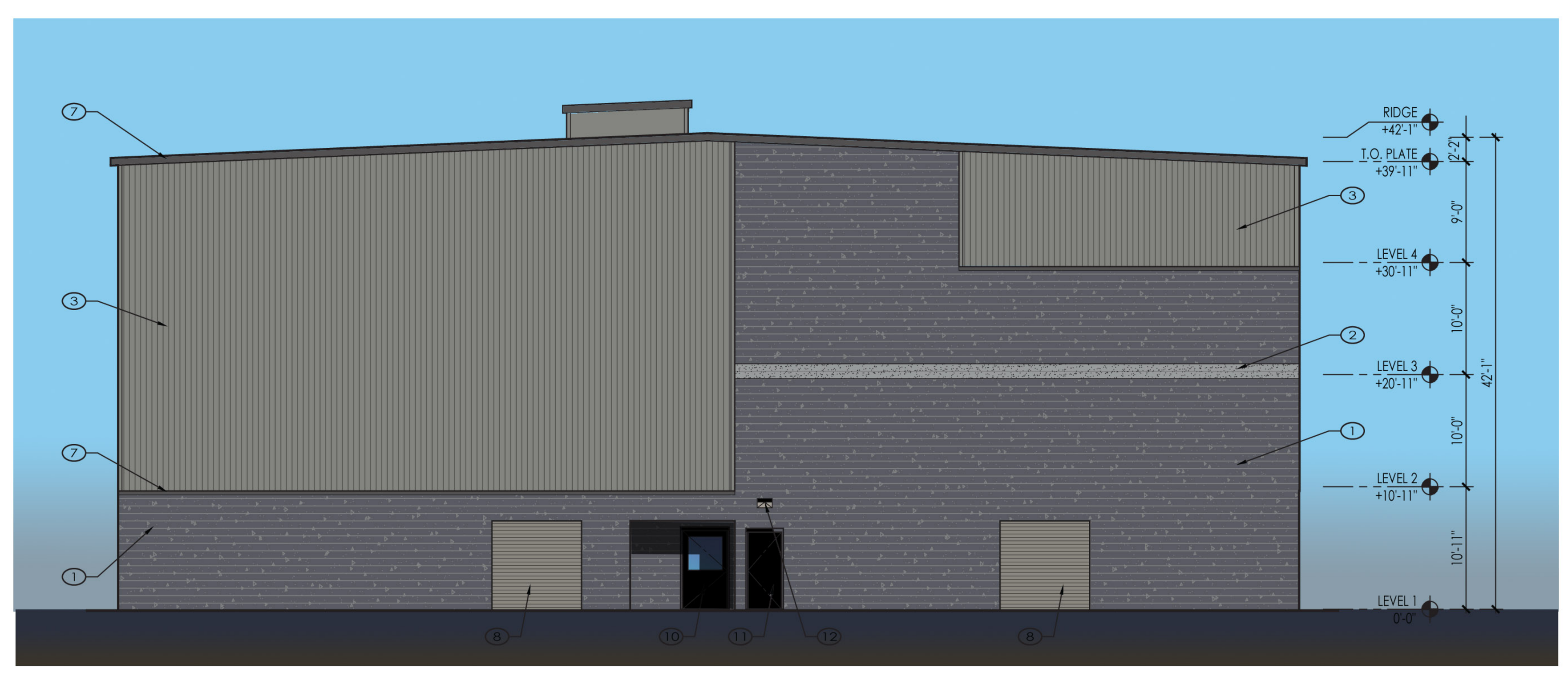
NO.	DATE	REVISION

PROJECT ARCHITECT
DRAWN BY
CHECKED BY
STAMP

TITLE
LEVELS 3 & FOUR FLOOR PLANS
SUBTITLE
PROJECT REF.
DATE
16 NOVEMBER 2023
ISSUE
FORMAL SITE PLAN REVIEW
SHEET NUMBER
A-3



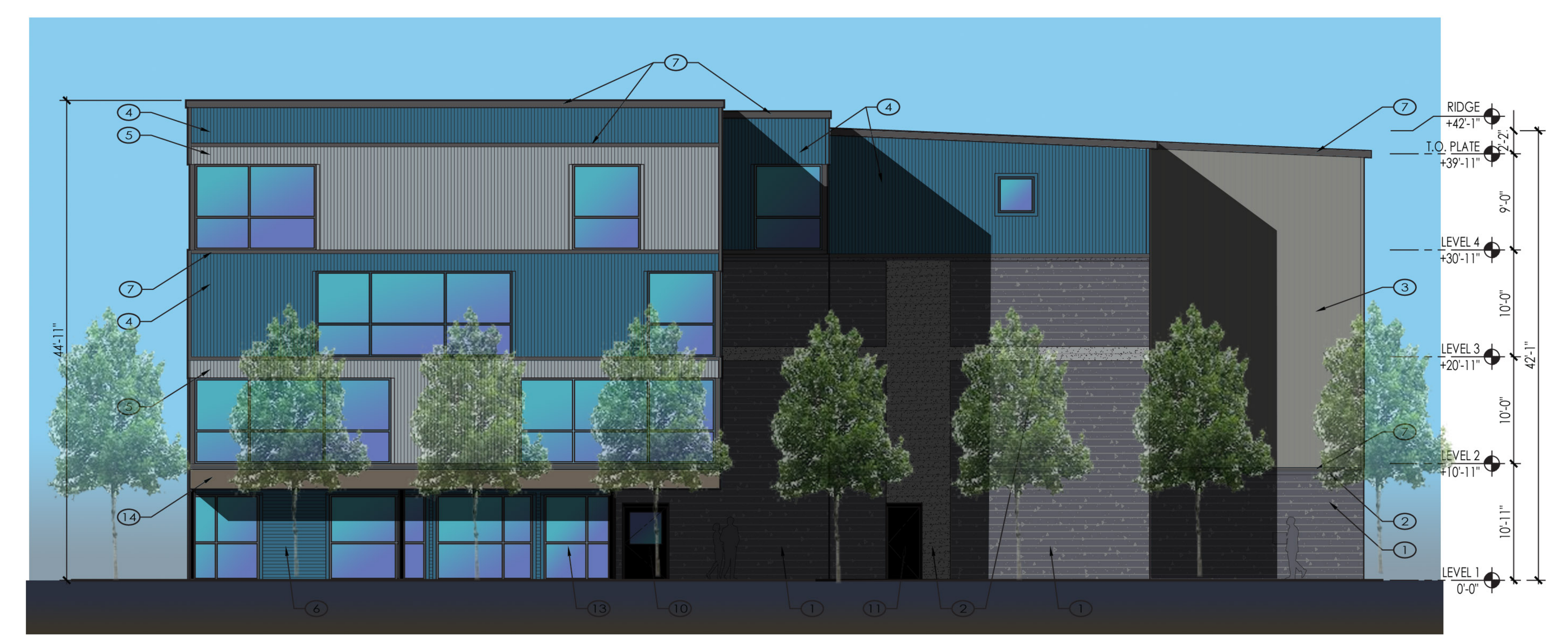
4 NORTH ELEVATION
SCALE: 1" = 10'-0"



3 WEST ELEVATION
SCALE: 1" = 10'-0"

MATERIAL KEY

1. INTEGRAL COLOR SPLIT-FACE CMU (CHARCOAL)
2. GROUND-FACE CMU (NATURAL)
3. VERT. "7.2" METAL SIDING (SLATE GRAY)
4. VERT. "PBC" METAL SIDING (HAWAIIAN BLUE)
5. VERT. "PBC" METAL SIDING (TUNDRA)
6. HORIZ. "MASTERLINE 16" METAL SIDING (HAWAIIAN BLUE)
7. GUTTER, DOWNSPOUT , TRIM & 8" COPING (CHARCOAL)
8. UNIT O.H. DOOR (SANDSTONE)
9. GALV METAL ROOFING
10. 4'x7' HM ENTRY DOOR (BLACK)
11. HM SERVICE DOOR (BLACK)
12. LED WALL PAK LIGHT (BLACK)
13. ALUM. STOREFRONT WINDOW SYSTEM (BLACK)
14. EXPOSED STEEL BEAM
15. HORIZ. "SHADOWRIB" METAL SIDING (POLAR WHITE)
16. STANDING SEAM METAL ROOFING (CHARCOAL)
17. TWO-WAY LED SCONCE LIGHT (BLACK)



2 EAST ELEVATION
SCALE: 1" = 10'-0"

1 SOUTH ELEVATION
SCALE: 1" = 10'-0"

SITE PLAN MIX LLC
AWARD-WINNING SELF-STORAGE ARCHITECTURE
206.310.7770
17030 174TH AVE NE
WOODINVILLE, WA 98072
stephen.bourne@comcast.net

LITTLE ROCK STORAGE CENTER
A NEW SELF-STORAGE FACILITY
6115/6119 LITTLE ROCK ROAD
TUMWATER, WA

TITLE
EXTERIOR ELELVATIONS
SUBTITLE
PROJECT REF:
DATE
17 NOVEMBER 2023
ISSUE
FORMAL SITE PLAN REVIEW
SHEET NUMBER
A-4

EXHIBIT 4

Zoning Map
Littlerock Self Storage
Site Plan Review, Conditional Use Permit and Variance Request
TPN 12721230500

DISCLAIMER: The City of Tumwater does not warrant, guarantee, or accept any liability for the accuracy, precision, or completeness of any information shown hereon or for any inferences made therefrom.

N

350

Feet

CITY OF TUMWATER

NOTICE OF PUBLIC HEARING
Littlerock Self-Storage SPR, Conditional Use and Variance
April 12, 2024

NOTICE IS HEREBY GIVEN that the City of Tumwater Hearing Examiner will conduct a public hearing at or about 6:00 p.m. on **Wednesday, April 24, 2024**, for consideration of the following items:

Case #'s: TUM-23-0650, TUM-24-0108, and TUM-24-0119.

Description of Proposal: Construction of a 4-Story 898-unit self-storage facility with leasing office and a request for variance from required zoning setbacks.

Applicant: Trevor Colby, 3228 Crosby Blvd SW, Tumwater, WA 98512

Location of Proposal: 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512

The public hearing will be held both virtually via Zoom and in person at Tumwater City Hall.

ATTEND in Person

Tumwater City Hall, 555 Israel Rd. SW, Tumwater, WA 98501.

WATCH Online

Go to http://www.zoom.us/join, and enter the Webinar ID: 860 9326 5651 and Passcode 84354.

LISTEN by Telephone

Call (253) 215-8782, listen for the prompts, and enter the Webinar ID: 860 9326 5651 and Passcode 84354.

The City of Tumwater Hearing Examiner will hear testimony from interested parties in person or via computer audio or by telephone. To provide comments via computer audio or by telephone you must register in advance:

https://us02web.zoom.us/webinar/register/WN_nLp6NFCTRuGROSRV9kkxqg

After registering, you will receive a confirmation email containing information about joining the webinar.

Written comments may be submitted to City of Tumwater, Community Development Department, 555 Israel Road SW, Tumwater, WA 98501, or by email at tmerriman@ci.tumwater.wa.us, and must be received by 5:00 p.m. on Wednesday, April 24, 2024. Verbal testimony will be received during the hearing either virtually, or in person.

The staff report for this request will be available for review at least five business-days prior to the public hearing. If you have any questions or would like additional information, please contact Tami Merriman at 360-754-4180.

Do not publish below this line

Published: April 12, 2024

Posted: April 12, 2024

City Hall
555 Israel Road SW
Tumwater, WA 98501-6515
Phone: 360-754-5855
Fax: 360-754-4138

CERTIFICATION OF PUBLIC NOTICE

I, Tami Merriman, Permit Manager for the City of Tumwater hereby certify that public notice for the Project # TUM-23-0650, TUM-24-0108, and TUM-24-0119; Littlerock Self-Storage was given as follows:

APPLICATION

Notice of Application Published in Olympian:	February 9, 2024
Notice of Application Uploaded to Website:	February 9, 2024
Notice of Application Mailed:	February 8, 2024
Notice of Application Posted:	February 7, 2024
Posting Locations:	Edge of property facing Littlerock Road

Environmental Determination Published:	February 29, 2024
Environmental Determination Uploaded to Website:	February 28, 2024
Environmental Determination Mailed:	February 28, 2024
Environmental Determination Posted:	February 27, 2024
Posting Locations:	Edge of property facing Littlerock Road

HEARING

Notice of Public Hearing Published:		April 12, 2024
Notice of Public Hearing Uploaded to Website:	on or before	April 11, 2024
Notice of Public Hearing Mailed:	on or before	April 11, 2024
Notice of Public Hearing Posted:	on or before	April 11, 2024
Posting Locations:		Edge of property facing Littlerock Road

The above is an accurate accounting of the public notice provided for the project.

Tami Merriman — April 10, 2024

NAME, TITLE — Date

EXHIBIT 6

Community Development Department
555 Israel Road SW
Tumwater, WA 98501
Phone: (360) 754-4180

NOTICE OF APPLICATION
Littlerock Self-Storage
TUM-23-0650
February 9, 2024

Proposal: Construction of a 4-story, 898-unit self-storage facility.

Applicant: Trevor Colby, 6820 6th Avenue, Suite 201, Tacoma, WA 98406.

Representative: Brandon Johnson, JSA Civil, LLC, 111 Tumwater Blvd SE, Tumwater, WA 98501.

Location of Proposal: 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512. S 03, T 17, R 2W. Tax Parcel No's 12703211801 & 12703211802.

Complete Application: Application submitted: January 3, 2024. Application deemed complete: February 1, 2024.

Required Project Permit/Approvals: The following permits and approvals may be required: Site Plan Approval, SEPA Environmental Review, Conditional Use, Transportation Concurrency, Variance, Design Review, Landscaping, On-site Lighting, and Engineering and Building Permits.

Environmental Documents Relating to the Project: A completed environmental checklist and related reports were submitted. Persons receiving this notice will be informed about the City's threshold determination when it is issued.

Determination of Consistency: No determination of consistency with City of Tumwater or State of Washington plans, regulations, or standards has been made. At a minimum, this project will be subject to the following plans and regulations: Tumwater Comprehensive Plan, Tumwater Zoning Code (TMC Title 18), Tumwater Environmental Policy Ordinance (TMC 16.04), the City of Tumwater Drainage Design and Erosion Control Manual, and the International Building Code.

Public Hearing: A public hearing is required for this project and public notice will take place once the meeting date is scheduled.

Public Comment Period: The 14 day comment period ends at 5:00 p.m. on February 23, 2024. Written comments may be submitted to City of Tumwater, Community Development Department, Attn: Tami Merriman, 555 Israel Road SW, Tumwater, WA 98501, or email to tmerriman@ci.tumwater.wa.us.

If you have any questions or would like additional information, please contact Tami Merriman, Permit Manager at 360-754-4180.

Published: February 9, 2024
Posted: February 9, 2024

LITTLEROCK STORAGE CENTER

6115 LITTLE ROCK ROAD, TUMWATER, WA

LEGAL DESCRIPTION

PARCEL A (6115):
Section 03 Township 17 Range 2W Quarter NW NW & NE SW SS-ORDS LT 2 Document 1048023; EXC PTN FOR LITTLEROCK RD PER AFN3868410.

PARCEL B (6119):
Section 03 Township 17 Range 2W Quarter NE NW & NW NW SS-ORDS LT 1 Document 009/107 EX PTN TO LITTLEROCK RD #3914710

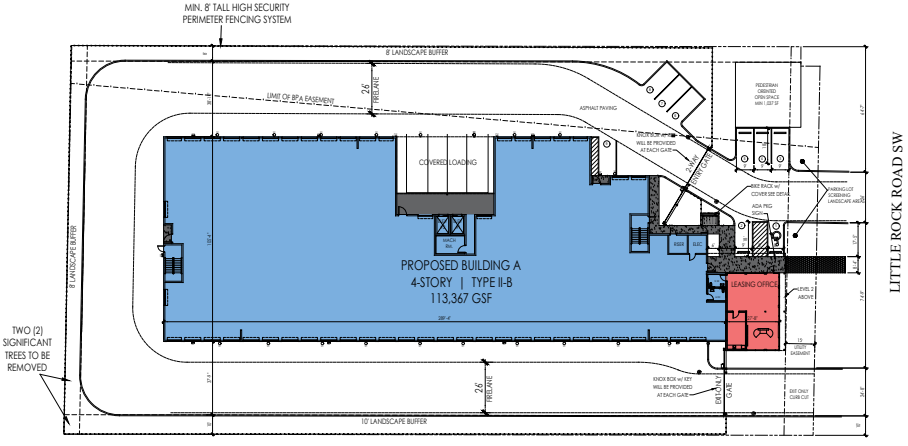
WELLHEAD PROTECTION STATEMENT

AS OF THIS PRINTING, THERE ARE NO KNOWN WELLS AND THEIR ASSOCIATED 200' PROTECTION ZONE WITHIN THE PERIMETER OF THIS PROPERTY.

Site Area	76,976
Building Footprint Area	26,716
Total Open Space Required	1,037

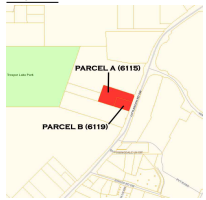
New Building Area

4-story Building A		HEAT	SPRINKLER
Level One	26,754	Semi	Wet
Office	1,197	Full	Wet
Level Two	27,587	Semi	Wet
Level Three	29,858	Semi	Wet
Level Four	29,916	Semi	Wet
Total Enclosed GSF	112,413		
Total Project GSF - All Bldgs	112,413		

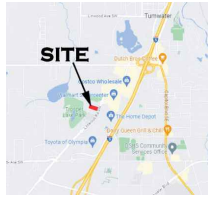


1 PROPOSED SITE PLAN
SCALE: 1" = 20'-0"

PARCEL MAP



VICINITY MAP



PROJECT INFORMATION

EXISTING SITE:
ADDRESS: 6115/6119 LITTLE ROCK ROAD TUMWATER, WA THURSTON COUNTY
PARCEL NUMBERS: 12703211802, 12703211801
ZONING DISTRICT: GC (GENERAL COMMERCIAL)
SITE AREA: 77,046 SF (1.77 ACRES)
WATER: CITY OF TUMWATER
SEWER: CITY OF TUMWATER

PROPOSED BUILDING:
OCCUPANCY/USE: STORAGE (S-1) ACCESSORY OFFICE (B)
NO. OF BLDGS: 1
TOTAL BLDG AREA: 112,413 GSF
MAX. BLDG HEIGHT: 45'/ 4 STORIES
SETBACKS: 0'/ 20' TO SLF ZONE (SOUTH)
CONSTR. TYPE: II-B
TOTAL UNITS: 898
FIRE PROTECTION: FULLY SPRINKLED CH 13

SCOPE OF WORK

THE PROPOSED PROJECT IS FOR ONE (1) 4-STORY BUILDING WHICH WILL INCLUDE AN ASSOCIATED LEASING OFFICE AND AN COVERED LOADING AREA. ONE OF THE EXISTING CURB CUTS ON LITTLE ROCK WILL BE REMOVED, ONE WILL BE REBUILT AND ONE WILL BE RELOCATED FOR VEHICULAR ACCESS WITH 5 NEW PARKING SPACES OUTSIDE THE GATE AND 5 COVERED LOADING SPACES AT THE ELEVATOR CORE. PLEASE NOTE THE SOUTHERN CURB BUT WILL BE EXIT ONLY. THE ENTIRE BUILDING AREA TO BE SPRINKLED. ALL EXISTING RESIDENTIAL STRUCTURES ON THE PARCES WILL BE DEMOLISHED AS PART OF THIS DEVELOPMENT.

PARKING CALCULATIONS

1 SPACE PER 100 UNITS
NO RESIDENTIAL MANAGER
TOTAL TEN (10) SPACES REQUIRED
TOTAL (10) PARKING SPACES PROVIDED
TOTAL (4) LOADING SPACES PROVIDED

IMPERVIOUS CALCULATIONS

MAX 85% IMPERVIOUS
TOTAL LANDSCAPE AREA: 12,163 SF
12,163 SF / 77,046 SF = 15.8%
ACTUAL IMPERVIOUS AREA = 84.2%

HYDROLOGY DESIGN

Stormwater flow control and water quality treatment will be in the form of an underground detention or infiltration system and vault type water quality units for enhanced treatment due to the commercial use of the proposed project. The project site will be designed to meet the requirements of the 2018 City of Tumwater Drainage Design and Erosion Control Manual. It is expected that infiltration can occur onsite so the LID performance standard can be met. Otherwise the Stormwater Management BMPs from List #2 will be evaluated as required.

SITE+ PLAN LLC
Award-Winning Self-Storage Architecture
206.310.7770
17050 174th Ave NE
Woodinville, WA 98072
stephen.bourne@comcast.net

LITTLE ROCK STORAGE CENTER
A NEW SELF-STORAGE FACILITY
6115/6119 LITTLE ROCK ROAD
TUMWATER, WA

SITE PLAN
PROJECT INFO
30 NOVEMBER 2023
FORMAL SITE PLAN REVIEW

A-1

Community Development
555 Israel Road SW
Tumwater, WA 98501-6515
Phone: 360-754-4180

MITIGATED DETERMINATION OF NON-SIGNIFICANCE
Littlerock Self-Storage
Permit No. TUM-23-0650
February 26, 2024

Description of Proposal: The applicant is proposing to construct a 4-story, 898-unit self-storage facility. Construction will include associated frontage improvements, parking, infrastructure, utilities and lighting.

Applicant: Trevor Colby, 6820 6th Avenue, Suite 201, Tacoma, WA 98406.

Representative: Brandon Johnson, JSA Civil, LLC, 111 Tumwater Blvd SE, Tumwater, WA 98501.

Location of Proposal: 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512. S 03, T 17, R 2W. Tax Parcel No's 12703211801 & 12703211802.

Lead agency: City of Tumwater, Community Development Department.
The lead agency for this proposal has determined that, as conditioned, does not have a probable significant adverse impact on the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead-agency. This information is available to the public on request.

This MDNS assumes that the applicant will comply with all City ordinances and development standards governing the type of development proposed, including but not limited to, street standards, storm water standards, high groundwater hazard areas ordinance standards, water and sewer utility standards, critical areas ordinance standards, tree protection standards, zoning ordinance standards, land division ordinance standards, building and fire code standards, and level of service standards relating to traffic. These ordinances and standards provide mitigation for adverse environmental impacts of the proposed development.

Condition of Approval for mitigating environmental impacts:
Findings:

1. The Tumwater Boulevard/I-5 northbound ramps intersection currently operates at LOS F during both peak periods for the northbound left-turn movement. The project is projected to add one trip to this intersection. The City has recently developed a SEPA improvement project for the Tumwater Boulevard/I-5 interchange that include intersection improvements at the northbound I-5 ramps intersection, with a peak hour per trip impact fee of $4,219 for each trip entering the interchange area.

Mitigation Measures:

1. Prior to issuance of the Building Permit:
    a. Construct a roundabout at the northbound Interstate 5 On/Off Ramp and Tumwater Boulevard intersection; or
    b. Voluntarily pay a mitigation fee of $4,219 per peak trip generated by this project (3) under RCW 82.02.020 to be used as described herein:
    Tumwater Boulevard/I-5 Interchange: The City's planned transportation improvements at the Tumwater Boulevard/I-5 interchange include converting the interchange to a roundabout diamond interchange by replacing the southbound on/off ramp signal and northbound stop controlled intersections with roundabouts. If the subject development has trips to the interchange before the roundabout is constructed, a temporary signal will be required.

This MDNS is issued under WAC 197-11-350; the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted no later than March 14, 2024, by 5:00 p.m.

Date: February 29, 2024

Responsible Official:

Michael Matlock, AICP
Community Development Director

Contact person: Tami Merriman, Permit Manager
555 Israel Road SW
Tumwater, WA 98501
tmerriman@ci.tumwater.wa.us

Appeals of this MDNS must be made to the City of Tumwater Community Development Department, no later than March 20, 2024, by 5:00 p.m. All appeals shall be in writing, be signed by the appellant, be accompanied by a filing fee of $2,000.00 and set forth the specific basis for such appeal, error alleged and relief requested.

LITTLEROCK STORAGE CENTER

6115 LITTLE ROCK ROAD, TUMWATER, WA

LEGAL DESCRIPTION

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Site Area	76,976
Building Footprint Area	26,716
Total Open Space Required	1,037

New Building Area

4-story Building A		HEAT	SPRINKLER
Level One	26,754	Semi	Wet
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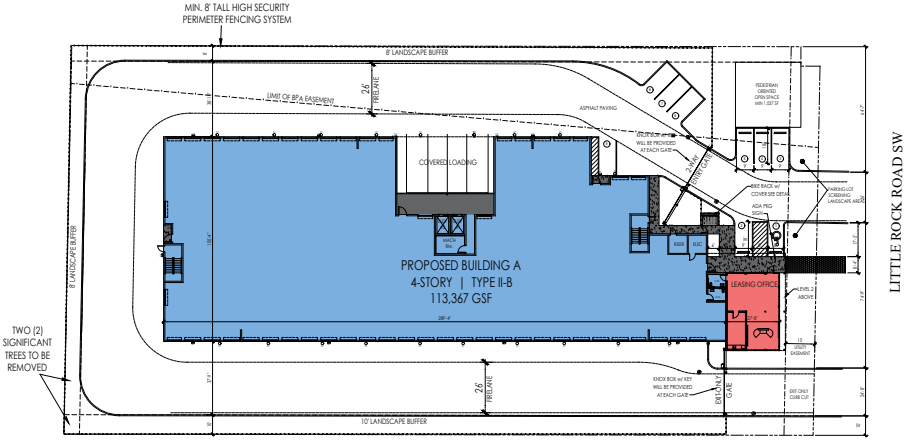
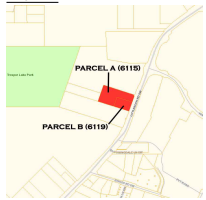


1 PROPOSED SITE PLAN
SCALE: 1" = 20'-0"

PARCEL MAP



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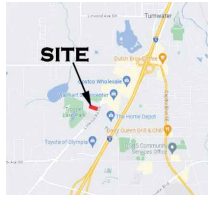

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SITE AREA:	77,046 SF (1.77 ACRES)
WATER:	CITY OF TUMWATER
SEWER:	CITY OF TUMWATER

PROPOSED BUILDING:

OCCUPANCY/USE:	STORAGE (S-1) ACCESSORY OFFICE (B)
NO. OF BLDGS:	1
TOTAL BLDG AREA:	112,413 GSF
MAX. BLDG HEIGHT:	45'/ 4 STORIES
SETBACKS:	0'/ 20' TO SLF ZONE (SOUTH)
CONSTR. TYPE:	II-B
TOTAL UNITS:	898
FIRE PROTECTION:	FULLY SPRINKLED CH 13

SCOPE OF WORK

THE PROPOSED PROJECT IS FOR ONE (1) 4-STORY BUILDING WHICH WILL INCLUDE AN ASSOCIATED LEASING OFFICE AND AN COVERED LOADING AREA. ONE OF THE EXISTING CURB CUTS ON LITTLE ROCK WILL BE REMOVED, ONE WILL BE REBUILT AND ONE WILL BE RELOCATED FOR VEHICULAR ACCESS WITH 5 NEW PARKING SPACES OUTSIDE THE GATE AND 5 COVERED LOADING SPACES AT THE ELEVATOR CORE. PLEASE NOTE THE SOUTHERN CURB BUT WILL BE EXIT ONLY. THE ENTIRE BUILDING AREA TO BE SPRINKLED. ALL EXISTING RESIDENTIAL STRUCTURES ON THE PARCELS WILL BE DEMOLISHED AS PART OF THIS DEVELOPMENT.

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LITTLE ROCK STORAGE CENTER
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6115/6119 LITTLE ROCK ROAD
TUMWATER, WA

SITE PLAN
PROJECT INFO

30 NOVEMBER 2023
FORMAL SITE PLAN REVIEW

A-1

CITY OF TUMWATER

NOTICE OF PUBLIC HEARING
Littlerock Self-Storage SPR, Conditional Use and Variance
April 12, 2024

NOTICE IS HEREBY GIVEN that the City of Tumwater Hearing Examiner will conduct a public hearing at or about 6:00 p.m. on **Wednesday, April 24, 2024**, for consideration of the following items:

Case #'s: TUM-23-0650, TUM-24-0108, and TUM-24-0119.

Description of Proposal: Construction of a 4-Story 898-unit self-storage facility with leasing office and a request for variance from required zoning setbacks.

Applicant: Trevor Colby, 3228 Crosby Blvd SW, Tumwater, WA 98512

Location of Proposal: 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512

The public hearing will be held both virtually via Zoom and in person at Tumwater City Hall.

ATTEND in Person

Tumwater City Hall, 555 Israel Rd. SW, Tumwater, WA 98501.

WATCH Online

Go to http://www.zoom.us/join, and enter the Webinar ID: 860 9326 5651 and Passcode 84354.

LISTEN by Telephone

Call (253) 215-8782, listen for the prompts, and enter the Webinar ID: 860 9326 5651 and Passcode 84354.

The City of Tumwater Hearing Examiner will hear testimony from interested parties in person or via computer audio or by telephone. To provide comments via computer audio or by telephone you must register in advance:

https://us02web.zoom.us/webinar/register/WN_nLp6NFCTRuGROSRV9kkxqg

After registering, you will receive a confirmation email containing information about joining the webinar.

Written comments may be submitted to City of Tumwater, Community Development Department, 555 Israel Road SW, Tumwater, WA 98501, or by email at tmerriman@ci.tumwater.wa.us, and must be received by 5:00 p.m. on Wednesday, April 24, 2024. Verbal testimony will be received during the hearing either virtually, or in person.

The staff report for this request will be available for review at least five business-days prior to the public hearing. If you have any questions or would like additional information, please contact Tami Merriman at 360-754-4180.

Do not publish below this line

Published: April 12, 2024

Posted: April 12, 2024

EXHIBIT 7

Community Development
555 Israel Road SW
Tumwater, WA 98501-6515
Phone: 360-754-4180

MITIGATED DETERMINATION OF NON-SIGNIFICANCE
Littlerock Self-Storage
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Lead agency: City of Tumwater, Community Development Department.
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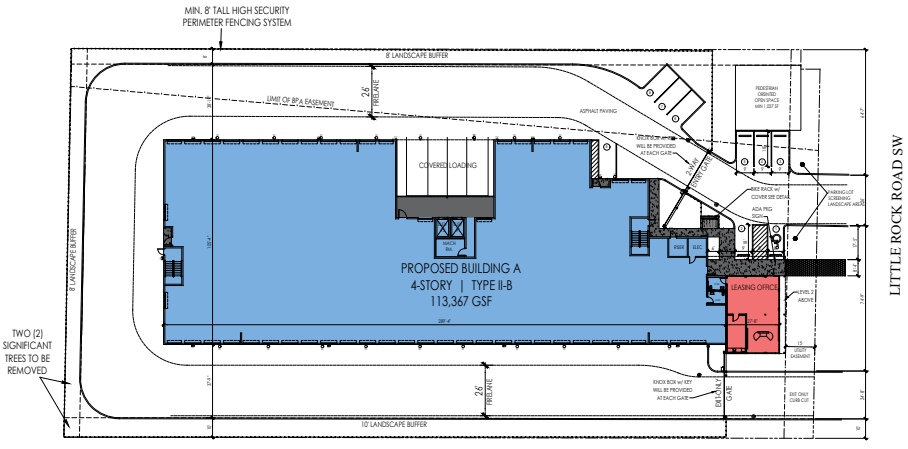

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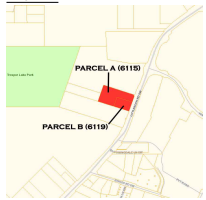

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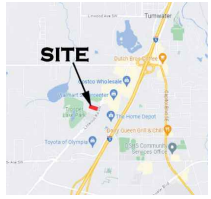

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TUMWATER, WA

SITE PLAN
PROJECT INFO

30 NOVEMBER 2023
FORMAL SITE PLAN REVIEW

A-1

CITY OF TUMWATER
555 ISRAEL RD. SW, TUMWATER, WA 98501
Email: cdd@ci.tumwater.wa.us
(360) 754-4180

TUM-____-_____

DATE STAMP

RECEIVED BY: _____

Any person proposing to develop in the incorporated limits of the City of Tumwater is required to submit an environmental checklist unless the project is exempt as specified in WAC 197-11-800 (Categorical Exemptions) of the State Environmental Policy Act Rules. **SUBMITTAL REQUIREMENTS** are as follows:

1. **A COMPLETE ENVIRONMENTAL CHECKLIST.** If the project is located within the Port of Olympia property, the checklist must also be signed by a representative of the Port.
2. **FEE OF $880.00 TO BE PAID UPON SUBMITTAL.** This includes the Public Notice fee.
3. **NAME AND ADDRESS LIST OF PROPERTY OWNERS WITHIN 300 FEET OF THE SUBJECT PROPERTY.**

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization, or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. **You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown.** You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to **all parts of your proposal,** even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for lead agencies

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold

determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B, plus the Supplemental Sheet for Nonproject Actions (Part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in "Part B: Environmental Elements" that do not contribute meaningfully to the analysis of the proposal.

A. Background Find help answering background questions

1. Name of proposed project, if applicable:

Littlerock Storage Center.

2. Name of applicant:

Mr. Trevor Colby.

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

Mr. Trevor Colby, 6820 6th Avenue, Suite 201, Tacoma, WA 98406.

4. Date checklist prepared:

October 2, 2023.

5. Agency requesting checklist:

City of Tumwater.

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

Begin construction Spring 2024 with substantial completion by Fall 2024.

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

No, there are no plans for future additions, expansion, or further activity related to this proposal.

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

The following environmental information has been prepared for this project:

- Boundary and Topographic Survey, by Informed Land Survey, dated July 17, 2023.
- Geotechnical Report, by South Sound Geotechnical Consulting, dated May 11, 2023.

- Traffic Impact Assessment, by Heath & Associates, dated July 17, 2023.
- Cultural Resource Report, by Antiquity Consulting, LLC, dated August 14, 2023.
- Mazama Pocket Gopher Report, by Land Services Northwest, dated October 26, 2023.
- Regulated Prairie Absence Report, by Land Services Northwest, dated July 27, 2023.

The environmental reports listed above are enclosed for review.

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.

There are no known pending applications for governmental approvals directly affecting the project site.

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

The following government approvals and permits will be required:

- City of Tumwater Preliminary and Formal Site Plan Review approvals
- City of Tumwater SEPA Determination
- City of Tumwater Conditional Use Permit
- City of Tumwater Variance (Setback)
- City of Tumwater Building Permit
- City of Tumwater Site Development/Grading Permit
- City of Tumwater Fire Sprinkler Permit
- City of Tumwater Sign Permit
- Boundary Line Adjustment/Lot Consolidation
- WA Department of Ecology Construction Stormwater General Permit

11. Give a 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. (Lead agencies may modify this form to include additional specific information on project description.)

Proposal includes demolition/removal of the existing residential structures on the +/- 1.77-acre site for construction of a new 4-story, +/- 113,367 ft² self-storage facility. The project will include on-site parking and loading areas, on-site stormwater facilities, perimeter landscaping, and underground utilities to serve the development.

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 site is located at 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512. The site includes Thurston County TPNs 12703211801 and 12703211802, located along the west side of Littlerock Road SW. Section 03, Township 17, Range 02W. Please refer to the project survey for a full legal description.

B. Environmental Elements

1. Earth Find help answering earth questions

a. General description of the site:

Circle or highlight one: Flat, rolling, hilly, steep slopes, mountainous, other:

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

The steepest on-site slope is approximately 3%.

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.

Per the USDA Natural Resources Conservation Service Web Soil Survey, the site contains Nisqually loamy fine sand, 0-3% slopes. Nisqually loamy fine sand is classified as prime farmland if irrigated, is a Hydrologic Soil Group A soil, and is not rated as hydric soil.

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

There are no known surface indications or history of unstable soils in the immediate vicinity**.**

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.

Approximately 200 CY of material cut and 2,500 CY of material fill will be used to grade the site for project construction. Fill will be sourced from a local approved borrow pit.

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

Erosion is always possible during construction. Best Management Practices (BMPs) will be maintained to limit erosion impacts.

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

Approximately 84% of the site will be covered with impervious surfaces after project construction.

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

BMPs such as a stabilized construction entrance, silt fencing, and covering exposes soils will be used during construction. BMPs will be updated as necessary to limit erosion.

2. Air Find help answering air questions

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.

Emissions from equipment and dust may be present during construction but are expected to be minor. Emissions from vehicles entering and exiting the self-storage facility will be present at completion.

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 sources of emissions or odor that may affect the proposed project.

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

Construction equipment will not be allowed to idle for extended periods of time.

3. Water Find help answering water questions

a. Surface Water: Find help answering surface water questions

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.**

Trosper Lake, the nearest surface water body, is located approximately 1,580 feet from the project site.

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.**

No work will be required over, in, or adjacent to Trosper Lake or any other bodies of water for the project.

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.**

No fill or dredge material will be placed in or removed from surface water or wetlands by the project.

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

No, the proposed project will not require surface water withdrawals or diversions.

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

No, per FEMA FIRM Panel 53067C0281E, the project is not located within a 100-year floodplain.

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, the project does not involve any discharges of waste materials to surface waters. The project will be connected to City of Tumwater sanitary sewer.

b. Ground Water: Find help answering ground water questions

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 a general description, purpose, and approximate quantities if known.**

No groundwater will be withdrawn from a well, the project will be connected to City of Tumwater water service.

2. **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (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 will be discharged into the ground from septic tanks or other sources. The project will be connected to City of Tumwater sanitary sewer.

c. Water Runoff (including stormwater):

a) **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.**

On-site storm runoff will be collected, treated, and infiltrated in a below grade infiltration facility.

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

It is unlikely that waste materials will enter ground or surface waters. The project, a self-storage facility, is not anticipated to generate waste other than sanitary refuse which will be stored in covered containers/dumpsters prior to removal by a refuse service.

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

Historic drainage patterns in the vicinity of the site will not be altered. On-site runoff will be collected, treated, and infiltrated on-site.

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

Stormwater will be collected, treated, and infiltrated on-site. No downstream impacts are anticipated.

4. Plants Find help answering plants questions

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

☒ **deciduous tree: alder, maple, aspen, other**

☒ **evergreen tree: fir, cedar, pine, other**

☒ **shrubs**
☒ **grass**
☐ **pasture**
☐ **crop or grain**
☐ **orchards, vineyards, or other permanent crops.**
☐ **wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other**
☐ **water plants: water lily, eelgrass, milfoil, other**
☐ **other types of vegetation**

Tree removal mitigation required

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

The +/- 1.77-acre site will be entirely cleared for project development and construction.

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

Per the U.S. Fish & Wildlife IPaC map (https://ipac.ecosphere.fws.gov/), there are no endangered plant species known to be on or near the site. Additionally, IPaC notes there are no critical habitats at this location.

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

Perimeter landscaping will be installed to meet or exceed City of Tumwater minimum code requirements. ✓

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

Per Thurston County GeoData, there are no noxious weeds or invasive species known to be on or near the site.

5. Animals Find help answering animal questions

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

Examples include:

- **Birds: hawk, heron, eagle, songbirds, other:** typical crows and raptors found in urban environments.
- **Mammals: deer, bear, elk, beaver, other:** opossum, raccoons, squirrels, mice.
- **Fish: bass, salmon, trout, herring, shellfish, other:**

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

Per IPaC mapping, threatened species potentially affected in this site location include: Olympia Pocket Gopher, Marbled Murrelet, Streaked Horned Lark, Yellow-billed Cuckoo, Oregon Spotted Frog, & Bull Trout. Endangered species include the Taylor's Checkerspot. A candidate for listing includes the Monarch Butterfly. There are no known instances of the aforementioned species on-site, however we are noting the potential.

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

Yes, the site is located within the Pacific Flyway.

Gopher Survey shows no evidence of gopher and prairie species.

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

No wildlife impacts are anticipated, no measures are proposed.

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

There are no invasive animal species known to be on or near the site.

6. Energy and Natural Resources Find help answering energy and natural resource questions

1. 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.

Electricity will be used to meet the completed project's energy needs for heating, cooling, and lighting.

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

The project is not anticipated to affect the potential use of solar energy by adjacent properties.

3. 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.

The project will be designed to comply with current energy code regulations. Energy conservating features may include LED lighting, building insulation, and energy efficient windows.

7. Environmental Health Find help with answering environmental health questions

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

There are no known environmental health hazards that could occur because of this proposal.

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

There is no known contamination at the site from present or past uses.

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.

There are no known existing hazardous chemicals/conditions that might affect project development and design. Per the National Pipeline Mapping System (https://pvnpms.phmsa.dot.gov/PublicViewer/), there are no hazardous liquid or gas transmission pipelines in the vicinity of the site.

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.

Gasoline, diesel fuel, and oil may be stored and/or used during construction. No hazardous chemicals will be produced by the project during construction or after completion of the self-storage facility.

4. Describe special emergency services that might be required.

No special emergency services are anticipated.

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

b. Noise

Gasoline, diesel fuel, and/or oils for construction equipment will be kept in sealed and approved containers.

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

Traffic on Littlerock Road SW, the neighboring Tumwater Middle School Campus, and other nearby roadways creates noise in the area but is not anticipated to affect 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)?

During construction and development, noise may be present from heavy equipment and contractor's tools. Construction work will be performed during typical daytime work hours. At completion, traffic from vehicles entering and exiting the completed project will occur but noise is expected to be minor.

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

Work will be limited to typical daytime work hours and equipment will not be allowed to idle for extended periods of time.

8. Land and Shoreline Use Find help answering land and shoreline use questions

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.

Currently, the site is used for residential purposes. Adjacent uses include Tumwater Middle School to the south, vacant commercial land to the west, vacant commercial land to the north, and Littlerock Road SW to the east. The proposal is not expected to affect current land uses on nearby or adjacent properties.

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 because 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 nonforest use?

The site has not been used as working farmlands or forest lands. None of the underlying tax parcels are considered agricultural or forest land of long-term commercial significance and are not held under resource classification. No resource lands will be converted to nonfarm or nonforest use by the proposed 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?**

No, the project will not affect or be affected by surrounding working farm or forest land normal business operations.

c. Describe any structures on the site.

The site currently contains a single-family residence, a mobile home residence, a shed, and three garage outbuildings.

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

All structures on the site will be demolished or removed for project development and construction.

Contact ORCAA for asbestos abatement. City demolition permit.

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

The site is currently zoned GC – General Commercial by the City of Tumwater.

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

The City of Tumwater's Comprehensive Plan identifies the future land use designation as General Commercial.

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

Not applicable, the site is not located within a shoreline area.

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

Per Thurston County GeoData, the site is located within a Class 1 Critical Aquifer Recharge Area (CARA), a Class I Agricultural CARA, contains "more preferred" Mazama Pocket Gopher Soils, and is located near Mazama Pocket Gopher Areas.

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

Approximately 4 people will work in the completed project; no people will reside in the completed self-storage facility.

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

Approximately 4-8 people will be displaced by the project based on an estimate of 2-4 residents per residential rental unit.

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

Displacement impacts are expected to be minor; no measures are proposed.

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

The project will be reviewed by City of Tumwater staff for compatibility with existing and projected land uses and plans.

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

No impacts to agricultural or forest lands of long-term commercial significance are anticipated, no measures are proposed.

9. Housing Find help answering housing questions

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

No housing units will be provided by the project.

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

Two middle-income rental housing units will be eliminated by the project.

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

No measures to reduce or control housing impacts are proposed.

10. Aesthetics Find help answering aesthetics questions

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

The maximum building height proposed is +/- 45 feet. The principal exterior building materials proposed are prefinished metal wall panels and CMU block.

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

No views in the immediate vicinity will be altered or obstructed.

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

The project will be designed to comply with City of Tumwater Citywide Design Guidelines for development and construction, and will be reviewed by City staff to ensure compatibility with aesthetic requirements for permit approval

11. Light and Glare Find help answering light and glare questions

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

Light will be produced during evening hours from exterior and pathway lighting, and luminaires within parking areas and on-site drive aisles.

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

Light or glare from the finished project are not anticipated to create safety hazards or cause interference with views.

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

There are no known off-site sources of light or glare that will affect the proposed project.

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

Exterior lighting will be positioned and/or shielded to prevent light exposure onto adjacent properties.

12. Recreation Find help answering recreation questions

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

Trosper Lake Park, an undeveloped neighborhood park which provides access to Trosper Lake, is located approximately 400 feet north of the project site.

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

No, the project will not displace any existing recreational uses.

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

No impacts on recreation are anticipated, no measures are proposed.

13. Historic and Cultural Preservation Find help answering historic and cultural preservation questions

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.

Per the Department of Archaeology and Historic Preservation's WISAARD map, there are no structures on the site listed in or eligible for listing in national, state, or local preservation registers. The site is located south of the Olympia-Grand Coulee No. 1 Transmission Line, register ID No. 725297.

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.

The site is mapped as an area of High Risk to contain Environmental Factors with Archaeological Resources. It is also a mapped area of Tribal interest for the Nisqually, Squaxin, Cowlitz, and Confederated Tribes of the Chehalis Reservation

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.

DAHP concurrence received

A query of the Department of Archaeology & Historic Preservation's WISAARD map system (https://wisaard.dahp.wa.gov/Map) was performed on 8/4/2023.

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.

If cultural or historic resources are discovered during demolition, grading, or construction, activities will cease until a qualified archaeologist evaluates the situation and outlines a course of action.

14. Transportation Find help with answering transportation questions

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 site is served by Littlerock Road SW, with 3 existing driveway accesses along the roadway frontage. The center access driveway from Littlerock Road SW will be closed by the project. The existing northern and southern driveway cuts will be relocated for the project. A new northern right-in-right-out driveway will serve as the project's entry, providing access to the on-site parking lot and storage building, and a new southern right-out driveway will serve as the exit to Littlerock Road SW; an interior drive aisle will be constructed around the building, connecting the driveways.

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?

Yes, the site and geographic area are served by Intercity Transit.

c. 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 new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities are proposed.

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

No, the project will not use or occur in the immediate vicinity of water, rail, or air transportation.

e. 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 nonpassenger vehicles). What data or transportation models were used to make these estimates?

The project is expected to generate 145 net new trips. Peak volumes are anticipated during the PM Peak Hour. These estimates are based on the Institute of Transportation Engineers (ITE) Trip Generation manual. Please refer to the enclosed Traffic Impact Analysis (TIA) for additional information.

f. 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 proposal will not interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area.

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

Mitigation payment for Tumwater Blvd/I-5 project

Traffic Impact Fees and SEPA Mitigation Fees required by the City of Tumwater are outlined in the enclosed TIA report. Please refer to the TIA for additional information.

15. Public Services Find help answering public service questions

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.

The project may result in a nominal increased need for fire and police protection services.

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

Impacts to public services are expected to be minor. Measures to reduce direct impacts include perimeter fencing, electronic security gates, security alarms, on-site fire hydrants, and fire protection sprinklers within the building.

16. Utilities Find help answering utilities questions

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.

Water: City of Tumwater
Sanitary Sewer: City of Tumwater
Power: Puget Sound Energy
Communications: Comcast and/or Lumen
Refuse: LeMay Pacific Disposal

C. Signature Find help about who should sign

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.

X 

Type name of signee: Nick Wheeler

Position and agency/organization: JSA Civil, LLC | Business Manager

Date submitted: December 14, 2023

D. Supplemental sheet for nonproject actions Find help for the nonproject actions worksheet

IT IS NOT REQUIRED to use this section for project actions.

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. **How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?**
   - **Proposed measures to avoid or reduce such increases are:**
2. **How would the proposal be likely to affect plants, animals, fish, or marine life?**
   - **Proposed measures to protect or conserve plants, animals, fish, or marine life are:**

3. **How would the proposal be likely to deplete energy or natural resources?**

   - **Proposed measures to protect or conserve energy and natural resources are:**

4. **How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection, such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?**

   - **Proposed measures to protect such resources or to avoid or reduce impacts are:**

5. **How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?**

   - **Proposed measures to avoid or reduce shoreline and land use impacts are:**

6. **How would the proposal be likely to increase demands on transportation or public services and utilities?**

   - **Proposed measures to reduce or respond to such demand(s) are:**

7. **Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.**

MAZAMA POCKET GOPHER (*Thomomys Mazama)* and REGULATED PRAIRIE ABSENCE REPORT

Prepared for
Ryan Haddock
Kidder Matthews

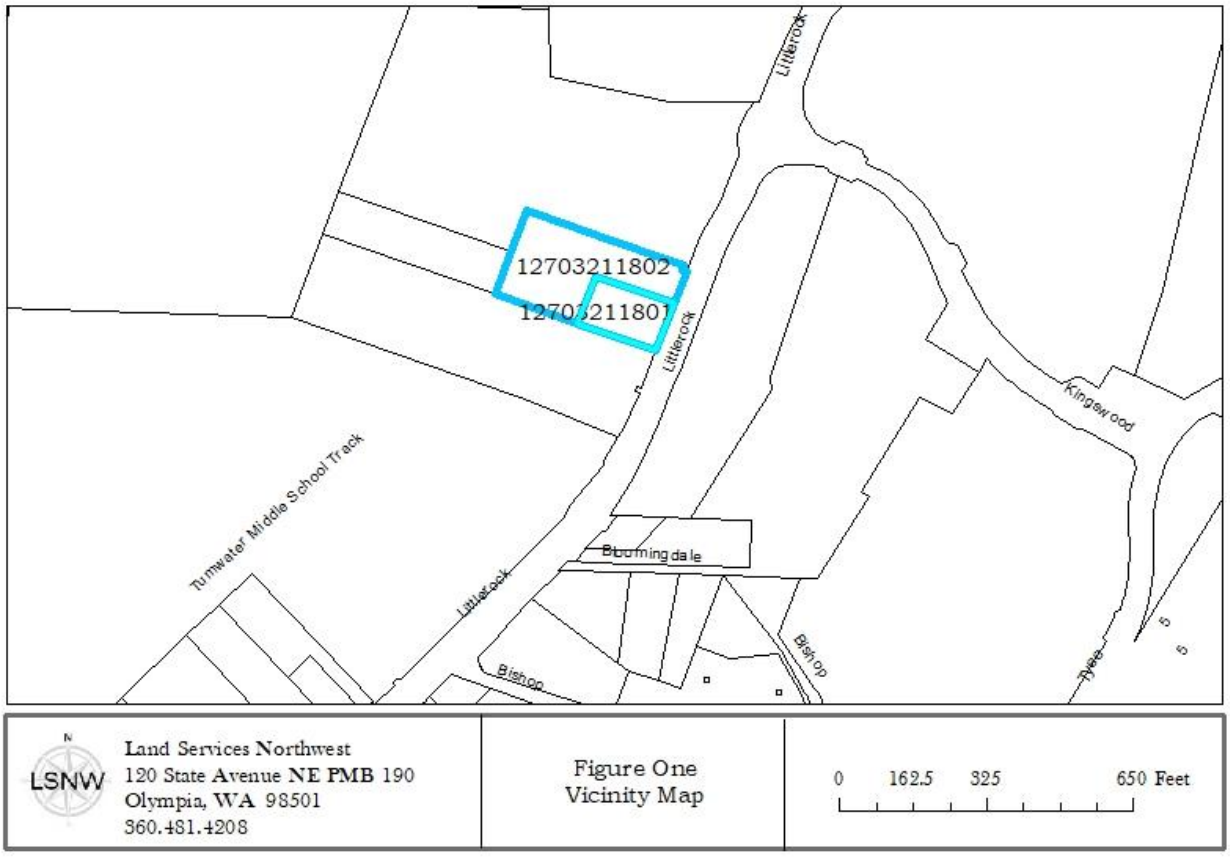
October 26, 2023

Land Services Northwest
Alex Callender MS, PWS
120 State Ave NE PMB 190, Olympia, WA, 98501
360.481.4208

1.0 INTRODUCTION

This report is the result of a Mazama Pocket Gopher and Regulated Prairie survey of the following parcels:

- 1.27-acre parcel #12703211802 at 6115 LITTLEROCK RD SW Tumwater, WA with the legal description of Section 03 Township 17 Range 2W Quarter NW NW & NE SWSS-0955 LT 2 Document 1048623; EXC PTN FOR LITTLEROCKRD PER AFN:3868410 in Thurston County.
- .5-acre parcel #12703211801 at 6119 LITTLEROCK RD SW Tumwater, WA with the legal description of Section 03 Township 17 Range 2W Quarter NE NW & NW NWSS-0955 LT 1 Document 009/107 EX PTN TO LITTLEROCK RD#3914710 in Thurston County. **(Figure 1).**



The Purpose of this report is to provide a study of the presence or absence of indicators of the Mazama Pocket Gopher (*Thomomys Mazama*) (MPG) and Regulated Prairie under City of Tumwater code.

This study should allow the reader to assess whether the Mazama pocket gopher is likely to be found on site and what the implications of its presence or absence may have with regard to permitting.

Mazama Pocket Gopher

Four subspecies of Mazama pocket gophers found in Thurston City are listed as threatened under the Endangered Species Act (ESA). Impacts to Mazama pocket gophers should be avoided or addressed through USFWS permitting processes**.** The presence of this species on a property may have regulatory implications that may limit the amount or type of development that can occur on a property in order to avoid "take" of the species. Take is defined under the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect any threatened or endangered species.

2.0 METHODS

2.1 Review of Existing Information

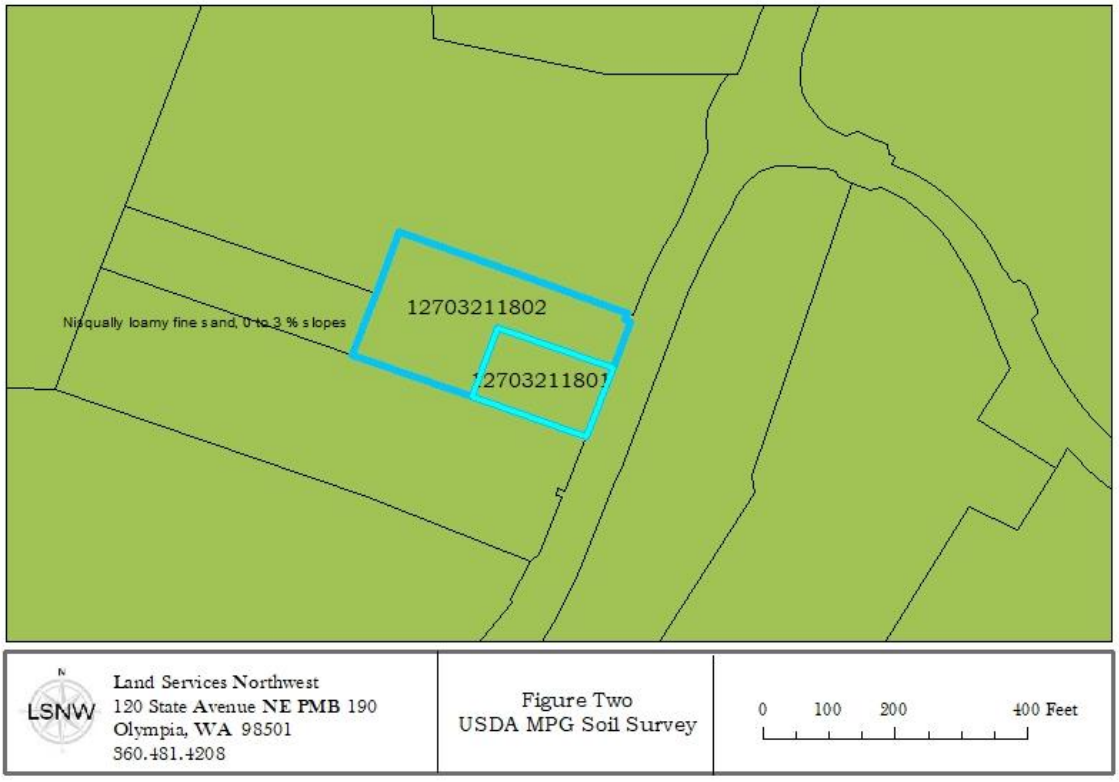
Background Review

Background information on the subject property was reviewed prior to field investigations and included the following:

- Thurston City Geodata Gopher Soils Shapefiles
- WDFW Priority Habitats and Species Information
- USFWS species list information
- WDFW species information

2.2 Summary of Existing Information

The existing information shows Nisqually loamy fine sand, 0 to 3 percent slopes on and within 300 feet of the subject property, which are more preferred by the MPG (**Figure 2) and (Attachment A).**


Nisqually loamy fine sand, 0 to 3 % slopes
12703211802
12703211801
N
LSNW
Land Services Northwest
120 State Avenue NE PMB 190
Olympia, WA 98501
360.481.4208
Figure Two
USDA MPG Soil Survey
0
100
200
400 Feet

Attachment A

Table 1. Soils known to be associated with Mazama pocket gopher occupancy.

Mazama Pocket Gopher Preference	Soil Type
More Preferred (formerly High and Medium Preference Soils)	Nisqually loamy fine sand, 0 to 3 percent slopes Nisqually loamy fine sand, 3 to 15 percent slopes Spanaway-Nisqually complex, 2 to 10 percent slopes Cagey loamy sand Indianola loamy sand, 0 to 3 percent slopes Spanaway gravelly sandy loam, 0 to 3 percent slopes Spanaway gravelly sandy loam, 3 to 15% slopes
Less Preferred (formerly Low Preference Soils)	Alderwood gravelly sandy loam, 0 to 3 percent slopes Alderwood gravelly sandy loam, 3 to 15 percent slopes Everett very gravelly sandy loam, 0 to 3 percent slopes Everett very gravelly sandy loam, 3 to 15 percent slopes Indianola loamy sand, 3 to 15 percent slopes Kapowsin silt loam, 3 to 15 percent slopes McKenna gravelly silt loam, 0 to 5 percent slopes Norma fine sandy loam Norma silt loam Spana gravelly loam Spanaway stony sandy loam, 0 to 3 percent slopes Spanaway stony sandy loam, 3 to 15 percent slopes Yelm fine sandy loam, 0 to 3 percent slopes Yelm fine sandy loam, 3 to 15 percent slopes

The WDFW Priority Habitats and Species Map does not show the MPG within 600 feet of the subject property (**Appendix B**).

2.3 2023 Mazama Pocket Gopher Protocol

A. General Information – 2023 Approach

1. The MPG review season will run June 1-October 31, 2023.

2. The protocol described in this memorandum will only apply to properties not known to be occupied by MPG since April 2014, the date of the federal listing.

The property was not known to be occupied by the MPG since April 2014.

3. Negative determinations will be valid for the length of the underlying City permit or approval, per City code.

No signs of the Mazama pocket gopher were found during the site visits.

4. Qualified consultants may perform field reviews and submit results for City evaluation, per the CAO. Consultants must have received training from USFWS at one of the two trainings offered in May/June 2018 and is certified to conduct these surveys.

Alex Callender is qualified as a consultant as he received training and certification during the May 2018 class conducted by the United States Fish and Wildlife Service.

B. In-Office Procedures

1. Staff will review land use applications to determine if the MPG field screening protocols described in this memorandum must be initiated for the following:

a. Within 600 feet of a site known to have positive MPG occurrence; or

b. On or within 300 feet of a soil type known to be associated with MPG occupancy.

The parcels are on and within 300 feet of soil types known to be associated with MPG occupancy.

8. Tumwater landowners who know or learn that Mazama pocket gophers are present on their property can move forward with their proposed development by: 1) proposing mitigation to the City as directed in the City's Critical Areas Ordinance (Title 24TCC); or 2) contacting USFWS directly to discuss the review, assessment, and mitigation process most appropriate for their site(s) and proposed activities,
.

C. Preliminary Assessment

As land use applications are received, properties mapped with or within 300 feet of gopher and/or prairie soils undergo the following preliminary assessment in-office.

1. For properties or project areas that appear to meet City criteria below, an internal review is conducted by staff biologist to determine if the project may be released from the full gopher review process. The following criteria may release a project
from further gopher review:

- Locations west of the Black River, or on the Steamboat Island or Cooper Point peninsulas.
- Sites submerged for 30 consecutive days or more since October 31, 2017.
- Sites covered with impervious surfaces (as defined in CAO Chapter 17.15 and Title 24).
- Fully forested (>30%) sites with shrub and fern understory.
- Sites that consist of slopes greater than 40 percent, or that contain landslide hazard areas (per existing City regulations).
- Sites on less preferred MPG soils north of Interstate 5.
- Building to take place in the footprint of an existing structure (also mobile

home replacements in the same footprint).
- Mobile home replacements in existing lots in an existing mobile home park.
- Heating oil tank removal
- Foundation repair
- Projects which lie >300 feet from mapped gopher soils.

2. If a property and/or project area do not meet internal review criteria, the project is put on a list to be scheduled for full MPG review during the appropriate seasonal review period.

In order to ensure the review process runs efficiently, the following measures will be implemented as part of the 2019 screening approach. These are intended to reduce costs and staff time, and ensure that MPG screening requests, especially those associated with building permit applications, are screened during the screening season.

1. No soil verification will be required in conjunction with MPG field screening.

2. Site mowing or brushing will be required to initiate first site visits, where necessary and feasible, and completed two to four weeks in advance of the site visit.

3. No further screening will be conducted in 2023 following the detection of MPG mounds on a property. The city will notify landowners that MPG evidence has been detected within two weeks.

4. At the end of the 2023 season, City staff will provide data regarding MPG occupancy to USFWS.

5. No additional site visit will be required if indeterminate mounds are detected, if the full number of required visits has been completed.

6. The City will prioritize project specific applications over non-project applications. This will help ensure that applicants that have projects ready for construction will receive necessary permits and may initiate construction in a timely manner.

E. Site Visit Overview

Hired consultants will conduct field observations to determine MPG presence on sites with potential habitat. These site visits will be conducted as follows:

1. All valid site visits must be conducted from June 1 through October 31, 2023. Site visits outside that survey window will not be considered valid.

The visits were conducted according to the protocol on July 26 and October 26, 2023.

2. A site or parcel is considered to be the entire property, not just the footprint of the proposed project.

Both parcels were surveyed entirely.

3. Sites with less preferred soils (see Attachment A) will be visited two (2) times, at least 30 days apart.

4. Sites with more preferred soils (see Attachment A) will be visited two (2) times, at least 30 days apart.

The surveys were conducted according to the protocol.

5. Site conditions must be recorded on a data sheet or similar information documented in narrative form. A template data sheet can be found on the city website at http://www.co.thurston.wa.us/permitting/gopher-reviews/index.html

The data sheets are provided in Appendix C.

6. Document and describe which areas of the parcel cannot be screened due to limited accessibility and/or dense understory. This should be depicted on an aerial or site plan submitted to the city.

The parcels were surveyed entirely.

7. The ground must be easily visible to ensure mound observation and identification. Request mowing if necessary to ensure visibility. Wait two to three weeks after mowing before beginning screening.

The ground as visible.

http://www.co.thurston.wa.us/permitting/gopher-reviews/index.html F. Detailed Field Methodology

1. The survey crew orients themselves with the layout of the property using aerial maps, and strategizes their route for walking through the property.

2. Start GPS to record survey route.

3. Walk the survey transects methodically, slowly walking a straight line and scanning an area approximately 2-3 meters to the left and right as you walk, looking for mounds. Transects should be no more than five (5) meters apart when conducted by a single individual.

4. If the survey is performed by a team, walk together in parallel lines approximately 5 meters apart while you are scanning left to right for mounds.

The surveys were conducted according to the protocol.

5. At each mound found, stop and identify it as an MPG or mole mound. If it is an MPG mound, identify it as a singular mound or a group (3 mounds or more) on a data sheet to be submitted to the city. (City has developed data sheets for your use on http://www.co.thurston.wa.us/permitting/gopher-reviews/index.html)

6. Record all positive MPG mounds, likely MPG mounds, and MPG mound groups in a GPS unit that provides a date, time, georeferenced point, and other required information in City GPS data instruction for each MPG mound. Submit GPS data in a form acceptable to the city. City GPS Data instruction can be found at http://www.co.thurston.wa.us/permitting/gopher-reviews/index.html

   N /A

7. Photograph all MPG mounds or MPG mound groups. At a minimum, photograph MPG mounds or MPG mound groups representative of MPG detections on site.

   No MPG mounds were found during the survey.

8. Photos of mounds should include one that has identifiable landscape features for reference. In order to accurately depict the presence of gopher activity on a specific property, the following series of photos should be submitted to the City:
   - At least one up-close photo to depict mound characteristics
     No MPG mounds were found.
   - At least one photo depicting groups of mounds as a whole (when groups are encountered).
     N/A
   - At least one photo depicting gopher mounds with recognizable landscape features in the background, at each location where mounds are detected on a property
     N/A
   - Photos can be taken with the GPS unit or a separate, camera, preferably a camera with locational features (latitude, longitude)
     N/A
   - Photo point description or noteworthy landscape or other features to aid in relocation. Additional photos to be considered.
     N/A
   - The approximate building footprint location from at least two cardinal directions.
     N/A
   - Landscape photos to depict habitat type and in some cases to indicate why not all portions of a property require gopher screening.
     Appendix A Photos

9. Describe and/or quantify what portion and proportion of the property was screened, and record your survey route and any MPG mounds found on either an aerial or parcel map.

   The parcels were surveyed entirely.

10. If MPG mounds are observed on a site, that day's survey effort should continue until the entire site is screened, and all mounds present identified, but additional site visits are not required.

No MPG mounds were found. The mounds found on site were typical of mole mounds with clumpy soils in a linear fashion.

11. In order for the city to accurately review Critical Area Reports submitted in lieu of City field inspections the information collected in the field (GPS, data sheets, field notes, transect representations on aerial, etc.) shall be filed with the City. GPS

No mounds were found, the information was submitted in an acceptable format.

2.4Regulated Prairie Survey Protocol

1. Prairie Review Method

The parcel contains soil types associated with prairies as defined in the Thurston County Critical Areas Ordinance. Transects were walked throughout the parcel, except for the excluded areas, looking for signs of regulated prairie plants.

2. A list of plant species encountered during the survey was recorded and CAO target prairie plants were noted.

Plants encountered are listed on the CAO plant list (Appendix D).

3. Confirmation that CAO prairie plants were surveyed for and either found or not found, prairie criteria met or not met, etc. An example statement of your findings could be:

No CAO prairie plants were found.

4. If prairie habitat is identified onsite it is regulated pursuant to Chapter 24.25 of the CAO. Provide either a GPS map or hand-drawn aerial map indicating location of prairie plants on the parcel in relation to the proposed building area.

N/A

5. A full species list of plants (prairie and non-prairie) found at the time of survey. Attached is a blank checklist and data sheet if you choose to use. Even if no CAO prairie plants were detected, a complete species list of vegetation observed helps characterize site conditions.

The full plant list is in Appendix D.

6. Color photos of plant species encountered.

See Appendix A.

7. Transect map. If done concurrently with gopher review, you can use the same transect map.

Transect maps are shown in Appendix C.

8. Oregon white oak trees, if observed onsite, must also be documented, mapped, and included in the prairie plant survey. As with prairie plants, provide either a GPS map or hand-drawn aerial map indicating location of oaks on the parcel in relation to the proposed building area.

No Oregon white oak trees were found onsite.

9. Mima mounds, if observed onsite, must also be documented, mapped, and included in the prairie plant survey. Provide either a GPS map or hand-drawn aerial map indicating location of Mima mounds on the parcel in relation to the proposed building area.

N/A

3.0 CURRENT CONDITIONS AND METHODS

Land Services Northwest conducted surveys on July 26 and October 26, 2023, walking the area and looking for signs of the MPG and regulated prairie plants in accordance with the protocol.

The parcels have single-family residences and numerous vehicles, recreational vehicles, and trailers stored throughout. The larger parcel has a large lawn area with numerous apple trees in the back.

Tumwater Middle School is directly to the south. An automobile auction business to the north. Trosper Lake Park is to the west and there are numerous commercial businesses to the east.

4.0 RESULTS

No Mazama pocket gophers were found on site.

No CAO prairie plants, Garry oaks or Mima mounds were found.

.

Appendix A - Photos


Haddock
07.26.2023 03:51 PM
5945 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 03:51 PM
5945 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 03:52 PM
6119 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 03:52 PM
6119 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 03:55 PM
6119 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 03:55 PM
6119 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 03:55 PM
6115 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 03:56 PM
6119 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 03:56 PM
6119 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 03:59 PM
6115 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 03:59 PM
6115 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 04:01 PM
6115 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 04:02 PM
6115 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 04:05 PM
6115 Littlerock Rd SW, Tumwater, WA 98512, USA


Haddock
07.26.2023 04:05 PM
6115 Littlerock Rd SW, Tumwater, WA 98512, USA

Appendix B - WDFW Priority Habitats and Species Map

5/16/23, 2:28 PM PHS Report

Priority Habitats and Species on the Web

Buffer radius: 600 Feet

Report Date: 05/16/2023

PHS Species/Habitats Overview:

Occurence Name	Federal Status	State Status	Sensitive Location
Freshwater Emergent Wetland	N/A	N/A	No
Big brown bat	N/A	N/A	Yes
myotis spp	N/A	N/A	Yes
Townsend's Big-eared Bat	N/A	Candidate	Yes

about:blank 1/3

PHS Species/Habitats Details:

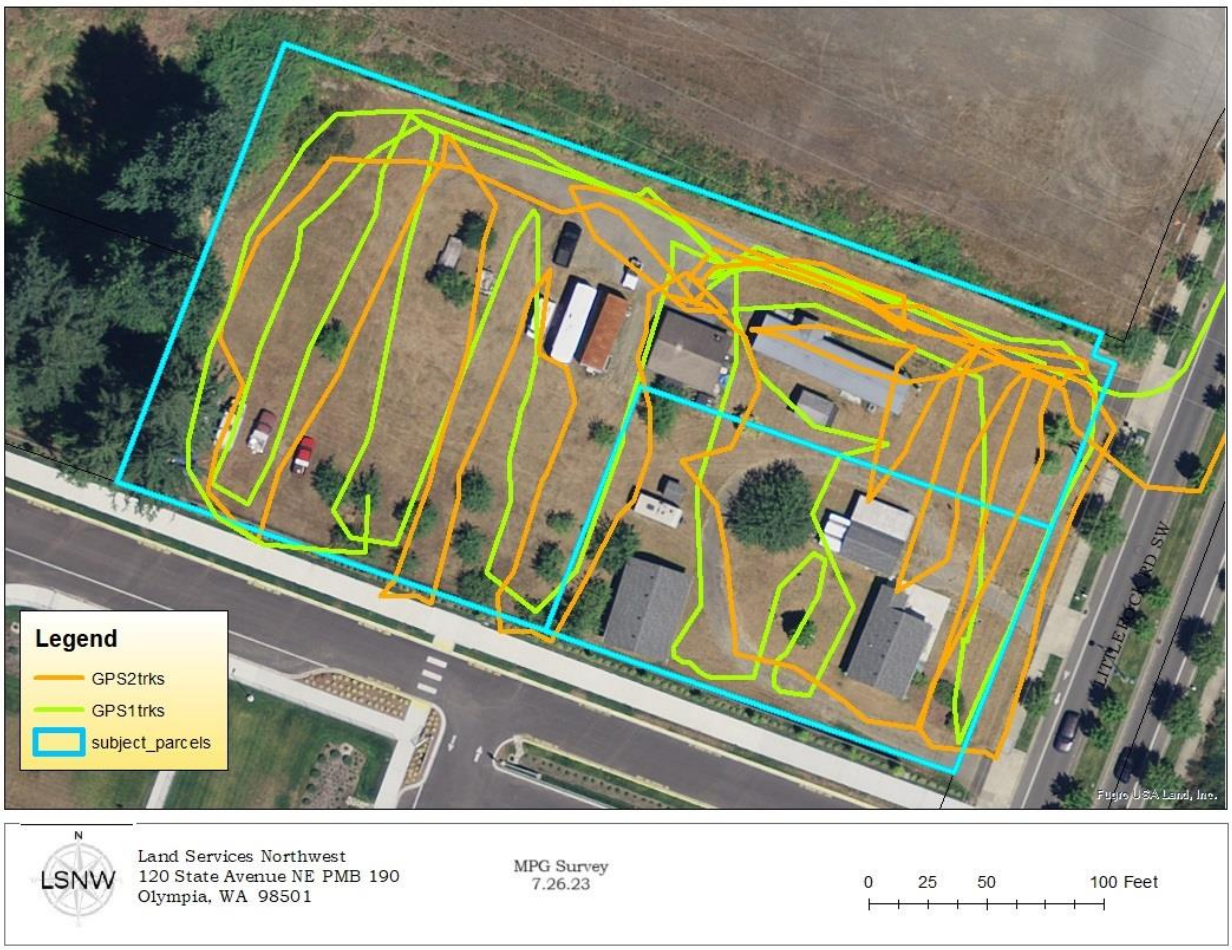
Freshwater Emergent Wetland	
Priority Area	Aquatic Habitat
Site Name	N/A
Accuracy	NA
Notes	Wetland System: Freshwater Emergent Wetland - NWI Code: PEM1C
Source Dataset	NWIWetlands
Source Name	Not Given
Source Entity	US Fish and Wildlife Service
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	N
SGCN	N
Display Resolution	AS MAPPED
ManagementRecommendations	http://www.ecy.wa.gov/programs/sea/wetlands/bas/index.html
Geometry Type	Polygons

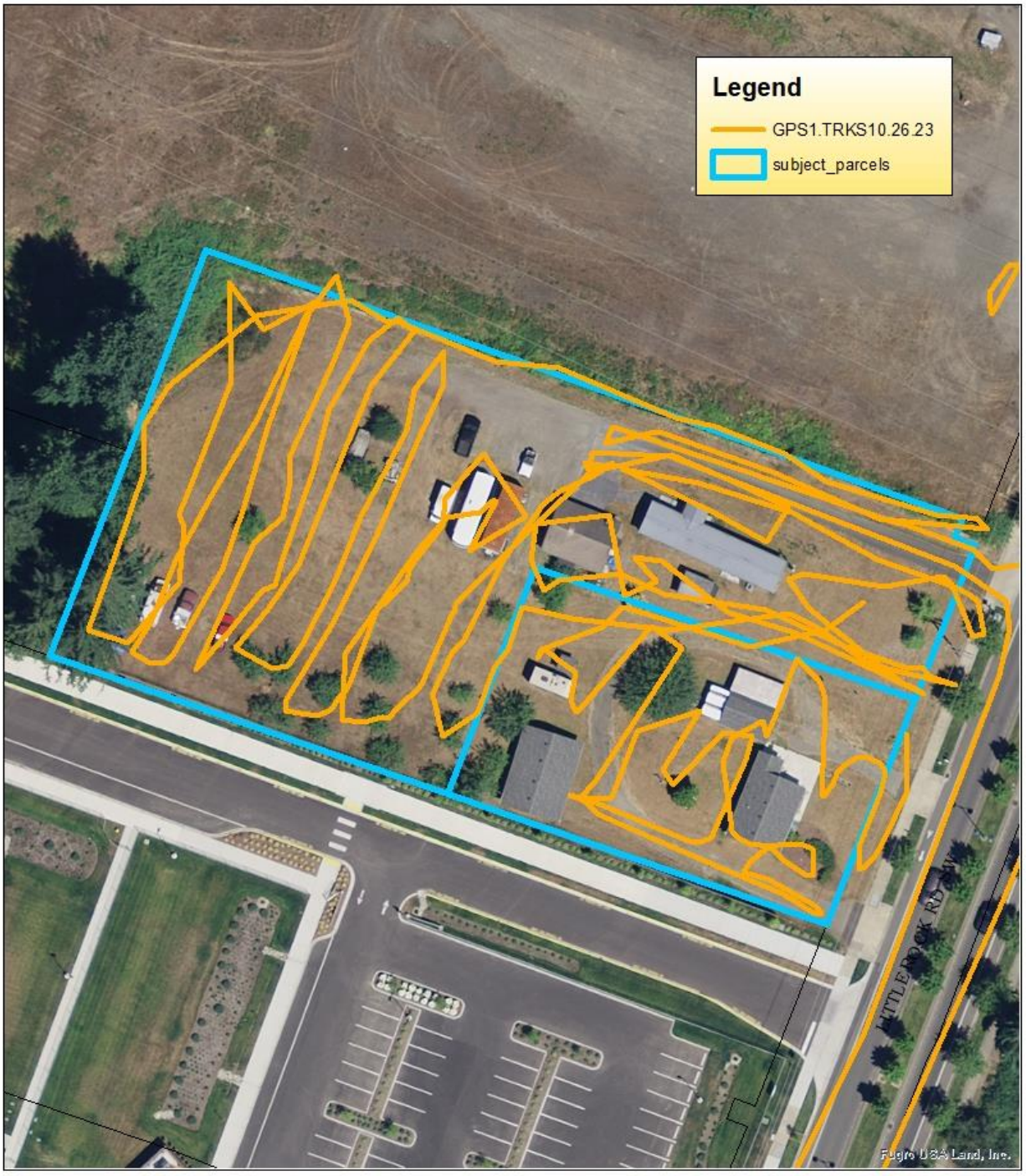
Big brown bat	
Scientific Name	*Eptesicus fuscus*
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at phsproducts@dfw.wa.gov for obtaining information about masked sensitive species and habitats.
PHS Listing Status	PHS Listed Occurrence
Sensitive	Y
Display Resolution	TOWNSHIP
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00605

myotis spp	
Scientific Name	*Myotis yumanensis/lucifigus*
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at phsproducts@dfw.wa.gov for obtaining information about masked sensitive species and habitats.
PHS Listing Status	PHS Listed Occurrence
Sensitive	Y
Display Resolution	TOWNSHIP

Townsend's Big-eared Bat	
Scientific Name	*Corynorhinus townsendii*
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at phsproducts@dfw.wa.gov for obtaining information about masked sensitive species and habitats.
State Status	Candidate
PHS Listing Status	PHS Listed Occurrence
Sensitive	Y
SGCN	Y
Display Resolution	TOWNSHIP
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00027

Appendix C - MPG Transect Maps and Survey Forms





N

LSNW

Land Services Northwest
120 State Avenue NE PMB 190
Olympia, WA 98501

MPG Survey
10.26.23

0 30 60 120 Feet

2021 Thurston County Mazama Pocket Gopher Screening Field Form **Site Visit Date:** 7.26.23

Site Name and Parcel #	**Parcel #:** 12703211802 and 12703211801 **Project #:** _____ **Site/Landowner:** Haddock/Littlerock Road
How were the data collected? **(circle the method for each)**	**Transect:** Trimble (Garmin) Aerial **Mounds** Trimble Garmin Aerial **Notes:** _____
Field Team Personnel: **(Indicate all staff present, CIRCLE who filled out form)**	**Name:** Alex Callender **Name:** (Susan Callender) **Name:**
Others onsite (name/affiliation)	
Site visit # **(CIRCLE all that apply)**	(1st) 2nd Unable to screen **Notes:**
Do onsite conditions preclude the need for further visits?	Yes (No) **Dense woody cover that encompasses the entire site (trees/shrubs) that appears to preclude any potential MPG use.** Impervious Compacted Graveled Flooded Other _____ **Notes:**
Describe visibility for mound detection:	Poor Fair (Good) **Notes:**
Request mowing? **(CIRCLE and DESCRIBE WHERE MOWING IS NEEDED and SHOW ON AERIAL PHOTO**	Yes No (N/A) **Notes:**

Page 1 of 2

Mounds observed over the whole site are characteristic of: Quantify or describe amount of each type and approx. # of mounds *Group = 3 mounds or more*	MPG Mounds	Likely MPG Mounds	Indeterminate	Likely Mole Mounds	Mole Mounds
	0	0	0	50+	100+
	(No MPG mounds (circle))				
MPG mounds in GPS? (CIRCLE and DESCRIBE) If MPG mounds present, entered in GPS?	None All Most Some Notes: Yes No (N/A)				
Does woody vegetation onsite match aerial photo?	(Yes) No - describe differences and show on parcel map/aerial:				
What portion(s) of the property was screened? (CIRCLE and DESCRIBE)	(All) Part - describe and show on parcel map/aerial:				
Notes -	Describe, and show on parcel map/aerial if applicable:				
Team reviewed and agreed to data recorded on form? (CIRCLE, and EXPLAIN if "No")	(Yes) No Reviewed by initials: AC SC _____ _____ Notes:				

Information provided by Thurston County Government

2021 Thurston County Mazama Pocket Gopher Screening Field Form **Site Visit Date:** 10.26.23

Site Name and Parcel #	**Parcel #:** 12703211802 and 12703211801 **Project #:** _____ **Site/Landowner:** Haddock/Littlerock Road
How were the data collected? **(circle the method for each)**	**Transect:** Trimble (Garmin) Aerial **Mounds** Trimble Garmin Aerial **Notes:** _____
Field Team Personnel: **(Indicate all staff present, CIRCLE who filled out form)**	**Name:** (Alex Callender) **Name:** **Name:**
Others onsite (name/affiliation)	
Site visit # **(CIRCLE all that apply)**	**1st** (2nd) **Unable to screen** **Notes:**
Do onsite conditions preclude the need for further visits?	**Yes** (No) **Dense woody cover that encompasses the entire site (trees/shrubs) that appears to preclude any potential MPG use.** **Impervious Compacted Graveled Flooded** **Other** _____ **Notes:**
Describe visibility for mound detection:	**Poor Fair** (Good) **Notes:**
Request mowing? **(CIRCLE and DESCRIBE WHERE MOWING IS NEEDED and SHOW ON AERIAL PHOTO**	**Yes** (No) **N/A Notes:**

Page 1 of 2

Mounds observed over the whole site are characteristic of:	MPG Mounds	Likely MPG Mounds	Indeterminate	Likely Mole Mounds	Mole Mounds
Quantify or describe amount of each type and approx. # of mounds *Group = 3 mounds or more*	0	0	0	50+	100+
	(No MPG mounds (circle))				
MPG mounds in GPS? (CIRCLE and DESCRIBE) If MPG mounds present, entered in GPS?	None All Most Some Notes: Yes No (N/A)				
Does woody vegetation onsite match aerial photo?	(Yes) No - describe differences and show on parcel map/aerial:				
What portion(s) of the property was screened? (CIRCLE and DESCRIBE)	(All) Part - describe and show on parcel map/aerial:				
Notes -	Describe, and show on parcel map/aerial if applicable:				
Team reviewed and agreed to data recorded on form? (CIRCLE, and EXPLAIN if "No")	(Yes) No Reviewed by initials: AC _____ _____ _____ Notes:				

Appendix D - Prairie Plants

2019 Thurston County Critical Areas Ordinance (CAO) Prairie Screening Data Sheet

Parcel Number:	12703211802 and 12703211801	**CAO prairie criteria met?**	Yes or (No)
Property Owner:		**Mima mounds present?**	Yes or (No)
Surveyor(s):	Alex and Susan Callender	**Oaks (*Quercus garryana*) present?**	Yes or (No)
Date: 7.26.23 and 10.26.23		Mature:	
Composition of Vegetation:		Sapling:	
		Seedling:	

X	Target species	Class* (circle)
	Apocynum androsaemifolium	1 2 3 4 5 N/A
	Balsamorhiza deltoidea	Present / Absent
	Bistorta bistortoides	Present / Absent
	Brodiaea coronaria	1 2 3 4 5 N/A
	Camassia leichtlinii	1 2 3 4 5 N/A
	Camassia quamash	Present / Absent
	Carex densa	Present / Absent
	Carex feta	1 2 3 4 5 N/A
	Carex inops ssp. *inops*	1 2 3 4 5 N/A
	Carex tumulicola	1 2 3 4 5 N/A
	Carex unilateralis	1 2 3 4 5 N/A
	Castilleja hispida	1 2 3 4 5 N/A
	Castilleja levisecta	Present / Absent
	Danthonia californica	1 2 3 4 5 N/A
	Delphinium menziesii	1 2 3 4 5 N/A
	Delphinium nuttallii	1 2 3 4 5 N/A
	Deschampsia cespitosa	1 2 3 4 5 N/A
	Deschampsia danthonioides	1 2 3 4 5 N/A
	Dodecatheon hendersonii	1 2 3 4 5 N/A
	Downingia yina	1 2 3 4 5 N/A
	Erigeron speciosus	1 2 3 4 5 N/A
	Eriophyllum lanatum	Cover: ___ m^2 N/A
	Eryngium petiolatum	Present / Absent
	Festuca roemeri (F. idahoensis)	1 2 3 4 5 N/A
	Fragaria virginiana	Cover: 3 m^2 N/A
	Fritillaria affinis	1 2 3 4 5 N/A
	Hieracium scouleri	1 2 3 4 5 N/A
	Hosackia pinnata *(Lotus pinnatus)*	Present / Absent
	Koeleria macrantha (K. cristata)	1 2 3 4 5 N/A
	Leptosiphon bicolor (Linanthus b.)	1 2 3 4 5 N/A
	Lomatium bradshawii	Present / Absent
	Lomatium nudicaule	1 2 3 4 5 N/A
	Lomatium triternatum	1 2 3 4 5 N/A
	Lomatium utriculatum	Present / Absent
	Lupinus albicaulis	1 2 3 4 5 N/A
	Lupinus lepidus var. *lepidus*	1 2 3 4 5 N/A
	Lupinus polyphyllus	1 2 3 4 5 N/A
	Micranthes integrifolia (Saxifraga i.)	Present / Absent
	Micranthes oregana (Saxifraga o.)	1 2 3 4 5 N/A
	Microseris laciniata	Present / Absent
	Perideridia gairdneri	1 2 3 4 5 N/A
	Plagiobothrys figuratus	1 2 3 4 5 N/A
	Plectritis congesta	Present / Absent
	Polemonium carneum	Present / Absent
	Potentilla gracillis	Present / Absent
	Ranunculus alismifolius	1 2 3 4 5 N/A
	Ranunculus occidentalis	Present / Absent
	Ranunculus orthorhynchus	1 2 3 4 5 N/A
	Sericocarpus rigidus	Present / Absent
	Sidalcea malviflora* var. *virgata	Present / Absent
	Silene scouleri	Present / Absent
	Sisyrinchium idahoense	1 2 3 4 5 N/A
	Solidago missouriensis	1 2 3 4 5 N/A
	Solidago simplex (S. spathulata)	1 2 3 4 5 N/A
	Toxicoscordion venenosum var. venenosum (Zigadenus venenosus)	1 2 3 4 5 N/A
	Trifolium willdenowii (T. tridentatum)	1 2 3 4 5 N/A
	Triteleia grandiflora	1 2 3 4 5 N/A
	Triteleia hyacinthina	1 2 3 4 5 N/A
	Veratrum californicum	1 2 3 4 5 N/A
	Veratrum viride	1 2 3 4 5 N/A
	Viola adunca	1 2 3 4 5 N/A
	Viola praemorsa var. *nuttallii*	1 2 3 4 5 N/A

*Species Count Class:
1 = < 25
2 = 25 - 49
3 = 50 - 74
4 = 75 - 100
5 = >100

Prairie Plant Manual:
https://www.thurstoncountywa.gov/planning/planningdocuments/cao-prairie-plant-manual-4.23.2018.pdf

Page 1 of 2

Non-CAO vegetation

	Species or codons (i.e. "HYPRAD" for *Hypochaeris radicata*)	Notes
1	Hairy cats ear (*Hypochaeris radicata*)	
2	Narrow leafed plantain (Plantago lanceolata10)	
3	Wild carrot *(Daucus carota)*	
4	White Clover (Trifolium repens)	
5	Trailing blackberry (Rubus ursinus)	
6	Creeping buttercup *(Ranunculus repens)*	
7	Hawkweed (Hieracium spp.)	
8	Scotch broom *(Cytisus scoparius)*	
9		
10		
11		
12		
13		
14		
15		

Prairie Habitat Criteria: If at any point at least three target species, totaling in general at least 25 plants each are encountered within about 5 meters of each other (WDFW 2015), the area in question meets the criteria to be established as occurrence of prairie. For certain plants such as WNHP rare plants (indicated here in bold), or species which serves as nectar or host plants for both TCB and either SCC or SGCN butterflies (indicated here with underline), presence is enough to meet prairie habitat criteria for such species, even if their count is less than 25 individual plants. CAO wet and dry prairie plant lists can be found in Tables 24.25-7 and 24.25-8, respectively. More info available at: https://www.thurstoncountywa.gov/planning/Pages/hcp-prairie-review.aspx
Mima mounds and oak habitat definitions can be found in TCC 24.03.010

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

February 20, 2024

Tami Merriman
Planner
City of Tumwater

In future correspondence please refer to:
Project Tracking Code: 2023-08-04938
Property: Littlerock Self Storage TUM-23-0650
Re: Archaeology - Concur with Survey; Follow Inadvertent Discovery Plan

Dear Tami Merriman:

Thank you for contacting the State Historic Preservation Officer (SHPO) and the Department of Archaeology and Historic Preservation (DAHP) with documentation regarding the above referenced project. In response, we concur with the results and recommendations made in the survey report entitled “Cultural Resource Assessment for Littlerock Self Storage, 6115 Littlerock Rd, Tumwater, Thurston County, WA.” Specifically, as no cultural resources were found during the survey, we do not recommend further direct archaeological supervision of the project. However, we do recommend that a standard Inadvertent Discovery Plan is followed during all ground disturbing activities.

Please note that the recommendations provided in this letter reflect only the opinions of DAHP. Any interested Tribes may have different recommendations. We appreciate receiving copies of any correspondence or comments from Tribes or other parties concerning cultural resource issues that you receive.

These comments are based on the information available at the time of this review and on behalf of the SHPO pursuant to Washington State law. Please note that should the project scope of work and/or location change significantly, please contact DAHP for further review.

Thank you for the opportunity to review and comment. Please ensure that the DAHP Project Number (a.k.a. Project Tracking Code) is attached to any future communications about this project. Should you have any questions, please feel free to contact me.

Sincerely,

Stephanie Jolivette
Local Governments Archaeologist
(360) 628-2755
Stephanie.Jolivette@dahp.wa.gov

EXHIBIT 8

MEMO

Date: February 16, 2024
To: Tami Merriman, Permit Manager
Alex Baruch, Associate Planner
From: Mary Heather Ames, Assistant Transportation & Engineering Director

Re: Transportation Concurrency – Littlerock Storage Center

Based on the traffic impact assessment prepared for the Littlerock Storage Center project, dated July 17, 2023 and the City of Tumwater Capital Facilities Plan, the City finds that the Littlerock Storage Center project is concurrent in regards to Transportation conditioned as follows:

1. Shall pay Transportation Impact Fees per the Fee Resolution current at time of permit application.
2. Shall construct transportation improvements as shown on the approved site plan.
3. A recent study of the I-5 interchange at Tumwater Boulevard indicates improvements are needed in order to meet established safety and level of service standards. This project shall either:
    a. Construct a roundabout at the northbound Interstate 5 On/Off Ramp and Tumwater Boulevard intersection; or
    b. Voluntarily pay a mitigation fee of $4,219 per peak trip generated by this project under RCW 82.02.020 to be used as described herein:
    Tumwater Boulevard/I-5 Interchange: The City's planned transportation improvements at the Tumwater Boulevard/I-5 interchange include converting the interchange to a roundabout diamond interchange by replacing the southbound on/off ramp signal and northbound stop controlled intersections with roundabouts. If the subject development has trips to the interchange before the roundabout is constructed, a temporary signal will be required.

EXHIBIT 9

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

February 20, 2024

Tami Merriman
Planner
City of Tumwater

In future correspondence please refer to:
Project Tracking Code: 2023-08-04938
Property: Littlerock Self Storage TUM-23-0650
Re: Archaeology - Concur with Survey; Follow Inadvertent Discovery Plan

Dear Tami Merriman:

Thank you for contacting the State Historic Preservation Officer (SHPO) and the Department of Archaeology and Historic Preservation (DAHP) with documentation regarding the above referenced project. In response, we concur with the results and recommendations made in the survey report entitled “Cultural Resource Assessment for Littlerock Self Storage, 6115 Littlerock Rd, Tumwater, Thurston County, WA.” Specifically, as no cultural resources were found during the survey, we do not recommend further direct archaeological supervision of the project. However, we do recommend that a standard Inadvertent Discovery Plan is followed during all ground disturbing activities.

Please note that the recommendations provided in this letter reflect only the opinions of DAHP. Any interested Tribes may have different recommendations. We appreciate receiving copies of any correspondence or comments from Tribes or other parties concerning cultural resource issues that you receive.

These comments are based on the information available at the time of this review and on behalf of the SHPO pursuant to Washington State law. Please note that should the project scope of work and/or location change significantly, please contact DAHP for further review.

Thank you for the opportunity to review and comment. Please ensure that the DAHP Project Number (a.k.a. Project Tracking Code) is attached to any future communications about this project. Should you have any questions, please feel free to contact me.

Sincerely,

Stephanie Jolivette
Local Governments Archaeologist
(360) 628-2755
Stephanie.Jolivette@dahp.wa.gov

NISQUALLY INDIAN TRIBE
Tribal Historic Preservation Office
4820 She-Nah-Num Drive S.E.
Olympia, Washington 98513
360.456.5221 (main)
877.768.8886 (toll free)
www.nisqually-nsn.gov

February 19, 2024

To: Tami Merriman, Permit Manager
City of Tumwater
Community Development
555 Israel Rd SW
Tumwater, WA 98501

Re: TUM-23-0650

The Nisqually Indian Tribe's THPO has reviewed the notice of application that you provided for the above-named project and has no specific comments or concerns at this time. Please keep us informed if there are any Inadvertent Discoveries of Archaeological Resources/Human Burials.

Although the Nisqually Indian Tribe doesn't have any specific concerns at this time, we respect the traditional cultural knowledge of affected tribes and support their opinions on this matter as well.

Sincerely,

Brad Beach, THPO
Nisqually Indian Tribe
360-528-1084
360-456-5221 ext 1277
beach.brad@nisqually-nsn.gov

cc: Annette Bullchild, Director, Nisqually Indian Tribe

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Southwest Region Office
PO Box 47775, Olympia, WA 98504-7775 • 360-407-6300

March 13, 2024

Tami Merriman, Permit Manager
City of Tumwater
Development Services Department
555 Israel Road Southwest
Tumwater, WA 98501

Dear Tami Merriman:

Thank you for the opportunity to comment on the mitigated determination of nonsignificance for the Littlerock Self-Storage Project (TUM-23-0650) located at 6115 & 6119 Littlerock Road Southwest as proposed by Trevor Colby. The Department of Ecology (Ecology) reviewed the environmental checklist and has the following comment(s):

HAZARDOUS WASTE & TOXICS REDUCTION: Garret Peck (564) 669-0836

The applicant proposes to demolish an existing structure(s). In addition to any required asbestos abatement procedures, the applicant should ensure that any other potentially dangerous or hazardous materials present, such as PCB-containing lamp ballasts, fluorescent lamps, and wall thermostats containing mercury, are removed prior to demolition. It is important that these materials and wastes are removed and appropriately managed prior to demolition. It is equally important that demolition debris is also safely managed, especially if it contains painted wood or concrete, treated wood, or other possibly dangerous materials.

Please review the "Dangerous Waste Rules for Demolition, Construction, and Renovation Wastes," posted at Ecology's website, https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Dangerous-waste-guidance/Common-dangerous-waste/Construction-and-demolition . The applicant may also contact Rob Rieck of Ecology's Hazardous Waste and Toxics Reduction Program at (360) 407-6751 for more information about safely handling dangerous wastes and demolition debris.

TOXICS CLEANUP: Thomas Middleton (360) 999-9594

If contamination is suspected, discovered, or occurs during the proposed SEPA action, testing of the potentially contaminated media must be conducted. If contamination of soil or groundwater is readily apparent, or is revealed by testing, Ecology must be notified. Contact the Environmental Report Tracking System Coordinator for the Southwest Regional Office (SWRO) at (360) 407-6300. For assistance and information about subsequent cleanup and to identify the type of testing that will be required, contact Thomas Middleton with the SWRO, Toxics Cleanup Program at the phone number provided above.

Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

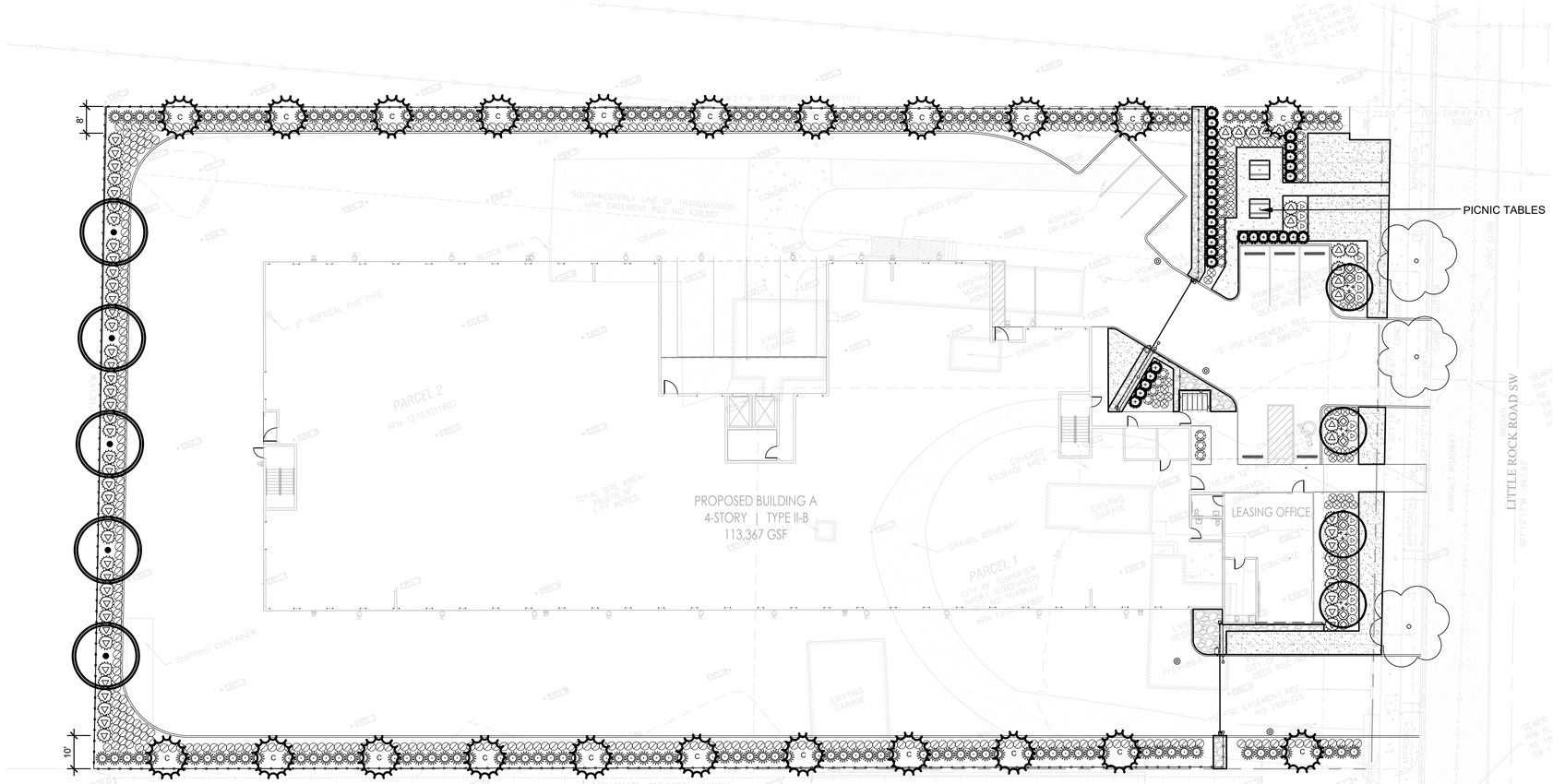
If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above.

Department of Ecology
Southwest Regional Office

(JKT:202400898)

cc: Garret Peck, HWTR
Thomas Middleton, TCP

EXHIBIT 10

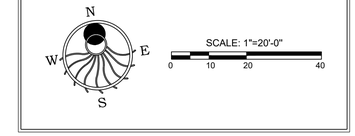


LANDSCAPE NOTES AND SOIL QUALITY

1. PROVIDE LANDSCAPE PLANTING TO SCREEN ALL OUTDOOR UTILITY EQUIPMENT. PLANT OPTIONS INCLUDE: BLUE ICE ARIZONA CYPRESS, PURPLE ROCK ROSE, PINK PRINCESS ESCALLONIA, OR PACIFIC WAX MYRTLE.
2. LANDSCAPE AREAS SHOULD BE DEEP-TILLED TO A DEPTH OF AT LEAST TWE1VE (12) INCHES TO FACILITATE DEEP WATER PENETRATION AND SOIL OXYGENATION. PROVIDE SOIL AMENDMENTS ENCOURAGED TO IMPROVE WATER DRAINAGE, MOISTURE PENETRATION OR WATER-HOLDING CAPACITY. FOR ALL NEWLY LANDSCAPED AREAS ORGANIC MATTER SHOULD BE INCORPORATED TO A DEPTH OF FOUR (4) TO SIX (6) INCHES TO FACILITATE DEEP WATER PENETRATION AND SOIL OXYGENATION.
3. CONTRACTOR SHALL PROVIDE 4" DEPTH IMPORTED TOPSOIL AT SEED MIX AREAS AND 9" DEPTH IMPORTED TOPSOIL AT ALL LANDSCAPE PLANTING AREAS.
4. COMPACT ALL SEED MIX AREAS IN TWO DIRECTIONS WITH ROLLER PRIOR TO HYDROSEEDING.
5. IMPORTED TOPSOIL SHALL BE 3-WAY MIX.
6. CONTRACTOR SHALL PROVIDE 2" DEPTH FINE COMPOST MULCH THROUGHOUT LANDSCAPE PLANTING AREAS.
7. CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF (1) ONE YEAR FROM TIME OF COMPLETION OF WORK.
8. TREES PLANTED FIVE FEET OR LESS FROM PAVED SURFACES SHALL BE PLANTED WITH ROOT CONTROL BARRIER.

PLANT LEGEND

QTY	BOTANICAL NAME	COMMON NAME	SIZE & SPACING
TREES			
5	CERCIDIPHYLLUM JAPONICUM	KATSURA TREE	2" CALIPER, 30' O.C., 5' GRAFT
4	LAGERSTROEMIA INDICA 'MUSKOGEE'	MUSKOGEE CRAPE MYRTLE	1'-15' HEIGHT, 3 STEM MIN.
22	CUPRESSUS × LEYLANDII	LEYLAND CYPRESS	7' MIN. HEIGHT, 10' O.C SPACING
33	THUJA OCCIDENTALIS 'SMARAGD'	EMERALD GREEN ARBOVITAE	4' HEIGHT, 4' O.C SPACING
SHRUBS			
162	CISTUS X PURPUREA	PURPLE ROCK ROSE	MIN. 16" HT., 4' O.C. SPACING
64	PRUNUS LAURO. 'OTTO LUYKEN'	OTTO LUYKEN LAUREL	MIN. 16" HT., 4' O.C. SPACING
15	AZALEA 'PURPLE GEM'	PURPLE GEM AZALEA	2 GALLON, 3' O.C. SPACING
21	CORNUS SERICEA 'KELSEYI'	KELSEY DOGWOOD	MIN. 16" HT., 3' O.C. SPACING
24	CALAMAGROSTIS 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	2 GALLON, 3' O.C. SPACING
GROUNDCOVER			
394	ARCTOSTPYLLOS UVA-URSI	KINNIKINNICK	1 GALLON, 30" O.C. SPACING
37	CALLUNA VULGARIS 'FIRE STAR'	FIRE STAR CALLUNA	1 GALLON, 30" O.C. SPACING
HYDROSEED MIXES			
	SPECIAL SUN MIXTURE		BY COUNTRY GREEN TURF FARMS 8 LBS PER 1000 SQ. FT.
	PERENNIAL RYEGRASS FINE FESCUE	80% 20%	
MISCELLANEOUS			
	3"-6" DRAIN ROCK		



STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
ERIC J. WILLIAMS
CERTIFICATE NO. 775

Little Rock Storage

6115/6119 LITTLE ROCK ROAD SW
TUMWATER, WA

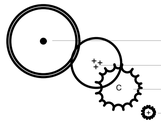
Eric J. Williams, Landscape Architect
LANDSCAPE ARCHITECTURE + SITE PLANNING
1529 SOUTH SEASHORE DRIVE
TACOMA, WA 98465
253-678-4173
wdstudio70@yahoo.com

Drawing:
LANDSCAPE PLAN

Date: Dec. 05, 2023
Job # litterock01-2023
Scale: 1"=10'-0"
Design: EJW
Drawn: EJW
Check:
Revisions:

Sheet:
L1.00

PLANT LEGEND



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	MISCELLANEOUS		
	3"-6" DRAIN ROCK		

PLANT IMAGES

KATSURA TREE

MUSKOGEE CRAPE MYRTLE

LEYLAND CYPRESS

EMERALD GREEN ARBORVITAE

PURPLE ROCK ROSE

OTTO LUYKEN LAUREL

PURPLE GEM AZALEA

KELSEY DOGWOOD

KARL FOERSTER FEATHER REED GRASS

KINNIKINNICK

FIRE FLY CALLUNA

STATE OF WASHINGTON
REGISTERED
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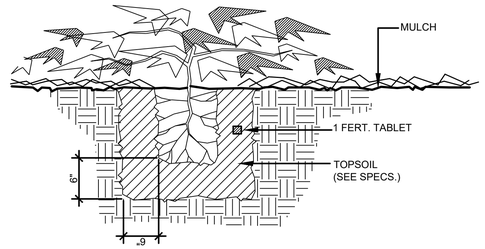
253-678-4173
wdstudio70@yahoo.com

Drawing:
PLANT LEGEND AND IMAGES

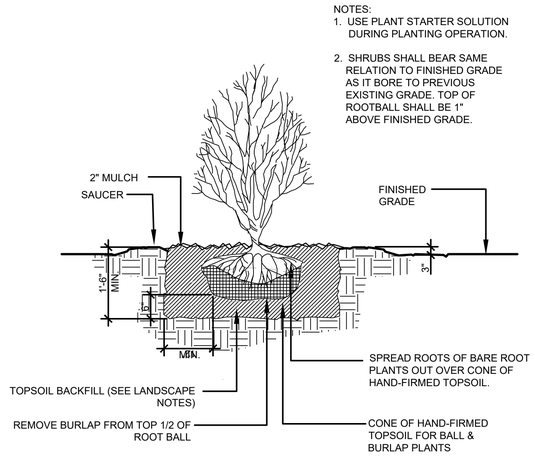
Date: Dec. 05, 2023
Job # litterock01-2023
Scale: NTS
Design: EJW
Drawn: EJW
Check:
Revisions:

Sheet:
L1.01

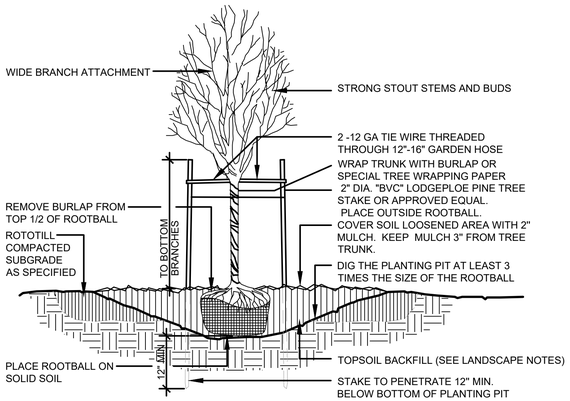


1 GROUNDCOVER PLANTING
NOT TO SCALE

NOTES:
1. USE PLANT STARTER SOLUTION DURING PLANTING OPERATION.
2. SHRUBS SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE. TOP OF ROOTBALL SHALL BE 1" ABOVE FINISHED GRADE.



2 SHRUB PLANTING
NOT TO SCALE



NOTES:
1. FERTILIZE AND WATER FOLLOWING PLANTING.
2. SEE LANDSCAPE NOTES FOR ADDITIONAL INFORMATION.

3 DECIDUOUS TREE PLANTING with STAKING
NOT TO SCALE

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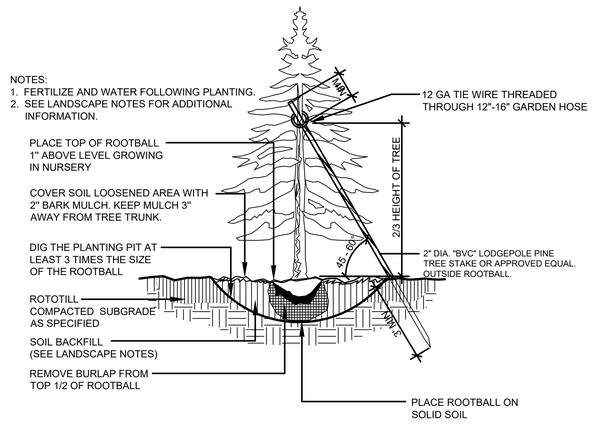
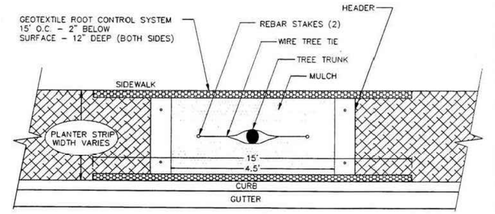
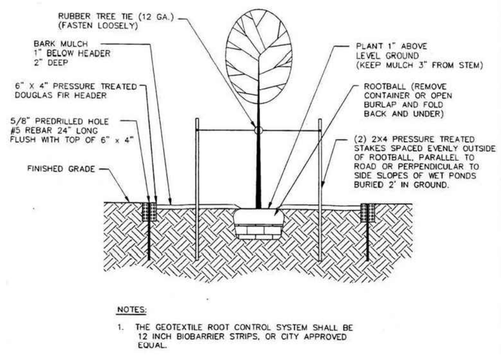
2. SEE LANDSCAPE NOTES FOR ADDITIONAL INFORMATION.



4 EVERGREEN TREE PLANTING with STAKING
NOT TO SCALE





NOTES:
1. THE GEOTEXTILE ROOT CONTROL SYSTEM SHALL BE 12 INCH BIOBARRIER STRIPS, OR CITY APPROVED EQUAL.

5 TREE PLANTER AND BARRIER DETAIL
NOT TO SCALE

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
ERIC J. WILLIAMS
CERTIFICATE NO. 775

Little Rock Storage

6115/6119 LITTLE ROCK ROAD SW
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Scale: NTS
Design: EJW
Drawn: EJW
Check:
Revisions:

Sheet:
L1.02

EXHIBIT 11

November 21 2023

Laurie Mischel
159 Spring Street SW
Concord, NC 28025

John and Donna Barckley
3228 Crosby Blvd SW
Tumwater, WA 98512

RE: Water Availability – Parcels #12703211801 and 12703211802
Sent via email to Nick Wheeler nick.wheeler@jsa-civil.com, *Phil Barckley* jpbarckley@gmail.com and jbarckley@aol.com , and *Laurie Boatright* laurieboatright@gmail.com

Dear Laurie Mischel, John and Donna Barckley,

The City of Tumwater, WA PWSID #89700Q, is pleased to accommodate your request for water and sewer connection and service to the above parcels sited at 6115 & 6119 Littlerock Rd SW. The parcels are zoned General Commercial. The requested services can be accommodated by the City under the following conditions:

1. Sewer and water extensions to serve the development will be per the City of Tumwater's comprehensive plans.
2. Easements necessary for utility maintenance shall be dedicated to the City of Tumwater in advance of making the physical connection to the water and sewer systems.
3. All connection/latecomer fees, if any, are due at time of building permit issuance or subdivision occurs.
4. Existing water wells or septic systems, if any, will be legally decommissioned.
5. Follow and comply with all standard city requirements.

This letter serves as the City's Certificate of Water and Sewer Availability for the proposed development of a four-story self-storage facility for domestic water and sewer uses. This includes an average use of 380 gpd for irrigation from May through September. The project has been approved for **1.4 Water ERUs and 1.0 Wastewater ERUs**, per TMC 13.08 and TMC 13.04. If additional consumptive needs for the project are identified, please notify us as soon as possible.

This agreement will expire 180 days after the date shown above. This agreement will remain valid for the duration of permit approval coverage, including extensions. Additional information may be required to accurately determine wastewater connection fees. If you have further questions, please contact Jared Crews at 360-754-4140.

Warm regards,

Carrie Gillum

Carrie Gillum
Water Resources Specialist
cc: Dan Smith, Water Resources & Sustainability Director
Jared Crews, Engineer II, Jeff Query, Engineer II

EXHIBIT 12

Littlerock Road Self-Storage

6115 & 6119 Littlerock Road SW
Tumwater, WA 98512

PRELIMINARY STORMWATER SITE PLAN

PREPARED BY

JSA CIVIL
Engineering | Planning | Management
6945 LITTLEROCK ROAD SW, SUITE A
TUMWATER, WA 98512
CONTACT: WHITNEY DUNLAP, PE
PHONE: 360.515.9600

JSA Project 134.001

JSA CIVIL

Engineering | Planning | Management

Contents

Appendices

JSA CIVIL

Engineering | Planning | Management

PROJECT ENGINEER'S CERTIFICATION

"I hereby state that this Drainage and Erosion Control Plan/Construction SWPPP for the Littlerock Road Self-Storage project has been prepared by me or under my supervision and meets the requirements of the City of Tumwater Drainage Design and Erosion Control Manual and the standard of care and expertise which is usual and customary in this community for professional engineers. I understand that the City of Tumwater does not and will not assume liability for the sufficiency, suitability, or performance of drainage facilities prepared by me."

PRELIMINARY	10/06/2023
Whitney Dunlap, PE	Date

STORMWATER SITE PLAN

The following report was prepared for the proposed Littlerock Road Self-Storage to accompany the site development permit application. This project was prepared to comply with the minimum technical standards and requirements that are set forth in the *2022 City of Tumwater Drainage Design and Erosion Control Manual (DDECM)*.

DETERMINATION OF MINIMUM REQUIREMENTS

The proposed commercial development will result in more than 5,000 ft^2 of new impervious surface. In accordance with the *DDECM*, a Drainage Report is required for this project. As a result, Minimum Requirements 1-11 will need to be addressed. The below table summarizes how each requirement will be met.

Table 1: Compliance with Minimum Technical Requirements

MINIMUM REQUIREMENT	COMPLIANCE WITH MINIMUM REQUIREMENT
#1 - Stormwater Site Planning	The contents of this report and all included appendices are intended to satisfy this requirement.
#2 - Construction SWPPP	A Construction SWPPP is included as Appendix 3 of this document.
#3 - Source Control of Pollution	A Source Control Pollution Prevention Plan will be prepared and included with the O&M manual.
#4 - Drainage Path Preservation	Preservation of the site's previously established natural drainage paths will be maintained to the maximum extent practicable through on-site infiltration.
#5 - Stormwater Management	On-site stormwater management is met using the LID performance standard through use of infiltration trenches to provide 100% infiltration on the site.
#6 - Runoff Treatment	Runoff Treatment is provided via Stormfilter catch basins prior to infiltration.
#7 - Flow Control	Flow control is provided via infiltration trenches (BMP T7.20).
#8 - Wetlands Protection	There are no known on-site wetlands or wetlands that the project site discharges to, therefore this requirement does not apply.
#9 - Operation and Maintenance	An Agreement to Maintain Stormwater Facilities will be prepared prior to the City issuing certificate of occupancy to the proposed apartments.
#10 - Financial Liability	A Bond Quantities Worksheet will be completed during final permitting.
#11 - Offsite Analysis and Mitigation	Historical drainage courses will not be altered. Consequently, downstream impacts are not anticipated.

SECTION 1: PROPOSED PROJECT DESCRIPTION

The following report summarizes the stormwater design analysis for the Littlerock Road Self-Storage project located at 6115 & 6119 Littlerock Road SW, Tumwater, WA 98512 (TPNs 12703211802 and 12703211801). The current proposal includes developing the 1.77-acre site with a four-story self-storage building including associated access, parking, sidewalks & utilities. After development, this impervious area coverage will be 83% for the site. Breakdowns of areas and project map can be found in Section 8 of this report.

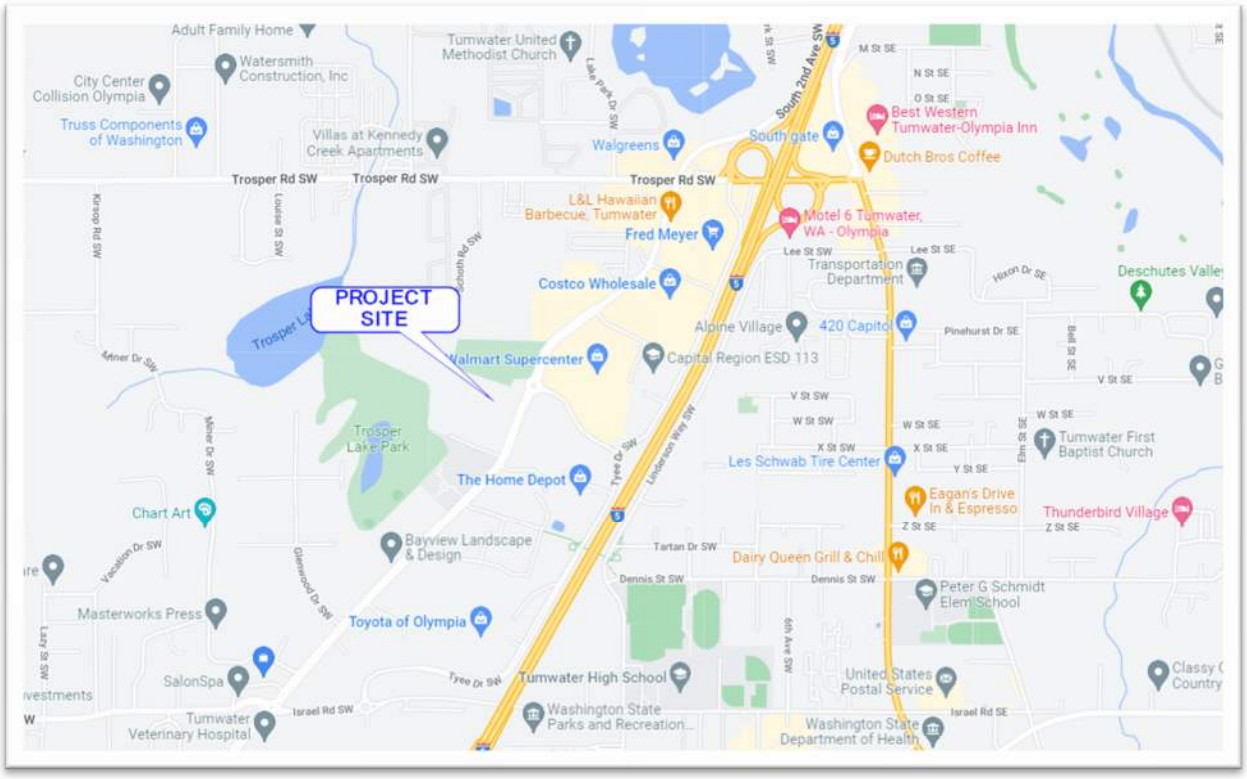


Figure 1: Vicinity Map

SECTION 2: EXISTING SITE CONDITIONS

The existing site has been previously cleared and developed with single family residences, driveways, and various outbuildings on both of the parcels. The site is predominantly lawn with some landscaping and intermittent trees. Along the western property line there is dense vegetation with larger conifer trees. Two of these larger trees are located on site and will be removed as part of the proposed project.

Existing slopes range from 0 to 10%. There are no known wetlands on the site.

An aerial photograph from 2023 is provided below.

Figure 2: 2023 Existing Conditions Aerial Photograph

SECTION 2.1: INFILTRATION / GEOTECHNICAL REPORT

A geotechnical report and on-site infiltration testing was completed by South Sound Geotechnical Consulting in May 2023. The report located in Appendix 2, recommends using a maximum design infiltration rate of 13.8 inches per hour, which is the average of the corrected infiltration rates found at each of the two test pit locations labeled PIT-1 and PIT 2 in Figure 3.

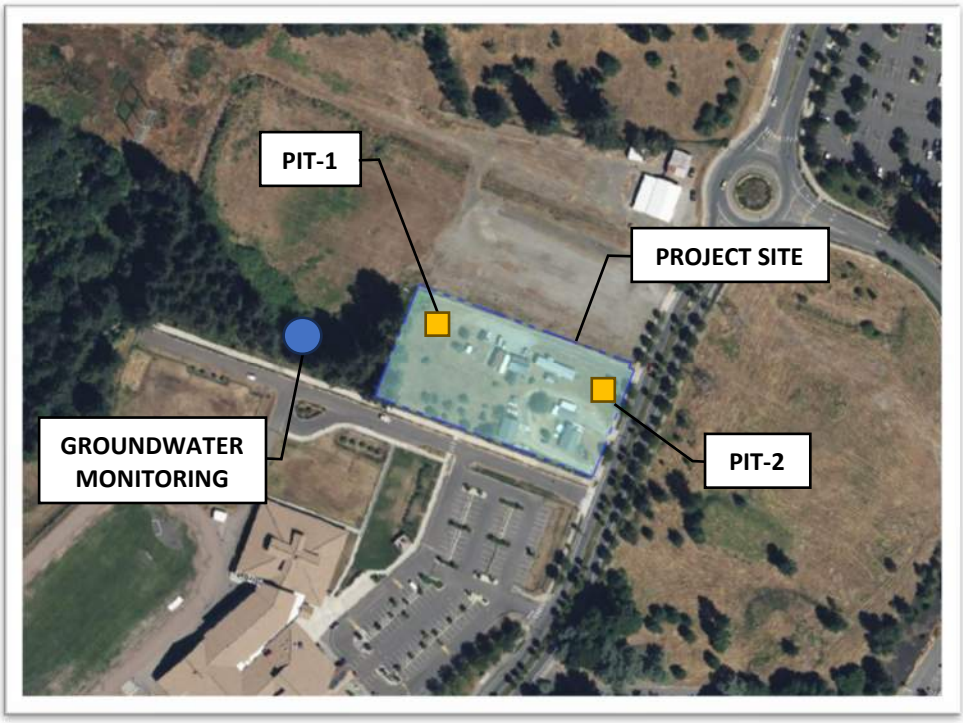


Figure 3: Test Pit Locations per Geotechnical Report

Groundwater was not observed in either test pit on-site, however groundwater monitoring was conducted on the adjacent parcel in 2022 approximately 200 feet west of the western property line for this project site. The results of that groundwater study found the maximum groundwater approximately 7.5' below the existing ground. The relative surface elevation at the depression is 176.0 yielding a maximum groundwater surface elevation of 168.5. The proposed infiltration facility bottom is located at 176.35, which provides more than the minimum 6' of vertical separation from groundwater.

SECTION 3: VICINITY ANALYSIS AND SUBBASIN DESCRIPTION

This section includes a qualitative analysis of the site and surrounding hydraulicly connected areas.

SECTION 3.1: KNOWN DRAINAGE PROBLEMS OR CONCERNS

There are no known drainage problems for the area. There is a localized low point approximately 200 feet to the west of the site where groundwater monitoring studies were conducted for the adjacent parcel. As this point is the low point in the area, excess stormwater flows from larger storm events are assumed to travel here in some capacity, however no known issues or concerns are noted. The proposed project will provide 100% infiltration of the runoff and has been designed to match predeveloped stormwater flows.

SECTION 3.1: WELL AND SEPTIC SYSTEMS

WSDOE Well Logs and on-site inspections have revealed no known wells in the vicinity of the project. A review of recorded documents shows both sites are served by septic systems which will be removed and decommissioned with the site development, which will not affect the proposed infiltration facility.

SECTION 3.2: FUEL TANKS

No fuel tanks were discovered during the project survey and/or on-site exploration activities.

SECTION 3.3: ANALYSIS OF THE 100-YEAR FLOOD

According to FEMA Community Panel Number 53067C0281E, the project is located outside of the 100-year flood zone.

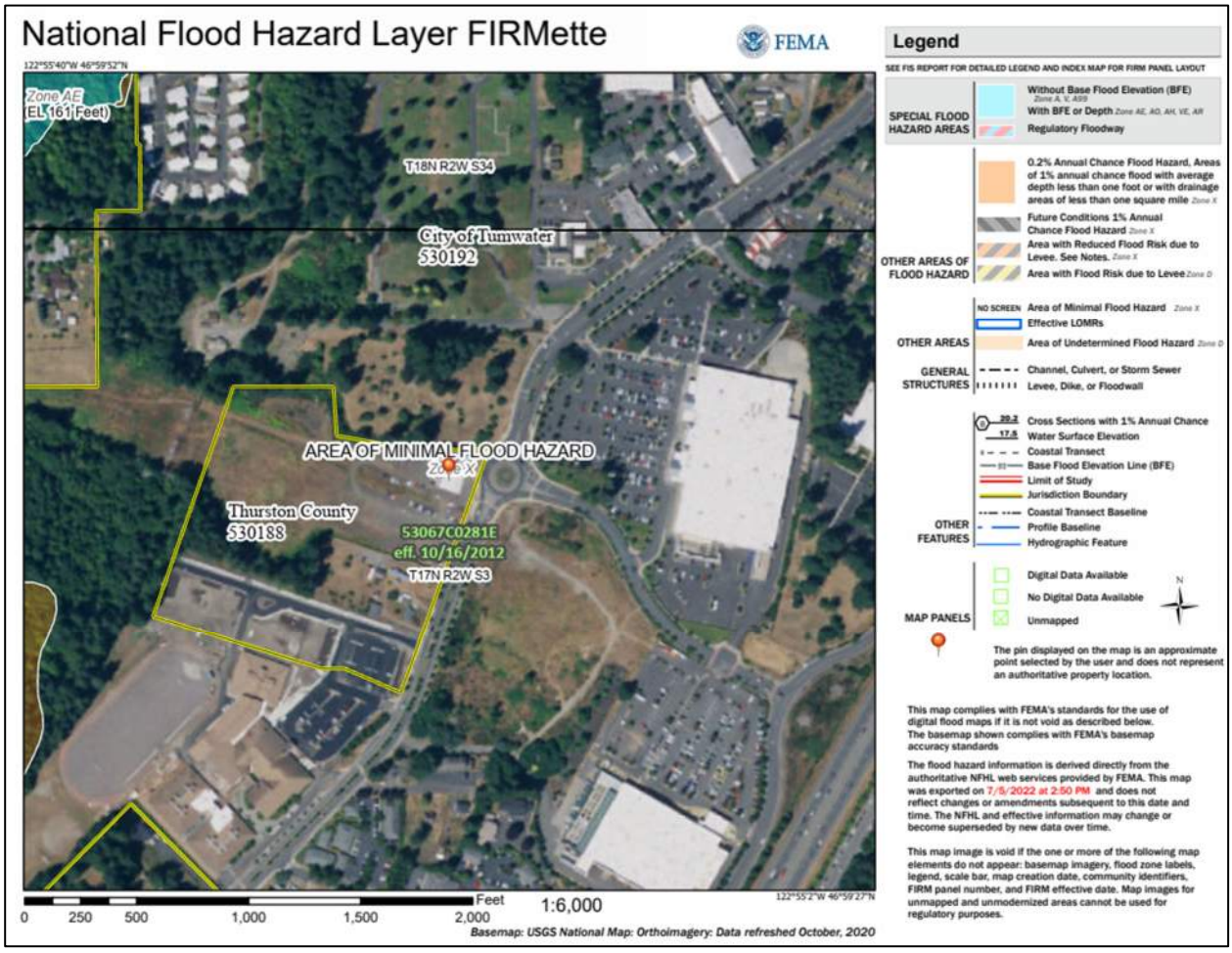


Figure 4: FEMA Map

SECTION 4: FLOW CONTROL AND WATER QUALITY FACILITY SIZING

The proposed facilities consist of catch basins and stormwater piping collecting and conveying runoff to three interconnected infiltration trenches located through the site. Water quality is provided via treatment catch basins that collect runoff from pollution generating surfaces. The bottom area of the facility been sized per *2022 Tumwater DDECM* using *WWHM2012* to infiltrate 100% of the runoff sent through the facilities.

Figure 5 provides the Basin Area Map and Table 2 provides the breakdown of pervious and impervious areas tributary to the proposed infiltration facility.

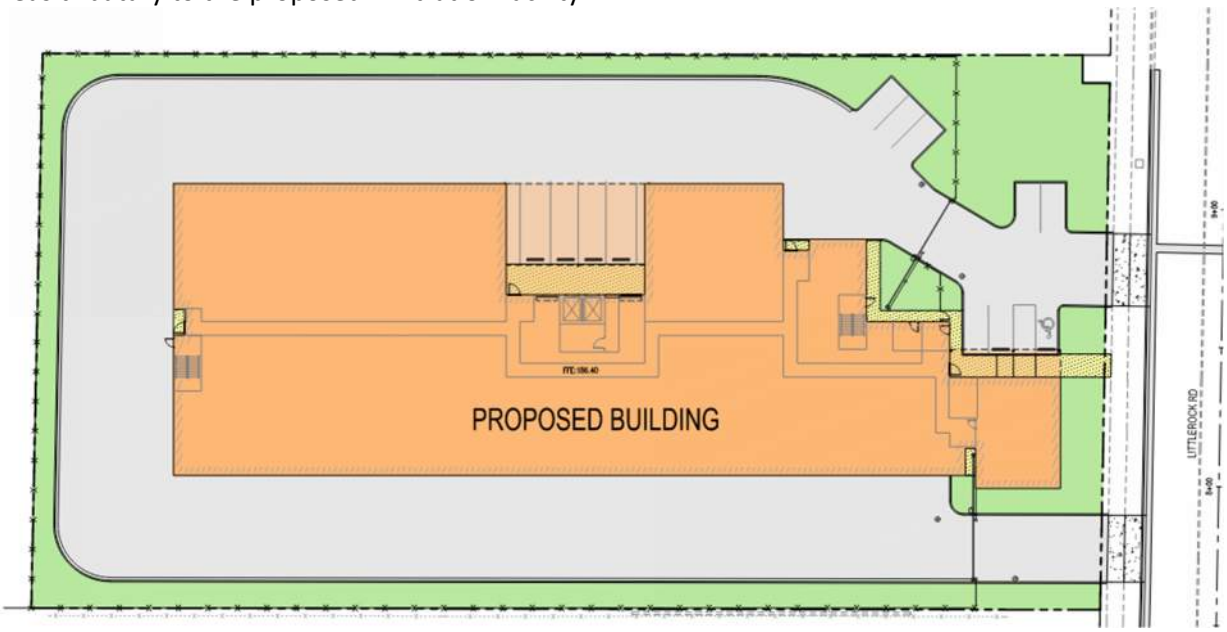


Figure 5: Basin Areas

Table 2: Land Type Designation Summary

BASIN LAND TYPE DESIGNATION	AREA (ACRES)	% OF TOTAL AREA
Total Area	1.77	100.0%
Proposed Impervious Surface – Building	0.66	83%
Proposed Impervious Surface – Paving	0.81	
Proposed Pervious Surface – Lawn/Landscaping	0.30	17%

Water Quality Treatment:

Water quality for this site is provided via stormfilter units that provide basic level treatment.
The offline treatment flowrate for a single 18" stormfilter cartridge is 7.5 gallons per minute (gpm). This equates to providing treatment for approximately 0.13 acres of impervious area per cartridge as calculated in *WWHM2012*. Figure 6 depicts the areas contributing to each stormfilter unit and the number of cartridges per basin. Overall, the project proposes 7 concrete stormfilter catch basins with either 1- or 2-18" cartridges as required for treatment.

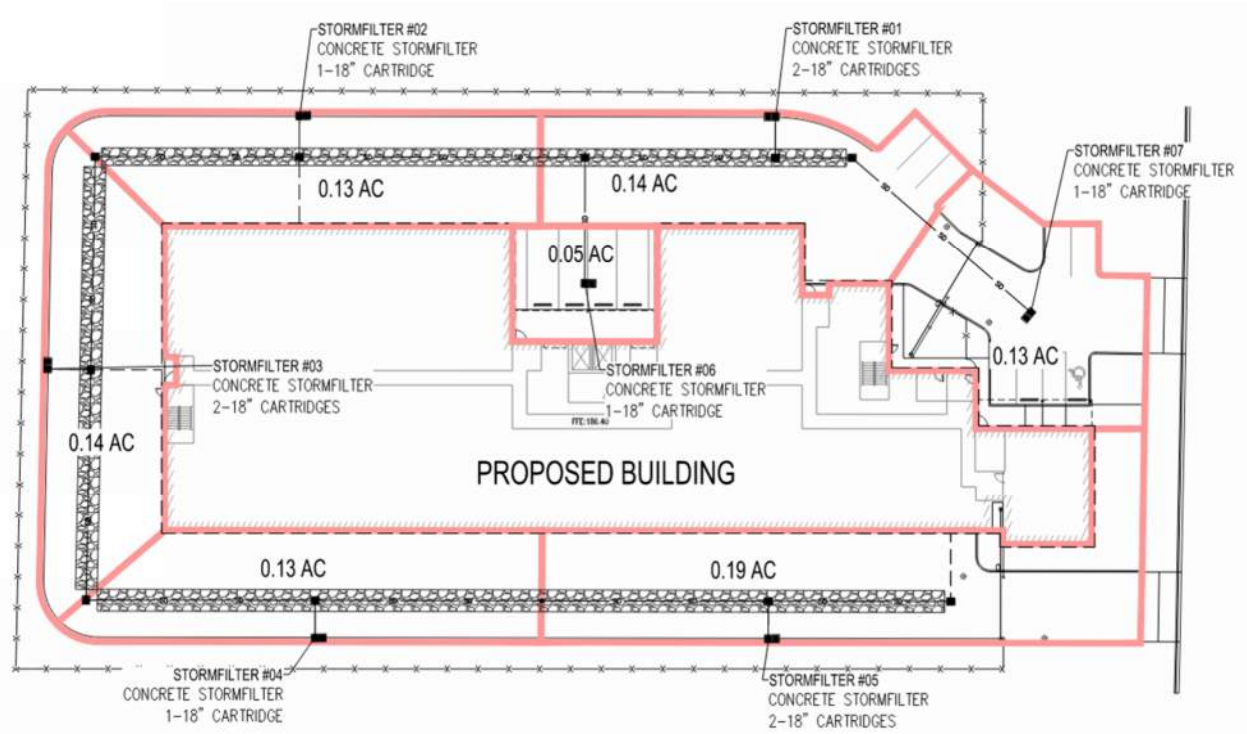


Figure 6: Water Quality Treatment Basin Areas

Flow Control:
Flow Control will be provided by interconnected gravel infiltration trenches within the asphalt drive aisle. Figure 7 below shows the cross-section detail of the proposed infiltration trench.

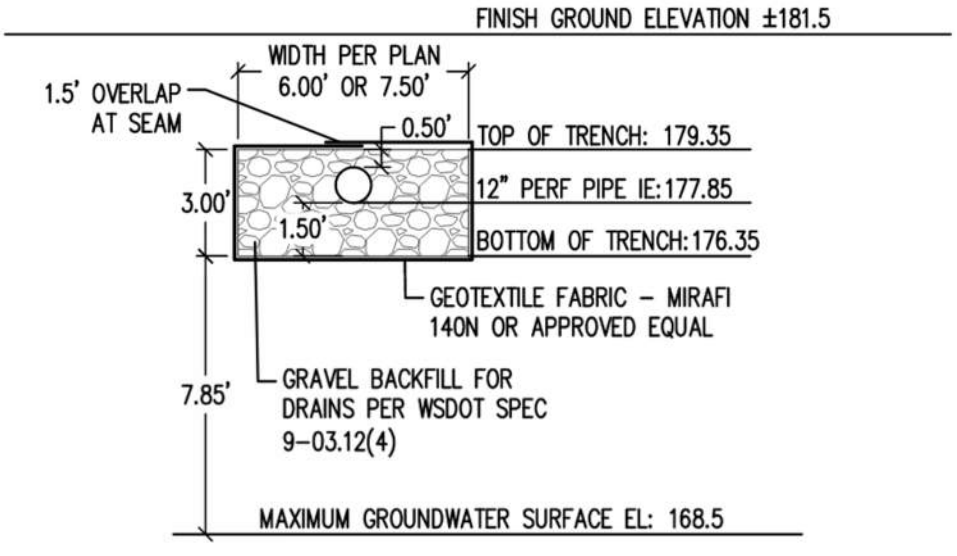


Figure 7: Infiltration Trench Typical Section

The trenches are located to maintain required 20' setbacks to structures and property lines per the *DDECM*. The site has been graded to drain stormwater runoff away from the building towards the perimeter curb and gutter. In the event of a significant system overflow/failure, the stormwater would

pond in the parking area adjacent to the curb and gutter before spilling over the curb into adjacent landscaping. The nearest natural low point is towards the west of the site where overflow runoff would be directed to.

An infiltration rate of 4 inches per hour has been used in sizing the infiltration trench, implementing a factor of safety of nearly 3.5 in addition to the correction factors used by the geotechnical engineer when calculating the recommended design rate. A summary of the designed facility is outlined in Table 3 with a more detailed breakdown of facility bottom area listed in Table 4

Table 3: Infiltration Trench Summary

BTM AREA	BTM ELEV	DEPTH	POROSITY	INFILTRATION RATE	% INFILTRATED
4,830 SF	176.35	3’	0.40	4.0 in/hr	100%

Table 4: Infiltration Trench Bottom Areas Summary

TRENCH	LENGTH	WIDTH	BTM AREA
NORTH	257.0’	6.0’	1,542 SF
WEST	146.0’	7.5’	1,095 SF
SOUTH	292.5’	7.5’	2,194 SF
TOTAL			**4,831 SF**

The depth described above is depth of rock section. For calculation purposes 4’ is used for effective total depth which includes one (1) foot of freeboard over top of riser. A screenshot of the *WWHM2012* modeling is provided as Figure 8 showing 100% infiltration with no volume through the riser. The full report in enclosed herein as Appendix 1.

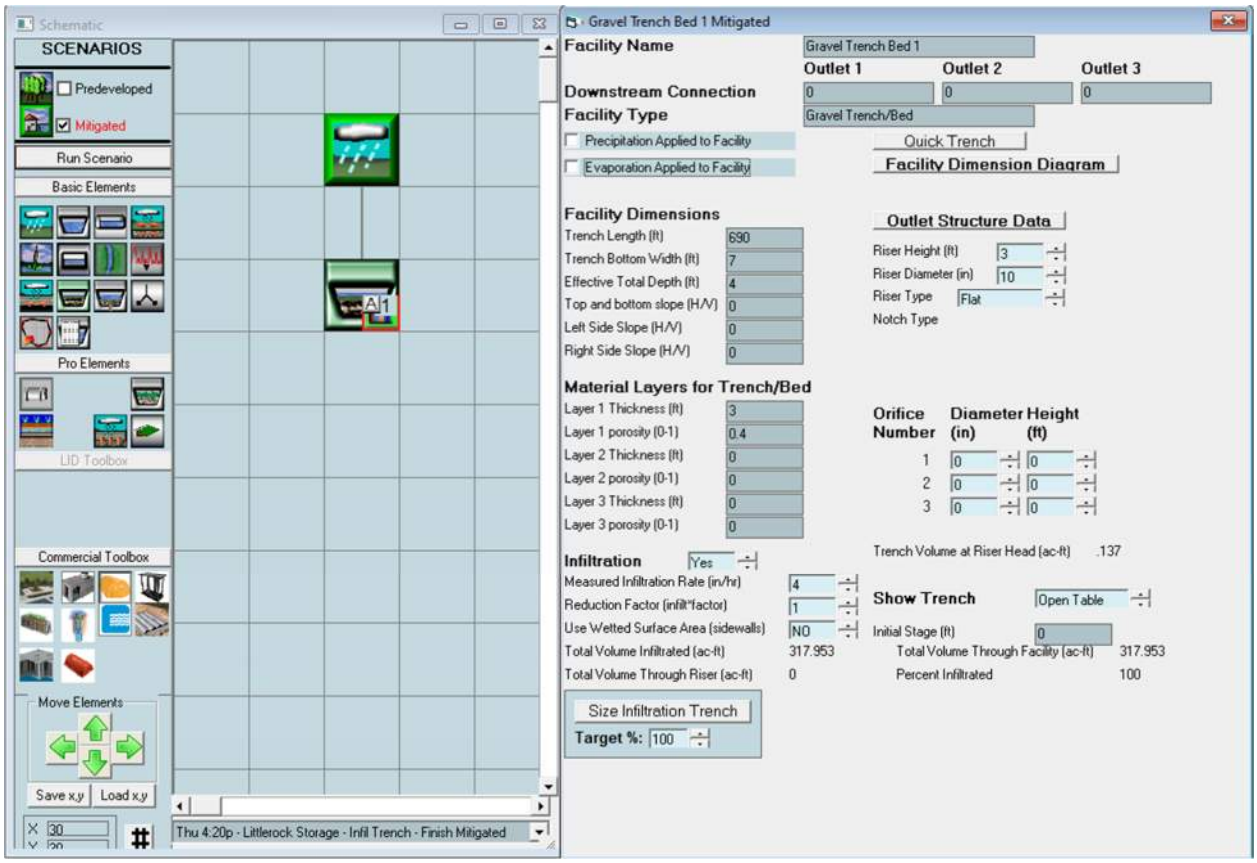


Figure 8: WWHM Results

SECTION 5: AESTHETIC CONSIDERATIONS FOR FACILITIES

The proposed stormwater facilities will be underground facilities and will not detract from the overall site surroundings. All post-construction land features outside of the development area will be restored to pre-construction condition or better.

SECTION 6: CONVEYANCE SYSTEM ANALYSIS & DESIGN

The stormwater is conveyed to the stormwater facility by concrete Stormfilter Catch Basins, Type 1 Catch Basins and ADS N-12 storm pipe. The maximum contributing area to a single pipe is 0.19 acres, which yields a 100-year flow of 0.13 cfs per *WWHM2012*. The model for this area is conservative as it assumes the entire basin in impervious when in reality a portion of the area is landscaping.

An 8” pipe with 1% slope has a capacity of 1.3 cfs, per Hydraflow Channel Output included as Appendix 4: Conveyance Sizing Calculations. All proposed piping is at least 8” in size and has a slope of at least 1%, so the conveyance system is adequately sized to handle runoff from the proposed site. The site development plan set showing proposed storm system in detail is included as Appendix 5 of this report.

SECTION 7: COVENANTS, DEDICATIONS, EASEMENTS

Maintenance of stormwater facilities will be the responsibility of the property owner as outlined within the Operation and Maintenance Manual.

SECTION 8: AGREEMENTS AND GUARANTEES

Maintenance and/or operational bonding will be provided as required for the project by City of Tumwater.

SECTION 9: OTHER PERMITS OR CONDITIONS PLACED ON THE PROJECT

Known permits required for this project include the following.

- Conditional Use Permit – City of Tumwater
- Building Permit – City of Tumwater
- Lot Consolidation – City of Tumwater
- Fire Sprinkler Permit – City of Tumwater
- Fire Alarm Permit – City of Tumwater
- Sign Permit – City of Tumwater

END OF STORMWATER SITE PLAN

APPENDIX 1
WWHM REPORTS

JSA CIVIL

Engineering | Planning | Management

WWHM2012

PROJECT REPORT

Littlerock Storage
Infiltration Trench Output

General Model Information

WWHM2012 Project Name: Littlerock Storage - Infil Trench

Site Name:	Littlerock Storage
Site Address:	6115 & 6119 Littlerock Rd
City:	Tumwater
Report Date:	7/14/2023
Gage:	Olympia Airport
Data Start:	1955/10/01
Data End:	2008/09/30
Timestep:	15 Minute
Precip Scale:	1.111
Version Date:	2023/01/27
Version:	4.2.19

POC Thresholds

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

Landuse Basin Data

Predeveloped Land Use

Basin 1

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
A B, Forest, Flat	1.77
Pervious Total	1.77
Impervious Land Use	acre
Impervious Total	0
Basin Total	1.77

Mitigated Land Use

Basin 1

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
A B, Lawn, Flat	0.3
Pervious Total	0.3
Impervious Land Use	acre
ROOF TOPS FLAT	0.66
PARKING FLAT	0.81
Impervious Total	1.47
Basin Total	1.77

Mitigated Routing

Gravel Trench Bed 1

Bottom Length:	690.00 ft.
Bottom Width:	7.00 ft.
Trench bottom slope 1:	0 To 1
Trench Left side slope 0:	0 To 1
Trench right side slope 2:	0 To 1
Material thickness of first layer:	3
Pour Space of material for first layer:	0.4
Material thickness of second layer:	0
Pour Space of material for second layer:	0
Material thickness of third layer:	0
Pour Space of material for third layer:	0
Infiltration On	
Infiltration rate:	4
Infiltration safety factor:	1
Total Volume Infiltrated (ac-ft.):	317.953
Total Volume Through Riser (ac-ft.):	0
Total Volume Through Facility (ac-ft.):	317.953
Percent Infiltrated:	100
Total Precip Applied to Facility:	0
Total Evap From Facility:	0
Discharge Structure	
Riser Height:	3 ft.
Riser Diameter:	10 in.
Element Flows To:	
Outlet 1	Outlet 2

Gravel Trench Bed Hydraulic Table

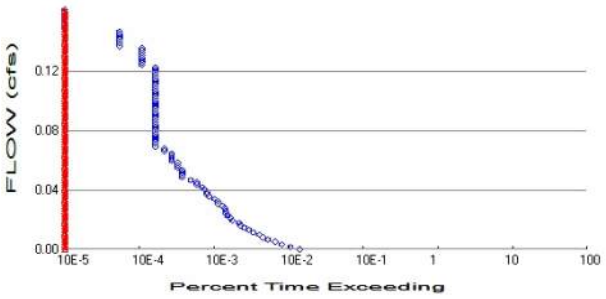
Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.110	0.000	0.000	0.000
0.0444	0.110	0.002	0.000	0.447
0.0889	0.110	0.003	0.000	0.447
0.1333	0.110	0.005	0.000	0.447
0.1778	0.110	0.007	0.000	0.447
0.2222	0.110	0.009	0.000	0.447
0.2667	0.110	0.011	0.000	0.447
0.3111	0.110	0.013	0.000	0.447
0.3556	0.110	0.015	0.000	0.447
0.4000	0.110	0.017	0.000	0.447
0.4444	0.110	0.019	0.000	0.447
0.4889	0.110	0.021	0.000	0.447
0.5333	0.110	0.023	0.000	0.447
0.5778	0.110	0.025	0.000	0.447
0.6222	0.110	0.027	0.000	0.447
0.6667	0.110	0.029	0.000	0.447
0.7111	0.110	0.031	0.000	0.447
0.7556	0.110	0.033	0.000	0.447
0.8000	0.110	0.035	0.000	0.447
0.8444	0.110	0.037	0.000	0.447
0.8889	0.110	0.039	0.000	0.447
0.9333	0.110	0.041	0.000	0.447
0.9778	0.110	0.043	0.000	0.447
1.0222	0.110	0.045	0.000	0.447

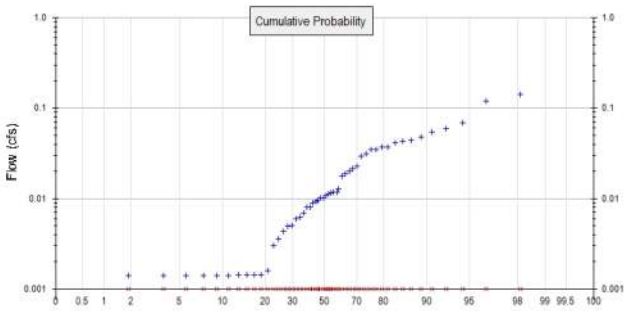
1.0667	0.110	0.047	0.000	0.447
1.1111	0.110	0.049	0.000	0.447
1.1556	0.110	0.051	0.000	0.447
1.2000	0.110	0.053	0.000	0.447
1.2444	0.110	0.055	0.000	0.447
1.2889	0.110	0.057	0.000	0.447
1.3333	0.110	0.059	0.000	0.447
1.3778	0.110	0.061	0.000	0.447
1.4222	0.110	0.063	0.000	0.447
1.4667	0.110	0.065	0.000	0.447
1.5111	0.110	0.067	0.000	0.447
1.5556	0.110	0.069	0.000	0.447
1.6000	0.110	0.071	0.000	0.447
1.6444	0.110	0.072	0.000	0.447
1.6889	0.110	0.074	0.000	0.447
1.7333	0.110	0.076	0.000	0.447
1.7778	0.110	0.078	0.000	0.447
1.8222	0.110	0.080	0.000	0.447
1.8667	0.110	0.082	0.000	0.447
1.9111	0.110	0.084	0.000	0.447
1.9556	0.110	0.086	0.000	0.447
2.0000	0.110	0.088	0.000	0.447
2.0444	0.110	0.090	0.000	0.447
2.0889	0.110	0.092	0.000	0.447
2.1333	0.110	0.094	0.000	0.447
2.1778	0.110	0.096	0.000	0.447
2.2222	0.110	0.098	0.000	0.447
2.2667	0.110	0.100	0.000	0.447
2.3111	0.110	0.102	0.000	0.447
2.3556	0.110	0.104	0.000	0.447
2.4000	0.110	0.106	0.000	0.447
2.4444	0.110	0.108	0.000	0.447
2.4889	0.110	0.110	0.000	0.447
2.5333	0.110	0.112	0.000	0.447
2.5778	0.110	0.114	0.000	0.447
2.6222	0.110	0.116	0.000	0.447
2.6667	0.110	0.118	0.000	0.447
2.7111	0.110	0.120	0.000	0.447
2.7556	0.110	0.122	0.000	0.447
2.8000	0.110	0.124	0.000	0.447
2.8444	0.110	0.126	0.000	0.447
2.8889	0.110	0.128	0.000	0.447
2.9333	0.110	0.130	0.000	0.447
2.9778	0.110	0.132	0.000	0.447
3.0222	0.110	0.137	0.029	0.447
3.0667	0.110	0.141	0.151	0.447
3.1111	0.110	0.146	0.323	0.447
3.1556	0.110	0.151	0.523	0.447
3.2000	0.110	0.156	0.733	0.447
3.2444	0.110	0.161	0.933	0.447
3.2889	0.110	0.166	1.107	0.447
3.3333	0.110	0.171	1.242	0.447
3.3778	0.110	0.176	1.337	0.447
3.4222	0.110	0.181	1.421	0.447
3.4667	0.110	0.186	1.494	0.447
3.5111	0.110	0.191	1.563	0.447
3.5556	0.110	0.196	1.630	0.447
3.6000	0.110	0.201	1.694	0.447

3.6444	0.110	0.206	1.755	0.447
3.6889	0.110	0.210	1.815	0.447
3.7333	0.110	0.215	1.873	0.447
3.7778	0.110	0.220	1.929	0.447
3.8222	0.110	0.225	1.983	0.447
3.8667	0.110	0.230	2.036	0.447
3.9111	0.110	0.235	2.087	0.447
3.9556	0.110	0.240	2.138	0.447
4.0000	0.110	0.245	2.187	0.447

Analysis Results

POC 1





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 1.77
Total Impervious Area: 0

Mitigated Landuse Totals for POC #1
Total Pervious Area: 0.3
Total Impervious Area: 1.47

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	Flow(cfs)
2 year	0.009688
5 year	0.029978
10 year	0.054105
25 year	0.101555
50 year	0.152529
100 year	0.219913

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	Flow(cfs)
2 year	0
5 year	0
10 year	0
25 year	0
50 year	0
100 year	0

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #1

Year	Predeveloped	Mitigated
1956	0.019	0.000
1957	0.010	0.000
1958	0.008	0.000
1959	0.007	0.000
1960	0.042	0.000
1961	0.037	0.000
1962	0.001	0.000
1963	0.055	0.000
1964	0.031	0.000
1965	0.035	0.000

1966	0.018	0.000
1967	0.012	0.000
1968	0.008	0.000
1969	0.002	0.000
1970	0.006	0.000
1971	0.012	0.000
1972	0.029	0.000
1973	0.001	0.000
1974	0.021	0.000
1975	0.013	0.000
1976	0.011	0.000
1977	0.001	0.000
1978	0.011	0.000
1979	0.004	0.000
1980	0.009	0.000
1981	0.011	0.000
1982	0.009	0.000
1983	0.005	0.000
1984	0.023	0.000
1985	0.001	0.000
1986	0.020	0.000
1987	0.119	0.000
1988	0.001	0.000
1989	0.001	0.000
1990	0.068	0.000
1991	0.059	0.000
1992	0.001	0.000
1993	0.003	0.000
1994	0.001	0.000
1995	0.009	0.000
1996	0.035	0.000
1997	0.037	0.000
1998	0.006	0.000
1999	0.043	0.000
2000	0.005	0.000
2001	0.001	0.000
2002	0.010	0.000
2003	0.001	0.000
2004	0.048	0.000
2005	0.001	0.000
2006	0.141	0.000
2007	0.044	0.000
2008	0.004	0.000

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #1

Rank	Predeveloped	Mitigated
1	0.1407	0.0000
2	0.1188	0.0000
3	0.0683	0.0000
4	0.0594	0.0000
5	0.0545	0.0000
6	0.0479	0.0000
7	0.0442	0.0000
8	0.0431	0.0000
9	0.0415	0.0000
10	0.0374	0.0000
11	0.0369	0.0000

12	0.0350	0.0000
13	0.0347	0.0000
14	0.0313	0.0000
15	0.0292	0.0000
16	0.0228	0.0000
17	0.0214	0.0000
18	0.0201	0.0000
19	0.0188	0.0000
20	0.0177	0.0000
21	0.0127	0.0000
22	0.0118	0.0000
23	0.0117	0.0000
24	0.0115	0.0000
25	0.0112	0.0000
26	0.0108	0.0000
27	0.0102	0.0000
28	0.0102	0.0000
29	0.0094	0.0000
30	0.0093	0.0000
31	0.0089	0.0000
32	0.0080	0.0000
33	0.0079	0.0000
34	0.0069	0.0000
35	0.0062	0.0000
36	0.0060	0.0000
37	0.0050	0.0000
38	0.0050	0.0000
39	0.0044	0.0000
40	0.0036	0.0000
41	0.0030	0.0000
42	0.0016	0.0000
43	0.0014	0.0000
44	0.0014	0.0000
45	0.0014	0.0000
46	0.0014	0.0000
47	0.0014	0.0000
48	0.0014	0.0000
49	0.0014	0.0000
50	0.0014	0.0000
51	0.0014	0.0000
52	0.0014	0.0000
53	0.0014	0.0000

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.0048	263	0	0	Pass
0.0063	194	0	0	Pass
0.0078	149	0	0	Pass
0.0093	121	0	0	Pass
0.0108	98	0	0	Pass
0.0123	84	0	0	Pass
0.0138	75	0	0	Pass
0.0153	62	0	0	Pass
0.0168	54	0	0	Pass
0.0183	47	0	0	Pass
0.0198	42	0	0	Pass
0.0213	40	0	0	Pass
0.0227	33	0	0	Pass
0.0242	31	0	0	Pass
0.0257	28	0	0	Pass
0.0272	27	0	0	Pass
0.0287	27	0	0	Pass
0.0302	26	0	0	Pass
0.0317	24	0	0	Pass
0.0332	21	0	0	Pass
0.0347	21	0	0	Pass
0.0362	19	0	0	Pass
0.0377	16	0	0	Pass
0.0392	15	0	0	Pass
0.0406	15	0	0	Pass
0.0421	14	0	0	Pass
0.0436	13	0	0	Pass
0.0451	11	0	0	Pass
0.0466	11	0	0	Pass
0.0481	9	0	0	Pass
0.0496	7	0	0	Pass
0.0511	7	0	0	Pass
0.0526	7	0	0	Pass
0.0541	7	0	0	Pass
0.0556	6	0	0	Pass
0.0571	6	0	0	Pass
0.0585	6	0	0	Pass
0.0600	5	0	0	Pass
0.0615	5	0	0	Pass
0.0630	5	0	0	Pass
0.0645	5	0	0	Pass
0.0660	4	0	0	Pass
0.0675	4	0	0	Pass
0.0690	3	0	0	Pass
0.0705	3	0	0	Pass
0.0720	3	0	0	Pass
0.0735	3	0	0	Pass
0.0750	3	0	0	Pass
0.0764	3	0	0	Pass
0.0779	3	0	0	Pass
0.0794	3	0	0	Pass
0.0809	3	0	0	Pass
0.0824	3	0	0	Pass

0.0839	3	0	0	Pass
0.0854	3	0	0	Pass
0.0869	3	0	0	Pass
0.0884	3	0	0	Pass
0.0899	3	0	0	Pass
0.0914	3	0	0	Pass
0.0929	3	0	0	Pass
0.0944	3	0	0	Pass
0.0958	3	0	0	Pass
0.0973	3	0	0	Pass
0.0988	3	0	0	Pass
0.1003	3	0	0	Pass
0.1018	3	0	0	Pass
0.1033	3	0	0	Pass
0.1048	3	0	0	Pass
0.1063	3	0	0	Pass
0.1078	3	0	0	Pass
0.1093	3	0	0	Pass
0.1108	3	0	0	Pass
0.1123	3	0	0	Pass
0.1137	3	0	0	Pass
0.1152	3	0	0	Pass
0.1167	3	0	0	Pass
0.1182	3	0	0	Pass
0.1197	2	0	0	Pass
0.1212	2	0	0	Pass
0.1227	2	0	0	Pass
0.1242	2	0	0	Pass
0.1257	2	0	0	Pass
0.1272	2	0	0	Pass
0.1287	2	0	0	Pass
0.1302	2	0	0	Pass
0.1316	1	0	0	Pass
0.1331	1	0	0	Pass
0.1346	1	0	0	Pass
0.1361	1	0	0	Pass
0.1376	1	0	0	Pass
0.1391	1	0	0	Pass
0.1406	1	0	0	Pass
0.1421	0	0	0	Pass
0.1436	0	0	0	Pass
0.1451	0	0	0	Pass
0.1466	0	0	0	Pass
0.1481	0	0	0	Pass
0.1495	0	0	0	Pass
0.1510	0	0	0	Pass
0.1525	0	0	0	Pass

LID Report

LID Technique	Used for Treatment ?	Total Volume Needs Treatment (ac-ft)	Volume Through Facility (ac-ft)	Infiltration Volume (ac-ft)	Cumulative Volume Infiltration Credit	Percent Volume Infiltrated	Water Quality	Percent Water Quality Treated	Comment
Gravel Trench Bed 1 POC	☐	289.34			☐	100.00			
Total Volume Infiltrated		289.34	0.00	0.00		100.00	0.00	0%	No Treat. Credit
Compliance with LID Standard 8% of 2-yr to 50% of 2-yr									Duration Analysis Result = Passed

Model Default Modifications

Total of 0 changes have been made.

PERLND Changes

No PERLND changes have been made.

IMPLND Changes

No IMPLND changes have been made.

Appendix

Predeveloped Schematic

Mitigated Schematic

Disclaimer

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WWHM2012

PROJECT REPORT

Littlerock Storage
Water Quality & Conveyance Output

General Model Information

WWHM2012 Project Name: Littlerock Storage - wq

Site Name:	Littlerock Storage
Site Address:	6115 & 6119 Littlerock Rd
City:	Tumwater
Report Date:	7/18/2023
Gage:	Olympia Airport
Data Start:	1955/10/01
Data End:	2008/09/30
Timestep:	15 Minute
Precip Scale:	1.111
Version Date:	2023/01/27
Version:	4.2.19

POC Thresholds

Low Flow Threshold for POC1:	50 Percent of the 2 Year
High Flow Threshold for POC1:	50 Year
Low Flow Threshold for POC2:	50 Percent of the 2 Year
High Flow Threshold for POC2:	50 Year

Landuse Basin Data

Predeveloped Land Use

Basin 1

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
A B, Forest, Flat	0.13
Pervious Total	0.13
Impervious Land Use	acre
Impervious Total	0
Basin Total	0.13

Basin 2

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
A B, Forest, Flat	0.19
Pervious Total	0.19
Impervious Land Use	acre
Impervious Total	0
Basin Total	0.19

Mitigated Land Use

Basin 1

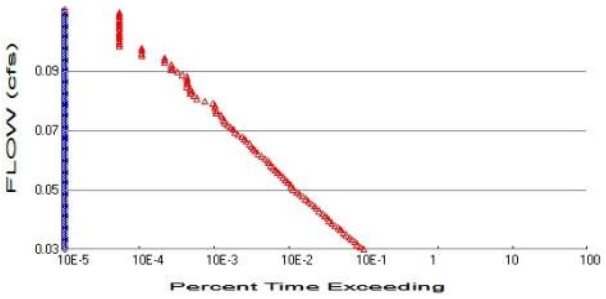
Bypass:	No
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
PARKING FLAT	0.13
Impervious Total	0.13
Basin Total	0.13

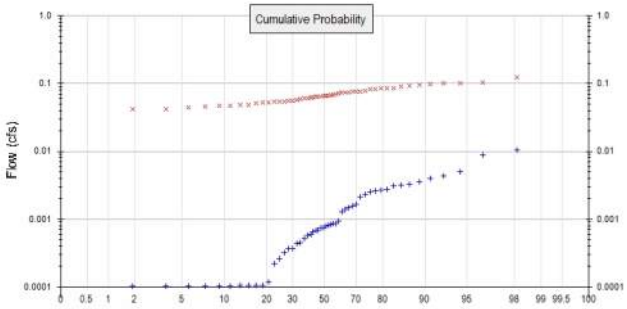
Basin 2

Bypass:	No
GroundWater:	No
Pervious Land Use	acre
Pervious Total	0
Impervious Land Use	acre
PARKING FLAT	0.19
Impervious Total	0.19
Basin Total	0.19

Analysis Results

POC 1





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #1
Total Pervious Area: 0.13
Total Impervious Area: 0

Mitigated Landuse Totals for POC #1
Total Pervious Area: 0
Total Impervious Area: 0.13

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #1

Return Period	Flow(cfs)
2 year	0.000712
5 year	0.002202
10 year	0.003974
25 year	0.007459
50 year	0.011203
100 year	0.016152

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	Flow(cfs)
2 year	0.065758
5 year	0.082419
10 year	0.09298
25 year	0.10594
50 year	0.115379
100 year	0.124673

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #1

Year	Predeveloped	Mitigated
1956	0.001	0.060
1957	0.001	0.089
1958	0.001	0.052
1959	0.001	0.067
1960	0.003	0.077
1961	0.003	0.061
1962	0.000	0.053
1963	0.004	0.100
1964	0.002	0.068
1965	0.003	0.058

1966	0.001	0.047
1967	0.001	0.053
1968	0.001	0.045
1969	0.000	0.046
1970	0.000	0.049
1971	0.001	0.049
1972	0.002	0.072
1973	0.000	0.047
1974	0.002	0.078
1975	0.001	0.083
1976	0.001	0.069
1977	0.000	0.095
1978	0.001	0.075
1979	0.000	0.084
1980	0.001	0.056
1981	0.001	0.084
1982	0.001	0.077
1983	0.000	0.125
1984	0.002	0.054
1985	0.000	0.053
1986	0.001	0.059
1987	0.009	0.100
1988	0.000	0.041
1989	0.000	0.065
1990	0.005	0.086
1991	0.004	0.098
1992	0.000	0.054
1993	0.000	0.041
1994	0.000	0.042
1995	0.001	0.063
1996	0.003	0.073
1997	0.003	0.065
1998	0.000	0.067
1999	0.003	0.075
2000	0.000	0.073
2001	0.000	0.055
2002	0.001	0.064
2003	0.000	0.066
2004	0.004	0.103
2005	0.000	0.062
2006	0.010	0.094
2007	0.003	0.086
2008	0.000	0.066

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #1

Rank	Predeveloped	Mitigated
1	0.0103	0.1247
2	0.0087	0.1034
3	0.0050	0.0998
4	0.0044	0.0997
5	0.0040	0.0978
6	0.0035	0.0946
7	0.0032	0.0942
8	0.0032	0.0891
9	0.0031	0.0863
10	0.0027	0.0856
11	0.0027	0.0843

12	0.0026	0.0839
13	0.0025	0.0833
14	0.0023	0.0781
15	0.0021	0.0769
16	0.0017	0.0767
17	0.0016	0.0751
18	0.0015	0.0748
19	0.0014	0.0733
20	0.0013	0.0731
21	0.0009	0.0715
22	0.0009	0.0692
23	0.0009	0.0676
24	0.0008	0.0675
25	0.0008	0.0667
26	0.0008	0.0664
27	0.0008	0.0662
28	0.0007	0.0651
29	0.0007	0.0650
30	0.0007	0.0644
31	0.0007	0.0628
32	0.0006	0.0625
33	0.0006	0.0610
34	0.0005	0.0598
35	0.0005	0.0593
36	0.0004	0.0578
37	0.0004	0.0562
38	0.0004	0.0552
39	0.0003	0.0542
40	0.0003	0.0539
41	0.0002	0.0535
42	0.0001	0.0528
43	0.0001	0.0526
44	0.0001	0.0518
45	0.0001	0.0490
46	0.0001	0.0486
47	0.0001	0.0470
48	0.0001	0.0469
49	0.0001	0.0462
50	0.0001	0.0447
51	0.0001	0.0416
52	0.0001	0.0414
53	0.0001	0.0409

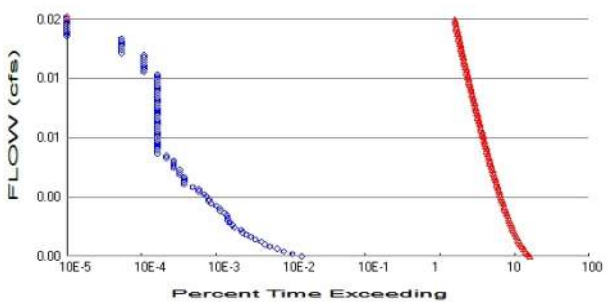
Water Quality

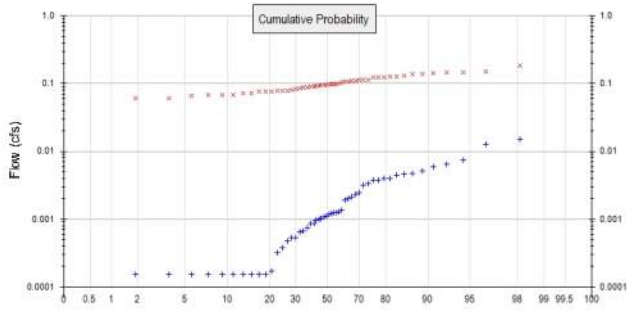
Water Quality BMP Flow and Volume for POC #1

On-line facility volume:	0.0253 acre-feet
On-line facility target flow:	0.0281 cfs.
Adjusted for 15 min:	0.0281 cfs.
Off-line facility target flow:	0.0159 cfs.
Adjusted for 15 min:	0.0159 cfs.

WQ Flowrate for 0.13 AC of area, 100% impervious

POC 2





\+ Predeveloped x Mitigated

Predeveloped Landuse Totals for POC #2
Total Pervious Area: 0.19
Total Impervious Area: 0

Mitigated Landuse Totals for POC #2
Total Pervious Area: 0
Total Impervious Area: 0.19

Flow Frequency Method: Log Pearson Type III 17B

Flow Frequency Return Periods for Predeveloped. POC #2

Return Period	Flow(cfs)
2 year	0.00104
5 year	0.003218
10 year	0.005808
25 year	0.010901
50 year	0.016373
100 year	0.023607

Flow Frequency Return Periods for Mitigated. POC #2

Return Period	Flow(cfs)
2 year	0.096108
5 year	0.120459
10 year	0.135895
25 year	0.154836
50 year	0.16863
100 year	0.182215

Flow used for conveyance analysis

Annual Peaks

Annual Peaks for Predeveloped and Mitigated. POC #2

Year	Predeveloped	Mitigated
1956	0.002	0.087
1957	0.001	0.130
1958	0.001	0.076
1959	0.001	0.097
1960	0.004	0.112
1961	0.004	0.089
1962	0.000	0.077
1963	0.006	0.146
1964	0.003	0.099
1965	0.004	0.084
1966	0.002	0.069

1967	0.001	0.077
1968	0.001	0.065
1969	0.000	0.068
1970	0.001	0.071
1971	0.001	0.072
1972	0.003	0.105
1973	0.000	0.069
1974	0.002	0.114
1975	0.001	0.122
1976	0.001	0.101
1977	0.000	0.138
1978	0.001	0.109
1979	0.000	0.123
1980	0.001	0.082
1981	0.001	0.123
1982	0.001	0.112
1983	0.001	0.182
1984	0.002	0.079
1985	0.000	0.078
1986	0.002	0.087
1987	0.013	0.146
1988	0.000	0.060
1989	0.000	0.095
1990	0.007	0.125
1991	0.006	0.143
1992	0.000	0.079
1993	0.000	0.061
1994	0.000	0.061
1995	0.001	0.092
1996	0.004	0.107
1997	0.004	0.095
1998	0.001	0.099
1999	0.005	0.110
2000	0.001	0.107
2001	0.000	0.081
2002	0.001	0.094
2003	0.000	0.097
2004	0.005	0.151
2005	0.000	0.091
2006	0.015	0.138
2007	0.005	0.126
2008	0.000	0.097

Ranked Annual Peaks

Ranked Annual Peaks for Predeveloped and Mitigated. POC #2

Rank	Predeveloped	Mitigated
1	0.0151	0.1822
2	0.0128	0.1512
3	0.0073	0.1459
4	0.0064	0.1457
5	0.0059	0.1430
6	0.0051	0.1383
7	0.0047	0.1376
8	0.0046	0.1303
9	0.0045	0.1262
10	0.0040	0.1251
11	0.0040	0.1232
12	0.0038	0.1227

13	0.0037	0.1218
14	0.0034	0.1142
15	0.0031	0.1124
16	0.0024	0.1121
17	0.0023	0.1097
18	0.0022	0.1093
19	0.0020	0.1072
20	0.0019	0.1069
21	0.0014	0.1045
22	0.0013	0.1011
23	0.0013	0.0988
24	0.0012	0.0986
25	0.0012	0.0975
26	0.0012	0.0971
27	0.0011	0.0968
28	0.0011	0.0951
29	0.0010	0.0950
30	0.0010	0.0941
31	0.0010	0.0918
32	0.0009	0.0913
33	0.0009	0.0892
34	0.0007	0.0874
35	0.0007	0.0867
36	0.0006	0.0845
37	0.0005	0.0821
38	0.0005	0.0806
39	0.0005	0.0792
40	0.0004	0.0788
41	0.0003	0.0781
42	0.0002	0.0771
43	0.0002	0.0768
44	0.0002	0.0757
45	0.0002	0.0716
46	0.0002	0.0710
47	0.0002	0.0687
48	0.0002	0.0685
49	0.0002	0.0675
50	0.0002	0.0654
51	0.0002	0.0608
52	0.0002	0.0605
53	0.0001	0.0597

Water Quality

Water Quality BMP Flow and Volume for POC #2

On-line facility volume:	0.037 acre-feet
On-line facility target flow:	0.0411 cfs.
Adjusted for 15 min:	0.0411 cfs.
Off-line facility target flow:	0.0233 cfs.
Adjusted for 15 min:	0.0233 cfs.

WQ Flowrate for 0.19 AC of area, 100% impervious

Model Default Modifications

Total of 0 changes have been made.

PERLND Changes

No PERLND changes have been made.

IMPLND Changes

No IMPLND changes have been made.

Appendix

Predeveloped Schematic

Mitigated Schematic

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APPENDIX 2
GEOTECHNICAL REPORT

JSA CIVIL

Engineering | Planning | Management

South Sound Geotechnical Consulting

May 11, 2023

Trevor Colby
c/o Kidder Mathews
1550 Irving Street, Ste 200
Tumwater, WA 98512

Subject: Geotechnical Engineering Report
6119 Littlerock Road SW
Tumwater, Washington
SSGC Project No. 23031

Mr. Colby,

South Sound Geotechnical Consulting (SSGC) has completed a geotechnical assessment for the planned development on the above addressed property in Tumwater, Washington. Our services have been completed in general conformance with our proposal P23031 (dated April 6, 2023) and authorized per signature of our agreement for services. Our scope of services included completion of four test pits and two infiltration test on the site, laboratory testing, engineering analyses, and preparation of this report.

PROJECT INFORMATION

The site is on the west side of Littlerock Road SW, north of Tumwater Middle School, and encompasses about 1.77 acres. We understand it will be developed for commercial use. We anticipate conventional spread footing foundations will be used for support of buildings with concrete slab-on-grade floors. Conventional asphalt pavements are expected for access ways and parking. Infiltration facilities are proposed to control stormwater.

SITE CONDITIONS

Several residences, mobile homes, and sheds are generally in the eastern portion of the property and will be removed. Landscaped lawn and a small orchard are in the western portion. Overall the property is level with an overall elevation change of 2 to 3 feet.

SUBSURFACE CONDITIONS

Subsurface conditions were characterized by completing two infiltration tests and four test pits April 25, 2023. Test holes were advanced to final depths between 10 and 11 feet below existing ground surface. Approximate locations of the explorations are shown on Figure 1, Exploration Plan. A summary description of observed subgrade conditions is provided below. Logs of the test holes are provided in Appendix A.

Soil Conditions

Topsoil was below the surface and extended to depths between about 1.5 to 2 feet. Soil below the topsoil or fill was loose native silty sand with minor organics extending to depths between 3 and 4 feet. Sand with trace to some silt was below the upper silty sand. This soil was in a loose to medium dense condition and extended to the termination depth of the test holes.

Groundwater Conditions

Groundwater was not observed in the test holes at the time of excavation. Mottling or other evidence of seasonal perched groundwater was not observed in exposed soil. Groundwater levels will vary throughout the year due to seasonal precipitation and on- and off-site drainage patterns. Piezometers were installed in the two infiltration test holes to monitor seasonal groundwater, as necessary.

Geologic Setting

Native soils are mapped as Nisqually loamy fine sand per the USDA Soil Conservation Service map of Thurston County. This soil reportedly formed in sandy glacial outwash. Native soils in the test holes appear to correspond to the mapped soil type.

GEOTECHNICAL DESIGN CONSIDERATIONS

The planned development is considered feasible based on observed soil conditions in the test pits. Properly prepared native soils and structural fill are considered suitable for support of conventional spread footing foundations, slab-on-grade floors, and conventional pavements.

Native (outwash) soils are suitable for infiltration to support stormwater control. Depth to seasonal high groundwater levels are not anticipated to affect development of this site.

Recommendations presented in the following sections should be considered general and may require modifications when earthwork and grading occur. They are based upon the subsurface conditions observed in the test pits and the assumption that finish site grades will be similar to existing grades. It should be noted that subsurface conditions across the site may vary from those depicted on the exploration logs and can change with time. Therefore, proper site preparation will depend upon the weather and soil conditions encountered at the time of construction. We recommend SSGC review final plans and assess subgrade conditions at the time of construction.

General Site Preparation

Site grading and earthwork should include procedures to control surface water runoff. Grading the site without adequate drainage control measures may negatively impact site soils, resulting in increased export of impacted soil and import of fill materials, thereby potentially increasing the cost of the earthwork and subgrade preparation phases of the project.

Site grading should include removal of any fill (if encountered) and topsoil in future building and pavement areas. Subgrades should consist of firm native soils following stripping. Stripping depths are anticipated to range from 1.5 to 2 feet based on observed soil conditions, but may vary across the site. Final stripping depths can only be determined at the time of earthwork.

General Subgrade Preparation

Subgrades in building and pavement areas should consist of firm native soil. We recommend exposed subgrades in building and conventional pavement areas are proofrolled using a large roller, loaded dump truck, or other mechanical equipment to assess subgrade conditions following stripping. Proofrolling efforts should result in the upper 1 foot of subgrade soil achieving a firm and unyielding condition and a compaction level of at least 92 percent of the maximum dry density (MDD) per the ASTM D1557 test method. Wet, loose, or soft subgrades that cannot achieve this compaction level should be removed (over-excavated) and replaced with structural fill. The depth of over-excavation should be based on soil conditions at the time of construction. A representative of SSGC should be present to assess subgrade conditions during proofrolling.

Grading and Drainage

Positive drainage should be provided during construction and maintained throughout the life of the development. Surface water should not be allowed into cut/fill areas, utility trenches, building footprints, or pavement areas.

Structural Fill Materials

The suitability of soil for use as structural fill will depend on the gradation and moisture content of the soil when it is placed. Soils with higher fines content (soil fraction passing the U.S. No. 200 sieve) will become sensitive with higher moisture content. It is often difficult to achieve adequate compaction if soil moisture is outside of optimum ranges for soils that contain more than about 5 percent fines.

Site Soils: Topsoil is not suitable for structural fill. Native soils are considered suitable for use as structural fill provided they can be moisture conditioned to within optimal ranges. Silt content will vary in native soil and can make them moisture sensitive, requiring conditioning (drying or wetting) to obtain optimum moisture content. Optimum moisture is considered within about +/- 2 percent of the moisture content required to achieve the maximum density per the ASTM D-1557 test method.

Import Fill Materials: We recommend imported structural fill placed during dry weather consist of material which meets the specifications for *Gravel Borrow* as described in Section 9-03.14(1) of the Washington State Department of Transportation (WSDOT) Specifications for Road, Bridge, and Municipal Construction Manual (Publication M41-10). Gravel Borrow should be protected from disturbance if exposed to wet conditions after placement.

During wet weather, or for backfill on wet subgrades, import soil suitable for compaction in wetter conditions should be provided. Imported fill for use in wet conditions should conform to specifications for *Select Borrow* as described in Section 9-03.14(2), or *Crushed Surfacing* per Section 9-03.9(3) of the WSDOT M41-10 manual, with the modification that a maximum of 5 percent by weight shall pass the U.S. No. 200 sieve for these soil types.

Structural fill placement and compaction is weather-dependent. Delays due to inclement weather are common, even when using select granular fill. We recommend site grading and earthwork be scheduled for the drier months of the year. Structural fill should not consist of frozen material.

Structural Fill Placement

We recommend structural fill is placed in lifts not exceeding about 10 inches in loose measure. It may be necessary to adjust lift thickness based on site and fill conditions during placement and compaction. Finer grained soil used as structural fill and/or lighter weight compaction equipment may require thinner lifts to attain required compaction levels. Coarser granular soil with lower fines contents could potentially be placed in thicker lifts (1 foot maximum) if they can be adequately compacted. Structural fill should be compacted to attain the recommended levels presented in Table 1, Compaction Criteria.

Table 1. Compaction Criteria

Fill Application	Compaction Criteria*
Footing areas (below structures and retaining walls)	95 %
Upper 2 feet in pavement areas, slabs and sidewalks, and utility trenches	95 %
Below 2 feet in pavement areas, slabs and sidewalks, and utility trenches	92 %
Utility trenches or general fill in non-paved or -building areas	90 %

*Per the ASTM D 1557 test method.

Trench backfill within about 2 feet of utility lines should not be over-compacted to reduce the risk of damage to the line. In some instances, the top of the utility line may be within 2 feet of the surface. Backfill in these circumstances should be compacted to a firm and unyielding condition.

We recommend fill procedures include maintaining grades that promote drainage and do not allow ponding of water within the fill area. The contractor should protect compacted fill subgrades from disturbance during wet weather. In the event of rain during structural fill placement, the exposed fill surface should be allowed to dry prior to placement of additional fill. Alternatively, the wet soil can be removed. We recommend consideration be given to protecting haul routes and other high traffic areas with free-draining granular fill material (i.e. sand and gravel containing less than 5 percent fines) or quarry spalls to reduce the potential for disturbance to the subgrade during inclement weather.

Earthwork Procedures

Conventional earthmoving equipment should be suitable for earthwork at this site. Earthwork may be difficult during periods of wet weather or if elevated soil moisture is present. Excavated site soils may not be suitable as structural fill depending on the soil moisture content and weather conditions at the time of earthwork. If soil is stockpiled and wet weather is anticipated, the stockpile should be protected with securely anchored plastic sheeting. If stockpiled soils become unusable, it may become necessary to import clean, granular soils to complete wet weather site work.

Wet or disturbed subgrade soils should be over-excavated to expose firm, non-yielding, non-organic soils and backfilled with compacted structural fill. We recommend the earthwork portion of this project be completed during extended periods of dry weather. If earthwork is completed during the wet season (typically late October through May) it may be necessary to take extra measures to protect subgrade soils.

If earthwork takes place during freezing conditions, we recommend the exposed subgrade is allowed to thaw and is re-compacted prior to placing subsequent lifts of structural fill. Alternatively, the frozen soil can be removed to unfrozen soil and replaced with structural fill.

The contractor is responsible for designing and constructing stable, temporary excavations (such as utility trenches) to maintain stability of excavation sides and bottoms. Excavations should be sloped or shored in the interest of safety following local and federal regulations, including current OSHA excavation and trench safety standards. Temporary excavation cuts should be sloped at inclinations of 1.5H:1V (Horizontal:Vertical) or flatter, unless the contractor can demonstrate the safety of steeper inclinations. Deeper excavations may require shoring. Permanent cut and fill slopes should be graded at inclinations of 2H:1V, or flatter.

A geotechnical engineer and accredited testing material laboratory should be retained during the construction phase of the project to observe earthwork operations and to perform necessary tests and observations during subgrade preparation, placement and compaction of structural fill, and backfilling of excavations.

Foundations

Foundations can be placed on native soils or on structural fill above prepared native subgrades as described in this report. The following recommendations are for conventional spread footing foundations:

Bearing Capacity (net allowable):	2,000 pounds per square foot (psf) for footings supported firm native soils or structural fill over native subgrades prepared as described in this report.
Footing Width (Minimum):	18 inches (Strip) 24 inches (Column)

Embedment Depth (Minimum):	18 inches (Exterior) 12 inches (Interior)	
Settlement:	Total:	< 1 inch
	Differential:	< 1/2 inch (over 30 feet)
Allowable Lateral Passive Resistance:	300 psf/ft* (below 18 inches)	
Allowable Coefficient of Friction:	0.35*	

*These values include a factor of safety of approximately 1.5.

The net allowable bearing pressures presented above may be increased by one-third to resist transient, dynamic loads such as wind or seismic forces. Lateral resistance to footings should be ignored in the upper 12-inches from exterior finish grade.

Foundation Construction Considerations

All foundation subgrades should be free of water and loose soil prior to placing concrete, and should be prepared as recommended in this report. Concrete should be placed soon after excavating and compaction to reduce disturbance to bearing soils. Should soils at foundation level become excessively dry, disturbed, saturated, or frozen, the affected soil should be removed prior to placing concrete. We recommend SSGC observe all foundation subgrades prior to placement of concrete.

Foundation Drainage

Ground surface adjacent foundations should be sloped away from buildings. We recommend footing drains are installed around perimeter footings that bear on the upper silty sand layer. Footing drains should include a minimum 4-inch diameter perforated rigid plastic or metal drain line installed at the base of the footing. The perforated drain lines should be connected to a tight line pipe that discharges to an approved storm drain receptor. The drain line should be surrounded by a zone of clean, free-draining granular material having less than 5 percent passing the No. 200 sieve or meeting the requirements of section 9-03.12(2) "Gravel Backfill for Walls" in the WSDOT M41-10 manual. The free-draining aggregate zone should be at least 12 inches wide and wrapped in filter fabric. The granular fill should extend to within 6 inches of final grade where it should be capped with compacted fill containing sufficient fines to reduce infiltration of surface water into the footing drains. Alternately, the ground surface can be paved with asphalt or concrete. Cleanouts are recommended for maintenance of the drain system.

Footing drains are not considered necessary for footings that are founded on native outwash.

On-Grade Floor Slabs

On-grade floor slabs should be placed on native soils or structural fill prepared as described in this report. We recommend a modulus subgrade reaction of 175 pounds per square inch per inch (psi/in) for native soil or compacted granular structural fill over native soil.

We recommend a capillary break is provided between the prepared subgrade and bottom of slab. Capillary break material should be a minimum of 4 inches thick and consist of compacted clean, free-draining, well graded course sand and gravel. The capillary break material should contain less than 5 percent fines, based on that soil fraction passing the U.S. No. 4 sieve. Alternatively, clean angular gravel such as No. 7 aggregate per Section 9-03.1(4) C of the WSDOT M41-10 manual could be used for this purpose.

We recommend positive separations and/or isolation joints are provided between slabs and foundations, and columns or utility lines to allow independent movement where needed. Backfill in interior trenches beneath slabs should be compacted in accordance with recommendations presented in this report.

A vapor retarder should be considered beneath concrete slabs that will be covered with moisture sensitive or impervious coverings (such as tile, wood, etc.), or when the slab will support equipment or stored materials sensitive to moisture. We recommend the slab designer refer to ACI 302 and/or ACI 360 for procedures and limitations regarding the use and placement of vapor retarders.

Seismic Considerations

Seismic parameters and values in Table 2 are recommended based on the 2018 International Building Code (IBC).

Table 2. Seismic Parameters

PARAMETER	VALUE
2018 International Building Code (IBC) Site Classification[1]	D
S_s Spectral Acceleration for a Short Period	1.39
S_1 Spectral Acceleration for a 1-Second Period	0.521g

[1] Note: In general accordance with the *2018 International Building Code* for risk categories I,II,III. IBC Site Class is based on the estimated characteristics of the upper 100 feet of the subsurface profile. S_s, and S_1 values based on the ATC Hazards website.

Liquefaction

Soil liquefaction is a condition where loose, typically granular soils located below the groundwater surface lose strength during ground shaking, and is often associated with earthquakes. The risk of liquefaction at this site is low to moderate for the design level earthquake based on the Washington DNR's Olympia-Lacey-Tumwater Urban Area, Washington: Liquefaction Susceptibility Map

(GM-47), dated 1999. This level may cause some architectural or minor structural damage to buildings, but should not result in foundation failure. A detailed seismic analysis would be required to fully assess liquefaction potential of site soils.

Infiltration Characteristics

Infiltration facilities will be used to assist in control of stormwater. An assessment of infiltration potential was completed by performing two Pilot Infiltration Tests per procedures in the City of Tumwater Drainage Design and Erosion Control Manual. Results of the tests are presented in Table 3.

Table 3. Infiltration Rates

Test Hole and Depth (ft)	Soil Type	Measured Infiltration Rate (in/hr)	Corrected Infiltration Rate (in/hr)	Correction Factors* (Fg/Ft/Fp)
PIT-1, 4 ft	Outwash	33	13.2	(1.0/0.5/0.8)
PIT-2, 4.5 ft	Outwash	36	14.4	

*Correction Factors from the Tumwater Drainage Design and Erosion Control Manual. Note Fg may vary based on dimensions and depth of selected infiltration facility.

The measured infiltration rates are considered appropriate for the soil tested and are comparable to infiltration tests completed at other sites in the area with similar soil. As soils across the site were similar, we recommend averaging the above rates for a design infiltration rate of 13.8 inches per hour (in/hr) for native outwash soil. Seasonal high groundwater is not anticipated to adversely affect infiltration systems within 5 feet of current ground surface.

Cation Exchange Capacity (CEC) and organic content tests were completed on a representative sample of outwash soil. Test results are summarized in the Table 4.

Table 4. CEC and Organic Content Results

Test Site, Sample Number, Depth	CEC Results (milliequivalents)	CEC Required* (milliequivalents)	Organic Content Results (%)	Organic Content Required* (%)
TP-4, S-1, 4.5 ft	11.3	≥ 5	4.97	≥1.0

* Values from the Tumwater Drainage Design and Erosion Control Manual.

Organic content and CEC results of the sample satisfy City requirements.

Conventional Pavement Sections

Subgrades for conventional pavements should be prepared as described in the "*Subgrade Preparation*" and "*Structural Fill*" sections of this report. Subgrades below pavement sections should be graded or crowned to promote drainage and not allow for ponding of water beneath the section. If drainage is not provided and ponding occurs, subgrade soils could become saturated, lose strength, and result in premature distress or failure of the section. In addition, the pavement surfacing should also be graded to promote drainage and reduce the potential for ponding of water on the pavement surface. We recommend a separation fabric (such as Mirafi N180, or other) is placed on the prepared subgrade prior to placement of pavement section materials. The purpose of the fabric is to maintain segregation of the coarser fill and the lower finer grained native soil. Coarser fill will have the tendency to migrate into the looser native soil over time which can compromise the structural integrity of the pavement section fill and result in premature distress in the pavement without the separation fabric.

Pavement section designs have been prepared and are based on AASHTO design guidelines and the following assumed design parameters:

- 20-year life span;
- Estimated design life Equivalent Single Axle Loads (18 kips) of 540,000;
- Estimated subgrade CBR of 8 (native);
- Terminal serviceability of 2.0; and,
- Level of reliability 85 percent.

Minimum recommended pavement sections for conventional asphalt or concrete pavements are presented in Table 5. We should be notified if actual traffic (ESAL) loads will be greater or less than those assumed to verify or modify the pavement sections. Pavement sections in public right-of-ways should be designed per City of Tumwater standards.

Table 5. Preliminary Pavement Sections

Traffic Area	Minimum Recommended Pavement Section Thickness (inches)			
	Asphalt Concrete Surface[1]	Portland Cement Concrete[2]	Aggregate Base Course[3,4]	Subbase Aggregate[5]
Car Parking Areas	2	4	4	12
Truck Access	3	6	6	12

[1] 1/2 –inch nominal aggregate hot-mix asphalt (HMA) per WSDOT 9-03.8(1)

[2] A 28 day minimum compressive strength of 4,000 psi and an allowable flexural strength of at least 250 psi

[3] Crushed Surfacing Base Course per WSDOT 9-03.9(3)

[4] Although not required for structural support under concrete pavements, a minimum four-inch thick base course layer is recommended to help reduce potential for slab curl, shrinkage cracking, and subgrade "pumping" through joints

[5] Gravel Borrow per WSDOT 9-03.14(1) or Permeable Ballast WSDOT 9-03.9(1)

Conventional Pavement Maintenance

The performance and lifespan of pavements can be significantly impacted by future maintenance. The above pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be completed. Proper maintenance will slow the rate of pavement deterioration, and will improve pavement performance and life. Preventive maintenance consists of both localized maintenance (crack and joint sealing and patching) and global maintenance (surface sealing). Added maintenance measures and reduced pavement life should be anticipated over the lifetime of pavements if any existing fill or topsoil is left in-place beneath pavement sections.

REPORT CONDITIONS

This report has been prepared for the exclusive use of Mr. Trevor Colby for specific application to the project discussed, and has been prepared in accordance with generally accepted geotechnical engineering practices in the area. No warranties, either express or implied, are intended or made. The analysis and recommendations presented in this report are based on observed soil conditions and test results at the indicated locations, and from other geologic information discussed. This report does not reflect variations that may occur across the site, or due to the modifying effects of construction, or weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be immediately notified so that further evaluation and supplemental recommendations can be provided.

This report was prepared for the planned type of development of the site as discussed herein. It is not valid for third party entities or alternate types of development on the site without the express written consent of SSGC. If development plans change we should be notified to review those changes and modify our recommendations as necessary.

The scope of services for this project does not include any environmental or biological assessment of the site including identification or prevention of pollutants, hazardous materials, or conditions. Other studies should be completed if the owner is concerned about the potential for contamination or pollution.

We appreciate the opportunity to work with you on this project. Please contact us if additional information is required or we can be of further assistance.

Respectfully,

South Sound Geotechnical Consulting

Timothy H. Roberts, P.E.
Member/Geotechnical Engineer

Attachments: Figure 1 – Exploration Plan
Appendix A – Field Exploration Procedures and Exploration Logs
Appendix B – Laboratory Testing and Results
Unified Soil Classification System

Legend

TP - 1

Approximate Test Pit Location

PIT - 1

Approximate Infiltration Test Location

Base map from Google Maps

Scale: NTS

South Sound Geotechnical Consulting
P.O. Box 39500
Lakewood, WA 98496
(253) 973-0515

Figure 1 – Exploration Plan

6119 Littlerock Rd SW Development
Tumwater, Washington

SSGC Project #23031

Appendix A

Field Exploration Procedures and Exploration Logs

SSGC

Field Exploration Procedures

Our field exploration for this project included four test pits and two Pilot Infiltration Tests completed on April 25, 2023. The approximate locations of the explorations are shown on Figure 1, Exploration Plan. Test pit locations were determined by pacing from site features. Ground surface elevations referenced on the logs were inferred from topographic data from Google Earth satellite imagery. Test pit locations and elevations should be considered accurate only to the degree implied by the means and methods used.

A private excavation company dug the test pits. Soil samples were collected and stored in moisture tight containers for further assessment and laboratory testing. Explorations were backfilled with excavated soils and tamped when completed. Please note that backfill in the explorations may settle with time. Backfill material located in roads or building areas should be re-excavated and recompacted, or replaced with structural fill.

The following logs indicate the observed lithology of soils and other materials observed in the explorations at the time of excavation. Where a soil contact was observed to be gradational, our log indicates the average contact depth. Our logs also indicate the approximate depth to groundwater (where observed at the time of excavation), along with sample numbers and approximate sample depths. Soil descriptions on the logs are based on the Unified Soil Classification System.

Test Pit TP-1

Depth (feet)	Material Description
0 – 1.5	**Topsoil**
1.5 – 3	Silty SAND with trace organics: Loose, moist, dark brown. (SM)
3 – 10	SAND with trace to some silt: Loose, moist, brown. (SP/SW)
	Test pit completed at approximately 10 feet on 4/25/23. Groundwater not observed at time of excavation. Approximate surface elevation: 169 feet

Test Pit TP-2

Depth (feet)	Material Description
0 – 2	**Topsoil**
2 – 4	Silty SAND with trace organics: Loose, moist, dark brown. (SM)
4 – 11	SAND with trace to some silt: Loose, moist, brown grading gray at 7 feet. (SP/SW)(Sample S-1 @ 7 feet)
	Test pit completed at approximately 11 feet on 4/25/23. Groundwater not observed at time of excavation. Approximate surface elevation: 169 feet

Test Pit TP-3

Depth (feet)	Material Description
0 – 1.5	**Topsoil**
1.5 – 3	Silty SAND with trace organics: Loose, moist, dark brown. (SM)
3 – 10	SAND with trace to some silt: Loose, moist, brown grading gray at 7 feet. (SP/SW)
	Test pit completed at approximately 10 feet on 4/25/23. Groundwater not observed at time of excavation. Approximate surface elevation: 168 feet

Test Pit TP-4

Depth (feet)	Material Description
0 – 1.5	**Topsoil**
1.5 – 3.5	Silty SAND with trace organics: Loose, moist, dark brown. (SM)(Sample S-1 @ 2.5 feet)
3 – 11	SAND with trace to some silt: Loose, moist, brown grading gray at 7.5 feet. (SP/SW)(Sample S-2 @ 4.5 feet)
	Test pit completed at approximately 11 feet on 4/25/23. Groundwater not observed at time of excavation. Approximate surface elevation: 168 feet

Infiltration Test PIT-1

Depth (feet)	Material Description
0 – 1.5	**Topsoil**
1.5 – 3	Silty SAND with trace organics: Loose, moist, dark brown. (SM)
3 – 10	SAND with trace to some silt: Loose, moist, brown grading gray at 7 feet. (SP/SW)(Sample S-1 @ 4 feet)
	Test pit completed at approximately 10 feet on 4/25/23. Infiltration test completed at 4 feet. Groundwater not observed at time of excavation. Piezometer set in test hole. Approximate surface elevation: 167 feet

Infiltration Test PIT-2

Depth (feet)	Material Description
0 – 1.5	**Topsoil**
1.5 – 4	Silty SAND with trace organics: Loose, moist, dark brown. (SM)
4 – 10	SAND with trace to some silt: Loose, moist, brown grading gray at 7 feet. (SP/SW)(Sample S-1 @ 4.5 feet)
	Test hole completed at approximately 10 feet on 4/25/23. Infiltration test completed at 4.5 feet. Groundwater not observed at time of excavation. Piezometer set in test hole. Approximate surface elevation: 169 feet

Appendix B

Laboratory Testing and Results

Laboratory Testing

Select soil samples were tested for organic content and cation exchange capacity (CEC) by Northwest Agricultural Consultants of Kennewick, Washington. Results of the laboratory testing are included in this appendix.

Northwest Agricultural Consultants

2545 W Falls Avenue
Kennewick, WA 99336
509.783.7450
www.nwag.com
lab@nwag.com

PAP-Accredited
NAPT

South Sound Geotechnical Consulting
PO Box 39500
Lakewood, WA 98496

Report: 63523-1-1
Date: May 4, 2023
Project No: 23031
Project Name: 6119 Littlerock

Sample ID	Organic Matter	Cation Exchange Capacity
TP-4, S-2	4.97 %	11.3 meq/100g
Method	**ASTM D2974**	**EPA 9081**

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests[A]					Soil Classification	
					Group Symbol	Group Name[B]
Coarse Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines[C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$[E]		GW	Well-graded gravel[F]
			$Cu < 4$ and/or $1 > Cc > 3$[E]		GP	Poorly graded gravel[F]
		Gravels with Fines More than 12% fines[C]	Fines classify as ML or MH		GM	Silty gravel[F,G,H]
			Fines classify as CL or CH		GC	Clayey gravel[F,G,H]
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines[D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$[E]		SW	Well-graded sand[I]
			$Cu < 6$ and/or $1 > Cc > 3$[E]		SP	Poorly graded sand[I]
		Sands with Fines More than 12% fines[D]	Fines classify as ML or MH		SM	Silty sand[G,H,I]
			Fines Classify as CL or CH		SC	Clayey sand[G,H,I]
Fine-Grained Soils 50% or more passes the No. 200 sieve	Silts and Clays Liquid limit less than 50	inorganic	PI > 7 and plots on or above "A" line[J]		CL	Lean clay[K,L,M]
			PI < 4 or plots below "A" line[J]		ML	Silt[K,L,M]
		organic	Liquid limit - oven dried / Liquid limit - not dried	< 0.75	OL	Organic clay[K,L,M,N] / Organic silt[K,L,M,O]
	Silts and Clays Liquid limit 50 or more	inorganic	PI plots on or above "A" line		CH	Fat clay[K,L,M]
			PI plots below "A" line		MH	Elastic Silt[K,L,M]
		organic	Liquid limit - oven dried / Liquid limit - not dried	< 0.75	OH	Organic clay[K,L,M,P] / Organic silt[K,L,M,Q]
Highly organic soils	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-in. (75-mm) sieve

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

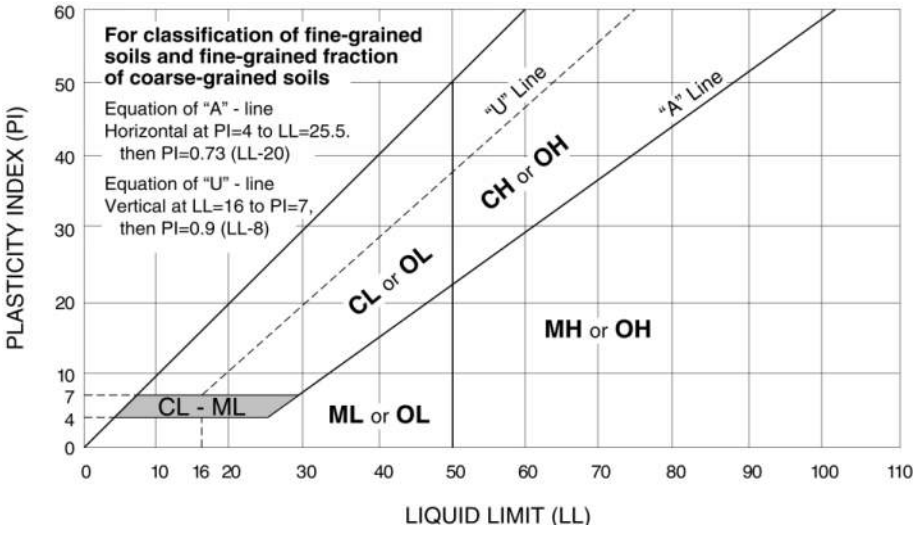
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.



APPENDIX 3
SWPPP

JSA CIVIL

Engineering | Planning | Management

JSA CIVIL

TABLE OF CONTENTS

Construction Stormwater Pollution Prevention Plan

JSA CIVIL

CONSTRUCTION STORMWATER POLLUTION PREVENTION ELEMENTS

Objective of Stormwater Pollution Prevention Plan

The purpose of a Construction Stormwater Pollution Prevention Plan (SWPPP) is to describe the potential for pollution problems during the duration of a construction project. The SWPPP also explains and illustrates the measures that may need to be taken on the construction site to control said problems. The SWPPP is a guideline for the Contractor to follow during the construction process to prevent erosion and migration of sediments. Erosion control measures are not limited to those that are identified in this SWPPP or on the temporary erosion and sediment control plans. Construction Best Management Practices (BMPs) shall be installed as necessary to meet the Department of Ecology's and City of Tumwater's guidelines for construction stormwater pollution prevention and the requirements that are set forth in the National Pollutant Discharge Elimination System (NPDES) Permit.

This SWPPP was prepared in accordance to the established guidelines and BMPs that are set forth in *2022 City of Tumwater DDECM.* The *DDECM* describes the thirteen (13) elements of construction stormwater pollution prevention. The thirteen (13) elements include the following:

- Element #1 – Preserve Vegetation/Mark Clearing Limits
- Element #2 – Establish Construction Access
- Element #3 – Control Flow Rates
- Element #4 – Install Sediment Controls
- Element #5 – Stabilize Soils
- Element #6 – Protect Slopes
- Element #7 – Protect Drain Inlets
- Element #8 – Stabilize Channels and Outlets
- Element #9 – Control Pollutants
- Element #10 – Control Dewatering
- Element #11 – Maintain BMPs
- Element #12 – Manage the Project
- Element #13 - *Protection Low Impact Development BMPs*

Summary of Elements

The BMPs listed in this report, or their equivalent, are required. Any revisions by the Contractor to the BMPs listed in the SWPPP shall be approved by the Engineer in writing. Thus, if the Contractor does not require a BMP or needs to modify a BMP, the Contractor shall document the reason(s) and present the documentation to the Engineer for approval.

Element #1 - Preserve Vegetation/Mark Clearing Limits

Prior to beginning land disturbing activities, which include site clearing and grading, the Contractor shall mark the clearing limits (including trees) that are to be preserved within the construction zone. High-visibility fences shall be installed/erected as shown on the temporary erosion and sediment control plan and in accordance with the landscaping plan. The following BMPs are applicable for this project. If the following BMPs are not shown on the construction plan set, the Engineer reserves the right to direct the Contractor to install, construct, and/or implement said BMPs.

- BMP C101: Preserving Natural Vegetation
- BMP C103: High-Visibility Plastic or Metal Fence with Backup Support

Element #2 - Establish Construction Access

A stabilized construction entrance shall be constructed to minimize the tracking of sediment onto any public road. During initial construction, the existing asphalt driveway may be used as a construction entrance. The stabilized construction entrance shall be constructed per the TESC plans and details and in accordance with the requirements of BMP C105.

- BMP C105: Stabilized Construction Entrance

Element #3 - Control Flow Rates

Properties and waterways downstream from the development site shall be protected from erosion due to increases in the volume, velocity, and/or peak flow rates of stormwater runoff from the project site. The following BMPs are applicable for this project. If the following BMPs are not shown on the construction plan set, the Engineer reserves the right to direct the Contractor to install, construct, and/or implement said BMPs.

- BMP C240: Sediment Trap
- BMP C241: Temporary Sediment Pond

Element #4 - Install Sediment Controls

Prior to leaving a construction site or prior to discharging into an infiltration facility, stormwater runoff must pass through a sediment pond or some other appropriate BMP for removal of sediments. Silt fencing shall be constructed as shown on the temporary and erosion sediment control plans. The following BMPs are applicable for this project. If the following BMPs are not shown on the construction plan set, the Engineer reserves the right to direct the Contractor to install, construct, and/or implement said BMPs.

- BMP C230: Straw Bale Barrier
- BMP C231: Brush Barrier
- BMP C232: Gravel Filter Berm
- BMP C233: Silt Fence
- BMP C234: Vegetated Filter Strip
- BMP C235: Straw Wattles
- BMP C240: Sediment Trap
- BMP C241: Temporary Sediment Pond
- BMP C251: Construction Stormwater Filtration

Element #5 - Stabilize Soils

All exposed and unworked soils shall be stabilized by application of effective BMPs, which protect the soil from the erosive forces of raindrop impact, flowing water, and from wind erosion. From October 01 through April 30 of each calendar year, no soils shall remain exposed and unworked form more than two (2) days. From May 01 to September 30 of each calendar year, no soils shall remain exposed and

unworked for more than seven (7) days. This condition applies to all on-site soils, whether at final grade or not.

In areas where the on-site soils will remain unworked for more than the aforementioned time duration limits or have reached final grade, seeding and mulching shall be installed in accordance with BMP C120 and C121. Sod shall be installed in accordance with BMP C124 for disturbed areas that require immediate vegetative cover. Dust control shall be used as needed to prevent wind transport of dust from disturbed soil surfaces and in accordance with BMP C140. If the following BMPs are not shown on the construction plan set, the Engineer reserves the right to direct the Contractor to install, construct, and/or implement said BMPs.

BMP C120: Temporary and Permanent Seeding
BMP C121: Mulching
BMP C123: Plastic Covering
BMP C124: Sodding
BMP C125: Topsoiling
BMP C140: Dust Control

Element #6 - Protecting Slopes

Slopes shall be constructed in such a manner that will minimize erosion. This shall include, but is not limited to: placing excavated material on the uphill side of trenches, collecting drainage at the top of slopes, etc. If the following BMPs are not shown on the construction plan set, the Engineer reserves the right to direct the Contractor to install, construct, and/or implement said BMPs.

BMP C200: Interceptor Dike and Swale
BMP C205: Subsurface Drains
BMP C206: Level Spreader
BMP C207: Check Dams

Element #7 - Protect Drain Inlets

All storm drain catch basins/inlets that are in use during construction, as well as all existing structures within the project limits, shall be protected so that stormwater runoff shall not enter any conveyance system without first being filtered or treated to remove sediment from sediment laden runoff. Install storm drain inlet protection devices as shown on the erosion and sediment control plans and in accordance with BMP C220.

BMP C220: Storm Drain Inlet Protection

Element #8 - Stabilize Channels and Outlets

All temporary on-site conveyance channels shall be constructed and stabilized to prevent erosion. Stabilization that is adequate to prevent erosion of outlets and drainage channels shall be provided. If the following BMPs are not shown on the construction plan set, the Engineer reserves the right to direct the Contractor to install, construct, and/or implement said BMPs.

BMP C202: Channel Lining

BMP C209: Outlet Protection

Element #9 - Control Pollutants

All pollutants, including waste materials and demolition of debris, that are generated or brought on-site during construction activities shall be handled and disposed of in a manner that does not cause contamination of stormwater. Maintenance and repair of heavy equipment and vehicles involving oil changes, hydraulic system drawdown, solvent and degreasing cleaning operations, fuel tank drawdown and removal, and other activities which may result in discharge or spillage of pollutants to the ground or into stormwater runoff must be conducted using spill prevention measures. Contaminated surfaces shall be cleaned immediately following any discharge or spill incident. Emergency repairs may be performed on-site using temporary plastic placed beneath and, if raining, over the vehicle. Application of agricultural chemicals, including fertilizers and pesticides, shall be conducted in a manner and at application rates that will not result in loss of chemical(s) to stormwater runoff. Manufacturers' recommendations shall be followed for application rates and procedures. The following Source Control BMPs will be prepared/implemented by the Contractor for this project.

- Maintenance of storm drainage facilities
- Street sweeping at an interval that's prescribed by the Engineer and/or the City of Tumwater

Element #10 - Control Dewatering

All foundation, vault, and trench dewatering activities shall be routed to a sediment pond for basic filtering/treatment. Clean, non-turbid dewatered water, as determined by the Certified Professional in Erosion and Sediment Control, can be discharged to systems tributary to state surface waters, provided the dewatering flow does not cause erosion or flooding to receiving waters.

Highly turbid or otherwise contaminated dewatered water that's from construction equipment operation, clamshell digging, concrete tremie pour, or work inside a cofferdam, shall be handled separately from stormwater at the site. Some disposal options, depending on site constraints, may include:

- Transport off-site in a vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute State waters
- On-site treatment using chemical treatment or other suitable treatment technologies
- Sanitary sewer discharge with local sewer district's approval if there is no other option

Element #11 - Maintain BMPs

All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function. All maintenance and repairs shall be completed in accordance with the practices, procedures, and materials for each respective BMP. Sediment Control BMPs shall be inspected weekly or after a runoff-producing storm event during the dry season and daily during the wet season.

All temporary erosion and Sediment Control BMPs shall be removed within thirty (30) days after final site stabilization is achieved or after the temporary BMPs are no longer needed. Trapped sediment shall

be removed or stabilized on-site. Disturbed soil areas resulting from removal of BMPs or vegetation shall be permanently stabilized.

Element #12 - Manage the Project

- Phasing of Construction - the project shall be phased where feasible in order to prevent, to the maximum extent practicable, the transport of sediment from the site during construction. Revegetation of exposed areas and maintenance of said vegetation shall be an integral part of the clearing activities for each phase.

- Seasonal Work Limitations - from October 01 through April 30, clearing, grading, and other soil disturbing activities shall only be permitted if shown to the satisfaction of the local permitting authority that silt-laden runoff will be prevented from leaving the construction site.

  The following activities are exempt for the seasonal clearing and grading limitations:

  1. Routine maintenance and necessary repair of erosion and sediment control BMPs.

  2. Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in the removal of the vegetative cover to the soil.

  3. Activities where there is 100% infiltration of surface runoff within the site in approved and installed erosion and sediment control facilities.

- Inspection and Monitoring - all BMPs shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function.

  The Certified Professional in Erosion and Sediment Control for this project is _____. _____ shall be on-site or on-call at all times during construction. The role of the Certified Professional in Erosion and Sediment Control is to identify problems or failures of erosion control measures in the field and to promptly initiate corrective measures. The Certified Professional in Erosion and Sediment Control shall be compensated by the Contractor.

  Sampling and analysis of discharged stormwater from the construction site may be necessary to ensure compliance with the standards.

  Whenever inspection and/or monitoring reveals that the BMPs identified in the Construction SWPPP are inadequate, due to the actual discharge of or potential to discharge a significant amount of any pollutant, the Construction SWPPP shall be modified, as appropriate, in a timely manner.

- Maintenance of the Construction SWPPP - the Construction SWPPP shall be retained on-site or within reasonable access to the site. The Construction SWPPP shall be modified whenever there is a significant change in the design, construction, operation, and/or maintenance of any BMP.

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Element #13 – Protect Low Impact Development BMPs

Protect all infiltration trench areas from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the proposed infiltration trench. Restore BMPs to their fully functioning condition if they accumulate sediment during construction. Restoring the BMP must include removal of sediment and any sediment-laden swale and/or pond soils, and replacing the removed soils with soils meeting the design specification.

Prevent compacting the infiltration areas by excluding construction equipment and foot traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment. Keep all heavy equipment off existing soils under LID facilities that have been excavated to final grade to retain the infiltration rate of the soils.

- BMP C102: Buffer Zone
- BMP C103: High Visibility Fence
- BMP C200: Interceptor Dike and Swale
- BMP C201: Grass-Lined Channels
- BMP C207: Check Dams
- BMP C208: Triangular Silt Dike
- BMP C231: Brush Barrier
- BMP C233: Silt Fence
- BMP C234: Vegetated Strip

PROJECT DESCRIPTION

Location

The proposed residential development site is located on Thurston County tax parcel numbers: 12703211801 & 12703220802, in the City of Tumwater, Washington.

Project Overview

The proposed project spans across two (2) adjoining properties, combined for a total project area of approximately 1.77 acres. A multi-story storage building and the associated parking, sidewalks and utilities are proposed on the project site.

EXISTING SITE CONDITIONS

Existing Drainage System

The site gradually slopes east to west with runoff generally infiltrating. Existing storm systems are in place along Littlerock Road SW to the east, and Tumwater Middle School to the south. To the north of the project is cleared land that contains overhead power lines and toward the west is undeveloped land with areas of clearing and areas of dense vegetation. All surrounding areas generally infiltrate stormwater runoff, however there is a natural low point approximately 200 feet to the west of the site where stormwater flows may collect in larger storm events.

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Existing Topography & Vegetation

The existing site has contains multiple single-family residential type buildings with lawn, landscaping and driveways. There are various landscaping trees, but the site has generally been cleared of any larger trees and dense vegetation. With the proposed development the site will be cleared of all existing structures and perimeter landscaping areas planted with approved trees and shrubs.

ADJACENT AREAS

South: Tumwater Middle School.
West: Densely vegetated parcel with localized low point for the area.
East: Littlerock Road SW
North: Cleared and mostly undeveloped land with overhead power lines.

CRITICAL AREAS

There are no know critical areas on the site.

SOILS

The soil type is Nisqually Loamy Fine sand. The Hydrologic Soil Group classification is: A

EROSION PROBLEM AREAS

Potential on-site erosion control problems are not anticipated for this project. The site is generally flat and stormwater is expected to infiltrate.

CONSTRUCTION PHASING

This self-storage project will be completed in one (1) phase.

CONSTRUCTION SCHEDULE

Anticipated construction activities and sequences are shown in the following table.

Table 1: Estimated Construction Schedule

CONSTRUCTION ACTIVITY	ANTICIPATED DATE OF COMPLETION
Contractor Notice to Proceed	09/01/2023
Install Erosion Control Facilities	09/02/2023
Begin Site Rough Grading	09/05/2023
Begin Installing Site Utilities	09/10/2023

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Stabilize Site	10/01/2019
Project Substantial Completion	04/01/2024

ENGINEERING CALCULATIONS

Refer to this project's Stormwater Site Plan for stormwater design calculations.

SITE PLAN

TESC plans are enclosed in the Stormwater Site Plan

REFERENCES

City of Tumwater DDECM 2022.

END OF CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN

APPENDIX 4
CONVEYANCE SIZING CALCULATIONS

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Engineering | Planning | Management

Channel Report

Littlerock Storage Pipe Calc

Circular

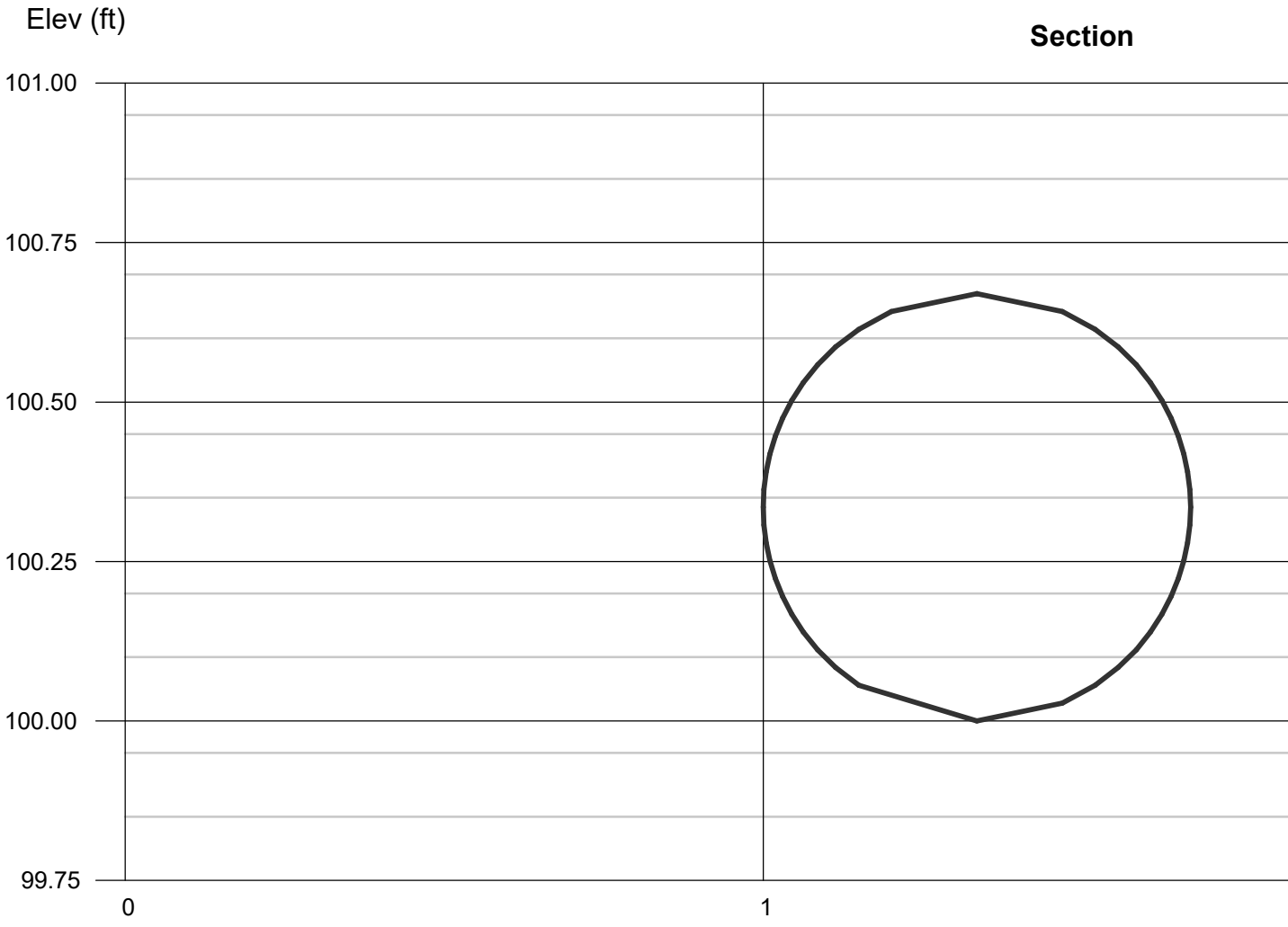
Diameter (ft)	= 0.67
Invert Elev (ft)	= 100.00
Slope (%)	= 1.00
N-Value	= 0.012

Calculations

Compute by:	Known Depth
Known Depth (ft)	= 0.67

Highlighted

Depth (ft)	= 0.67
Q (cfs)	= 1.326
Area (sqft)	= 0.35
Velocity (ft/s)	= 3.76
Wetted Perim (ft)	= 2.10
Crit Depth, Yc (ft)	= 0.55
Top Width (ft)	= 0.00
EGL (ft)	= 0.89

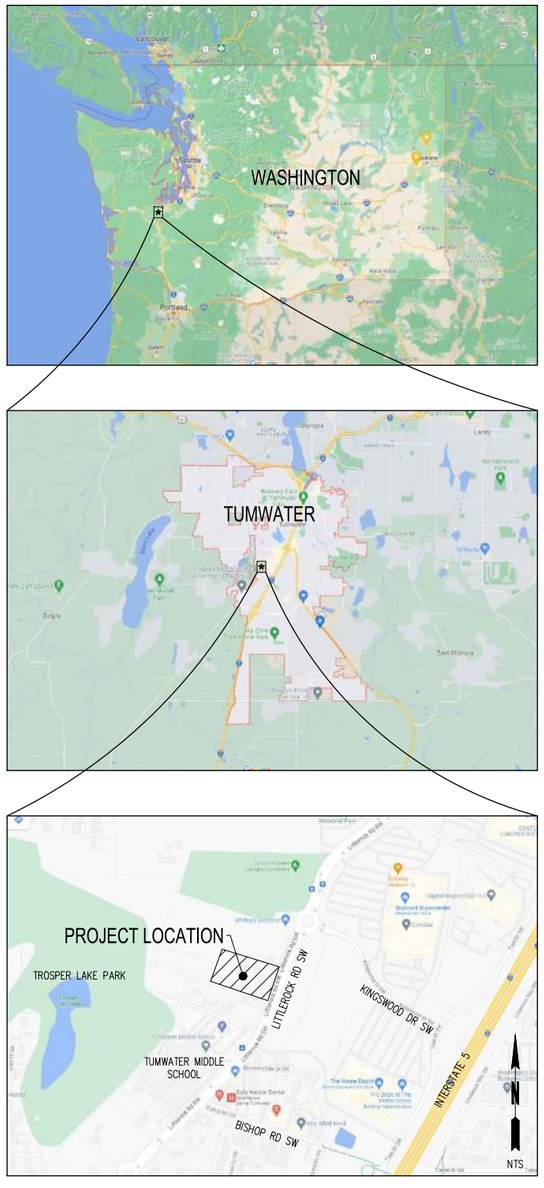


APPENDIX 5
ENGINEERING PLANS

JSA CIVIL

Engineering | Planning | Management

SELF STORAGE FACILITY
CIVIL CONSTRUCTION DOCUMENTS
TUMWATER, WA



APPLICANT
TREVOR COLBY
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EMAIL: TREVOR@KCIWA.COM

ENGINEER
JSA CIVIL, LLC
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TUMWATER, WA 98512
PHONE: 425.577.4527
CONTACT: WHITNEY DUNLAP

ARCHITECT
SITE, PLAN, MIX LLC
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WOODINVILLE, WA 98072
PHONE: 206.310.7770
CONTACT: STEPHEN BOURNE

LANDSCAPE ARCHITECT
ERIC WILLIAMS
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TACOMA, WA 98465
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EMAIL: WDSTUDIO70@YAHOO.COM

GEOTECHNICAL
SOUTH SOUND GEOTECHNICAL CONSULTING
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PHONE: 253.973.0515
CONTACT: TIMOTHY ROBERTS

SURVEYOR
INFORMED LAND SURVEY
PO BOX 5137
TACOMA, WA 98415
PHONE: 253.627.2070
CONTACT: EVAN WAHLSTROM

GOVERNING AGENCY
CITY OF TUMWATER
PHONE: 360.754.4140

UTILITIES
SEWER & WATER
CITY OF TUMWATER
PHONE: 360.754.4140

PHONE
LUMEN
866.963.6665

POWER & GAS
PUGET SOUND ENERGY
PHONE: 888.225.5773

CABLE
COMCAST
PHONE: 800.934.6489

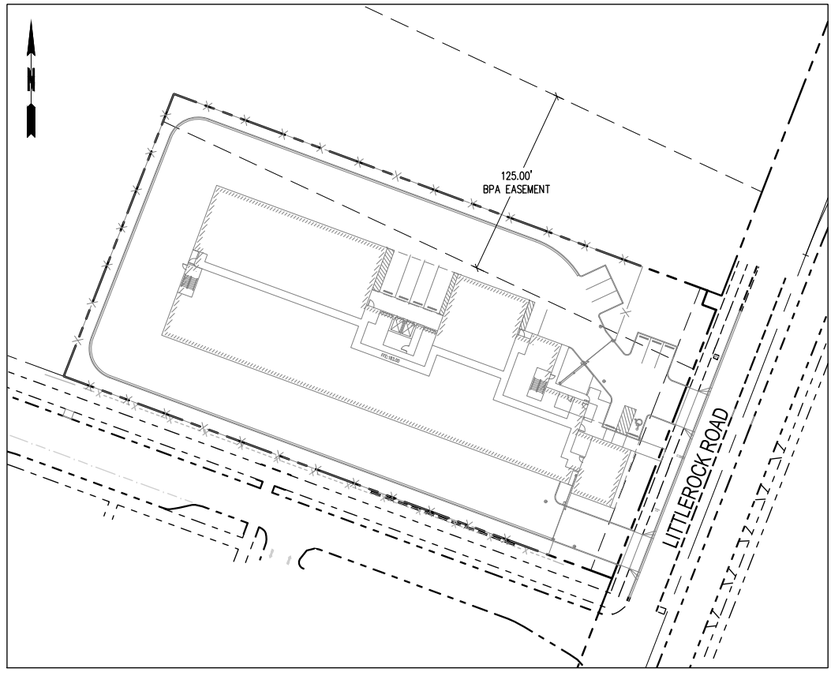
SITE INFORMATION
ADDRESS: 6115/6119 LITTLE ROCK ROAD TUMWATER, WA
PARCEL: 12703211802, 12703211801
ACRES: ±1.77
ZONING: GC (GENERAL COMMERCIAL)

LEGAL DESCRIPTION
PARCEL A (6115):
SECTION 03 TOWNSHIP 17 RANGE 2W QUARTER NW NW & NE SW SS-0955 LT 2 DOCUMENT 1048623; EXC PTN FOR LITTLEROCK RD PER AFN:3868410.

PARCEL B (6119):
SECTION 03 TOWNSHIP 17 RANGE 2W QUARTER NE NW & NW NW SS-0955 LT 1 DOCUMENT 009/107 EX PTN TO LITTLEROCK RD #3914710

HORIZONTAL & VERTICAL DATUM
SEE SURVEY

SHEET INDEX



OVERALL SITE PLAN
1" = 50'

CALL BEFORE YOU DIG
THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

VERTICAL DATUM
NGVD 29

GEOTECHNICAL & WABO INSPECTION NOTE:
THE CITY OF TUMWATER REQUIRES THAT THE FIRM PROVIDING THE SOILS REPORT, SOUTH SOUND GEOTECHNICAL CONSULTING, CONDUCT THE SITE INSPECTIONS AS DEFINED IN THE REPORT. THE CITY ALSO REQUIRES THAT IN ADDITION TO THE SOILS ENGINEERING FIRM, A WABO REGISTERED SPECIAL INSPECTOR WITH EXPERIENCE WITH SOIL GRADING BE EMPLOYED, BY THE OWNER, TO CONDUCT COMPACTION TESTING FOR THE BUILDING PADS AND THE REQUIRED FIRE LANES. THE SPECIAL INSPECTOR SHALL NOT BE THE GEOTECHNICAL FIRM, THE CIVIL ENGINEER OF RECORD OR AN EMPLOYEE OF THE CONTRACTOR. ALL GRADING WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE SOILS REPORT PREPARED BY SOUTH SOUND GEOTECHNICAL CONSULTING. COMPACTION TESTING OF THE SOULS UNDER THE FIRE LANES AND THE BUILDING FOUNDATIONS AND UTILITY TRENCHES SHALL BE VERIFIED BY SOUTH SOUND GEOTECHNICAL CONSULTING AND THE WABO SPECIAL INSPECTOR.

INADVERTENT DISCOVERY NOTE:
WHEN AN UNANTICIPATED DISCOVERY OF PROTECTED CULTURAL MATERIAL (E.G., BONES, SHELLS, STONE TOOLS, BEADS, CERAMICS, OLD BOTTLES, HEARTHS, ETC.) OR HUMAN REMAINS ARE DISCOVERED, THE PROPERTY OWNER OR CONTRACTOR WILL IMMEDIATELY STOP ALL WORK, COMPLETELY SECURE THE LOCATION, AND CONTACT THE WASHINGTON STATE DEPARTMENT OF ARCHAEOLOGY AND HISTORIC PRESERVATION AND OTHER CONTACTS AS IDENTIFIED IN THE CITY OF TUMWATER STANDARD INADVERTENT ARCHAEOLOGICAL AND HISTORIC RESOURCES DISCOVERY PLAN. THE INDIVIDUAL OR REPRESENTATIVE WHOM THE PERMIT WAS ISSUED TO MUST SEND WRITTEN NOTIFICATION OF THE INADVERTENT DISCOVERY TO THE CITY OF TUMWATER DEPARTMENT OF COMMUNITY DEVELOPMENT.

SURVEY MONUMENT NOTE
THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE SURVEYING OF THE PROJECT MUST OBTAIN A PERMIT FROM DNR BEFORE ANY MONUMENTS ARE DISTURBED.

DEWATERING NOTE
THE CONTRACTOR SHALL UTILIZE APPROPRIATE DEWATERING SYSTEMS AND TECHNIQUES TO MAINTAIN THE EXCAVATED AREA SUFFICIENTLY DRY FROM GROUNDWATER AND/OR SURFACE RUNOFF SO AS NOT TO ADVERSELY AFFECT CONSTRUCTION PROCEDURES OR CAUSE EXCESSIVE DISTURBANCE OF UNDERLYING NATURAL GROUND. THE CONTRACTOR SHALL REPAIR ANY DAMAGE RESULTING FROM THE FAILURE OF THE DEWATERING OPERATIONS OR FROM A FAILURE TO MAINTAIN ALL THE AREAS OF WORK IN A SUITABLE DRY CONDITION. UNLESS OTHERWISE SPECIFIED, CONTINUE DEWATERING UNINTERRUPTED UNTIL THE STRUCTURES, PIPES, AND APPURTENANCES TO BE BUILT HAVE BEEN PROPERLY INSTALLED, BACKFILLED, AND COMPACTED. WHERE SUBGRADE MATERIALS ARE UNABLE TO MEET THE SUBGRADE DENSITY REQUIREMENTS DUE TO IMPROPER DEWATERING TECHNIQUES, REMOVE AND REPLACE THE MATERIALS AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL NOTE
THE CONTRACTOR SHALL PROVIDE ALL FLAGGERS, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES AS NECESSARY TO COMPLETE THE WORK. THE CONTRACTOR SHALL ERECT AND MAINTAIN ALL CONSTRUCTION SIGNS, WARNING SIGNS, DETOUR SIGNS, AND OTHER TRAFFIC CONTROL DEVICES NECESSARY TO WARN AND PROTECT THE PUBLIC AT ALL TIMES FROM INJURY OR DAMAGE AS A RESULT OF THE CONTRACTOR'S OPERATIONS THAT MAY OCCUR IN HIGHWAYS, ROADS, OR STREETS. NO WORK SHALL BE DONE ON OR ADJACENT TO THE ROADWAY UNTIL ALL NECESSARY SIGNS AND TRAFFIC CONTROL DEVICES ARE IN-PLACE. THE CONTRACTOR SHALL NOT CLOSE DOWN THROUGH TRAFFIC ON CITY/COUNTY/STATE ROADS. ACCESS FOR BOTH VEHICULAR AND PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT WHERE THE CONTRACTOR OBTAINS PERMISSION TO TEMPORARILY CLOSE A SIDEWALK. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY OF TUMWATER FOR REVIEW AND APPROVAL PRIOR TO STARTING ANY WORK IN THE RIGHT-OF-WAY.

REVISIONS

PROJECT NO.
163.001
DRAWN
C. DAHM
CHECKED
–
SUBMITTAL DATES
OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP
WHITNEY E. DUNLAP
STATE OF WASHINGTON
20122774
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY
12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
COVER SHEET

SHEET
CV-01

JSA CIVIL GENERAL CONSTRUCTION NOTES

1. ALL WORK, WORKMANSHIP AND MATERIALS FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE FOLLOWING MANUAL(S) AND DOCUMENT(S):

   THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION
   HTTPS://WSDOT.WA.GOV/ENGINEERING-STANDARDS/ALL-MANUALS-AND-STANDARDS/MANUALS/STANDARD-SPECIFICATIONS-ROAD-BRIDGE-AND-MUNICIPAL-CONSTRUCTION

   THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD PLANS
   HTTPS://WSDOT.WA.GOV/ENGINEERING-STANDARDS/ALL-MANUALS-AND-STANDARDS/STANDARD-PLANS

   THE CITY OF TUMWATER STANDARD PLANS
   HTTPS://WWW.CI.TUMWATER.WA.US/DEPARTMENTS/TRANSPORTATION-ENGINEERING-DEPARTMENT/TRANSPORTATION-AND-ENGINEERING-SERVICES/ENGINEERING-SURVEYING/DEVELOPMENT-GUIDE/AUTOCAD-DWG-FILES

   THE CITY OF TUMWATER DRAINAGE DESIGN AND EROSION CONTROL MANUAL
   HTTPS://WWW.CI.TUMWATER.WA.US/HOME/COMPONENTS/CALENDAR/EVENT/6886/19?SORTN=ENAME&SORTD=ASC&FOLDER=1304

   THE CITY OF TUMWATER DEVELOPMENT GUIDE
   HTTPS://WWW.CI.TUMWATER.WA.US/DEPARTMENTS/TRANSPORTATION-ENGINEERING-DEPARTMENT/TRANSPORTATION-AND-ENGINEERING-SERVICES/ENGINEERING-SURVEYING/DEVELOPMENT-GUIDE

   GEOTECHNICAL REPORT FINALIZED BY SOUTH SOUND GEOTECHNICAL CONSULTING ON MAY 11, 2023

2. ALL GOVERNMENTAL SAFETY REGULATIONS SHALL BE STRICTLY ADHERED TO INCLUDING OSHA.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DULY NOTIFY THE CITY OF TUMWATER IN ADVANCE OF THE COMMENCEMENT OF ANY AUTHORIZED WORK AND TO SCHEDULE REQUIRED INSPECTIONS. ANY REQUIRED INSPECTION TEST WILL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.
4. THE APPROVAL OF THESE PLANS BY THE CITY OF TUMWATER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO COMPLY WITH THE REQUIREMENTS OF OTHER GOVERNING AGENCIES.

   CAUTION – NOTICE TO CONTRACTOR
5. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON THE PROJECT SURVEY AND OTHER RECORDS OF UTILITIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CALL FOR UTILITY LOCATES 48 HOURS PRIOR TO PLANNED EXCAVATIONS.
6. THE DESIGN SHOWN IS BASED UPON THE ENGINEER'S UNDERSTANDING OF THE EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN SET ARE BASED UPON COMPILED SURVEY DATA. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FIELD CONDITIONS PRIOR TO BIDDING THE PROPOSED WORK IMPROVEMENTS. IF CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE.
7. EXISTING UTILITIES ARE SHOWN FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY EXACT LOCATION, DIAMETER, LENGTH, CONDITION, PIPE TYPE, SLOPE AND VERTICAL AND HORIZONTAL ALIGNMENT OF THE EXISTING ALIGNMENT OF THE PROPOSED POINTS OF CONNECTION PRIOR TO CONNECTION AND REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO INSTALLATION OF THE PROPOSED UTILITIES.
8. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY LOCAL, STATE, AND FEDERAL APPROVALS AND PERMITS.
9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF THE APPROVED PLANS, SPECIFICATIONS, CONSTRUCTION SWPPP, AND CONTRACT DOCUMENTS AT THE CONSTRUCTION SITE AT ALL TIMES.
10. CONSTRUCTION SIGNING AND TRAFFIC CONTROL SHALL BE PER THE CURRENT COPY OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE CONTRACTOR SHALL PREPARE AND SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY OF TUMWATER AND OBTAIN APPROVAL PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.
11. ALL VEHICLES AND EQUIPMENT SHALL BE KEPT WITHIN THE WORK AREAS ESTABLISHED FOR THAT WORK SHIFT UNLESS TRAVELING TO OR FROM THE SITE. UNDER NO CIRCUMSTANCES SHALL VEHICLES BE PARKED OR EQUIPMENT BE STORED OUTSIDE OF THESE AREAS.
12. OTHER CONSTRUCTION PROJECTS MAY OCCUR NEAR THE PROJECT SITE AND MAY BE IN PROGRESS CONCURRENT WITH THE PROJECT. THE CONTRACTOR SHALL COOPERATE AS NECESSARY AND NOT INTERFERE OR HINDER THE PROGRESS OR COMPLETION OF WORK BEING PERFORMED BY OTHER CONTRACTORS.
13. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHOWN ON THESE DRAWINGS AND TO OBTAIN ACCEPTANCE BY THE CITY OF TUMWATER AND THE PROJECT OWNER.
14. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL "PRE CONSTRUCTION" STATE OR BETTER.
15. DRIVEWAY ACCESS AND UTILITY SERVICE TO EXISTING HOMES AND BUSINESSES SHALL BE MAINTAINED AT ALL TIMES.
16. THE CONTRACTOR SHALL ASSUME THAT A PORTION OF THE SOILS WILL NOT PROVIDE SUFFICIENT STABILITY TO STAND UP IN VERTICAL TRENCH WALLS. THIS WILL RESULT IN WIDER TRENCHES, GREATER EARTHWORK VOLUMES, AND MORE SURFACE DISTURBANCE. THE CONTRACTOR SHALL ASSUME THAT A PORTION OF NATIVE SOILS WILL INCLUDE BOULDERS/COBBLES WHICH ARE GREATER THAN 24 INCHES IN DIAMETER WHICH WILL SLOW DOWN THE CONTRACTOR'S PROGRESS. THIS WILL RESULT IN WIDER TRENCHES, GREATER EARTHWORK VOLUMES, MORE SURFACE DISTURBANCE, AND MORE SURFACE RESTORATION THAN WHAT MAY BE SHOWN ON THE DRAWINGS.
17. THE REMOVAL, LOADING, AND HAULING OF EXCESS MATERIALS AS A RESULT OF DEMOLITION, TRENCHING, AND EXCAVATION ACTIVITIES SHALL BE DISPOSED OF AT A CONTRACTOR-PROVIDED WASTE SITE AT NO ADDITIONAL COST TO THE OWNER.
18. THE EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE BASED ON A TOPOGRAPHIC/NSPS LAND TITLE SURVEY FROM INFORMED LAND SURVEY, DATED JULY 17, 2023. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING AND ALERT THE ENGINEER IMMEDIATELY IF DISCREPANCIES ARE FOUND

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

VERTICAL DATUM
NGVD 29

ABBREVIATIONS

&	AND	KWH	KILOWATT HOURS
Ð	ANGLE		
±	APPROXIMATELY	L	LENGTH
@	AT	LB(S)	POUND(S)
℄	CENTERLINE	LF	LINEAR FEET
°	DEGREE	LP	LOW POINT ELEVATION
=	EQUALS	LT	LEFT
'	FOOT		
>	GREATER THAN	MAX	MAXIMUM
"	INCH	MFR	MANUFACTURER
#	NUMBER	MH	MANHOLE
%	PERCENT	MIN	MINIMUM, MINUTE
		MISC	MISCELLANEOUS
AC	ASPHALTIC CONCRETE	MON	MONUMENT IN CASE
ADD'L	ADDITIONAL		
ADJT	ADJACENT	N	NORTH, NORTHING
AFF	ABOVE FINISH FLOOR	N/A	NOT APPLICABLE
AP	ANGLE POINT	NE	NORTHEAST
APPROX	APPROXIMATE	NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION
ARCH	ARCHITECT	NIC	NOT IN CONTRACT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	NO, NO	NUMBER
ATB	ASPHALT TREATED BASE COURSE	NTS	NOT TO SCALE
AVE	AVENUE	NW	NORTHWEST
BCR	BEGIN CURB RETURN	OC, OC	ON CENTER
BFV	BUTTERFLY VALVE	OD	OUTSIDE DIAMETER
BGS	BELOW GROUND SURFACE	OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
BLK	BLOCK(S)		
BLDG	BUILDING	P	POWER, POWER VAULT
BM	BENCHMARK	PC	POINT OF CURVATURE
BVC	BEGIN VERTICAL CURB	PCC	POINT OF COMPOUND CURVE OR PORTLAND CEMENT CONCRETE
C	CONDUIT	PED	PEDESTAL
CB	CATCH BASIN	PI	POINT OF INTERSECTION
CF	CUBIC FEET	ℙ	PROPERTY LINE
CIRC	CIRCUIT, CIRCULA(R, TION)	POC	POINT OF CONNECTION
CIP	CAST-IN-PLACE	PP	POWER POLE
CIP MON	CAST-IN-PLACE MONUMENT	PRC	POINT OF REVERSE CURVATURE
CJ	CENTER JOINT	PROP	PROPERTY
℄	CENTER LINE	PSI	POUNDS PER SQUARE INCH
CL	CROWNLINE	PT	POINT OF TANGENCY
CLR	CLEAR	PVC	POINT OF VERTICAL CURVE
CO	CLEANOUT	PVI	POINT OF VERTICAL INTERSECTION
COMM	COMMUNICATION	PVT	POINT OF VERTICAL TANGENT
COMPT	COMPACTED	PVMT	PAVEMENT
CONC	CONCRETE	PWR	POWER
CONST	CONSTRUCT		
CONT	CONTINU(E, ED, OUS, ATION)	QTY	QUANTITY
COORD	COORDINATE		
CSBC	CRUSHED SURFACING BASE COURSE	R	RADIUS
CSTC	CRUSHED SURFACING TOP COURSE	RD	ROAD, ROADWAY
CULV	CULVERT	REF	REFERENCE
CU YD	CUBIC YARD	REINF	REINFORC(E, ED, ING, MENT)
		REQ'D	REQUIRED
D/W	DRIVEWAY	REV	REVISION
DEF	DEFLECTION	RIM	STRUCTURE RIM ELEVATION
DEG	DEGREE	RT	RIGHT TURN
DEMO	DEMOLISH/DEMOLITION	R/W, ROW	RIGHT OF WAY
DIA	DIAMETER		
DIM	DIMENSION(S)	S	SOUTH OR SLOPE
DIP	DUCTILE IRON PIPE	SCHED	SCHEDULE
DR	DRIVE	SD, SDMH	STORM DRAIN, STORM DRAIN MANHOLE
DWG(S)	DRAWING(S)	SE	SOUTHEAST
		SECT	SECTION(S)
E	EAST OR ELECTRICAL	SHT	SHEET
EA	EACH	SP	SPRINKLER
ECR	END CURB RETURN	SQ	SQUARE
EHH	ELECTRICAL HANDHOLE	SQ FT	SQUARE FEET
EL, ELEV	ELEVATION	SQ IN	SQUARE INCH
ELEC	ELECTRIC(AL)	SS	SANITARY SEWER
ENGR	ENGINEER	SSMH	SANITARY SEWER MANHOLE
EOP	EDGE OF PAVEMENT	ST	STREET
EQ	EQUAL(LY)	STA	STATION
EQUIP	EQUIPMENT	STD	STANDARD
ESMT	EASEMENT	STRUCT	STRUCTUR(E, AL)
EVC	END VERTICAL CURVE	SW	SOUTHWEST
EX, EXIST	EXISTING EXP EXPANSION	SYS	SYSTEM
EXP	EXPANSION		
		T	TELEPHONE OR TELEPHONE VAULT
FDC	FIRE DEPARTMENT CONNECTION	TBD	TO BE DETERMINED
FDN	FOUNDATION	TBM	TEMPORARY BENCH MARK
FF	FINISH FLOOR	TC	TOP OF CURB ELEVATION
FG	FINISH GRADE ELEVATION	TELE	TELEPHONE
FH	FIRE HYDRANT	TEMP	TEMPORARY
FIN	FINISH(ED)	TP, T/P	TOP OF PIPE
FL	FIRE LINE/FLANGE	TYP	TYPICAL
FT	FOOT/FEET	TW	TOP OF WALL ELEVATION
		UDG	UNDERGROUND
G	GAS		
GALV	GALVANIZED	VAP	VERTICAL ANGLE POINT
GRND	GROUND	VC	VERTICAL CURVE
GV	GATE VALVE	VERT	VERTICAL
		VOL	VOLUME
HH	HANDHOLE		
HMA	HOT MIX ASPHALT	W	WEST, WIDTH, WIDE OR WATER
HORIZ	HORIZONTAL	W/	WITH
HT	HEIGHT	W/O	WITHOUT
		WM	WATER MAIN OR WILLAMETTE MERIDIAN
IE	INVERT ELEVATION	WV	WATER VALVE
IN	INCH		
		XFMR	TRANSFORMER
JB, J-BOX	JUNCTION BOX		
JT	JOINT TRENCH		
KV	KILOVOLTS		
KW	KILOWATT		

DRAFTING SYMBOLS

(XX) .....CONSTRUCTION NOTE NUMBER

(XX)
[X]

[XX-A] .....SECTION NUMBER
[XX-01] .....SHEET NUMBER SECTION IS LOCATED ON

REVISIONS

PROJECT NO.
163.001
DRAWN
C. DAHM
CHECKED
–
SUBMITTAL DATES

OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP
WHITNEY E. DUMAS
STATE OF WASHINGTON
20122774
REGISTERED
PROFESSIONAL ENGINEER
12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
GENERAL NOTES & ABBREVIATIONS

SHEET
GN-01

CITY OF TUMWATER - STORM DRAIN CONSTRUCTION NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY/COUNTY STANDARDS AND THE 2018 STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION (WSDOT/APWA).
2. TEMPORARY EROSION/WATER POLLUTION MEASURES SHALL BE REQUIRED IN ACCORDANCE WITH SECTION 1-07.15 OF THE STANDARD SPECIFICATIONS AND THE DRAINAGE DESIGN AND EROSION CONTROL MANUAL ("DRAINAGE MANUAL").
3. PROPONENT SHALL COMPLY WITH ALL OTHER PERMITS AND OTHER REQUIREMENTS OF THE GOVERNING AUTHORITY OR AGENCY.
4. A PRECONSTRUCTION MEETING SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION OR STAKING OF THE SITE.
5. ALL STORM MAINS AND RETENTION/DETENTION AREAS SHALL BE STAKED FOR GRADE AND ALIGNMENT BY AN ENGINEERING OR SURVEY FIRM LICENSED TO PERFORM SUCH WORK.
6. STORM DRAIN PIPE SHALL BE AS SPECIFIED IN THE 2018 CITY OF TUMWATER DRAINAGE DESIGN AND EROSION CONTROL MANUAL.
7. SPECIAL STRUCTURES, OIL/WATER SEPARATORS, AND OUTLET CONTROLS SHALL BE INSTALLED PER PLANS AND MANUFACTURERS RECOMMENDATIONS.
8. PROVIDE TRAFFIC CONTROL PLAN(S) AS REQUIRED IN ACCORDANCE WITH MUTCD.
9. CALL UNDERGROUND LOCATE LINE 1-800-424-5555 MINIMUM 48 HOURS PRIOR TO ANY EXCAVATIONS.
10. ALL SURVEYING AND STAKING SHALL BE PERFORMED BY AN ENGINEERING OR SURVEYING FIRM CAPABLE OF PERFORMING SUCH WORK. THE ENGINEER OR SURVEYOR DIRECTING SUCH WORK SHALL BE LICENSED BY THE STATE OF WASHINGTON.
11. THE MINIMUM STAKING OF STORM SEWER SYSTEMS SHALL BE AS FOLLOWS:
    A. STAKE LOCATION OF ALL CATCH BASINS/MANHOLES AND OTHER FIXTURES FOR GRADE AND ALIGNMENT.
    B. STAKE LOCATION, SIZE, AND DEPTH OF RETENTION/DETENTION FACILITY.
    C. STAKE FINISHED GRADE OF ALL STORMWATER FEATURES, INCLUDING BUT NOT LIMITED TO CATCH BASIN/MANHOLE RIM ELEVATIONS, OVERFLOW STRUCTURES, WEIRS, AND INVERT ELEVATIONS OF ALL PIPES IN CATCH BASINS, MANHOLES, AND THOSE PIPES THAT DAYLIGHT.
12. PIPE MATERIALS USED FOR STORMWATER CONVEYANCE SHALL BE AS APPROVED BY THE JURISDICTION. PIPE SIZE, SLOPE, COVER, ETC., SHALL BE AS SPECIFIED IN THE DRAINAGE MANUAL.
13. ALL DRIVEWAY CULVERTS SHALL BE OF SUFFICIENT LENGTH TO PROVIDE A MINIMUM 3:1 SLOPE FROM THE EDGE OF THE DRIVEWAY TO THE BOTTOM OF THE DITCH. CULVERTS SHALL HAVE BEVELED END SECTIONS TO MATCH THE SIDE SLOPE.
14. IF DRAINAGE OUTLETS (STUB-OUTS) ARE TO BE PROVIDED FOR EACH INDIVIDUAL LOT, THE STUB-OUTS SHALL CONFORM TO THE FOLLOWING:
    A. EACH OUTLET SHALL BE SUITABLY LOCATED AT THE LOWEST ELEVATION ON THE LOT, SO AS TO SERVICE ALL FUTURE ROOF DOWNSPOUTS AND FOOTING DRAINS, DRIVEWAYS, YARD DRAINS, AND ANY OTHER SURFACE OR SUBSURFACE DRAINS NECESSARY TO RENDER THE LOTS SUITABLE FOR THEIR INTENDED USE. EACH OUTLET SHALL HAVE FREE-FLOWING, POSITIVE DRAINAGE TO AN APPROVED STORM WATER CONVEYANCE SYSTEM OR TO AN APPROVED OUTFALL LOCATION.
    B. OUTLETS ON EACH LOT SHALL BE LOCATED WITH A FIVE-FOOT-HIGH, 2"X4" STAKE MARKED "STORM" OR "DRAIN." THE STUB-OUT SHALL VISIBLY EXTEND ABOVE SURFACE LEVEL AND BE SECURED TO THE STAKE.
    C. PIPE MATERIAL SHALL BE AS APPROVED BY THE JURISDICTION.
    D. DRAINAGE EASEMENTS ARE REQUIRED FOR DRAINAGE SYSTEMS DESIGNED TO CONVEY FLOWS THROUGH INDIVIDUAL LOTS.
    E. THE DEVELOPER AND/OR CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL STUB-OUT CONVEYANCE LINES WITH RESPECT TO THE UTILITIES (E.G., POWER, GAS, TELEPHONE, TELEVISION).
    F. ALL INDIVIDUAL STUB-OUTS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE LOT OWNER.
15. THE STORM DRAINAGE SYSTEM SHALL BE CONSTRUCTED ACCORDING TO APPROVED PLANS ON FILE WITH THE JURISDICTION. ANY MATERIAL DEVIATION FROM THE APPROVED PLANS WILL REQUIRE WRITTEN APPROVAL FROM THE JURISDICTION.
16. A COPY OF THE APPROVED STORM WATER PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
17. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SIMILARLY STABILIZED TO THE SATISFACTION OF THE JURISDICTION. FOR SITES WHERE GRASS HAS BEEN PLANTED THROUGH HYDROSEEDING, THE PERFORMANCE BOND WILL NOT BE RELEASED UNTIL THE GRASS HAS BEEN THOROUGHLY ESTABLISHED, UNLESS OTHERWISE APPROVED BY THE JURISDICTION.
18. ALL BUILDING DOWNSPOUTS ON COMMERCIAL SITES SHALL BE CONNECTED TO THE STORM DRAINAGE SYSTEM, UNLESS OTHERWISE APPROVED BY THE JURISDICTION.
19. ALL EROSION CONTROL AND STORMWATER FACILITIES SHALL BE REGULARLY INSPECTED AND MAINTAINED BY THE CONTRACTOR DURING THE CONSTRUCTION PHASE OF THE DEVELOPMENT PROJECT.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. ALL SECTIONS OF THE CURRENT W.S.D.O.T. STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL SHALL APPLY.
21. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN STREET USE AND OTHER RELATED OR REQUIRED PERMITS PRIOR TO ANY CONSTRUCTION ACTIVITY IN THE JURISDICTION'S RIGHT-OF-WAY. IT SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ANY CONSTRUCTION.
22. NO FINAL CUT OR FILL SLOPE SHALL EXCEED TWO (2) HORIZONTAL TO ONE (1) VERTICAL WITHOUT STABILIZATION BY ROCKERY OR BY A STRUCTURAL RETAINING WALL.
23. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, WIDTHS, THICKNESSES, AND ELEVATIONS OF ALL EXISTING PAVEMENTS AND STRUCTURES, INCLUDING UTILITIES AND OTHER FRONTAGE IMPROVEMENTS, THAT ARE TO INTERFACE WITH NEW WORK, PROVIDE ALL TRIMMING, CUTTING, SAW CUTTING, GRADING, LEVELING, SLOPING, COATING, AND OTHER WORK, INCLUDING MATERIALS AS NECESSARY TO CAUSE THE INTERFACE WITH EXISTING WORKS TO BE PROPER, WITHOUT CONFLICT, ACCEPTABLE TO THE ENGINEER AND THE JURISDICTION, COMPLETE IN PLACE, AND READY TO USE.
24. COMPACTION OF ALL FILL AREAS SHALL BE PER CURRENT APWA SPECIFICATIONS. FILL SHALL BE PROVIDED IN 6" MAXIMUM LIFTS AND SHALL BE COMPACTED TO 95 PERCENT OF ITS MAXIMUM RELATIVE DENSITY.
25. CONTRACTOR SHALL CONTACT THE CITY OF TUMWATER PUBLIC WORKS TO OBTAIN FREE ANTI-DUMP DISCS AND INSTALL THEM AT ALL PROJECT STORMWATER STRUCTURES.

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

VERTICAL DATUM
NGVD 29

CITY OF TUMWATER - SANITARY SEWER MAIN INSTALLATION NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF TUMWATER STANDARDS AND THE LATEST EDITION OF THE STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION (WSDOT/APWA).
2. CITY OF TUMWATER DATUM SHALL BE USED FOR ALL VERTICAL CONTROL. A BENCHMARK LIST IS AVAILABLE FROM THE PUBLIC WORKS DEPARTMENT.
3. ALL APPROVALS AND PERMITS REQUIRED BY THE CITY OF TUMWATER SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
4. IF CONSTRUCTION IS TO TAKE PLACE IN THE COUNTY RIGHT-OF-WAY, THE CONTRACTOR SHALL NOTIFY THE COUNTY AND OBTAIN ALL THE REQUIRED APPROVALS AND PERMITS
5. A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE CITY OF TUMWATER CONSTRUCTION INSPECTOR PRIOR TO THE START OF CONSTRUCTION.
6. THE CITY OF TUMWATER CONSTRUCTION INSPECTOR SHALL BE NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE OF A TAP CONNECTION TO AN EXISTING MAIN. TAP ONLY PERFORMED BY CITY.
7. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1-800-424-5555 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.
8. GRAVITY SEWER MAIN SHALL BE PVC, ASTM D 3034 SDR 35 OR ASTM F 789 WITH JOINTS AND RUBBER GASKETS CONFORMING TO ASTM D 3212 AND ASTM F 477.
9. PRECAST MANHOLES SHALL MEET THE REQUIREMENTS OF ASTM C 478. MANHOLES SHALL BE TYPE 1-48" MANHOLE OR LARGER UNLESS OTHERWISE SPECIFIED ON THE PLANS. JOINTS SHALL BE RUBBER GASKETED CONFORMING TO ASTM C 443 AND SHALL BE GROUTED FROM THE INSIDE. LIFT HOLES SHALL BE GROUTED FROM THE OUTSIDE AND INSIDE OF THE MANHOLE.
10. SIDE SEWER SERVICES SHALL BE PVC, ASTM D 3034 SDR 35 WITH FLEXIBLE GASKETED JOINTS. SIDE SEWER CONNECTIONS SHALL BE MADE BY A TAP TO AN EXISTING MAIN OR A WYE BRANCH FROM A NEW MAIN.
11. ALL SEWER MAINS SHALL BE FIELD STAKED FOR GRADES AND ALIGNMENT BY A LICENSED ENGINEERING OR SURVEYING FIRM QUALIFIED TO PERFORM SUCH WORK.
12. BEDDING OF THE SEWER MAIN AND COMPACTION OF THE BACKFILL MATERIAL SHALL BE REQUIRED IN ACCORDANCE WITH THE ABOVE MENTIONED SPECIFICATION (SEE NOTE 1).
13. TEMPORARY STREET PATCHING SHALL BE ALLOWED FOR AS APPROVED BY THE CITY ENGINEER. TEMPORARY STREET PATCHING SHALL BE PROVIDED BY PLACEMENT AND COMPACTION OF ONE INCH MAXIMUM ASPHALT CONCRETE COLD MIX. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AS REQUIRED.
14. EROSION CONTROL MEASURES SHALL BE TAKEN BY THE CONTRACTOR DURING CONSTRUCTION TO PREVENT INFILTRATION OF EXISTING AND PROPOSED STORM DRAINAGE FACILITIES AND ROADWAYS.
15. PROVIDE TRAFFIC CONTROL PLAN(S) IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS REQUIRED.
16. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF THESE APPROVED PLANS ON THE CONSTRUCTION SITE AT ALL TIMES.
17. ANY CHANGES TO THE DESIGN SHALL FIRST BE REVIEWED AND APPROVED BY THE PROJECT ENGINEER AND THE CITY OF TUMWATER.
18. ALL LINES SHALL BE CLEANED AND PRESSURE TESTED IN CONFORMANCE WITH THE ABOVE REFERENCED SPECIFICATIONS (SEE NOTE 1). A WATER TEST OF ALL MANHOLES IN ACCORDANCE WITH TUMWATER STANDARD IS ALSO REQUIRED. TESTING SHALL TAKE PLACE AFTER ALL UNDERGROUND UTILITIES ARE INSTALLED AND COMPACTION OF THE ROADWAY SUBGRADE IS COMPLETED.
19. PRIOR TO BACKFILL, ALL MAINS AND APPURTENANCES SHALL BE INSPECTED AND APPROVED BY THE CITY OF TUMWATER CONSTRUCTION INSPECTOR. APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM CORRECTION OF ANY DEFICIENCIES AND/OR FAILURES AS DETERMINED BY SUBSEQUENT TESTING AND INSPECTIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF TUMWATER FOR THE REQUIRED INSPECTIONS.
20. ALL SANITARY SEWER MAINS SHALL BE PLACED IN PUBLIC RIGHT-OF-WAY OR IF IN EASEMENT AREAS, PROVIDE 12 FOOT WIDE PAVED (SIX INCH BALLAST, TWO INCH CRUSHED, TWO INCH ASPHALT) ACCESS TO ALL MANHOLES. NO LOT LINE SEWER MAINS WILL BE ALLOWED.
21. ALL MAINS WILL BE DEDICATED TO THE CITY FOR MAINTENANCE WITH APPROPRIATE BILLS OF SALE AND EASEMENTS.
22. CITY OWNERSHIP OF THE MAIN AND LATERAL WILL GO TO THE PROPERTY LINE OR EASEMENT IF A CLEANOUT EXISTS AT THIS POINT. IF NO CLEANOUT EXISTS, CITY RESPONSIBILITY ENDS AT THE LIMIT OF THE MAIN.
23. ALL PIPE AND SERVICES SHALL BE INSTALLED WITH 12 GAUGE COATED COPPER WIRE, WRAPPED AROUND THE PIPE, BROUGHT UP AND TIED OFF AT TOPS OF MANHOLES, CLEANOUTS AND STUB MARKERS.
24. ALL NEWLY CONSTRUCTED MANHOLES SHALL BE COATED ON THE OUTSIDE 4-FOOT BELOW GRADE TO THE BOTTOM OF THE MANHOLE.

CITY OF TUMWATER - STREET CONSTRUCTION NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF TUMWATER STANDARDS AND THE 2018 STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL IN ACCORDANCE WITH THE M.U.T.C.D. PRIOR TO DISRUPTION OF ANY TRAFFIC, TRAFFIC CONTROL PLANS SHALL BE PREPARED AND SUBMITTED TO THE CITY FOR APPROVAL. NO WORK SHALL COMMENCE UNTIL ALL APPROVED TRAFFIC CONTROL IS IN PLACE.
3. ALL CURB AND GUTTER, STREET GRADES, SIDEWALK GRADES, AND ANY OTHER VERTICAL AND/OR HORIZONTAL ALIGNMENT SHALL BE STAKED BY AN ENGINEERING OR SURVEYING FIRM CAPABLE OF PERFORMING SUCH WORK.
4. WHERE NEW ASPHALT JOINS EXISTING, THE EXISTING ASPHALT SHALL BE CUT TO A NEAT VERTICAL EDGE AND TACKED WITH ASPHALT EMULSION TYPE CSS-1 IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE NEW ASPHALT SHALL BE FEATHERED BACK OVER EXISTING TO PROVIDE FOR A SEAL AT THE SAW CUT LOCATION AND THE JOINT SEALED WITH GRADE AR-4000W PAVING ASPHALT.
5. COMPACTION OF SUBGRADE, ROCK, AND ASPHALT SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
6. FORM AND SUBGRADE INSPECTION BY THE CITY IS REQUIRED BEFORE POURING CONCRETE. TWENTY-FOUR HOURS NOTICE IS REQUIRED FOR FORM INSPECTION.
7. SEE THE CITY OF TUMWATER DEVELOPMENT GUIDELINES FOR TESTING AND SAMPLING FREQUENCIES.
8. CONTRACTOR SHALL INSTALL CURB & GUTTER VIA MACHINE WHEN GRADE IS 0.5-PERCENT OR LESS.

CITY OF TUMWATER - WATER MAIN INSTALLATION NOTES

1. ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH CITY OF TUMWATER STANDARDS AND THE 2018 STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, LATEST EDITION.
2. A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE CITY PRIOR TO THE START OF CONSTRUCTION.
3. WATER MAINS EQUAL TO OR LESS THAN TWELVE INCHES IN DIAMETER SHALL BE AWWA C900 FACTORY MUTUAL APPROVED PRESSURE CLASS 150 PVC OR CEMENT MORTAR-LINED DUCTILE IRON, THICKNESS CLASS 50. ALL WATER MAINS LARGER THAN 12 INCHES IN DIAMETER SHALL BE AWWA C905, PR 235 PVC OR CEMENT MORTAR-LINED DUCTILE IRON, THICKNESS CLASS 50.
4. GATE VALVES SHALL BE RESILIENT WEDGE, NRS (NON RISING STEM) WITH O-RINGS SEALS. VALVE ENDS SHALL BE MECHANICAL JOINT OR ANSI FLANGES. VALVES SHALL CONFORM TO AWWA 509-80. VALVES SHALL BE MUELLER, M & H, KENNEDY, CLOW R/W OR WATEROUS SERIES 500. EXISTING VALVES SHALL BE OPERATED BY CITY EMPLOYEES ONLY.
5. HYDRANTS SHALL BE THE DRY BARREL TYPE AND ONE OF THE FOLLOWING: WATEROUS, M & H, MUELLER, OR CLOW. HYDRANTS SHALL BE BAGGED UNTIL SYSTEM IS APPROVED. ALL HYDRANTS SHALL BE EQUIPPED WITH STORZ ADAPTERS.
6. ALL LINES SHALL BE CHLORINATED AND TESTED IN CONFORMANCE WITH THE ABOVE REFERENCED SPECIFICATION (SEE NOTE 1).
7. ALL PIPE AND SERVICES SHALL BE INSTALLED WITH 12 GAUGE COATED COPPER WIRE, WRAPPED AROUND THE PIPE, BROUGHT UP AND TIED OFF AT TOP OF VALVE BOX.
8. PROVIDE TRAFFIC CONTROL PLAN(S) AS REQUIRED IN ACCORDANCE WITH MUTCD.
9. ALL WATER MAINS SHALL BE STAKED FOR GRADES AND ALIGNMENT BY AN ENGINEERING OR SURVEYING FIRM CAPABLE OF PERFORMING SUCH WORK.
10. CALL UNDERGROUND LOCATE AT 1-800-424-5555 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATIONS.
11. WHERE CONNECTIONS REQUIRE "FIELD VERIFICATION", CONNECTION POINTS WILL BE EXPOSED BY CONTRACTOR AND FITTINGS VERIFIED 48 HOURS PRIOR TO DISTRIBUTING SHUT-DOWN NOTICES.
12. AT ANY CONNECTION TO AN EXISTING LINE WHERE A NEW VALVE IS NOT INSTALLED, THE EXISTING VALVE MUST BE PRESSURE TESTED TO CITY STANDARDS PRIOR TO CONNECTION. IF AN EXISTING VALVE FAILS TO PASS THE TEST, THE CONTRACTOR SHALL MAKE THE NECESSARY PROVISIONS TO TEST THE NEW LINE PRIOR TO CONNECTION TO THE EXISTING SYSTEM OR INSTALL A NEW VALVE.
13. NO LOT LINE WATERMAINS ARE ALLOWED.
14. MEGALUG RESTRAINED JOINTS (OR EQUAL) SHALL BE USED AT ALL WATER LINE FITTINGS, BENDS, TEES, ETC. FOR 16" WATER LINE. CONTRACTOR SHALL COORDINATE WITH THE JOINT RESTRAINT MANUFACTURER AND SUPPLIER TO DETERMINE NUMBER OF JOINTS REQUIRED TO BE RESTRAINED AT EACH FITTING.
15. CONTRACTOR SHALL INSTALL FIELD LOCK GASKETS FOR WATERMAINS.

CITY OF TUMWATER - TRENCH BACKFILL & RESTORATION NOTES (FOR WORK IN THE ROW)

A. ALL TRENCH AND PAVEMENT CUTS SHALL BE MADE BY SAW CUTS. THE CUTS SHALL BE A MINIMUM OF 1 FOOT OUTSIDE THE TRENCH WIDTH.

B. ALL TRENCHING SHALL BE BACKFILLED AS ACCORDING TO WSDOT/APWA AND CITY OF TUMWATER STANDARDS EXCEPT AS NOTED BELOW.

IF THE EXISTING MATERIAL IS DETERMINED BY THE CITY TO BE SUITABLE FOR BACKFILL, THE CONTRACTOR MAY USE THE NATIVE MATERIAL. ALL TRENCH BACKFILL MATERIALS SHALL BE COMPACTED TO 95% DENSITY. BACKFILL COMPACTION SHALL BE PERFORMED IN 6 INCH LIFTS.

PERPENDICULAR TRENCHES SHALL BE BACKFILLED WITH CONTROLLED DENSITY FILL AS ACCORDING TO DETAIL NO. ST-13.

REPLACEMENT OF THE ASPHALT CONCRETE OR PORTLAND CONCRETE CEMENT SHALL BE OF EXISTING DEPTH PLUS 1 INCH, OR TOTAL THICKNESS OF 3 INCHES, WHICHEVER IS GREATER.

C. TACK SHALL BE APPLIED TO THE EXISTING PAVEMENT AND EDGE OF CUT AND SHALL BE EMULSIFIED ASPHALT GRADE CSS-1 AS SPECIFIED IN SECTION 9-02.1(6) OF THE WSDOT/APWA STANDARD SPECIFICATIONS. TACK COAT SHALL BE APPLIED AS SPECIFIED IN SECTION 5-04 OF THE WSDOT/APWA STANDARD SPECIFICATIONS.

D. ASPHALT CONCRETE CLASS B SHALL BE PLACED ON THE PREPARED SURFACE BY AN APPROVED PAVING MACHINE AND SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SECTION 5-04 OF THE WSDOT/APWA STANDARD SPECIFICATIONS, EXCEPT THAT LONGITUDINAL JOINTS BETWEEN SUCCESSIVE LAYERS OF ASPHALT CONCRETE SHALL BE DISPLACED LATERALLY A MINIMUM OF 12 INCHES UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. FINE AND COARSE AGGREGATE SHALL BE IN ACCORDANCE WITH SECTION 9-03.8 OF THE WSDOT/APWA STANDARD SPECIFICATIONS. ASPHALT CONCRETE OVER 2 INCHES THICK SHALL BE PLACED IN EQUAL LIFTS NOT TO EXCEED 2 INCHES EACH.

ALL STREET SURFACES, WALKS OR DRIVEWAYS WITHIN THE STREET TRENCHING AREAS AFFECTED BY THE TRENCHING SHALL BE FEATHERED AND SHIMMED TO AN EXTENT THAT PROVIDES A SMOOTH-RIDING CONNECTION AND EXPEDITIOUS DRAINAGE FLOW FOR THE NEWLY PAVED SURFACE. SHIMMING AND FEATHERING AS REQUIRED BY THE CITY ENGINEER SHALL BE 4-17 ACCOMPLISHED BY RAKING OUT THE OVERSIZED AGGREGATES FROM THE CLASS B MIX AS APPROPRIATE. SURFACE SMOOTHNESS SHALL BE PER SECTION 5-04.3(13) OF THE WSDOT/APWA STANDARD SPECIFICATIONS. THE PAVING SHALL BE CORRECTED BY REMOVAL AND REPAVING OF THE TRENCH ONLY.

E. ALL JOINTS SHALL BE SEALED USING PAVING ASPHALT AR4000W.

F. WHEN TRENCHING WITHIN THE ROADWAY SHOULDER(S), THE SHOULDER SHALL BE RESTORED TO ITS ORIGINAL OR BETTER CONDITION.

G. THE FINAL PATCH SHALL BE COMPLETED AS SOON AS POSSIBLE AND SHALL BE COMPLETED WITHIN 30 DAYS AFTER FIRST OPENING THE TRENCH. THIS TIME FRAME MAY BE ADJUSTED IF DELAYS ARE DUE TO INCLEMENT PAVING WEATHER, OR OTHER ADVERSE CONDITIONS THAT MAY EXIST. HOWEVER, DELAYING OF FINAL PATCH OF OVERLAY WORK IS ALLOWABLE ONLY SUBJECT TO THE CITY ENGINEER'S APPROVAL. THE CITY ENGINEER MAY DEEM IT NECESSARY TO COMPLETE THE WORK WITHIN THE 30 DAYS TIME FRAME AND NOT ALLOW ANY TIME EXTENSION. IF THIS OCCURS, THE CONTRACTOR SHALL PERFORM THE NECESSARY WORK AS DIRECTED BY THE CITY ENGINEER.

H. WHEN TRENCHING WITHIN AN EXISTING ROADWAY, NO EXISTING ASPHALT LESS THAN 4' WIDE SHALL BE LEFT IN PLACE. THE CONTRACTOR WILL BE REQUIRED TO REMOVE EXISTING ASPHALT AND REPLACE AT THE TIME OF PATCHING THE TRENCH.

REVISIONS

PROJECT NO.
163.001
DRAWN
C. DAHM
CHECKED
–
SUBMITTAL DATES
OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP
WHITNEY E. DUMAS
STATE OF WASHINGTON
20122774
REGISTERED
PROFESSIONAL ENGINEER
12/04/2023

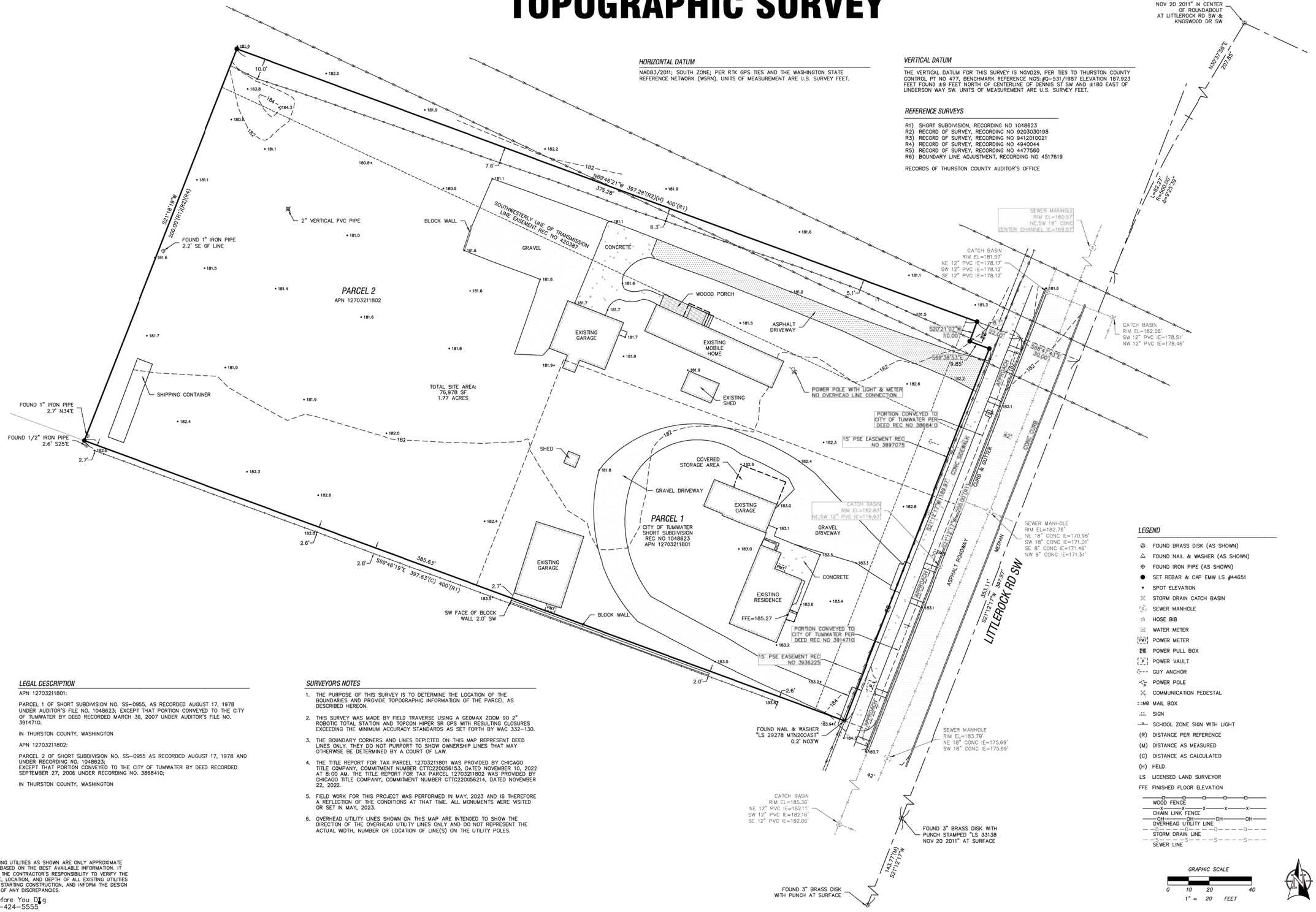
SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
CITY OF TUMWATER GENERAL NOTES

SHEET
GN-02

TOPOGRAPHIC SURVEY



LEGAL DESCRIPTION

APN 12703211801:

PARCEL 1 OF SHORT SUBDIVISION NO. SS-0955, AS RECORDED AUGUST 17, 1978 UNDER AUDITOR'S FILE NO. 1048623; EXCEPT THAT PORTION CONVEYED TO THE CITY OF TUMWATER BY DEED RECORDED MARCH 30, 2007 UNDER AUDITOR'S FILE NO. 3914710.

IN THURSTON COUNTY, WASHINGTON

APN 12703211802:

PARCEL 2 OF SHORT SUBDIVISION NO. SS-0955 AS RECORDED AUGUST 17, 1978 AND UNDER RECORDING NO. 1048623;
EXCEPT THAT PORTION CONVEYED TO THE CITY OF TUMWATER BY DEED RECORDED SEPTEMBER 27, 2006 UNDER RECORDING NO. 3868410;

IN THURSTON COUNTY, WASHINGTON

SURVEYOR'S NOTES

1. THE PURPOSE OF THIS SURVEY IS TO DETERMINE THE LOCATION OF THE BOUNDARIES AND PROVIDE TOPOGRAPHIC INFORMATION OF THE PARCEL AS DESCRIBED HEREON.
2. THIS SURVEY WAS MADE BY FIELD TRAVERSE USING A GEOMAX ZOOM 90 2" ROBOTIC TOTAL STATION AND TOPCON HIPER SR GPS WITH RESULTING CLOSURES EXCEEDING THE MINIMUM ACCURACY STANDARDS AS SET FORTH BY WAC 332-130.
3. THE BOUNDARY CORNERS AND LINES DEPICTED ON THIS MAP REPRESENT DEED LINES ONLY. THEY DO NOT PURPORT TO SHOW OWNERSHIP LINES THAT MAY OTHERWISE BE DETERMINED BY A COURT OF LAW.
4. THE TITLE REPORT FOR TAX PARCEL 12703211801 WAS PROVIDED BY CHICAGO TITLE COMPANY, COMMITMENT NUMBER CTTC2200056153, DATED NOVEMBER 10, 2022 AT 8:00 AM. THE TITLE REPORT FOR TAX PARCEL 12703211802 WAS PROVIDED BY CHICAGO TITLE COMPANY, COMMITMENT NUMBER CTTC2200056214, DATED NOVEMBER 22, 2022.
5. FIELD WORK FOR THIS PROJECT WAS PERFORMED IN MAY, 2023 AND IS THEREFORE A REFLECTION OF THE CONDITIONS AT THAT TIME. ALL MONUMENTS WERE VISITED OR SET IN MAY, 2023.
6. OVERHEAD UTILITY LINES SHOWN ON THIS MAP ARE INTENDED TO SHOW THE DIRECTION OF THE OVERHEAD UTILITY LINES ONLY AND DO NOT REPRESENT THE ACTUAL WIDTH, NUMBER OR LOCATION OF LINE(S) ON THE UTILITY POLES.

NOTE:
THE EXISTING UTILITIES AS SHOWN ARE ONLY APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE SIZE, TYPE, LOCATION, AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION, AND INFORM THE DESIGN ENGINEER OF ANY DISCREPANCIES.
Call Before You Dig
1-800-424-5555

SHT. 1 OF 1

A PORTION OF THE NE 1/4 & NW 1/4 OF THE NW 1/4 OF SECTION 3, T17N, R2W, W.M.

FOR: TREVOR COLBY

CITY OF TUMWATER, THURSTON COUNTY, WA

TOPOGRAPHIC SURVEY

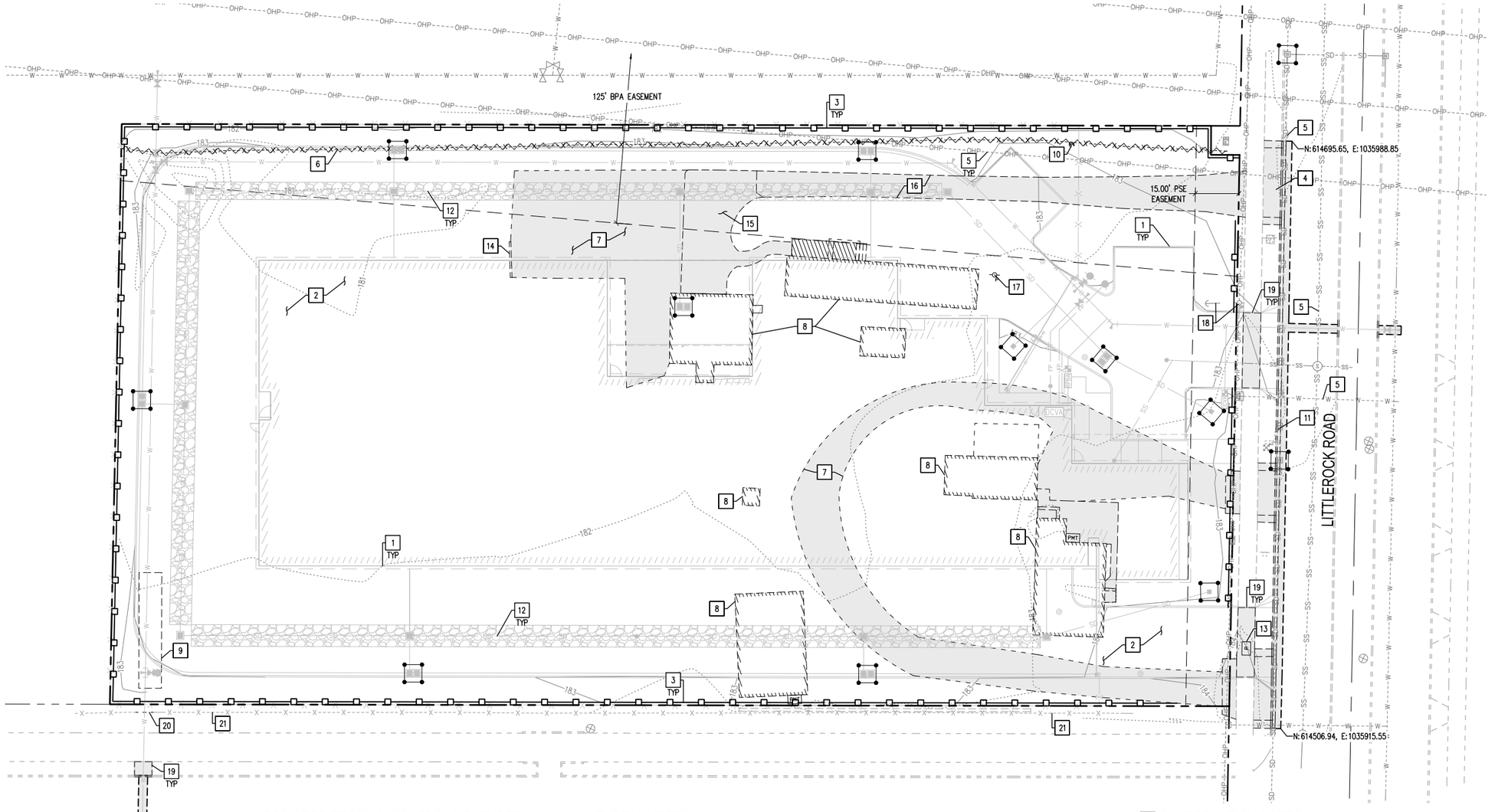
DRAFTED: JR
DATE: 7/17/2023
SCALE: 1"=20'

CHECKED: EW
JOB NO.: COLBT-230222
FIELD CREWED: MR

WASHINGTON STATE REGISTERED PROFESSIONAL LAND SURVEYOR EVAN M. WAHLSTROM 7/17/2023

6115 & 6119 LITTLEROCK RD
TUMWATER, WA 98512
TAX PARCEL NO. 12703211802 & 12703211801

informed land survey
PO Box 5137
Tacoma, WA 98415-0137
Phone: 253-627-2070
evan@informedsurvey.com
www.informedsurvey.com
LAND SURVEYING • MAPPING • CONSTRUCTION LAYOUT



N

0 20 40

SCALE IN FEET

LEGEND

- PROPERTY LINE
- EASEMENT
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING CURB
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING OVERHEAD POWER LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING STORM LINE
- EXISTING POWER POLE
- EXISTING POWER VAULT
- EXISTING PHONE PEDESTAL
- EXISTING CATCH BASIN
- EXISTING SEWER MANHOLE
- EXISTING WATER METER
- EXISTING GATE VALVE
- HIGH VISIBILITY SILT FENCE: SEE EC-02
- SAWCUT (FULL DEPTH)
- ASPHALT, GRAVEL, CONCRETE, CURB & GUTTER, AND BASE MATERIAL TO BE REMOVED, INCLUDING HAUL TO A CONTRACTOR PROVIDED WASTE SITE
- PROPOSED STORM LINE
- PROPOSED CATCH BASIN
- INLET PROTECTION: SEE EC-02
- APPROXIMATED LINEWORK FOR EXIST. NON-SURVEYED IMPROVEMENTS

REQUIRED EROSION CONTROL MEASURES

CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES FOR ALL SLOPES DURING AND AFTER CONSTRUCTION PER THE TABLE BELOW

SLOPE	
4:1–2:1 (25%–50%)	TENSAR ROLLMAX SC150BN
2:1–1:1 (50%–100%)	TENSAR ROLLMAX C125BN

GENERAL NOTES

1. CONTRACTOR SHALL SECURE ALL STORAGE AREAS
2. CONTRACTOR SHALL PROVIDE ALL EROSION CONTROL MEASURES FOR STORAGE AND STOCKPILE AREAS
3. ALL MATERIALS STORED ON-SITE SHALL HAVE PROPER ENCLOSURES AND/OR COVERINGS
4. SEE LANDSCAPE PLANS FOR SEEDING AND PLANTING REQUIREMENTS
5. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO COMMENCING WITH ANY SITE DISTURBING ACTIVITIES
6. SIDEWALK, DRIVEWAYS, AND CURBING THAT ARE TO BE REMOVED SHALL BE SAWCUT AND REMOVED TO THE NEAREST FULL DEPTH EXPANSION JOINT REGARDLESS OF THE DEMOLITION LIMITS THAT ARE SHOWN ON THE PLANS. SAWCUTTING BETWEEN JOINTS SHALL NOT BE ALLOWED
7. THE CONTRACTOR SHALL INSTALL OR CONSTRUCT ADDITIONAL EROSION CONTROL MEASURES AS REQUIRED TO SATISFY THE REQUIREMENTS OF THE STATE'S CONSTRUCTION STORMWATER DISCHARGE PERMIT AT NO ADDITIONAL COST TO THE OWNER. THE SHOWN BMPS ARE THE MINIMUM REQUIRED BMPS TO START CONSTRUCTION ACTIVITIES.
8. CONTRACTOR TO REMOVE ALL EXISTING UTILITIES LOCATED UNDER THE BUILDING. OTHER UTILITIES FOUND MAY BE ABANDONED IN PLACE PROVIDED THEY DO NOT CONFLICT WITH ANY PROPOSED UTILITIES OR OTHER PROPOSED IMPROVEMENTS. UTILITIES TO ABANDONED IN PLACE TO BE CUT AND CAPPED. LAST 2 FEET OF PIPE TO BE FILLED WITH CDF.
9. CONTRACTOR TO REMOVE EXISTING SEPTIC SYSTEMS SERVING THE BUILDINGS IN ACCORDANCE WITH WASHINGTON STATE AND THURSTON COUNTY DEPARTMENT OF HEALTH STANDARDS.
10. RECORDS SHOW BOTH PROPERTIES WERE SERVED BY ON-SITE SEPTIC SYSTEMS. SEPTIC TANKS AND DRAINFIELDS WERE NOT IDENTIFIED DURING SURVEY. CONTRACTOR SHALL LOCATE AND ABANDON PER DOH REQUIREMENTS (WAC 246-272A-300) AND REMOVE COMPONENTS AS NECESSARY FOR CONSTRUCTION.
11. LINEWORK OUTSIDE THE LIMITS OF SURVEY HAS BEEN ADDED TO DEPICT APPROXIMATE EXTENT OF RESTORATION REQUIRED FOR UTILITY CONNECTIONS TO THE SOUTHERN PROPERTY AND WITHIN LITTLEROCK ROAD. CONTRACTOR TO VERIFY AND NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN APPROXIMATE LINEWORK AND FIELD CONDITIONS PRIOR TO BEGINNING WORK IN THESE LOCATIONS. FOR SURVEYED INFORMATION, SEE SURVEY SV-01

[X] CONSTRUCTION NOTES

1. PROPOSED SITE IMPROVEMENTS SHOWN FOR REFERENCE ONLY
2. CLEAR, GRUB, AND EXCAVATE AS NECESSARY FOR SITE AND FRONTAGE IMPROVEMENTS (TYP). EXCESS MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE LOCAL, COUNTY, STATE, AND FEDERAL LAWS AND REGULATIONS AT A CONTRACTOR PROVIDED WASTE SITE
3. HIGH VISIBILITY SILT FENCE: SEE EC-02
4. UTILIZE EXISTING DRIVEWAY FOR CONSTRUCTION ENTRANCE OR INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL ON EC-02
5. PROTECT EXISTING UTILITY IN-PLACE. REPLACE IN-KIND IF DAMAGED
6. REMOVE AND DISPOSE OF EXISTING FENCE
7. REMOVE AND DISPOSE OF EXISTING GRAVEL DRIVEWAY
8. REMOVE AND DISPOSE OF EXISTING STRUCTURE INCLUDING BUILDING FOUNDATION, DECKS, PORCHES, CONCRETE PADS, AND AWNINGS. CONTRACTOR TO DISCONNECT AND REMOVE ALL UTILITIES SERVING THE BUILDING TO BE REMOVED
9. REMOVE AND DISPOSE OF EXISTING SHIPPING CONTAINER
10. REMOVE AND DISPOSE OF EXISTING HOSE BIB. WATER SERVICE LINE TO BE CAPPED AND ABANDONED IN PLACE IN ACCORDANCE WITH NOTE 8 OF THE GENERAL NOTES
11. REMOVE AND DISPOSE OF EXISTING CURB, GUTTER, AND DRIVEWAY APPROACHES ALONG THE PROPERTY FRONTAGE. SAWCUT SHOWN 2' FROM EDGE OF GUTTER
12. PROTECT FUTURE INFILTRATION GALLERIES DURING CONSTRUCTION. CONTRACTOR TO AVOID STOCKPILING MATERIAL AND PLACING HEAVY EQUIPMENT IN AREA OF FUTURE INFILTRATION TO MAXIMUM EXTENT PRACTICABLE
13. EXISTING POWER VAULT TO BE RELOCATED. RELOCATION TO BE COORDINATED WITH PSE PRIOR TO CONSTRUCTION
14. REMOVE & DISPOSE OF EXISTING BLOCK WALL
15. REMOVE & DISPOSE OF EXISTING CONCRETE DRIVEWAY
16. REMOVE & DISPOSE OF EXISTING ASPHALT DRIVEWAY
17. REMOVE & DISPOSE OF EXISTING POWER POLE, LIGHT, AND METER
18. PROTECT EXISTING UTILITY POLE AND GUY WIRE IN-PLACE
19. SAWCUT, REMOVE, AND REPLACE SIDEWALK TO NEAREST CONTROL JOINT
20. REMOVE AND REINSTALL EXISTING FENCE AS NECESSARY FOR WATER MAIN INSTALLATION
21. PROTECT EXISTING FENCE IN-PLACE. REPLACE IN-KIND IF DAMAGED

CALL BEFORE YOU DIG

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VERTICAL DATUM
NGVD 29

REVISIONS

PROJECT NO.
163.001
DRAWN
C. DAHM
CHECKED
–
SUBMITTAL DATES

OTB DATE
–

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20122774
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PROFESSIONAL ENGINEER
12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

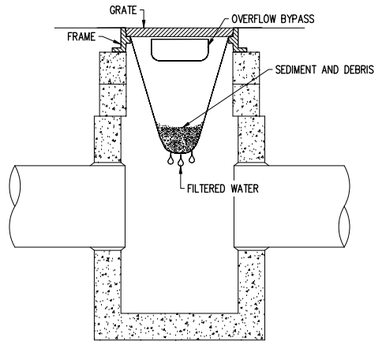
TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
EROSION CONTROL & DEMOLITION PLAN

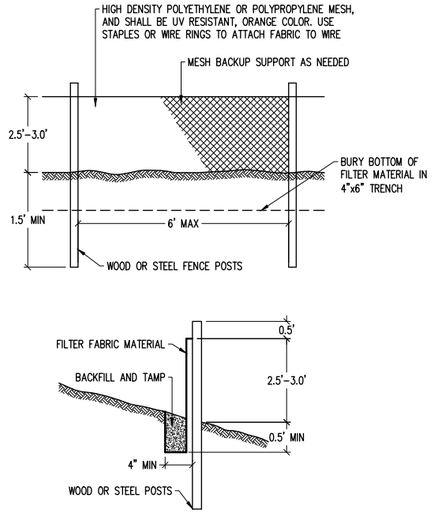
SHEET
EC-01

GENERAL EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL FOLLOW EROSION CONTROL PRACTICES OUTLINED IN THE MOST CURRENT EDITION OF THE CITY OF TUMWATER DRAINAGE DESIGN AND EROSION CONTROL MANUAL AND THE SWPPP.
2. EROSION CONTROL MEASURES ARE NOT LIMITED TO THE ITEMS ON THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES. NO SILTATION OF EXISTING OR PROPOSED DRAINAGE FACILITIES SHALL BE ALLOWED. CARE SHALL BE TAKEN TO PREVENT MIGRATION OF SILTS TO OFF-SITE PROPERTIES.
3. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE BEGINNING OF CONSTRUCTION. THE PROJECT ENGINEER AND THE REVIEWING AGENCY SHALL INSPECT AND APPROVE THE INSTALLATION OF EROSION CONTROL MEASURES PRIOR TO BEGINNING CONSTRUCTION.
   A. INSTALL INLET SEDIMENTATION AS SPECIFIED AT ALL CATCH BASIN LOCATIONS IMMEDIATELY UPON ARRIVAL AT PROJECT/CONSTRUCTION SITE.
   B. STABILIZED CONSTRUCTION ENTRANCE SHALL CONFORM TO DETAIL ON THIS SHEET. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT ALL INGRESS/EGRESS POINTS TO CONSTRUCTION SITE.
4. ALL EROSION/SEDIMENTATION CONTROL FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL CONSTRUCTION IS COMPLETE AND THE SITE HAS BEEN STABILIZED. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND ADDITIONS TO THE SYSTEM AS REQUIRED BY THE OWNER, ENGINEER, OR THE AUTHORITY HAVING JURISDICTION.
5. THE CONTRACTOR SHALL MAKE A DAILY SURVEILLANCE OF ALL EROSION CONTROL MEASURES AND MAKE ANY NECESSARY REPAIRS OR ADDITIONS TO THE EROSION CONTROL MEASURES AS REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL MEASURES AS DETERMINED NECESSARY BY THE INSPECTOR AND/OR PROJECT ENGINEER. FAILURE TO COMPLY WITH ALL LOCAL AND STATE EROSION CONTROL REQUIREMENTS MAY RESULT IN CIVIL PENALTIES BEING LEVIED AGAINST THE CONTRACTOR.
6. PRIOR TO CLEARING AND GRADING THE CONTRACTOR SHALL PROTECT TREES TO BE SAVED WITH HIGH VISIBILITY FENCING AT THE ROOT PROTECTION DELINEATION OR OTHERWISE PROTECTED AS DIRECTED BY THE ENGINEER, CITY STAFF, OR OWNERS REPRESENTATIVE. CLEARING AND GRADING LIMITS SHALL BE STAKED IN THE FIELD PRIOR TO EXCAVATION.
7. ALL STORM DRAINAGE INLETS RECEIVING RUNOFF FROM THE PROJECT DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER WILL BE FILTERED BEFORE ENTERING THE CONVEYANCE SYSTEM.
8. ALL OFF-SITE CATCH BASINS IMMEDIATELY ADJACENT TO THE PROPOSED SITE SHALL BE PROTECTED FROM SILTATION.
9. THE CONSTRUCTION OF TRENCHES (E.G., PIPES, UNDERGROUND UTILITY LINES AND STRUCTURES) SHALL BE SUBJECT TO THE FOLLOWING CRITERIA:
   A. NO MORE THAN 300 FEET OF TRENCH ON A DOWNSLOPE OF MORE THAN FIVE PERCENT SHALL BE OPENED AT ONE TIME.
   B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
10. TRENCH DEWATERING DEVICES SHALL BE DISCHARGED IN A MANNER THAT WILL NOT ADVERSELY AFFECT STREAMS, DRAINAGE SYSTEMS, OR OFF-SITE PROPERTIES.
11. TRACKING OF SOIL, MUD, OR DEBRIS OFF-SITE IS NOT ALLOWED. SOIL, MUD, OR DEBRIS TRACKED ONTO A PUBLIC ROADWAY, SHALL BE REMOVED BY THE END OF THAT WORKING DAY. TO PREVENT THE TRACKING OF SOIL, MUD, OR DEBRIS ONTO PUBLIC ROADWAYS, SWEEPING OR WASHING OF THE VEHICLE'S TIRES MAY BE REQUIRED PRIOR TO ENTERING A PUBLIC ROADWAY.
12. ALL DISTURBED AREAS SHALL BE HYDROSEEDED WITH EROSION CONTROL SEED MIX. INCLUDING BUT NOT LIMITED TO ROADWAY EMBANKMENTS, SHOULDERS, UTILITY EASEMENTS, STAGING AREAS, CONSTRUCTED WETLANDS AND CUT/FILL SLOPES.
13. ALL SEEDED OR SODDED AREAS SHALL BE CHECKED REGULARLY TO ENSURE VEGETATIVE COVERAGE IS COMPLETE. AREAS SHALL BE REPAIRED, RESEEDED, AND FERTILIZED AS REQUIRED.
14. DROP-IN CATCH BASIN FILTERS MAY BE USED IN PLACE OF OTHER STANDARD INLET PROTECTION PRACTICES. THIS INLET PROTECTION TECHNOLOGY CAN BE USED IN SITUATIONS WHERE RIGHT-OF-WAY FLOODING WOULD BE PROBLEMATIC.
15. TO MAINTAIN FUNCTION, THE CONTRACTOR SHALL REMOVE AND CLEAN OR REPLACE FILTERS AFTER EACH STORM EVENT. CONTACT THE JURISDICTION TO DETERMINE ITS ACCEPTANCE OF SPECIFIC FILTER PRODUCTS, PRIOR TO INSTALLATION.
16. NO MATERIAL SHALL BE STOCKPILED ON PAVEMENT WITHOUT AUTHORIZATION FROM THE PROJECT ENGINEER OR OWNERS REPRESENTATIVE WHICH WILL BE CONDITIONAL ON IMPLEMENTATION OF A PROCEDURE TO PREVENT SEDIMENT TRANSPORT.
17. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED OR AFTER THE MEASURES ARE NO LONGER NEEDED. SEDIMENT COLLECTED IN TRAPS, PONDS, OR SILT FENCE SHALL BE REMOVED AND DISPOSED IN AN APPROVED MANNER OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM SEDIMENT REMOVAL SHALL BE PERMANENTLY STABILIZED WITHIN SEVEN (7) DAYS.



INLET PROTECTION
NTS



HIGH VISIBILITY SILT FENCE
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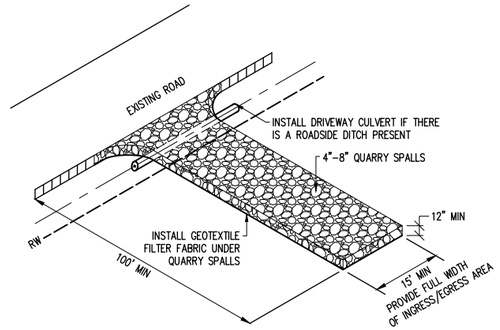

NOTES
1. INSTALL CONSTRUCTION ENTRANCE AT LOCATION WHERE ACCESS OFF OF A PAVED ROADWAY BEGINS.
2. DRIVEWAY SHALL MEET THE REQUIREMENTS OF THE PERMITTING AGENCY
3. IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD

STABILIZED CONSTRUCTION ENTRANCE
NTS

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VERTICAL DATUM
NGVD 29

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JSA CIVIL
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12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
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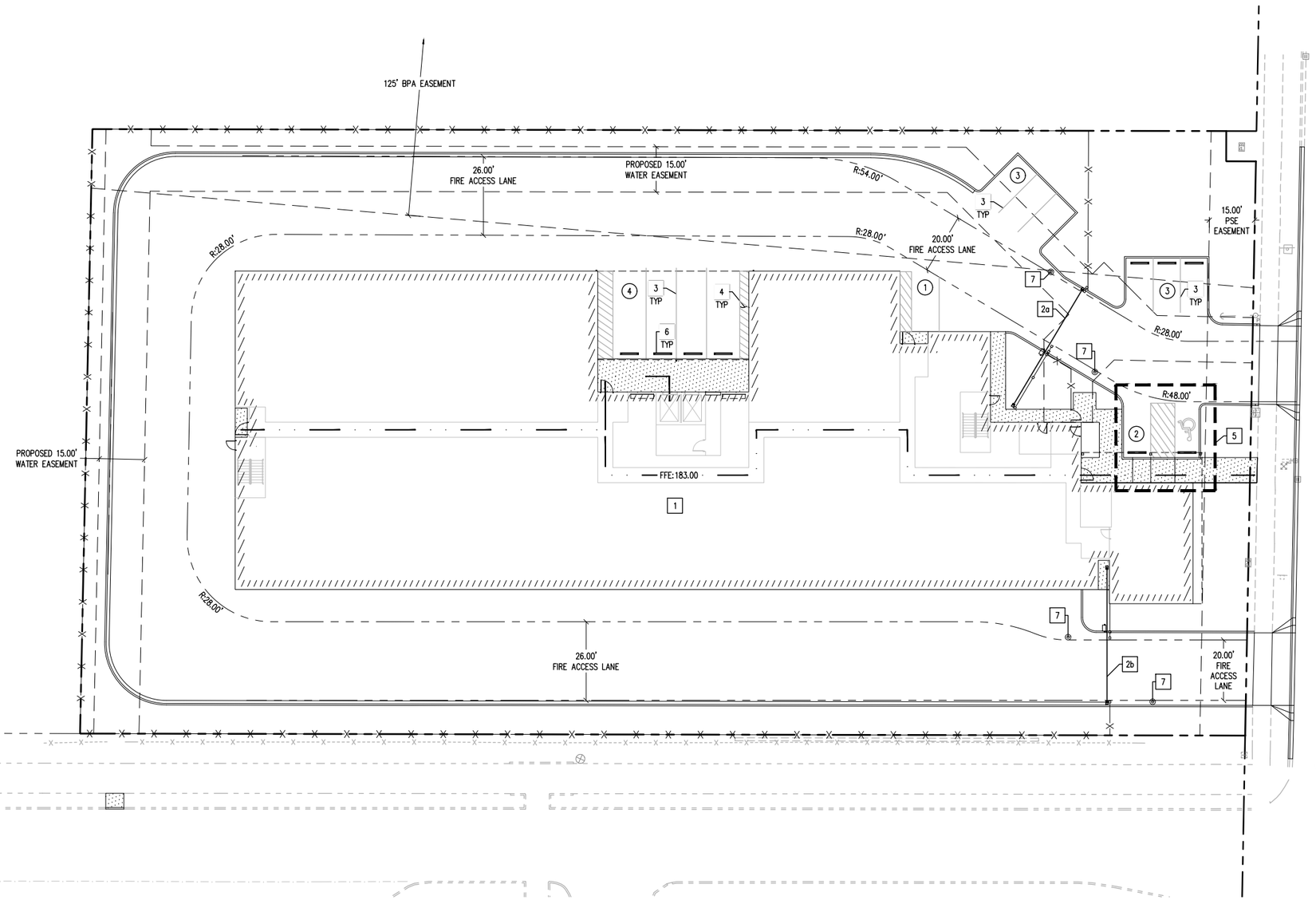
SHEET TITLE
EROSION CONTROL NOTES & DETAILS

SHEET
EC-02



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SCALE IN FEET

LEGEND

- PROPERTY LINE
- EASEMENT
- SETBACK LINE
- EXISTING CURB
- PROPOSED BUILDING
- ROOF OVERHANG
- FIRE LANE
- 8' TALL HIGH SECURITY PERIMETER FENCE: SEE ARCHITECTURAL PLANS
- EXTRUDED CONCRETE CURB
- CEMENT CONCRETE CURB & GUTTER
- CEMENT CONCRETE SIDEWALK
- (XX) STALL COUNT
- ADA PATHWAY

[X] CONSTRUCTION NOTES

1. STORAGE FACILITY: SEE ARCHITECTURAL PLANS
2. SECURITY GATE: SEE ARCHITECTURAL PLANS
   a. ENTRY & EXIT
   b. EXIT ONLY
3. 4" WIDE STRIPE
   2 COATS OF WHITE PAINT
   W/ 7 MIL DFT PER COAT (MIN)
4. 4" WIDE 45° STRIPING AT 48" O.C.
   2 COATS OF WHITE PAINT
   W/ 7 MIL DFT PER COAT (MIN)
5. ACCESSIBLE PARKING STALL: SEE SP-03
6. CEMENT CONCRETE WHEELSTOP: SEE SP-03
7. KEY PAD FOR SECURITY GATE: SEE ARCHITECTURAL PLANS

CALL BEFORE YOU DIG

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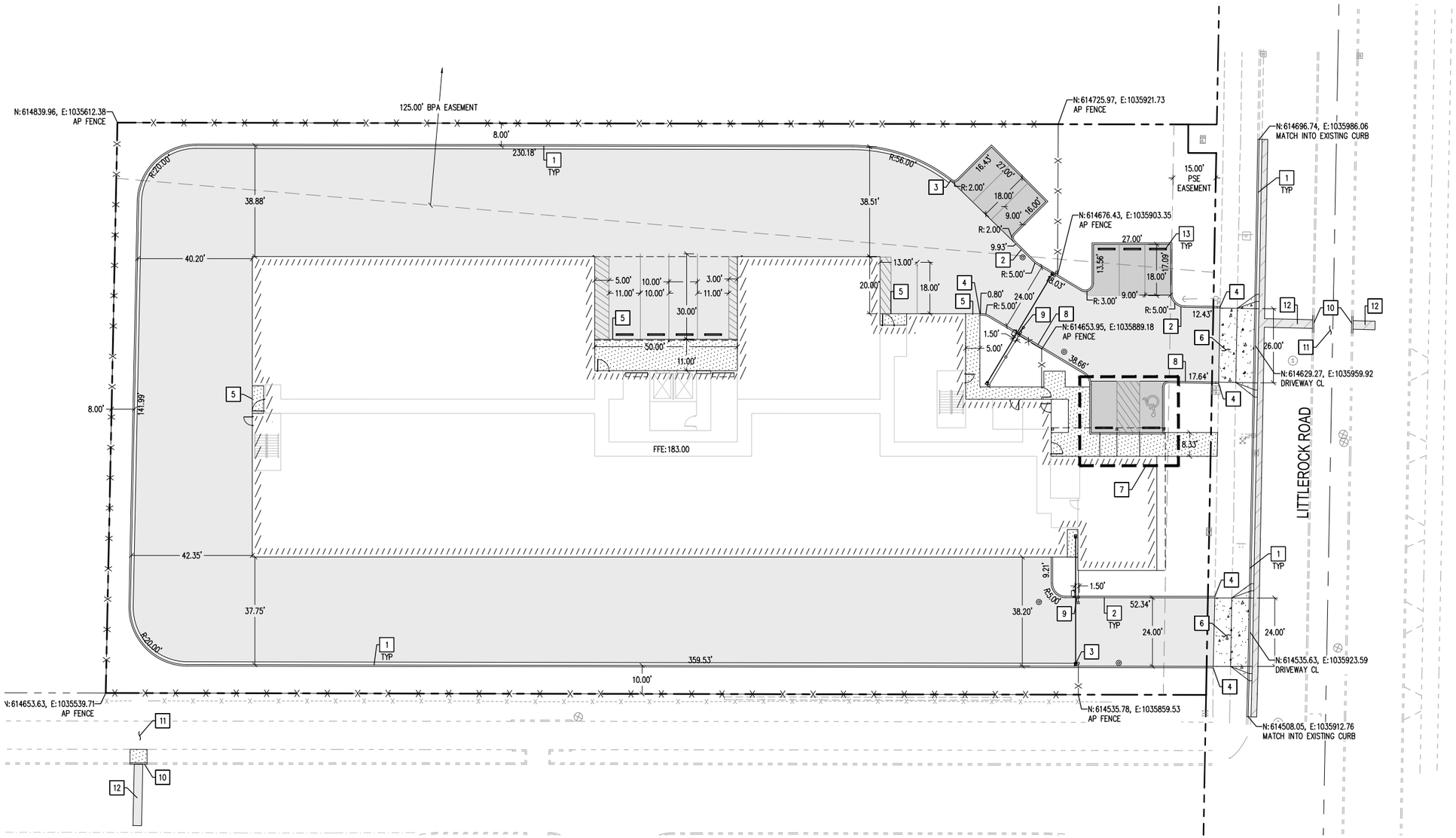
TACOMA, WA 98406

SHEET TITLE
SITE PLAN

SHEET
SP-01



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SCALE IN FEET

LEGEND

- PROPERTY LINE
- EASEMENT
- EXISTING CURB
- PROPOSED BUILDING
- 8' TALL PERIMETER FENCE: SEE ARCHITECTURAL PLANS
- CONCRETE CURB AS NOTED
- CEMENT CONCRETE CURB & GUTTER PER TUMWATER STD. DWG ST-7: SEE SP-04
- CEMENT CONCRETE SIDEWALK PER TUMWATER STD. DWG. ST-4: SEE SP-04
- MODIFIED WSDOT TYPE 3 CONCRETE DRIVEWAY: SEE SP-03
- HEAVY DUTY ASPHALT PAVEMENT PER SECTION ON SP-03
- LIGHT DUTY ASPHALT PAVEMENT PER SECTION ON SP-03
- MATCH EXISTING ASPHALT PAVEMENT SECTION IN ROW

X CONSTRUCTION NOTES

1. CEMENT CONCRETE CURB & GUTTER PER TUMWATER STD. DWG. ST-7: SEE SP-04
2. EXTRUDED CONCRETE CURB: SEE SP-03
3. TRANSITION BETWEEN CURB & GUTTER AND EXTRUDED CURB
4. CHAMFER CURB AT 2:1
5. SIDEWALK FLUSH WITH PAVING
6. MODIFIED WSDOT TYPE 3 CONCRETE DRIVEWAY: SEE SP-03
7. ACCESSIBLE PARKING STALL: SEE SP-03
8. BARRIER CURB: SEE SP-03
9. PROVIDE CURB CUT FOR SLIDING GATE
10. MATCH EXISTING CURB IN KIND
11. RESTORE EXISTING LANDSCAPING IN KIND
12. PERPENDICULAR TRENCH RESTORATION PER TUMWATER STD. DWG. ST-14: SEE SP-04
13. PRECAST CONCRETE WHEESTOP: SEE SP-03

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VERTICAL DATUM
NGVD 29

04, 2023 11:57:24am – User: whitney
2 – PROJECTS\163 TREVOR COLBY\163.001 6115 & 6119 LITTLEROCK ROAD\ACAD\163.001 SP-02.DWG

REVISIONS

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TREVOR COLBY
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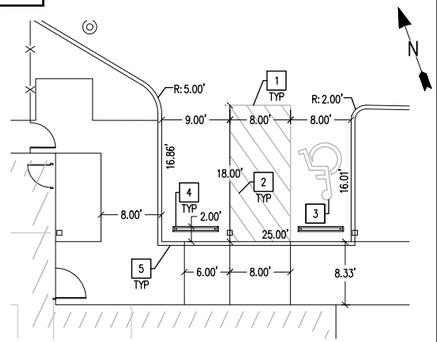
SHEET TITLE
HORIZONTAL CONTROL & PAVING PLAN

SHEET
SP-02

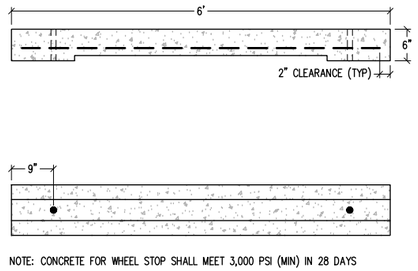


X CONSTRUCTION NOTES

1. 4" WIDE STRIPING
   2 COATS OF WHITE PAINT (MIN)
   W/ 7 MIL DFT PER COAT
2. 4" WIDE 45° STRIPING AT 48" O.C.
   2 COATS OF WHITE PAINT (MIN)
   W/ 7 MIL DFT PER COAT
3. ACCESSIBILITY SYMBOL: PER DETAIL THIS SHEET
4. PRECAST CEMENT CONCRETE WHEELSTOP: PER DETAIL THIS SHEET
5. FOR CURB AND GRADING INFORMATION, SEE GRADING ENLARGEMENT: SEE CG-01

ACCESSIBLE PARKING STALL

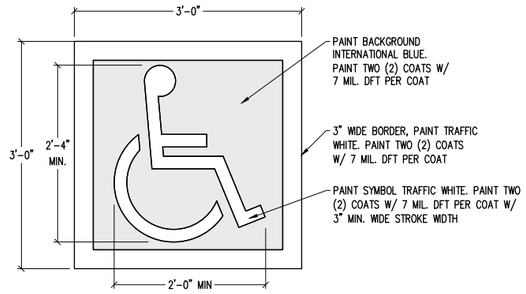
1" = 10'



NOTE: CONCRETE FOR WHEEL STOP SHALL MEET 3,000 PSI (MIN) IN 28 DAYS

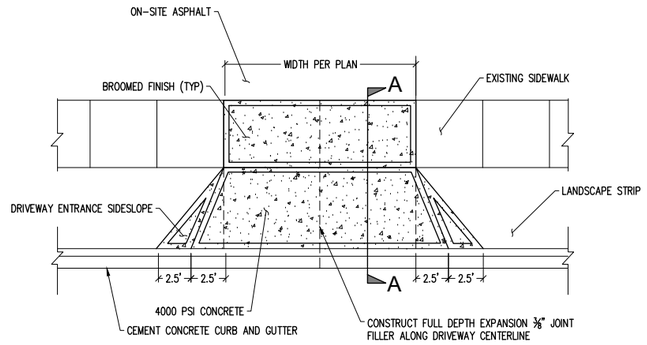
PRECAST CEMENT CONCRETE WHEELSTOP

NTS

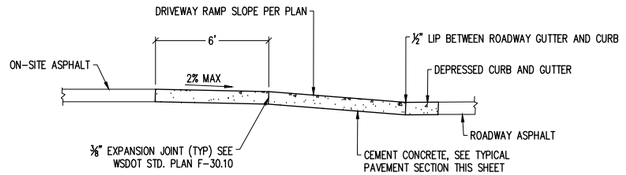


ACCESSIBILITY SYMBOL

NTS



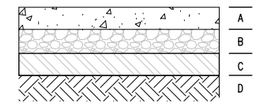
DRIVEWAY PLAN VIEW



DRIVEWAY CROSS SECTION A-A

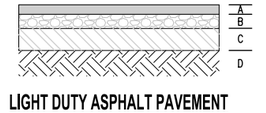
MODIFIED WSDOT TYPE 3 CONCRETE DRIVEWAY

NTS



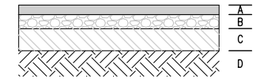
A. 6" PORTLAND CEMENT CONCRETE
B. 6" AGGREGATE BASE COURSE
C. 12" SUBBASE AGGREGATE
D. PREPARED SUBGRADE

CEMENT CONCRETE PAVEMENT



A. 2" ASPHALT CONCRETE SURFACE
B. 4" AGGREGATE BASE COURSE
C. 12" SUBBASE AGGREGATE
D. PREPARED SUBGRADE

LIGHT DUTY ASPHALT PAVEMENT



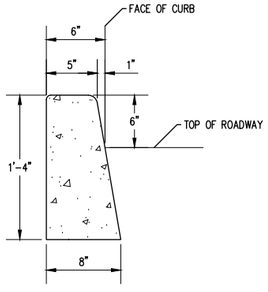
A. 3" ASPHALT CONCRETE SURFACE
B. 6" AGGREGATE BASE COURSE
C. 12" SUBBASE AGGREGATE
D. PREPARED SUBGRADE

HEAVY DUTY ASPHALT PAVEMENT

NOTES
1. MATERIALS, COMPACTION, AND CONSTRUCTION OF PAVEMENTS FOR THE PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE GEOTECHNICAL ENGINEERING REPORT THAT WAS FINALIZED BY SOUTH SOUND GEOTECHNICAL CONSULTING ON MAY 11, 2023 (THE GEOTECH REPORT).

TYPICAL PAVEMENT SECTIONS

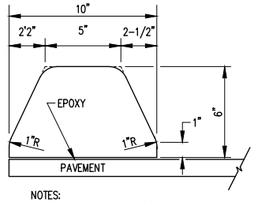
NTS



NOTES:
1. CONCRETE SHALL BE 4,000 PSI.
2. EXPANSION JOINT MATERIAL TO BE ⅜" THICK PREMOLDED JOINT FILLER FULL THICKNESS OF CONCRETE SPACE EVERY 15'.

CEMENT CONCRETE BARRIER CURB

NTS



NOTES:
1. IF DIFFERENT CROSS SECTION IS USED, PRIOR APPROVAL BY THE ENGINEER IS REQUIRED.
2. CONCRETE SHALL BE 4,000 PSI

EXTRUDED CURB

NTS

REVISIONS

PROJECT NO.
163.001
DRAWN
C. DAHM
CHECKED
–
SUBMITTAL DATES
OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

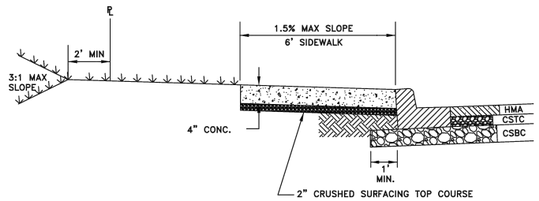
STAMP
WHITNEY E. DUNLAP
STATE OF WASHINGTON
20122774
REGISTERED
PROFESSIONAL ENGINEER
12/04/2023

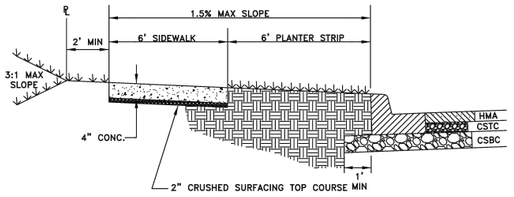
SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
SITE & PAVING DETAILS

SHEET
SP-03

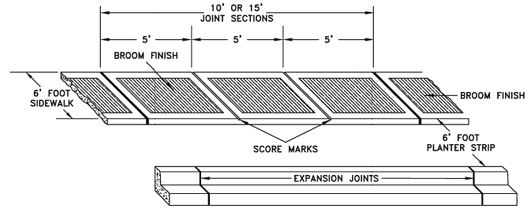


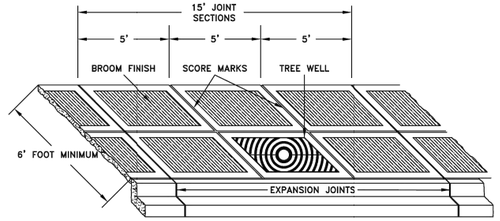


GENERAL NOTES:

1. FORMS SHALL BE WOOD OR METAL AND SHALL EXTEND FOR THE FULL DEPTH OF THE CONCRETE.
2. ALL FORMS SHALL BE CLEAN, STRAIGHT, FREE FROM WARP, AND OF SUFFICIENT STRENGTH TO RESIST THE PRESSURE OF THE CONCRETE WITHOUT SPRING.
3. CONCRETE DRIVEWAYS REQUIRE A MINIMUM DEPTH OF 6".
4. THE TOP OR TOE OF ALL SLOPES SHALL BEGIN 2' BACK OF THE SIDEWALK.

CITY OF TUMWATER, WASHINGTON DEPT. OF PUBLIC WORKS				
SIDEWALK				
APPROVED BY:				DWG. NO.
CITY ENGINEER				ST-4
DES.	DWG. BY	CK'D BY	DATE	NOT TO SCALE
PW	PW	MW	JAN. 2015	



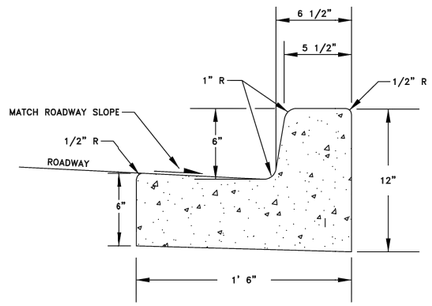


* USE DECORATIVE SCORE MARKS FOR NEW SIDEWALK IN: CAPITOL BOULEVARD – BREWERY DISTRICT – TOWN CENTER

GENERAL NOTES:

1. FORMS SHALL BE WOOD OR METAL AND SHALL EXTEND FOR THE FULL DEPTH OF THE CONCRETE.
2. ALL FORMS SHALL BE STRAIGHT, FREE FROM WARP AND OF SUFFCIENT STRENGTH TO RESIST THE PRESSURE OF THE CONCRETE WITHOUT SPRING.
3. EXPANSION JOINT MATERIAL TO BE 3/8" THICK PREMOLDED JOINT FILLER FULL THICKNESS OF CONCRETE AND INSTALLED FLUSH OR 1/4" BELOW FINISH GRADE.
4. FORM AND SUBGRADE INSPECTION ARE REQUIRED BEFORE PLACING CONCRETE.
5. SCORE MARKS SHALL BE 1/8" TO 1/4" WIDE AND A MINIMUM OF 1" DEEP.
6. EXPANSION JOINTS SHALL BE INSTALLED IN THE CURB & GUTTER AND SIDEWALK AT THE PC AND PT FOR ALL CURB RETURNS. EXPANSION JOINTS SHALL BE PLACED IN THE SIDEWALK AT THE SAME LOCATIONS AS THOSE IN THE CURB & GUTTER WHEN THE SIDEWALK IS ADJACENT TO CURB & GUTTER, OR UNLESS OTHERWISE DIRECTED BY THE CITY.

CITY OF TUMWATER, WASHINGTON DEPT. OF PUBLIC WORKS				
SIDEWALK SPACING EXPANSION JOINTS & SCORE MARKS				
APPROVED BY:				DWG. NO.
CITY ENGINEER				ST-5
DES.	DWG. BY	CK'D BY	DATE	NOT TO SCALE
PW	PW	MW	JAN. 2015	

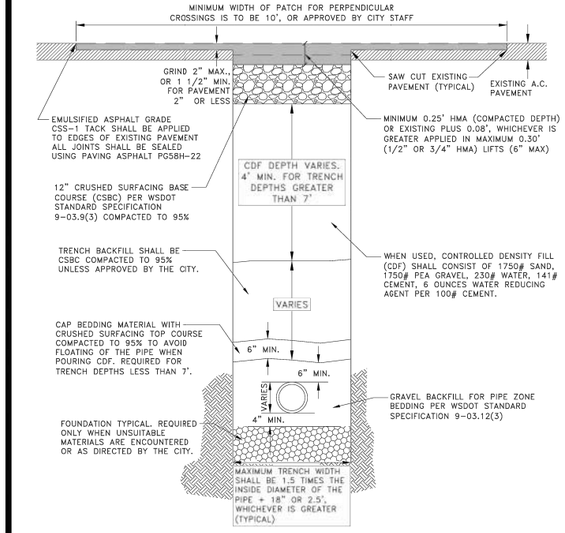


TYPE 1

GENERAL NOTES:

1. EXPANSION JOINT MATERIAL TO BE 3/8" THICK PREMOLDED. JOINT FILLER FULL THICKNESS OF CONCRETE SPACING.
2. FORM AND SUBGRADE INSPECTION REQUIRED BEFORE PLACING CONCRETE.

CITY OF TUMWATER, WASHINGTON DEPT. OF PUBLIC WORKS				
CEMENT CONCRETE CURB & GUTTER				
APPROVED BY:				DWG. NO.
CITY ENGINEER				ST-7
DES.	DWG. BY	CK'D BY	DATE	NOT TO SCALE
PW	PW	MW	JAN. 2015	



GENERAL NOTES:

1. ALL MATERIALS EXCEPT H.M.A. SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO 95% DENSITY AS DETERMINED BY ASTM D1557.
2. ALL MATERIALS, WORKMANSHIP, AND INSTALLATION SHALL BE IN CONFORMANCE WITH THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AS AMENDED BY CITY OF TUMWATER STANDARDS.
3. KEEP TRENCH BOTTOM COMPACTED WITH UNIFORM GRADE. NO TEMPORARY SUPPORTS, I.E. BLOCKS, WILL BE ALLOWED TO SUPPORT PIPE. TRENCH BOTTOM SHALL BE TO GRADE PRIOR TO PIPE INSTALLATION.
4. SAW CUT PAVEMENT TO MAX. TRENCH WIDTH. BACKFILL AND PAVE TO TOP OF EXISTING PAVEMENT FOR TRENCH WIDTH. ALLOW 24 HOURS MINIMUM FOR TRENCH PATCH TO CURE. GRIND AND PAVE FINAL PATCH AS SHOWN.

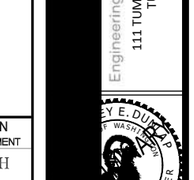
ST-14.DWG

CITY OF TUMWATER, WASHINGTON TRANSPORTATION AND ENGINEERING DEPARTMENT			
PERPENDICULAR TRENCH RESTORATION ARTERIALS, BLVDS. & COLLECTORS			
APPROVED			DWG. NO.
ENGINEERING SERVICES MANAGER			ST-14
DES	DWN	CK'D	DATE
T.E.D.	JN	BH	AUG 2020

Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

REVISIONS

DATES



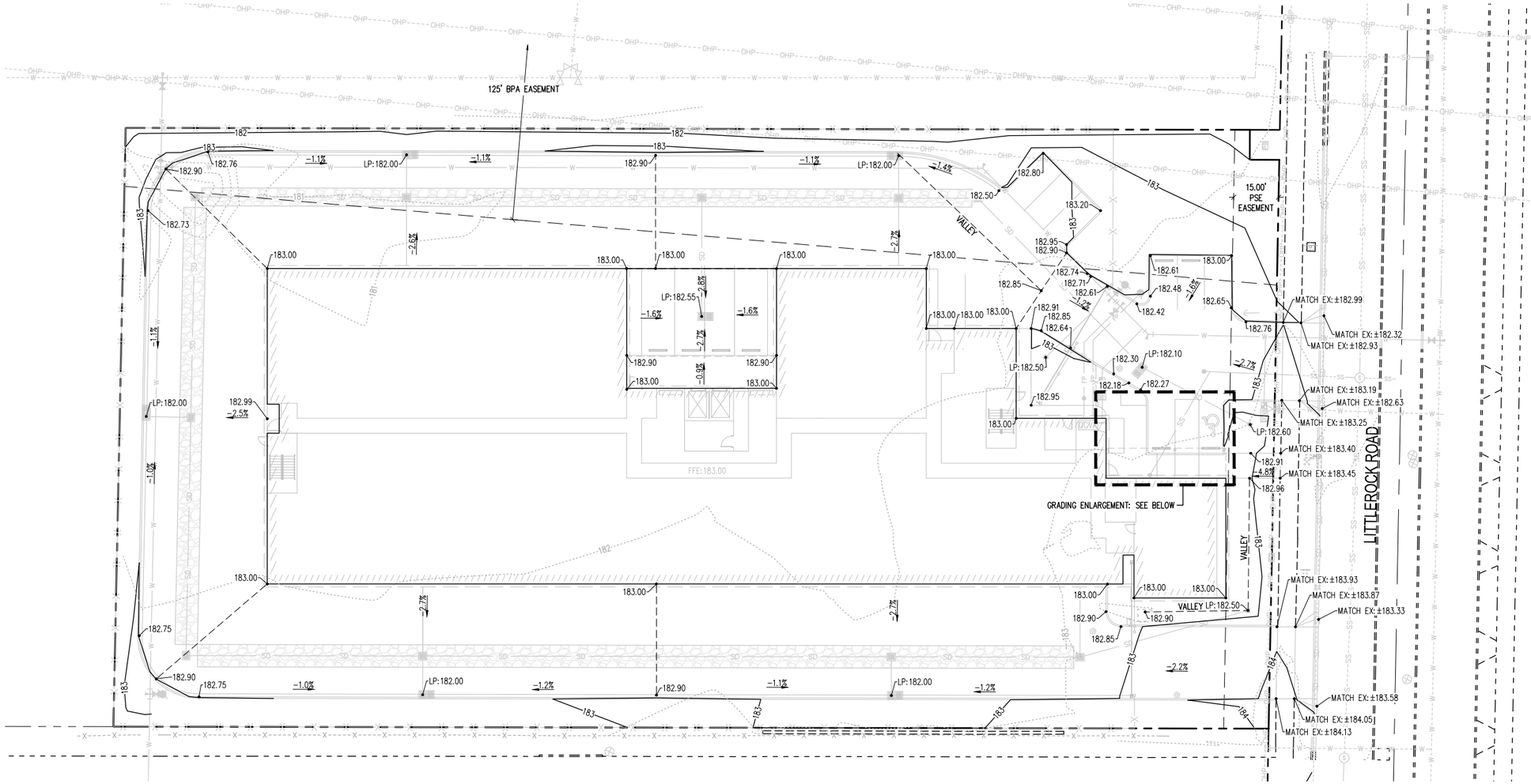
12/04/2023

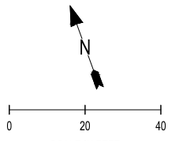
SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
SITE & PAVING DETAILS

SHEET
SP-04



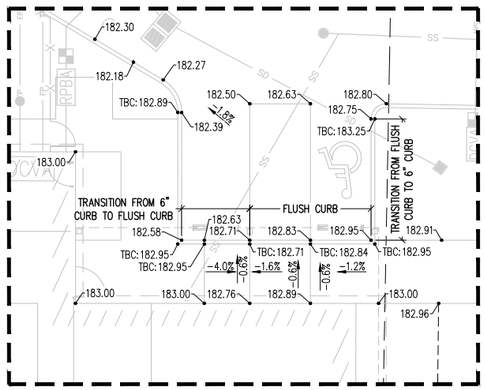


LEGEND

- PROPERTY LINE
- EASEMENT
- EXISTING CONTOURS
- PROPOSED CONTOURS
- GRADE BREAK
- EXISTING CURB
- EXISTING STORM LINE
- EXISTING CATCH BASIN
- PROPOSED BUILDING
- CONCRETE CURB
- CONCRETE CURB & GUTTER
- STORM LINE
- CATCH BASIN
- XX.XX SPOT ELEVATION
- -X.X% SLOPE LABEL

GENERAL NOTES

1. SPOT ELEVATIONS REPRESENT FINISHED GRADE AT FLOW LINE UNLESS OTHERWISE NOTED
2. CATCH SLOPES TO EXISTING GRADE SHALL NOT EXCEED 3:1
3. CONTRACTOR SHALL NOT ALLOW WATER TO POND AT SUBGRADE OR BASE MATERIAL ADJACENT TO CURB INLETS AND CATCH BASINS PRIOR TO PLACEMENT OF PAVEMENT. TEMPORARY PROVISIONS SUCH AS DEWATERING AND INSTALLATION OF SUBDRAINS SHALL BE TAKEN TO KEEP THE SUBGRADE DRY DURING CONSTRUCTION.
4. ACRONYMS FOR SPOT ELEVATIONS:
   - BW: BOTTOM OF WALL
   - HP: HIGH POINT
   - LP: LOW POINT
   - MATCH EX: MATCH EXISTING GRADE
   - TBC: TOP BACK OF CURB
   - TW: TOP OF WALL
   - SW: SIDEWALK



GRADING ENLARGEMENT
1" = 10'

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

VERTICAL DATUM
NGVD 29

REVISIONS

PROJECT NO.
163.001
DRAWN
C. DAHM
CHECKED
–
SUBMITTAL DATES
OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

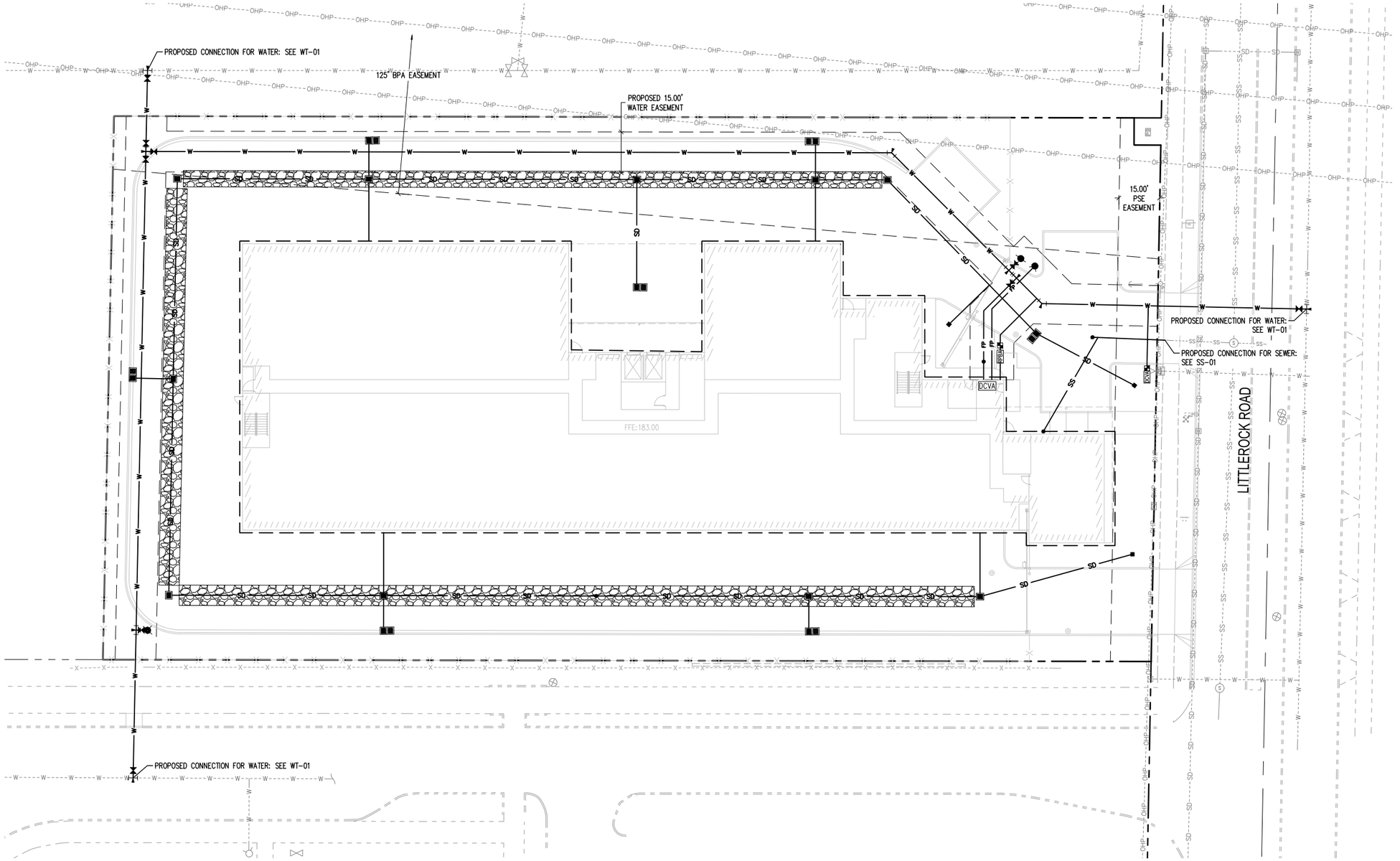
STAMP
WHITNEY E. DUNLAP
STATE OF WASHINGTON
20122774
REGISTERED
PROFESSIONAL ENGINEER
12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
GRADING PLAN

SHEET
CG-01



N

0 20 40

SCALE IN FEET

LEGEND

- PROPERTY LINE
- EASEMENT
- EXISTING CURB
- EXISTING OVERHEAD POWER LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING STORM LINE
- EXISTING POWER POLE
- EXISTING POWER VAULT
- EXISTING PHONE PEDESTAL
- EXISTING CATCH BASIN
- EXISTING SEWER MANHOLE
- EXISTING WATER METER
- EXISTING GATE VALVE
- PROPOSED BUILDING
- SD STORM LINE
- W WATER LINE
- WS WATER SERVICE LINE
- SS SEWER LINE

CALL BEFORE YOU DIG

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VERTICAL DATUM
NGVD 29

REVISIONS

PROJECT NO.
163.001

DRAWN
C. DAHM

CHECKED
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SUBMITTAL DATES

OTB DATE
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JSA CIVIL
Engineering | Planning | Management
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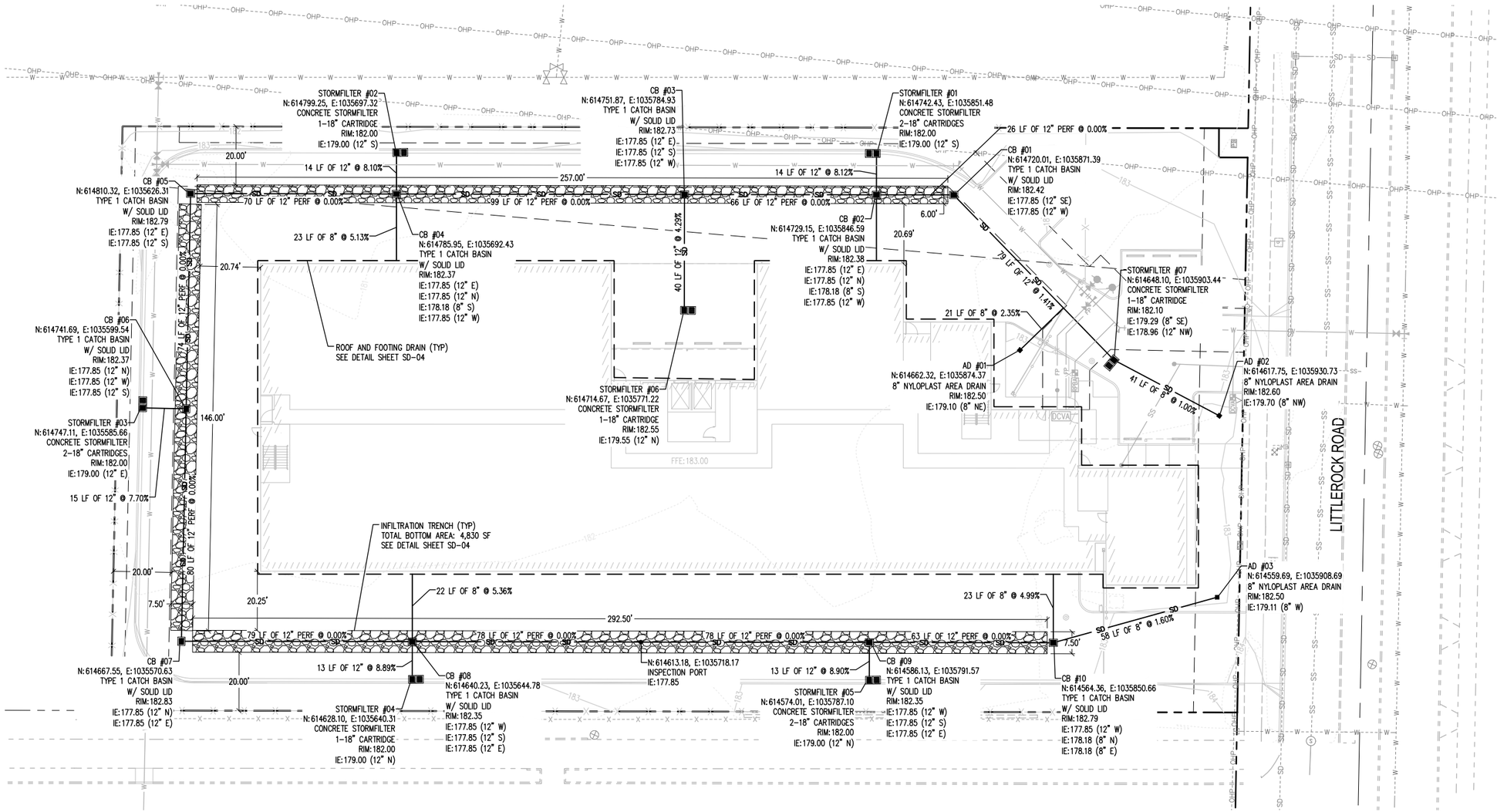
STAMP
WHITNEY E. DUSHAP
STATE OF WASHINGTON
20122774
REGISTERED
PROFESSIONAL ENGINEER
12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
UTILITY PLAN

SHEET
UT-01



LEGEND

- PROPERTY LINE
- EASEMENT
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING STORM LINE
- EXISTING CATCH BASIN
- EXISTING CURB
- PROPOSED BUILDING
- CONCRETE CURB
- CONCRETE CURB & GUTTER
- WATER LINE
- WATER SERVICE LINE
- SEWER LINE
- ADS N-12 STORM LINE UNLESS OTHERWISE NOTED
- ROOD DOWNSPOUT & FOTING DRAIN: SEE SD-04
- INFILTRATION TRENCH: SEE SD-04
- TYPE 1 CATCH BASIN PER WSDOT STD. PLAN B-5.20-03 SEE SD-05
- CONCRETE CATCH BASIN STORMFILTER SEE SD-04
- NYLOPLAST DRAIN BASIN WITH DOMED LID SEE SD-04
- INSPECTION PORT: SEE SD-04

GENERAL NOTES

1. ALL STORMFILTER CB'S TO HAVE ANTI-DUMP MESSAGE PER TUMWATER STD. DWG. SD-1: SEE SD-04

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

VERTICAL DATUM
NGVD 29

REVISIONS

PROJECT NO.
163.001
DRAWN
C. DAHM
CHECKED
–
SUBMITTAL DATES
OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP
WHITNEY E. DUMP
STATE OF WASHINGTON
20122774
REGISTERED
PROFESSIONAL ENGINEER
12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

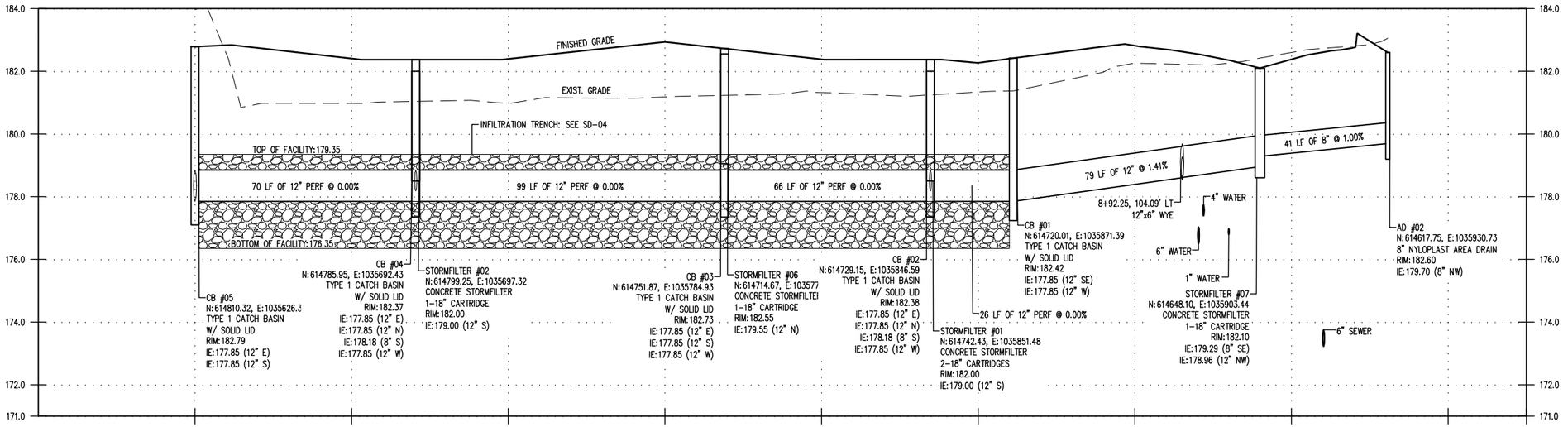
SHEET TITLE
STORMWATER PLAN

SHEET
SD-01

V 0 2 4

H 0 20 40

SCALE IN FEET



STORM PROFILE NORTH

REVISIONS

PROJECT NO.
163.001

DRAWN
C. DAHM

CHECKED
–

SUBMITTAL DATES

OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP
WHITNEY E. DUNLAP
STATE OF WASHINGTON
20122774
REGISTERED
PROFESSIONAL ENGINEER
PRELIMINARY
12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

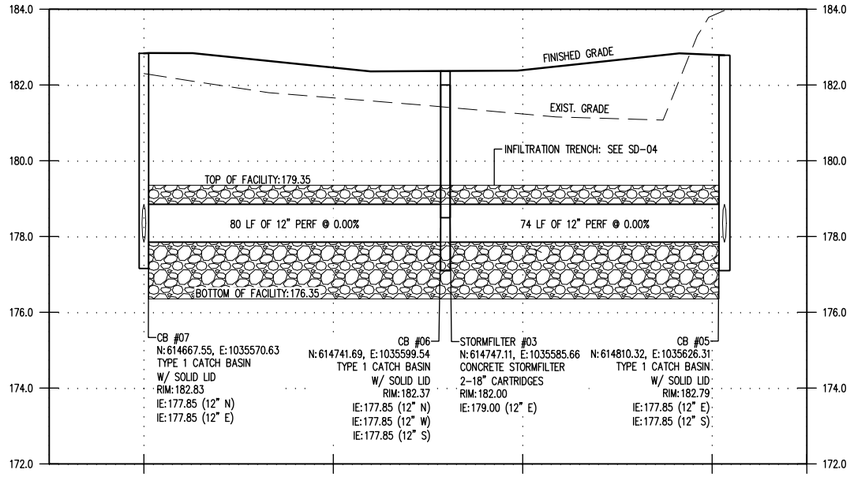
SHEET TITLE
STORMWATER PROFILES

SHEET
SD-02

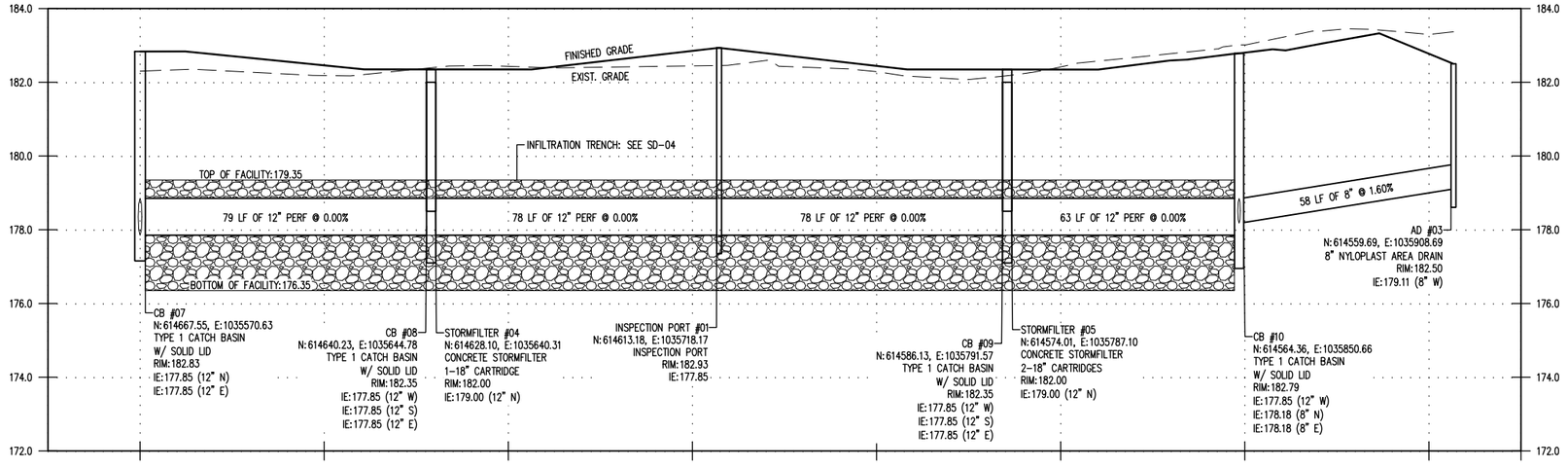
V 0 2 4

H 0 20 40

SCALE IN FEET



STORM PROFILE WEST



STORM PROFILE SOUTH

REVISIONS

PROJECT NO.
163.001

DRAWN
C. DAHM

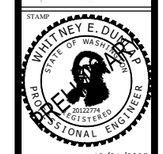
CHECKED
–

SUBMITTAL DATES

OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP



12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
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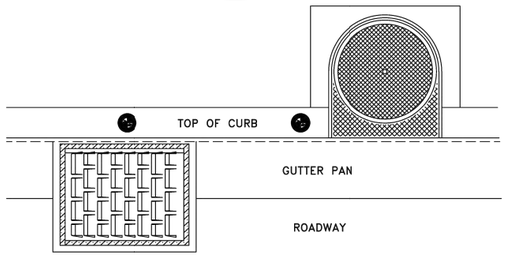
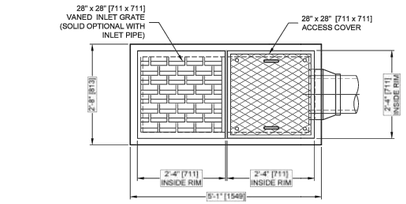
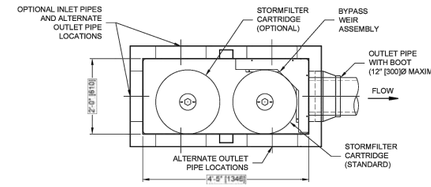
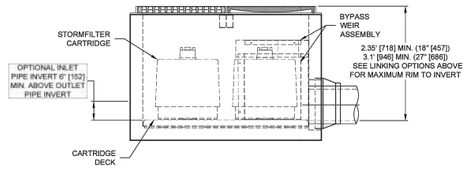
SHEET TITLE
STORMWATER PROFILES

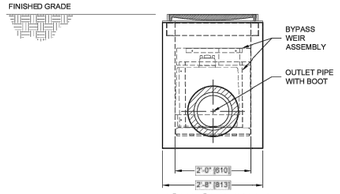
SHEET
SD-03











Item 3a.

GENERAL NOTES:

1. ALL DECALS SHALL BE DAS #4.0 TUM-FW MANUFACTURER SPECIFIC.
2. DECALS AND DAS CURB MARKER ADHESIVE (#RS-222) SHALL BE PURCHASED AND AFFIXED BY THE CONTRACTOR/DEVELOPER.
3. DECALS SHALL BE ADHERED TO CLEAN, DRY CONCRETE (EXCLUSIVELY WITH SPECIFIED ADHESIVE) A MINIMUM OF 1" FROM EDGE OF CURB.
4. FINISHED PRODUCT SHALL BE INSPECTED AS PART OF THE CITY'S FINAL WALK THROUGH PROCESS.

CITY OF TUMWATER, WASHINGTON DEPT. OF PUBLIC WORKS				
CATCH BASIN ANTI-DUMP MESSAGE TYPE II				
APPROVED CITY ENGINEER				DWG. NO. SD-1
DES. PW	DWG. BY PW	CK'D BY KMC	DATE FEB. 2014	NOT TO SCALE

I:\COMMON\CAD\TREATMENT\10 STORMFILTER\40 STANDARD DRAWINGS\SFCB\SFCB-C\DWG\WEST DWG - CONTECH FORM AT CASCADE PRECAST\SFCB-C-DTL.DWG 12/16/2022 7:31 AM

PLAN VIEW

PLAN VIEW

CASTINGS NOT SHOWN

ELEVATION VIEW

The Stormwater Management StormFilter®

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,322,629; 5,524,576; 5,707,527; 5,985,157; 6,027,639; 6,649,048; RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING.

STORMFILTER DESIGN NOTES

- CONCRETE CATCHBASIN STORMFILTER TREATMENT CAPACITY VARIES BY CARTRIDGE COUNT AND LOCAL APPROVALS
- PEAK CONVEYANCE CAPACITY IS 1.3 CFS
- CONCRETE CATCHBASIN STORMFILTER IS AVAILABLE WITH UP TO TWO (2), 18" [457] OR 27" [686] TALL CARTRIDGES
- UP TO 4 INDIVIDUAL UNITS MAY BE LINKED FOR AN ULTIMATE CAPACITY OF EIGHT (8) CARTRIDGES

CARTRIDGE SIZE (in. [mm])	27 [686]			18 [457]		
RECOMMENDED HYDRAULIC DROP (ft. [mm])	3.05 [930]			2.3 [701]		
SPECIFIC FLOW RATE (gpm/sf [L/s/m²])	2 [1.36]	1.67* [1.13]*	1 [0.68]	2 [1.36]	1.67* [1.13]*	1 [0.68]
CARTRIDGE FLOW RATE (gpm [L/s])	22.5 [1.4]	18.79 [1.19]	11.25 [0.71]	15 [0.95]	12.53 [0.79]	7.5 [0.47]

* 1.67 gpm/sf [1.13 L/s/m²] SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

LINKING OPTIONS SHOWN BELOW. FLEXIBLE INLET PIPE, GRATED AND SOLID COVER PLACEMENT.
CONTACT YOUR CONTECH REPRESENTATIVE FOR MORE INFORMATION

MAXIMUM RIM TO OUTLET PIPE INVERT HEIGHT IS 6.05' [1844].

GENERAL NOTES

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. ALTERNATE DIMENSIONS ARE MILLIMETERS [mm] UNLESS NOTED OTHERWISE.
4. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
5. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
6. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL BE 7-INCHES [178]. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS.
7. SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM [L/S]) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF [m²]).
8. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 0'-2" [51] AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.

INSTALLATION NOTES

1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
2. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
3. CONTRACTOR TO PROVIDE AND INSTALL PIPES. MATCH PIPE INVERTS SHOWN ON PROJECT SPECIFIC DRAWINGS.
4. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

RIGHT SIDE VIEW

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	see plans for elevations
WATER QUALITY FLOW RATE (cfs [L/s])	
PEAK FLOW RATE (cfs [L/s])	
RETURN PERIOD OF PEAK FLOW (yrs)	
CARTRIDGE SIZE (27, 18)	
CARTRIDGE FLOW RATE	
MEDIA TYPE (PERLITE, ZPG, PSORB)	
NUMBER OF CARTRIDGES REQUIRED	
RIM ELEVATION	

PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			

NOTES/SPECIAL REQUIREMENTS:

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
11815 NE Glenn Widing Drive, Portland, OR 97220
800-548-4667 503-240-3393 800-561-1271 FAX

CONCRETE CATCHBASIN
STORMFILTER
STANDARD DETAIL

INSPECTION PORT

NTS

0899CGDF

APPROX. DRAIN AREA = 53.24 SQ IN
APPROX. WEIGHT = 4.94 LBS

SECTION A-A

DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST. ©2010 NYLOPLAST	DRAWN BY NMH DATE 6-22-18	MATERIAL DUCTILE IRON	ADS Nyloplast 3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
	REVISED BY NMH DATE 6-22-18	PROJECT NO./NAME	TITLE 8 IN DOME GRATE - TYPE B
	DWG SIZE A	SCALE NTS SHEET 1 OF 1	DWG NO. 7001-110-539 REV A

…04, 2023 11:58:45am – User whitney
…2 – PROJECTS\163 TREVOR COLBY\163.001 6115 & 6119 LITTLEROCK ROAD\ACAD\163.001 SD-04.DWG

NYLOPLAST 8" DRAIN BASIN: 2808AG _ _ X

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

(4) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE: 4" - 8" FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL, ADS/HANCOR SINGLE WALL), PVC SEWER (EX: SDR 35), PVC DWV (EX: SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC

WATERTIGHT JOINT
(CORRUGATED HDPE SHOWN)

GRATE OPTIONS	LOAD RATING	PART #
STANDARD	LIGHT DUTY	0899CGSF
SOLID COVER	LIGHT DUTY	0899CGCF
BRONZE	N/A	0899CGBF
DOME	N/A	0899CGDF
DROP IN GRATE	LIGHT DUTY	0801DI

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - CUSTOM DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
3 - STANDARD DRAIN BASIN HAS FIXED ADAPTER LOCATIONS OF 0° & 180°. CUSTOM DRAIN BASIN ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL) & PVC SEWER (4" - 24").

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	APPD BY NMH DATE 6-25-18	PROJECT NO./NAME	TITLE 8 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
	DWG SIZE A	SCALE 1:12 SHEET 1 OF 1	DWG NO. 7001-110-272 REV F

INFILTRATION TRENCH DETAIL

1" = 5'

ROOF AND FOOTING DRAINS SHALL BE CONNECTED SEPARATELY TO THE INFILTRATION TRENCH.

ROOF DOWNSPOUT & FOOT DRAIN DETAIL

NTS

REVISIONS

PROJECT NO.
163.001

DRAWN
C. DAHM

CHECKED
–

SUBMITTAL DATES

OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP
WHITNEY E. DUNLAP
20122774
PRELIMINARY
12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

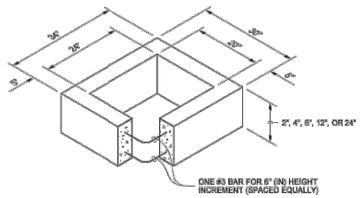
SHEET TITLE
STORMWATER
DETAILS

SHEET
SD-04

DRAWN BY: FERN LIDDELL

~~FRAME AND VANED GRATE~~

INSTALL RECTANGULAR SOLID METAL COVER PER WSDOT STD. PLAN B-3020-04



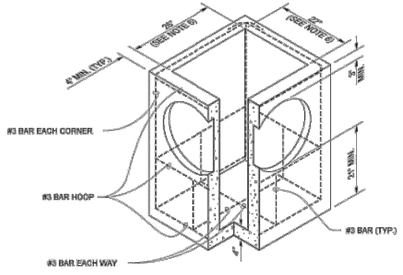
RECTANGULAR ADJUSTMENT SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12'
ALL METAL PIPE	15'
CPSSP * (STD. SPEC. SECT. 9-05.20)	12'
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	15'
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	15'

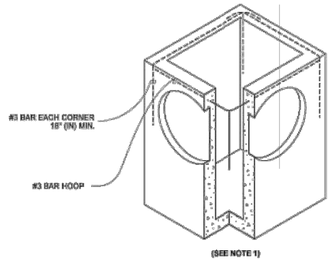
* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification Section 9-04.3**.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
6. The opening shall be measured at the top of the **Precast Base Section.**
7. All pickup holes shall be grouted full after the basin has been placed.



PRECAST BASE SECTION



ALTERNATIVE PRECAST BASE SECTION

JULIE HEILMAN STATE OF WASHINGTON 41819 REGISTERED PROFESSIONAL ENGINEER

Julie Heilman 2020.09.01 07:52:50 -07'00'

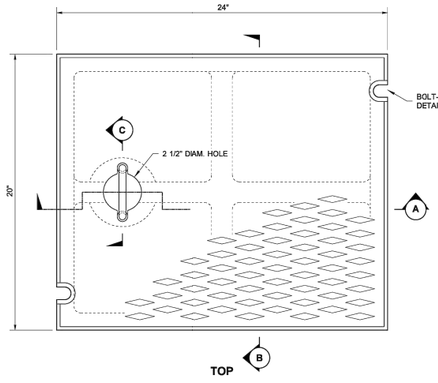
CATCH BASIN TYPE 1

STANDARD PLAN B-5.20-03

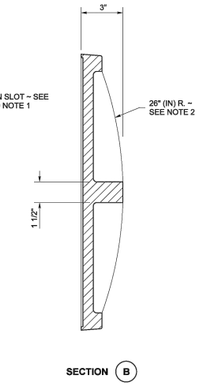
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Roark, Steve Digitally signed by Roark, Steve Date: 2020.09.09 09:45:23 -07'00'
STATE DESIGN ENGINEER
Washington State Department of Transportation

DRAWN BY: FERN LIDDELL



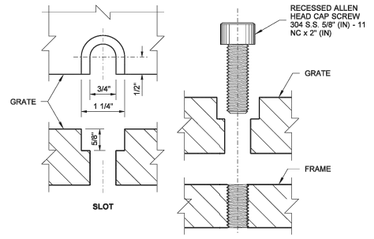
TOP



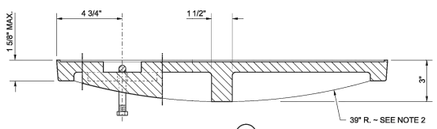
SECTION (B)

NOTES

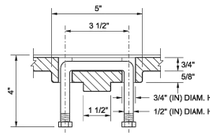
1. Bolt-down capability is required on all frames, grates, and covers, unless specified otherwise in the Contract. Provide 2 holes in the frame that are vertically aligned with the grate or cover slots. The frame shall accept the 304 Stainless Steel (S.S.) 5/8" (in) - 11 NC × 2" (in) allen head cap screw by being tapped, or other approved mechanism. Location of bolt-down holes varies by manufacturer.
2. Alternative reinforcing designs are acceptable in lieu of the rib design.
3. Refer to **Standard Specification Section 9-05.15** and **9-05.15(2)** for additional requirements.
4. For frame details, see **Standard Plan B-30.10.**



BOLT-DOWN DETAILS
SEE NOTE 1



SECTION (A)



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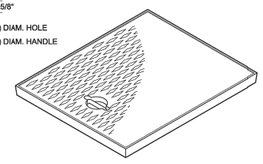


ISOMETRIC

JULIE HEILMAN STATE OF WASHINGTON 41819 REGISTERED PROFESSIONAL ENGINEER

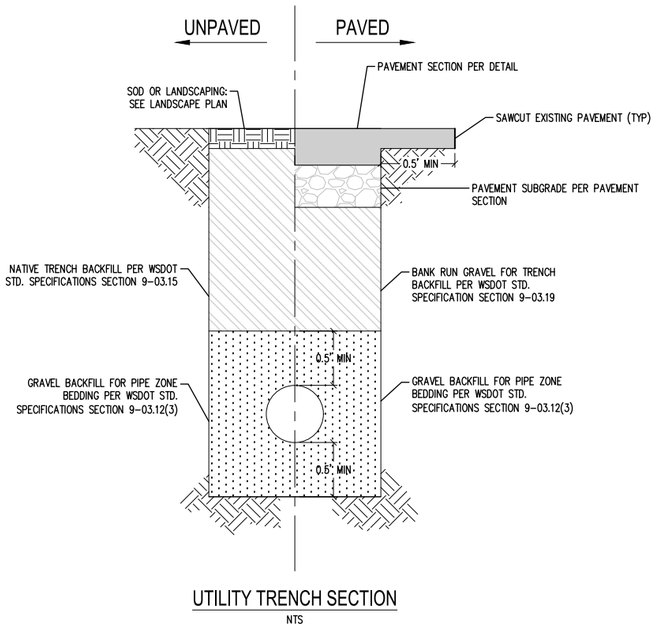
Julie Heilman Heilman, Julie Feb 20 2018 12:53 PM

RECTANGULAR SOLID METAL COVER

STANDARD PLAN B-30.20-04

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Cozzetto, Jeff Feb 27 2018 7:57 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation



UTILITY TRENCH SECTION
NTS

REVISIONS

PROJECT NO. 163.001
DRAWN C. DAHM
CHECKED –
SUBMITTAL DATES
OTB DATE –

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP

WHITNEY E. DUMP STATE OF WASHINGTON 20122774 REGISTERED PROFESSIONAL ENGINEER

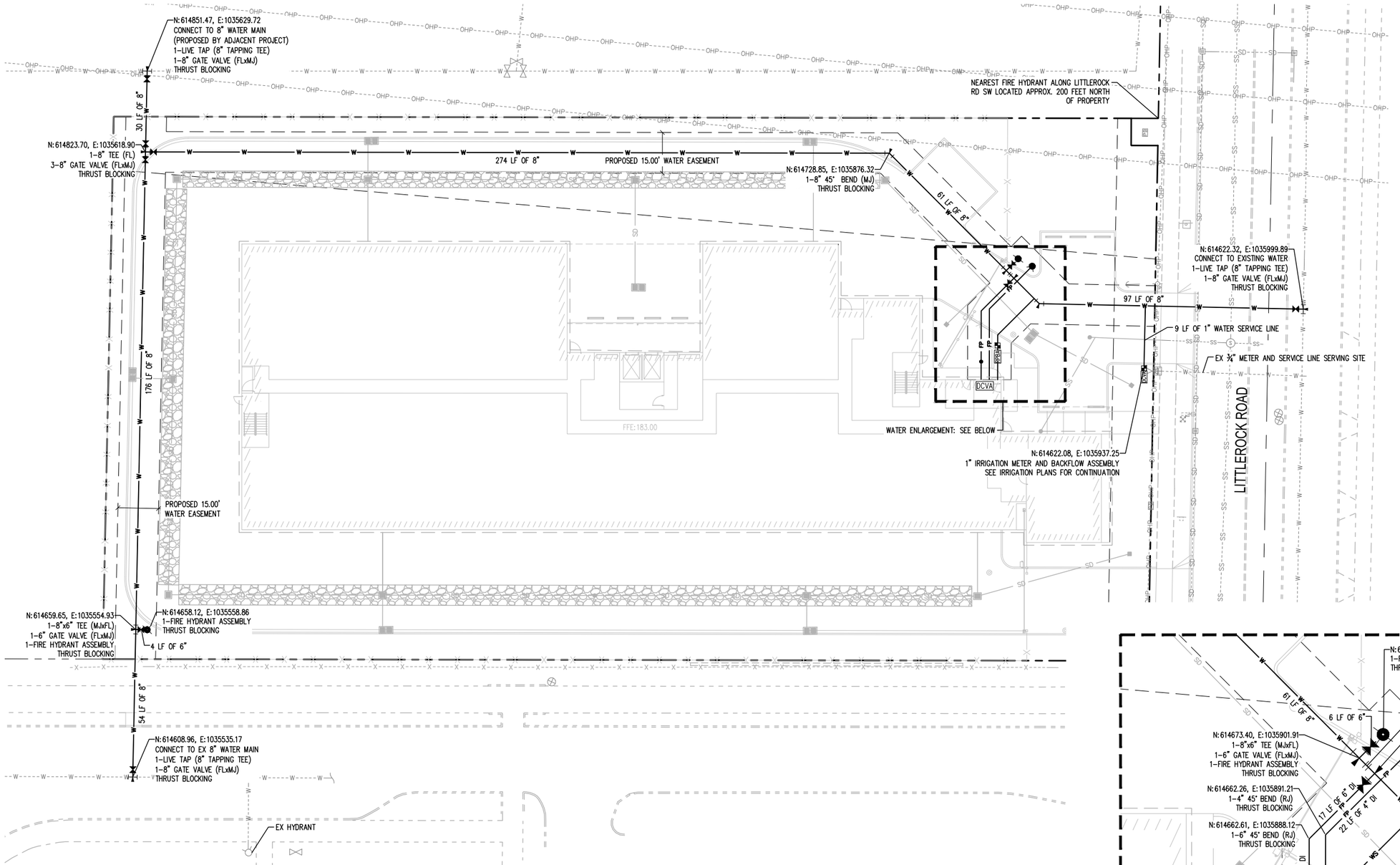
12/04/2023

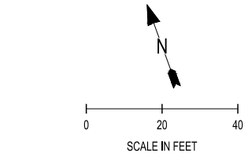
SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
STORMWATER DETAILS

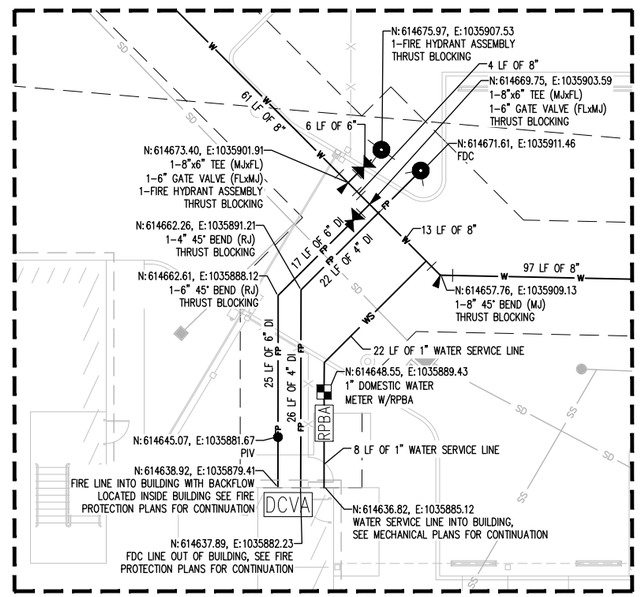
SHEET
SD-05





LEGEND

- PROPERTY LINE
- EASEMENT
- EXISTING CURB
- EXISTING WATER LINE
- EXISTING WATER METER
- EXISTING GATE VALVE
- PROPOSED BUILDING
- CONCRETE CURB
- CONCRETE CURB & GUTTER
- STORM LINE
- SEWER LINE
- ANSI/AWWA C-900 DR 18 PVC WATER LINE UNLESS OTHERWISE NOTED
- HDPE WATER SERVICE LINE UNLESS OTHERWISE NOTED
- DI FIRE LINE UNLESS OTHERWISE NOTED
- FIRE DEPARTMENT CONNECTION (FDC)
- POST INDICATOR VALVE (PIV)
- METER
- DOUBLE CHECK VALVE ASSEMBLY (DCVA)
- REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA)
- VALVE
- FITTINGS
- FIRE HYDRANT



WATER ENLARGEMENT
1" = 10'

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

VERTICAL DATUM
NGVD 29

REVISIONS

PROJECT NO.
163.001
DRAWN
C. DAHM
CHECKED
–
SUBMITTAL DATES
OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

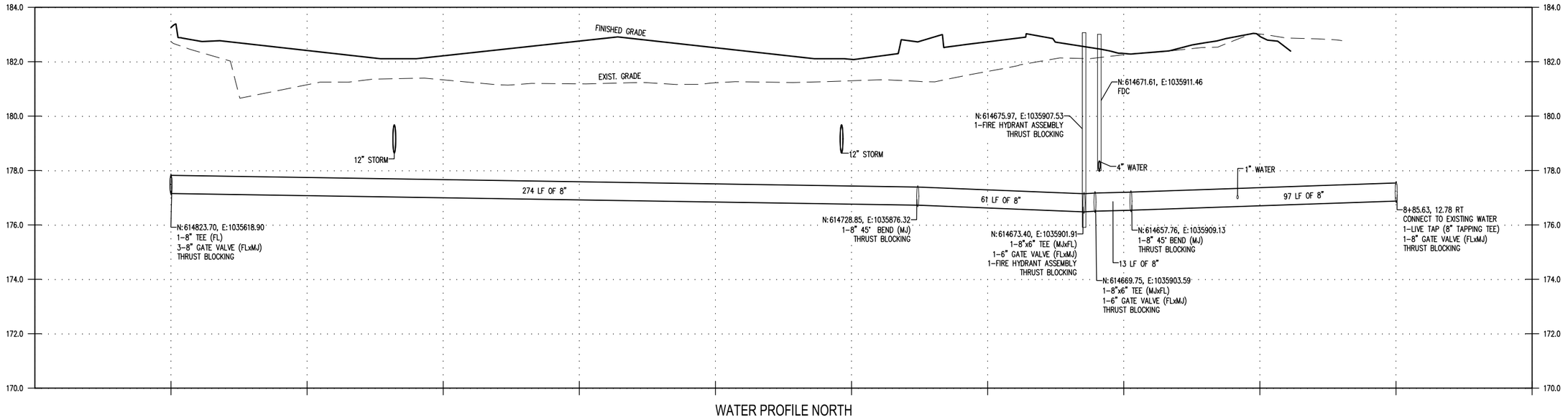
STAMP
WHITNEY E. DUMP
STATE OF WASHINGTON
20122774
REGISTERED
PROFESSIONAL ENGINEER
12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

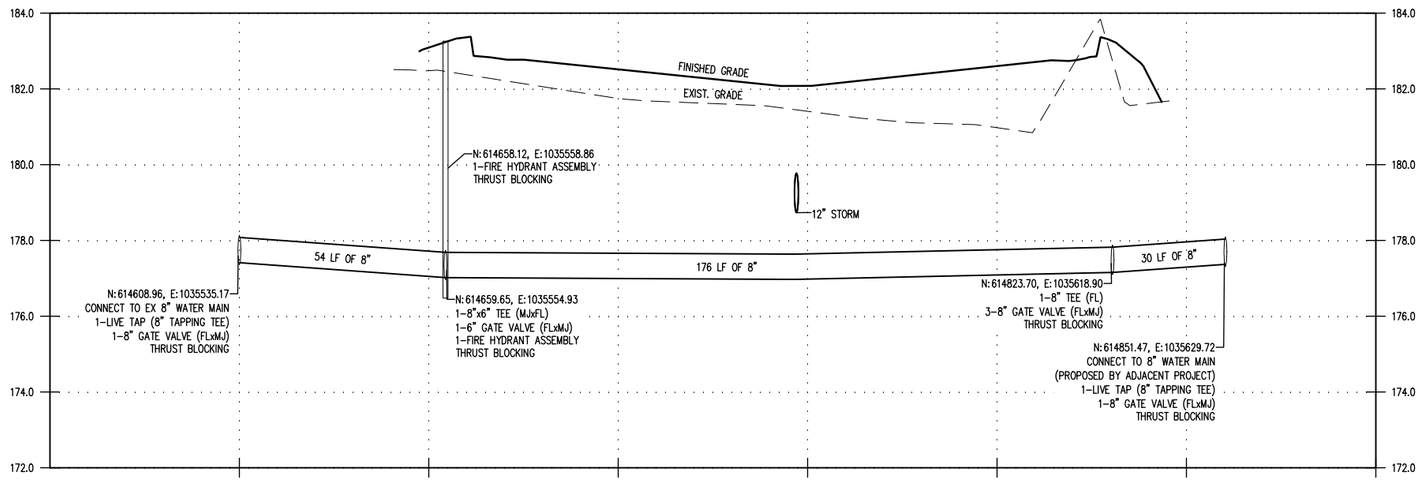
TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
WATER PLAN

SHEET
WT-01



WATER PROFILE NORTH



WATER PROFILE WEST

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

VERTICAL DATUM
NGVD 29

V 0 2 4
H 0 20 40
SCALE IN FEET

REVISIONS

PROJECT NO.
163.001
DRAWN
C. DAHM
CHECKED
--
SUBMITTAL DATES

OTB DATE
--

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Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP
WHITNEY E. DUNLAP
STATE OF WASHINGTON
20122774
REGISTERED
PROFESSIONAL ENGINEER
12/04/2023

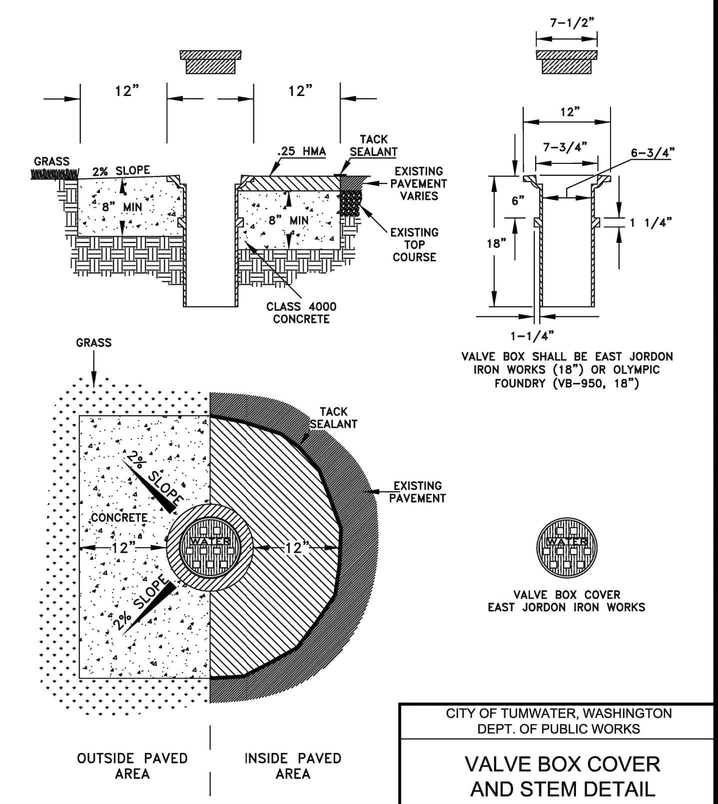
SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
WATER PROFILES

SHEET
WT-02

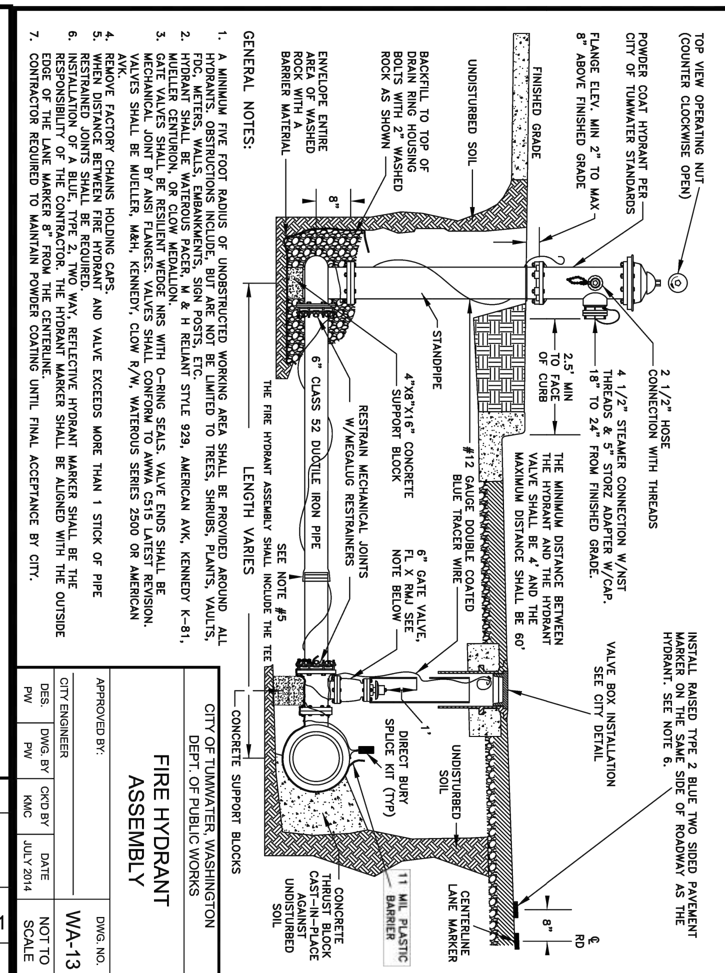
Item 3a.



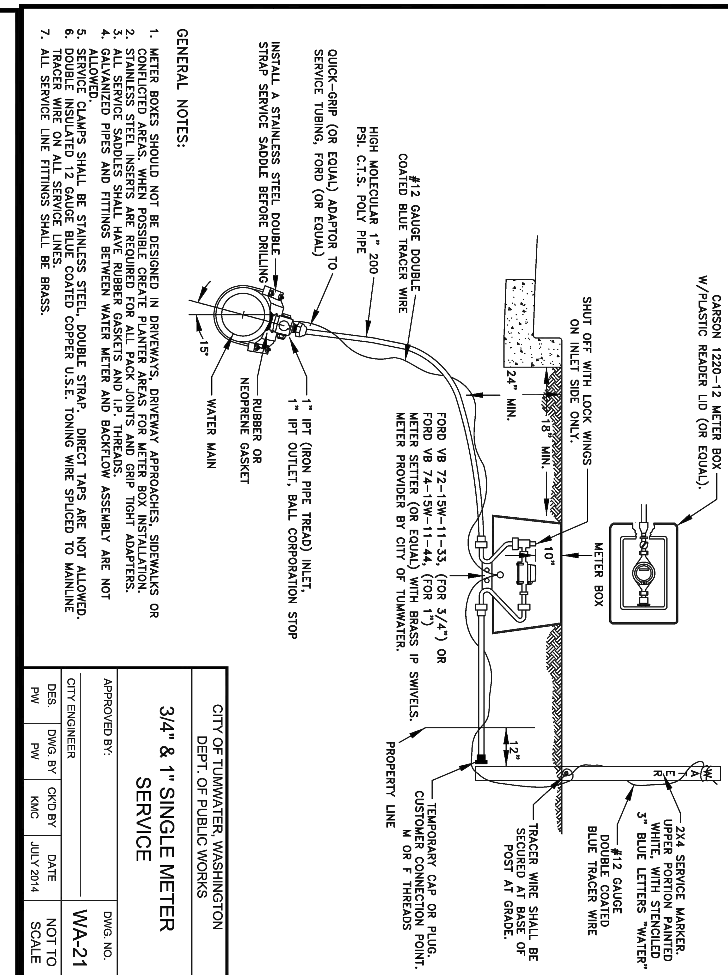
CITY OF TUMWATER, WASHINGTON
DEPT. OF PUBLIC WORKS

VALVE BOX COVER AND STEM DETAIL

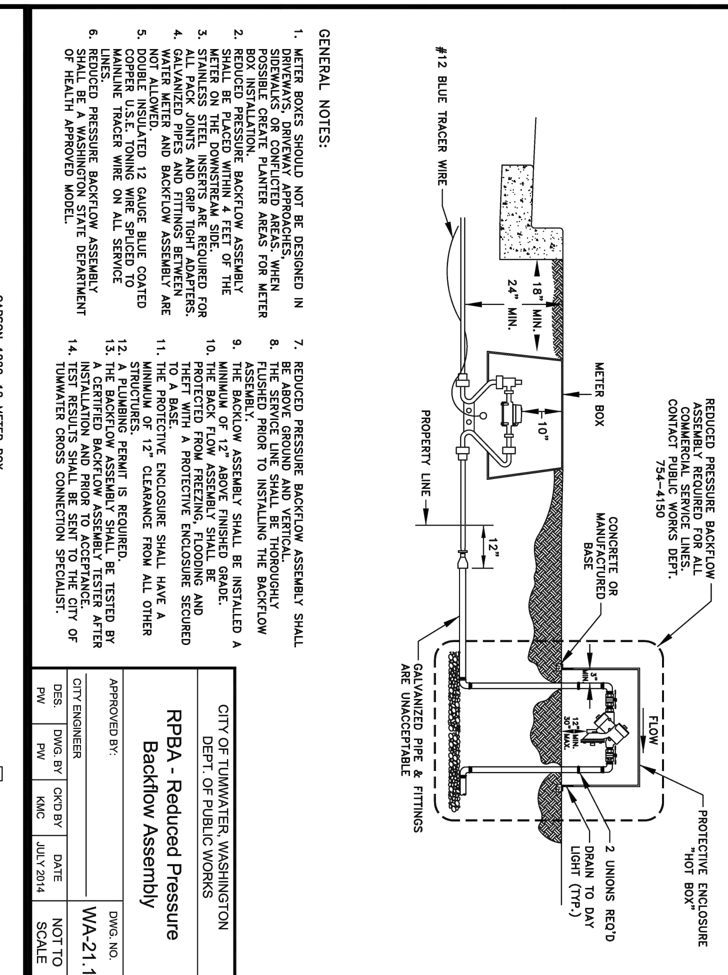
APPROVED BY:			DWG. NO. WA-12.1
CITY ENGINEER			
DES. PW	DWG. BY PW	CK'D BY KMC	DATE JUNE 2014	NOT TO SCALE



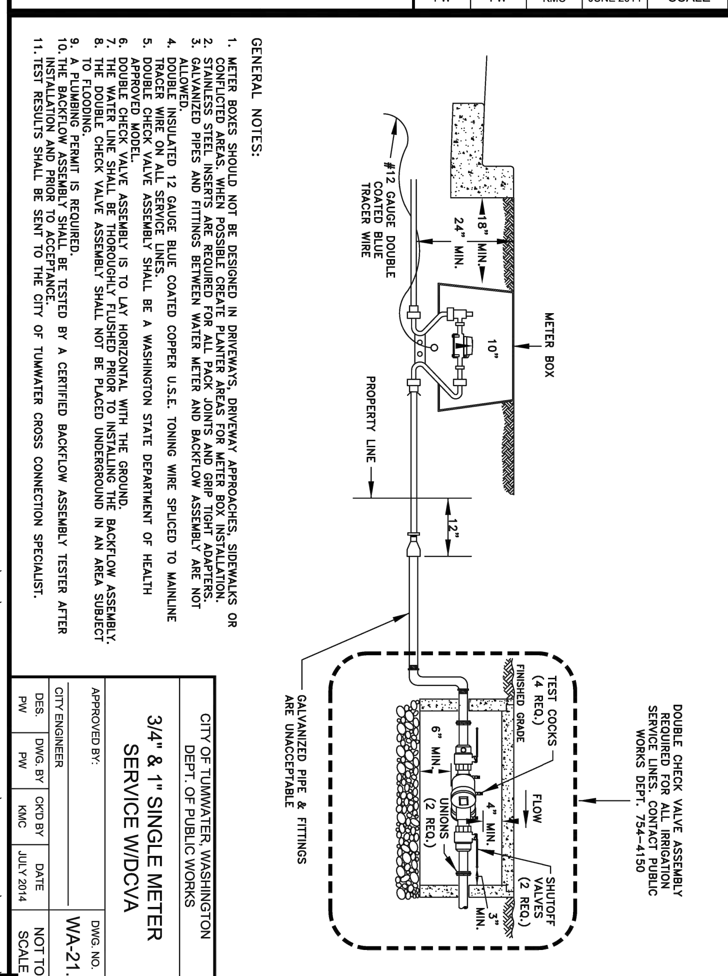
CITY OF TUMWATER, WASHINGTON DEPT. OF PUBLIC WORKS — FIRE HYDRANT ASSEMBLY — DWG. NO. WA-13 — DES. PW, DWG. BY PW, CKD BY KMC, DATE JULY 2014, NOT TO SCALE



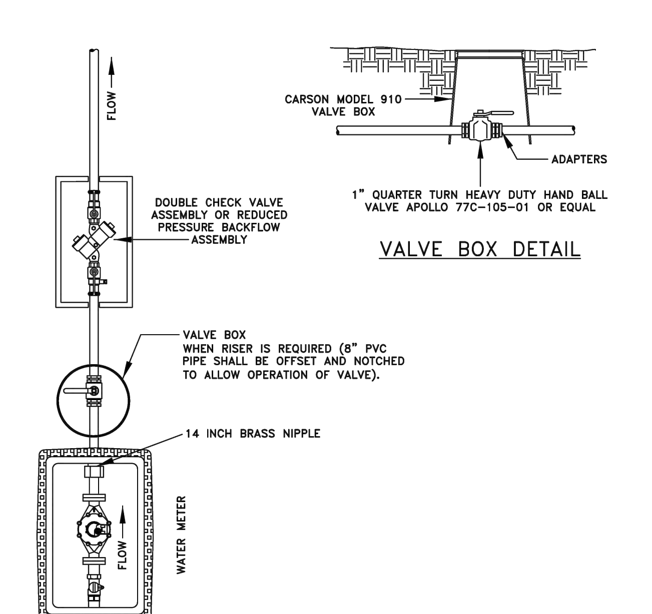
CITY OF TUMWATER, WASHINGTON DEPT. OF PUBLIC WORKS — 3/4" & 1" SINGLE METER SERVICE — DWG. NO. WA-21 — DES. PW, DWG. BY PW, CKD BY KMC, DATE JULY 2014, NOT TO SCALE



CITY OF TUMWATER, WASHINGTON DEPT. OF PUBLIC WORKS — RPBA - Reduced Pressure Backflow Assembly — DWG. NO. WA-21.1 — DES. PW, DWG. BY PW, CKD BY KMC, DATE JULY 2014, NOT TO SCALE



CITY OF TUMWATER, WASHINGTON DEPT. OF PUBLIC WORKS — 3/4" & 1" SINGLE METER SERVICE W/DCVA — DWG. NO. WA-21.2 — DES. PW, DWG. BY PW, CKD BY KMC, DATE JULY 2014, NOT TO SCALE



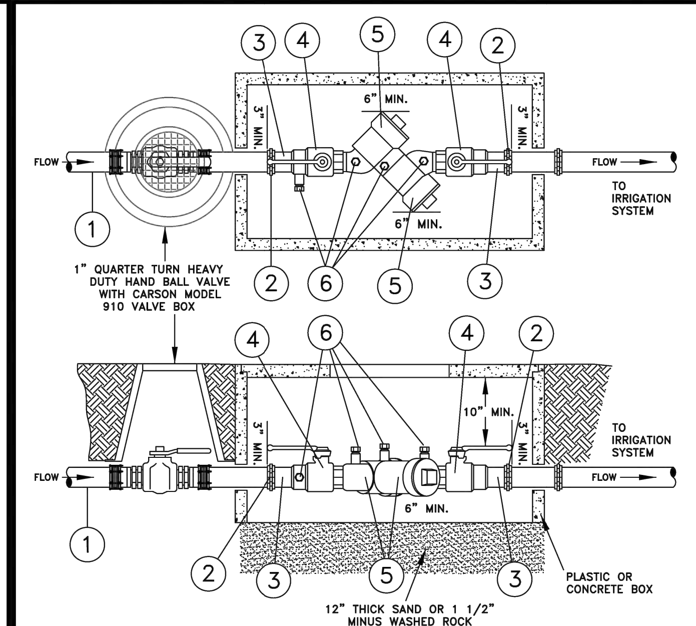
GENERAL NOTES:

1. METER BOXES SHOULD NOT BE DESIGNED IN DRIVEWAYS, DRIVEWAY APPROACHES, SIDEWALKS OR CONFLICTED AREAS. WHEN POSSIBLE CREATE PLANTER AREAS FOR METER BOX INSTALLATION.
2. DO NOT INSTALL IN AREAS SUBJECT TO FLOODING.
3. IF REDUCED PRESSURE DEVICE IS USED, RPBA BOX MUST BE FREE DRAINING.

CITY OF TUMWATER, WASHINGTON
DEPT. OF PUBLIC WORKS

IRRIGATION SERVICE FOR COMMERICAL SITES

APPROVED BY:			DWG. NO. WA-25
CITY ENGINEER			
DES. PW	DWG. BY PW	CK'D BY KMC	DATE JULY 2014	NOT TO SCALE



MATERIAL LIST:
1. SERVICE LINE
2. UNION
3. NIPPLE
4. SHUT-OFF VALVE
5. CHECK VALVES (D.O.H. APPROVED)
6. TEST COCKS

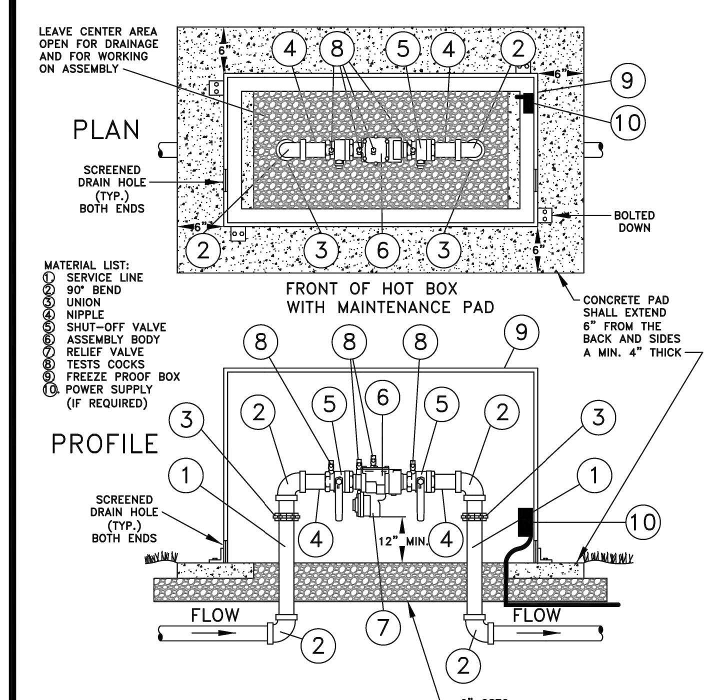
GENERAL NOTES:

1. THOROUGHLY FLUSH THE LINES PRIOR TO INSTALLING DCVA.
2. IF THE IRRIGATION SYSTEM IS TAPPED OFF OF THE DOMESTIC SERVICE LINE, A HEAVY DUTY HAND BALL VALVE MUST BE INSTALLED IN A OFFSET VALVE BOX (CARSON MODEL 910) WITHIN 18" BEFORE THE CHECK VALVE ASSEMBLY. SEE CITY DETAIL.
3. THE DEPTH OF THE VAULT SHALL NOT EXCEED 3.5'.

CITY OF TUMWATER, WASHINGTON
DEPT. OF PUBLIC WORKS

DOUBLE CHECK VALVE ASSEMBLY FOR 2" OR SMALLER IRRIGATION

APPROVED BY:			DWG. NO. WA-35
CITY ENGINEER			
DES. PW	DWG. BY PW	CK'D BY KMC	DATE JULY 2014	NOT TO SCALE



GENERAL NOTES:

1. ASSEMBLY SHALL BE D.O.H. APPROVED.
2. THOROUGHLY FLUSH LINES PRIOR TO INSTALLATION.
3. DO NOT INSTALL IN AREA SUBJECT TO FLOODING.
4. ALL PIPE AND FITTINGS SHALL BE BRASS.
5. DRAIN HOLE OPENINGS SHALL BE 1 1/2 TIMES THE DIAMETER OF SUPPLY LINE AND INCLUDE SCREENING.
6. ALL REDUCED PRESSURE BACKFLOW ASSEMBLIES SHALL BE INSTALLED IN A HOT BOX TO PREVENT THE UNIT FROM FREEZING. THE HOT BOX MAY BE EQUIPPED WITH ELECTRICAL COMPONENTS (CONDUITS, WIRING, ETC.) AND POWER SUPPLIED BY THE OWNER WHEN NECESSARY OR REQUIRED.
7. ALL CITY OF TUMWATER DUMP STATION SITES SHALL BE EQUIPPED WITH A FACTORY HEATED HOT BOX, A 1 1/2" CONDUIT AND SHALL BE WIRED FROM THE CONTROL CABINET TO THE HOT BOX AND THERMOSTAT.

CITY OF TUMWATER, WASHINGTON
DEPT. OF PUBLIC WORKS

REDUCED PRESSURE BACKFLOW ASSEMBLY FOR 2" OR SMALLER

APPROVED BY:			DWG. NO. WA-36
CITY ENGINEER			
DES. PW	DWG. BY PW	CK'D BY KMC	DATE JULY 2014	NOT TO SCALE

REVISIONS

PROJECT NO: 163.001
DRAWN: C. DAHM
CHECKED: –
SUBMITTAL DATES
OTB DATE: –

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

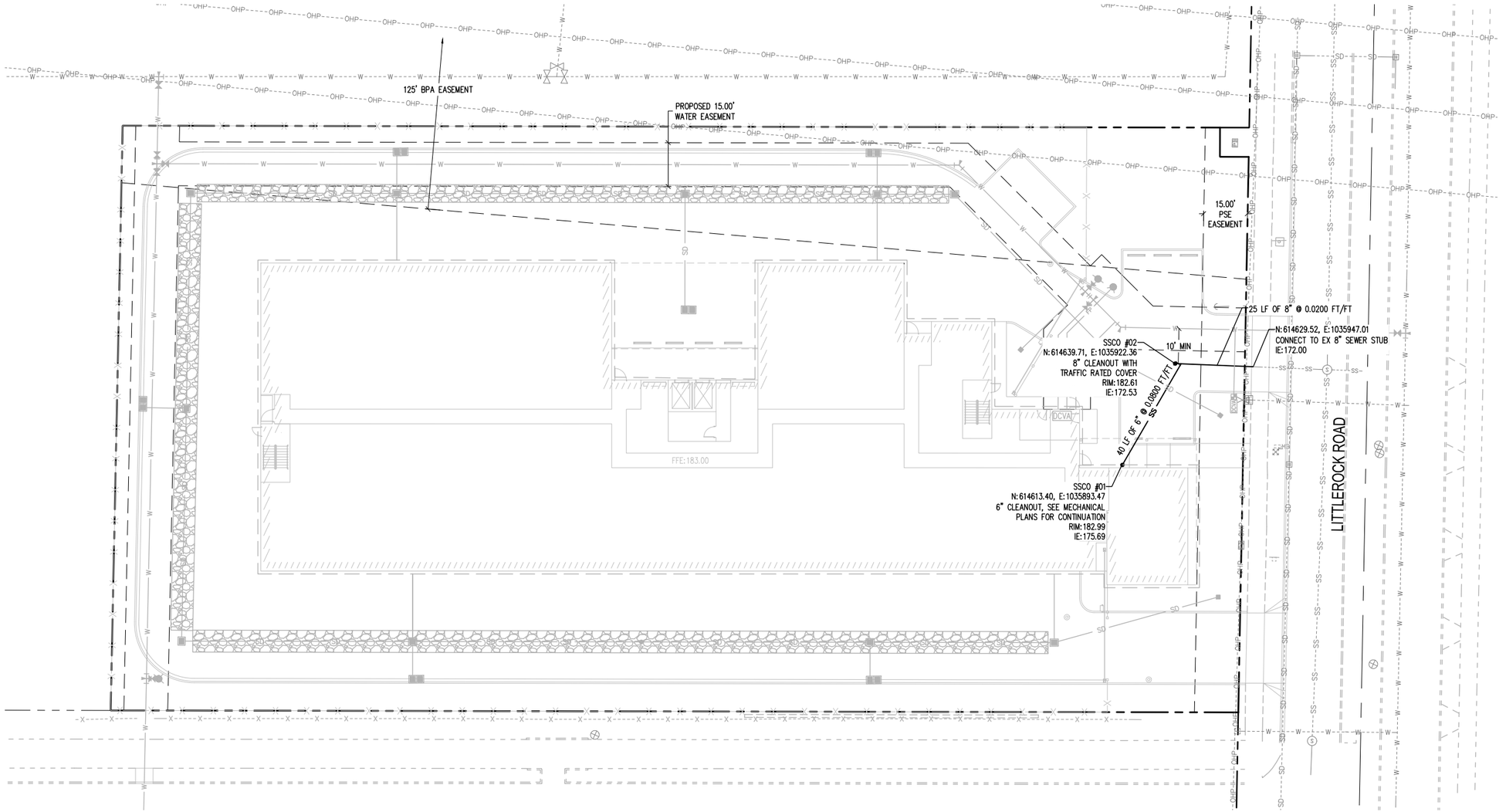
STAMP
12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
WATER DETAILS

SHEET
WT-03



N

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SCALE IN FEET

LEGEND

- PROPERTY LINE
- EASEMENT
- EXISTING CURB
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- PROPOSED BUILDING
- CONCRETE CURB
- CONCRETE CURB & GUTTER
- STORM LINE
- WATER LINE
- WATER SERVICE LINE
- ASTM D 3034 SDR 35 PVC SEWER LINE UNLESS OTHERWISE NOTED
- SEWER CLEANOUT: SEE SD-03

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

VERTICAL DATUM
NGVD 29

REVISIONS

PROJECT NO.
163.001

DRAWN
C. DAHM

CHECKED
–

SUBMITTAL DATES

OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP

WHITNEY E. DUMP
STATE OF WASHINGTON
20122774
REGISTERED
PROFESSIONAL ENGINEER

12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE

SEWER PLAN

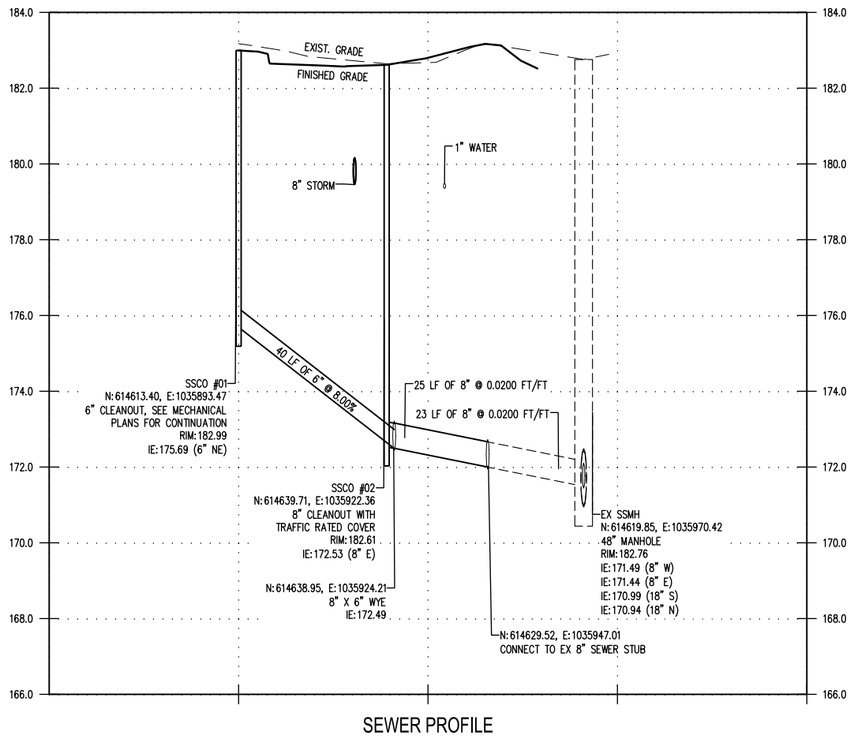
SHEET

SS-01

V 0 2 4

H 0 20 40

SCALE IN FEET



SEWER PROFILE

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

VERTICAL DATUM
NGVD 29

REVISIONS

PROJECT NO.
163.001

DRAWN
C. DAHM

CHECKED
–

SUBMITTAL DATES

OTB DATE
–

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP

WHITNEY E. DUNLAP
STATE OF WASHINGTON
20122774
REGISTERED
PROFESSIONAL ENGINEER

12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

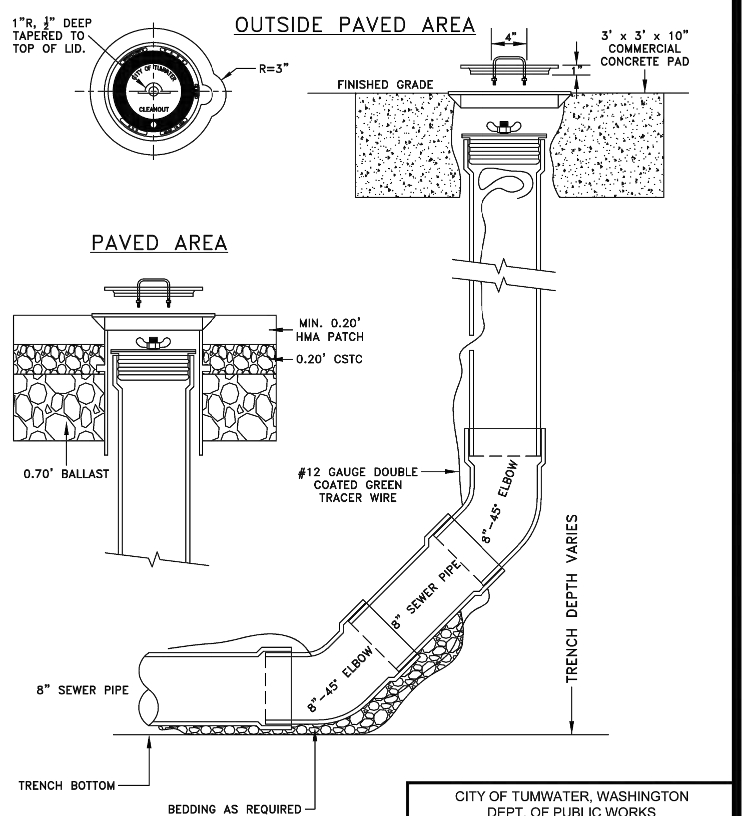
SHEET TITLE

SEWER PROFILES

SHEET

SS-02

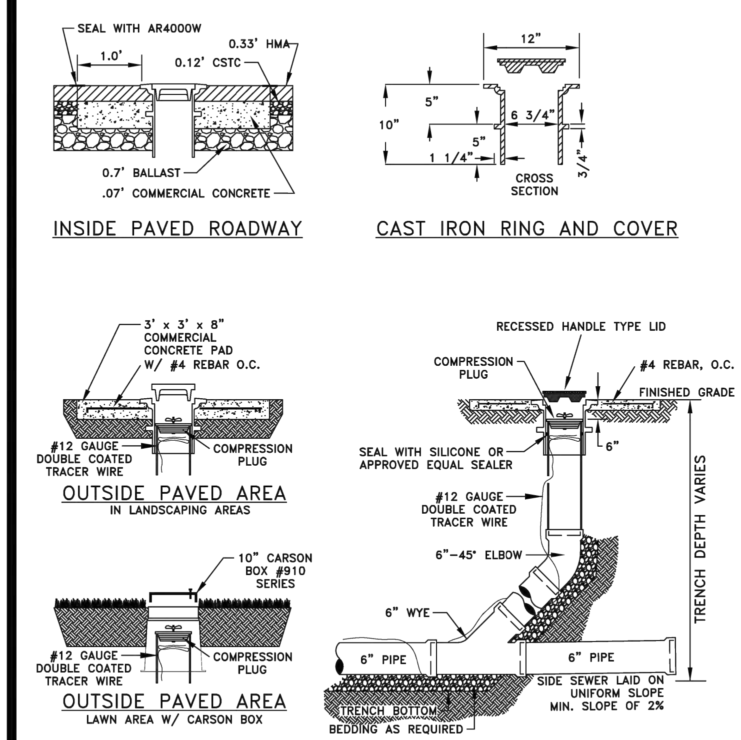
Item 3a.



GENERAL NOTES:

1. SEWER MAINS LARGER THAN 8" IN DIAMETER WILL REQUIRE PLACEMENT OF MANHOLE.

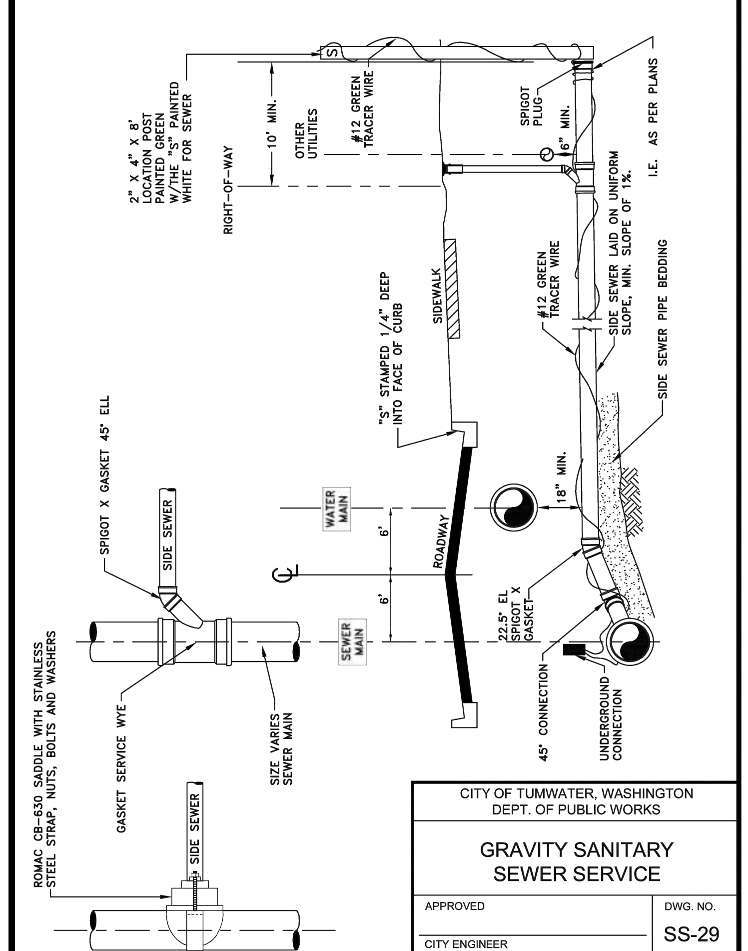
CITY OF TUMWATER, WASHINGTON DEPT. OF PUBLIC WORKS				
CLEANOUT 8" SEWER MAIN				
APPROVED CITY ENGINEER				DWG. NO. SS-10
DES. PW	DWG. BY PW	CK'D BY MW	DATE NOV. 2014	NOT TO SCALE



GENERAL NOTES:

1. ALL SEWER PIPE SHALL BE ASTM 3034 SDR 35.
2. LOCATED IN CENTER OF CUL-DE-SAC WHEN APPROPRIATE.

CITY OF TUMWATER, WASHINGTON DEPT. OF PUBLIC WORKS				
6" LATERIAL CLEANOUT DUCTIAL IRON				
APPROVED CITY ENGINEER				DWG. NO. SS-11
DES. PW	DWG. BY PW	CK'D BY MW	DATE NOV. 2014	NOT TO SCALE



CITY OF TUMWATER, WASHINGTON DEPT. OF PUBLIC WORKS				
GRAVITY SANITARY SEWER SERVICE				
APPROVED CITY ENGINEER				DWG. NO. SS-29
DES. PW	DWG. BY PW	CK'D BY KMC	DATE JAN. 2012	NOT TO SCALE

04, 2023 12:00:21pm – User whitney
2 – PROJECTS\163 TREVOR COLBY\163.001 6115 & 6119 LITTLEROCK ROAD\ACAD\163.001 SS-03.DWG

CALL BEFORE YOU DIG

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

VERTICAL DATUM
NGVD 29

REVISIONS

PROJECT NO. 163.001
DRAWN C. DAHM
CHECKED –
SUBMITTAL DATES
OTB DATE –

JSA CIVIL
Engineering | Planning | Management
111 TUMWATER BLVD SE, SUITE C210
TUMWATER, WA 98501

STAMP
WHITNEY E. DUNLAP
STATE OF WASHINGTON
20122774
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY
12/04/2023

SELF STORAGE FACILITY
COMMERCIAL DEVELOPMENT PROJECT
6115 & 6119 LITTLEROCK RD SW
TUMWATER, WA 98512

TREVOR COLBY
6820 6TH AVE, SUITE 201
TACOMA, WA 98406

SHEET TITLE
SEWER DETAILS

SHEET
SS-03

EXHIBIT 13

INDEMNITY AGREEMENT

This indemnity agreement ("Agreement") dated for reference purposes as of this _____ day of _____, 2024, is executed by Littlerock Storage LLC, a Washington limited liability company ("Indemnitor") herein for the benefit of the City of Tumwater, a Municipal Corporation ("City").

RECITALS:

1. Indemnitor has requested the City approve a preliminary Site Plan Review ("TUM-23-0650"), Conditional Use Permit ("TUM-24-0108") and Variance ("TUM-24-0119") ("Land Use Application") relative to property owned by Indemnitor and situated on two parcels totaling approximately 1.7-acres situated at 6115 and 6119 Littlerock Rd. Tumwater, WA 98512, and further defined as Thurston County Tax Parcel Numbers1270-321-1802 and 1270-321-1801 ("the Land").

2. The Bonneville Power Administration ("BPA") is the holder of certain easements over and across portion of the above describe property, ("Easement Area") in connection with the placement and maintenance of electrical transmission lines within the easement area. The Indemnitor maintains that the provisions of those easements do not require approval by the Bonneville Power Administration for the construction of the improvements within the easement area in connection with the above referenced land use application, as it relates to the construction of improvements including but not limited to utilities and storm retention trenches and roads. This Agreement with regard to the construction of the improvements is entered into in lieu of including a condition upon approval of Indemnitor's development that would require the Indemnitor to enter into an agreement with the BPA concerning the approval of the construction of those improvements within the easement area. Nothing herein shall foreclose such an agreement with the BPA , nor shall the terms of this Indemnity Agreement be affected by any such agreement with BPA in the future.

3. The Indemnitor is executing this Agreement to induce the City to not require prior approval by the BPA with respect to the improvements to be constructed within the easement area in accordance with the development of the property, pursuant to the above referenced land use application. The City acknowledges that it will accept this Indemnification Agreement in lieu of making as a condition of approval the execution of an agreement between the Indemnitor and the BPA.

AGREEMENT:

As a material inducement and consideration for City's agreement to not require prior approval by the Bonneville Power Administration for the construction of

improvements within the BPA easement area, the Indemnitor represents, warrants, covenants, and agrees as follows:

1. INDEMNIFICATION

1.1 Indemnitor shall defend and hold the City harmless from and against any and all claims, demands, damages, losses, liens, liabilities, penalties, fines, lawsuits, and other proceedings, and cost and expenses (including attorney's fees, architectural and engineering and accountings costs, and all other replace and cleanup costs) that are incurred or may be made or incurred by the City or are in any way connected with the construction and maintenance of any improvements within the Bonneville Power Administration easement area in connection with or in furtherance of the development of the above described property by the Indemnitor, its heirs, successors, and assigns in connection with the development of the property pursuant to the above referenced land use application. This indemnification shall apply not only to any claims that may be brought by or on behalf of the Bonneville Power Administration, but on behalf of any other claimant arising out of the easements granted to the BPA in connection with the activities and improvements to be located within the Bonneville Power easement area constructed by Indemnitor or its assigns pursuant to the Land Use Application.

2. ASSUMPTION OF LIABILITY

2.1 In addition to the indemnification provision set forth above, the Indemnitor also assumes any and all liability for costs to relocate or to remove any improvements to be constructed in connection with the land use application referred to above in the event the BPA, its successors or assigns, successfully requires relocation or removal of any such improvements constructed with the easement area, including the costs of all site restoration.

3. UNCONDITIONAL OBLIGATIONS

3.1 Indemnitor's obligations under this Agreement are unconditional and shall not be subject to any limitation or liability and shall continue to affect after any transfer of all or any portion of the property described above the subject to the land use application.

3.2 This indemnity shall run with the Land. The Indemnitor states that all of the obligations set forth therein shall run with the land and shall be binding upon the heirs, successors, and assigns of the Indemnitor, and further

provide this Indemnity Agreement at the request of the City may be recorded.

4. ATTORNEYS FEES AND EXPENSES

4.1 Indemnitor agrees to pay on demand all of the City's costs and expenses, including the City's attorney's fees and legal expenses incurred relating to the enforcement of this agreement. In the event arbitration, suit, action, or other legal proceedings is brought to interpret and enforce this Agreement, then Indemnitor on behalf of its heirs, successors, and assigns agrees to pay all additional funds and the arbitrator or judges reasonable attorneys' costs, disbursement, and attorney's fees at hearing, trial, and on any and all appeals.

5. SUCCESSORS AND ASSIGNS

5.1 This agreement shall be binding upon and inure to the benefit of the City, Indemnitor and their respective representatives' successors, and assigns, and shall run with the Land.

6. AMENDMENT

6.1 The parties agree that this Agreement sets forth the entire understanding of the parties with respect to the subject matter contained herein and cannot be amended or modified, except in writing signed by all parties bound by this Agreement.

DATED this _____ day of _____, 2024.

LITTLEROCK STORAGE LLC

_____

Trevor Colby
Managing Member

CITY OF TUMWATER

_____

By:_____
Its:_____

Notary Acknowledgement on Following Page

STATE OF WASHINGTON)
) ss.
COUNTY OF THURSTON)

On this _____ day of _____, 2024, before me personally appeared Trevor Colby, to me known to be the Managing Member of Littlerock Storage LLC, the limited liability company that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said company, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute said instrument.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

_____
NOTARY PUBLIC - State of Washington
Commission expires:_____

STATE OF WASHINGTON)
) ss.
COUNTY OF THURSTON)

On this _____ day of _____, 2024, before me personally appeared_____, to me known to be the _____, of the City of Tumwater, the Municipal Corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he/she is authorized to execute said instrument.

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year first above written.

_____
NOTARY PUBLIC - State of Washington
Commission expires:_____