CITY OF
BAINBRIDGE ISLAND

PLANNING COMMISSION REGULAR MEETING
THURSDAY, JANUARY 24, 2019
7:00 – 9:00 PM
COUNCIL CHAMBER
280 MADISON AVE N
BAINBRIDGE ISLAND, WA 98110

# AMENDED AGENDA

| | |
|---|---|
| 7:00 PM | CALL TO ORDER<br>Call to Order, Agenda Review, Conflict Disclosure |
| 7:05 PM | REVIEW AND APPROVE MINUTES<br>January 10, 2019 |
| 7:10 PM | PUBLIC COMMENT<br>Accept public comment on off agenda items. |
| 7:15 PM | CKCB MADISON SITE PLAN REVIEW AND SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT (PLN50958 SPR/SSDP)<br>Recommendation<br>Olivia Sontag, Planner |
| 8:15 PM | SUBDIVISION STANDARDS<br>Study Session<br>Christy Carr, AICP, Long Range Senior Planner |
| 8:55 PM | NEW/OLD BUSINESS |
| 9:00 PM | ADJOURN |

***TIMES ARE ESTIMATES**

Public comment time at meeting may be limited to allow time for Commissioners to deliberate. To provide additional comment to the City outside of this meeting, e-mail us at pcd@bainbridgewa.gov or write us at Planning and Community Development, 280 Madison Avenue, Bainbridge Island, WA 98110

**For special accommodations, please contact Jane Rasely, Planning & Community Development 206-780-3758 or at jrasely@bainbridgewa.gov**

CITY OF
BAINBRIDGE ISLAND

# Planning Commission
# Regular Meeting and Public Hearing Minutes
# Thursday January 10, 2019

CALL TO ORDER – Call to Order, Agenda Review, Conflict Disclosure
REVIEW OF MINUTES – November 10, 2016, November 29, 2018 and December 13, 2018
ELECT PLANNING COMMISSION CHAIR AND VICE-CHAIR
PUBLIC COMMENT – Accept public comment on off agenda items
PLANNING COMMISSION REVIEW PROCESS
SUBDIVISION UPDATE
NEW/OLD BUSINESS
ADJOURN

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**CALL TO ORDER – Call to Order, Agenda Review, Conflict Disclosure**
Chair William Chester called the meeting to order at 7:04 PM. Planning Commissioners in attendance were J. Mack Pearl, Jon Quitslund, Lisa Macchio, Kimberly McCormick Osmond and Don Doman. City Staff present were Planning Director Gary Christensen, Long Range Senior Planner Christy Carr and Administrative Specialist Jane Rasely who monitored recording and prepared minutes.

The agenda was reviewed. There were not any conflicts noted.

**REVIEW OF MINUTES – November 10, 2016, November 29, 2018 and December 13, 2018**

> **Motion: I move approval of the minutes as distributed for November 10, 2016, November 29, 2018 and December 13, 2018.**
> **Quitslund/Pearl: Passed Unanimously**

**ELECT PLANNING COMMISSION CHAIR AND VICE-CHAIR**

> **Motion: I nominate Bill Chester to continue as Chair.**
> **Pearl/McCormick/Osmond: Unanimously approve**

Commissioner McCormick Osmond volunteered to be Vice-Chair and was unanimously approved.

Chair Chester and Planning Director Gary Christensen thanked J. Mack Pearl for his years of service to the Planning Commission as both a Commissioner and Chair of the Commission.

It was agreed the non-formal subcommittee comprised of Chair Chester and Commissioners Pearl and McCormick Osmond would continue. Commissioner Macchio asked to be included when possible.

DRAFT

**PUBLIC COMMENT – Accept public comment on off agenda items**
None.

**PLANNING COMMISSION REVIEW PROCESS**
Discussion of draft review process proposed by Chair Chester (see attached). Commissioners Don Doman and Jon Quitslund were chosen to be the Planning Commission's Design Review Board Liaisons.

**SUBDIVISION UPDATE**
Senior Planner Christy Carr facilitated discussion.

Public Comment
**Jonathan Davis, City Consultant** – Spoke in favor of *Table 18.12.040 Permitted Setback/Height Modifications* as pertinent to setbacks and that perhaps there should be a separate table for buffers. He also spoke against buffers doubling as community space.

**NEW/OLD BUSINESS**
Chair Chester briefed the other Commissioners on the applications received to fill the vacant Position 7. City Council Member Sarah Blossom weighed in on the interview process as well.

Planning Director Gary Christensen provided a synopsis of planning related actions taken by City Council on January 8, 2019.

**ADJOURN**
The meeting was adjourned at 9:11 PM.

Approved by:

_____ _____
William Chester, Chair Jane Rasely, Administrative Specialist

DRAFT

CITY OF BAINBRIDGE ISLAND

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

# STAFF REPORT AND RECOMMENDATION

## CKCB MADISON AVENUE DEVELOPMENT
## FILE #: PLN50958 SPR/SSDP/SVAR

Prepared by: Olivia Sontag, Planner

Date: January 18, 2019

**Request:** Site Plan and Design Review (SPR), PLN50958 SPR
Shoreline Substantial Development Permit (SSDP), PLN50958 SSDP
Shoreline Variance (SVAR), PLN50958 SVAR

**Owner:** CKCB Madison Avenue Development LLC

**Location:** Undeveloped - No Site Address

**Tax Parcel:** 262502-3-078-2006

**Part I: Description of Proposal and Recommendation**

1. **Description of Proposal:** The undeveloped 0.39-acre property is located within the Mixed Use Town Center – Central Core Overlay District. The proposed development is within shoreline jurisdiction and is located adjacent to a marine bluff and a geologically hazardous area. The applicant proposed to reduce the minimum buffer to the geologically hazardous area from 50 feet to 10 feet. The buffer reduction was supported by an Independent Third-Party Geotechnical Review, requiring a 10-foot buffer and a 15-foot building setback from the top of the slope.

   The applicant proposes development of a courtyard-style ten-unit residential building made up of eight (8) one-bedroom apartments and two (2) townhomes. Vehicular and bicycle parking is proposed in an underground parking garage with a disabled access parking space located along Madison Avenue S. Other frontage improvements include a bike lane, a five (5) foot sidewalk, street trees and other landscaping.

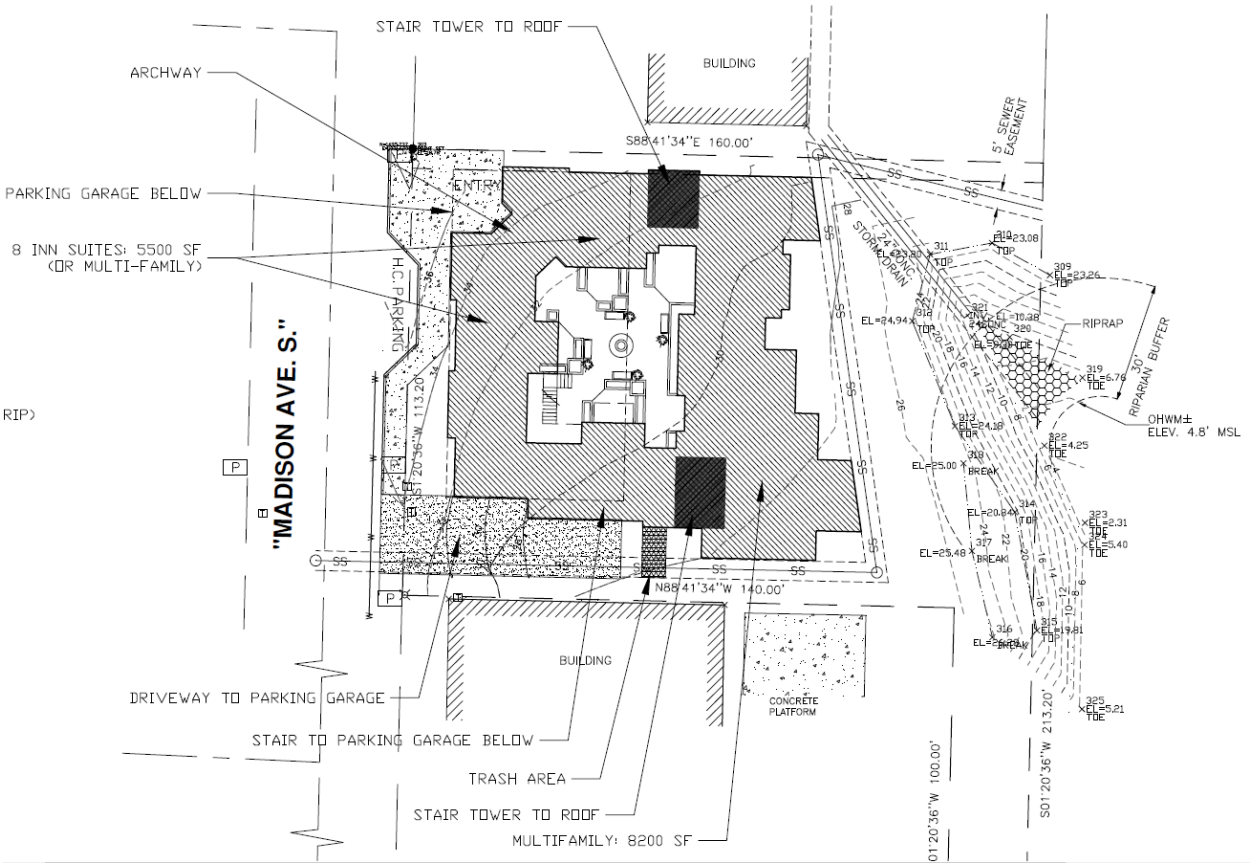
   The proposed development preserves all native vegetation within the shoreline buffer and proposes a public trail along the top of the marine bluff as a continuation of the Waterfront Trail. No significant trees or mature native vegetation are proposed for removal and the applicant is proposing to increase the existing tree units on site.

   The applicant is also requesting a shoreline variance for an additional five (5) feet in height for two (2) elevator/stair towers providing disabled access to the rooftop for each townhome.

2. **Environmental Review:** The project is subject to State Environmental Policy Act (SEPA) review as provided in Washington Administrative Code (WAC 197-11-800).

3. **Staff Recommendation:** APPROVAL, with conditions.

**Figure 1 – Site Plan**




**Part II: General Information and Site Characteristics**

| **Basic Information** | |
|---|---|
| Zoning District | Mixed Use Town Center – Central Core Overlay (CORE) |
| Gross Site Area | 0.39 acres (18,112 square feet not counting 20-foot wide strip) |
| Soils and Terrain | Soils consist of Glacial Till, Kapowsin gravelly sandy loam. The majority of the site slopes gently toward the east to a steep slope approximately 15 feet in height that extends down to a tidal inlet. |
| Critical Areas | Geologically Hazardous Area and Buffer |
| Shoreline Designation | Urban |
| Existing Development | Undeveloped |

| **Public Services and Utilities** | |
|---|---|
| Police | City of Bainbridge Island Police Department |
| Fire | Bainbridge Island Fire District |
| Schools | Bainbridge Island School District |
| Water | COBI Water Service Area |
| Sewer | COBI Sewer Service Area |
| Storm Drainage | Proposing to tie into an existing outfall for a direct-discharge of stormwater to Eagle Harbor if connecting to the storm drain on Madison Avenue is infeasible. |

**Figure 2 – Vicinity Map, Project Site, and Surrounding Zoning**

**Part III: Application Background**

| Date | Action | Summary |
|---|---|---|
| September 26, 2017 | First Preapplication Meeting | Staff requested more information in order to determine the permit process. |
| November 6, 2017 | Design Review Board (DRB) Meeting | Preliminary review and discussion. DRB suggested that shoreline issues be resolved before the next DRB review and requested that the applicant provide the design in 3D. |
| November 7, 2017 | Second Preapplication Meeting | Permit process was determined. |
| November 9, 2017 | Preapplication Letter Sent | Included comments from the Fire District and COBI Public Works Development Engineer. |
| December 11, 2017 | Public Participation Meeting | Meeting was well-attended with 50+ attendees. Comments and concerns centered around the request for a variance for height, activities and elements proposed on the rooftop, privacy for neighbors, pedestrian traffic along Madison, and requests that the Waterfront Trail be installed on the property. |
| January 9, 2018 | Development Moratorium (Ordinance No. 2018-02) | The moratorium as originally adopted prohibited applications for many land use actions. The moratorium was subsequently modified to allow an exception for Major Site Plan and Design Review proposals that were not otherwise subject to this moratorium and that had a preapplication conference on the Planning Department's calendar before the effective date of the moratorium. (Ordinance No. 2018-05)<br>The moratorium was then revised again to exclude Major Site Plan and Design Review properties located in the Mixed Use Town Center/Central Core Overlay District. (Ordinance No. 2018-09) |
| February 28, 2018 | Application Submitted | Submitted on the effective date of Ordinance No. 2018-05. |
| March 28, 2018 | Determination of Completeness | Application was deemed complete. |
| April 23, 2018 | Design Review Board (DRB) Meeting | Recommended approval with several conditions and additional review of the building materials and landscape site plan prior to permitting. |
| June 13, 2018 | Multi-Modal Transportation Advisory Committee (MTAC) Meeting | Preliminary review and discussion. Committee members scheduled a site visit. |
| July 11, 2018 | Multi-Modal Transportation Advisory Committee (MTAC) Meeting | The Committee voted 6-0 to recommend City Staff require the applicant to complete a segment of the Waterfront Trail on the subject property. |

**Part IV: Comprehensive Plan Goals and Policies**

| Elements | Goals and Policies |
|---|---|
| Introduction | Guiding Principle #1: Preserve the special character of the Island, which includes downtown Winslow's small town atmosphere and function, historic buildings, extensive forested areas, meadows, farms, marine views and access, and scenic and winding roads supporting all forms of transportation. |
| | Guiding Principle #4: Consider the costs and benefits to Island residents and property owners in making land use decisions. |
| Land Use Element | Island-Wide Conservation and Development Strategy – Goal LU-4: As part of a long-term Island-wide Conservation and Development Strategy, focus residential and commercial development in designated centers, increase a network of conservation lands, maximize public access while protecting the shoreline, minimize impacts from the SR 305 corridor and conserve the Island's ecosystems and the green and open character of its landscape. |
| | Designated Centers – Goal LU-5: Focus Urban Development in Designated Centers. |
| | Policy LU 6.2: Promote dense residential and commercial development and encourage human activity within Winslow, the heart of Bainbridge Island. In order to create a vibrant city center direct growth where infrastructure exists, reduce reliance on the automobile, provide opportunities for affordable housing and absorb growth that would otherwise be scattered in outlying areas. Plan for adequate parking in Winslow to accommodate residents and visitors who drive downtown for shopping, participation in local government, attendance at cultural events and centers, and to use other resources in Winslow. |
| | Winslow Town Center – Goal LU-7: The Winslow mixed use and commercial districts are designed to strengthen the vitality of downtown Winslow as a place for people to live, shop and work. The Winslow Mixed Use Town Center (MUTC) is intended to have a strong residential component to encourage a lively community during the day and at night. The high residential density of Winslow requires the Central Core Overlay District to provide services and products that meet the needs of residents as well as visitors. |
| | Policy LU 7.3: Central Core Overlay District – The Central Core is the most densely developed district within the Mixed Use Town Center. Within this Overlay District, residential uses are encouraged, but exclusive office and/or retail uses are permitted. Mixed-use development within the Central Core Overlay District that includes a residential component may be exempt from requirements to provide off-street parking for the residential component of the project. |
| Economic Element | Development in Designated Centers – Goal EC-6: As the city's designated centers evolve, balance their functions as places of commerce and employment with their roles helping to meet housing needs and provide focal points for civic engagement and cultural enrichment. |
| | Policy EC 11.2: The predominant focus of downtown Winslow is to serve the commercial and social needs of Island residents. A lively, pedestrian-oriented town center that provides a mix of commercial and residential uses creates a potential tourist destination. |
| Environmental Element | Geologically Hazardous Areas – Goal EN-8: Protect landslide hazard areas and erosion hazard areas from the impacts of use and development for the protection of public safety, property and the environment. |

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| | Policy EN 8.1 Avoid land uses on landslide hazard and erosion hazard areas. If the hazard caused by development can be mitigated, then design land use to prevent damage to persons or property and environmental degradation and to preserve and enhance existing vegetation to the maximum extent possible. |
| | Policy EN 10.2: Encourage the retention of existing trees and vegetation and the planting of new trees and vegetation that provides natural filtration of suspended particulate matter, removes carbon dioxide and improves air quality. |
| Water Resources Element | Policy WR 2.3: To promote efficient use of groundwater resources, encourage the expansion of existing water systems rather than encouraging shallow or individual residential wells. |
| | Policy WR 2.13: Require the retention of native landscapes to promote water quality and to reduce the need for irrigation. |
| | Surface Water Protection and Management – Goal WR-3: Achieve no net loss of ecological functions and processes necessary to sustain aquatic resources including loss that may result from cumulative impacts over time. |
| | Policy WR 3.2: Require that vegetated buffers be maintained between proposed development and the aquatic resource in order to protect the functions and values of such systems. Restore degraded buffers to enhance their function. Allow reductions in vegetated buffers only in areas where such reductions, if consistently applied, would not result in significant cumulative impacts to aquatic resources and fish and wildlife habitat. |
| | Policy WR 3.3 Require that buffers be retained in their natural condition wherever possible while allowing for appropriate maintenance. Where buffer disturbance has occurred, require re-vegetation with appropriate species, with a preference for native species, to restore the buffers' protective values. |
| Housing Element | Policy HO 3.1 Encourage innovative zoning regulations that increase the variety of housing types and choices suitable to a range of household sizes and incomes in a way that is compatible with the character of existing neighborhoods. |
| | Policy HO 4.1 Encourage new multifamily housing in a variety of sizes and forms in designated centers. |
| Transportation Element | Multimodal – Goal TR-1: Encourage the development of an integrated multimodal transportation system that provides a range of safe transportation alternatives and increases the through movement of people, maximizing use of non-motorized and public transit. |
| | Policy TR 1.1: In accordance with complete streets practices and guidelines, new or rebuilt streets shall, as much as is practical, address the use of the right-of-way by all users. |
| | Non-Motorized System – Goal TR-2: Provide a non-motorized transportation system that is a planned and coordinated network of shoulders, sidewalks, trails, footpaths, bikeways and multi- purpose trails that connect neighborhoods with parks, schools, the shoreline, the ferry terminal and commercial areas. |
| | Policy TR 2.2: Trails should provide for both passive and active pursuits including recreation and nature study, exercise, shopping, and commuting to work and schools. Coordinate with the Park District as the primary provider of the community's recreational trails. |

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| | Policy TR 2.4: Provide a network of sidewalk facilities adjacent to roadways in designated centers with the Winslow area given priority. Sidewalks shall be of sufficient width to accommodate expected pedestrian use, including safe crossings with adequate overhead or embedded lighting. Where possible, separate sidewalks from the roadway with a street tree planting strip and buffer. Designs should accommodate users of all abilities, meeting ADA requirements. |
| | Policy TR 2.6: Develop a trail system to serve non-motorized users across the Island. As envisioned, the network will include the Waterfront Trail in Winslow, the Sound to Olympics Trail (STO, a regional trail connecting the Ferry Terminal to the Agate Pass Bridge), intra-island multi-use trails, unopened City rights-of-way, shoreline trails, and connecting pathways within neighborhoods. The goal is to provide walkability within neighborhoods and Island-wide connectivity for both pedestrians and cyclists. |
| | Policy TR 2.11: Secure easements and other land dedication for non-motorized facilities through development and redevelopment mitigation and conditions, donation, tax incentives, and direct acquisition. Coordinate these efforts with the Park District when parkland and recreational trails are involved. |
| | Policy TR 8.4: Complete and protect the Winslow Waterfront Trail. |
| | Policy TR 10.1 Provide adequate parking in designated centers. Development of street frontages in urban commercial areas should maximize on-street parking to the extent practical. Development projects in urban residential areas should consider on-street parking rather than off-street parking. |
| Utilities Element | Policy U 12.2: Within public sewer system service areas, new construction should provide for eventual connection to public sewer systems. |
| | Storm and Surface Water – Goal U-13: Manage stormwater runoff to protect life, property and habitat from flooding and erosion; to channel runoff to minimize impacts to daily activities; to protect the quality of groundwater, surface water, and the waters of Puget Sound; and to provide recharge of groundwater where appropriate. |
| | Policy U 13.2: Require new development to provide both on-site and off-site improvements necessary to avoid adverse water quality and quantity impacts. |
| | Policy U 13.5: Minimize disruption and/or degradation of natural drainage systems, minimize impervious areas by restricting site coverage, and encourage site permeability by retaining natural vegetation and buffers, and specifying use of permeable materials. |
| | Policy U 14.5: Encourage the electric service provider and electricity users to use carbon neutral electricity generation, local electricity generation, and innovative technologies such as solar power that are reliable, cost effective, preserve resources, provide minimal environmental impact, and do not contribute to global warming. |
| | Policy U 14.8: Encourage new development to integrate environmentally responsible and innovative energy systems. |

**Part V: Public Notice, Public Comments, and Agency Comments**

1. **Public Notice**

| Date | Action | Summary |
|---|---|---|
| April 6, 2018 | Notice of Application/SEPA Comment Period/Hearing Published | 30 Day Comment Period<br>Seven (7) Public Comments Received |

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| June 8, 2018 | Revised Notice of Application/SEPA Comment Period/Hearing Published | 30 Day Comment Period<br>Five (5) New Public Comments Received<br>The project was re-noticed after some properties were inadvertently omitted from the original comment period that occurred from April 6, 2018 to May 7, 2018. All comments received during the original comment period remained valid. |
| July 9, 2018 | End of Comment Period | Total of 12 Public Comments Received |
| January 11, 2019 | Notice of Intent to Reduce the Minimum Buffer in a Landslide Hazard Area | 21 Day Comment Period |
| February 4, 2019 | End of Comment Period | No public comments have been received. |

**2. Public Comments**

| Summary of Comment | City Response |
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| **Variance for Height:**<br>There were seven (7) comments which opposed the height variance. Reasons provided included:<br>• Obstructs views of the harbor.<br>• Reduced privacy for surrounding properties.<br>• Interferes with the view corridors of the Seabreeze condominiums from the North.<br>• Heights of this building at the eastern end of the building, northeast, and southeast corners are already well in excess of 30 feet due to the natural slope/grade of the property.<br>• Roof could be accessed by several other means such as recessed, uncovered, or open stairwells.<br>• This request does not meet the variance decision criteria. Granting a variance would amount to special privilege not available to others. It would adversely affect neighboring properties. There are no special circumstances identified. The property owner has not demonstrated that a variance is necessary for reasonable use of the property.<br>• Purpose is to enrich the amenities of two waterfront luxury condominiums.<br>• Pedestrians who walk Madison Ave daily should not be subject to an exceptionally tall and imposing building blocking more view.<br>• Want to keep the 'small town' feel of Winslow. | The decision criteria for the shoreline variance are analyzed in this staff report and will be used to make a decision on the application. The applicant has been asked to consider other ways that the roof can be accessed. The applicant provided a height analysis depiction of how the height increase will impact views of the properties to the north along the east side of Madison Avenue. The applicant has attempted to minimize these impacts by limiting the size of the elevator/stair towers. The applicant has correctly calculated the average grade on the site. Per the City's Shoreline Master Program (SMP), height is calculated as the distance measured from the average grade level to the highest point of a structure. Average grade level is the average of the natural or existing topography of the portion of the lot, parcel, or tract of real property which will be directly under the proposed building or structure. Calculation of the average grade level shall be made by averaging the elevations at the center of all exterior walls of the proposed building. This definition of "average grade level" differs from the definition in BIMC Title 18 for zoning. Structures within shoreline jurisdiction shall comply with the SMP definition. The elevator/stair towers will not impact the view from the right of way or sidewalk. |
| **Rooftop Features, Access, and Privacy:**<br>In conjunction with the opposition to the variance for height, commenters expressed concern over the use of the rooftop area. Concerns included: | The City does not regulate temporary features such as patio furniture, umbrellas, and planters. The applicant is proposing to use vegetation on the roof to provide privacy for the residents. |

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| • The "stairwell towers" will be far more than just a "stair tower", it will be an outdoor covered deck and patio space with large plants and trellises that further impact the public's view.<br>• Fixed elements are not proposed, but the rooftop will likely have temporary elements for shading such as parasol umbrellas, trees and planters. A permanent safety railing would also be needed around the roof edge.<br>• The proposed rooftop deck would create a significant privacy concern. Anyone standing on the rooftop could look directly into the windows and decks of neighboring properties including those of Seabreeze condominiums. | The railing proposed does not exceed the 30-foot height limit. In the Mixed Use Town Center – Central Core Overlay District (CORE), the landscape standards in BIMC 18.15.010.G.5 allow trees required to meet tree retention requirements to be planted either at ground level or above ground level (such as a patio, terrace, or rooftop). The applicant has not proposed any of the trees required for tree retention to be placed on the roof. |
| **Pedestrian Traffic on Madison:**<br>• The sidewalk along the east side of Madison Ave is the second busiest pedestrian sidewalk on the Island. Thousands of tourists and locals walk up and down this sidewalk annually.<br>• Placing the new sidewalk right against the northwest corner of the property invites future trouble when the evening crowd walks up from the pub and restaurants on the waterfront. | The applicant has proposed the sidewalk along Madison in accordance with the Island Wide Transportation Plan (IWTP) and the non-motorized construction standards. Easements will be provided to the City for any portion of the sidewalk that is not within City right of way. Completion of this segment of the Waterfront Trail may alleviate some of the pedestrian traffic along Madison Avenue. |
| **Waterfront Trail and Existing Footpaths:**<br>There were five (5) comments which advocated for installation of the Waterfront Trail and connectivity through the site. Reasons provided include:<br>• The proposed commercial development is located along the shoreline and is required by the Shoreline Master Program (SMP), 2016 Bainbridge Island Comprehensive Plan Update, and the Winslow Master Plan (WMP).<br>• It will provide an important link of the Waterfront Trail going parallel along the water inlet between Bjune Drive and Parfitt Way.<br>• The Waterfront Trail has gradually developed over 30 years, and this link of the trail has been on the list for completion for most of that period.<br>• Analysis by a professional engineer may be needed to provide a smooth transition from the existing path to the new path provided by the applicant.<br>• Future easements may be needed to progress down to other buildings along the waterfront. The trail could go perpendicular to the water and exit onto Madison allowing pedestrians to continue down Madison to the water. | There are several City documents support and require the installation of the Waterfront Trail:<br>• The Winslow Master Plan (WMP) Chapter 4 Open Space and Trails WMP 4-3.5.<br>• The 2016 Bainbridge Island Comprehensive Plan Update Transportation Element Policy TR 2.6, 2.11, and 8.4.<br>• The Shoreline Master Program (SMP) in the Bainbridge Island Municipal Code (BIMC) 16.12.030.C.4. requirements for public access.<br>• The Island Wide Transportation Plan (IWTP) as depicted on the system map.<br><br>The applicant has proposed the Waterfront Trail along the inlet as far south along the panhandle as possible as required in the IWTP. The southern 50 feet of the panhandle is partially overwater and the trail cannot feasibly be constructed. If the applicant would like to earn an FAR bonus by providing public amenities, they have the option to construct, for example, an elevated boardwalk that would complete the remaining 50 feet of trail. A 20-foot easement for the trail is being provided to the City. The project has been conditioned accordingly. |

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| • The Bainbridge Island Metro Parks & Recreation District (BIMPRD) strongly encourages the City to require a trail be built along the waterfront side of the site as a condition of approval for the development. | |
| **Development Destroying Tree Roots:**<br>• Deep foundations for the structure are near the edge of the property. Digging and clearing to within 10 feet of the northern boundary will require cutting into the root structure of three trees on the boundary line – one of which is 40-50 feet tall. Cutting the roots is likely to kill the trees. Commenter seeks assurances that trees on the property line are protected or replaced if lost within 3 years. | No side yard setbacks are required for the proposed development. The applicant has proposed a four and a half (4.5) foot setback to the north and an 11-foot setback to the south. The trunk of the largest tree being referred to in this comment is approximately eight (8) feet from the proposed foundation. The property owner is proposing to work with the neighbor to the north to manage the canopy of the tree. As conditioned, an arborist is required to be on site to recommend ways to minimize impacts to offsite trees. |
| **Local Developer:**<br>• Several comments expressed that the development is a positive addition to the neighborhood and are pleased that the developer is a local person. | The applicant also developed the Eagle Harbor Inn and Madison Lofts across the street to the west in 2003. |

### 3. Agency Comments

| Date | Agency | Summary of Comment |
|---|---|---|
| February 28, 2018 | Kitsap Public Health District (KPHD) | KPHD had no comments. |
| April 23, 2018 | Design Review Board (DRB) | The Board recommended approval with several conditions and additional review of the building materials and landscape site plan prior to issuance of the building permit:<br>• Look into the Fair Housing Act and how the project meets the requirements;<br>• Move bedroom window on lower level over to the right so the bed isn't right up against the window and create more of a secluded area for the bed;<br>• Prepare a landscape plan for DRB review;<br>• Add additional windows to the master bedroom of the southeast facing the harbor; and<br>• Bring color and building material samples for DRB review before project is built.<br>Additional Considerations:<br>• Green Screen over brick for ivy to grow up to protect the mortar;<br>• Consideration for a lift or elevator from basement parking to units;<br>• Check the grade next to the handicap parking spot;<br>• More street trees in front of the blank walls;<br>• Discuss with neighboring property if you can move the |

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| | | handicap parking spot more north;<br>• Paint color to be more creamy than white; and<br>• Confirm code requirement for square footage vs. number of exits required. |
| May 11, 2018 | COBI Operations and Maintenance | The City issued a non-binding commitment for water and sewer system capacity. |
| June 13, 2018 | Multi-Modal Transportation Advisory Committee (MTAC) | The Committee voted 6-0 to recommend City Staff require the applicant to complete a segment of the Waterfront Trail on the subject property in the following ways:<br>• One (1) easement providing pedestrian access to the public from north to south along and across the full length of the property's eastern boundary;<br>• Another easement providing pedestrian access to the public from east to west along and across the southern edge of the proposed building;<br>• Construction of a public trail in the first easement, connecting to existing segments of the Waterfront Trail and extending to the maximum length deemed feasible by City Staff; and<br>• Instillation of wayfinding signage noting the public's ongoing right to access across both easements. |
| July 11, 2018 | Bainbridge Island Fire District (BIFD) | The Fire Marshal recommended approval with conditions. |
| October 30, 2018 | COBI Public Works - Engineering | The City's Public Works Development Engineer recommended approval with conditions. |
| January 16, 2019 | Independent Third-Party Geotechnical Review | The Independent Third-Party Geotechnical Reviewer supported the analysis in the applicant's geotechnical report and recommended approval of the buffer reduction. |

**Part VI: Land Use Code Analysis**

1. **BIMC Title 16 Environment**

   a. BIMC 16.12 Shoreline Master Program (SMP)

| **Shoreline Characteristics** | |
|---|---|
| Shoreline Designation | Urban |
| Aquatic Designation | Aquatic |
| Geomorphic Class | Marsh/Lagoon |
| Geomorphic Shoretype | No Appreciable Drift |
| Shoreline Buffer | 30 feet landward of Ordinary High Water Mark (OHWM) |
| Zone 1 | 30 feet |
| Zone 2 | 0 feet |
| No Net Loss Demonstration | Site Specific Impact Analysis – Habitat Management Plan: assessment of existing baseline environmental conditions, assessment of priority habitat, project impact assessment, analysis of mitigation sequencing, and vegetation management plan. |
| Shoreline Use | Multi-family residential shoreline uses are permitted in the Urban Shoreline Designation. |

| No Net Loss of Ecological Function and Processes Demonstration | |
|---|---|
| Baseline Site Conditions | The property is undeveloped, located entirely within shoreline jurisdiction, and is adjacent to a marine bluff and a geologically hazardous area. Vegetation includes Himalayan blackberry, Scott's broom, common vetch, American holly, oceanspray, hawthorne, sword fern, bracken fern, and grasses. Mature trees are present along the top of the slope within the shoreline buffer and include red alder, big leaf maple, madrone, and Douglas fir. English ivy is present from root to canopy among the mature trees. |
| Environmental Impacts: Vegetation Disturbance | Approximately 12,000 sq.ft. of invasive species, noxious weeds, a cluster of young alders, and a single hawthorne will be disturbed by the proposed development. |
| Environmental Impacts: Impervious Surface | Approximately 10,000 sq.ft. of new impervious surface is proposed on the property. |
| No Net Loss Demonstration | Site Specific Impact Analysis – Vegetation Management Plan<br>Mitigation: Invasive species and noxious weeds eradication on the property. Restore and maintain a 10-foot native vegetation buffer along the top of the slope. |
| Mitigation Sequencing | Avoid: The proposed development maintains the 30-foot shoreline buffer and all native vegetation within the buffer. The remainder of the site is overgrown with invasive species.<br>Minimize: The proposed development is designed landward of the 30-foot shoreline buffer and all significant native vegetation. An existing sewer easement along the east side of the property increases the buffer to the shoreline by another 20-50 feet.<br>Rectify: The management plan proposes restoration of the degraded shoreline buffer landward of the top of the slope by eradicating invasive species and noxious weeds.<br>Reduce: Stormwater will be handled in compliance with the stormwater manual. No fertilizer, insecticide, or pesticide will be used. Native vegetation is strategically placed to improve the soil structure. Directional lighting and timers are recommended.<br>Compensate: In addition to eradicating invasive species and noxious weeds, the management plan proposes to restore and maintain a 10-foot native vegetation buffer along the top of the slope.<br>Monitor: Restoration area success, performance, maintenance and monitoring are described in the management plan. An as-built planting plan is required upon installation of the vegetation. Five (5) years of monitoring reports and final compliance documentation are required. |
| Required Mitigation Surety Devices | Notice on Title<br>Performance Assurance<br>Maintenance and Monitoring Assurance |
| Waterfront Trail Adjacent to a Marine Bluff | The property has slopes greater than 40 percent that exceed a vertical height of 10 feet within the marine shoreline jurisdiction and is considered to have a marine bluff. Minor development for public access (e.g., public trails, stairs, or view points) may be allowed on the face of a marine bluff or in the required buffer; provided, that environmental impacts are mitigated, and the development can meet the factor of safety. The geotechnical report completed by Geotech Consultants, Inc. in October 2018 demonstrated that |

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| | the proposed Waterfront Trail meets the factor of safety. The report recommends using a lightweight surface such as wood chips or gravel, using no more than 4-6 inches of material. Vegetation on the steep slope shall be maintained for bluff management. |

b. BIMC 16.20 Critical Areas

| Critical Area | Required/Allowed | Proposed |
|---|---|---|
| Geologically Hazardous Area (landslide hazard – slopes 40% or greater) | Buffer Requirement: A buffer equal to the height of the slope or 50 feet, whichever is greater, shall be established from all edges of a landslide hazard area except where no other reasonable alternative exists, a reduction may be allowed.<br><br>Building Setback: All building and structures shall have a minimum setback of 15 feet from the outer edge of the buffer around landslide hazard areas to allow for construction activity. | The applicant has proposed a buffer reduction for a combined buffer and setback of 25 feet from the top of slope. Per BIMC 16.20.130.E.5, Independent Third Party Geotechnical Review was conducted to review the proposed buffer reduction. Once the Third Party review was complete, a Notice of Intent to Reduce the Minimum Buffer in a Landslide Hazard Area was issued with a 21-day comment period ending on February 4, 2019. An Indemnification or Hold Harmless agreement will be required prior to commencement of construction or site alteration. |

**2. BIMC Title 18 Zoning**

a. BIMC 18.09 Use Regulations

| Proposed Use | Use Standards |
|---|---|
| Multifamily Dwellings | Multifamily development is a permitted use in the Mixed Use Town Center – Central Core Overlay District (CORE). |

b. BIMC 18.12 Dimensional Standards

| Dimensional Standards | Required/Allowed | Proposed |
|---|---|---|
| Lot Coverage | 100 percent excluding setbacks (18,112 sq.ft.) | 46 percent (8,322 sq.ft.) |
| Front Yard Setback | 10 feet min and 20 feet max from the Madison Avenue sidewalk<br>City staff are analyzing the placement of the disabled access parking space and the impact on the 10-foot minimum front yard setback. | 10 feet from the Madison Avenue sidewalk except where on-street parking for the disabled access parking space is proposed. |
| Rear Setback | 0 feet | 40 feet |
| Side Yard Setbacks | 0 feet | 4.5 feet to north and 11 feet to south |
| Residential FAR Maximum with Bonus | 0.4 FAR (7,244 sq.ft.)<br>1.0 FAR (18,112 sq.ft.) | 0.75 FAR (13,573 sq.ft.)<br>(bonus needed for 6,329 sq.ft.) |
| Eligible properties may achieve a maximum level of development above the base FAR by using one, or a combination of FAR bonus provisions in BIMC 18.12.030.E. The applicant is considering the following options: | | |

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| • Up to 100 percent of the maximum residential FAR bonus may come from the purchase of development rights. The current cost of development rights for residential FAR is $18.00/sq.ft.<br>• Subject to approval by the director, the public amenities FAR bonus may be achieved by the construction of public amenities and/or infrastructure beyond that required to mitigate the impacts of development. Public amenities and/or infrastructure projects shall be located in the Mixed Use Town Center or High School Road districts, and shall be chosen from projects identified in the six-year capital facilities program, or approved by the city. In accordance with the Bainbridge Island Comprehensive Plan, Shoreline Master Program (SMP), Winslow Master Program (WMP), Island Wide Transportation Plan (IWTP), and the recommendation from the Multi-Modal Transportation Advisory Committee (MTAC), the City encourages the applicant to consider the public amenities FAR bonus by constructing a boardwalk for the remaining 50 feet of trail along the portion of the panhandle that is partially overwater. This segment will complete the connection of the Waterfront Trail. | | |
| Title 18 Building Height<br>Bonus for parking under the building<br>Title 16 Building Height | 35 feet maximum<br>45 feet maximum<br><br>30 feet maximum in Shoreline | 35 feet |
| Permitted Height Modifications – Solar Panels | Up to 18 inches above the maximum building height in the district. | The applicant is not proposing a height modification for the solar panels. |

c. BIMC 18.15 Development Standards and Guidelines

i. BIMC 18.15.010 – Landscaping, Screening, Tree Retention, Protection and Replacement

| Landscape Requirements | Required/Allowed | Proposed |
|---|---|---|
| Tree Units | 30 tree units per acre<br>14 tree units are required | The applicant has proposed 14 new trees to meet the tree unit requirement. Existing trees total to 45 tree units but are all within shoreline buffers and/or critical areas and their buffers and do not count towards the tree unit requirements. |
| Perimeter Buffer | N/A | N/A |
| Roadside Buffer | N/A | N/A |

ii. BIMC 18.15.020 – Parking and Loading

| Parking Requirements | Required/Allowed | Proposed |
|---|---|---|
| On-Street Parking<br>Disabled Access Parking | On-street parking may be included in the parking space calculation upon approval of the director. One (1) disabled access parking space is required. The disabled access parking space shall be van-accessible and must connect to the shortest accessible route to the accessible building entrance or facility they serve. | The applicant has proposed one (1) disabled access parking space along the street to be included in the parking calculation. Disabled access parking has been proposed as close to the entrance as possible. Only one (1) on-street space is proposed. |
| Off-Street Parking | One (1) space per one-bedroom apartment | The applicant has proposed a parking garage under the building. A total of |

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| | Two (2) spaces per townhome<br>12 parking spaces total<br>Guest parking may be required by the Planning Director at a maximum of 0.5 spaces per four (4) required spaces. Spaces provided in underground parking garages are exempt from parking maximums. | 10 parking spaces (including the on-street disabled access space) are provided for the apartments, eight (8) for the residents and two (2) additional spaces for guest parking. A two (2) car garage is proposed for each of the townhomes, providing a total of four (4) spaces. A total of 13 off-street spaces are proposed. |

iii. BIMC 18.15.030 – Mobility and Access

| Mobility Requirements | Required/Allowed | Proposed |
|---|---|---|
| Bicycle Spaces | One (1) bicycle space per five (5) parking spaces with a minimum of four (4) bicycle spaces. | The applicant has proposed four (4) bicycle spaces in the parking garage. |

iv. BIMC 18.15.040 – Outdoor Lighting

| Lighting Requirements | Required/Allowed | Proposed |
|---|---|---|
| Outdoor Lighting | The project has been conditioned to comply with the outdoor lighting requirements. | No outdoor lighting is proposed at this time. There is an existing street lamp on the northwest corner of the property. |

v. BIMC 18.15.050 – Signs

| Sign Requirements | Required/Allowed | Proposed |
|---|---|---|
| Signs | The project has been conditioned to obtain a sign permit for any signage proposed. | No signs are proposed at this time. |

d. BIMC 18.18 Design Standards and Guidelines

| Design Guidelines | Requirements |
|---|---|
| All Zoning Districts | The Design Review Board reviewed all of the Design Guideline Checklists and recommended approval with several conditions and additional review of the building materials and landscape site plan prior to issuance of the building permit. The project has been conditioned accordingly. |
| Mixed Use Town Center | |
| Central Core Overlay District | |
| Street Trees in the Central Core Overlay District | Street trees shall be provided in an amount equivalent to at least one (1) every 30 feet in planting pots or beds covered by a tree grate, pavers, or planted area. Trees may be grouped and are encouraged to have a varied meandering effect. The applicant has proposed five (5) street trees along the frontage and meets this design standard. |

**Part VII: Decision Criteria**

1. **BIMC 2.16.040 Site Plan and Design Review**

   The director and planning commission shall base their respective recommendations or decisions on site plan and design review applications on the following criteria:

| Decision Criteria | City Analysis |
|---|---|
| 1. The site plan and design is in conformance with applicable code provisions and development standards of the applicable zoning district, unless a standard has been modified as a housing design demonstration project pursuant to BIMC 2.16.020.S; | As conditioned, the site plan and design is in conformance with the Bainbridge Island Municipal Code (BIMC) and standards of the Mixed Use Town Center – Central Core Overlay (CORE). |
| 2. The locations of the buildings and structures, open spaces, landscaping, pedestrian, bicycle and vehicular circulation systems are adequate, safe, efficient and in conformance with the Island-Wide Transportation Plan; | As conditioned, the location of the building, open spaces, landscaping, pedestrian, bicycle and vehicular circulation systems are adequate, safe, efficient and in conformance with the Island-Wide Transportation Plan. The applicant has proposed installation of the Waterfront Trail consistent with the trail standards. |
| 3. The Kitsap County health district has determined that the site plan and design meets the following decision criteria:<br>a. The proposal conforms to current standards regarding domestic water supply and sewage disposal. | The property is served by City sewer and water and the City issued a non-binding commitment for water and sewer system capacity. A binding commitment letter for water and sewer availability is required prior to building permit issuance for the proposed structure. |
| 4. The city engineer has determined that the site plan and design meets the following decision criteria:<br>a. The site plan and design conforms to regulations concerning drainage in Chapters 15.20 and 15.21 BIMC; and<br>b. The site plan and design will not cause an undue burden on the drainage basin or water quality and will not unreasonably interfere with the use and enjoyment of properties downstream; and<br>c. The streets and pedestrian ways as proposed align with and are otherwise coordinated with streets serving adjacent properties; and<br>d. The streets and pedestrian ways as proposed are adequate to accommodate anticipated traffic; and<br>e. If the site will rely on public water or sewer services, there is capacity in the water or sewer system (as applicable) to serve the site, and the applicable service(s) can be made available at the site; and<br>f. The site plan and design conforms to the "City of Bainbridge Island Design and Construction Standards," unless the city engineer has approved a variation to the road standards in that document based on his or her determination that the variation meets the | As conditioned, the City engineer has determined that the site plan and design meets the decision criteria. The applicant proposes to tie into an existing outfall for a direct-discharge of stormwater to Eagle Harbor if connecting to the storm drain on Madison Avenue is infeasible. The streets and pedestrian ways coordinate with existing streets and are adequate to accommodate anticipated traffic. A Certificate of Concurrency was issued for the traffic study prepared by Heath & Associates, dated October 2018. Construction of the Waterfront Trail will provide another pathway for pedestrians. The property is served by City sewer and water and the City issued a non-binding commitment for water and sewer system capacity. The proposal conforms to the "City of Bainbridge Island Design and Construction Standards." In addition to an easement for the Waterfront Trail, the Multi-Modal Transportation Advisory Committee (MTAC) recommended another easement for pedestrian access to the public from east to west along and across the southern edge of the proposed building with wayfinding signage for both easements. The access along the southern edge is proposed for vehicles entering the under ground parking garage and the City has |

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| purposes of BIMC Title 18. | concerns about using this for pedestrian access. The City would also like to encourage use of the new section of the Waterfront Trail. |
| 5. The site plan and design is consistent with all applicable design guidelines in BIMC Title 18, unless strict adherence to a guideline has been modified as a housing design demonstration project pursuant to BIMC 2.16.020.S; | The Design Review Board reviewed all of the Design Guideline Checklists and recommended approval with several conditions and additional review of the building materials and landscape site plan prior to issuance of the building permit. Prior to issuance of the building permit for the structure, the applicant will meet with the Design Review Board (DRB) to review the proposed building materials and landscape plan. |
| 6. No harmful or unhealthful conditions are likely to result from the proposed site plan; | As conditioned, no harmful or unhealthful conditions are likely to result from the proposed development. |
| 7. The site plan and design is in conformance with the Bainbridge Island Comprehensive Plan and other applicable adopted community plans; | As conditioned, the proposed development is in conformance with the Bainbridge Island Comprehensive Plan and the Winslow Master Plan (WMP). |
| 8. Any property subject to site plan and design review that contains a critical area or buffer, as defined in Chapter 16.20 BIMC, conforms to all requirements of that chapter; | As conditioned, the proposed development conforms to the critical areas regulations as adopted in the Shoreline Master Program (SMP) in BIMC 16.12.060. The buffer reduction was properly noticed and reviewed. The applicant will be required to record an Indemnification or Hold Harmless Agreement prior to building permit issuance. |
| 9. Any property subject to site plan and design review that is within shoreline jurisdiction, as defined in Chapter 16.12 BIMC, conforms to all requirements of that chapter; | As conditioned, the proposed development conforms to the Shoreline Master Program (SMP) in BIMC 16.12. Proposed mitigation will require monitoring and maintenance as outlined in the no net loss documentation completed by BGE Environmental in February 2018. |
| 10. If the applicant is providing privately owned open space and is requesting credit against dedications for park and recreation facilities required by BIMC 17.20.020.C, the requirements of BIMC 17.20.020.D have been met; | No privately owned open space is proposed. |
| 11. The site plan and design has been prepared consistent with the purpose of the site design review process and open space goals. | The site plan and design has been prepared consistent with the purpose of the site design review process. |

**2. BIMC 2.16.165.F Shoreline Substantial Development Permit**

In making the decision, the administrator shall grant a substantial development permit only when the development proposed is consistent with the following:

| Decision Criteria | City Analysis |
|---|---|
| 1. The applicable policies, guidelines, and regulations of the Shoreline Management Act of 1971; Chapter 90.58 RCW, as amended; and Chapters 173-26 and 173-27 WAC or their successors; | As conditioned, the proposed development is consistent with the Shoreline Management Act (SMA) and all revisions thereafter. |
| 2. The goals, policies, objectives and regulations of the city of Bainbridge Island shoreline master program; | As conditioned, the proposed development is consistent with the Shoreline Master Program (SMP). The shoreline no net loss documentation outlines the baseline conditions, impacts from development, mitigation sequencing, a vegetation management plan, and maintenance and monitoring for the site. |
| 3. The city of Bainbridge Island Comprehensive Plan and municipal code; all other applicable law; and any related documents and approvals. | As conditioned, the proposed development is consistent with the Bainbridge Island Comprehensive Plan and the BIMC. |
| The administrator shall also consider whether the cumulative impact of additional past and future requests that reasonably may be made in accordance with the comprehensive plan, or similar planning document, for like actions in the area will result in substantial adverse effects on the shoreline environment and shoreline resources. | If the applicant chooses to install a boardwalk to complete the remaining 50 feet of the Waterfront Trail, additional shoreline review and permitting may be required. |

**3. BIMC 2.16.165.G Shoreline Variance**

Shoreline variance permits for development and/or uses that will be located landward of the ordinary high water mark (OHWM), and/or landward of any wetland, as defined in Chapter 16.12 BIMC, may be authorized, provided the applicant can demonstrate all of the following:

| Decision Criteria | City Analysis |
|---|---|
| 1. The strict application of the bulk, dimensional or performance standards set forth in the applicable master program precludes, or significantly interferes with, reasonable use of the property; | The Mixed Use Town Center – Central Core Overlay District allows a building height of 45 feet and the Shoreline Master Program (SMP) limits the height to 30 feet. Per RCW 90.58.320, the Shoreline Management Act (SMA) for Washington State allows height up to 35 feet. This difference in height regulations between the City's zoning and the SMP reduces the maximum height allowed on this property by 15 feet and does not allow it to develop to the density encouraged in the zoning code. The height increase is for the elevator/stair tower and not adding additional living space. |
| 2. The hardship described in subsection G.4.a.i of this section is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of the master program, and not, | The site has a depth of approximately 160 feet. The shoreline buffer, geologically hazardous area and buffer, and an existing City sewer and storm drain easement significantly reduce the depth and buildable area of the property. The |

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| for example, from deed restrictions or the applicant's own actions; | applicant is also installing the Waterfront Trail along the inlet and giving the City a 20-foot wide easement along the full length of the trail. The Waterfront Trail reduces the privacy of the townhomes and their back yard areas. To create a private outdoor space for the townhomes, the applicant has proposed private rooftop space. The owners of the future townhomes desire disabled access to the rooftop decks. The applicant is requesting an additional five (5) feet in height to provide the elevator/stair tower to the roof. The hardship has not been caused by the applicant's own actions. |
| 3. The design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and shoreline master program and will not cause adverse impacts to the shoreline environment; | The design and use of the proposed development is compatible with other authorized uses within the area. The Bainbridge Island Comprehensive Plan encourages dense development in the Mixed Use Town Center – Central Core Overlay District. Under the zoning code, the structure would be allowed to be built to 45 feet in height. |
| 4. The variance will not constitute a grant of special privilege not enjoyed by the other properties in the area; | Properties outside of shoreline jurisdiction to the west and north have the ability to develop to the 45-foot height limit, including the Seabreeze development located 2 properties to the north. The Shoreline Master Program, however, limits the height to 30 feet for properties within shoreline jurisdiction and restricts the development potential for the site. The Shoreline Management Act (SMA), as revised in RCW 90.58.320, limits height to 35 feet in shoreline jurisdiction. |
| 5. The variance requested is the minimum necessary to afford relief; and | The proposed elevator/stair towers require an additional 5 feet in height. The applicant has minimized the height request by proposing a ramp system from the elevator to the roof level. The applicant has also minimized the impact of the tower by limiting it to 10 feet in width and aligning the towers on the north and south ends of the structure. The towers amount to only 5 percent of the building footprint. |
| 6. The public interest will suffer no substantial detrimental effect. | The public view is primarily from the Madison Avenue right of way and sidewalk and the elevator/stair tower was positioned in a way that minimizes impacts to the larger community. The applicant has minimized the size and height of the towers and positioned them far enough to the west that they are minimally visible from |

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| | the street. Comments from residents in the neighboring Seabreeze building to the north were concerned about impacts to their privacy and views of the harbor. The applicant has addressed this by aligning the towers along the north and south ends of the structure to minimize impacts to the Seabreeze view corridor. The amount of public disturbance has been minimized to allow a feature that provides disabled access to two (2) residential units. Additionally, the applicant provided a depiction of the development potential of the adjacent property to the north which illustrated that a 30-foot structure would surpass the height of the proposed 35-foot structure and the proposed elevator/stair tower and rooftop would no longer be visible. |

**The applicant has provided the following response to the shoreline variance decision criteria:**

We are proposing a 10 unit building with two units in the back that face the ravine to the east. This would have been a very private back yard for these units and one that other similar developments have enjoyed. However, the city is requiring a public path as close as 15-20 feet from the homes. Because of this requirement all privacy is lost. In order to mitigate this, we decided to create a private rooftop deck for these units and in order to access them with stairs and an elevator we are requesting an additional 5 feet in height, from the base height of 30 feet to 35 feet – only for these stair towers.

This is a hardship unique to this particular piece of property, to the installation of a new segment of the Waterfront Trail, and the public exposure that the new trail will create. It is the desire of the owners of the two townhomes to provide handicapped access to the rooftop decks for themselves and future owners.

It should be noted that although an additional 5 foot height variance could be requested for the entire building we are asking for a minimum amount - only 5% of the building footprint.

From the sidewalk at the north corner of the property this building is only 23 feet above the sidewalk, and the stair tower is set back into the middle of the building so its impact is really minimal from the street.

I can understand that there are objections from owners in the Seabreeze Building. But there are some things that should be considered. First that building enjoyed a building height of 45 foot because it is right up against 200 foot to the shoreline, which puts them outside the shoreline jurisdiction. Second, most of the units will be able to look over the top of the stair tower, and those on the lower floor would be affected even with a 30 foot height. Also, there is a piece of property between the two properties and the average grade for that building is more than 5 feet above the average grade for ours, so future development on that property even at 30 foot height limit will be higher than our stair towers.

As an additional benefit we have offered to not put any mechanical equipment on the roof. Looking out over finished terraces will be much more attractive than a roof full of equipment.

**Part VIII: Attachments**

1. PLN50958 SPR SSDP SVAR Site Plans
2. PLN50958 SPR SSDP SVAR Landscape Plan
3. PLN50958 SPR SSDP SVAR Geotechnical Report October 2018
4. PLN50958 SPR SSDP SVAR Traffic Impact Analysis October 2018
5. PLN50958 SPR SSDP SVAR Certificate of Concurrency
6. PLN50958 SPR SSDP SVAR Shoreline No Net Loss Documentation February 2018
7. PLN50958 SPR SSDP SVAR SEPA Checklist
8. PLN50958 SPR SSDP SVAR Applicant's Response to Shoreline Variance Decision Criteria
9. PLN50958 SPR SSDP SVAR Madison Height Analysis
10. PLN50958 SPR SSDP SVAR Rendering SE
11. PLN50958 SPR SSDP SVAR Rendering NE
12. PLN50958 SPR SSDP SVAR Design Guideline Checklists
13. PLN50958 SPR SSDP SVAR Design Review Board Minutes April 2018

**Part IX: Recommendation and Conditions of Approval**

Staff is recommending approval of the proposal in accordance with the following conditions:

**SEPA Conditions:**

1. The limits of clearing and grading shall be clearly marked in the field and inspected by the Department of Planning and Community Development staff prior to start of any clearing, grading, or other site work.
2. To mitigate impacts on air quality during earth moving activities, contractors shall conform to Puget Sound Clean Air Agency regulations to ensure all reasonable precautions are taken to avoid dust emissions.
3. An arborist shall be on site when construction commences to recommend ways to minimize impacts to the health of trees on neighboring properties.
4. Prior to certificate of occupancy, the applicant shall provide wayfinding signage for the Waterfront Trail, as approved by the City.

**Project Conditions:**

*General*

5. Except for modifications reflecting compliance with these conditions of approval, the project shall be in substantial conformance with the site plans dated January 18, 2019.
6. Prior to construction activity, the applicant shall obtain the appropriate permits from the City of Bainbridge Island, including but not limited to clearing, grading, right-of-way, and building permits.
7. All work shall adhere to the City's seasonal work limitations between October 1 and April 30 of any year. During this period, no soils shall remain exposed and unworked for more than two days. From May 1 to September 30, no soils shall remain exposed and unworked for more than seven days.
8. Prior to any construction, a temporary erosion and sedimentation control plan (TESCP) shall be submitted and approved by the City. Construction shall be restricted to the dates occurring between May 1 and September 30 unless a wet weather erosion control plan is submitted and approved by the City prior to construction.

9. All construction activities shall comply with noise limitations per BIMC 16.16.020.
10. If any historical or archaeological artifacts are uncovered during excavation or construction, work shall immediately stop and the Department of Planning and Community Development and the Washington State Department of Archaeology and Historic Preservation shall be immediately notified. Construction shall only continue thereafter in compliance with the applicable provisions of law.

*Building Official*

11. The project shall comply with the provisions of the 2015 International Codes as currently adopted by the City of Bainbridge Island per the Bainbridge Island Municipal Code (BIMC) Chapter 15.04 and shall include any State of Washington Amendments.
12. The project shall comply with the provisions of the 2015 International building Code, Chapter 11 and ANSI 117.1-2009 for disabled access compliance, including a minimum of one (1) van-accessible disabled access parking space.
13. A soils report is required for this project which shall address soils conditions and all foundation and building design criteria per the International Building Code and State of WA Code Amendments. The Soils and Structural Engineer shall coordinate design criteria for all structures for submittal and submit a complete design analysis and recommendations at time of plans examination.

*Fire District*

14. To the satisfaction of the Bainbridge Island Fire Department, the proposed project shall comply with all applicable provisions of the adopted Fire Code.
15. Fire flow is required for this project. Fire flow shall be not less than 1500 gpm as provided by the City of Bainbridge Island.
16. Fire sprinklers are required for this project.

*Public Works*

17. The City engineer has approved a deviation to the standard road section for an urban collector roadway per DCSS drawing DWG 7-030 requiring a planter strip adjacent to the back of curb and a minimum 5-foot wide sidewalk. The deviation reverses the location of the planter strip and sidewalk so that the planter strip is between the sidewalk and the proposed structure.
18. Right-of-way (ROW) dedication is required along the full lot frontage of the property from the existing ROW/property line to the back of the furthest portion of sidewalk resulting from the construction of on-street parallel parking stalls, or 5-feet, whichever is greater.
19. Development of the site will require non-motorized improvements as shown on the Non-Motorized Transportation Plan Map D: Winslow System Plan (Minimum Standards) in the adopted Island Wide Transportation Plan. The 6-foot wide Waterfront Trail connecting path per the City of Bainbridge Island Design and Construction Standards and Specifications (DCSS) standard drawing DWG. 8-360 shall be constructed along the water front side of the project for the full width of the lot to the southernmost portion of the flag as terrain and trees allow. A 20-foot wide public trail easement shall be granted to the City centered on the trail construction, to the extent feasible. Any boardwalk proposed in lieu of the standard connecting pathway shall not be placed over the existing sewer line or easement.

20. An easement will be required for any portion of the public sidewalk not located within the City right-of-way.
21. The easement serving the sewer main through the parcel is a substandard width (5 feet). The City's minimum easement width requires 20 feet. The applicant shall dedicate an additional 15 feet of sewer easement on the eastern and southern sides of the existing easement (waterward and away from the buildings).
22. The 20-foot sanitary sewer main easement shall remain wholly unobstructed for purposes of access, maintenance, repairs, replacement, etc. No permanent structures or trash enclosures that would interfere with the City's easement rights shall be constructed over the easement. Prior to building permit issuance, building roof eaves, overhangs, footings, etc. that encroach into the easement shall be evaluated so as not to impact the ability to operate heavy construction equipment, including excavators, lifts, backhoes, etc. The applicant shall submit section drawings with the building permit application showing any encroachments into the easement for evaluation by the City.
23. Prior to submittal of the building permit, Step Forms 1 & 2: Construction in a Geologically Hazardous Area shall be submitted to the City.
24. Prior to certificate of occupancy for the structure, a Step Form 3: Certification for Final Inspection shall be submitted to the City.
25. An indemnification or hold harmless agreement shall be required for all projects in geologically hazardous areas and buffers. The form of the agreement shall be approved by the City, executed prior to the commencement of construction or site alteration, and recorded with the County Auditor through a notice on title, or other similar document subject to the approval of the Administrator.
26. Prior to building permit issuance, the applicant shall demonstrate how storm water will be handled in conformance with current BIMC 15.20 regulations. An outfall for a direct-discharge of stormwater to Eagle Harbor is allowed where no other alternative exists. The project should attempt to connect to the storm drain system in Madison Avenue where feasible to avoid further shoreline impacts.
27. Low impact development for stormwater should be incorporated into the site to the maximum extent feasible. Incorporating stormwater management may be feasible for frontage improvements.
28. A binding commitment letter for water and sewer availability is required prior to building permit issuance for the proposed structure.
29. A traffic impact analysis was completed for the site per BIMC 15.32 and 15.40 to evaluate for concurrency. Based on the results of the traffic impact analysis completed by Heath & Associates in October 2018, a certificate of concurrency was issued per BIMC 15.32.060. Any proposed intensity of use at the site may require analysis and a new evaluation for concurrency.

*Shoreline, Critical Areas, and Vegetation*

30. Work within shoreline jurisdiction shall be completed in substantial compliance with the no net loss documentation completed by BGE Environmental in February 2018, except to comply with these conditions.
31. No construction activities or staging is permitted within the shoreline buffer or geologically hazardous area and buffer.

32. Per SMP Section 4.1.4.4., disturbed areas will be restored or replanted as required.
33. New vegetation planted in the shoreline buffer shall be native species using a native plant-community approach of multi-storied, diverse plant species that are native to the Central Puget Lowland marine riparian zone. The plant schedule in the no net loss documentation completed by BGE Environmental in February 2018 proposes appropriately sized and spaced native or native equivalent vegetation.
34. Prior to issuance of certificate of occupancy, the applicant/property owner shall provide assurance to the satisfaction of the Administrator that the mitigation area will be maintained in perpetuity. The assurance can be in the form of notice on title, conservation easement, or similar mechanism as approved by the City Attorney.
35. The proposed 10-foot vegetation buffer along the top of the slope was designed in the no net loss documentation completed by BGE Environmental in February 2018, prior to the incorporation of the Waterfront Trail on the site plan. If the 6-foot wide trail displaces any area of the proposed 10-foot vegetation buffer, an equal area of the displaced vegetation buffer shall be planted on either side of the 6-foot trail. Prior to building permit issuance, the applicant shall submit a revised planting plan incorporating the trail and revising any displaced areas affected by the trail.
36. The certificate of occupancy for the structure shall not be issued until the required tree units and the 10-foot vegetation buffer have been planted or a performance assurance has been accepted by the City.
37. As proposed in the no net loss documentation completed by BGE Environmental in February 2018, the monitoring, maintenance, and contingency plan for the mitigation areas shall be implemented in accordance with SMP Section 4.1.2.8. The monitoring plan may require periodic maintenance measures if tree survival, plant survival, invasive plan recolonization, or irrigation is does not meet the thresholds outlined in the plan. To ensure the success of the required mitigation, monitoring shall occur for a minimum duration of five (5) years from the date of the completed planting. The duration of monitoring may be extended if the project performance standards set forth in the approved mitigation plan fail to be accomplished.
38. Per BIMC 18.15.010.H.3, performance assurance is required to assure the City that the required tree units and 10-foot vegetation buffer are properly installed and will become established and be adequately maintained. The required landscaping shall be installed prior to certificate of occupancy for the structure. A Washington landscape architect, Washington certified nursery professional, or Washington certified landscaper shall submit a landscaping declaration to the director to verify installation in accordance with the approved plans. The time limit for compliance may be extended to allow installation of landscaping during the next appropriate planting season as approved if the director determines that a performance assurance device, for a period of not more than one (1) year, will adequately protect the interests of the City. The performance assurance device shall be for 150 percent of the cost of the work or improvements covered by the assurance device. In no case may the property owner delay performance for more than one (1) year. Once the planting is completed, landscape declaration is submitted, and a maintenance and monitoring assurance is accepted, the performance assurance shall be released.
39. Per BIMC 18.15.010.H.4, the property owner shall replace any unhealthy or dead plant materials in conformance with the approved landscape plan and vegetation management plan. A maintenance assurance device shall be required for a period of five (5) years after acceptance by

the City of the new planting of vegetation to ensure proper installation, establishment, and maintenance. The maintenance assurance device amount shall not be less than 20 percent of the cost of replacing materials covered by the assurance device. The maintenance surety shall be refunded to the applicant upon completion of the five (5) year monitoring period and submittal of final compliance documentation as outlined in the no net loss documentation completed by BGE Environmental in February 2018, minus any funds needed for the City to perform corrective actions or perform monitoring.

40. Temporary or permanent irrigation within new planting areas that do not have high soil moisture conditions is required in accordance with BIMC 18.15.010.I. This shall not apply where provisions of BIMC 16.12 or 16.20 or any state or federal law restricts irrigation.

41. As proposed, 14 new trees are required to meet the tree unit requirement. Existing trees within shoreline buffers and/or critical areas and their buffers and do not count towards the tree unit requirements. Trees planted to meet tree retention requirements shall be planted in accordance with the planting requirements of BIMC 18.15.010.H and the landscape plan dated January 18, 2019.

*Zoning*

42. All development shall comply with the sign regulations contained in BIMC 15.08.

43. To mitigate potential off-site glare and light trespass, any outdoor lighting shall comply with the outdoor lighting regulations in BIMC 18.15.040.

44. Prior to issuance of the building permit for the structure, the applicant shall meet with the Design Review Board (DRB) to review the proposed building materials and landscape plan.

45. The applicant is requesting a Floor Area Ratio (FAR) bonus. Prior to building permit issuance, the applicant shall acquire the FAR bonus pursuant to BIMC 18.12.030.E. Up to 100 percent of the maximum residential FAR bonus may come from the purchase of development rights. Subject to approval by the Director, the FAR bonus may also be achieved by the construction of public amenities and/or infrastructure beyond that required to mitigate the impacts of development. Public amenities and/or infrastructure projects shall be located in the Mixed Use Town Center or High School Road districts and shall be chosen from projects identified in the six-year capital facilities program or approved by the city. The City encourages the applicant to consider earning the public amenities FAR bonus by constructing a boardwalk for the remaining 50 feet of trail. If the applicant chooses to install a boardwalk, additional shoreline review and permitting may be required.

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271 WYATT WAY NE, SUITE 102
BAINBRIDGE ISLAND, WA
98110

p 206 226 8313

cihan@anisoglu.com
seanfancy@gmail.com

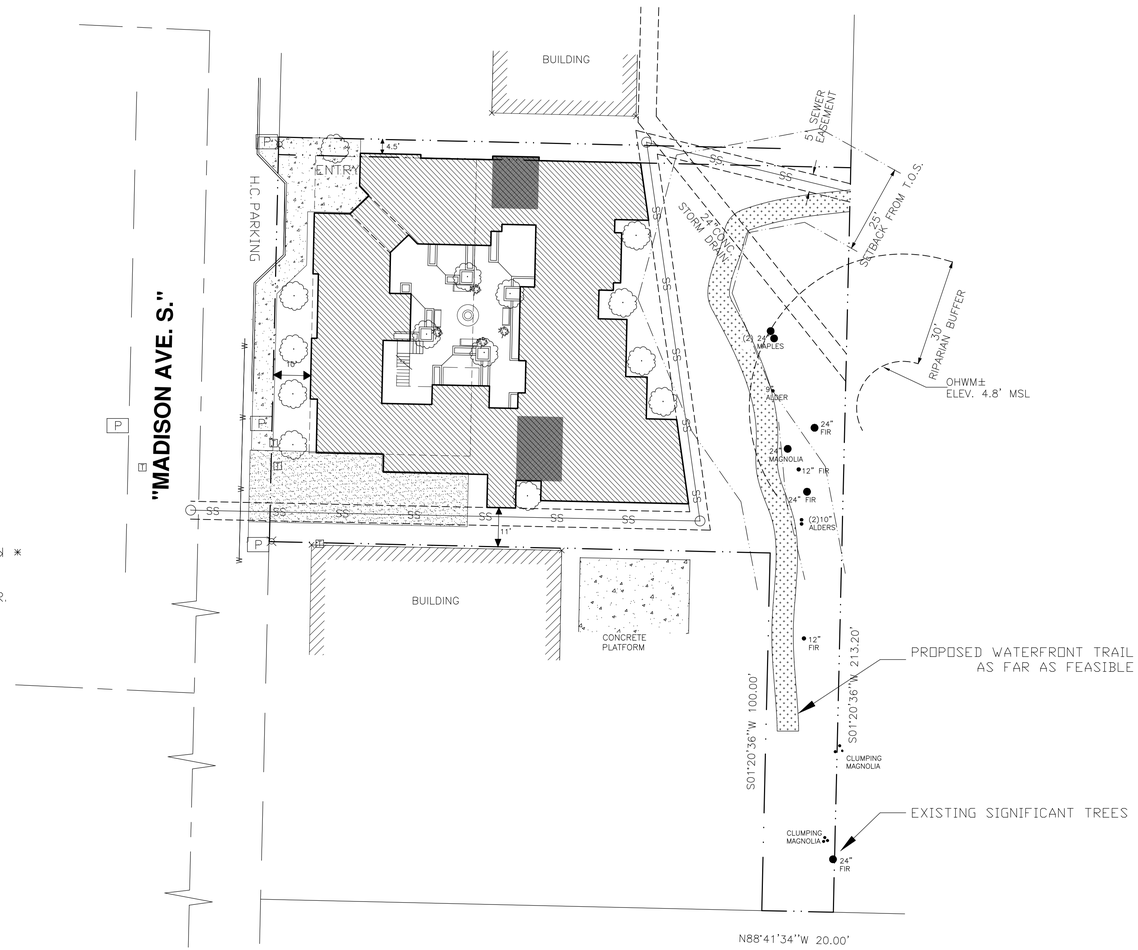
3462
REGISTERED ARCHITECT
Cihan H. Anisoglu
STATE OF WASHINGTON

ZONING: MIXED-USE TOWN CENTER

| SETBACKS: | REQUIRED | PROVIDED |
|---|---|---|
| FRONT: | 10' | 10' |
| SIDE: | 0 | 4.5' & 11' |
| REAR: | 0 | 25' FROM T.O.S |

| FAR CALCULATION | LOT SIZE: 18112 sq. ft. |
|---|---|
| Residential Base FAR | 40% = 7245 sq. ft. |
| Commercial Base FAR | 60% = 10867 sq. ft. |
| Proposed Residential FAR | 13573 sq. ft. |
| | -7245 sq. ft. |
| | 6328 sq. ft. Bonus FAR Required * |

*BONUS FAR OBTAINED BY PROVIDING PUBLIC AMENITIES, COMMUNITY OPEN SPACE AND/OR PURCHASE OF RESIDENTIAL FAR.




## LEGEND

- PROPERTY LINE
- ADJOINING PROPERTY LINE
- RIGHT-OF-WAY
- EDGE OF GRAVEL DRIVE
- WATER LINE
- CENTERLINE OF ROAD
- TOE OF SLOPE
- TOP OF SLOPE (T.O.S)
- CONTOUR LINE
- SANITARY SEWER MAN HOLE
- SEWER LINE
- EASEMENT
- LIGHT POLE
- TELEPHONE VAULT
- POWER VAULT
- SET 3/4" IRON PIPE YPC & 2"X2" STAKE
- TREE UNIT

N ZONING
SCALE: 1"=20'

20 0 20 40 60
Scale: 1" = 20'

| No. | Date | Description |
|---|---|---|
| | 08.29.17 | PRE-APPLICATION CONFERENCE |
| | 10.27.17 | PRE-APPLICATION CONFERENCE |
| | 2.08.2018 | SITE PLAN REVIEW |
| | 1.08.2019 | SITE PLAN REVIEW |

CKCB
MADISON AVE PROJECT

Project
Drawn
Sheet Title
Sheet Number

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BAINBRIDGE ISLAND, WA
98110

p 206 226 8313

cihan@anisoglu.com
seanfancy@gmail.com

3462
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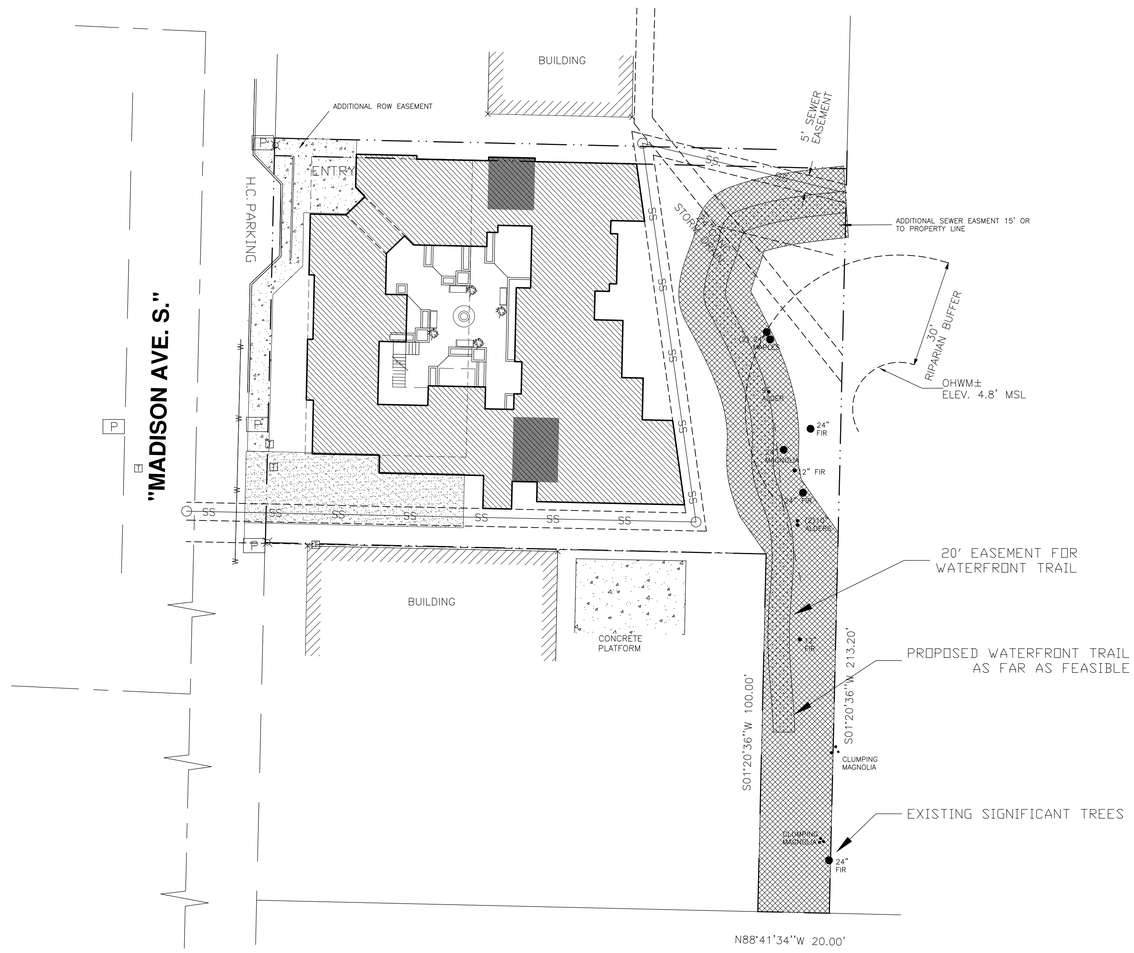
Cihan H. Anisoglu
STATE OF WASHINGTON




## LEGEND

- PROPERTY LINE
- ADJOINING PROPERTY LINE
- RIGHT-OF-WAY
- EDGE OF GRAVEL DRIVE
- WATER LINE
- CENTERLINE OF ROAD
- TOE OF SLOPE
- TOP OF SLOPE (T.O.S)
- CONTOUR LINE
- SANITARY SEWER MAN HOLE
- SEWER LINE
- EASEMENT
- LIGHT POLE
- TELEPHONE VAULT
- POWER VAULT
- SET 3/4" IRON PIPE YPC & 2"X2" STAKE

N

TRAIL EASEMENT
SCALE: 1"=20'

20 0 20 40 60
Scale: 1" = 20'

| No. | Date | Description |
|---|---|---|
| | 08.29.17 | PRE-APPLICATION CONFERENCE |
| | 10.27.17 | PRE-APPLICATION CONFERENCE |
| | 2.08.2018 | SITE PLAN REVIEW |
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Sheet Title

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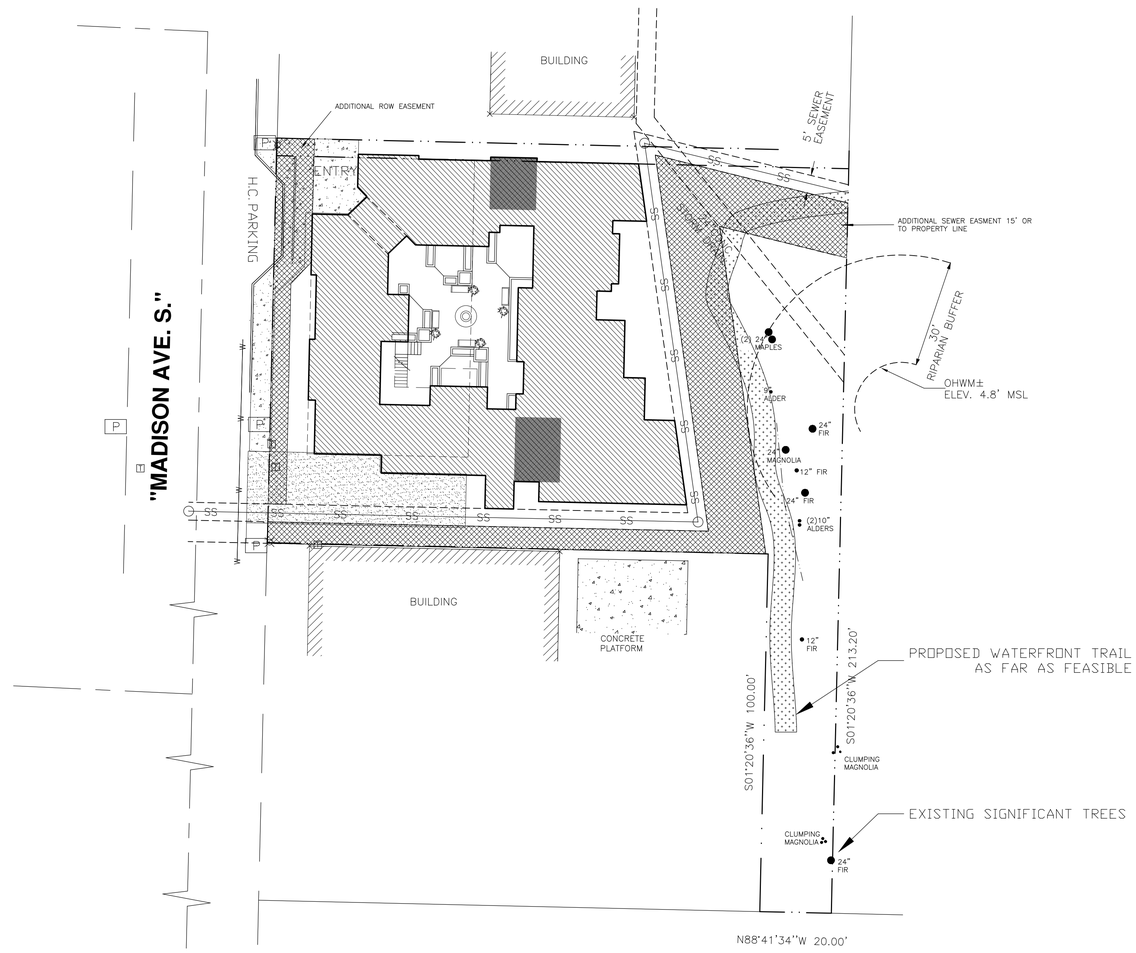
BAINBRIDGE ISLAND, WA
98110

p 206 226 8313

cihan@anisoglu.com
seanfancy@gmail.com

3462
REGISTERED ARCHITECT
Cihan H. Anisoglu
STATE OF WASHINGTON




## LEGEND

- PROPERTY LINE
- ADJOINING PROPERTY LINE
- RIGHT-OF-WAY
- EDGE OF GRAVEL DRIVE
- WATER LINE
- CENTERLINE OF ROAD
- TOE OF SLOPE
- TOP OF SLOPE (T.O.S)
- CONTOUR LINE
- SANITARY SEWER MAN HOLE
- SEWER LINE
- EASEMENT
- LIGHT POLE
- TELEPHONE VAULT
- POWER VAULT
- SET 3/4" IRON PIPE YPC & 2"X2" STAKE

N

# SEWER AND ROW EASEMENT

SCALE: 1"=20'

20 0 20 40 60

Scale: 1" = 20'

| No. | Date | Description |
|---|---|---|
| | 08.29.17 | PRE-APPLICATION CONFERENCE |
| | 10.27.17 | PRE-APPLICATION CONFERENCE |
| | 2.08.2018 | SITE PLAN REVIEW |
| | 1.08.2019 | SITE PLAN REVIEW |

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Project
Drawn

Sheet Title

Sheet Number

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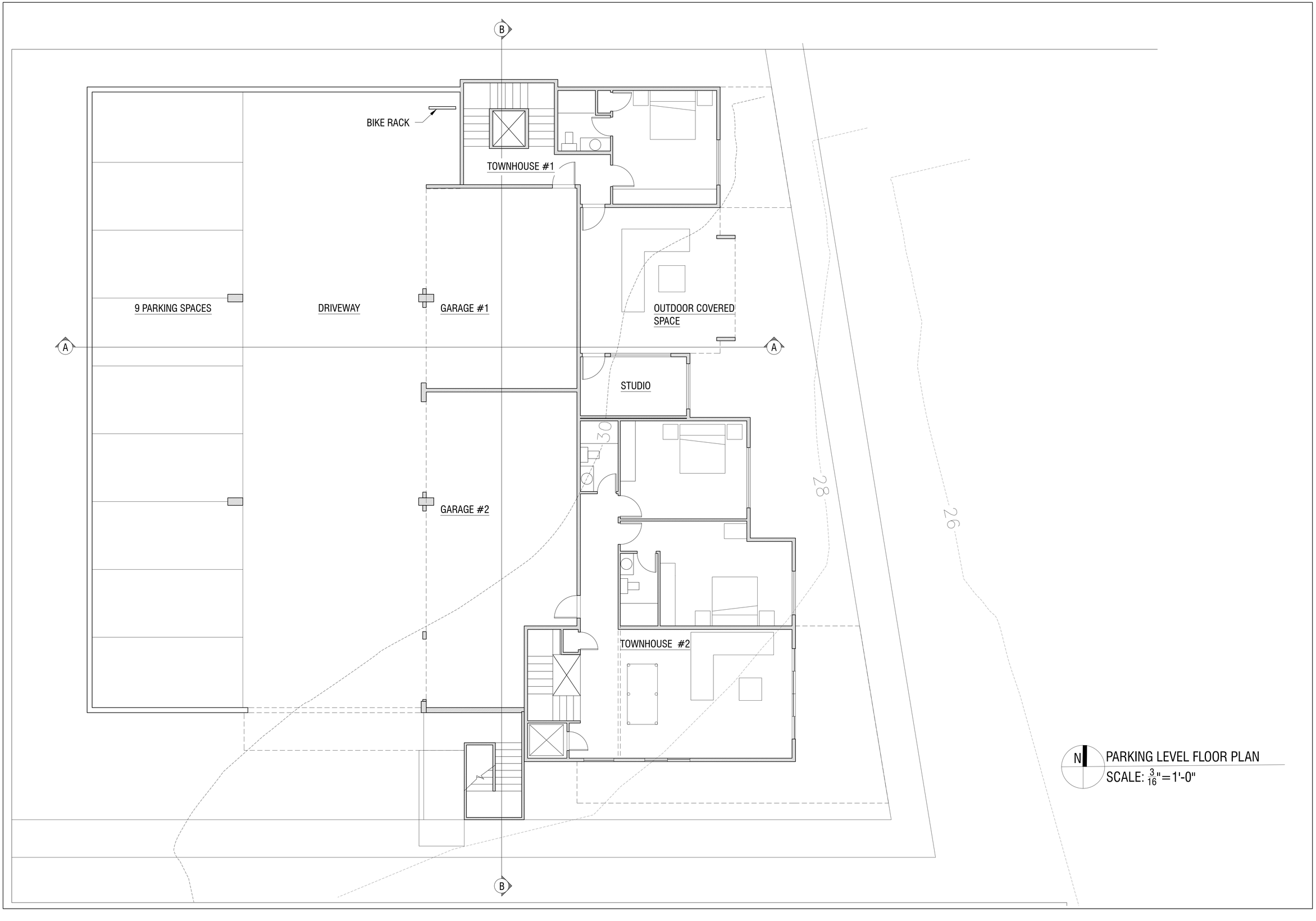


N

PARKING LEVEL FLOOR PLAN

SCALE: $\frac{3}{16}$"=1'-0"

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271 WYATT WAY NE, SUITE 102
BAINBRIDGE ISLAND, WA
9 8 1 1 0

p 2 0 6 2 2 6 8 3 1 3

cihan@anisoglu.com
seanfancy@gmail.com

3462
REGISTERED ARCHITECT
Cihan H. Anisoglu
STATE OF WASHINGTON

| No. | Date | Description |
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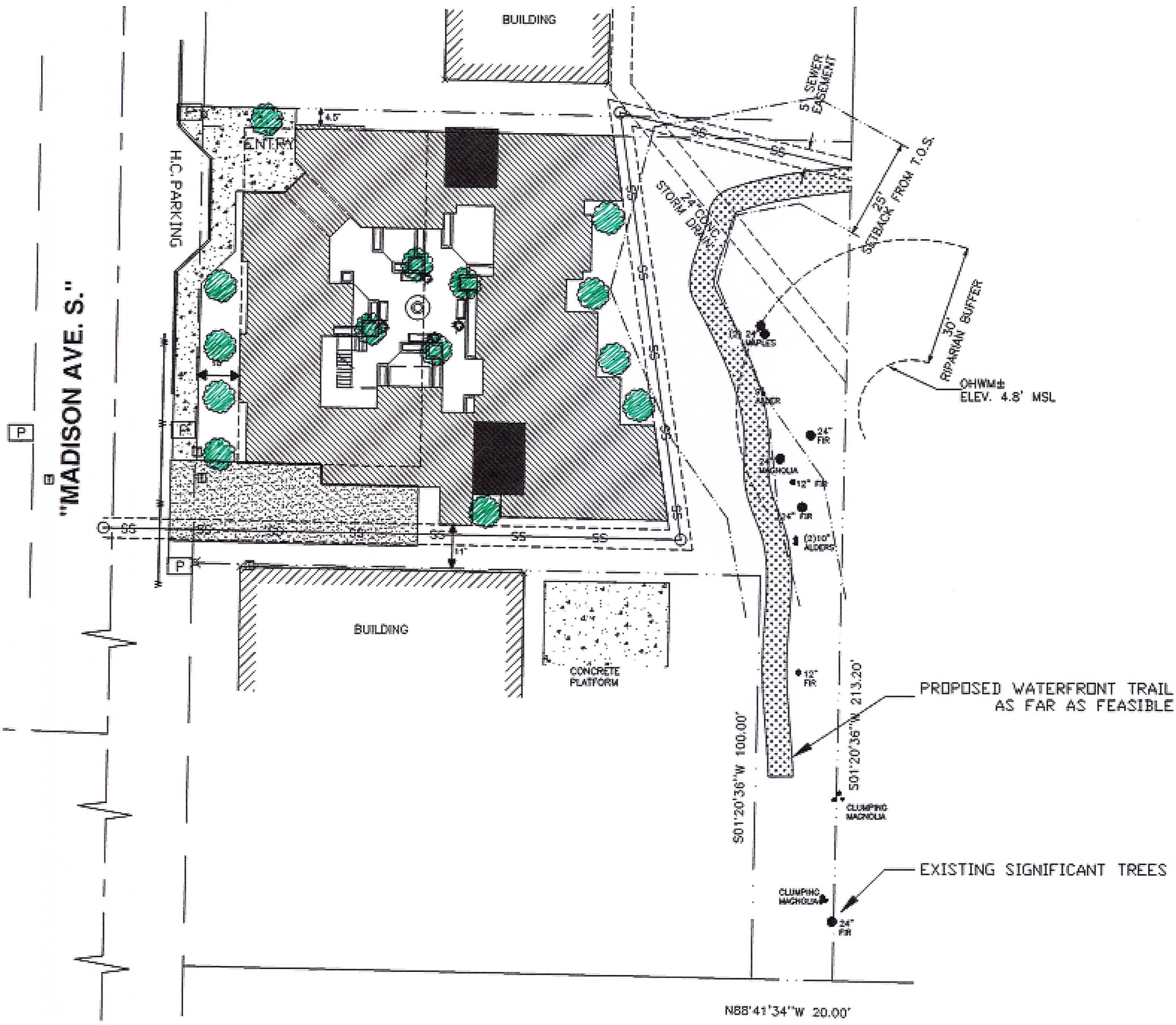
| | 10.27.17 | PRE-APPLICATION CONFERENCE |
| | 2.08.2018 | SITE PLAN REVIEW |
| | 1.08.2019 | SITE PLAN REVIEW |

CKCB
MADISON AVE PROJECT

Project | Drawn

FLOOR PLAN - PARKING LEVEL
Sheet Title

Sheet Number




# Landscape Plan

January 18, 2019

**GEOTECH**
**CONSULTANTS, INC.**

2401 10th Ave E
Seattle, Washington 98102
(425) 747-5618

October 17, 2018

JN 18485

Cihan Anisoglu
P.O. Box 10386
Bainbridge Island, Washington 98110
*via email: cihan@anisoglu.com*

Subject: **Critical Area Report and Update of Previous Geotechnical Engineering Study**
Proposed New Multi-Family Building
230 Madison Avenue South
Bainbridge Island, Washington

Reference: *Geotechnical Engineering Study, Proposed Windward Inn Hotel, 230 Madison Avenue South, Winslow, Washington*; December 4, 2002; Geotech Consultants, Inc.

Dear Mr. Anisoglu:

This Critical Area Report (CAR) is intended to satisfy the report requirements of section 16.20.180 of the Bainbridge Island Municipal Code (BIMC). The proposed site contains geologically hazardous areas, which must be addressed in a CAR. In order to prepare this report, we:

1. Reviewed the above-referenced report,
2. Revisited the subject property on October 8, 2018 to observe the current conditions on the subject lot and the adjoining properties,
3. Reviewed the development plans provided,
4. Discussed the planned development with you,
5. Researched the U.S. Geologic Survey's (USGS) website for the current seismic design parameters required by the International Building Code (IBC), and
6. Completed stability analyses for both static and seismic conditions on the steep, eastern slope.

## CRITICAL AREA REPORT

### Site and Project Plans:

A Vicinity Map for the site location is attached to the end of this report.

We were provided with architectural plans prepared by Anisoglu Architecture Art and Ideas dated February 8, 2018 and indicated to be for "Site Plan Review". Based on this information, and our discussions with you, we expect that a multi-family residential building will be constructed on the western two-thirds of the property. The new structure will extend no further east than the existing sanitary sewer, which runs along the south side of the lot from Madison Avenue South, before turning northward approximately two-thirds of the way into the site. This new building will have one below-grade level that will daylight to the east. It will have a finish floor elevation of approximately 28 feet. The majority of this below-grade level will contain parking, which will be accessed via a sloped driveway extending along the south side of the building from Madison Avenue South. Two residential units and covered outdoor space will occupy the eastern approximately one-fourth of this lower level. Two floors of residential units will overlie the basement level.

Temporary cuts of up to approximately 10 feet will be needed to reach the basement foundation level. The tallest cut will be located in the northwest corner of the building.

The structure is shown to be set back at least 25 feet from the crest of the steep slope that is located on the eastern portion of the property.

A waterfront trail is shown extending north to south through the eastern side of the development area, along the crest of the steep slope. This trail is indicated to continue off the site both to the east and to the south, along the top of the marine bluff. We expect that this trail will only be used for foot traffic.

A copy of the Site Plan contained within the provided set of drawings is attached to the end of this report as Plate 2. This Site Plan shows the property boundaries, the proposed footprints of the building and waterfront trail, the existing sanitary sewer, and the existing topography. We have also included on the Site Plan the approximate locations of the test pits conducted for our 2002 *Geotechnical Engineering Study* of the property. A copy of this previous study is attached as Appendix A.

The site lies within the Shoreline Management Act Jurisdiction. The conditions on the site are substantially unchanged since we completed our 2002 *Geotechnical Engineering Study*. There are no indications of grading since our 2002 work. The majority of the property slopes gently toward the east from Madison Avenue East. This portion of the property is covered with tall grass and weeds, with scattered trees. Along the east edge of site is a steep slope extending down to a small tidal inlet. This slope is approximately 15 feet in height, and is inclined at approximately 1:1 (Horizontal:Vertical). It is overgrown with blackberry vines and other underbrush, and there are a few medium-sized trees growing on the slope. There are no indications of recent movement on this steep slope. Its oversteepened condition within the boundaries of the site appears mostly the result of previous erosion from past uncontrolled discharge from a large storm drain outfall located in the northeastern portion of the lot. The base of the steep slope has been protected with rock armoring and does not appear to be subjected to wave attack. The *Coastal Zone Atlas of Washington* maps this waterfront area as stable.

Under BIMC 16.12.060, the steep slope on the eastern edge of the property meets the criteria for a landslide hazard area and an erosion hazard area. This is primarily due to the steep inclination of the waterfront slope, which extends down to a small tidal inlet. On the Critical Areas Plan, Plate 3, we have indicated the geologically hazardous areas (landslide hazard and erosion hazard areas as defined by BIMC 16.12.060). Based on our interpretation of the BIMC, the prescriptive buffer from a landslide hazard area is 50 feet or the height of the slope, whichever is greater. This 50-foot buffer zone is also indicated on the Critical Areas Plan.

**Assessment of Geologic Characteristics:**

As a part of our 2002 *Geotechnical Engineering Study* our firm completed five test pits spread over the site. Test Pits 3 and 4 found fill soils immediately below the existing ground surface. The native soil conditions found beneath the fill, and underneath the ground surface in the remaining test pits, consists of a layer of topsoil overlying gravelly, silty, fine-grained sand that is weathered, and loose to medium-dense to a depth of 2 to 3 feet below the original ground surface. Beneath this looser soil, the gravelly, silty sand is dense to very dense. It has been glacially-compressed, and is referred to as glacial till. The glacial till was difficult to excavate, and extended to the maximum 11-foot depth of the test pits.

Our research of the Washington Department of Natural Resources' *Geologic Information Portal* yielded logs of test holes conducted in 2002 at 305 Madison Avenue South, to the southwest of the subject site. These test holes also found several feet of loose, weathered soil overlying glacial till.

The glacial till soils have a high internal strength, due to their cemented, glacially-compressed condition. It is not uncommon for near-vertical banks of dense glacial till to stand stable for many years.

In addition to the fill soils exposed in the test pits, fill will likely be encountered in the areas previously disturbed by excavation and backfilling for the sanitary sewer that extends through the south and east sides of the site.

No groundwater seepage was encountered in the test pits, which were excavated during the summer months. Glacial till is essentially impervious to the downward percolation of water that infiltrates into the upper, looser soils. As a result, it is not uncommon to encounter at least localized zones of shallow groundwater perched on top of the glacial till soils following extended wet weather. Groundwater may also be trapped in the bottom of the trenches for the sanitary sewer. We noted that recent drainage improvements had been put in place on the outside of the north wall of the adjacent southern building. This may be the result of shallow seasonal perched water building up against the outside of that building, which is slightly lower in elevation than the subject site.

As discussed above, there have been no indications of recent instability on the eastern steep slope. The glacial till soils are not susceptible to deep-seated instability, or soil strength loss, even during a large seismic event. Even so, shallow instability in the form of skin slides can occur on steep slopes where the upper few feet of soils have weathered over time, due primarily to freeze/thaw cycles. This usually occurs only periodically, and typically affects only the uppermost one to 2 feet of soil.

## Geologic Hazards Considerations:

**Erosion Hazard Area:** The majority of the site, the only portion of the property that will be disturbed for the planned development, slopes only gently. The steep, eastern portion of the lot is to remain undisturbed. The erosion potential of the on-site soils on the gently-sloped portion of the property is not severe. Implementation of appropriate temporary and permanent erosion control measures will be sufficient to protect the surrounding properties for adverse erosion impacts.

We expect that a Temporary Erosion and Sedimentation Control (TESC) plan will be required as a part of the permit process for this development. The extent of the temporary erosion control measures that will be appropriate will depend largely on the weather conditions during the clearing, excavation, and site grading operations. As a minimum, we recommend erosion control measures to include:

- Limiting vegetation clearing to areas that will be immediately worked, or that will be protected with straw, mulch, hog fuel, plastic sheeting, or some other measure.
- Installing wire-backed silt fences along the north, east and south boundaries of the work area. These fences should be bedded into mulch or compost.
- Constructing rock-covered access and staging areas to prevent vehicles that will enter and leave the site from driving onto bare soil.

- Covering soil stockpiles with plastic sheeting in wet and dry weather to control both erosion and dust.
- Mulching or covering all areas of bare soil in wet conditions. This is particularly important outside of the excavation where the ground surface slopes toward the neighboring properties or the steep slope.
- Preventing silty runoff from leaving the site and excavation. This may require that a temporary holding tank be kept at the site in wet weather until all bare areas are covered. Protecting the base of the excavation with a layer of clean rock is prudent to reduce the potential for generating silty water once the excavation is completed.

On most construction projects, it is necessary for the on-site contractor to periodically maintain or modify temporary erosion control measures to address specific site and weather conditions.

**Landslide Hazard Area:** The site is underlain at a relatively shallow depth by glacial till, a glacially-compressed mixture of gravel, silt and fine-grained sand. Experienced geotechnical engineers know that this soil has a high internal strength, and is not prone to deep-seated landslides. As a part of our work for this CAR, we completed a slope stability analysis for both static and seismic conditions. The results of these analyses are attached as Appendix B. As expected, the safety factors against slope movement extending into the glacial till soils exceeds 1.5 and 1.1 for static and seismic conditions.

The near-surface, looser soils (fill and native) are prone to future movement, most likely following extended wet weather. These shallow skin slides would not pose a risk to the planned building, which will be founded on competent glacial till soils. Considering the observed conditions, we expect that the crest of the slope will recede in periodic episodes involving the near-surface one to 2 feet of looser, weathered soil. This skin slides typically occur on approximate 20- to 30-year intervals, depending largely on weather patterns.

We recommend a building setback of at least 25 feet from the crest of the steep slope. This is the minimum setback allowed by the BIMC, consisting of a 15-foot setback from a minimum 10-foot buffer.

The proposed development plan includes the potential for a footpath to extend along the top of the steep slope and onto the adjacent properties. This would be within the minimum 10-foot buffer allowed by the BIMC from landslide hazard areas. It is our profession opinion that if this path is constructed using a lightweight surface, such as wood chips or gravel, and no more than 4 to 6 inches of this material is placed, the path should not adversely impact the stability of the steep slope. This assumes that the vegetation on the steep slope itself will be maintained. It is important to note, however, that future foreseeable shallow slope movement may damage or undermine this surface footpath.

Considering the above discussions, it is our professional opinion that:

- The proposed development will not create a net increase in geological instability, either on or off site,
- The proposed development will not increase the risk of life safety due to geological hazards above professionally acceptable levels,
- The proposed development will not increase the risk due to geological hazards above professionally acceptable levels for property loss to habitable structures or their necessary infrastructure on the site, or for property loss to off-site structures,

- The proposed building will be constructed using appropriate engineering methods that respond to the geologic characteristics specific to the site,
- The proposed development will not further degrade the geologic functions of the associated critical areas.

## UPDATE TO GEOTECHNICAL ENGINEERING STUDY

The geotechnical findings and conclusions presented in our 2002 report are generally still applicable to the planned development. The new building can be supported on conventional foundations bearing on the dense glacial till soils. An allowable bearing capacity of 5,000 pounds per square foot (psf) can be assumed, with a one-third increase for short-term wind or seismic loads. It will be important that all foundation bearing surfaces be cleaned of loose or disturbed soils prior to pouring concrete. In wet conditions, it would be prudent to protect the bearing surfaces from disturbance by placing several inches of clean crushed rock.

The design considerations presented in the report for foundations, walls, slabs, subsurface drainage and temporary excavations are still appropriate. The following considerations supplement those presented in our 2002 report:

- The provided plans show that the south and east sides of the building will be close to the easement for a sanitary sewer that was installed previously. It will be critical for the new foundations to be located below a 1:1 (Horizontal:Vertical) zone sloping upward from the bottom of the trench that was excavated for the sanitary sewer. Depending on the depth of the sewer, which should be determined, this could require deepening of the nearby new building foundations.

- In accordance with the 2012/2015 International Building Code (IBC), the site class within 100 feet of the ground surface is best represented by Site Class Type C (Very Dense Soil and Soft Rock). As noted in the USGS website, the mapped spectral acceleration value for a 0.2 second ($S_s$) and 1.0 second period ($S_1$) equals 1.45g and 0.47g, respectively.

  The IBC requires that the potential for liquefaction (soil strength loss) during an earthquake be evaluated for the peak ground acceleration of the Maximum Considered Earthquake (MCE), which has a probability of occurring once in 2,475 years (2 percent probability of occurring in a 50-year period). The soils beneath the site that will support the foundations are not susceptible to seismic liquefaction under the ground motions of the MCE because of their dense nature.

- The on-site glacial till soils are essentially impervious to downward percolation of water. On-site infiltration of runoff from impervious areas is infeasible. Attempting to infiltrate or disperse storm water on the site will increase the shallow subsurface flow to the steep slope, and any downgradient properties.

- There is a potential for subsurface water to perch on the glacial till and bypass perimeter footing drains. In order to prevent a build up of water underneath the basement floor slab, it would be prudent to install at least a 6-inch layer of free-draining gravel combined with perforated drain pipes beneath the slab. This underslab drainage system would then be connected to the remainder of the foundation drainage system.

- The temporary cut slope recommendations in the report are still appropriate. If adequately-sloped temporary cuts cannot be made within the property lines, and a temporary easement cannot be obtained from the adjoining property owners, shoring could be designed. We can assist with this, if it is necessary.

If you have any questions regarding this report, or if we may be of further service, please do not hesitate to contact us.

Respectfully submitted,

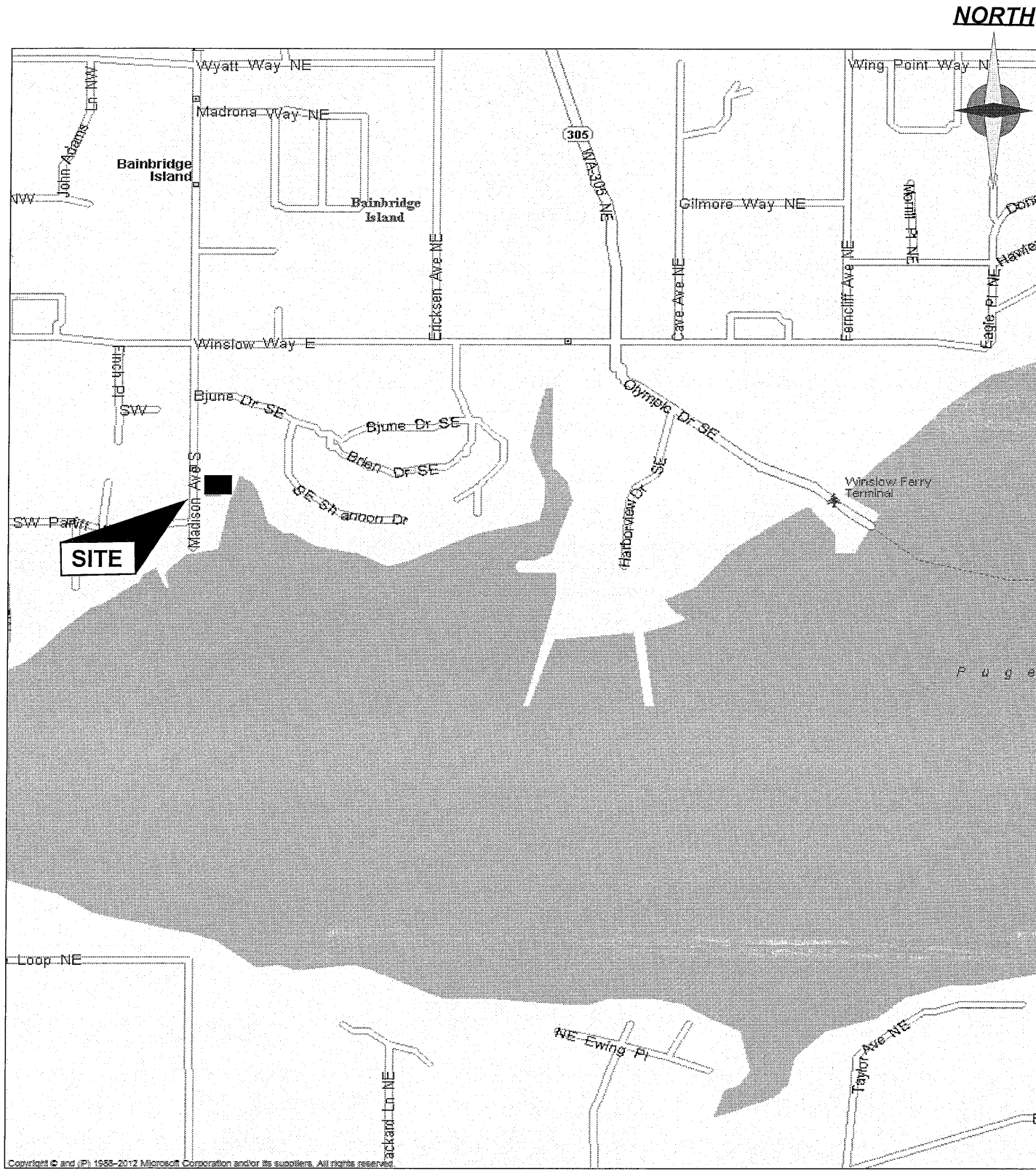
GEOTECH CONSULTANTS, INC.

10/17/18

Marc R. McGinnis, P.E.
Principal

Attachments:
- Vicinity Map
- Site Plan
- Critical Areas Plan
- Appendix A – 2002 Geotechnical Engineering Study
- Appendix B – Slope Stability Analyses

MRM: kg



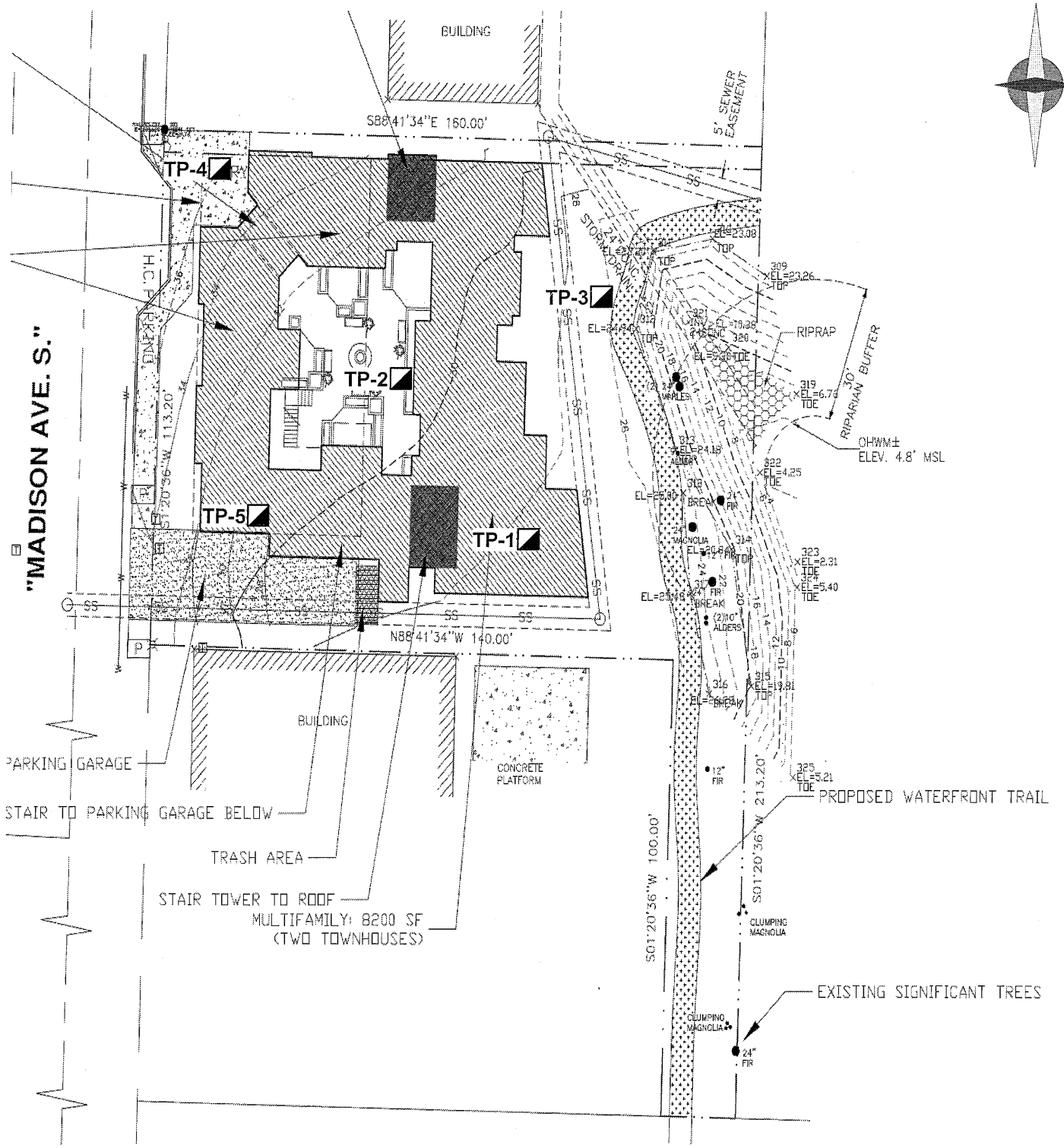

(Source: Microsoft MapPoint, 2013)

**GEOTECH**
**CONSULTANTS, INC.**

# VICINITY MAP

230 Madison Avenue South
Bainbridge Island, Washington

| Job No: | Date: | | Plate: |
|---|---|---|---|
| 18485 | Oct. 2018 | | 1 |




**Legend**:

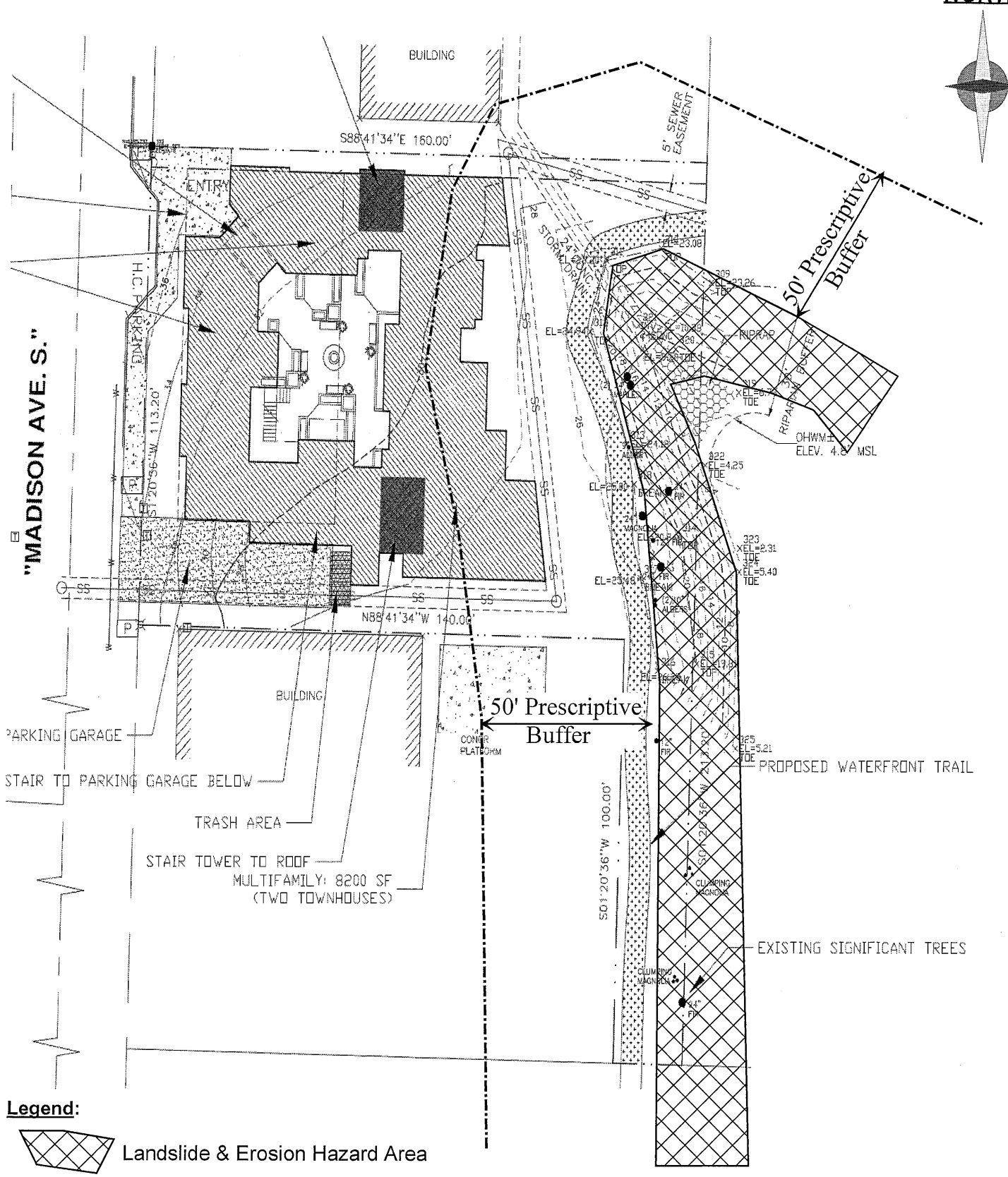
Test Pit Location (2002 Geotech Consultants, Inc.)

**GEOTECH**
**CONSULTANTS, INC.**

# SITE PLAN

230 Madison Avenue South
Bainbridge Island, Washington

| Job No: | Date: | | Plate: |
|---|---|---|---|
| 18485 | Oct. 2018 | No Scale | 2 |




**Legend**:

Landslide & Erosion Hazard Area

**GEOTECH CONSULTANTS, INC.**

# CRITICAL AREAS PLAN

230 Madison Avenue South
Bainbridge Island, Washington

| Job No: | Date: | | Plate: |
|---|---|---|---|
| 18485 | Oct. 2018 | | 3 |

# Appendix A – 2002 Geotechnical Engineering Study

## 230 Madison Avenue South

## Bainbridge Island, Washington

**GEOTECH**
**CONSULTANTS, INC.**

13256 Northeast 20th Street, Suite 16
Bellevue, Washington 98005
(425) 747-5618 FAX (425) 747-8561

December 4, 2002

JN 02302

Larsen Architects
P.O. Box 10674
Bainbridge Island, Washington 98110

Attention: Garrett Larsen

Subject: **Geotechnical Engineering Study**
Proposed Windward Inn Hotel
230 Madison Avenue South
Winslow, Washington

Dear Mr. Larsen:

We are pleased to present this geotechnical engineering report for the proposed Windward Inn Hotel development to be constructed at 230 Madison Avenue South in Winslow, Washington. The scope of our services consisted of exploring site surface and subsurface conditions, and then developing this report to provide recommendations for general earthwork and design criteria for foundations, retaining walls, and pavements. This work was authorized by your acceptance of our proposal, P-02302, dated August 5, 2002.

### *PROJECT UNDERSTANDING*

We were provided with a facsimile of a preliminary site plan for the Windward Inn Hotel. Larsen Architects prepared this sketch, which was undated. Based upon our review of the site plan, and discussions with you, it appears that the development will consist of an "L"-shaped building with 29 rooms in approximately two floors, above parking. We further understand that the building would be at grade along its western margin and a parking area beneath the building would daylight to the east. Access to the site would be off of Madison Avenue South, which bounds the proposed development on the west. Detailed information regarding final floor elevations and site grading was not available.

If the scope of the project changes from what we have described above, we should be provided with revised plans in order to determine if modifications to the recommendations and conclusions of this report are warranted.

## ***SITE CONDITIONS***

### *SURFACE*

The Vicinity Map, Plate 1, illustrates the general location of the site. The subject property lies east of Madison Avenue South and west of an embayment of Eagle Harbor in the Winslow area of Bainbridge Island. The irregularly shaped property is comprised of a single tax parcel that totals approximately 0.46 acres. The property is currently undeveloped and is vegetated with scattered

conifers and deciduous trees, and dense thickets of brambles. Beginning at the western property boundary, an approximate 20-foot-wide sanitary sewer easement parallels the southern property boundary. The easement turns toward the north-northwest approximately three-fourths the way into the site. It continues to the north-northwest across the property and exits the site approximately two-thirds the way from the western property line along the northern property line, then turns to the southeast. A manhole cover is visible near the southeastern corner of the adjoining northern building.

We were not provided with a topographic survey and do not have more information about ground surface elevations. The surface of the property gently descends from Madison Avenue South on the west, until reaching the eastern margin of the site, where the ground descends steeply to an embayment of Eagle Harbor.

We observed no indications of recent instability on the steep slope during our site visit. The slope was overgrown and its toe appears to be protected by rock armoring. Development adjacent to the site includes a real estate office on the north and a naval architects office on the south. Multi-family buildings are east of the embayment.

## *SUBSURFACE*

The subsurface conditions were explored by excavating five test pits at the approximate locations shown on the Site Exploration Plan, Plate 2. Our exploration program was based on the proposed construction, anticipated subsurface conditions and those encountered during exploration, and the scope of services outlined in our proposal.

The test pits were excavated on August 8, 2002 with a trackhoe. A geologist from our staff observed the excavation process, logged the test pits, and obtained representative samples of the soil encountered. "Grab" samples of selected subsurface soil were collected from the trackhoe bucket. The Test Pit Logs are attached to this report as Plates 3 through 5.

### ***Soil Conditions***

With the exception of approximately 5.5 feet of fill in Test Pit 3, the test pits excavated across the site generally encountered similar conditions. We typically observed a very thin layer of topsoil and highly organic material, overlying medium-dense silty sand with gravel that became dense between 2 and 4 feet in depth and very dense within 5 feet. The fill encountered in Test Pit 3 was medium-dense with roots. A dark brown, one-inch-thick organic layer separated the fill from underlying native silty sand.

The dense to very dense silty sand with gravel encountered in our explorations has been glacially compressed and is commonly referred to as glacial till. The glacial till was encountered in all of the test pits to the maximum explored depth of 11 feet. The till soil contained occasional sandier zones.

We did encounter cobbles in one of the test pits. We anticipate that more cobbles and possibly occasional boulders may be encountered during site redevelopment activities.

***Groundwater Conditions***

No groundwater seepage was observed in any of the five test pits excavated. The test pits were excavated in the summer and were left open for only a short time period. Therefore, the absence of seepage levels on the logs does not preclude the presence of groundwater in future excavations. It should be noted that groundwater levels can vary seasonally with rainfall and other factors. We anticipate that perched groundwater could be found above and within the glacial till soils in the winter and spring months, especially in excavations near the wetlands.

The final logs represent our interpretations of the field logs and laboratory tests. The stratification lines on the logs represent the approximate boundaries between soil types at the exploration locations. The actual transition between soil types may be gradual, and subsurface conditions can vary between exploration locations. The logs provide specific subsurface information only at the locations tested. The relative densities and moisture descriptions indicated on the test pit logs are interpretive descriptions based on the conditions observed during excavation.

The compaction of backfill was not in the scope of our services. Loose soil will therefore be found in the area of the test pits. If this presents a problem, the backfill will need to be removed and replaced with structural fill during construction.

## CONCLUSIONS AND RECOMMENDATIONS

### *GENERAL*

*THIS SECTION CONTAINS A SUMMARY OF OUR STUDY AND FINDINGS FOR THE PURPOSES OF A GENERAL OVERVIEW ONLY. MORE SPECIFIC RECOMMENDATIONS AND CONCLUSIONS ARE CONTAINED IN THE REMAINDER OF THIS REPORT. ANY PARTY RELYING ON THIS REPORT SHOULD READ THE ENTIRE DOCUMENT.*

With the exception of encountering approximately 5.5 feet of fill in Test Pit 3, the test pits excavated for this study generally encountered thin topsoil and organic material overlying medium-dense silty sand with gravel or gravelly sand that became dense between 2 and 4 feet in depth. The silty sand with gravel encountered in our explorations has been glacially compressed and is commonly referred to as glacial till. It is our opinion that the proposed Windward Inn can be supported on conventional foundations bearing directly on the dense native soils.

The recommendations of this report are intended to protect the planned development from damage due to slope instability, and to prevent the planned work from reducing the stability of the steep slope. Based on the lack of evident recent slope instability, and the presence of dense, glacially compressed silty sands, the potential for deep instability appears negligible. It will be important that protection of the slope's toe be maintained to prevent undercutting by wave action. It is possible that future shallow instability affecting the fill and looser weathered soils on, or near, the steep slope could occur. We therefore recommend the following:

- Locate structures no closer than 25 feet to the crest of the steep slope.
- Maintain a minimum 15-foot separation between the on-grade parking and the steep slope.

- Place no fill or clearing debris, or disturb the existing vegetation on, or within 10 feet of, the steep slope.

- Allow no water from impervious surfaces to flow onto, or be discharged on, the steep slope. Collected water should either be piped to a storm sewer or the base of the steep slope.

If future slope movement occurs, it could be necessary to stabilize the affected area with a retaining wall or buttress, or simply revegetate the resulting bare area.

Due to the silty, moisture-sensitive nature of the majority of the site soils, earthwork will be easier and more economical if performed during the drier summer months. The fine-grained silty site soils are sensitive to moisture, which makes them difficult to impossible to adequately compact when they have moisture contents even 2 to 3 percent above their optimum moisture content. The on-site soils are not acceptable for reuse as fill beneath footings. The reuse of these soils as structural fill beneath slab or pavement areas will only be successful during hot, dry weather. When above optimum moisture content, aeration of each loose lift of soil will be required to dry it before the lift is compacted. Alternatively, the soil could be chemically dried by adding lime, kiln dust, or cement, provided this is allowed by the responsible building department. Regardless of the method of drying, the earthwork process will be slowed dramatically. The earthwork contractor must be prepared to rework areas that do not achieve proper compaction due to high moisture content. Utility trench backfill in structural areas, such as pavements, must also be dried before it can be adequately compacted. Improper compaction of backfill in utility trenches and around control structures is a common reason for pavement distress and failures. Imported granular fill will be needed wherever it is not possible to dry the on-site soils sufficiently before compaction.

The drainage and/or waterproofing recommendations presented in this report are intended only to prevent active seepage from flowing through concrete walls or slabs. Even in the absence of active seepage into and beneath structures, water vapor can migrate through walls, slabs, and floors from the surrounding soil, and can even be transmitted from slabs and foundation walls due to the concrete curing process. Excessive water vapor trapped within structures can result in a variety of undesirable conditions, including, but not limited to, moisture problems with flooring systems, excessively moist air within occupied areas, and the growth of molds, fungi, and other biological organisms that may be harmful to the health of the occupants. The architect must consider the potential vapor sources and likely occupant uses, and provide sufficient ventilation, either passive or mechanical, to prevent a build up of excessive water vapor within the planned structure.

The erosion control measures needed during the site development will depend heavily on the weather conditions that are encountered. We anticipate that a stout wire-backed silt fence will be needed around the downslope sides of any cleared areas. Rocked construction access roads should be extended into the site to reduce the amount of mud carried off the property by trucks and equipment. Wherever possible, these roads should follow the alignment of planned pavements. Cut slopes and soil stockpiles should be covered with plastic during wet weather. Following rough grading, it may be necessary to mulch or hydroseed bare areas that will not be immediately covered with landscaping or an impervious surface.

Geotech Consultants, Inc. should be allowed to review the final development plans to verify that the recommendations presented in this report are adequately addressed in the design. Such a plan review would be additional work beyond the current scope of work for this study, and it may include revisions to our recommendations to accommodate site, development, and geotechnical constraints that become more evident during the review process.

### *SEISMIC CONSIDERATIONS*

The site is located within Seismic Zone 3, as illustrated on Figure No. 16-2 of the 1997 Uniform Building Code (UBC). In accordance with Table 16-J of the 1997 UBC, the site soil profile within 100 feet of the ground surface is best represented by Soil Profile Type $S_C$ (Very Dense Soil). The site soils are not susceptible to seismic liquefaction because of their dense nature.

### *CONVENTIONAL FOUNDATIONS*

The proposed structure can be supported on conventional continuous and spread footings bearing directly on the dense native soil. Structural fill should not be placed beneath the building's foundations. We recommend that continuous and individual spread footings have minimum widths of 16 and 24 inches, respectively. Footings should also be bottomed at least 18 inches below the lowest adjacent finish ground surface. The local building codes should be reviewed to determine if different footing widths or embedment depths are required.

Depending on the final site grades, overexcavation may be required below the footings to expose competent native soil. Unless lean concrete (minimum 1.5 sacks of cement per cubic yard) is used to fill an overexcavated hole, the foundation should be extended downward. If lean concrete backfill is used, the overexcavation need only extend 6 inches beyond the edges of the footing.

An allowable bearing pressure of 5,000 pounds per square foot (psf) is appropriate for footings supported on dense native soil. A one-third increase in this design bearing pressure may be used when considering short-term wind or seismic loads. For the above design criteria, it is anticipated that the total post-construction settlement of footings founded on competent native soil will be less than one inch, with differential settlements on the order of one-half inch in a distance of 50 feet along a continuous footing with a uniform load.

Lateral loads due to wind or seismic forces may be resisted by friction between the foundation and the bearing soil, or by passive earth pressure acting on the vertical, embedded portions of the foundation. For the latter condition, the foundation must be either poured directly against relatively level, undisturbed soil or be surrounded by level structural fill. We recommend using the following ultimate values for the foundation's resistance to lateral loading:

| PARAMETER | ULTIMATE VALUE |
|---|---|
| Coefficient of Friction | 0.50 |
| Passive Earth Pressure | 350 pcf |

**Where: (i) pcf is pounds per cubic foot, and (ii) passive earth pressure is computed using the equivalent fluid density.**

If the ground in front of a foundation is loose or sloping, the passive earth pressure given above will not be appropriate. We recommend maintaining a safety factor of at least 1.5 for the foundation's resistance to lateral loading, when using the above ultimate values.

***PERMANENT FOUNDATION AND RETAINING WALLS***

Retaining walls backfilled on only one side should be designed to resist the lateral earth pressures imposed by the soil they retain. The following recommended parameters are for walls that restrain level backfill:

| PARAMETER | VALUE |
|---|---|
| Active Earth Pressure * | 35 pcf |
| Passive Earth Pressure | 350 pcf |
| Coefficient of Friction | 0.45 |
| Soil Unit Weight | 130 pcf |

**Where: (i) pcf is pounds per cubic foot, and (ii) active and passive earth pressures are computed using the equivalent fluid pressures.**

*** For a restrained wall that cannot deflect at least 0.002 times its height, a uniform lateral pressure equal to 10 psf times the height of the wall should be added to the above active equivalent fluid pressure.**

The values given above are to be used to design permanent foundation and retaining walls only. The passive pressure given is appropriate for the depth of level structural fill placed in front of a retaining or foundation wall only. The values for friction and passive resistance are ultimate values and do not include a safety factor. We recommend a safety factor of at least 1.5 for overturning and sliding, when using the above values to design the walls. Restrained wall soil parameters should be utilized for a distance of 1.5 times the wall height from corners or bends in the walls. This is intended to reduce the amount of cracking that can occur where a wall is restrained by a corner.

The design values given above do not include the effects of any hydrostatic pressures behind the walls and assume that no surcharges, such as those caused by slopes, vehicles, or adjacent foundations will be exerted on the walls. If these conditions exist, those pressures should be added to the above lateral soil pressures. Where sloping backfill is desired behind the walls, we will need to be given the wall dimensions and the slope of the backfill in order to provide the appropriate design earth pressures. The surcharge due to traffic loads behind a wall can typically be accounted for by adding a uniform pressure equal to 2 feet multiplied by the above active fluid density.

Heavy construction equipment should not be operated behind retaining and foundation walls within a distance equal to the height of a wall, unless the walls are designed for the additional lateral pressures resulting from the equipment. The wall design criteria assume that the backfill will be well-compacted in lifts no thicker than 12 inches. The compaction of backfill near the walls should be accomplished with hand-operated equipment to prevent the walls from being overloaded by the higher soil forces that occur during compaction.

***Retaining Wall Backfill and Waterproofing***

Backfill placed behind retaining or foundation walls should be coarse, free-draining structural fill containing no organics. This backfill should contain no more than 5 percent silt or clay particles and have no gravel greater than 4 inches in diameter. The percentage of particles passing the No. 4 sieve should be between 25 and 70 percent. The native soils are not free draining. If the native glacial till soil is used as backfill, a minimum of 12 inches of free-draining gravel should be placed against the backfilled retaining walls. Free-draining backfill or gravel should be used for the entire width of the backfill where seepage is encountered. For increased protection, drainage composites should be placed along cut slope faces, and the walls should be backfilled entirely with free-draining soil.

The purpose of these backfill requirements is to ensure that the design criteria for a retaining wall are not exceeded because of a build-up of hydrostatic pressure behind the wall. The top 12 to 18 inches of the backfill should consist of a compacted, relatively impermeable soil or topsoil, or the surface should be paved. The ground surface must also slope away from backfilled walls to reduce the potential for surface water to percolate into the backfill. The section entitled ***General Earthwork and Structural Fill*** contains recommendations regarding the placement and compaction of structural fill behind retaining and foundation walls.

The above recommendations are not intended to waterproof below-grade walls. Over time, the performance of subsurface drainage systems can degrade, subsurface groundwater flow patterns can change, and utilities can break or develop leaks. Therefore, waterproofing should be provided where future seepage through the walls is not acceptable. This typically includes limiting cold-joints and wall penetrations, and using bentonite panels or membranes on the outside of the walls. Waterproofing systems should be installed by an experienced contractor familiar with the anticipated construction and subsurface conditions. Applying a thin coat of asphalt emulsion to the outside face of a wall is not considered waterproofing, and will only help to reduce moisture generated from water vapor or capillary action from seeping through the concrete. As with any project, adequate ventilation of basement and crawl space areas is important to prevent a build up of water vapor that is commonly transmitted through concrete walls from the surrounding soil, even when seepage is not present. This is appropriate even when waterproofing is applied to the outside of foundation and retaining walls.

## *SLABS-ON-GRADE*

The building floors may be constructed as slabs-on-grade atop non-organic, medium-dense native soils, or on structural fill placed above this competent soil. The subgrade soil must be in a firm non-yielding condition at the time of slab construction or underslab fill placement. Any soft areas encountered should be excavated and replaced with select imported structural fill.

All slabs-on-grade should be underlain by a capillary break or drainage layer consisting of a minimum 4-inch thickness of coarse, free-draining structural fill with a gradation similar to that discussed in ***Permanent Foundation and Retaining Walls***. As noted by the American Concrete Institute (ACI) in the *Guides for Concrete Floor and Slab Structures*, proper moisture protection is desirable immediately below any on-grade slab that will be covered by tile, wood, carpet, impermeable floor coverings, or any moisture-sensitive equipment or products. ACI also notes that vapor *retarders*, such as 6-mil plastic sheeting, are typically used. A vapor retarder is defined as a

material with a permeance of less than 0.3 US perms per square foot (psf) per hour, as determined by ASTM E 96. It is possible that concrete admixtures may meet this specification, although the manufacturers of the admixtures should be consulted. Where plastic sheeting is used under slabs, joints should overlap by at least 6 inches and be sealed with adhesive tape. The sheeting should extend to the foundation walls for maximum vapor protection.

If no potential for vapor passage through the slab is desired, a vapor *barrier* should be used. A vapor barrier, as defined by ACI, is a product with a water transmission rate of 0.00 perms per square foot per hour when tested in accordance with ASTM E 96. Reinforced membranes having sealed overlaps can meet this requirement.

In the recent past, ACI (Section 4.1.5) recommended that a minimum of 4 inches of well-graded compactable granular material, such as a 5/8-inch-minus crushed rock pavement base, be placed over the vapor retarder or barrier to protect them during slab construction and to act as a "blotter" for more even curing of the concrete slab. However, more current literature indicates that long-term vapor problems could result where the protection/blotter material becomes wet before the slab placement occurs. This is especially an issue in areas with wet climates, such as the Puget Sound. Therefore, if there is a potential that the protection/blotter material will become wet before the slab is installed, ACI now recommends that no protection/blotter material be used. However, they then recommend that the joint spacing in the slab be reduced, a low shrinkage concrete mixture be used, and "other measures" (steel reinforcing, etc.) be utilized to reduce the potential for irregular slab curing and excessive shrinkage cracking due to uneven curing.

We recommend that the contractor, architect, structural engineer, and the owner discuss these issues and review recent ACI literature and ASTM E-1643 for installation guidelines and guidance on the use of the protection/blotter material.

## *EXCAVATIONS AND SLOPES*

Excavation slopes should not exceed the limits specified in local, state, and national government safety regulations. Temporary cuts to a depth of about 4 feet may be attempted vertically in unsaturated soil, if there are no indications of slope instability. However, vertical cuts should not be made near property boundaries, or existing utilities and structures. Based upon Washington Administrative Code (WAC) 296, Part N, the topsoil and loose to medium-dense soils at the subject site would generally be classified as Type B, while the underlying dense glacial till would be classified as Type A. Temporary cut slopes in the Type B soils should be excavated at an inclination no steeper than 1:1 (Horizontal:Vertical) and the Type A soils no steeper than 0.75:1 (H:V).

The above-recommended temporary slope inclinations are based on what has been successful at other sites with similar soil conditions. Temporary cuts are those that will remain unsupported for a relatively short duration to allow for the construction of foundations, retaining walls, or utilities. Temporary cut slopes should be protected with plastic sheeting during wet weather. The cut slopes should also be backfilled or retained as soon as possible to reduce the potential for instability. Please note that sand or loose soil can cave suddenly and without warning. Excavation, foundation, and utility contractors should be made especially aware of this potential danger.

All permanent cuts into native soil should be inclined no steeper than 2:1 (H:V). Fill slopes should also not be constructed with an inclination greater than 2:1 (H:V). As discussed in the ***General*** section, fill should not be placed on, or near, the steep east slope. To reduce the potential for shallow sloughing, fill must be compacted to the face of these slopes. This can be accomplished by overbuilding the compacted fill and then trimming it back to its final inclination. Adequate compaction of the slope face is important for long-term stability and is necessary to prevent excessive settlement of patios, slabs, foundations, or other improvements that may be placed near the edge of the slope.

Water should not be allowed to flow uncontrolled over the top of any temporary or permanent slope. All permanently exposed slopes should be seeded with an appropriate species of vegetation to reduce erosion and improve the stability of the surficial layer of soil.

## *DRAINAGE CONSIDERATIONS*

Foundation drains should be used where (1) crawl spaces or basements will be below a structure, (2) a slab is below the outside grade, or (3) the outside grade does not slope downward from a building. Drains should also be placed at the base of all earth-retaining walls. These drains should be surrounded by at least 6 inches of 1-inch-minus, washed rock and then wrapped in non-woven, geotextile filter fabric (Mirafi 140N, Supac 4NP, or similar material). At its highest point, a perforated pipe invert should be at least 6 inches below the bottom of a slab floor or the level of a crawl space, and it should be sloped for drainage. All roof and surface water drains must be kept separate from the foundation drain system. A typical drain detail is attached to this report as Plate 6. For the best long-term performance, perforated PVC pipe is recommended for all subsurface drains.

Drainage inside the building's footprint should also be provided where a crawl space will slope or be lower than the surrounding ground surface, or an excavation encounters significant seepage. Considering the potential for perched groundwater, it would be prudent to provide at least a 4- to 6-inch gravel layer and several perforated drainpipes under the slab. We can provide additional recommendations for interior drains, should they become necessary, during excavation and foundation construction.

As a minimum, a vapor retarder, as defined in the ***Slabs-On-Grade*** section, should be provided in any crawl space area to limit the transmission of water vapor from the underlying soils. Also, an outlet drain is recommended for all crawl spaces to prevent a build up of any water that may bypass the footing drains.

No groundwater was observed during our field work. However, if seepage is encountered in an excavation, it should be drained from the site by directing it through drainage ditches, perforated pipe, or French drains, or by pumping it from sumps interconnected by shallow connector trenches at the bottom of the excavation.

The excavation and site should be graded so that surface water is directed off the site and away from the tops of slopes. Water should not be allowed to stand in any area where foundations, slabs, or pavements are to be constructed. Final site grading in areas adjacent to a buildings should slope away at least 2 percent, except where the area is paved. Surface drains should be provided where necessary to prevent ponding of water behind foundation or retaining walls.

### *GENERAL EARTHWORK AND STRUCTURAL FILL*

All building and pavement areas should be stripped of surface vegetation, topsoil, organic soil, and other deleterious material. The stripped or removed materials should not be mixed with any materials to be used as structural fill, but they could be used in non-structural areas, such as landscape beds.

Structural fill is defined as any fill, including utility backfill, placed under, or close to, a building, behind permanent retaining or foundation walls, or in other areas where the underlying soil needs to support loads. All structural fill should be placed in horizontal lifts with a moisture content at, or near, the optimum moisture content. The optimum moisture content is that moisture content that results in the greatest compacted dry density. The moisture content of fill is very important and must be closely controlled during the filling and compaction process.

The allowable thickness of the fill lift will depend on the material type selected, the compaction equipment used, and the number of passes made to compact the lift. The loose lift thickness should not exceed 12 inches. We recommend testing the fill as it is placed. If the fill is not sufficiently compacted, it can be recompacted before another lift is placed. This eliminates the need to remove the fill to achieve the required compaction. The following table presents recommended relative compactions for structural fill:

| LOCATION OF FILL PLACEMENT | MINIMUM RELATIVE COMPACTION |
|---|---|
| Beneath slabs or walkways | 95% |
| Filled slopes and behind retaining walls | 90% |
| Beneath pavements | 95% for upper 12 inches of subgrade; 90% below that level |

**Where: Minimum Relative Compaction is the ratio, expressed in percentages, of the compacted dry density to the maximum dry density, as determined in accordance with ASTM Test Designation D 1557-91 (Modified Proctor).**

The ***General*** section should be reviewed for considerations related to the reuse of on-site soils. Structural fill that will be placed in wet weather should consist of a coarse, granular soil with a silt or clay content of no more than 5 percent. The percentage of particles passing the No. 200 sieve should be measured from that portion of soil passing the three-quarter-inch sieve.

## ***LIMITATIONS***

The conclusions and recommendations contained in this report are based on site conditions as they existed at the time of our exploration and assume that the soil and groundwater conditions encountered in the test pits are representative of subsurface conditions on the site. If the subsurface conditions encountered during construction are significantly different from those observed in our explorations, we should be advised at once so that we can review these conditions and reconsider our recommendations where necessary. Unanticipated soil conditions are commonly encountered on construction sites and cannot be fully anticipated by merely taking soil

samples in test pits. Subsurface conditions can also vary between exploration locations. Such unexpected conditions frequently require making additional expenditures to attain a properly constructed project. It is recommended that the owner consider providing a contingency fund to accommodate such potential extra costs and risks. This is a standard recommendation for all projects.

This report has been prepared for Larsen Architects and its representatives for specific application to this project and site. Our conclusions and recommendations are professional opinions derived in accordance with current standards of practice within the scope of our services and within budget and time constraints.

No warranty is expressed or implied. The scope of our services does not include services related to construction safety precautions, and our recommendations are not intended to direct the contractor's methods, techniques, sequences, or procedures, except as specifically described in our report for consideration in design.

## ***ADDITIONAL SERVICES***

Geotech Consultants, Inc. should be retained to provide geotechnical consultation, testing, and observation services during construction. This is to confirm that subsurface conditions are consistent with those indicated by our exploration, to evaluate whether earthwork and foundation construction activities comply with the general intent of the recommendations presented in this report, and to provide suggestions for design changes in the event subsurface conditions differ from those anticipated prior to the start of construction. However, our work would not include the supervision or direction of the actual work of the contractor and its employees or agents. Also, job and site safety, and dimensional measurements, will be the responsibility of the contractor.

The following plates are attached to complete this report:

| | |
|---|---|
| Plate 1 | Vicinity Map |
| Plate 2 | Site Exploration Plan |
| Plates 3 - 5 | Test Pit Logs |
| Plate 6 | Typical Footing Drain |

We appreciate the opportunity to be of service on this project. If you have any questions, or if we may be of further service, please do not hesitate to contact us.

Respectfully submitted,

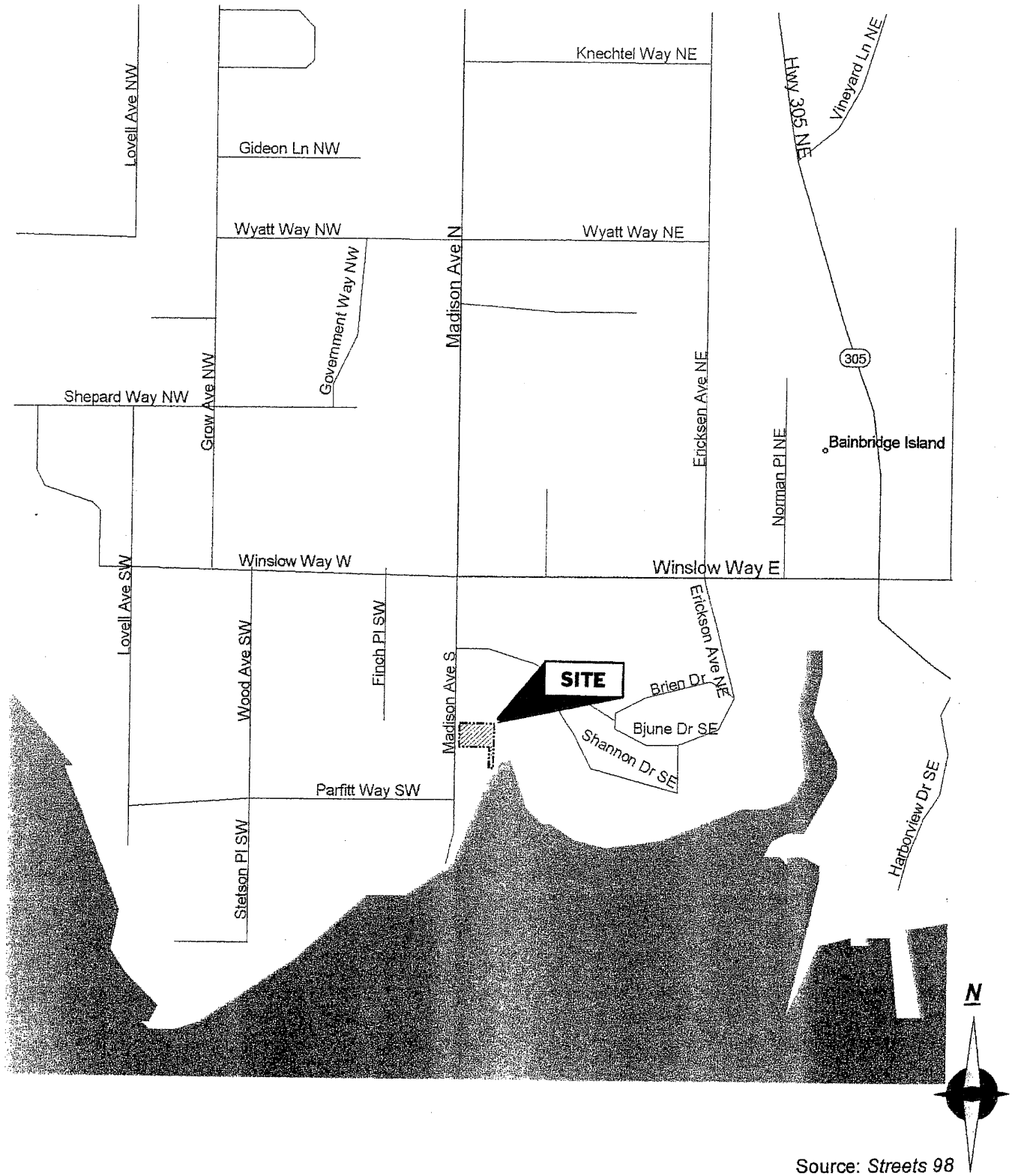
GEOTECH CONSULTANTS, INC.

Timothy A. Johnson
Geologist

MARC R. McGINNIS
STATE OF WASHINGTON
27845
REGISTERED
PROFESSIONAL ENGINEER
12/4/02
EXPIRES 10/25/03

Marc R. McGinnis, P.E.
Principal

TAJ/MRM: esm



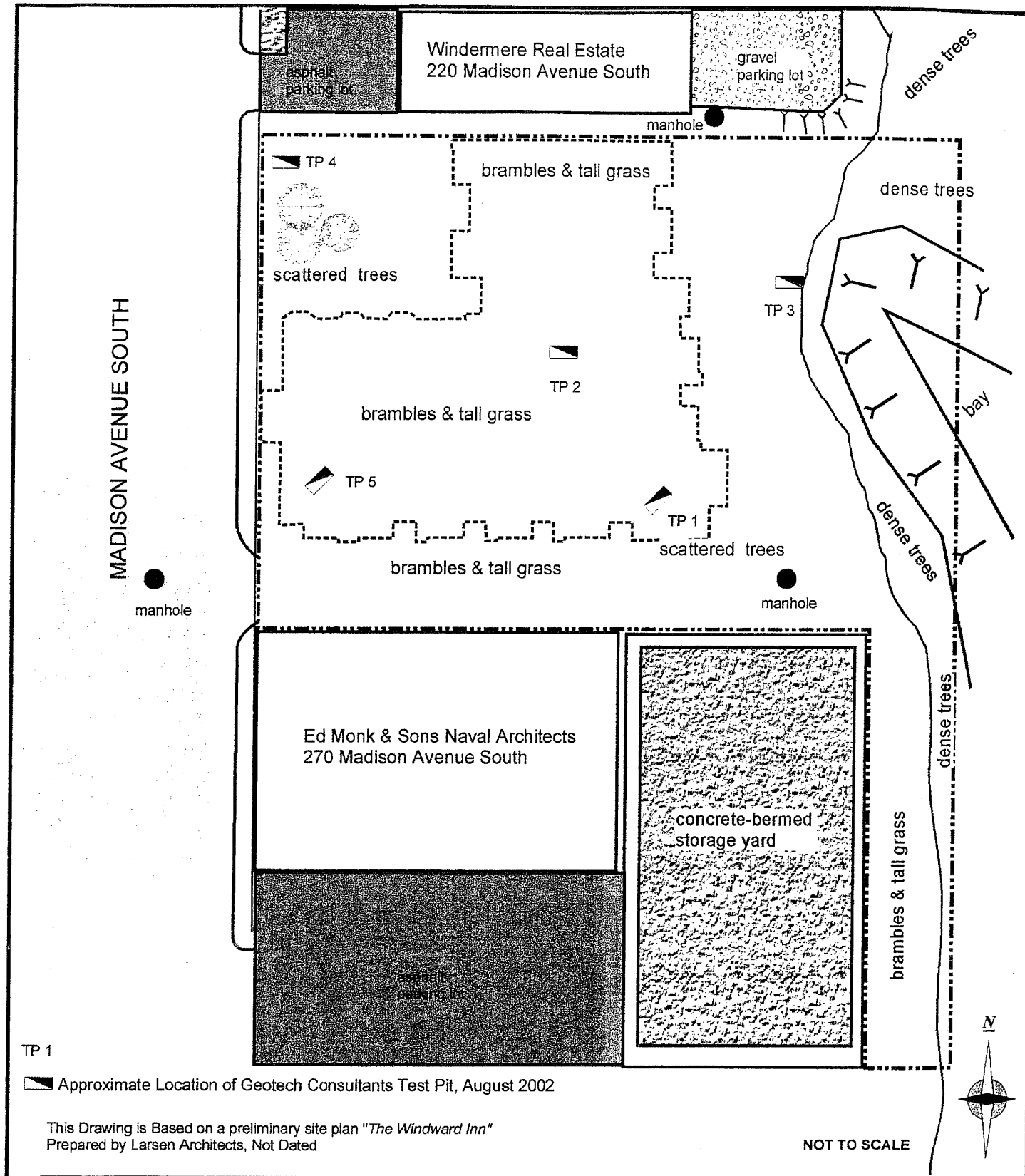

Source: *Streets 98*

**GEOTECH**
**CONSULTANTS, INC.**

# VICINITY MAP

Proposed Windward Inn Hotel
230 Madison Avenue South
Winslow, Washington

| Job No: | Date: | | Plate: |
|---|---|---|---|
| 02302 | November 2002 | | 1 |




TP 1

Approximate Location of Geotech Consultants Test Pit, August 2002

This Drawing is Based on a preliminary site plan "*The Windward Inn*"
Prepared by Larsen Architects, Not Dated

NOT TO SCALE

**GEOTECH**
**CONSULTANTS, INC.**

# SITE EXPLORATION PLAN

Proposed Windward Inn Hotel
230 Madison Avenue South
Winslow, Washington

| Job No: | Date: | | Plate: |
|---|---|---|---|
| 02302 | November 2002 | | 2 |

## TEST PIT 1

| Depth (ft.) | Moisture Content (%) | Water Table | USCS | Description | Elevation: |
|---|---|---|---|---|---|
| | | | SM | Topsoil with roots | |
| | | | SM | Tan, silty SAND, with gravel & cobbles, fine-grained, dry, medium dense<br>- becomes dense<br>- becomes gray, very dense | |
| 5 | | | SM | - becomes less gravely, moist | |
| | | | SM | - very dense, difficult to dig | |
| 10 | | | | | |
| 15 | | | | | |

* **Test Pit was terminated at 8 feet on August 8, 2002.**
* **No groundwater seepage was observed during excavation.**
* **No caving was observed during excavation.**

## TEST PIT 2

| Depth (ft.) | Moisture Content (%) | Water Table | USCS | Description | Elevation: |
|---|---|---|---|---|---|
| | | | SM | Topsoil with roots (3") | |
| | | | SM | Rusty brown, silty SAND, with gravel, fine-grained, dry, medium dense<br>- becomes grayish tan, dense<br>- becomes gray, very dense | |
| 5 | | | | | |
| 10 | | | | | |
| 15 | | | | | |

* **Test Pit was terminated at 5 feet on August 8, 2002.**
* **No groundwater seepage was observed during excavation.**
* **No caving was observed during excavation.**

**GEOTECH**
**CONSULTANTS, INC.**

**TEST PIT LOGS**
Proposed Windward Inn Hotel
230 Madison Avenue South
Winslow, Washington

| Job No: | Date: | Logged By: | Plate: |
|---|---|---|---|
| 02302 | November 2002 | T.A.J. | 3 |

## TEST PIT 3

| Depth (ft.) | Moisture Content (%) | Water Table | USCS | Description | Elevation: |
|---|---|---|---|---|---|
| | | | FILL | Topsoil with roots (3") | |
| | | | | Tan, silty SAND, with gravel, occasional cobbles, fine- to medium-grained, dry, medium dense ***(FILL)*** | |
| | | | | - roots | |
| 5 | | | | Compressed vegetation | |
| | | | SM | Rusty brown, silty SAND, with gravel, fine- to medium-grained, moist, dense | |
| | | | | - some cobbles | |
| 10 | | | | - becomes gray with orange mottling, moist, dense to very dense | |
| 15 | | | | | |

*** Test Pit was terminated at 11 feet on August 8, 2002.**
*** No groundwater seepage was observed during excavation.**
*** No caving was observed during excavation.**

## TEST PIT 4

| Depth (ft.) | Moisture Content (%) | Water Table | USCS | Description | Elevation: |
|---|---|---|---|---|---|
| | | | FILL | Tan, silty SAND, with gravel, fine- to medium grained, dry, medium-dense ***(FILL)*** | |
| | | | | Vegetation layer | |
| | | | SM | Rusty brown, silty SAND, with gravel, fine- to medium-grained, dry, medium-dense | |
| | | | | - becomes grayish tan, moist, dense | |
| 5 | | | | - becomes gray, very dense | |
| | | | | - very dense | |
| 10 | | | | | |
| 15 | | | | | |

*** Test Pit was terminated at 8.5 feet on August 8, 2002.**
*** No groundwater seepage was observed during excavation.**
*** No caving was observed during excavation.**

**GEOTECH**
**CONSULTANTS, INC.**

**TEST PIT LOGS**
Proposed Windward Inn Hotel
230 Madison Avenue South
Winslow, Washington

| Job No: | Date: | Logged By: | Plate: |
|---|---|---|---|
| 02302 | November 2002 | T.A.J. | 4 |

# TEST PIT 5

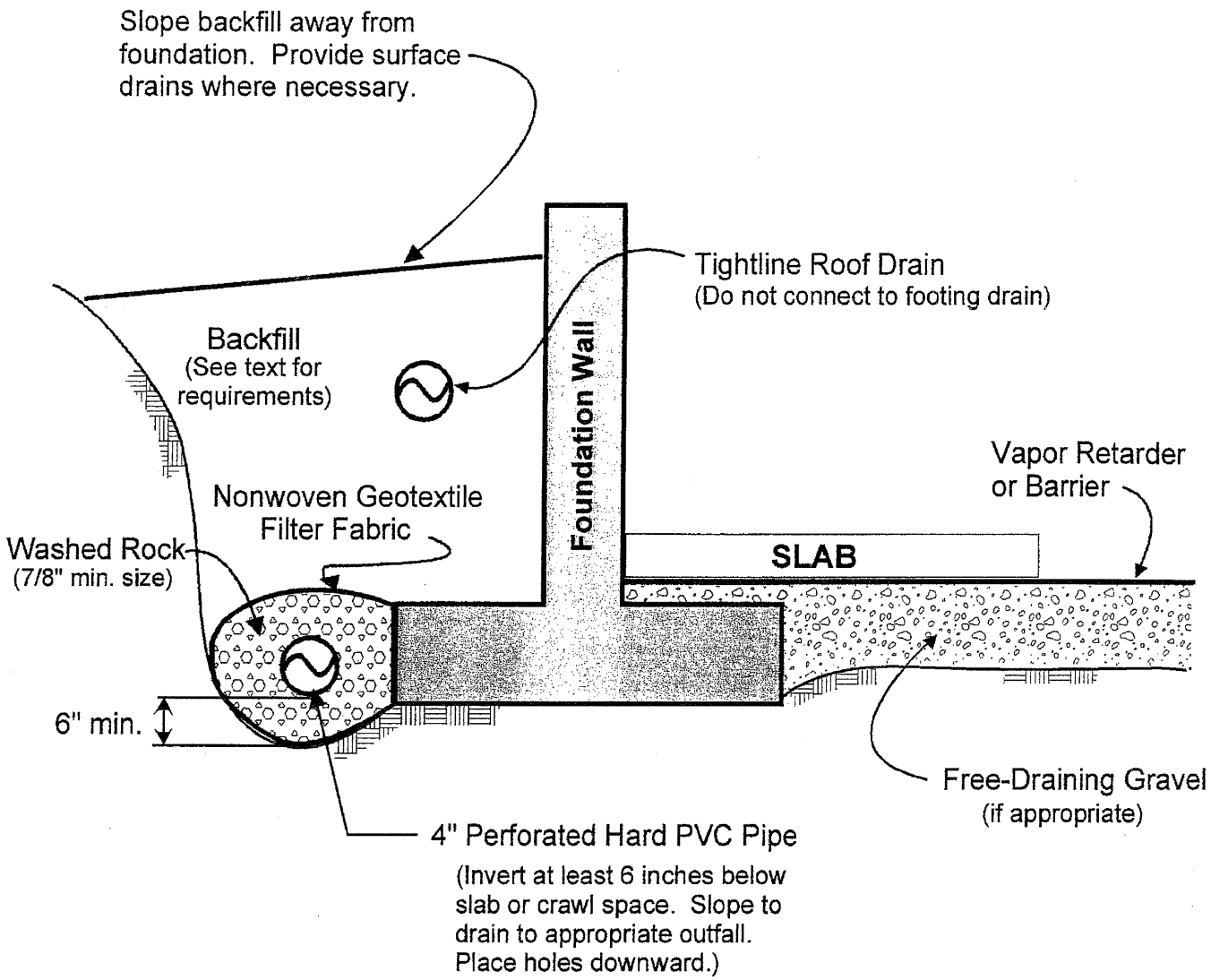
| Depth (ft.) | Moisture Content (%) | Water Table | USCS | Description | Elevation: |
|---|---|---|---|---|---|
| | | | | Topsoil with roots (3") | |
| | | | SM | Tan to rusty tan, silty SAND, fine- to medium-grained, dry, medium-dense - becomes dense | |
| 5 | | | GP | Rusty gray, sandy GRAVEL, moist, very dense | |
| | | | SM | Gray, silty SAND, with gravel, fine-grained, moist, very dense | |
| 10 | | | | | |
| 15 | | | | | |

* **Test Pit was terminated at 8.5 feet on August 8, 2002.**
* **No groundwater seepage was observed during excavation.**
* **No caving was observed during excavation.**

GEOTECH
CONSULTANTS, INC.

**TEST PIT LOGS**
Proposed Windward Inn Hotel
230 Madison Avenue South
Winslow, Washington

| Job No: | Date: | Logged By: | Plate: |
|---|---|---|---|
| 02302 | November 2002 | T.A.J. | 5 |




**NOTES:**

(1) In crawl spaces, provide an outlet drain to prevent buildup of water that bypasses the perimeter footing drains.

(2) Refer to report text for additional drainage and waterproofing considerations.

GEOTECH
CONSULTANTS, INC.

**FOOTING DRAIN DETAIL**

Proposed Windward Inn Hotel
230 Madison Avenue South
Winslow, Washington

| Job No: | Date: | | Plate: |
|---|---|---|---|
| 02302 | November 2002 | | 6 |

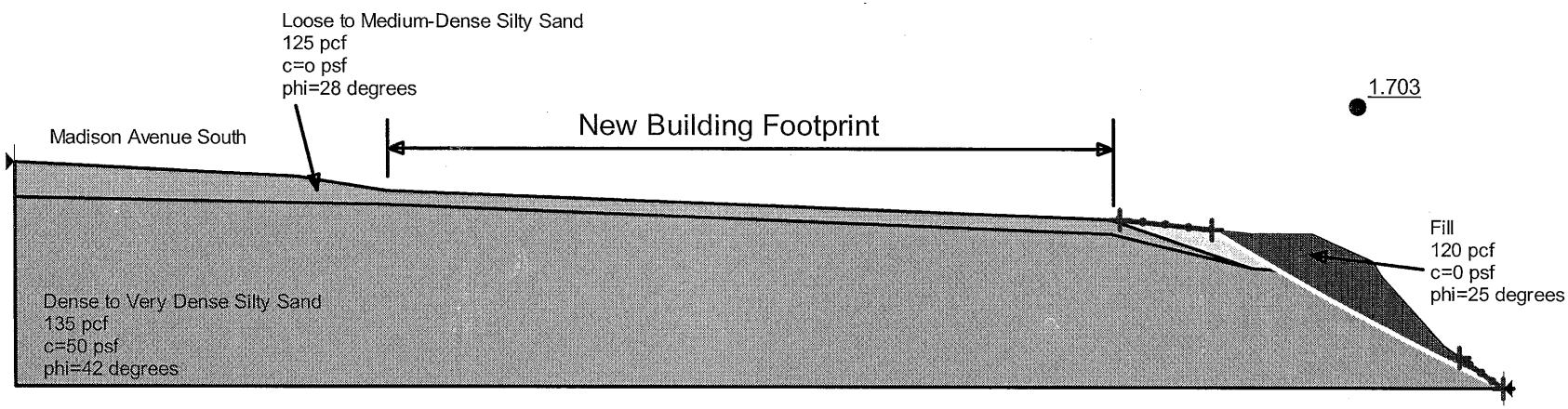
# Appendix B - Slope Stability Analyses

## 230 Madison Avenue South

## Bainbridge Island, Washington

18485 - Cihan Anisoglu

Static



# Static

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## File Information

File Version: 8.15
Title: 18485 Cihan Slope Stability
Created By: Matt McGinnis
Last Edited By: Matt McGinnis
Revision Number: 8
Date: 10/4/2018
Time: 12:33:45 PM
Tool Version: 8.15.4.11512
File Name: 18485 Slope stability - Existing with New Building Overlay.gsz
Directory: S:\2018 Jobs\18485 Anisoglu (MRM)\
Last Solved Date: 10/4/2018
Last Solved Time: 12:33:47 PM

## Project Settings

Length(L) Units: Feet
Time(t) Units: Seconds
Force(F) Units: Pounds
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D
Element Thickness: 1

## Analysis Settings

### Static

Kind: SLOPE/W
Method: Morgenstern-Price
Settings
- Side Function
  - Interslice force function option: Half-Sine
- PWP Conditions Source: (none)

Slip Surface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 1
- Resisting Side Maximum Convex Angle: 1 °
- Driving Side Maximum Convex Angle: 5 °
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

F of S Distribution
- F of S Calculation Option: Constant

Advanced
Number of Slices: 30
F of S Tolerance: 0.001
Minimum Slip Surface Depth: 0.1 ft
Search Method: Root Finder
Tolerable difference between starting and converged F of S: 3
Maximum iterations to calculate converged lambda: 20
Max Absolute Lambda: 2

# Materials

## Fill

Model: Mohr-Coulomb
Unit Weight: 120 pcf
Cohesion': 0 psf
Phi': 25 °
Phi-B: 0 °

## Loose to Medium-Dense Silty Sand

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion': 0 psf
Phi': 28 °
Phi-B: 0 °

## Dense to Very Dense Silty Sand

Model: Mohr-Coulomb
Unit Weight: 135 pcf
Cohesion': 50 psf
Phi': 42 °
Phi-B: 0 °

# Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (157, 27.8607) ft
Left-Zone Right Coordinate: (170, 26.56716) ft
Left-Zone Increment: 4
Right Projection: Range
Right-Zone Left Coordinate: (205.12103, 8.38068) ft
Right-Zone Right Coordinate: (211.4, 4) ft
Right-Zone Increment: 4
Radius Increments: 4

# Slip Surface Limits

Left Coordinate: (0, 36) ft
Right Coordinate: (211.4, 4) ft

# Seismic Coefficients

Horz Seismic Coef.: 0

# Points

| | X (ft) | Y (ft) |
|---|---|---|
| Point 1 | 0 | 36 |
| Point 2 | 40 | 34 |
| Point 3 | 52.8 | 32 |
| Point 4 | 155.6 | 28 |
| Point 5 | 175.7 | 26 |
| Point 6 | 184.2 | 26 |
| Point 7 | 192.8 | 22 |
| Point 8 | 194.2 | 20 |
| Point 9 | 202.8 | 10 |
| Point 10 | 211.4 | 4 |
| Point 11 | 0 | 4 |
| Point 12 | 155.6 | 26 |
| Point 13 | 155.6 | 20 |
| Point 14 | 175.7 | 21 |
| Point 15 | 175.6 | 15 |
| Point 16 | 52.8 | 30 |
| Point 17 | 52.8 | 23.5 |
| Point 18 | 4 | 4 |
| Point 19 | 0 | 31 |

# Regions

| | Material | Points | Area ($ft^2$) |
|---|---|---|---|
| Region 1 | Dense to Very Dense Silty Sand | 18,10,9,8,14,12,16,19,11 | 4,684 |
| Region 2 | Loose to Medium-Dense Silty Sand | 1,2,3,4,14,12,16,19 | 437.7 |
| Region 3 | Fill | 4,5,6,7,8,14 | 127.8 |

# Current Slip Surface

Slip Surface: 121
F of S: 1.703
Volume: 185.05693 $ft^3$
Weight: 23,752.794 lbs
Resisting Moment: 7,741,017.2 lbs-ft
Activating Moment: 4,544,669.2 lbs-ft
Resisting Force: 17,105.499 lbs
Activating Force: 10,042.829 lbs
F of S Rank (Analysis): 1 of 125 slip surfaces
F of S Rank (Query): 1 of 125 slip surfaces
Exit: (211.4, 4) ft
Entry: (170, 26.567164) ft
Radius: 397.36763 ft
Center: (380.55013, 363.56817) ft

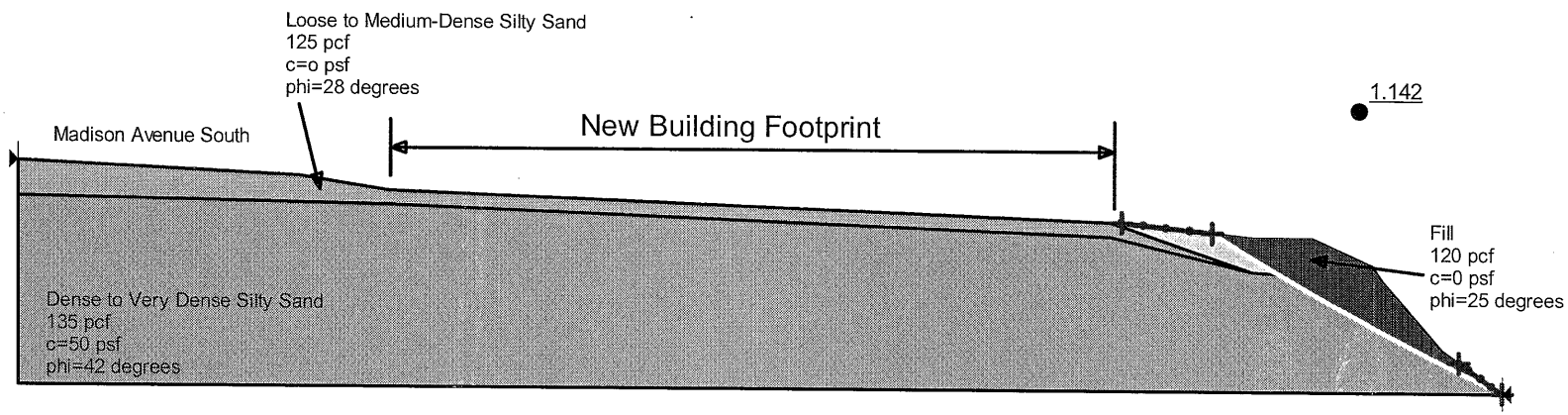
## Slip Slices

| | X (ft) | Y (ft) | PWP | Base Normal Stress | Frictional Strength | Cohesive Strength |
|---|---|---|---|---|---|---|

| | | | (psf) | (psf) | (psf) | (psf) |
|---|---|---|---|---|---|---|
| Slice 1 | 170.7125 | 26.1241 | 0 | 37.334877 | 17.409539 | 0 |
| Slice 2 | 172.1375 | 25.242128 | 0 | 108.67722 | 50.67702 | 0 |
| Slice 3 | 173.5625 | 24.368436 | 0 | 175.3934 | 81.787287 | 0 |
| Slice 4 | 174.9875 | 23.50296 | 0 | 238.30555 | 111.1237 | 0 |
| Slice 5 | 176.33965 | 22.68907 | 0 | 301.2404 | 140.47071 | 0 |
| Slice 6 | 177.61896 | 21.925925 | 0 | 364.90458 | 170.1578 | 0 |
| Slice 7 | 178.89827 | 21.169262 | 0 | 426.9805 | 199.10428 | 0 |
| Slice 8 | 180.31494 | 20.339246 | 0 | 491.47504 | 442.52611 | 50 |
| Slice 9 | 181.86896 | 19.437346 | 0 | 587.11522 | 528.64092 | 50 |
| Slice 10 | 183.42299 | 18.544802 | 0 | 682.80332 | 614.79887 | 50 |
| Slice 11 | 184.91667 | 17.695498 | 0 | 744.72403 | 670.55253 | 50 |
| Slice 12 | 186.35 | 16.888678 | 0 | 772.51625 | 695.57676 | 50 |
| Slice 13 | 187.78333 | 16.089645 | 0 | 799.95558 | 720.28324 | 50 |
| Slice 14 | 189.21667 | 15.298343 | 0 | 826.89265 | 744.53749 | 50 |
| Slice 15 | 190.65 | 14.514721 | 0 | 853.15471 | 768.18395 | 50 |
| Slice 16 | 192.08333 | 13.738727 | 0 | 878.54977 | 791.04977 | 50 |
| Slice 17 | 193.5 | 12.979159 | 0 | 839.63534 | 756.01106 | 50 |
| Slice 18 | 194.91667 | 12.227032 | 0 | 742.61413 | 668.65276 | 50 |
| Slice 19 | 196.35 | 11.473448 | 0 | 650.35941 | 585.58624 | 50 |
| Slice 20 | 197.78333 | 10.727297 | 0 | 555.53054 | 500.20194 | 50 |
| Slice 21 | 199.21667 | 9.9885303 | 0 | 458.15788 | 412.52721 | 50 |
| Slice 22 | 200.65 | 9.2571026 | 0 | 358.35369 | 322.66311 | 50 |
| Slice 23 | 202.08333 | 8.5329684 | 0 | 256.30765 | 230.78045 | 50 |
| Slice 24 | 203.51667 | 7.8160831 | 0 | 188.2236 | 169.4773 | 50 |
| Slice 25 | 204.95 | 7.1064029 | 0 | 154.53567 | 139.14454 | 50 |
| Slice 26 | 206.38333 | 6.403885 | 0 | 119.49406 | 107.59294 | 50 |
| Slice 27 | 207.81667 | 5.708487 | 0 | 83.276793 | 74.982762 | 50 |
| Slice 28 | 209.25 | 5.0201677 | 0 | 46.076468 | 41.487438 | 50 |
| Slice 29 | 210.68333 | 4.3388863 | 0 | 8.0915334 | 7.2856494 | 50 |

18485 - Cihan Anisoglu

Seismic



# Seismic

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## File Information

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Created By: Matt McGinnis
Last Edited By: Matt McGinnis
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Last Solved Time: 12:33:47 PM

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Length(L) Units: Feet
Time(t) Units: Seconds
Force(F) Units: Pounds
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D
Element Thickness: 1

## Analysis Settings

### Seismic

Kind: SLOPE/W
Method: Morgenstern-Price
Settings
- Side Function
  - Interslice force function option: Half-Sine
- PWP Conditions Source: (none)

Slip Surface
- Direction of movement: Left to Right
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 1
- Resisting Side Maximum Convex Angle: 1 °
- Driving Side Maximum Convex Angle: 5 °
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

F of S Distribution
- F of S Calculation Option: Constant

Advanced

Number of Slices: 30
F of S Tolerance: 0.001
Minimum Slip Surface Depth: 0.1 ft
Search Method: Root Finder
Tolerable difference between starting and converged F of S: 3
Maximum iterations to calculate converged lambda: 20
Max Absolute Lambda: 2

# Materials

## Fill

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Unit Weight: 120 pcf
Cohesion': 0 psf
Phi': 25 °
Phi-B: 0 °

## Loose to Medium-Dense Silty Sand

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion': 0 psf
Phi': 28 °
Phi-B: 0 °

## Dense to Very Dense Silty Sand

Model: Mohr-Coulomb
Unit Weight: 135 pcf
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Phi': 42 °
Phi-B: 0 °

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Left-Zone Left Coordinate: (157, 27.8607) ft
Left-Zone Right Coordinate: (170, 26.56716) ft
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Right-Zone Left Coordinate: (205.12103, 8.38068) ft
Right-Zone Right Coordinate: (211.4, 4) ft
Right-Zone Increment: 4
Radius Increments: 4

# Slip Surface Limits

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Right Coordinate: (211.4, 4) ft

# Seismic Coefficients

Horz Seismic Coef.: 0.2

# Points

| | X (ft) | Y (ft) |
|---|---|---|
| Point 1 | 0 | 36 |
| Point 2 | 40 | 34 |
| Point 3 | 52.8 | 32 |
| Point 4 | 155.6 | 28 |
| Point 5 | 175.7 | 26 |
| Point 6 | 184.2 | 26 |
| Point 7 | 192.8 | 22 |
| Point 8 | 194.2 | 20 |
| Point 9 | 202.8 | 10 |
| Point 10 | 211.4 | 4 |
| Point 11 | 0 | 4 |
| Point 12 | 155.6 | 26 |
| Point 13 | 155.6 | 20 |
| Point 14 | 175.7 | 21 |
| Point 15 | 175.6 | 15 |
| Point 16 | 52.8 | 30 |
| Point 17 | 52.8 | 23.5 |
| Point 18 | 4 | 4 |
| Point 19 | 0 | 31 |

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| | Material | Points | Area ($ft^2$) |
|---|---|---|---|
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| Region 2 | Loose to Medium-Dense Silty Sand | 1,2,3,4,14,12,16,19 | 437.7 |
| Region 3 | Fill | 4,5,6,7,8,14 | 127.8 |

# Current Slip Surface

Slip Surface: 121
F of S: 1.142
Volume: 185.05693 $ft^3$
Weight: 23,752.794 lbs
Resisting Moment: 7,059,671.3 lbs-ft
Activating Moment: 6,183,401.9 lbs-ft
Resisting Force: 15,619.499 lbs
Activating Force: 13,676.514 lbs
F of S Rank (Analysis): 1 of 125 slip surfaces
F of S Rank (Query): 1 of 125 slip surfaces
Exit: (211.4, 4) ft
Entry: (170, 26.567164) ft
Radius: 397.36763 ft
Center: (380.55013, 363.56817) ft

## Slip Slices

| | X (ft) | Y (ft) | PWP | Base Normal Stress | Frictional Strength | Cohesive Strength |
|---|---|---|---|---|---|---|

| | | | (psf) | (psf) | (psf) | (psf) |
|---|---|---|---|---|---|---|
| Slice 1 | 170.7125 | 26.1241 | 0 | 33.513167 | 15.627446 | 0 |
| Slice 2 | 172.1375 | 25.242128 | 0 | 92.600349 | 43.180252 | 0 |
| Slice 3 | 173.5625 | 24.368436 | 0 | 141.08475 | 65.788897 | 0 |
| Slice 4 | 174.9875 | 23.50296 | 0 | 181.00138 | 84.402331 | 0 |
| Slice 5 | 176.33965 | 22.68907 | 0 | 217.46317 | 101.40474 | 0 |
| Slice 6 | 177.61896 | 21.925925 | 0 | 252.05959 | 117.53732 | 0 |
| Slice 7 | 178.89827 | 21.169262 | 0 | 283.20542 | 132.06086 | 0 |
| Slice 8 | 180.31494 | 20.339246 | 0 | 392.23013 | 353.1656 | 50 |
| Slice 9 | 181.86896 | 19.437346 | 0 | 477.19229 | 429.66587 | 50 |
| Slice 10 | 183.42299 | 18.544802 | 0 | 563.51601 | 507.39209 | 50 |
| Slice 11 | 184.91667 | 17.695498 | 0 | 623.1732 | 561.10767 | 50 |
| Slice 12 | 186.35 | 16.888678 | 0 | 656.09133 | 590.74728 | 50 |
| Slice 13 | 187.78333 | 16.089645 | 0 | 690.86542 | 622.05802 | 50 |
| Slice 14 | 189.21667 | 15.298343 | 0 | 727.05259 | 654.6411 | 50 |
| Slice 15 | 190.65 | 14.514721 | 0 | 763.98515 | 687.89532 | 50 |
| Slice 16 | 192.08333 | 13.738727 | 0 | 800.79095 | 721.03541 | 50 |
| Slice 17 | 193.5 | 12.979159 | 0 | 781.55315 | 703.71362 | 50 |
| Slice 18 | 194.91667 | 12.227032 | 0 | 709.49899 | 638.83576 | 50 |
| Slice 19 | 196.35 | 11.473448 | 0 | 637.79116 | 574.26974 | 50 |
| Slice 20 | 197.78333 | 10.727297 | 0 | 559.26562 | 503.56502 | 50 |
| Slice 21 | 199.21667 | 9.9885303 | 0 | 473.75615 | 426.57195 | 50 |
| Slice 22 | 200.65 | 9.2571026 | 0 | 381.6419 | 343.63191 | 50 |
| Slice 23 | 202.08333 | 8.5329684 | 0 | 283.78397 | 255.52024 | 50 |
| Slice 24 | 203.51667 | 7.8160831 | 0 | 213.97379 | 192.66287 | 50 |
| Slice 25 | 204.95 | 7.1064029 | 0 | 173.99659 | 156.66723 | 50 |
| Slice 26 | 206.38333 | 6.403885 | 0 | 132.41969 | 119.23122 | 50 |
| Slice 27 | 207.81667 | 5.708487 | 0 | 90.102252 | 81.128432 | 50 |
| Slice 28 | 209.25 | 5.0201677 | 0 | 47.721625 | 42.968744 | 50 |
| Slice 29 | 210.68333 | 4.3388863 | 0 | 5.7305448 | 5.1598057 | 50 |

# CKCB MADISON AVENUE
# TRAFFIC IMPACT ANALYSIS

*City of Bainbridge Island, WA*

GREGARY B. HEATH
STATE OF WASHINGTON
40720
REGISTERED
PROFESSIONAL ENGINEER

10/18/18

Prepared for: Mr. Cihan Anisoglu
A2 Architects, LLC
PO Box 10386
Bainbridge Island, WA 98110

October 2018

2214 Tacoma Road Puyallup WA 98371 (253) 770 1401 Fax (253) 770 1473 heathtraffic.com

CKCB MADISON AVENUE
TRAFFIC IMPACT ANALYSIS

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2. Existing Conditions .....3
3. Future Traffic Conditions .....9
4. Summary .....16

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2. Peak Hour Level of Service .....15

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3. Existing PM Peak Hour Volumes .....8
4. Peak Hour Trip Distribution .....11
5. Pipeline Volumes .....12
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7. Forecast 2035 PM Peak Hour Volumes .....14

CKCB MADISON AVENUE
TRAFFIC IMPACT ANALYSIS

## 1. PROJECT DESCRIPTION

This report summarizes anticipated traffic impacts related to the proposed CKCB Madison Avenue project in the City of Bainbridge Island. The project consists of constructing 8 one-bedroom apartment units and 2 townhouses for a total of 10 net new dwelling units on an undeveloped parcel: 262502-3-078-2006. The site area comprises approximately 0.39 acres and resides under an Urban Shoreline Designation situated on the east side of Madison Avenue South. Access to the site is proposed via one new driveway from Madison Avenue South to a below-grade parking garage. Figure 1 on the following page shows the general site location and roadway network serving the vicinity. A site plan for of the project is given on Figure 2.

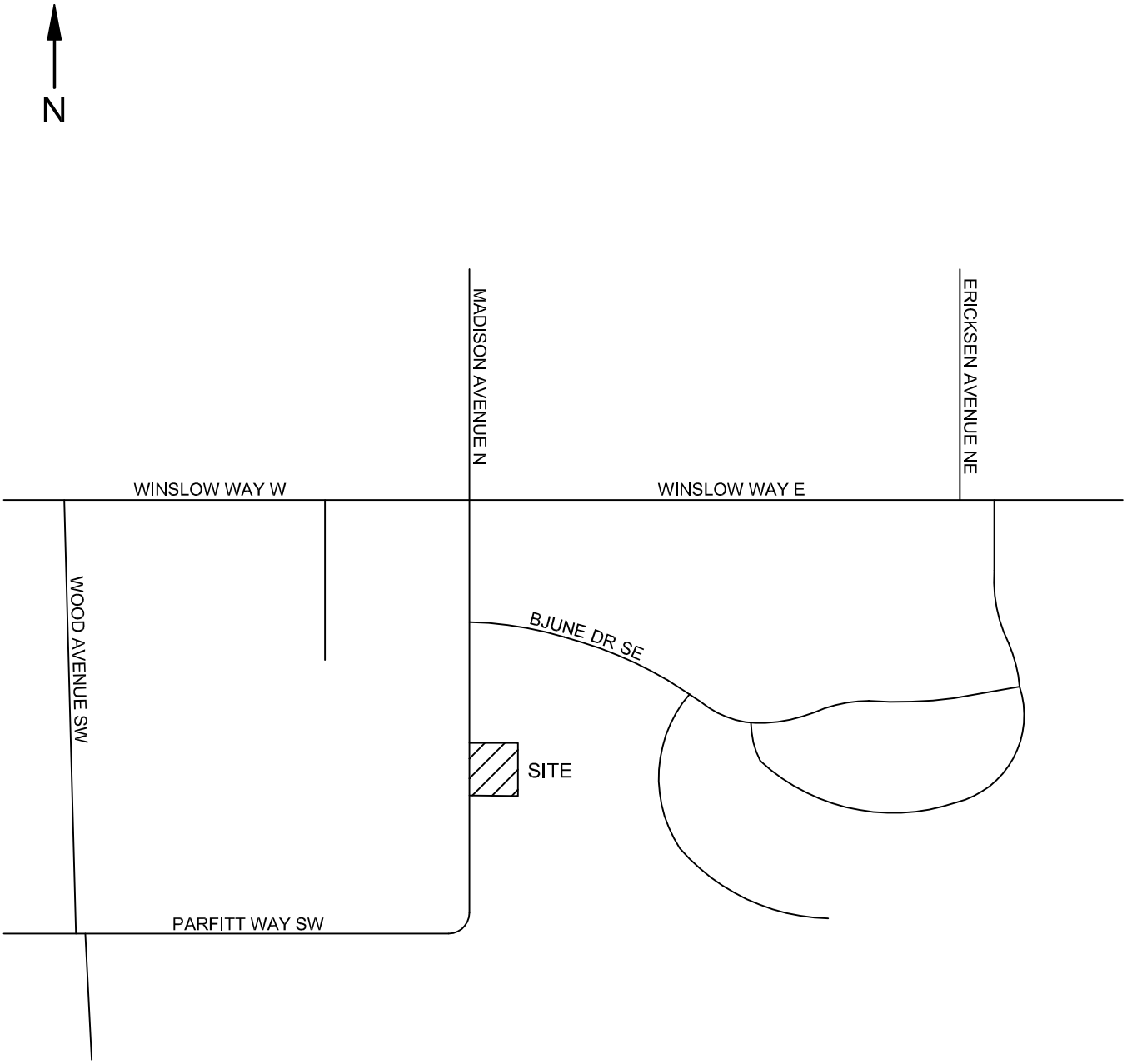
## 2. EXISTING CONDITIONS

### 2.1. Existing Roadway Characteristics

The street network serving the proposed project consists of a variety of roadways. Characteristics for these roadways vary with respect to lane widths, grades, speeds, and function. The major roadways surrounding the site are listed and described below.

*Madison Avenue S./N.:* is a north-south, two-lane collector south of Winslow Way and a two- to three-lane secondary arterial to the north. The road cross-section near the site consists of one 10-foot wide travel lane in each direction and 4-foot wide paved shoulders. Curb, gutter, and sidewalk are available along either direction. The roadway has a posted speed limit of 25 mph in the vicinity. No on-street parking opportunities are offered south of Winslow Way.

*Winslow Way W./E.:* is an east-west, two-lane collector and local access west of Madison Avenue and a two-lane secondary arterial to the east. Travel lanes vary from 10-12 feet in width and the roadway has a posted speed limit of 20 mph in the vicinity. Painted bike sharrows are found on the roadway east of Madison Avenue. Curb, gutter, and sidewalk are available in either direction. On-street parking is offered as head-in angle and parallel.

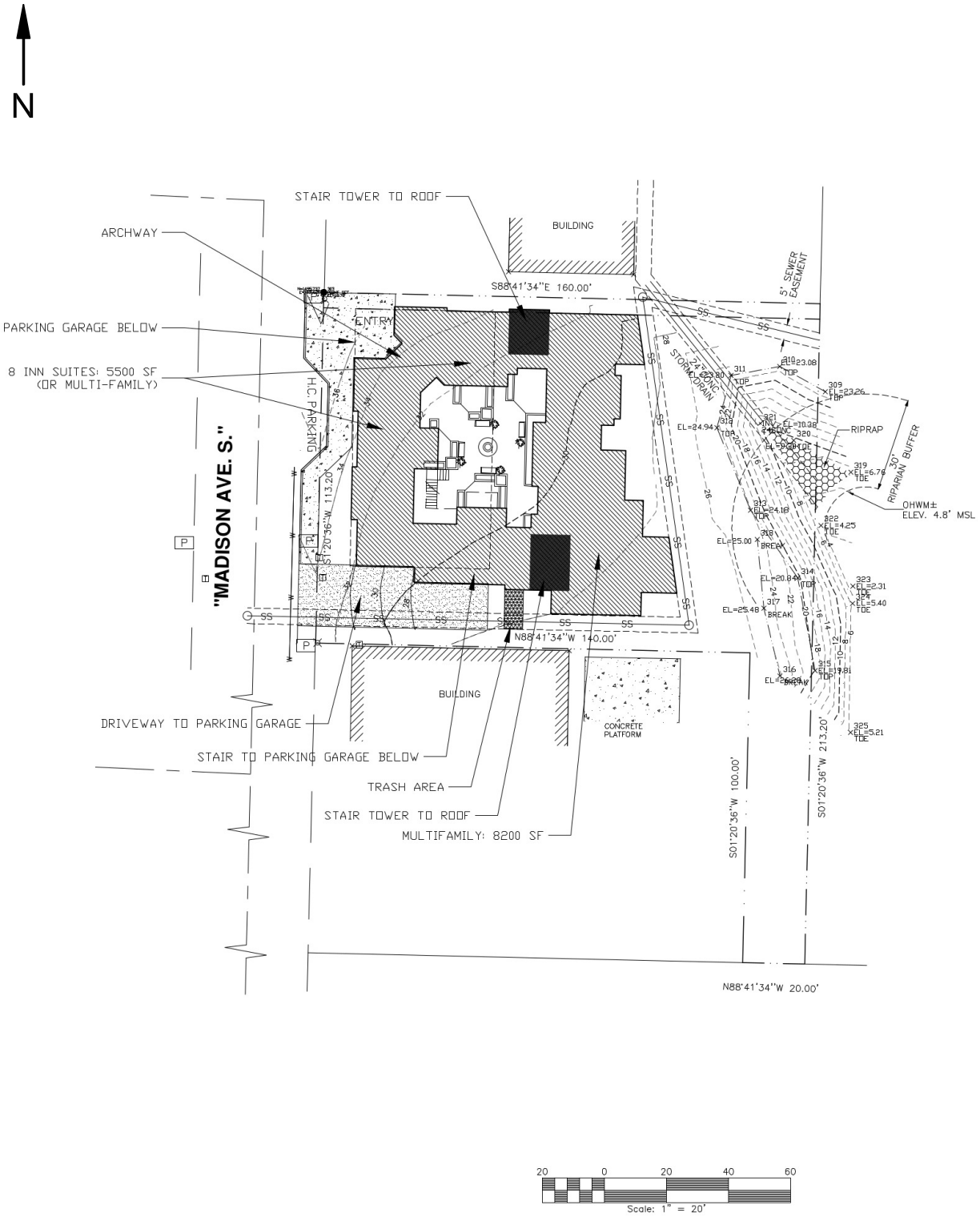



HEATH & ASSOCIATES

TRAFFIC AND CIVIL ENGINEERING

CKCB - BAINBRIDGE ISLAND

VICINITY MAP & ROADWAY SYSTEM
FIGURE 1




HEATH & ASSOCIATES

TRAFFIC AND CIVIL ENGINEERING

CKCB - BAINBRIDGE ISLAND

SITE PLAN
FIGURE 2

## 2.2. Transit Service

A review of the Kitsap Transit system indicates transit service is provided in the area. The nearest bus stops are approximately 0.25 miles walking distance or less to the project site. The northern most bus stop is located on Madison Avenue North at the Bainbridge Island City Hall and is served via Routes 90, 98, & 99. The northwest bus stop is located at the Winslow Way West/Wood Avenue SW intersection and is served via Route 97. The northeast bus stop is located on Winslow Way East at the Town & County Market and is served via Routes 90, 97, 98, & 99. Refer to the Kitsap Transit Routed Buses schedule for detailed Route information.

Moreover, the Bainbridge Island Ferry Terminal is less than one mile east with respect to the project site. Given the proximity to multiple transit routes servicing the surrounding areas and the ability for nearby ferry transport, a reduction in overall project traffic is anticipated.

## 2.3. Access Driveway Safety

Access to the site is proposed via one new driveway entrance on Madison Avenue South. Assessments of driveway sight distance are based on AASHTO's *Green Book* (2011), standards for outbound movements. Based on the 25 mph posted speed limit on Madison Avenue, 240 and 280 feet of unobstructed sight distance are needed for project traffic to safely enter Madison Avenue. Preliminary measurements of the approximate access location indicate sight distance requirements are met with lines of sight exceeding 300 feet in either direction. No safety issues are identified with the proposed access location.

## 2.4. Non-Motorist Traffic

The surrounding vicinity currently offers non-motorist facilities in the form of complete sidewalk networks, marked pedestrian crossings, and bicycle lanes/sharrows. Furthermore, a continuous sidewalk path is available from the project frontage to the nearest public transit routes. The downtown nature of the area and proximity to local amenities is anticipated to encourage non-vehicular modes of transportation.

## 2.5. Roadway Improvements

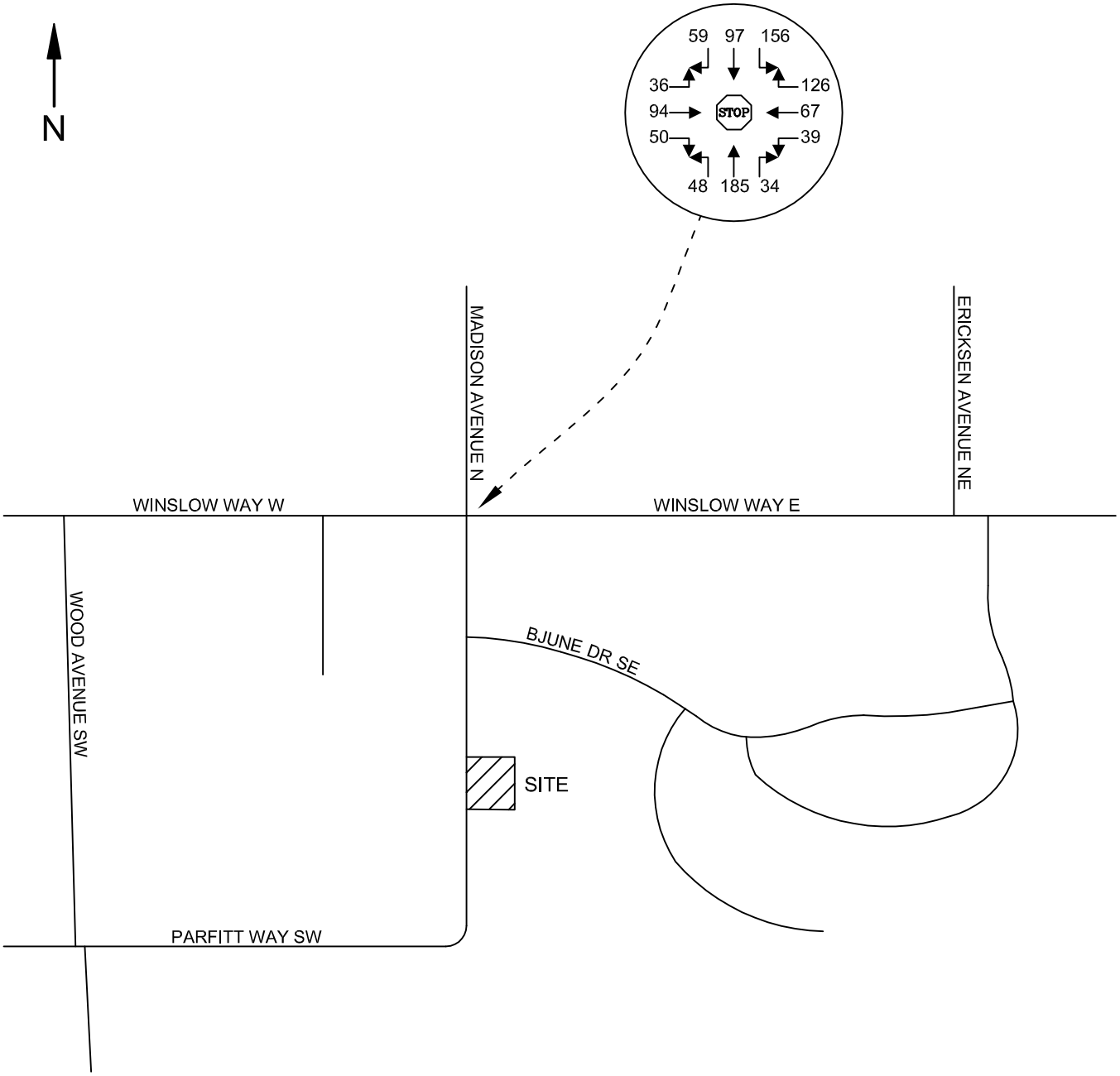
A review of the 2017 to 2022 City of Bainbridge Island Capital Improvement Program indicates an improvement project is planned in the vicinity.

*Wyatt Way Reconstruction Phase 1*

This scope of this project intends to reconstruct and improve the existing Wyatt Way segment from Madison Avenue to Lovell Avenue. Included are sidewalk and bicycle facilities on both sides of the street and capacity improvements to the intersection of Wyatt Way/Madison Avenue. Intersection improvements are planned with either signalization or a roundabout.

## 2.6. Existing PM Peak Hour Volumes and Travel Patterns

Field data for this study was obtained and collected in January of 2018 at the primary intersection of interest – Madison Avenue/Winslow Way. The traffic count was taken during the 4:00 PM – 6:00 PM timeframe which generally reflects the highest levels of congestion with respect to traffic and delays during a 24 hours period. The busiest one-hour is then derived from the two-hour field count, known as the peak hour, and is used for analysis to depict “worst case” conditions. Figure 3 on the following page shows the existing weekday PM peak hour volumes at the intersection of Madison Avenue/Winslow Way.

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TRAFFIC AND CIVIL ENGINEERING

CKCB - BAINBRIDGE ISLAND

EXISTING PM PEAK HOUR VOLUMES

FIGURE 3

## 3. FUTURE TRAFFIC CONDITIONS

### 3.1. Trip Generation

Trip generation is used to determine the magnitude of project impacts on the surrounding street system. This is denoted by the quantity or specific number of new trips that enter or exit a project during a designated time period, such as a specific peak hour or an entire day. Data presented in this report was taken from the Institute of Transportation Engineer's publication *Trip Generation*, 10th Edition. The designated land use for the proposed project is defined as Multifamily Housing – Low-Rise (LUC 220). Table 1 below summarizes the estimated new trips. Included are the average weekday daily traffic (AWDT) and the AM and PM peak hours. Refer to the appendix for trip generation output.

**Table 1**
Project Trip Generation

| Land Use | Size (Dwelling Units) | AWDT | AM Peak-Hour Trips | | | PM Peak-Hour Trips | | |
|---|---|---|---|---|---|---|---|---|
| | | | In | Out | Total | In | Out | Total |
| Multi-Family | 10 | 73 | 1 | 4 | **5** | 4 | 2 | **6** |

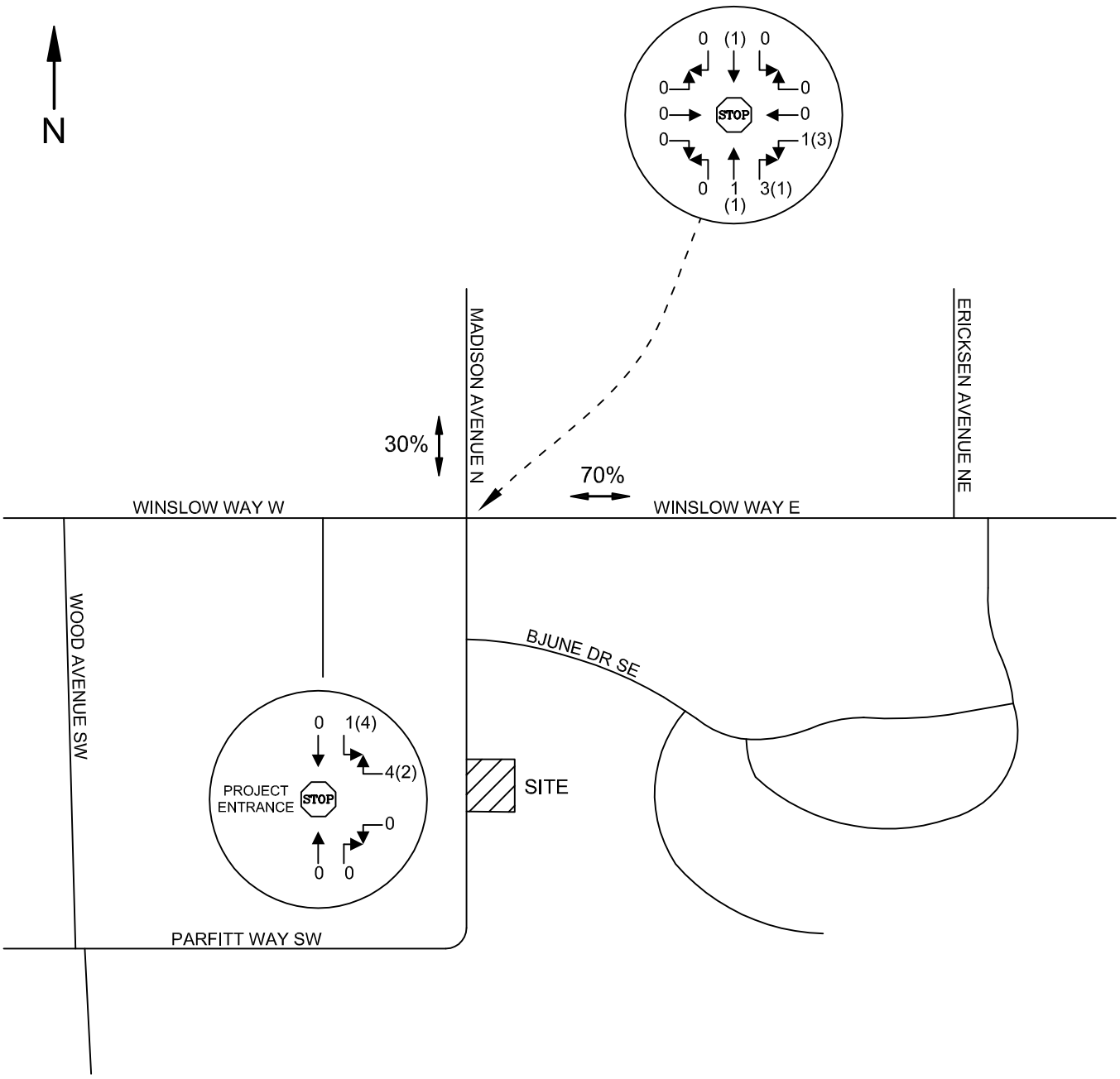
Based on Table 1 above the project is anticipated to generate 5 new trips in the AM and 6 new trips in the PM peak hours of travel. However, given the nature of the surrounding area, availability or pedestrian and bicycle facilities, and proximity to transit, actual observed daily and peak hour trips are anticipated to be lower.

### 3.2. Distribution & Assignment

Trip distribution describes the process by which project trips are dispersed on the roadway network surrounding the site. The specific destinations and origins of the generated traffic primarily influences the key intersections, which will effectively receive the bulk of project impacts. Peak hour trips generated by the project are anticipated to follow the general patterns shown in Figure 4 on the following page. Distribution percentages are based on existing travel patterns and the location of nearby major roadways.

### 3.3. Future Peak Hour Volumes

A horizon year of 2020 was used for future traffic delay analysis to reflect conditions at the time of project buildout. A long-term horizon year of 2035 was used to assess, if any, potential adverse impacts to the intersection of study. Forecast background volumes were derived by applying a one percent annual compound growth rate to the existing volumes shown on Figure 3. This growth rate has been determined appropriate for the area and has been used in similar projects in the past. In addition, a number of nearby approved projects have been included as pipeline volumes. Projects include: Madison Grove, Wallace Cottages, Madison Place, Madison Landing, Wyatt Apartments, and Madrona Townhomes. Pipeline volumes traveling through the study intersection are shown in Figure 5. Forecast 2020 peak hour volumes are presented in Figure 6; Forecast 2035 peak hour volumes are presented in Figure 7.




PROJECT TRIP GENERATION

| AM PEAK HOUR TRIPS | PM PEAK HOUR TRIPS |
|---|---|
| INBOUND: 1 VPH | INBOUND: (4) VPH |
| OUTBOUND: 4 VPH | OUTBOUND: (2) VPH |

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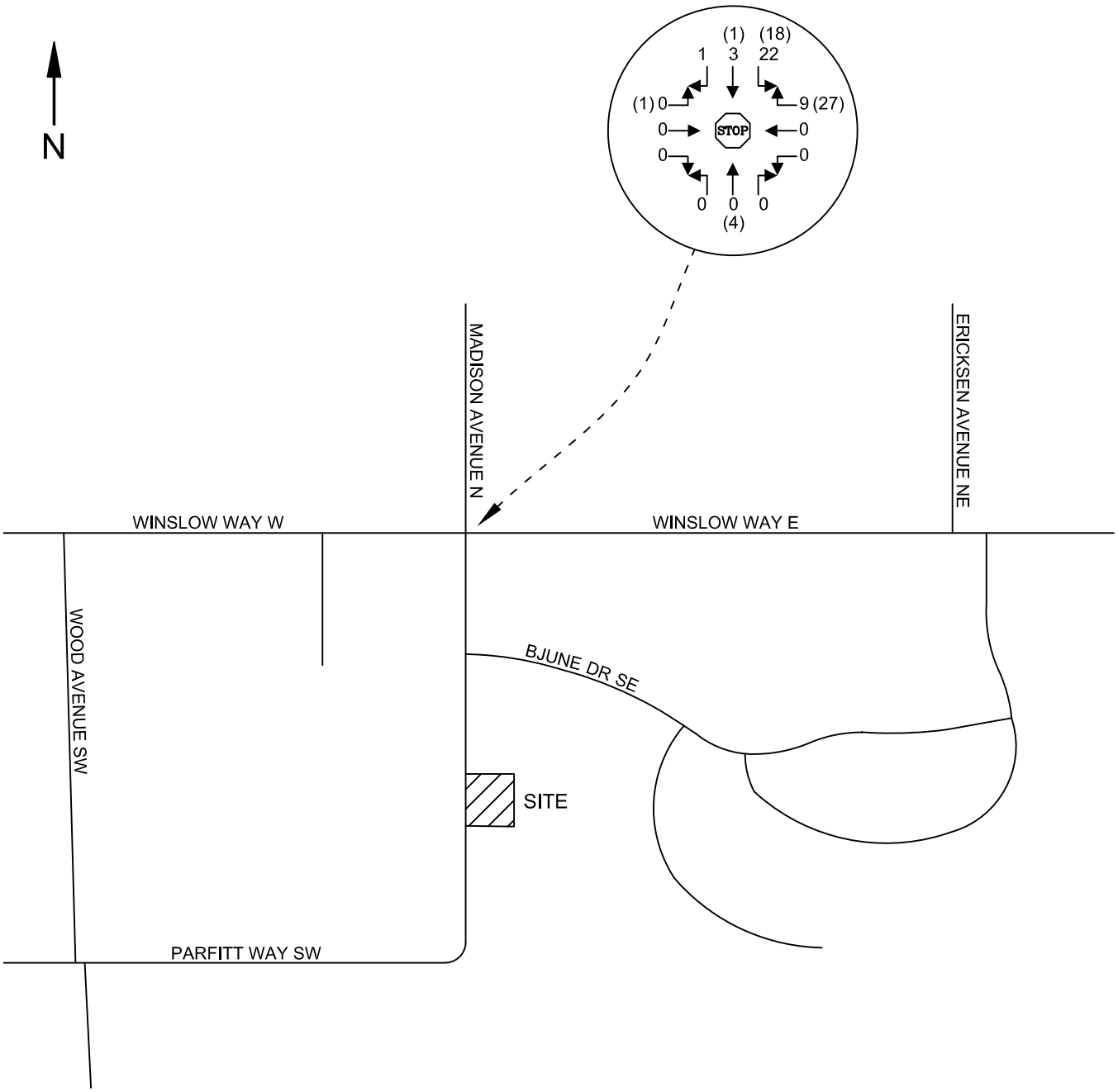
PEAK HOUR TRIP DISTRIBUTION
FIGURE 4




AM PEAK HOUR VOLUMES
(PM PEAK HOUR VOLUMES)

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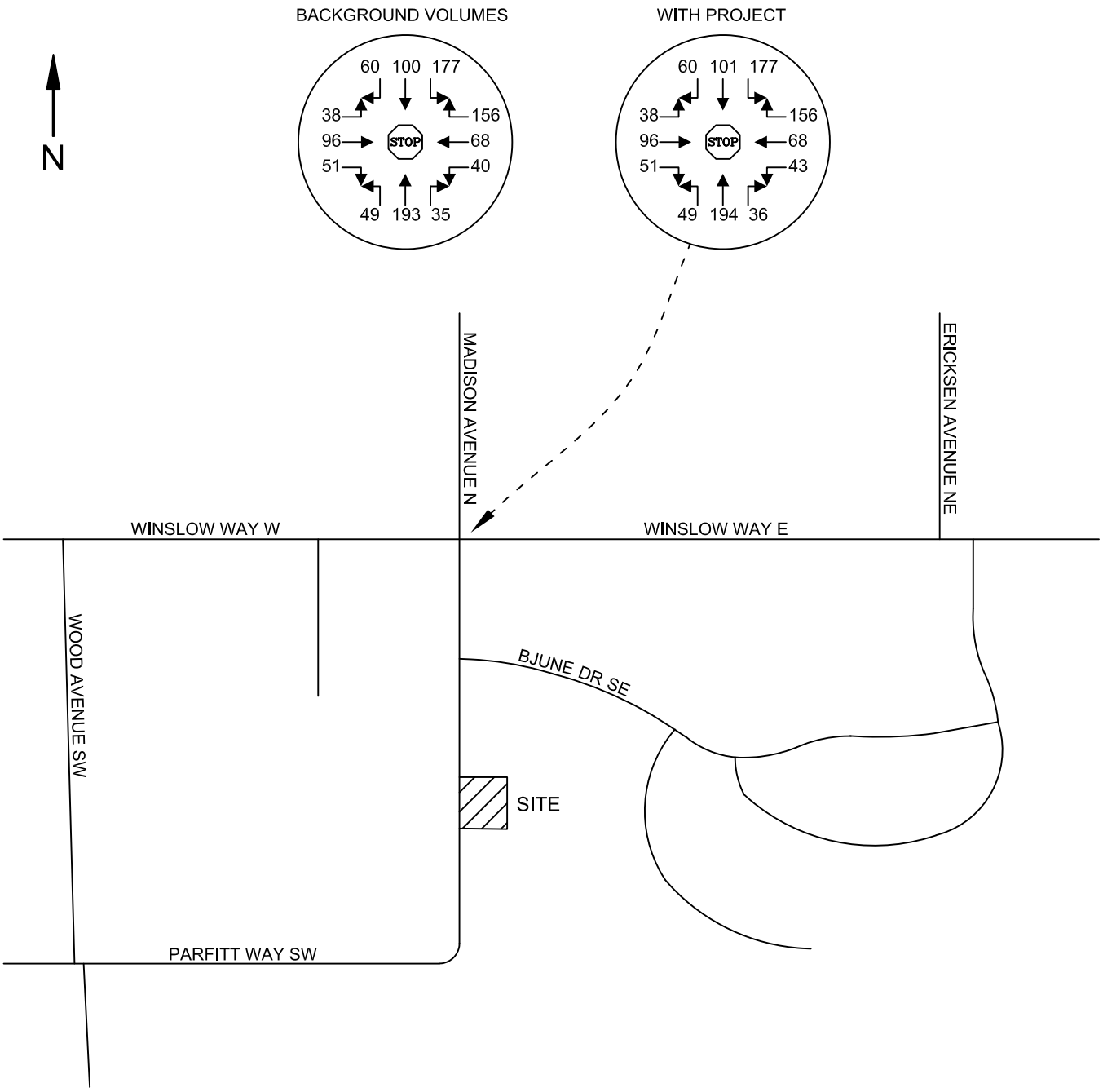
PIPELINE VOLUMES
FIGURE 5

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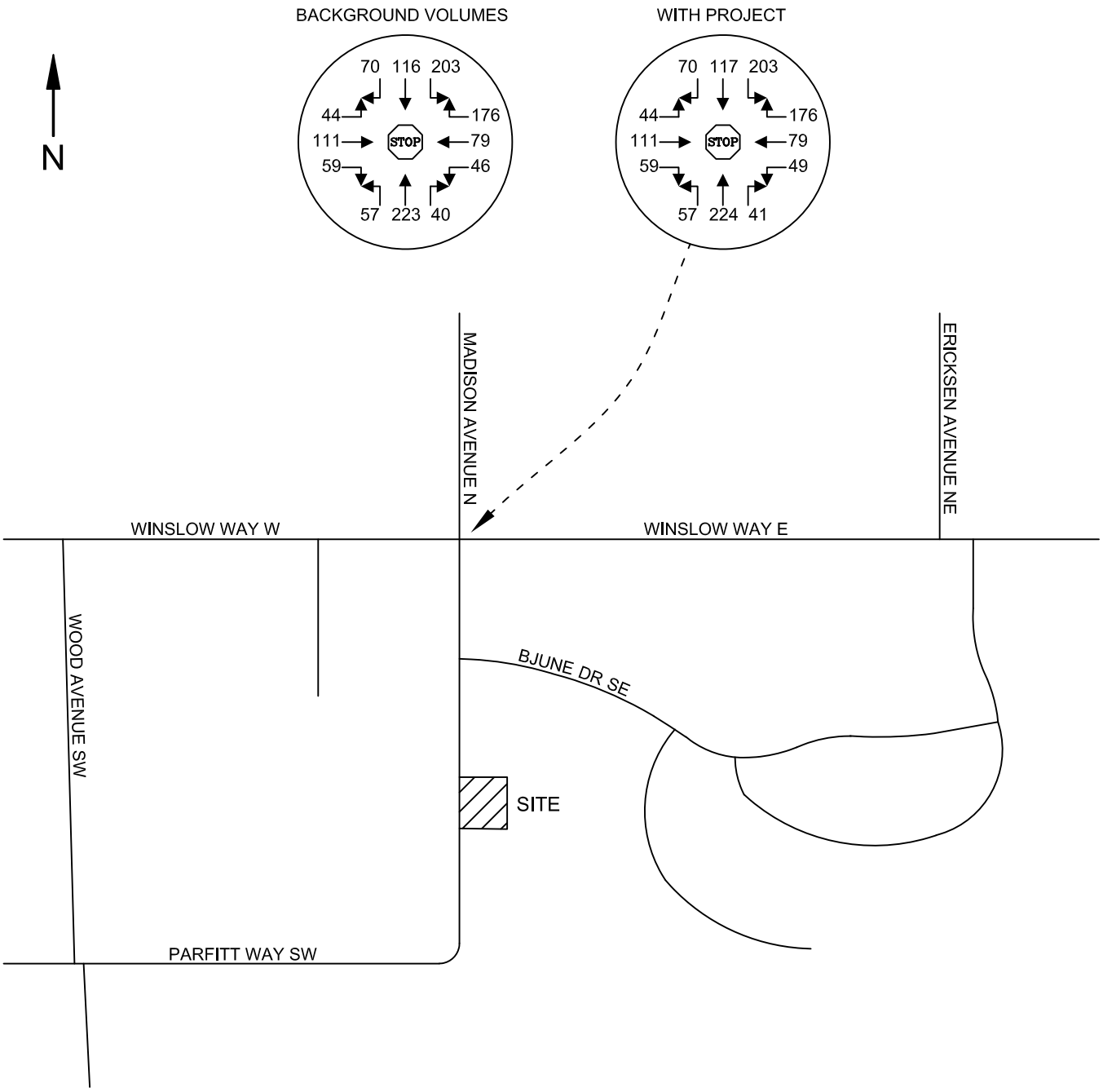
FORECAST 2020 PM PEAK HOUR VOLUMES

FIGURE 6

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FORECAST 2035 PM PEAK HOUR VOLUMES

FIGURE 7

## 3.4. Future Level of Service

Peak hour delays were determined through the use of the *Highway Capacity Manual* 6th Edition. Capacity analysis is used to determine level of service (LOS) which is an established measure of congestion for transportation facilities. The range[1] for intersection level of service is LOS A to LOS F with the former indicating the best operating conditions with low control delays and the latter indicating the worst conditions with heavy control delays. Detailed descriptions of intersection LOS are given in the 2016 Highway Capacity Manual. Level of service calculations were made through the use of the Synchro 10 analysis program. Table 2 below portrays existing and forecast 2020 and 2035 peak hour delays for the key intersection of Madison Avenue/Winslow Way.

**Table 2**

Peak Hour Level of Service

*Delays Given in Seconds per Vehicle*

| | | | | | With Project Traffic | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Existing | | 2020 | | 2035 | |
| **Intersection** | **Control** | **Time Period** | **LOS** | **Delay** | **LOS** | **Delay** | **LOS** | **Delay** |
| **Madison Avenue / Winslow Way** | AWSC | PM Peak Hour | B | 13.5 | B | 14.9 | C | 19.1 |

AWSC: All-Way Stop Control

Existing delays and forecast 2020 delays with project traffic are anticipated to operate with mild delays in the overall LOS B range. Delays are shown to increase to LOS C for the forecast 2035 conditions. All scenarios are shown to operate to City of Bainbridge LOS D or better standards for arterial roadways. Overall the intersection has the existing and forecast capacity to support the incoming project's vehicular demand.

---

[1] *Signalized Intersections - Level of Service*

| Level of Service | Control Delay per Vehicle (sec) |
|---|---|
| A | ≤10 |
| B | ＞10 and ≤20 |
| C | ＞20 and ≤35 |
| D | ＞35 and ≤55 |
| E | ＞55 and ≤80 |
| F | ＞80 |

*Stop Controlled Intersections – Level of Service*

| Level of Service | Control Delay per Vehicle (sec) |
|---|---|
| A | ≤10 |
| B | ＞10 and ≤15 |
| C | ＞15 and ≤25 |
| D | ＞25 and ≤35 |
| E | ＞35 and ≤50 |
| F | ＞50 |

Highway Capacity Manual, 6th Edition

## 4. SUMMARY

The CKCB Madison Avenue project plans on constructing 10-units of multi-family on an undeveloped parcel (262502-3-078-2006) in the City of Bainbridge Island. The project site is located on the east side of Madison Avenue South and south of Bjune Drive SE. A site plan is presented on Figure 2 and indicates one new driveway access on Madison Avenue South to a below-grade parking garage.

The general vicinity offers non-motorist facilities with complete sidewalk networks and bicycle lanes along with nearby public transit routes. Based on ITE data, 5 AM and 6 PM peak hour trips may be expected without accounting for the anticipated utilization of nearby transit. Forecast 2020 and 2035 PM peak hour delay analyses project delays to operate with acceptable level of service at LOS B and LOS C, respectively. Based on the analysis provided, no off-site mitigation is identified at this time.

CKCB MADISON AVENUE
TRAFFIC IMPACT ANALYSIS

*APPENDIX*

# Multifamily Housing (Low-Rise)
(220)

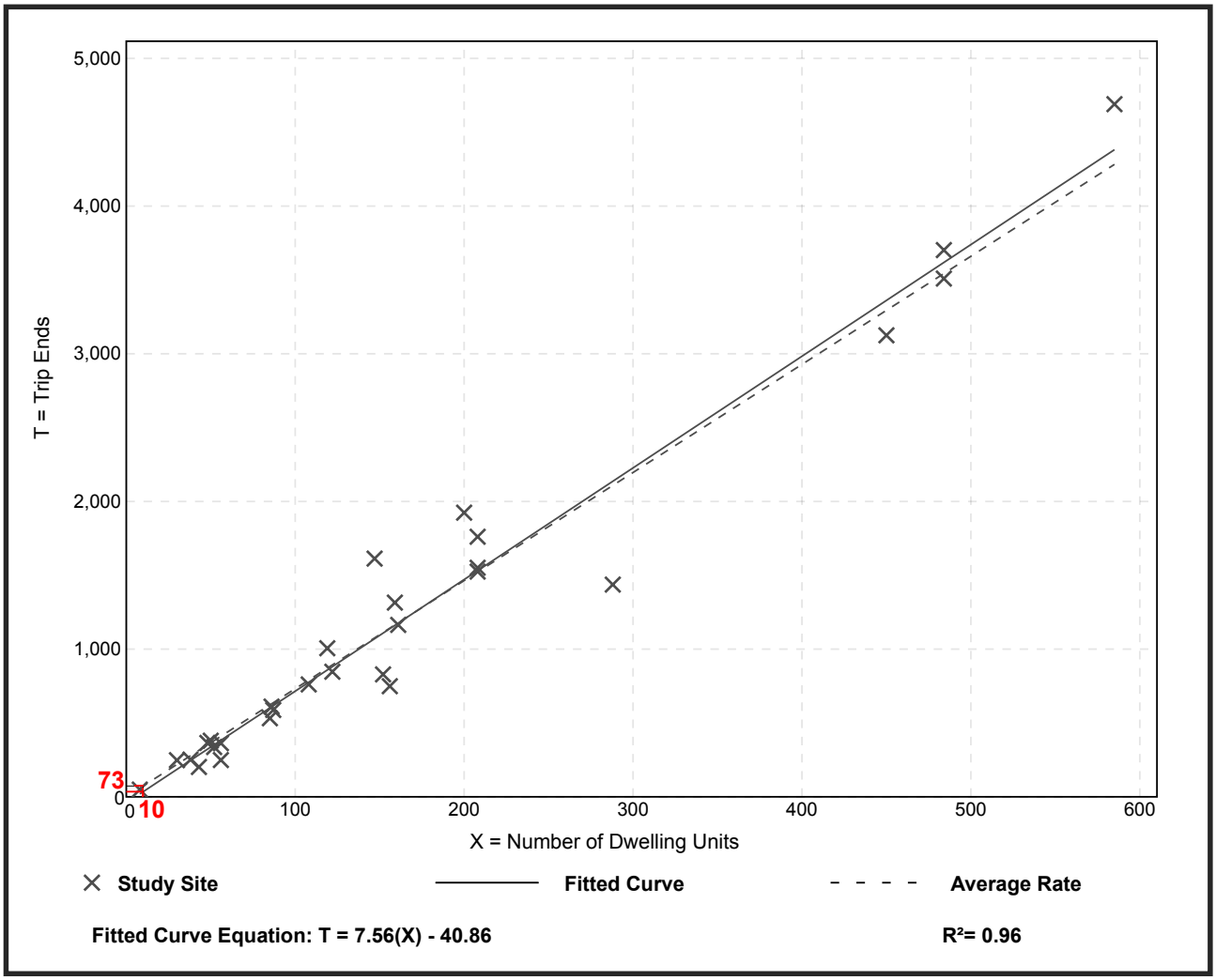
**Vehicle Trip Ends vs:** **Dwelling Units**
**On a:** **Weekday**

**Setting/Location:** **General Urban/Suburban**
Number of Studies: 29
Avg. Num. of Dwelling Units: 168
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 7.32 | 4.45 - 10.97 | 1.31 |

## Data Plot and Equation




*Trip Generation Manual,* 10th Edition ● Institute of Transportation Engineers

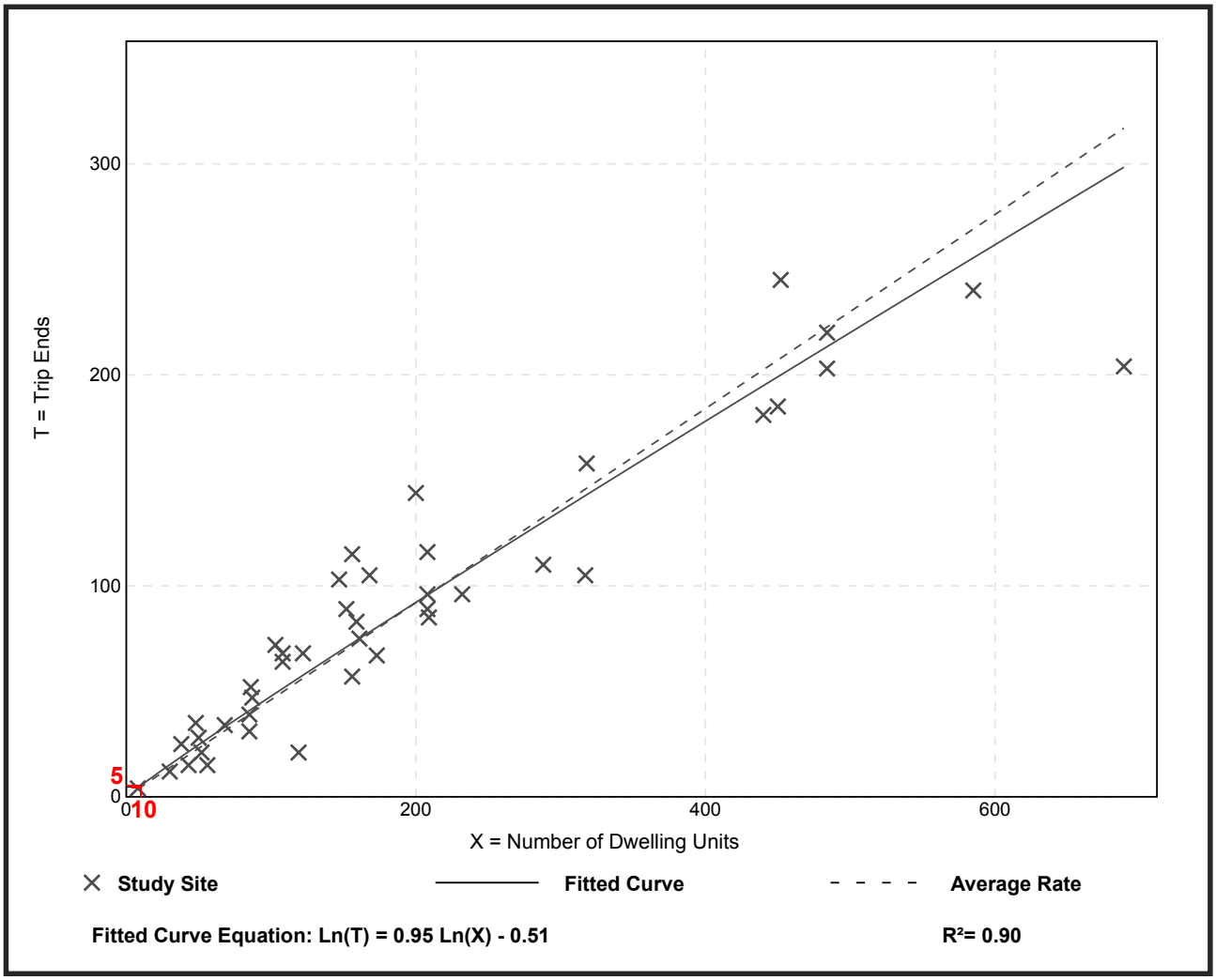
# Multifamily Housing (Low-Rise)
(220)

| | |
|---|---|
| **Vehicle Trip Ends vs:** | **Dwelling Units** |
| **On a:** | **Weekday,** |
| | **Peak Hour of Adjacent Street Traffic,** |
| | **One Hour Between 7 and 9 a.m.** |
| **Setting/Location:** | **General Urban/Suburban** |
| Number of Studies: | 42 |
| Avg. Num. of Dwelling Units: | 199 |
| Directional Distribution: | 23% entering, 77% exiting |

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.46 | 0.18 - 0.74 | 0.12 |

## Data Plot and Equation




*Trip Generation Manual,* 10th Edition ● Institute of Transportation Engineers

# Multifamily Housing (Low-Rise)
(220)

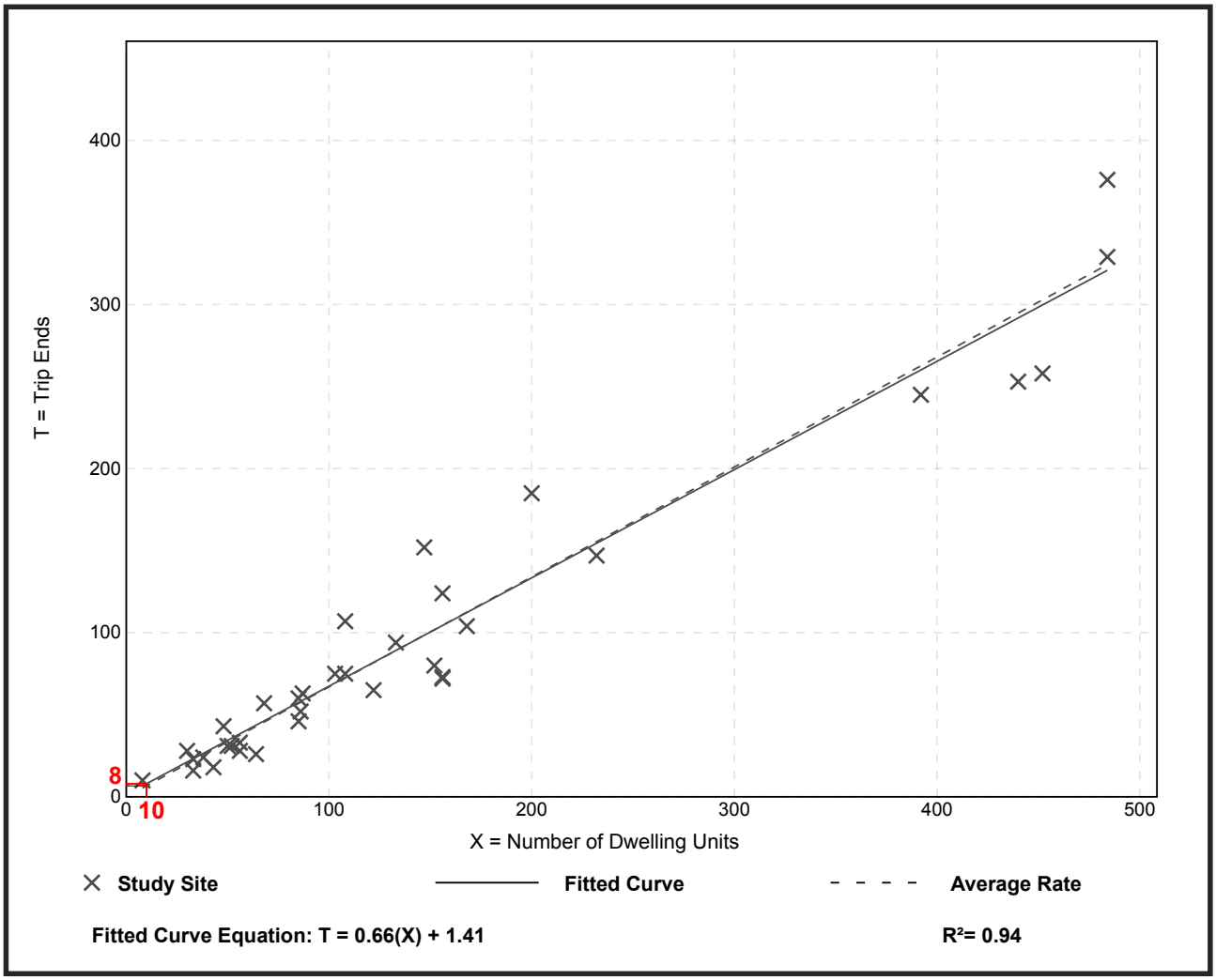
**Vehicle Trip Ends vs:** **Dwelling Units**
**On a:** **Weekday,**
**PM Peak Hour of Generator**

**Setting/Location:** **General Urban/Suburban**
Number of Studies: 35
Avg. Num. of Dwelling Units: 146
Directional Distribution: 59% entering, 41% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.67 | 0.41 - 1.25 | 0.14 |

## Data Plot and Equation



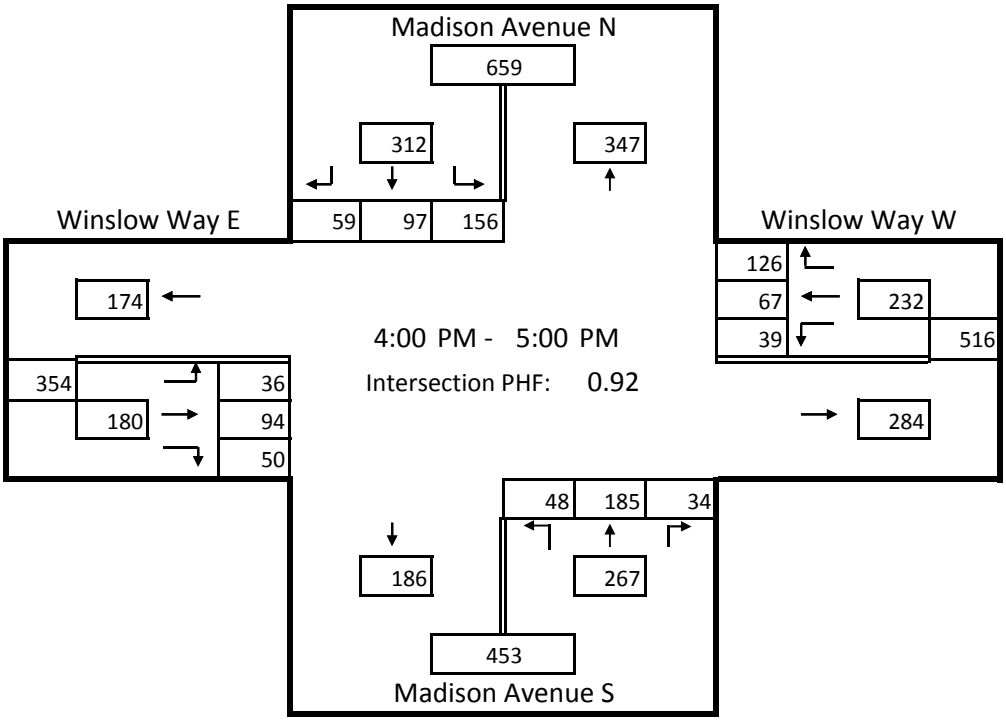

*Trip Generation Manual,* 10th Edition ● Institute of Transportation Engineers

**Heath & Associates, Inc.**
**2214 Tacoma Road**
**Puyallup, WA 98371**

**Project Name:** **CKCB Madison Avenue**
Intersection: Madison Avenue & Winslow Way — Date of Count: 1/25/2018
Jurisdiction: Bainbridge Island — Project Number: 4057

| Time Period | Soutbound Madison Avenue N | | | | Westbound Winslow Way W | | | | Northbound Madison Avenue S | | | | Eastbound Winslow Way E | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HV | R | T | L | HV | R | T | L | HV | R | T | L | HV | R | T | L | Total |
| 4:00 PM | 0 | 17 | 25 | 50 | 0 | 30 | 18 | 9 | 0 | 11 | 50 | 13 | 0 | 15 | 20 | 10 | 268 |
| 4:15 PM | 0 | 11 | 29 | 45 | 0 | 29 | 17 | 10 | 0 | 6 | 52 | 10 | 0 | 12 | 19 | 7 | 247 |
| 4:30 PM | 0 | 16 | 21 | 30 | 0 | 38 | 19 | 10 | 0 | 7 | 39 | 10 | 0 | 9 | 28 | 12 | 239 |
| 4:45 PM | 0 | 15 | 22 | 31 | 0 | 29 | 13 | 10 | 0 | 10 | 44 | 15 | 0 | 14 | 27 | 7 | 237 |
| 5:00 PM | 0 | 12 | 17 | 46 | 0 | 37 | 16 | 16 | 0 | 9 | 44 | 7 | 0 | 9 | 19 | 6 | 238 |
| 5:15 PM | 0 | 9 | 23 | 45 | 0 | 38 | 16 | 6 | 0 | 9 | 29 | 10 | 0 | 7 | 20 | 12 | 224 |
| 5:30 PM | 0 | 8 | 18 | 29 | 0 | 40 | 15 | 8 | 0 | 4 | 29 | 9 | 0 | 5 | 12 | 7 | 184 |
| 5:45 PM | 0 | 7 | 17 | 27 | 0 | 30 | 9 | 10 | 0 | 9 | 33 | 5 | 0 | 9 | 9 | 9 | 174 |
| Total | 0 | 95 | 172 | 303 | 0 | 271 | 123 | 79 | 0 | 65 | 320 | 79 | 0 | 80 | 154 | 70 | 1,811 |

| Peak Hour | **4:00 PM to 5:00 PM** | | | | | | | | | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Total | 0 | 59 | 97 | 156 | 0 | 126 | 67 | 39 | 0 | 34 | 185 | 48 | 0 | 50 | 94 | 36 | 991 |
| Heavy Veh. | 0.0% | | | | 0.0% | | | | 0.0% | | | | 0.0% | | | | |
| PHF | 0.85 | | | | 0.87 | | | | 0.90 | | | | 0.92 | | | | |



| Intersection | |
|---|---|
| Intersection Delay, s/veh | 13.5 |
| Intersection LOS | B |

| Movement | EBU | EBL | EBT | EBR | WBU | WBL | WBT | WBR | NBU | NBL | NBT | NBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 0 | 36 | 94 | 50 | 0 | 39 | 67 | 126 | 0 | 48 | 185 | 34 |
| Future Vol, veh/h | 0 | 36 | 94 | 50 | 0 | 39 | 67 | 126 | 0 | 48 | 185 | 34 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 |
| Mvmt Flow | 0 | 39 | 102 | 54 | 0 | 42 | 73 | 137 | 0 | 52 | 201 | 37 |
| Number of Lanes | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB |
|---|---|---|---|
| Opposing Approach | WB | EB | SB |
| Opposing Lanes | 2 | 1 | 2 |
| Conflicting Approach Left | SB | NB | EB |
| Conflicting Lanes Left | 2 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB |
| Conflicting Lanes Right | 1 | 2 | 2 |
| HCM Control Delay | 13.9 | 11.3 | 16.6 |
| HCM LOS | B | B | C |

| Lane | NBLn1 | EBLn1 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 18% | 20% | 37% | 0% | 100% | 0% |
| Vol Thru, % | 69% | 52% | 63% | 0% | 0% | 62% |
| Vol Right, % | 13% | 28% | 0% | 100% | 0% | 38% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 267 | 180 | 106 | 126 | 156 | 156 |
| LT Vol | 48 | 36 | 39 | 0 | 156 | 0 |
| Through Vol | 185 | 94 | 67 | 0 | 0 | 97 |
| RT Vol | 34 | 50 | 0 | 126 | 0 | 59 |
| Lane Flow Rate | 290 | 196 | 115 | 137 | 170 | 170 |
| Geometry Grp | 6 | 6 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 0.524 | 0.369 | 0.224 | 0.232 | 0.328 | 0.291 |
| Departure Headway (Hd) | 6.501 | 6.795 | 7.008 | 6.106 | 6.966 | 6.187 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 551 | 524 | 508 | 582 | 514 | 577 |
| Service Time | 4.586 | 4.894 | 4.803 | 3.9 | 4.752 | 3.973 |
| HCM Lane V/C Ratio | 0.526 | 0.374 | 0.226 | 0.235 | 0.331 | 0.295 |
| HCM Control Delay | 16.6 | 13.9 | 11.8 | 10.8 | 13.2 | 11.5 |
| HCM Lane LOS | C | B | B | B | B | B |
| HCM 95th-tile Q | 3 | 1.7 | 0.9 | 0.9 | 1.4 | 1.2 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | |
| Intersection LOS | |

| Movement | SBU | SBL | SBT | SBR |
|---|---|---|---|---|
| Lane Configurations | | | | |
| Traffic Vol, veh/h | 0 | 156 | 97 | 59 |
| Future Vol, veh/h | 0 | 156 | 97 | 59 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 1 | 1 | 1 |
| Mvmt Flow | 0 | 170 | 105 | 64 |
| Number of Lanes | 0 | 1 | 1 | 0 |

| Approach | SB |
|---|---|
| Opposing Approach | NB |
| Opposing Lanes | 1 |
| Conflicting Approach Left | WB |
| Conflicting Lanes Left | 2 |
| Conflicting Approach Right | EB |
| Conflicting Lanes Right | 1 |
| HCM Control Delay | 12.3 |
| HCM LOS | B |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 14.9 |
| Intersection LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 38 | 96 | 51 | 43 | 68 | 156 | 49 | 194 | 36 | 177 | 101 | 60 |
| Future Vol, veh/h | 38 | 96 | 51 | 43 | 68 | 156 | 49 | 194 | 36 | 177 | 101 | 60 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Mvmt Flow | 41 | 104 | 55 | 47 | 74 | 170 | 53 | 211 | 39 | 192 | 110 | 65 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 1 | 2 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 1 | 1 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 2 | 2 | 1 |
| HCM Control Delay | 15 | 12.1 | 18.9 | 13.6 |
| HCM LOS | B | B | C | B |

| Lane | NBLn1 | EBLn1 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 18% | 21% | 39% | 0% | 100% | 0% |
| Vol Thru, % | 70% | 52% | 61% | 0% | 0% | 63% |
| Vol Right, % | 13% | 28% | 0% | 100% | 0% | 37% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 279 | 185 | 111 | 156 | 177 | 161 |
| LT Vol | 49 | 38 | 43 | 0 | 177 | 0 |
| Through Vol | 194 | 96 | 68 | 0 | 0 | 101 |
| RT Vol | 36 | 51 | 0 | 156 | 0 | 60 |
| Lane Flow Rate | 303 | 201 | 121 | 170 | 192 | 175 |
| Geometry Grp | 6 | 6 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 0.577 | 0.402 | 0.246 | 0.302 | 0.39 | 0.317 |
| Departure Headway (Hd) | 6.846 | 7.191 | 7.335 | 6.421 | 7.297 | 6.519 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 528 | 501 | 490 | 560 | 493 | 551 |
| Service Time | 4.888 | 5.238 | 5.081 | 4.166 | 5.04 | 4.263 |
| HCM Lane V/C Ratio | 0.574 | 0.401 | 0.247 | 0.304 | 0.389 | 0.318 |
| HCM Control Delay | 18.9 | 15 | 12.5 | 11.9 | 14.7 | 12.3 |
| HCM Lane LOS | C | B | B | B | B | B |
| HCM 95th-tile Q | 3.6 | 1.9 | 1 | 1.3 | 1.8 | 1.4 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 19.1 |
| Intersection LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 44 | 111 | 59 | 49 | 79 | 176 | 57 | 224 | 41 | 203 | 117 | 70 |
| Future Vol, veh/h | 44 | 111 | 59 | 49 | 79 | 176 | 57 | 224 | 41 | 203 | 117 | 70 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Mvmt Flow | 48 | 121 | 64 | 53 | 86 | 191 | 62 | 243 | 45 | 221 | 127 | 76 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 1 | 2 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 1 | 1 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 2 | 2 | 1 |
| HCM Control Delay | 18.8 | 14.1 | 27.5 | 16.3 |
| HCM LOS | C | B | D | C |

| Lane | NBLn1 | EBLn1 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 18% | 21% | 38% | 0% | 100% | 0% |
| Vol Thru, % | 70% | 52% | 62% | 0% | 0% | 63% |
| Vol Right, % | 13% | 28% | 0% | 100% | 0% | 37% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 322 | 214 | 128 | 176 | 203 | 187 |
| LT Vol | 57 | 44 | 49 | 0 | 203 | 0 |
| Through Vol | 224 | 111 | 79 | 0 | 0 | 117 |
| RT Vol | 41 | 59 | 0 | 176 | 0 | 70 |
| Lane Flow Rate | 350 | 233 | 139 | 191 | 221 | 203 |
| Geometry Grp | 6 | 6 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 0.72 | 0.507 | 0.307 | 0.373 | 0.483 | 0.401 |
| Departure Headway (Hd) | 7.41 | 7.841 | 7.946 | 7.028 | 7.877 | 7.095 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 487 | 458 | 451 | 509 | 457 | 504 |
| Service Time | 5.489 | 5.928 | 5.727 | 4.809 | 5.658 | 4.875 |
| HCM Lane V/C Ratio | 0.719 | 0.509 | 0.308 | 0.375 | 0.484 | 0.403 |
| HCM Control Delay | 27.5 | 18.8 | 14.2 | 14 | 17.9 | 14.6 |
| HCM Lane LOS | D | C | B | B | C | B |
| HCM 95th-tile Q | 5.7 | 2.8 | 1.3 | 1.7 | 2.6 | 1.9 |

CITY OF BAINBRIDGE ISLAND

DEPARTMENT PUBLIC WORKS - ENGINEERING

# CERTIFICATE OF CONCURRENCY

Pursuant to The City of Bainbridge Island Municipal Code 15.32.040.B, the City Engineer has determined that the capacity of transportation facilities affected by the proposed development is equal to or greater than the capacity required to maintain the level of service standard for the impact of the development.

Property Location or Description: **CKCB**
**Madison Avenue South**
**Bainbridge Island, WA**
**Tax Parcel: 262502-3-078-2006**
**Permit Number: PLN50958 SPR/SVAR**

Development Type: **Site Plan Review, Shoreline Substantial Development, and Shoreline Variance**

Approved Uses: **Multi-Family Residential**

Approved Density: **8 apartments, 2 townhouses**
Approved Intensity: **6 PM Peak-Hour Trips/73 Average Daily Trips (ADT) at project completion**

Basis For Concurrency: **Attached traffic study, prepared by Heath & Associates, dated October, 2018**

Date Issued: **This certificate is effective on the issuance date of the above referenced permit numbers.**

Expiration Date: **This certificate expires on the earlier of: 1) The date of expiration of the above referenced permit numbers, or 2) Three years after the above effective (issuance) date of this certificate.**

P.S. Corelis

BY: Peter S. Corelis, P.E.

Attachments:
- ☐ **1: Concurrency Test; or**
- ☒ **2: Traffic Analysis**

# CKCB MADISON AVE DEVELOPMENT

## HABITAT MANAGEMENT PLAN

FEBRUARY 5, 2018
BGE18_0110

BGE ENVIRONMENTAL, LLC.
WETLAND CONSULTING AND LAND USE PLANNING

# CKCB MADISON AVE DEVELOPMENT

## HABITAT MANAGEMENT PLAN

FEBRUARY 5, 2018

PROJECT LOCATION
MADISON AVE S
BAINBRIDGE ISLAND, WA 98110

TAX ACCOUNT
262502-3-078-2006
S 26, T 25 N, R 02E, SW QTR

PREPARED FOR
CIHAN ANISOGLU
PO BOX 10386
BAINBRIDGE ISLAND, WA 98110

PREPARED BY
BGE ENVIRONMENTAL LLC
MAIN OFFICE: 2102 BRASHEM AVE
(MAILING) BREMERTON, WA 98310

BAINBRIDGE OFFICE: 755 WINSLOW WAY EAST
SUITE 101
BAINBRIDGE ISLAND, WA 98110
360.710.6066
www.bgeenvironemental.com

BGE18_0110

# CERTIFICATION

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

SWS PCP EDUCATION EXPERIENCE ETHICS PWS ROBBYN MYERS 1286 PROFESSIONAL WETLAND SCIENTIST

5 Feb 2018

Robbyn Myers, PWS
Wetland Biologist/Environmental Planner

Date

CKCB MADISON AVE DEVELOPMENT
HABITAT MANAGEMENT PLAN
BGE18_0110

BGE ENVIRONMENTAL, LLC.
WETLAND CONSULTING AND LAND USE PLANNING

# INTRODUCTION

Cihan Anisoglu (Client) is proposing the construction of an 8 suite inn (multi-family housing) on a single parcel located on Madison Avenue S, Bainbridge Island, Washington. The parcel is undeveloped bound to the west by right-of-way to Madison Ave S and existing developments north and south. To the east, topography defines a steep ravine setting which hosts a tidal estuarine complex. The hydrology is supported from a storm water facility outlet. The outlet is a 24-in cmp to heavy rip-rap prior to the defining natural features of the ravine and estuary. A sewer line easement enters the parcel from the southwest corner and zig-zags north then east around the ravine.

Shoreline designation is Urban with a 30-ft standard buffer. The parcel is fully encumbered within the 200-ft shoreline jurisdiction. The proposed project includes underground parking and an interior courtyard. The footprint is delineated from the east and south by the sewer easement. The property line and right-of-way setbacks define the limits of development north and east.

The parcel vegetation consists of mostly noxious, invasive species, specifically Himalayan blackberry. Significant vegetation (mature trees) are concentrated to the ravine. The project respects the 30-ft shoreline buffer and 15-ft structural setback. The proposed development is setback a range of 50 to 70-ft from the Urban 30-ft buffer standard.

All shoreline development and activities shall be located, designed, constructed, and managed in a manner that will result in a no net loss of ecological function. To ensure achievement of no net loss standards, a site-specific analysis of potential impacts within the 200-ft shoreline jurisdiction and appropriate mitigation measures is provided through this Habitat Management Plan (HMP). This HMP is designed to meet the following criteria of the Site-Specific Vegetation Management section of the Bainbridge Island Municipal Code (BIMC) Chapter 16.12 Shoreline Master Program (SMP):

- Assessment of existing baseline environmental conditions;
- Assessment of priority habitat, species within the vicinity of the project;
- Project impact assessment;
- Analysis of mitigation sequencing; and
- Vegetation Management Plan.

# BASELINE ENVIRONMENTAL CONDITIONS

The subject parcel is located along Madison Avenue S, Bainbridge Island, Kitsap County, Washington. The parcel is flag shaped, facing west, with the extended acreage headed due south along the ravine. The parcel is 0.39 acres, undeveloped, and clear of significant vegetation outside of the ravine setting, see Exhibit A. Observed species include Himalayan blackberry, Scott's broom, common vetch, American holly, oceanspray, hawthorne, sword fern, grasses, and bracken fern. Mature trees are set at and along the top-of-slope and include red alder, big leaf maple, madrone, and Douglas fir. Additional species observed to the ravine include Oregon grape, flowering dogwood, baldhip rose, and predominate cover of Himalayan blackberry. English ivy is present from root to canopy among the mature trees.

The parcel is flat. The ravine has an immediate, steep break in slope with dense cover of mostly invasive species. There is a limited view to the bottom of the ravine. Developments to the opposite side are clearly visible. Rip-rap heavily covers the immediate cmp outfall and 30-ft waterward to the tidal region of the estuarine complex.

A public access is present as the eastern adjacent parcel. A trail extends from Bjune Dr SE to the start of the ravine. A sitting bench provides a resting place and peek-a-boo views through the ravine and Eagle Harbor. A heavily used path is present westward from the public access to Madison Ave S: established along the northern property line of the subject parcel.

The Washington Department of Fish and Wildlife Priority Habitat and Species within the vicinity of the project is limited to the estuary, as aquatic habitat.

# PROJECT DESCRIPTION

The proposed development is roughly 11,000 sq ft of structure and associated infrastructure, see Exhibit B. The project is delineated to the east by the existing sewer easement, resulting in a 50 to 70-ft setback from Ordinary High Water Mark (OHWM) to the estuary. The 30-ft shoreline buffer and 15-ft setback is maintained. No mature vegetation (< 15-ft in overall height) removal is required for the proposed development. A cluster of young alders and a single hawthorne are present within the action area. The remaining vegetation cover to be impacted is dominate Himalayan blackberry and smaller percentages of persistent noxious or weedy individuals.

# MITIGATION SEQUENCING

Permitted uses shall be designed and conducted to minimize, in so far as practical, any resultant damage to the ecology and environments. Impacts shall be mitigated according to BIMC 16.12.B.2.d, in a sequential analysis to avoid, minimize and mitigate. The mitigation analysis sequence for the shoreline in question is provided below.

| MITIGATION MEASURE | MITIGATED ACTION(S) |
|---|---|
| AVOID the impact altogether by not taking a certain action or parts of an action | • The proposed development maintains the 30-ft shoreline buffer and 15-ft setback. Impacts to the buffer avoided. |
| MINIMIZE impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts | • Development is designed landward of the sewer easement and all significant mature vegetation. |
| RECTIFY the impact by repairing, rehabilitating, or restoring the affected environment | • Restoration of degraded shoreline buffer landward of top-of-slope to native complex<br>• The fallow condition of the parcel has resulted in heavy accumulations of noxious, invasive species. Eradication of these species within the parcel boundaries is recommended, see Maintenance section of this report. |
| REDUCE or eliminate the impact over time by preservation and maintenance operations | • Landscape structure and associated use with native vegetation where appropriate for lighting, soil structure, and wetness.<br>• No fertilizer, insecticide, or pesticide use recommended.<br>• Installation of directional lighting and timers recommended.<br>• Stormwater collection and compliance with current manual standards. |
| COMPENSATE for the impact by replacing, enhancing, or providing substitute resources or environments | • Restore degraded shoreline buffer landward of the top-of-slope<br>• Restore and maintain a 10-ftvegetation buffer along the top-of-slope according to the *Vegetation Management Plan.* |
| MONITOR the impact and the compensation project and take appropriate corrective measures | • Restoration area success, performance, maintenance and monitoring are defined in the *Vegetation Management Plan* section of this document.<br>• As-built, five-year monitoring and final compliance documentation required. |

# IMPACTS OF SITE DEVELOPMENT

There are no direct impacts to the 30-ft shoreline buffer. Vegetation disturbances with in the 200-ft shoreline jurisdiction include a cluster of young red alder, one hawthorne, and a dominant cover of Himalayan blackberry. There is no significant vegetation removal with the new construction.

Vegetation replanting is required for all development, uses or activities within the 200-ft shoreline jurisdiction that either alters existing native vegetation or any vegetation in the required shoreline buffer, whether a permit is required or not. This includes invasive species removal (Chapter 16.12.030(B)(2)(c), COBI-SMP).

# VEGETATION MANAGEMENT PLAN

To meet the goals and policies of the City of Bainbridge Island Shoreline Master Program (COBI-SMP), the new construction shall ensure that the parcels site specific ecological functions and processes are managed to meet the no net loss standard. The parcels 30-ft shoreline buffer is degraded, mostly absent of shrubs and ground covers beyond the top-of-slope. The ravines interior is dominated by noxious, invasive Himalayan blackberry. English ivy threatens mature native trees in the vicinity.

This site-specific analysis has identified two functional deficiencies present to the ravine bound estuarine complex which may be rectified within the subject parcel. The first is the prominence of noxious, invasive Himalayan blackberry and English ivy. The second is the absence of native vegetation cover along the top-of-slope and the 30-ft shoreline buffer. A *Vegetation Management Plan* has been developed to rectify the identified functional deficiencies as mitigation for new construction within the shoreline parcel.

## INVASIVE SPECIES

Dense stands of Himalayan blackberry are observed along the northeastern corner of the parcel, landward of the top-of-slope. This species is equally present as individuals at and waterward of the top-of-slope for the western slope face within the property. Likewise, English ivy is dominating mature tree canopies and competing with blackberry for surface cover. Both species shall be aggressively targeted for removal and complete eradication from trees and surfaces landward of the top-of-slope. Where feasible, individuals along the slope face should also be removed to reduce the competitive cover. The action plan for eradication of these species is detailed in the Maintenance section of this report.

## VEGETATION MANAGEMENT AREA

The Vegetation Management Area (VMA) includes the portion of the 30-ft shoreline buffer landward of the top-of-slope and areas 10-ft from the western top-of-slope void of vegetation, see Exhibit C. The VMA recommends the restoration of complex, diverse native vegetation along the top-of-slope. Existing mature trees shall not be disturbed. Limitations to the restoration area are identified with the steep grade of the slope face, although if feasible, additional native materials would benefit functional attributes within the ravine and the estuarine complex downgrade.

The conceptual planting plan presumes a dominance of native species along the north eastern corner of the property. This corner of the property was not well discernable in the field and included dense Himalayan blackberry and mature native shrubs. The Vegetation Management Plan prescribes the removal of all blackberry thickets beyond the top-of-slope. Once removed, additional plantings may be warranted along the top-of-slope to ensure no adverse effects, direct or independent to the invasive species removal, are anticipated to the downgradient estuarine complex.

## PLANTING PLAN SPECIFICATIONS AND DETAIL

Individual species are depicted on Exhibit C for illustration of placement, distribution and density. A total of 69 individuals shall be installed within the VMA. The individuals shall be planted in groups as opposed to a symmetrical row crop pattern. Voids in the mitigation area are acceptable for natural spread and establishment of species to the mitigation area. Alternative species acceptable shall be native to the lower Puget Sound ecosystem and with prior approval by Restoration Specialist and/or City staff.

| SPECIES | COMMON NAME | QUANTITY | SPACING | SIZE MIN. |
|---|---|---|---|---|
| *Vaccinium ovatum* | Evergreen huckleberry | 23 | 4-ft o.c. | 1-gal |
| *Pseudotsuga menziesii* | Douglas fir | 3 | 10-ft o.c. | 5-gal |
| *Holodiscus discolor* | Oceanspray | 11 | 5-ft o.c. | 1-gal |
| *Gaultheria shallon* | Salal | 16 | 4-ft o.c. | 1-gal |

Plantings shall be established within the approximate locations indicated on Exhibit C. A conceptual planting plan is provided as guidance for calculated densities and distributions for healthy establishment and development of native vegetation. Field conditions overrule the prescribed planting plan and shall be recorded by the installation team and consultant for compliance reporting and as-built. Once invasive species have been removed from the northeast corner, the area shall be reevaluated for potential restoration to VMA vicinity.

# PERFORMANCE STANDARDS

Performance standards are necessary for the evaluation of success achieved with the implemented buffer restoration. If the standards are met at the end of the five-year monitoring period, the City shall issue release of the performance bond.

## SURVIVAL

- 100% survival of all tree and shrub plantings at the end of Year One. This standard may be met through establishment of installed plants or by replanting as necessary to achieve the required numbers.
- 100% survival of all tree plantings and 80% survival of all shrub plantings at the end of Year Five. This standard may be met through establishment of installed plants or by replanting as necessary to achieve the required numbers.

## COVERAGE

- Achieve at least 60% cover of native vegetation by the end of Year 3. This can be a combination of trees, shrubs and groundcover, but a minimum 40% must be composed of tree and shrub species. Volunteer species may count towards this standard.
- Achieve at least 80% cover of native vegetation by the end of Year 5. This can be a combination of trees, shrubs, and groundcover, but a minimum 60% must be composed of tree and shrub species. Volunteer species may count towards this standard.

## INVASIVE SPECIES

- Removal and eradication of English ivy and Himalayan blackberry landward of the top-of-slope. No tolerance of the presence or establishment of invasive species, including all Class A, B, or C noxious weeds as listed by the Washington state Noxious Weed Control Board, within the Vegetation Management Area is applied.
- Tolerance of invasive species on slope face is acknowledged.
    - However, when and if accessible, these species should be cut back and removed for establishing a beneficial native complex to the slope face.
    - Care shall be taken to minimize soil disturbances on the slope face.

# CONSTRUCTION AND SPECIFICATIONS

## GENERAL NOTES

The proposed mitigation actions are limited in area and complexity. The applicant should seek professional help from a Restoration Specialist with implementation of the mitigation plan yet may complete the actions independently. BGE Environmental personnel, or other persons qualified to evaluate environmental restoration projects (Restoration Specialist), shall monitor the following:

1) Invasive and nonnative species removal
2) Surface preparation for planting
    a. Evaluation of density and distribution to potential restoration areas within the VMA. The VMA is defined as 10-ft landward of the top-of-slope and the 30-ft shoreline buffer.
3) Plant material inspection.

## PROJECT SEQUENCING

Planting shall occur during the dormant season, October 1 through March 31.

1) Independently remove invasive or weedy species.
2) Install vegetation materials according to specifications for species and spacing per planting detail.
3) Cover planting area with a two to three-inch layer of mulch.
4) As-built production and submittal to the City of Bainbridge Island within 60 days of planting.
5) Annual monitoring, late summer, and annual reporting City of Bainbridge Island for a minimum period of five-years.

## EROSION CONTROL, POLLUTION PREVENTION AND SITE PREPARATION

Temporary erosion and sediment control (TESC) measures shall be implemented under the guidance of approval conditions using BIMP's outlined in the project's Stormwater Pollution Prevention Plan (SWPPP) and TESC Plan prepared by the Project Engineer. Approval by the responsible Restoration Specialist prior to mowing, hand-clearing and planting activities on-site is recommended.

## PLANT SCHEDULING, SPECIES AND DENSITY

Planting should occur between October 1 and March 31. All materials to be used on the site will be nursery grown stock from a reputable, local source. Only native species are to be used; no hybrids or cultivars will be allowed. All plant material shall be inspected by the consultant/contractor upon delivery. Plant material provided will be typical of their species or variety and shall be sound, healthy, vigorous plants free from defects, and all forms of disease and infestation. Plant material not conforming to the specifications will be rejected and replaced by the contractor or supplier. Rejected plant materials shall be immediately removed from the site.

## PRODUCT HANDLING, DELIVERY, AND STORAGE

All precautions customary in good trade practice shall be taken in preparing plants for moving. Workmanship that fails to meet industry standards will be rejected. Plants will be packed, transported, and handled with care to ensure protection against injury and from drying out. If plants cannot be planted immediately upon delivery they should be protected with soil, wet peat moss, or in a manner acceptable to the project biologist. Plants, fertilizer, and mulch not installed immediately upon delivery shall be secured on the site to prevent theft or tampering. No plant shall be bound with rope or wire in a manner that could damage or break the branches. Plants transported on open vehicles should be secured with a protective covering to prevent windburn.

## PREPARATION AND INSTALLATION OF PLANT MATERIALS

Contractor shall verify the location of all elements of the mitigation plan with the materials count upon clearing of invasive and nonnative vegetation and prepping surface for installation. Plant quantities are based on field measurements and density calculations which have a standard error association with planning and implementation. Locations of proposed materials are accurate but may be moved as deemed necessary as the terraced conditions may restrict optimal root and species spacing requirements. All installed vegetation will be marked to a site plan for general areas and quantities. The documented actions will be used to produce an as-built once the mitigation actions are complete.

Circular plant pits with vertical sides will be excavated for all bare root and container stock. The pits should be at least 6 inches greater in diameter than the root mass or container. The pit should accommodate the entire root system. The bottom of each pit will be scarified to a depth of 4 inches. Add slow release Agroform tablet to planting pit. Set plant material upright in the planting pit to proper grade and alignment. Water plants thoroughly midway through backfilling. Water pits again upon completion of backfilling. No filling should occur around trunks or stems. Do not use frozen or muddy mixtures for backfilling. Form a ring of soil around the edge of each planting pit to retain water. Once planted, the entire area shall be covered with a minimum of two-inches of mulch with a diameter of 18-inches. Add additional mulch if existing grass or denuded soils are visible on the surface.

# MONITORING

BGE Environmental personnel, or other persons qualified to evaluate environmental restoration projects (Restoration Specialist), shall implement the Habitat Management Plan. Upon installation of vegetation, the Restoration Specialist shall create an as-built document and submit it to the City of Bainbridge Island within 60 days of completing the work. The document may consist of a summary of actions as they pertain to the restoration efforts defined in this mitigation plan to include alterations and deviations to species, placement, or other actions necessary for proper implementation. A list of planted species, time of installation and supporting photographs, before and after installation, should accompany the document.

Each year, for the following four monitoring years, the vegetation management area should be reviewed by the Restoration Specialist to ensure that the planted materials are healthy, vigorous, and present a high probability of success pursuant the Performance Standards. Conditions shall be documented with photographs during the same time frame. Late summer monitoring and documentation is required. Contingency efforts shall be implemented as deemed warranted by the Restoration Specialist to ensure a successful five-year response to mitigation efforts.  Submittal of progress report to City of Bainbridge Island at the end of each monitoring year.

Five years post planting, a review of mitigation and compliance documents should be provided to the City of Bainbridge Island. The compliance documents should be a determination of success regarding vegetation coverage, health and sustainability. The assessment may evaluate, but not be limited to, observations of species survival, replacement vegetation since restoration and a summary of actions completed to support the success of the restored shoreline buffer (irrigation, trimming, fertilizer use, etc.). It may include an estimate of buffer area restoration and quantification of, if any, additional use of native vegetation which promotes ecoregional function within the landscape. The monitoring report shall include yearly photographs of the vegetation conditions and progression with a technical evaluation of success in achieving the no net loss standard.

# MAINTENANCE

Maintenance of the vegetation management area shall consist of all actions necessary to ensure that planted materials establish and thrive with the planted area, and that invasive species do not encroach, spread, or establish within the vegetation management area or vicinity. The prescribed maintenance plan shall be implemented for a minimum of five years following completion of the plant installation. However, proper stewardship of the shoreline buffer is the responsibility of the property owner in which effective implementation of this plan will restore natural function to the shoreline ecology which protects the integrity of environment and the residing structures and use.

Anticipated actions and necessary guidelines to meet the performance standards are as follows:

1) Replace each plant found dead in the summer monitoring visit after the first year of planting and subsequent years if mortality continues to occur.
2) Invasive species maintenance plan:
    a. Himalayan blackberry, Japanese knotweed, Scot's broom, English ivy, and other invasive vegetation shall be grubbed out by hand on an ongoing basis, being careful to grub out roots where both safe and accessible. Such work should not result in heavy disturbance of soil surface or jeopardize the roots of installed native or volunteer native plants.
    b. Where hand removal is observed to have no effect in control and spread, herbicide applications may be applied, particularly for Japanese knotweed. Application of Imazapyr is acceptable. Herbicide applications must be conducted only by a state-licensed applicator during the effective time frame between mid-spring and mid-summer. Applications should be a targeted method such as spot spray or wick.
3) At least twice a year, hand remove all competing weeds and weed roots from beneath each installed plant and any desirable volunteer vegetation to eighteen (18) inches from the main plant stem. Weeding should occur as needed during the spring and summer. Frequent weeding will result in lower mortality and lower plant replacement costs.
4) Do not weed the area near the plant bases with string trimmer (weed whacker).
5) Mulch the weeded areas beneath plant with wood chips as necessary to maintain a minimum two to three-inch thick mat to the planting area

Care shall be taken to promote survival of the planted species. This does not include cutting of vegetation within the shoreline buffer. Height of the shrub cover is not expected to inhibit the view corridor. Pruning is acceptable to maintain building setbacks for structure maintenance and to maintain plant health. Pruning should primarily involve removing all dead, broken, diseased, or problem limbs by trimming them at the point of origin or back to a strong lateral branch or shoot. Removing this material often opens the canopy sufficiently so that no further pruning is necessary.

When trimming and pruning vegetation, pile the debris in an area somewhere within the property to create a brush shelter. Tucking the trimmings beneath the shrubs is a perfect option. Downed wood, even a pile of twigs provides food and shelter to many species, while slowly retuning nutrients to the soil. The pile can be in the sun or the shade, place it in an unused area of the property. Remove starts of invasive species immediately.

The use of herbicides, insecticides, or pesticides, particularly near the areas of berry, fruit or mast producing shrubs or trees, is not recommended. This will help ensure the availability of foraging for wildlife. Even fertilizing lawn can degrade nutrients and alter the decomposition process of the natural grasses. Limit the use of insecticides. Insect populations are important on many ecological levels particularly as a food source for insectivores.

# CONTINGENCY

If any part of the planting area fails to satisfy the goals and performance standards of this plan to such an extent that the failure cannot be adequately addressed through standard maintenance activities, a contingency plan shall be developed. A detailed contingency plan cannot be developed until the specific items that need to be addressed are known. Compliance with the installation procedures and maintenance plans are measures to properly promote a successful restoration. Where the performance is less than satisfactory, attention shall be given to, but not limited to, soil conditions, species installation, and temporal variations. Adaptive management actions taken to ensure success, when practical, are an acceptable means to ensure survival and growth of the planted species.

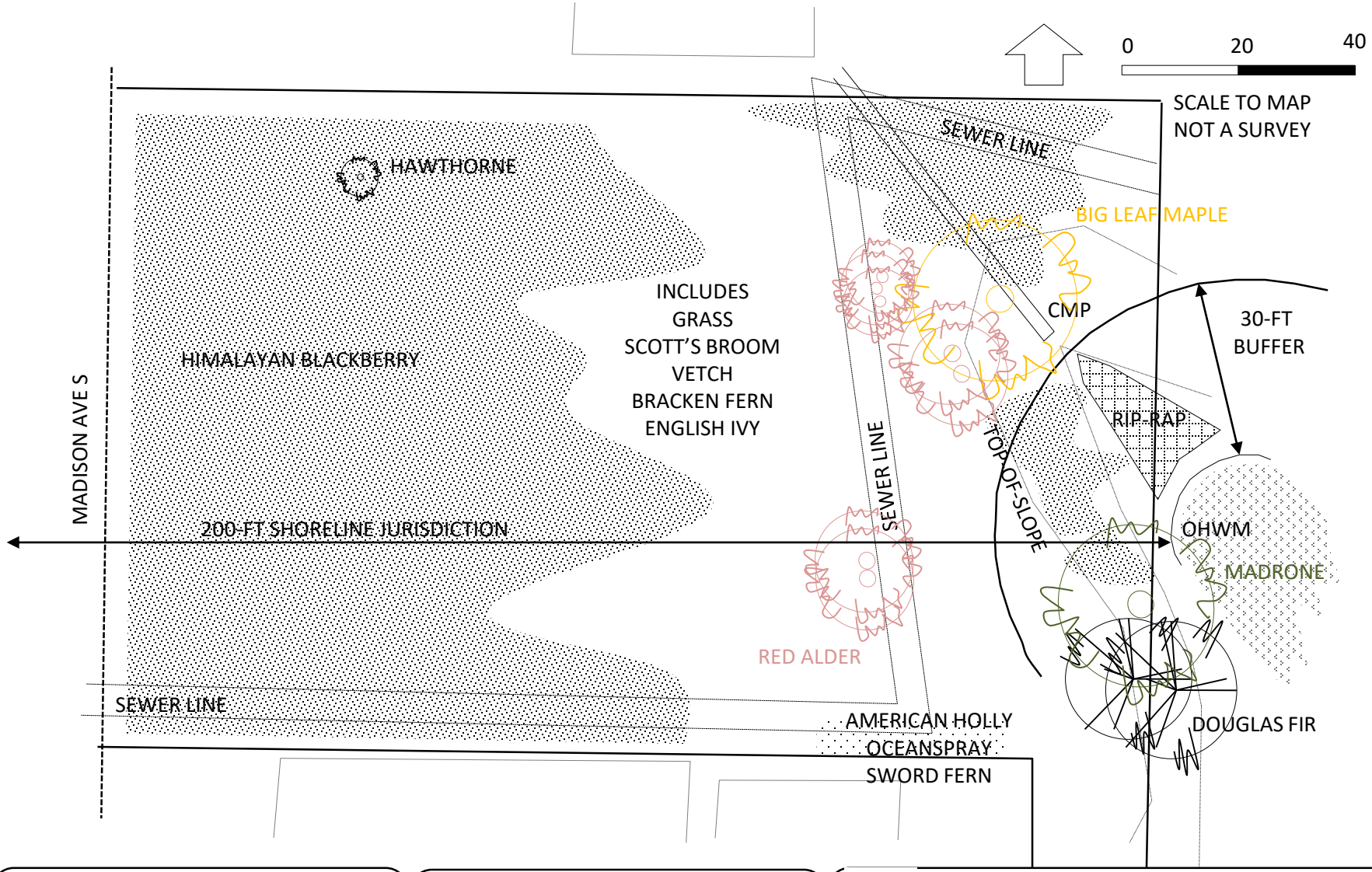



EXHIBIT A
EXISTING CONDITIONS

CKCB MADISON AVE DEVELOPMENT
262502-3-078-2006

BGE Environmental, LLC
Wetland Consulting & Land Use Planning

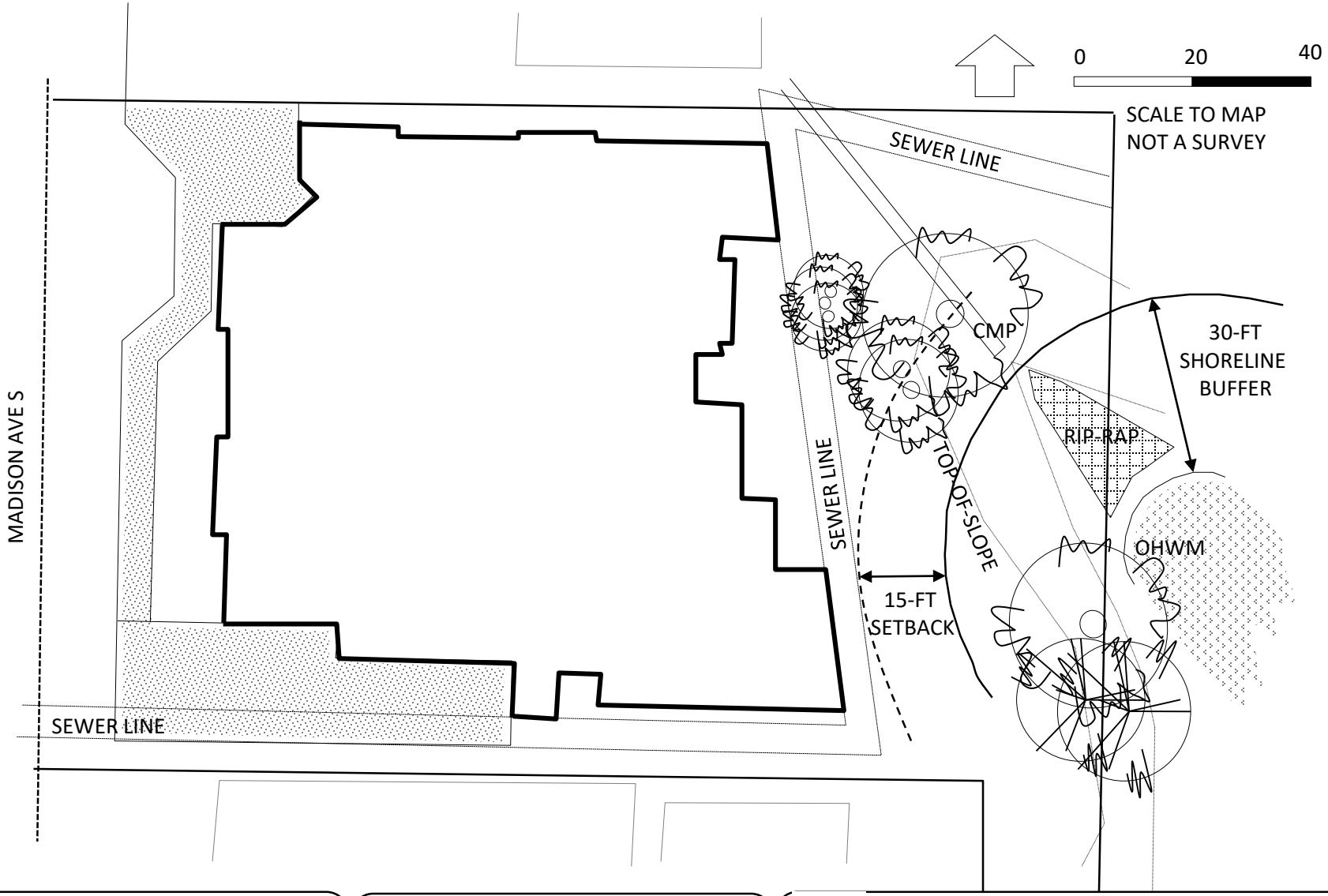
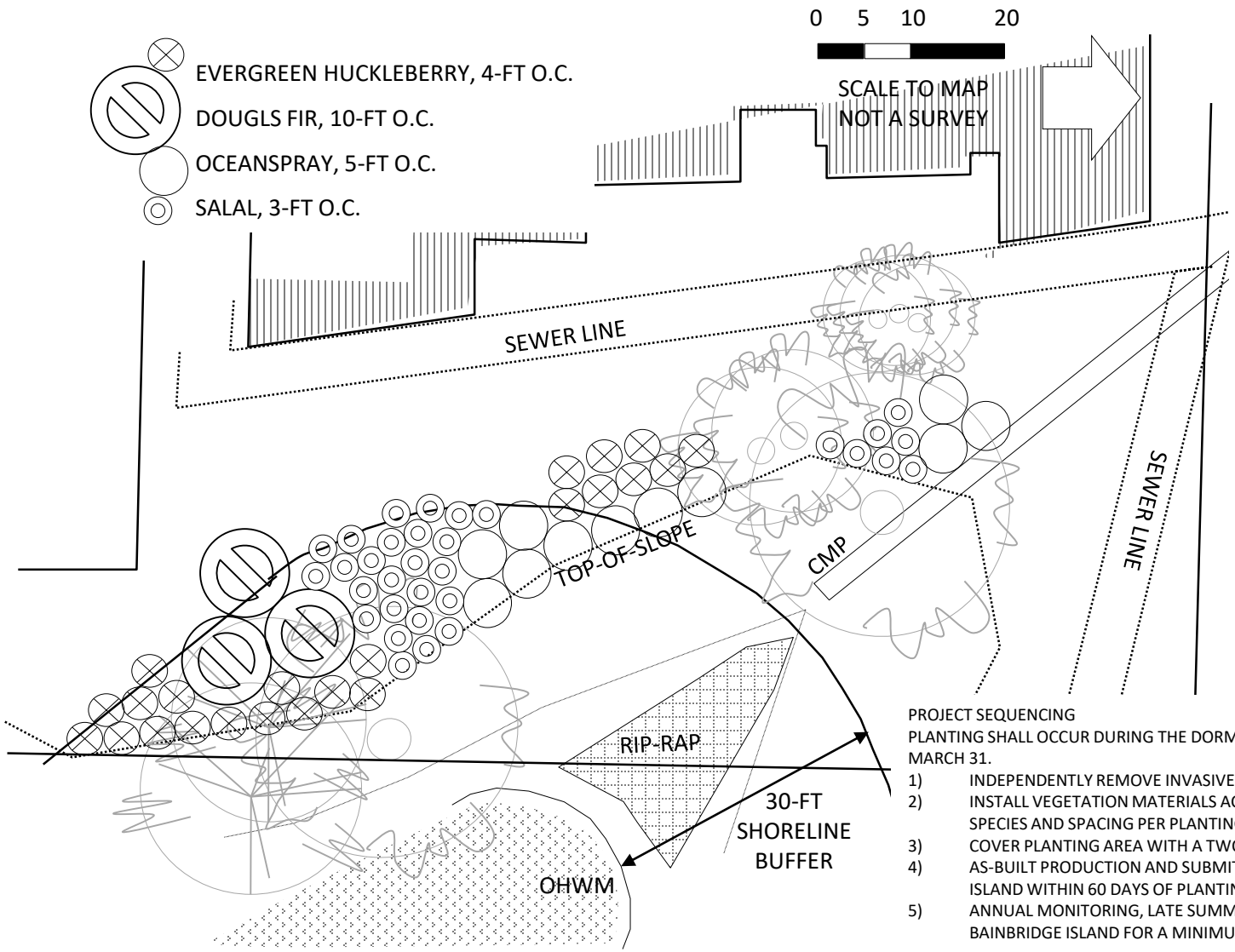



EXHIBIT B
PROPOSED PROJECT

CKCB MADISON AVE DEVELOPMENT
262502-3-078-2006

BGE Environmental, LLC
Wetland Consulting & Land Use Planning




GENERAL NOTES

THE PROPOSED MITIGATION ACTIONS ARE LIMITED IN AREA AND COMPLEXITY. THE APPLICANT SHOULD SEEK PROFESSIONAL HELP FROM A RESTORATION SPECIALIST WITH IMPLEMENTATION OF THE MITIGATION PLAN YET MAY COMPLETE THE ACTIONS INDEPENDENTLY. BGE ENVIRONMENTAL PERSONNEL, OR OTHER PERSONS QUALIFIED TO EVALUATE ENVIRONMENTAL RESTORATION PROJECTS (RESTORATION SPECIALIST), SHALL MONITOR THE FOLLOWING:

1. INVASIVE AND NONNATIVE SPECIES REMOVAL
2. SURFACE PREPARATION FOR PLANTING
   EVALUATION OF DENSITY AND DISTRIBUTION TO POTENTIAL RESTORATION AREAS WITHIN THE VMA. THE VMA IS DEFINED AS 10-FT LANDWARD OF THE TOP-OF-SLOPE AND THE 30-FT SHORELINE BUFFER.
3. PLANT MATERIAL INSPECTION.

PROJECT SEQUENCING

PLANTING SHALL OCCUR DURING THE DORMANT SEASON, OCTOBER 1 THROUGH MARCH 31.

1) INDEPENDENTLY REMOVE INVASIVE OR WEEDY SPECIES.
2) INSTALL VEGETATION MATERIALS ACCORDING TO SPECIFICATIONS FOR SPECIES AND SPACING PER PLANTING DETAIL.
3) COVER PLANTING AREA WITH A TWO TO THREE-INCH LAYER OF MULCH.
4) AS-BUILT PRODUCTION AND SUBMITTAL TO THE CITY OF BAINBRIDGE ISLAND WITHIN 60 DAYS OF PLANTING.
5) ANNUAL MONITORING, LATE SUMMER, AND ANNUAL REPORTING CITY OF BAINBRIDGE ISLAND FOR A MINIMUM PERIOD OF FIVE-YEARS.

EXHIBIT C
VEGETATION MANAGEMENT PLAN
CONCEPTUAL PLANTING SCHEMATIC

CKCB MADISON AVE DEVELOPMENT
262502-3-078-2006

BGE Environmental, LLC
Wetland Consulting & Land Use Planning

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ANISOGLU

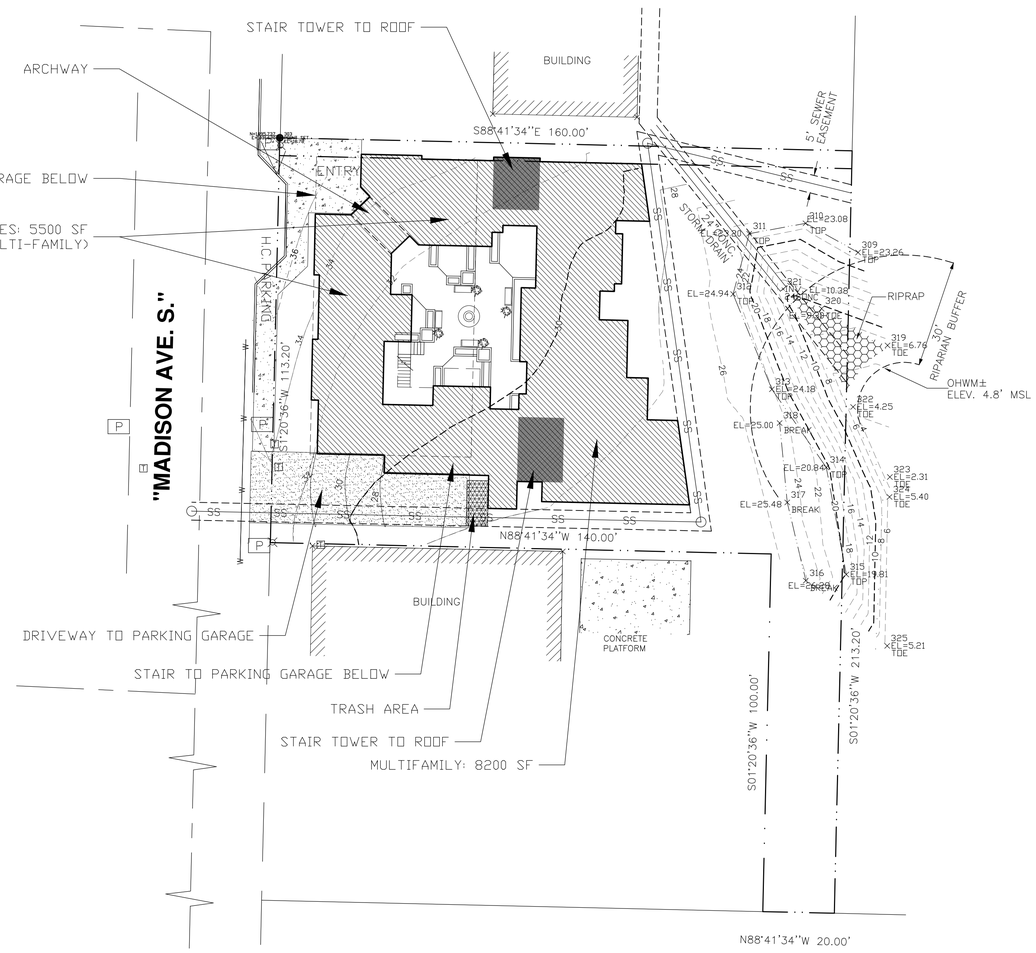
ARCHITECTURE
ART AND IDEAS

271 WYATT WAY NE, SUITE 102
BAINBRIDGE ISLAND, WA
9 8 1 1 0

p 2 0 6 2 2 6 8 3 1 3

cihan@anisoglu.com
seanfancy@gmail.com

3462
REGISTERED ARCHITECT
Cihan H. Anisoglu
STATE OF WASHINGTON




ZONING: MIXED-USE TOWN CENTER

LOT SIZE: 18112 SF (NOT COUNTING 20' STRIP)
BASE FAR: COMMERCIAL: 60%=10,867
RESIDENTIAL: 40%=7,244

## DESCRIPTION

PARCEL B OF CITY OF WINSLOW SHORT PLAT (W-46) RECORDED UNDER AUDITOR'S FILE NO. 7801190137; THAT PORTION OF GOVERNMENT LOT 4, SECTION 26, TOWNSHIP 25 NORTH, RANGE 2 EAST, W.M., DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID GOVERNMENT LOT 4; THENCE S0*32'40 W ALONG THE WEST BOUNDARY OF SAID GOVERNMENT LOT 4; A DISTANCE OF 280.18 FEET; THENCE N89*30'E TO THE INTERSECTION OF THE EAST LINE OF MADISON STREET AND THE SOUTH LINE OF BJUNE DRIVE; THENCE S0*32'40 W 210.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE S0*32'40 W 113.20 FEET; THENCE S89*29'30 E 140.00 FEET; THENCE S0*32'40 W 100.00 FEET; THENCE S89*29'30 E 20.00 FEET; THENCE N0*32'40 E 213.20 FEET; THENCE N89*29'30 W 160.0 FEET TO THE POINT OF BEGINNING.

## REFERENCES

| | |
|---|---|
| STANDARD OIL | 74-4168 |
| KING | 86-8420 |
| MILLER | 97-S2875 |
| LARSEN | 98-S2986 |

## LEGEND

- PROPERTY LINE
- ADJOINING PROPERTY LINE
- RIGHT-OF-WAY
- EDGE OF GRAVEL DRIVE
- WATER LINE
- CENTERLINE OF ROAD
- TOE OF SLOPE
- TOP OF SLOPE
- CONTOUR LINE
- SANITARY SEWER MAN HOLE
- SEWER LINE
- EASEMENT
- LIGHT POLE
- TELEPHONE VAULT
- POWER VAULT
- SET 3/4" IRON PIPE YPC & 2"X2" STAKE

20 0 20 40 60
Scale: 1" = 20'

| No. | Date | Description |
|---|---|---|
| | 08.29.17 | PRE-APPLICATION CONFERENCE |
| | 10.27.17 | PRE-APPLICATION CONFERENCE |

CKCB
MADISON AVE PROJECT

Project
Drawn
Sheet Title
Sheet Number

# PHOTOGRAPHS

VIEW TO EAST, THROUGH PARCEL FROM MADISON AVE S

RAVINE SETTING OF MATURE TREES

PATH ALONG NORTHERN PROPERTY LINE

SOUTHERN VIEW THROUGH RAVINE

VIEW TO THE WEST; MADISON AVE S

SOUTHERN ADJACENT

NORTHERN ADJACENT

DENSE NOXIOUS, INVASIVE COVER.  NOTE IVY TO MATURE TREES ON RIGHT

LANDWARD OF TOP-OF-SLOPE.  VIEW TO THE SOUTH

VIEW FROM THE SOUTHEAST CORNER

IVY ESTABLISHED TO MATURE TREES ALONG TOP-OF-SLOPE

VIEW TO CMP

EASTERN SIDE OF RAVINE

BOND ESTIMATE WORKSHEET

# CKCB MADISON AVE DEVELOPMENT

5-Feb-18

PROJECT LOCATION:
MADISON AVE S
BAINBRIDGE ISLAND, WA 98110

BY: BGE ENVIRONMENTAL, LLC
BREMERTON, WA 98310
360.710.6066

| PLANT MATERIALS | | | | | |
|---|---|---|---|---|---|
| Type | Unit Price | Unit | Quantity | Description | Cost |
| 4" diameter | | each | | | |
| 1 gallon | $11.00 | each | 23 | E. huckleberry | $253.00 |
| | $9.00 | each | 11 | Oceanspray | $99.00 |
| | $11.00 | each | 16 | Salal | $176.00 |
| 2 gallon | | | | | |
| 5 gallon | $20.00 | each | 3 | Douglas fir | $60.00 |
| Stakes (cost/linear ft) | | each | | | |
| Plugs (10 $in^3$) | | each | | | |
| Seed (lbs/sq ft) | | LB | | | |
| | | | | SUBTOTAL | $588.00 |
| **INSTALLATION COSTS (LABOR, EQUIPMENT, & OVERHEAD)** | | | | | |
| **Type** | **Unit Price** | **Unit** | **Quantity** | **Description** | **Cost** |
| Compost | | CY | | | |
| Labor, area preparation | $45.00 | hr | 20 | invasive removal | $900.00 |
| Labor, landscaping | $45.00 | HR | 6 | plant installation | $270.00 |
| Labor, restoration specialist | $80.00 | HR | 10 | includes As-built | $800.00 |
| Operations, machinery (bulk) | | day | | as necessary | |
| Agroform, equivalent fertilizer | $0.25 | each | 53 | | $13.25 |
| Mulch; straw, 2" deep | | CY | | | |
| Mulch; wood chip, 2" deep | $20.00 | CY | 8 | | $160.00 |
| Stabilizer; jute, waddle, etc | | unit | | | |
| Turf Staples; biodegradable | | 1 | | | |
| Irrigation; temporary | | Acre | | | |
| | | | | SUBTOTAL | $2,143.25 |
| **MAINTENANCE & MONITORING** | **Unit Price** | **Unit** | **Quantity** | **Description** | **Cost** |
| **Maintenance, annual** | | | | | |
| Less than 1,000 sq ft of buffer | $350.00 | each | 8 | Twice/year | $2,800.00 |
| Larger than 1,000 sq ft, but | | | | | |
| < 5,000 sq ft of buffer | | each | | | |
| Larger than 5,000 sq ft buffer only | | each | | | |
| **Monitoring, annual** | | | | | |
| Less than 1,000 sq ft of buffer | $650.00 | each | 4 | Once / year | $2,600.00 |
| Larger than 1,000 sq ft, but | | | | | |
| < 5,000 sq ft of buffer | | each | | | |
| Larger than 1 acre but < 5 | | | | | |
| acres of buffer and/or wetland | | day | | | |
| | | | | | |
| **Final Monitoring Report** | $1,500.00 | STD | 1 | Year 5 | $1,500.00 |

*BGE18_0110.BOND.jki*

**TOTAL** $12,362.50

**BOND OF 150% OF TOTAL** $18,543.75

BGE ENVIRONMENTAL, LLC.

Wetland Consulting and Land Use Planning

MAIN OFFICE (MAIL):
2102 BRASHEM AVE
BREMERTON, WA 98310

BAINBRIDGE OFFICE:
755 WINSLOW WAY EAST, SUITE 101
BAINBRIDGE ISLAND, WA 98110

OFFICE: 360.710.6066
WWW.BGEENVIRONMENTAL.COM

**CITY OF BAINBRIDGE ISLAND**

**ENVIRONMENTAL (SEPA) CHECKLIST - *UPDATED 2014***
**FORM MUST BE COMPLETED IN INK, PREFERABLY BLUE**
**PENCIL WILL NOT BE ACCEPTED**

**PLEASE READ THE FOLLOWING CAREFULLY BEFORE FILLING OUT THE 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:** [help]

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:** [help]

**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.

City of Bainbridge Island
FEB 28 2018
Planning and Community Development

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**A. background** [help]

1. Name of proposed project, if applicable: [help]
   CKCB MADISON AVE. DEVELOPMENT — A

2. Name of applicant: [help]
   CIHAN ANISOGLU — A

3. Address and phone number of applicant and contact person: [help]
   PO BOX 10386, BAINBRIDGE ISL. WA 98110
   206 226 8313 — A

4. Date checklist prepared: [help]
   1/1/18 — A

5. Agency requesting checklist: [help]
   CITY OF BAINBRIDGE ISL. — A

6. Proposed timing or schedule (including phasing, if applicable): [help]
   CONSTRUCTION TO BEGIN SUMMER 2018
   1 YR CONSTRUCTION — A

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [help]
   NO — A

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [help]
   - SOIL TEST FOR CONTAMINANTS BY GEOTECH CONSULTANTS NOV. 15, 2002
   - GEOTECH ENGINEERING STUDY - DEC. 4 2002
   - PHASE 2 AMENDED REPORT DEC. 23 2011

   A

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. [help]
   NO — A

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| 10. List any government approvals or permits that will be needed for your proposal, if known. [help]<br>COBI SITEPLAN REVIEW, SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT, COBI BUILDING PERMIT | Shoreline Variance (for height) |
| 11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) [help]<br>10 UNIT MULTIFAMILY COURTYARD STYLE DEVELOPMENT W/ UNDER BUILDING PARKING | Public Trail (Waterfront Trail) |
| 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. [help]<br>VACANT PARCEL OF LAND SOUTH OF 220 MADISON AVE. S, BAINBRIDGE ISL. WA 98110 | TA#: 262502-3-078-2006 |

**B. ENVIRONMENTAL ELEMENTS** [help]

**1. Earth**

a. General description of the site [help]
(circle one): Flat, rolling, hilly, steep slopes, mountainous,
RELATIVELY FLAT - GENTLE SLOPE ACROSS PROP.
other: _____

Steep Slopes + Marine Bluff (east)

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| b. What is the steepest slope on the site (approximate percent slope)? [help]<br>100 % BUT LESS THAN 20' VERTICLE - JUST IN THE SHORELINE BUFFER | A |
| 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. [help]<br>MEDIUM TO VERY DENSE SILTY SAND PER SOILS REPORT | A |
| d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [help]<br>No | A |
| 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. [help]<br>EXCAVATION AREA: 10,000 SQ FT<br>SOIL TO BE REMOVED: ≈ 800 CU YARDS | A |
| f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [help]<br>UNLIKELY | Will be required to provide erosion control measures. |
| g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [help]<br>≈ 10 000 SQ FT | A |

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| h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [help]<br>COVER EXCAVATED CUTS W/ POLY, STRAW BAILS/ SILT FENCE @ LOW PORTIONS OF SITE | A |
| **2. Air** | |
| a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. [help]<br>EXHAUST EMISSIONS FROM VEHICLES, EXCAVATING EQUIP. MINIMAL | A |
| b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]<br>NO | A |
| c. Proposed measures to reduce or control emissions or other impacts to air, if any: [help]<br>NA | A |
| 3. **Water** | |
| a. Surface Water: [help] | |
| 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. [help]<br>INLET FROM EAGLE HARBOR | A |

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| 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. [help] PROPOSED PROJECT IS WITHIN 200 FEET OF INLET. BUT OUTSIDE OF BUFFER AREAS NO WORK OVER WATER | A |
| 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. [help] NONE | A |
| 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [help] NO | A |
| 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [help] NO | A |
| 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. [help] NO | A |

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| b. Ground Water: | |
| 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. [help]<br>NO | A |
| 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. [help]<br>NA | A |
| c. Water runoff (including stormwater): | |
| 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. [help]<br>STORM WATER FROM ROOFS, COURTYARDS, DRIVEWAY WILL BE DIRECTED INTO COBI STORM SEWER SYSTEM. | A |
| 2) Could waste materials enter ground or surface waters? If so, generally describe. [help]<br>NO | A |

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| 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.<br>NO | A |
| d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: | Will be required/ conditioned by DE. |
| 4. **Plants** [help]<br>a. Check the types of vegetation found on the site: [help]<br>✓ deciduous tree: alder. maple, aspen, other<br>✓ evergreen tree: fir, cedar, pine, other<br>✓ shrubs<br>✓ grass<br>____ pasture<br>____ crop or grain<br>____ Orchards, vineyards or other permanent crops.<br>____ wet soil plants: cattail, buttercup, skunk cabbage, other<br>____ water plants: water lily, eelgrass, milfoil, other<br>✓ other types of vegetation | A<br>Blackberry Bushes cover the majority of the site. |
| b. What kind and amount of vegetation will be removed or altered? [help]<br>INVASIVE PLANT MATERIAL (BLACKBERRY BUSHES) GRASSES, SHRUBS | A |
| c. List threatened and endangered species known to be on or near the site. [help]<br>NONE | A |

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| d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [help]<br>PROPOSED LANDSCAPING WILL BE URBAN LANDSCAPE MATERIALS PLANTED IN COURTYARD PLANTERS ALONG SIDEWALK AND 'BACK YARD' AREAS | A<br>Native trees + shrubs as mitigation |
| e. List all noxious weeds and invasive species known to be on or near the site.<br>BLACKBERRY BUSHES, IVY | A<br>Scott's Broom |
| 5. **Animals** | |
| a. List any birds and other animals which have been observed, or are known to be on or near the site. Examples include: [help]<br>birds: hawk, heron, eagle, songbirds, other: ROBIN, CROW<br>mammals: deer, bear, elk, beaver, other:<br>fish: bass, salmon, trout, herring, shellfish, other : | A |
| b. List any threatened and endangered species known to be on or near the site. [help]<br>NONE | A |
| c. Is the site part of a migration route? If so, explain. [help]<br>NO | A |
| d. Proposed measures to preserve or enhance wildlife, if any: [help]<br>NA | A |
| e. List any invasive animal species known to be on or near the site.<br>NONE | A |

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6. **Energy and natural resources**

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

ELECTRIC, LP, SOLAR PANELS
ELEC. & SOLAR PANELS FOR HEAT.

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

NO

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

HIGH EFFICIENCY HEATERS, LED LIGHTING

7. **Environmental health**

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

NO

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

NONE

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

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| vicinity.<br>NONE | A |
| 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.<br>LP TANKS | A |
| 4) Describe special emergency services that might be required.<br>POLICE, FIRE, EMT | A |
| 5) Proposed measures to reduce or control environmental health hazards, if any: | A |
| b. **Noise** | |
| 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [help]<br>TRAFFIC, TRUCK DELIVERY, GARBAGE TRUCKS | A |
| 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. [help]<br>- CONSTRUCTION NOISE DURING CONSTRUCTION<br>- TRAFFIC (CARS PULLING IN & OUT OF PARKING GARAGE | A |
| 3) Proposed measures to reduce or control noise impacts, if any: [help]<br>- CONSTRUCTION NOISE LIMITED TO HOURS OF OPERATION DICTATED BY COBI | A |
| 8. **Land and shoreline use** | |
| a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [help] | |

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CURRENTLY SITE IS VACANT PARCEL - NEIGHBORING BUILDINGS HOUSE OFFICE / RETAIL USES. | A

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

NO

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: | A

NO

c. Describe any structures on the site. [help] | A

SEWER LINES, MANHOLES — OTHERWISE NO STRUCTURES

d. Will any structures be demolished? If so, what? [help] | A

NO

e. What is the current zoning classification of the site? [help] | A

CORE - MIXED USE TOWN CENTER

f. What is the current comprehensive plan designation of the site? [help] | A

MIXED USE TOWN CENTER

g. If applicable, what is the current shoreline master program designation of the site? [help] | A

URBAN

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| h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [help]<br>NO | Marine Bluff + Steep Slopes |
| i. Approximately how many people would reside or work in the completed project? [help] 14 – 22 | A |
| j. Approximately how many people would the completed project displace? [help]<br>NONE | A |
| k. Proposed measures to avoid or reduce displacement impacts, if any: [help]<br>NA | A |
| L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [help]<br>MEET ZONING & DESIGN GUIDELINES | A |
| m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:<br>NA | A |
| 9. **Housing** | |
| a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [help]<br>10 UNITS – MIDDLE/HIGH | A |
| b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [help]<br>NONE | A |

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| c. Proposed measures to reduce or control housing impacts, if any: [help]<br>NA | A |
| **10. Aesthetics** | |
| a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [help]<br>35' ABOVE AVE. GRADE - EXT. MATLS: STUCCO, METAL SIDING, BRICK | A<br>Shoreline Variance requested to increase height from 30' → 35' |
| b. What views in the immediate vicinity would be altered or obstructed? [help]<br>VIEWS FROM THE NORTH LOOKING SOUTH & FROM ACROSS THE STREET LOOKING AT THE PROPERTY WOULD BE ALTERED | A |
| c. Proposed measures to reduce or control aesthetic impacts, if any: [help]<br>COMPATIBLE WITH OTHER BUILDING IN THE AREA | A |
| **11. Light and glare** | |
| a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [help]<br>LIGHT FROM THE RESIDENCES AT NIGHT. SUN REFLECTION OFF OF SOME WINDOWS | A |
| b. Could light or glare from the finished project be a safety hazard or interfere with views? [help]<br>NO | A |
| c. What existing off-site sources of light or glare may affect your proposal? [help]<br>LIGHT FROM ADJ. BUILDINGS AT NIGHT, SUN REFLECTION OFF OF WINDOWS | A |

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| 12. **Recreation** | |
| a. What designated and informal recreational opportunities are in the immediate vicinity? [help]<br>PARKS, MARINAS, THEATERS NEARBY | A |
| b. Would the proposed project displace any existing recreational uses? If so, describe. [help]<br>NO | A |
| c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [help]<br>NA | A<br>Completion of a section of the Waterfront Trail. |
| 13. **Historic and cultural preservation** | |
| a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. [help] NO | A |
| 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. [help]<br>NO | A |

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| 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. [help]<br>NA | A |
| 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.<br>NA | A |
| **14. Transportation** | |
| a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [help] DRIVEWAY ACCESS TO MADISON AVE S. | A |
| 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? [help] YES - BUS, FERRY | A |
| c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [help] ADD 14-15 PARKING SPACES | A |
| d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [help]<br>NO | A<br>Some frontage improvements required. |

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

WASH ST. FERRY SERVICE

A within Walking Distance

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

TRAFFIC ENGINEER INDICATED THAT PROJECT WOULD GEN. 5 TRIPS PER HOUR, PEAK VOLUMES WOULD BE 52 TRIPS. NO COMMERCIAL VEHICLE EXCEPT 1/WEEK GARBAGE ANTICIPATED

A

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

NO

A

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

TRAFFIC IMPACT FEE

A

15. **Public services**

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

MINIMAL – ADDITION OF 10 RESIDENCES

A

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

NA

A

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16. **Utilities**

a. Circle utilities currently available at the site: [help]
(electricity) natural gas, (water) (refuse service) (telephone) (sanitary sewer) septic system, other STORM SEWER

A

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. [help]

- SANITARY & STORM SEWER CONNECTION – COBI
- ELECTRIC – PSE
- TELEPHONE / CABLE – CENTURYLINK / COMCAST
- GARBAGE – BAINBRIDGE DISPOSAL

C. **Signature** [HELP]

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

Signature: [signature]

Name of signee CIHAN AKISOGLU

Position and Agency/Organization OWNER / ARCHITECT

Date Submitted 2·28·2018

CHECKLIST REVIEWED BY:

[signature]

Project Manager, Department of Planning and Community Development

Request for a 5 foot height variance.

We are proposing a 10 unit building with two units in the back that face the ravine to the east. This would have been a very private back yard for these units and one that other similar developments have enjoyed. However the city is requiring a public path as close as 15-20 feet from the homes. Because of this requirement all privacy is lost. In order to mitigate this we decided to create a private rooftop deck for these units and in order to access them with stairs and an elevator we are requesting an additional 5 feet in height, from the base height of 30 feet to 35 feet – only for these stair towers.

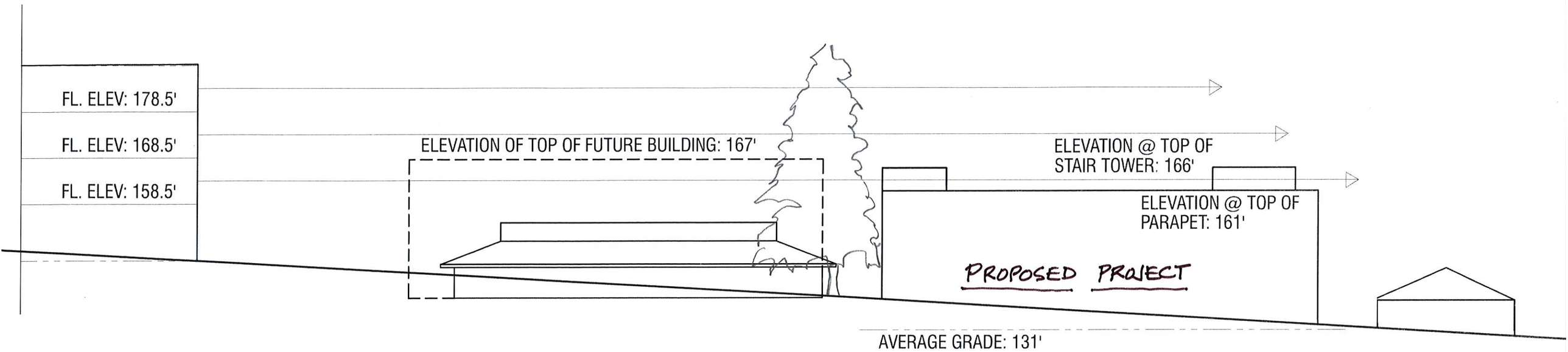
It should be noted that although an additional 5 foot height variance could be requested for the entire building we are asking for a minimum amount - only 5% of the building footprint.

From the sidewalk at the north corner of the property this building is only 23 feet above the sidewalk, and the stair tower is set back into the middle of the building so it's impact is really minimal from the street.

I can understand that there are objections from owners in the Seabreeze Building. But there are some things that should be considered. First that building enjoyed a building height of 45 foot because it is right up against 200 foot to the shoreline, which puts them outside the shoreline jurisdiction. Second, most of the units will be able to look over the top of the stair tower, and those on the lower floor would be affected even with a 30 foot height. Also there is a piece of property between the two properties and the average grade for that building is more than 5 feet above the average grade for ours, so future development on that property even at 30 foot height limit will be higher than our stair towers.

As an additional benefit we have offered to not put any mechanical equipment on the roof. Looking out over finished terraces will be much more attractive than a roof full of equipment.

In this development we are proposing to provide for the public waterfront trail across the east side of the property. This is a public benefit, which compromises the privacy for the two townhouses on the east of the property. This is a hardship unique to this particular piece of property, to the installation of a new segment of the waterfront trail, and the public exposure that the new trail will create. To mitigate that, we have designed private space on the roof of the building in rooftop decks. It is the desire of the owners of the two townhouses to provide handicapped access to the rooftop decks for themselves and future owners. The only way to do that is to provide an elevator/stair tower, which needs another 5 ft. of height to be able to go to this rooftop level. This is why we have applied for this variance. This variance for an extra 5 feet in height allowance is limited to the two elevator/stair towers in the two townhouses. The variance is not requested for the entire building – it represents approximately 5% of the roof area of the building proposed and would be a minimum impact to surrounding properties.




# RELATIVE ELEVATIONS ALONG MADIOSON AVE S.

City of Bainbridge Island
MAR 16 2018

# Design Review Board Design Guideline Checklist

Mixed Use Town Center and High School Road Districts / General Design Guidelines– BIMC 18.18.030

☐ **"Pre-App" Meeting Checklist**

☐ **"Post-App" Meeting Checklist**

**Project Name/Case #:** CKCB MADISON AVE. DEVELOPMENT / PLN 50958 SPR, SSDP & SVAR

**Land Use Application (Pre-app, Site Plan Review etc.):** SITEPLAN REVIEW, SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT, SHORELINE VARIENCE

**Project Description:** DEVELOPMENT OF A COURTYARD STYLE 10 UNIT RESIDENTIAL BLDG WITH UNDERBUILDING PARKING

| Applicable Design Guidelines | | | | |
|---|---|---|---|---|
| **Design Guideline** | **Intent** | **Description** | **Applicant Response** | **DRB Action (Y/N)** |
| **1. Parking Lot Location** | To have parking lots be as visually unobtrusive as possible. | Parking lots should not front upon intersections. Parking lots should be located behind or to the side of buildings. | **Parking is proposed underneath the building.** | |
| **2. Outdoor Open Spaces and Amenities** | To establish, over time, a variety of open spaces within the town center | New development and redevelopment should provide facilities near or visible from the sidewalk for outdoor public use. Examples of such facilities include seating areas, courtyards, and small plaza spaces. Generally, the larger the development, the greater the number and size of such spaces. Furthermore, it is desirable to locate these spaces where they can receive sun and where they can easily be connected to adjacent concentrations of land use. | **Outdoor seating is proposed in the expanded entry to the project.** | |

# Design Review Board Design Guideline Checklist

## Mixed Use Town Center and High School Road Districts / General Design Guidelines– BIMC 18.18.030

| | | | | |
|---|---|---|---|---|
| **3. Pedestrian Connections** | To create a network of safe, comfortable and attractive linkages for people on foot | New development and redevelopment should include pedestrian walkways, raised and/or separated from traffic lanes, that offer access from the public sidewalk to the main entrance to the building. (Locating a building entrance directly on the sidewalk satisfies this guideline.) In addition, connections to adjoining properties should be provided. Furthermore, within parking lots, there should be pedestrian walkways that allow people to traverse the lot without being forced to use vehicular aisles. | **The archway entrance to the interior courtyard provides this.** | |
| **4. Shielded Lighting** | To ensure that the source of lighting for parking, service and loading areas is not visible from neighboring development. | Freestanding light fixtures should not exceed 14' in height. All exterior lighting fixtures should incorporate cutoff shields to prevent spillover. | **All exterior lighting will comply with the outdoor lighting regulations in BIMC 18.15.040.** | |
| **5. Screen Service Areas** | To conceal loading, trash, and storage areas from view. | Trash containers should be enclosed on all sides with solid walls and gates. Loading docks, outdoor storage and staging areas should be screened with fencing and vegetation, such as evergreen hedges. Chain link fencing is not acceptable. | **Located along south side of building.** | |
| **6. Common Open Space** | To ensure that open spaces within a development containing dwelling units are truly usable by all residents. | While some portions of common open space may be dedicated to specific amenities such as pools and tennis courts, most of it should be designed in such a manner as to allow walking throughout the development, to any adjacent commercial or recreational areas, and to surrounding streets. Except for designated senior housing, some place for children to play should also be provided. | **Outdoor seating and interior courtyard.** | |

# Design Review Board Design Guideline Checklist

Mixed Use Town Center and High School Road Districts / General Design Guidelines– BIMC 18.18.030

| | | | | |
|---|---|---|---|---|
| **6a. Conceal Garage Doors** | To ensure that street frontages are not dominated by vehicular storage facilities. | Entrances to parking garages and structures should be from alleys, access lanes, or minor side streets, rather than from principal through streets. If access from a principal street is unavoidable, such access should be restricted to a single, two-way curb cut for each development. | **Located along south side of building.** | |
| **7. Overall Form** | To create visual continuity among buildings having potentially different styles. | Buildings should utilize elements such as massing, materials, windows, canopies, and pitched or terraced roof forms to create both a visually distinct "base" as well as a "cap". | THESE ELEMENTS ARE INCORPORATED IN THE DESIGN | |
| **8. Entrances** | To make it apparent from the street where major entrances to buildings are located. | Principal entrances to buildings should be visually prominent and located within close proximity to the public sidewalk. Entrances should incorporate elements such as setbacks, recesses, balconies, porches, arches, trellises, or other architectural devices. | THE ARCHWAY ENTRANCE IS RECESSED BACK WITH AN ENLARGED ENTRY PLAZA | |
| **9. Conceal Mechanical Equipment** | To ensure that larger pieces of mechanical equipment are visually unobtrusive. | Rooftop mechanical equipment should be concealed by and integrated within the roof form of a building. Simply surrounding it with a parapet wall is not sufficient. | MECH EQUIP. WILL BE SCREENED FROM STREET AS WELL AS VIEW FROM RESIDENCES ABOVE | |
| **10. Structured Parking** | To diminish the visual impact of parking as viewed from streets. | Any level of parking contained within or under a structure that is visible from a public street shall fully screen the parking with either another use, a facade that incorporates artwork, or trees and other vegetation. | **Parking is proposed underneath the building.** | |
| **11. Encouraging Varied Details** | To ensure that denser types of housing include details that create a sense of human scale and that break down the bulk of larger buildings. | Buildings containing residential dwellings should incorporate most, if not all, of the following elements:<br>• Front porches or stoops<br>• Bay windows or dormers<br>• Visible trim around windows and building | THE ELEMENTS ARE INCORPORATED IN THE DESIGN | |

| | | | | |
|---|---|---|---|---|
| | | corners<br>• Base articulation, such as a plinth or first floor raised above grade | | |

| | | | | |
|---|---|---|---|---|
| **12. Integration** | To ensure that signage is a part of the overall design approach to a project and not an afterthought. | The design of signs should be integrated with the architecture and site design of a project. | **The Residential nature of the project does not require signage.** | |
| **13. Creativity** | To encourage interesting and even unusual approaches to graphic design. | Signs should be expressive and even whimsical, exhibiting a graphic design approach to form and lighting. Standard, back-lighted, metal frame and plastic panel signs are discouraged. | **The Residential nature of the project does not require signage.** | |
| **14. Awning Signs** | To produce a visual effect that emphasizes buildings and vegetation, not advertising. | Signs painted on awnings are allowed, but awnings should not be internally illuminated. | **The Residential nature of the project does not require signage.** | |

**Guidelines Requiring Action per DRB:** _____

**DRB Summary Motion on Actions:** _____

_____

_____

**Design Review Board Design Guideline Checklist**

Mixed Use Town Center and High School Road Districts / General Design Guidelines– BIMC 18.18.030

# Design Review Board Design Guideline Checklist

Commercial and Mixed-Use Design Guidelines for All Zoning Districts– BIMC 18.18.030

☐ **"Pre-App" Meeting Checklist**

☐ **"Post-App" Meeting Checklist**

**Project Name/Case #:** CKCB Madison Ave. Project

**Land Use Application (Pre-app, Site Plan Review etc.):** Pre-app

**Project Description:**

**See the enclosed project description. Due to the conflict between the Shoreline Code and the Mixed Use Town Center zone, we are revising the application from Mixed Use – which is not allowed under the current Shoreline Code – to and 'All Residential ' project, which is allowed under both codes. The city is trying to rectify this conflict, which would allow 8 of the residential units to revert to 'Hotel' use. The design works either way.**

| Applicable Design Guidelines | | | | |
|---|---|---|---|---|
| **Design Guideline** | **Intent** | **Description** | **Applicant Response** | **DRB Action (Y/N)** |
| **1.** | To develop variation in façade treatment to provide visual interest. | Vary building materials or patterns to produce variations in texture. | **Exposed steel structure, brick, stucco, dark metal siding and wood soffits in overhangs provides variation in materials.** | |
| **2.** | To modulate the scale of building masses. | Building elevations shall be vertically modulated in no more than 20' increments or horizontally in no more than 30' increments. Modulation is defined as a change in plane or articulation (such as bands, cornices, setbacks or changes in | **Building elevations to a large extent does this.** | |

# Design Review Board Design Guideline Checklist

Commercial and Mixed-Use Design Guidelines for All Zoning Districts– BIMC 18.18.030

| | | | | |
|---|---|---|---|---|
| | | material). | | |
| **Applicable Design Guidelines** | | | | |
| **Design Guideline** | **Intent** | **Description** | **Applicant Response** | **DRB Action (Y/N)** |
| **3.** | To limit the visual impact of blank walls and facades and better assure aesthetic appeal. | Blank walls shall not be visible to public spaces. Blank facades should otherwise be limited to the back of buildings or where required by the building code. Treatments to alleviate blank walls shall be similar in materials to facades normally in view of the public. | **This is accomplished in the design** | |
| **4.** | To establish visually prominent ground floor facades. | The first floor of multi-storied buildings should be taller than upper floors. Minimum ceiling height should be at least 10' to allow transom or larger display windows. Other elements such as transom windows, canopies, cornices, and prominent entries are encouraged. First floor uses shall be pedestrian oriented and include substantial shop windows. Display windows on the first floor of retail and commercial buildings should be the predominant surface of the first floor. | **This project does not have commercial storefront so the 10 ft. ceiling height does not apply in this case. The all-residential units have 9' ceiling heights.** | |
| **5.** | To maintain pedestrian scale along facades facing public ways. | Facades facing public ways shall incorporate setbacks or articulation that establishes a pattern of bays or window openings. Facades shall include features such as display windows, columns or bays, recessed entries or canopies | **This project achieves much of this. Multiple entries do not apply with the use proposed.** | |

# Design Review Board Design Guideline Checklist

Commercial and Mixed-Use Design Guidelines for All Zoning Districts– BIMC 18.18.030

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| | | or other recesses. The use of a variety of materials at the sidewalk level is encouraged. Multiple building entrances are encouraged. | | |
| **Applicable Design Guidelines** | | | | |
| **Design Guideline** | **Intent** | **Description** | **Applicant Response** | **DRB Action (Y/N)** |
| **6.** | To maintain the pedestrian activities by encouraging continuous frontages along sidewalks. | Where parking fronts onto a public street, the maximum separation between buildings shall be 80 feet. Greater separations are permitted if landscape setbacks are increased or other design features such as low walls, trellises and public spaces are created along the street frontage. | **All parking is under the building.** | |
| **7.** | To reduce overall scale of the building into multiple building masses. | Facades over 128' in length shall be separated by pedestrian passage or open space. Passages should be at least 12' wide and two stories in height if covered. Façade setback should be expressed at the roof line by changes in plane. Passage should connect to public open space. | **Building is less than 128' long.** | |
| **8.** | To encourage the creation of public outdoor spaces. | Building setbacks may be increased for the creation of public outdoor seating areas. Entry alcoves and small outdoor spaces may be located between the building and the sidewalk. | **Outdoor seating is proposed in the expanded entry to the project.** | |
| **9.** | To soften the impact of the built environment. | Encourage public pedestrian passageways and vegetation between buildings. | **This is accomplished in the proposed design.** | |

# Design Review Board Design Guideline Checklist

Commercial and Mixed-Use Design Guidelines for All Zoning Districts– BIMC 18.18.030

| | | | | |
|---|---|---|---|---|
| **10.** | To encourage compatibility of development with both community and neighborhood characteristics. | Building designs should respond to nearby buildings that meet the upgraded design standards by using shared elements, materials or massing. | **The design is somewhat dictated by the low height limit in the shoreline zone - although the design might be described as 'Classic Modern' the wide range of designs in this neighborhood makes this complimentary to the overall neighborhood.** | |
| **Applicable Design Guidelines** | | | | |
| **Design Guideline** | **Design Guideline** | **Design Guideline** | **Design Guideline** | **Design Guideline** |
| **11.** | To minimize the intrusiveness of commercial signage. | Signage, corporate colors and other icons of the business may not dominate the exterior of the building. including canopies and separate outdoor structures covering activities associated with the business. Color should be used to express changes in detail or material but exterior building or structure colors may not be used as signs, or the extension of signs. When businesses are sold or tenants are changed, any sign modification shall trigger this requirement. | **The Residential nature of the project does not require signage.** | |
| **12.** | To improve the pedestrian environment around buildings and minimize curb cuts. | Where a drive through facility is allowed, drive throughs must be in conjunction with a parking lot that serves the same business, must be to the side or rear of the building and should not be visible from public streets. Drive throughs should consist of no more than a single vehicle lane. | **NA** | |
| **13.** | To provide pedestrian access to buildings. | Provide multiple entrances along streets. Pedestrian passageways are encouraged. | **The archway entrance to the interior courtyard provides this.** | |

## Design Review Board Design Guideline Checklist

Commercial and Mixed-Use Design Guidelines for All Zoning Districts– BIMC 18.18.030

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|---|---|---|---|---|
| **14.** | To provide weather protection for pedestrians. | Recessed entries and/or overhead weather protection above the sidewalk entrances shall be used. | **Although the archway provides some weather protection at the entrance to the courtyard, the residential use is incompatible with this requirement.** | |
| **15.** | To maintain smaller scale commercial buildings. | Buildings in excess of a 10,000 square foot footprint should be visually split into two or more distinct elements. | **NA** | |
| **Applicable Design Guidelines** | | | | |
| **Design Guideline** | **Design Guideline** | **Design Guideline** | **Design Guideline** | **Design Guideline** |
| **16.** | To reduce the visual impact of parking areas. | Create small parking clusters connected by vegetated landscaping and pedestrian walkways. Internal streets that connect or serve parking areas shall be designed as streets with sidewalks, planters and pedestrian scale lighting. | **Parking is under the building so this is NA.** | |

**Guidelines Requiring Action per DRB:** _____

**DRB Summary Motion on Actions:** _____

_____

_____

CITY OF
BAINBRIDGE ISLAND

# Design Review Board
# Special Meeting
# Monday, April 23, 2018

Call to Order (Attendance, Agenda, Ethics)
Review & Approve Minutes
Bainbridge Island Child Care Center
CKCB Madison Avenue Development
New/Old Business
Adjourn

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## Call to Order (Attendance, Agenda, Ethics)

Chair Alan Grainger called the meeting to order at 2:03 pm. Design Review Board (DRB) members in attendance were Alan Grainger, Jim McNett, Joe Dunstan and Jason Wilkinson. Chris Gutsche and Peter Perry were absent and excused. Council member Ron Peltier was present. Planning Commission members in attendance were Kim McCormick Osmond, Jon Quitslund and Bill Chester. City staff in attendance were David Greetham Senior Planner, Christy Carr Senior Planner, Olivia Sontag Planner and Administrative Specialist Carla Lundgren who recorded the meeting and prepared minutes.

## Review & Approve Minutes

**Motion**: I move to approve the April 2, 2018 minutes.
**Wilkenson/Dunstan:** Motion passed 4-0.

## Bainbridge Island Child Care Center

**Project Manager:** David Greetham, Senior Planner

DRB recommendation:

- Discuss intention with neighbors of property at earliest convenience
- Sidewalk down driveway to separate from driveway
- Use landscaping to create boundaries for an outside play area
- Incorporate environmental learning through design
- Awareness of potential increased cost in separation of vehicle and pedestrian areas, as well as, a fenced/contained outdoor play area

## CKCB Madison Avenue Development (PLN50958 SPR/SSDP/SVAR)

**Project Manager:** Olivia Sontag, Planner

DRB Recommendation: **Condition of recommendation*

- Green Screen over brick for ivy to grow up to protect the mortar
- Consideration for a lift or elevator from basement parking to units
- Look into the Fair Housing Act and how the project meets the requirements*

- Move bedroom window on lower level over to the right so the bed isn't right up against the window and create more of a secluded area for the bed*
- Check the grade next to the handicap parking spot
- More street trees in front of the blank walls
- Prepare a landscape plan for DRB review*
- Add additional windows to the master bedroom of the southeast facing the harbor*
- Discuss with neighboring property if you can move the handicap parking spot more north
- Paint color to be more creamy than white
- Confirm code requirement for square footage vs. number of exits required
- Bring color and building material samples for DRB review before project is built*

**Public Comment:** Charles Schmid asked about impact on the waterfront trail.

**Motion:** I recommend approval with the stated conditions and additional review of building materials and landscape site plan prior to permitting.
**Grainger/Wilkenson:** 4-0

**Design Standards and Subdivision Review Process**
Christy Carr, Senior Planner *(Discussion Only)*

**New/Old Business**
Chair, Alan Grainger, began a discussion on the absence of DRB member, Chris Gutsche for the past five consecutive meetings with no communication regarding the reason(s) for the absences. Mr. Grainger revealed that the City Code states that after three consecutive absences from any DRB member can be cause for removal from the DRB.

**Motion:** I move that Chris Gutsche be removed from the Design Review Board and for his vacancy to be posted for the remainder of his term.
**Grainger/Wilkenson:** Motion passed 4-0.

**Adjourn**
The meeting adjourned at 4:56pm.

Approved by:

Alan Grainger, Chair

Carla Lundgren, Administrative Specialist

CITY OF BAINBRIDGE ISLAND

# CITY OF BAINBRIDGE ISLAND
## DESIGN REVIEW BOARD – SPECIAL MEETING
## April 23, 2018

**PLEASE PRINT**

| Name | Affiliation | Phone/ E-Mail | Join ListServ Yes/No |
|---|---|---|---|
| ALAN GRAINGER | DRB | | |
| JOE DUNSTAN | DRB | | |
| JASON WILKINSON | DRB | | |
| BRIAN KELLY | BI Review | editor@bainbridgereview.com | |
| David Greetham | COBI - PCD | dgreetham@bainbridgewa.gov | |
| JAMES MUNETT | DRB | | |
| CHARLES SCHMITT | ABC | | |
| Ron Peltier | City Council | rpeltier@bainbridgewa.gov | |
| Rebecca Hodge | BICCC | accounts@biccc.org | NO |
| PATRICK BANKS | COATES DESIGN | PATRICK@COATESDESIGN.com | |
| Shelley Long | BICCC | slong@biccc.org | |
| MATTHEW COATES | COATES DESIGN | matthew@coatesdesign.com | Yes. |
| Olivia Sontag | COBI - PCD | | |
| CIHAN ANISOGLU | CKCB MADISON AVE | CIHAN@ANISOGLU.COM | |
| Jon Quitslund | Planning Comm. | jonquitslund@att.net | Yes on it already ? |
| BILL CHESTER | " " | bill@chesterarchitecture.com | |
| Kim McCormick Osmond | Planning Commission | Kimberly.mccormick.osmond@cobicommittee.email | yes - already on it |
| | | | |
| JONATHAN DAUK | ARCHITECT | | |
| CHARLES WENZLAU | ARCHITECT | charles@wenzlaunchitects.com | |

## Chapter 17.12 – Subdivision Standards

### 17.12.010 Applicability.

This section sets forth standards for short subdivisions, long subdivisions, large lot subdivisions, and nonresidential and multifamily subdivisions. Specific requirements relevant to each individual type of subdivision are provided throughout various chapters of this title.

### 17.12.020 Subdivision Design Guidelines.

All residential subdivisions shall comply with those design guidelines contained in "Design Guidelines for Residential Subdivisions" set forth in BIMC 18.18 and its reference documents, which are adopted as part of this title by reference.

The purpose of subdivision design guidelines is to define the qualities of subdivisions that meet the guiding principals, goals, and policies of the city's Comprehensive Plan and to serve as a tool for guiding individual projects to meet those expectations through the city's land use review procedures. The design guidelines offer a forum for the public to participate in discussions about new subdivisions in their neighborhood, and as a means of allowing flexibility in the application of development standards and zoning requirements. An applicant may be granted a departure from the design guidelines by demonstrating that an alternative design better meets the intent of the design guidelines.

### 17.12.030 Four-Step Design Process

The city's subdivision approach requires a four-step system that places the identification and conservation of resources as the primary and leading goal. This approach reverses the conventional site planning approach which typically begins by laying out the streets, lot lines and building footprints as the first part of the process. Instead of first identifying development areas, the design process begins by analyzing on-site resources and the site's connections to surrounding resources in order to identify what areas are best for preserving and those areas of the site that can best accommodate development.

The four-step design process is required for all residential subdivisions except the division or redivision of land into two lots. The process, further defined in the city's Administrative Manual, consists of four steps: 1) Delineate Natural Area; 2) Locate Homesites and Community Space; 3) Define Access; and, 4) Draw Lot Lines.

### 17.12.040 Natural Area and Community Space.

A. Natural Area Required. All residential subdivisions shall provide natural area consistent with BIMC 17.28, Definitions, Table 17.12.060-1, and the following standards:

1. Natural Area Objectives. Natural areas shall accomplish one or more of the following objectives:

a. Conservation natural resources, including wildlife habitat;
b. Protection of groundwater recharge;
c. Conservation of native soils;
d. Enhancement of the value to adjacent or neighboring open space, parks, forested areas, conservation easements, shorelines, or critical areas;
e. Enhancement of community agricultural opportunities;
f. Preservation of farmland and historic sites;
g. Preservation of unique natural land or rock features;
h. Preservation of visual qualities along highway, road and street corridors or scenic vistas.

2. Amount of Natural Area Required. The minimum natural area shown in Table 17.12.060-1 shall be provided and shall be depicted on the face of the plat.

3. Natural Area Configuration. The area designated for natural area preservation shall be configured in a manner that enhances and promotes the natural character of the island and open space characteristics of the property. Natural area configuration shall satisfy the following guidelines:

a. Natural area should be concentrated in large, consolidated areas; and
b. Natural area should connect to adjacent off-site open space areas, designated wildlife corridors, and/or critical areas; and
c. Natural area should be designed to preserve views from off site of the subject property; and
d. Natural area should be delineated with a low perimeter-to-area ratio with a minimum width of fifty (50) feet; and
e. Natural area may be included as a portion of one or more lots or may be contained in a separate open space tract.

4. Prioritization of Valued Natural Area. The relative desirability of different types of natural areas is ranked in Table 17.12.040-1, and proposed subdivisions shall design natural areas to include areas with higher priority rankings if possible. If a subdivision site contains a particularly exceptional or rare natural area feature that is lower in priority, the applicant and/or city may choose to preserve that feature over those higher in the table. Where valued natural area features are present and some portion of those features is adjacent to the same or other listed valued features in Table 17.12.040-1, the protected natural area should be designed to include those areas contiguous to valued natural area features on adjacent properties.

**Table 17.12.040-1: Valued Natural Area Features for Residential Subdivisions**

| Priority | Natural Area Feature | Notes |
|---|---|---|
| 1. | Critical Areas (as defined in Chapter 16.20 BIMC), Areas Contiguous with Critical Areas and their Buffers | All critical areas and their associated buffers shall be preserved.<br><br>Area required to be designated as Aquifer Recharge Protection Area (ARPA) as defined in Chapter 16.20.100 BIMC shall be preserved. |
| 2. | Shoreline Buffers (as defined in Chapter 16.12 BIMC) | All shoreline buffers shall be preserved. |
| 3. | Significant Trees | Significant trees should be preserved. |

| Priority | Natural Area Feature | Notes |
|---|---|---|
| 4. | Wildlife Corridors | Designated wildlife corridors as adopted by Resolution No. 2001-12, or as identified in a City-adopted wildlife corridor plan, should be preserved. Check resolution. |
| 5. | Trail Corridors | Off-road trail corridors should be preserved. |
| 6. | Pastures, Meadows, Orchards, and Farmland | Pastures, farmland and land areas currently or traditionally used in agriculture should be preserved. Where possible, the size and configuration of pasture and farmland areas should permit commercially viable farming. |
| 7. | Mature Vegetation on Ridgelines | Mature vegetation found on ridgelines of community significance (as viewed from off site) should be preserved. |

5. Natural Area Ownership. Ownership of natural area shall be established consistent with one of the following forms of ownership:

a. Private Ownership. Natural area may be held in private ownership if established by easements, restrictive covenants, natural area management plan, or other similar legal means; or
b. Common Ownership. Natural areas may be held in common by a home or property owners' association or other similar organization. For the purposes of this title, ownership of and/or conservation easement being held by a land trust, or other similar conservancy organization, shall be considered common ownership. If this ownership pattern is selected, covenant, conditions, and/or restrictions shall be required; or
c. Public Ownership. Designated natural areas shall not be required to be dedicated to the city or other public agency, and the owner shall not be required to permit public access to designated natural areas. However, if the owner offers to dedicate, the city or other public agency may choose to accept ownership of natural areas. Consequently, upon approval and acceptance by the city council, natural areas shall be dedicated to the public.

6. Natural Area Maintenance. An applicant shall submit a draft natural area management plan (NAMP) as described in the Bainbridge Island administrative manual, for review as part of the preliminary plat application. Final approval of the NAMP will occur at the time of final plat approval. The natural area management plan shall include:

a. A list of all approved uses for the natural areas. Where uses in separate natural areas vary, the specific location of each use shall be depicted graphically.
b. A maintenance plan for natural areas that clearly describes the frequency and scope of maintenance activities for natural areas and that meets all requirements set forth in subsection 7 herein and the Bainbridge Island administrative manual.
c. The approved NAMP must be filed with the Kitsap County Auditor. In the event that the natural area is not maintained consistent with the NAMP, the city shall have the right to enter the property for necessary maintenance, with the cost of such maintenance assessed against the landowner or, in the case of a homeowner's association, the owners of the properties within the subdivision and shall, if unpaid, become a tax lien on such property or properties.

7. Allowed Uses in Natural Area. Developments and activities allowed within natural area include:

a. Installation of native plants.
b. Maintenance pruning of trees and shrubs provided the structural integrity and long-term health of the vegetation is preserved.
c. Wildfire mitigation activities, other than tree removal, within a 30-foot defensible space around a primary structure, in accordance with the Bainbridge Island community wildfire protection plan and as described by Section 603 of the International Wildland Urban Interface Code.
d. Removal of invasive plant species.
e. Passive recreation, including pervious trails.
f. Potable water wells and well houses.
g. Low impact fencing or signs marking the ARPA boundary.
h. On-site sewage drainfield facilities, if construction of the system will not require the use of heavy equipment or removal of significant trees.
i. Storm drainage facilities if the applicant can demonstrate that (i) the system meets the low impact design (LID) standards of Chapter 15.20 BIMC, and (ii) construction of the system will not require the use of heavy equipment or removal of significant trees.
j. Accessory solar panels, small wind energy generators, composting bins, rainwater harvesting barrels, and cisterns, as defined in Chapter 18.36 BIMC.
k. Other structures or hard surfaces with a total footprint of no greater than 200 square feet.

B. Community Space Required. All residential subdivisions shall provide community space consistent with BIMC 17.28, Definitions, Table 17.12.060-1, and the following standards:

Section not complete.

1. Community Space Objectives

2. Amount of Community Space Required

3. Community Space Ownership

4. Community Space Maintenance

5. Allowed Uses in Community Space

**17.12.050 Homesites.** All single-family residential subdivisions require homesites located and designed consistent with BIMC 17.28, Definitions, Table 17.12.060-1, and the following standards:

1. Homesite Area.

a. A homesite area with the maximum area shown in Table 17.12.060-1 shall be provided for each lot and shall be depicted on the face of the plat.
b. The homesite area shall include the primary residential dwelling, accessory buildings, and on-site parking, if provided for each lot within the subdivision.

c. Other allowed uses and structures include residential landscaping, pathways, and turf; individual water, stormwater, and septic infrastructure; and fences.
d. Homesites shall not contain any critical areas or their buffers or setbacks, shoreline buffers, or any portion of required natural areas.

2. Homesite Clustering. All single-family subdivisions resulting in four or more lots require homesite clustering. The purpose of clustering is to facilitate the efficient use of land by reducing disturbed areas, impervious surfaces, utility extensions, and roadways. Homesites shall be located in cluster groups and the efficient location of infrastructure shall be used to maximize the undeveloped area.

a. Cluster groups shall be a minimum of four homesites.
b. No more than three cluster groups are allowed within any subdivision.
c. All homesites in a cluster grouping shall adjoin or be located the maximum distance apart from another homesite provided in Table 17.12.060-1, Subdivision Dimensional Standards.
d. Homesite cluster groups shall be located to minimize adverse impacts to adjacent, previously existing residential development.
e. The location of homesite cluster groups is not required to be located near any existing home on the property.

**17.12.060 General residential subdivision standards.**

A. Constrained lots. If, due to site or design constraints, no homesite with supporting infrastructure can be located on a subject property, no division of land is permitted.

B. Preexisting lots. Lots that have previously received final approval from the city, or that have previously received final approval from Kitsap County prior to inclusion within the city boundaries, and that do not comply with the adopted flexible lot design requirements shall be considered existing nonconforming lots, but any future resubdivision of any such lots shall comply with adopted flexible lot design requirements.

C. Remaining area. Any area not designated as public or private access, lots, or utility tracts shall be designated as either natural area or community space, as applicable.

D. Dimensional standards. Table 17.12.060-1 sets forth required dimensional standards. Where a property is located in more than one zone district, units permitted by density calculations within each zone district must be constructed on the portion of the property located within that zone district and required setbacks for each zone district must be met. Permitted densities are not “blended” across the zone district line.

E. Septic Systems. Locations of individual or community drainfields and associated reserve drainfields shall comply with all applicable standards established by the Kitsap Public Health District or Washington Department of Health. Reserve drainfield areas shall remain undisturbed until such time their use is required. This standard shall be noted on the face of the preliminary and final plat.

F. Streets and Vehicle Access. Alleys?

1. Subdivisions shall comply with all applicable standards of the "City of Bainbridge Island Design and Construction Standards and Specifications," unless modified within this subsection or by the City Engineer.

2. Public and private streets within subdivisions with 20 or fewer lots shall meet the requirements of Table 7.2 "Optional Suburban Street Requirements" of the "City of Bainbridge Island Design and Construction Standards and Specifications," unless modified within this subsection or by the City Engineer or Fire Marshal.

3. Public streets within subdivisions with more than 20 lots shall meet the requirements of Table 7.1 "Street Requirements" of the "City of Bainbridge Island Design and Construction Standards and Specifications," unless modified within this subsection or by the City Engineer or Fire Marshal.

4. Each lot in a residential subdivision shall have direct access to a public or private street, except for those with shared driveways or alternative lot designs that provide shared or clustered parking outside of individual lots.

5. Deviations from the "City of Bainbridge Island Design and Construction Standards and Specifications" may be granted by the City Engineer upon evidence that such deviations are in the public interest and that they are based on sound engineering principles and practices. All requirements for safety, function, appearance and maintainability must be fully met. Desired deviations must be requested during the pre-application phase of the project.

6. The street system of proposed subdivisions shall be designed to connect with existing, proposed, and planned streets outside of the subdivision. Wherever a proposed development abuts unplatted land or other land with the capability of being further subdivided, street stubs shall be provided to allow access to future abutting subdivisions if deemed practicable by the City Engineer.

7. Interior street layout shall be oriented on the east/west axis, if feasible, to maximize active and passive solar access.

8. To minimize impervious surfaces, public rights-of-way, access easements, private streets, and driveways shall not be greater than the minimum dimensions required to meet standards.

9. Street names and traffic regulatory signs shall be provided, and their locations shall be indicated on the plat/plan. The location of mailboxes and traffic regulatory signs is only required to be indicated on the plat/plan when other public improvements are required.

10. Transit stops shall be provided as recommended by Kitsap Transit.

G. Parking and Garages. **Need to update 18.15

1. Parking shall be provided consistent with BIMC 18.15.020, except as modified by this subsection.
2. Parking spaces provided on individual lots must be located within the designated homesite.
3. Parking spaces may be located outside of individual lots in individual or shared garages.
4. Parking spaces may be consolidated in a remote or satellite location within the subdivision.

5. Consolidated parking areas shall be landscaped in accordance with BIMC 18.15.010.F.
6. Shared garages are limited to five vehicle spaces and shall not exceed 60 feet in length.
7. Garages located on individual homesites facing a public street shall be:
    a. Limited to two vehicles; and
    b. Either accessed from the side or rear or set back from the front façade of the house a minimum of five feet.

H. Circulation and Access.

1. All subdivisions shall include a circulation and access system of walkways, paths, sidewalks, or trails that interconnect lots, natural area, community space, and adjacent access facilities.
2. Multi-modal facilities shall be consistent with the applicable standards of the "City of Bainbridge Island Design and Construction Standards and Specifications."
3. Subdivision layout shall consider providing dedicated access easements if one or more "trail connection zones" are located on the site as shown on Map C and D (Non-Motorized System Plan) of the Island-Wide Transportation Plan.
4. Pursuant to RCW 58.17.110(1) sidewalks or other planning features shall be provided to assure safe walking conditions for students who walk to and from school.

I. Fencing.

1. Solid board fencing is prohibited at the exterior boundary of a subdivision along a public right of way.
2. Fencing at the exterior boundary of a subdivision along a public right of way shall not exceed 3 feet, 6 inches in height.
3. Fencing around surface stormwater ponds shall not exceed 3 feet, 6 inches in height unless required by the city engineer for safety reasons.

J. Landscaping. Section not complete – draft only.

1. Landscaping within homesites
2. Landscaping outside of homesites within individual lots
3. Perimeter Buffers in Single-Family Subdivisions. The intent of perimeter buffers is to provide an effective screen, either landscaped or comprised of existing vegetation, intended to reduce the potential off-site impacts of new development, including undesirable sights, sounds, and odors.

    a. R-0.4, R-1, R-2 and R-2.9 districts
        i. Adjacent to existing residence on parcel not further subdividable
        ii. Adjacent to existing residence on parcel further subdividable

    b. All other zone districts minimum width

    c. Only required abutting developed portion of parcel (homesites and community space structures)

    d. Existing native vegetation to be retained.

    e. Perimeter buffers may be included in the natural area as required in Table 17.12.060-1 if the area complies with BIMC 17.12.040.1-7.

4. Perimeter Buffers in Multifamily Subdivisions. When a multifamily subdivision is created within the R-2, R-1, and R-0.4 zoning districts, a 25-foot-wide, full screen landscape perimeter shall be required along the subdivision boundary.

5. Perimeter buffers in Commercial Subdivisions.

6. Roadside Buffers in Single-Family Residential Subdivisions. The intent of roadside buffers is to enhance or retain Island character through the minimization of disturbance of existing roadside vegetation and screen new development from more highly traveled roads.

a. A roadside buffer shall meet the following standards:
    a. Minimum 25 feet wide.
    b. Existing native vegetation must be retained in the roadside buffer.
    c. Comprised of new plant material, existing non-invasive vegetation, or a combination of both.
    d. Provides an effective visual screen.
b. Where there is no existing vegetation that contributes to the existing vegetation character of the roads, new plant material shall be installed to achieve an effective visual screen using the full screen standard in BIMC 18.15.010.D.4.a.
c. Cannot be included in natural area or community space.
d. Only required for properties located adjacent to public roads that are designated as collector or arterial roads in the city's Islandwide Transportation Plan.
e. Only required for properties located in the R-0.4, R-1, R-2 and R-2.9 zoning districts. In all other zones, a roadside buffer is not required unless it is determined [by xxx] that a roadside buffer is necessary to maintain the character of the existing roadside vegetation or to reflect neighboring development patterns.
f. For subdivisions designating community space that is intended for agricultural use and would be adversely impacted by the addition of screening landscaping, a roadside buffer shall not be required.
g. To accommodate an existing house that is located within 25 feet of the subdivision boundary adjacent to a collector or arterial road, the roadside buffer width shall be reduced to the width adjoining the existing home between the existing house and the subdivision boundary adjacent to the collector or arterial road.

7. Roadside Buffers in Multifamily and Commercial Subdivisions. A minimum 50-foot roadside buffer shall be established adjacent to all designated scenic roads consistent with the full screen standard in BIMC 18.15.010.D.4.a.

K. Design Diversity. Subdivisions shall avoid monotonous rows of duplicative dwellings and incorporated measures that promote design diversity by:

1. Providing a mixture of lot sizes and/or front setbacks; and/or
2. Providing a diversity of floor plans and façade treatments.

L. No City Maintenance of Streets in Short Subdivisions. Streets within a short subdivision shall not be maintained by the city unless such streets have been dedicated as a right-of-way, improved to current

city standards, and accepted as part of the approved short subdivision. Therefore, unless accepted, the responsibility for maintenance shall lie with the owners of the lots.

M. Improvements.

1. Where the buildout of a subdivision is divided into phases, land dedications and infrastructure development will be required on a pro rata basis as each phase is developed unless the applicant negotiates an alternative phasing schedule with the city. This will be required to be documented on a plat note.
2. On any approved large lot, no further lot divisions shall be approved until the required improvements are installed by the applicant and approved by the city.
3. All large lot subdivisions shall have the following improvements developed and/or installed prior to recording:
   a. Streets shall be cleared, grubbed, and rocked or graveled to provide adequate year-round passage.
   b. Appropriate drainage, including erosion control, facilities shall be provided consistent with a plan approved by the city engineer prior to clearing and construction of any plat improvements.

(Ord. 2017-02 § 20, 2017; Ord. 2011-02 § 2 (Exh. A), 2011)

**17.12.070 Multifamily and nonresidential subdivisions.**

A. Subdivisions established for multifamily and nonresidential shall comply with all provisions of BIMC Title 18 (Zoning) applicable to the zone district where the property is located and the type of development anticipated. This requirement shall include, without limitation, compliance with lot areas, dimensions, and design, mobility and access, landscaping, screening, and vegetative buffers.

**17.12.080 Special requirements for critical areas and shoreline.**

A. Critical Areas. Any portion of a short or long subdivision, large lot subdivision, nonresidential or multifamily subdivision that contains a critical area as defined in Chapter 16.20 BIMC must conform to all requirements of that chapter.

B. Shoreline. Any portion of a short or long subdivision, large lot subdivision, nonresidential or multifamily subdivision located within the jurisdiction of the shoreline master program, as defined in Chapter 16.12 BIMC, must conform to all requirements of that chapter.

**Table 17.12.060-1 Subdivision Dimensional Standards**

**[Numbers in brackets indicate additional requirements listed at the end of the table.]**

| ZONING DISTRICT<br>DIMENSIONAL STANDARD | R-0.4 | R-1 | R-2 | R-2.9 | R-3.5 | R-4.3 | R-5 | R-6 | R-8 | R-14 | NC | MUTC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MINIMUM LOT AREA** | | | | | | | | | | | | |
| **Short and Long Subdivision** | If the site is not served by a public sewer system, the minimum individual lot area shall be determined by the Kitsap Public Health District in accordance with Section 15 of the Kitsap County Board of Health Ordinance 2008A-01, Amended June 7, 2011, *Onsite Sewage System and General Sewage Sanitation Regulations*, as amended.<br><br>If the site is served by a public sewer system, there is no minimum lot area.<br><br>Individual lots may contain portions of natural and community space and access easements. | | | | | | | | | | | |
| **Large Lot Subdivision** | 5 ac or 1/128th of a section, whichever is smaller.<br><br>Individual lots may contain portions of natural area and community space and access easements. | | | | | | | | | | | |
| **MAXIMUM DENSITY (Minimum lot area per dwelling unit)**<br><br>Note: Subdivisions containing irregularly shaped lots and lots containing critical areas may not be permitted to achieve maximum density. Additional regulations on density may apply pursuant to:<br><br>(a) BIMC 16.20.160.F.5.a, Additional Development Standards for Regulated Uses, Land Divisions and Land Use Permits, Density Calculation | | | | | | | | | | | | |
| **Short, Long and Large Lot Subdivisions** | The maximum number of lots permitted shall be calculated by dividing the total lot area of the property (without deducting areas to be dedicated as public rights-of-way or areas to be encumbered by private road easements) by the minimum lot area for standard lots in the zone district. | | | | | | | | | | | |
| Base Density (minimum lot area) | 100,000 sq. ft. | 40,000 sq. ft. | 20,000 sq. ft. [1] | 15,000 sq. ft. | 12,500 sq. ft. | 10,000 sq. ft. | 8,500 sq. ft. | 7,260 sq. ft. | 5,400 sq. ft. | 3,100 sq. ft. | 8,500 sq. ft. | See FAR table |
| Bonus Density pursuant to BIMC 18.12.030.A (minimum lot area) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 3,630 sq. ft. | 2,074 sq. ft. | N/A | N/A |
| **NATURAL AREA [x]**<br><br>Note: xxxx | | | | | | | | | | | | |
| Minimum percentage of total site | 55% | 45% | 30% | 25% | 25% | 20% | 15% | N/A | 10% | 5% | 15% | 5% |
| Minimum width | 50 ft. | | | | | | | | | | | |
| **COMMUNITY SPACE [x]**<br><br>Note: xxxxx | | | | | | | | | | | | |
| Minimum percentage of total site | 5% | 7.5% | 10% | 15% | | | | | | 10% | 15% | 10% |

| ZONING DISTRICT<br>DIMENSIONAL STANDARD | R-0.4 | R-1 | R-2 | R-2.9 | R-3.5 | R-4.3 | R-5 | R-6 | R-8 | R-14 | NC | MUTC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **HOMESITE [x]**<br>Note: Refer to definition of homesite and standards for homesites. | | | | | | | | | | | | |
| Maximum size | 10,000 sq. ft. | 7,500 sq. ft. | 6,500 sq. ft. | 5,500 sq. ft. | 4,500 sq. ft. | 3,500 sq. ft. | 3,500 sq. ft. | N/A | 3,000 sq. ft. | 2,250 sq. ft. | 3,500 sq. ft. | 2,250 sq. ft. |
| Maximum separation – homesite | 25 ft. | | | | | | | | | | | |
| Maximum separation – homesite cluster group | 50 ft. | | | | | | | | | | | |
| **HOME SIZE** | | | | | | | | | | | | |
| Maximum size | N/A | | | | | | | | 1,600 sq. ft. | | | |
| **MAXIMUM LOT COVERAGE [3]** | | | | | | | | | | | | |
| Short and Long Subdivision | Same as applied to the entire property that is the subject of the subdivision application, a portion of which shall be assigned to each lot at the time of preliminary plat approval. | | | | | | | | | | | |
| Large Lot Subdivision | 10% | 15% | 20% | N/A | N/A | N/A | N/A | N/A | 25% | 40% | N/A | N/A |
| **MINIMUM SETBACKS [4]**<br>Note: Landscaped areas may serve as setbacks (i.e., setbacks are not in addition to landscaped areas), and some encroachments into setback areas are permitted pursuant to BIMC 18.12.040.<br>Note: Additional setbacks may be required by:<br>(a) Chapter 16.08 or 16.12 BIMC, or<br>(b) Chapter 16.20 BIMC, Critical Areas, or<br>(c) BIMC 16.28.040, mining regulations, or<br>(d) BIMC 18.09.030, Use-specific standards, or<br>(e) BIMC 18.12.030.F, Shoreline Structure Setbacks, or<br>(f) BIMC 18.15.010, landscaping and screening.<br>[x] attached or zero lot line allowed in all districts but R-0.4 if building is 1,600 sf or less<br>[x] ADUs do not need to meet TOTAL building to homesite boundary setback – only minimum setback; must be located within homesite. | | | | | | | | | | | | |
| Building to homesite boundary<br>Net building size 1,600 sq. ft. or less | 5 ft. min., 10 ft. total | | | | | | 3 ft. min., 10 ft. total | | | | | |

| ZONING DISTRICT<br>DIMENSIONAL STANDARD | R-0.4 | R-1 | R-2 | R-2.9 | R-3.5 | R-4.3 | R-5 | R-6 | R-8 | R-14 | NC | MUTC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum/total [x] | | | | | | | | | | | | |
| Building to homesite boundary<br>Net building size 1,601 sq. ft. or more<br>Minimum/total | 15 ft. min., 50 ft. total | 10 ft. min., 25 ft. total | 5 ft. min., 20 ft. total | | 10 ft. min., 20 ft. total | 5 ft. min., 20 ft. total | 5 ft. min., 15 ft. total | N/A | 5 ft. min., 10 ft. total | | 3 ft. min., 10 ft. total | |
| Building to exterior plat boundary line<br>Net building size 1,600 sq. ft. or less | 25 ft. | 15 ft. | | 10 ft. | | 5 ft. | | | | | | |
| Building to exterior plat boundary line<br>Net building size 1,601 sq. ft. or more | 25 ft. | | | | | 10 ft. | | | | | 5 ft. | |
| Building to SR 305 right-of-way | 75 ft. | 75 ft. | 75 ft. | N/A | 25 ft. | N/A | N/A | N/A | 25 ft. | N/A | 25 ft. | 25 ft. |
| Building to arterial and collector rights-of-way | 25 ft. | 10 ft. | | | | | | | | | | |
| Building to all other streets | 10 ft. | | | | | | 5 ft. | | | | | |
| Building to trail, natural or community space or access easement (except for natural areas that are also roadside or landscape buffers) | 10 ft. | | | | | 5 ft. | | | | | 10 ft. | 5 ft. |
| Shoreline Jurisdiction | See Table 16.12.030-2, Dimensional Standards Table, and BIMC 18.12.030.F, Shoreline Structure Setbacks. For properties abutting the shoreline, the native vegetation zone required by BIMC 16.12.030 and Table 16.12.030-3 replaces the zoning setbacks along the water. | | | | | | | | | | N/A | |
| **GARAGE DIMENSIONAL STANDARDS**<br>Note: xxxxx | | | | | | | | | | | | |
| Shared garage to public ROW | 0 feet | | | | | | | | | | | |
| Private garage to public ROW | 10 feet | | | | | | | | | | | |
| Garage to private access | 0 feet | | | | | | | | | | | |
| Shared garage to shared garage | 10 feet | | | | | | | | | | | |
| Shared garage maximum length | 60 feet | | | | | | | | | | | |
| **MAXIMUM BUILDING HEIGHT**<br>Note: Bonus may not be available in the shoreline jurisdiction | | | | | | | | | | | | |
| **Short, Long, and Large Lot Subdivisions** | Height requirements for standard lots apply [4] | | | | | | | | | | | |

[1] The base density for that parcel in the Lynwood Center special planning area designated as R-2 is one unit per 20,000 sq. ft., but may be increased up to 3 units per acre; provided, that a public access easement is granted for that portion of the parcel that lies to the south of Point White Drive along the waters of Rich Passage. The base density of some parcels in the Fort Ward historic overlay district may be increased as shown in BIMC 18.24.070.

[3] Educational, governmental, cultural, religious, and health care within residential zone districts must be processed as major conditional use permits pursuant to BIMC 2.16.110.E.

[4] Setbacks from rights-of-way may be reduced to maintain neighborhood character by establishing building setbacks equal to or greater than the existing building setbacks on the adjacent properties. Where there are no developed properties adjacent to the property being subdivided, the setbacks in Table 18.12.020-1 shall apply.