City of Bellevue
Development Services Department
Land Use Staff Report

Proposal Name:	GIS Townhomes
Proposal Address:	13601 NE Bel-Red Road
Proposal Description:	Design Review and Critical Areas Land Use Permit approval to construct a 12-unit townhome complex with proposed stream restoration and buffer modification.
File Number:	15-122602-LD & 15-122890-LO
Applicant:	SKB Architects
Decisions Included:	Combined Design Review, Critical Areas Land Use Permit and SEPA (Process II)
Planner:	Leah Chulsky, Associate Planner
State Environmental Policy Act Threshold Determination:	Determination of Non-Significance Carol V. Helland, Environmental Coordinator Development Services Department
Director's Recommendation:	**Approval with Conditions** Michael A. Brennan, Director Development Services Department By: Carol V. Helland, Land Use Director

Application Date:	September 15, 2015
Notice of Application:	October 22, 2015
14-day Comment Period:	September 5, 2015
Decision Publication Date:	September 1, 2016
Appeal Deadline:	September 15, 2016

For information on how to appeal the project, visit the Permit Center at City Hall or call (425) 452-6800. Appeal of the decision must be received in the City Clerk's office by 5 p.m. on the date noted for the appeal deadline.

I. REQUEST AND PROJECT DESCRIPTION

A. Background

The applicant requests Design Review and Critical Areas Land Use Permit approval to construct twelve residential units on a 1.69-acre site containing a section of Kelsey Creek. The site is currently undeveloped within the Bel-Red Subarea with a Land Use Code and Comprehensive Plan Designation of BR-ORT. The applicant is proposing to modify the stream buffer, structure setback and associated wetland buffer. The applicant is proposing to mitigate for the reductions through a buffer enhancement which includes designating 40,020 square feet as a Native Growth Protection Easement (NGPE) which will retain significant vegetation (including 24 mature trees).

B. Review Process

Design Review and Critical Areas Land Use Permits are both Process II decisions made by the Director of the Development Services Department. The process includes public noticing with a minimum 14-day comment period. The Director's decision shall be written in a staff report to indicate whether the application has been approved, approved with conditions, or denied. The decision will be publically noticed with a mandatory 14-day appeal period. Process II decisions may be appealed by parties who submitted comments on the application. Any appeal submitted shall be heard at a public hearing before the City Hearing Examiner.

C. Site Design

The proposed development will be accessed via a 26 foot wide central private driveway directly off of Bel-Red Road which will be the only access to the site. The site design provides access to the private two-car garages located within each of the twelve units off of the central driveway. Several of the residences are oriented to provide additional guest parking in front of the unit. The site includes perimeter landscaping and retention of significant trees within the setbacks and buffers. The applicant is proposing a bark/wood chip trail feature through a portion of the enhanced buffer. The enhancement plan will restore the existing riparian corridor and adjacent wetland and buffer functions by removing trash, invasive vegetation and replanting with native species. In addition to the native plantings, nurse logs sourced from trees removed onsite and additional habitat structures will be installed in the stream buffer. These structures include: bird nest boxes, bat houses and bee shelters (see Habitat Package within the Critical Areas Report). The site will contain a 40,020 square foot NGPE as mitigation for areas of buffer disturbance (this results in a mitigation ratio of 2.65:1)

Refer to Condition of Approval regarding NGPE in Section IX of this report.

CURRENT SITE PLAN

D. Building Design

In response to topography and with the aim of using Kelsey Creek as a focal point the proposed building design utilizes two different layouts. Eight of the units are east facing with views onto the creek and enhanced buffer area. These units are section off in two groups of four and feature separate entry stairs and front patios facing the NGPE. The four other units are on the opposite side of the central drive and are more secluded from the other eight units. These units are in two groups of two with one share wall between each group. The development connects with a series of interior walkways to maintain the pedestrian scale of the development. These walkways also provide access to the main boardwalk located between the development and the enhanced NGPE. The proposed development is designed with a modern aesthetic using concrete and natural brick as the predominate materials that anchor the main level with entry stairs the reach up to the open living areas on the second floor. The exterior materials then transition to a mix of

clapboard siding, metal panel and stucco on the upper floors (see color board in file).

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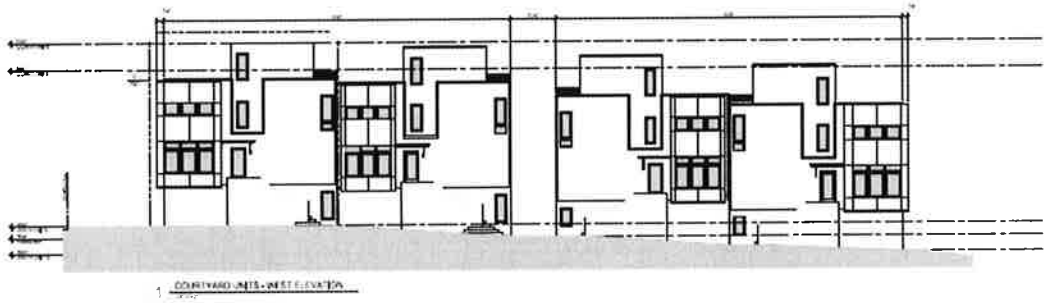
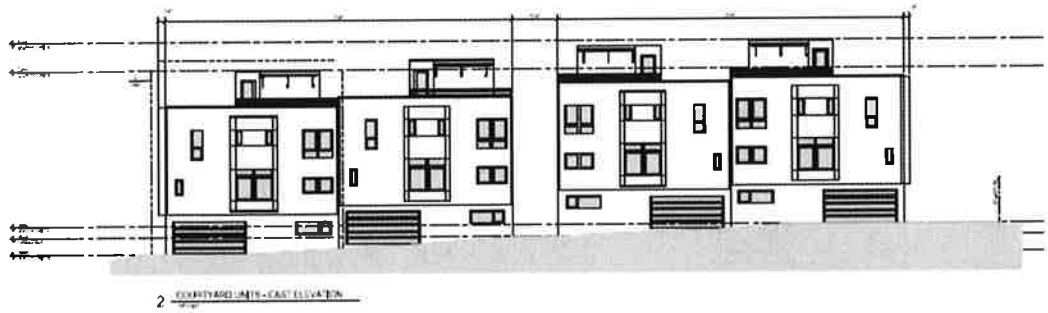


1 COURTYARD UNITS - WEST ELEVATION



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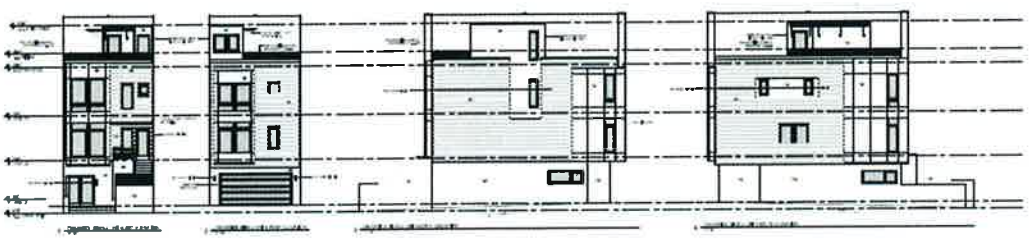
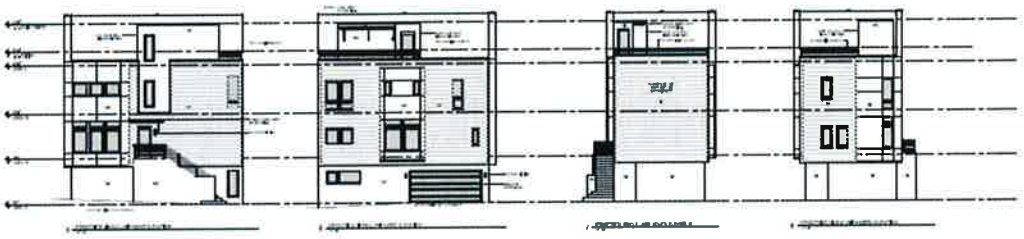




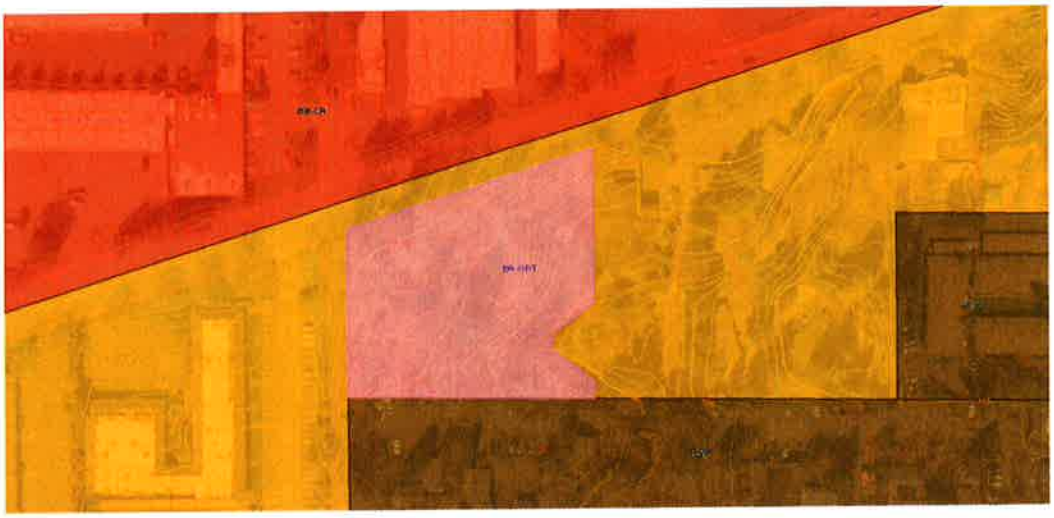
II. SITE DESCRIPTION, LAND USE CONTEXT AND ZONING

A. Site Description

This is an approximately 1.69 acre undeveloped site. The site is mostly square. The site slopes northwest to southeast towards Kelsey Creek and the wetland. The site contains 886 diameter inches of significant trees.

B. Land Use Context and Zoning

The site is zoned Bel-Red ORT. Multifamily uses lie to the immediate south and Office uses surround the site to the north (across Bel-Red road), east and west.



III. CONSISTENCY WITH LAND USE CODE REQUIREMENTS:

A. General Provisions of the Land Use Code

1. Use

Uses are regulated by LUC Sec. 20.10.440 (Use Charts). The multifamily residential use proposed for this project is permitted in the BR-ORT zone.

2. Dimensional Requirements

As conditioned, the proposal meets the dimensional requirements of the Land Use Code Section 20.20.010.

Table 1 – Dimensional Requirements

I.	Permitted/Required	II. Proposed
Lot Coverage /Impervious	75%	37% Meets LUC requirement
Setbacks	Front: 20 ft. Rear: 30 ft. Side: 20 ft.	Front: 20 ft. (north) Rear: 30 ft. (south) Side: 20 ft. (east and west) Meets LUC requirements
Building Height	45 ft.	45 ft. Meets LUC requirement

Parking	Residential Use: 1 space minimum / 2 space maximum	2 garage spaces per unit Meets LUC requirement
Landscape Requirements	Street Frontage: 20 foot wide Type III landscaping Interior Property Line: 10 foot wide Type III	Street Frontage: 20' wide Type III landscaping Interior Property Line: 10 foot wide Type III Meets LUC requirement
Tree Retention	Site Perimeter: 100% tree retention Site Interior: 15%	All significant trees within 15 feet of all property lines will be retained. Site Interior: 79% Meets LUC requirement
Mechanical Equipment	Locate on the roof or below grade and visually screen, unless this requirement is modified by the City for projects requiring discretionary approval per LUC 20.20.525.C.5 & 6.	All mechanical equipment will be located inside the buildings. Meets LUC requirements

3. Landscaping

a. Tree Retention

The proposal with retain all significant trees within 15 feet of all property lines. The proposal will also retain 85 percent of the diameter inches of the significant trees in the site interior (441 diameter inches). A significant number of the inches to be retained are located within the critical area buffer and structure setback. As conditioned, the applicant will provide tree retention in excess of that which is required to help maintain the existing wooded character and provide for a vegetated buffer between the proposed development and Kelsey Creek.

b. Perimeter Landscaping

i. Street Frontage

The proposal site is located off of Bel-Red Road. A 20 foot Type III landscape buffer will be planted along the entire northern property line. The proposal also includes additional landscaping beyond the 20 foot buffer internal to the site.

As conditioned, the applicant will provide a landscape design that includes the following: retention of all significant trees adjacent to Bel-Red Road, extensive native landscaping

within the enhanced buffer area and throughout the site that includes a mix of evergreen and deciduous material. In addition, the applicant has worked with the City of Bellevue to increase the amount of trees onsite by proposing to plant 1significant native trees and ground cover.

See Condition of Approval regarding Final Planting Plan in Section IX of this report.

ii. Interior Property Lines Abutting Less Intense District

The applicant is proposing 20 foot landscape buffer along the western and southern property lines. The approved landscape buffer shall contain additional plantings to include a minimum of 5 trees per 1,000 square feet of buffer and include shrubs and ground cover (no more than 40 percent of the trees are to be deciduous).The applicant will maintain all existing significant trees within the critical area buffer and structure setback

4. Bel-Red Design Guidelines (LUC 20.25D.150)

A. Site Design Guidelines

As conditioned the proposal meets the applicant Bel-Red Design Guidelines. The proposed site and building design capitalize on the fact that Kelsey Creek traverses the site along the eastern property lines and has used this natural feature as a focal point for the development. The proposed site design incorporates soft trails and outdoor gathering areas within the open space resulting in an amenity for the residents. The enhancement plan proposes to use bird houses and fallen log features to create an atmosphere where the residents engage in the sights and sounds of the natural environment. The proposal also uses the creek as the focal point by orienting the structures so that they are facing Kelsey Creek and incorporating natural bricks and stones within their internal walk ways and patio areas (out of all buffer areas). The proposed exterior materials include natural brick, finished concrete, stone and neutral subdued colors.

The proposal will also conserve the existing natural hydrology, habitat and preserve the existing biodiversity by further protecting the existing wetland through the approved buffer enhancement. As proposed, the development will minimize the disturbances to the onsite and offsite natural water system through a grading plan that captures and slows runoff and on-site landscape based water treatments for runoff from roofs and paved areas.

See Condition of Approval regarding Final Planting Plan in Section IX of this report.

5. Critical Areas Regulations

Wetlands

Wetlands include the vegetated edges of ponds and areas commonly called swamps, marshes, and bogs. Frequently, their water is only visible in the spring. Wetlands are classified into four categories, based on a combination of habitat, water quality, and flood-flow-reduction functions.

Wetlands provide rearing and foraging habitats for fish and wildlife and food chain support for downstream waters. Wetlands provide natural water quality improvement; flood-flow reduction and storage; shoreline erosion protection; and opportunities for passive recreation. Many urban wetlands are heavily disturbed, but still provide valuable water quality treatment and flood-flow reduction.

Streams

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

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

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

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

Stream riparian areas, or buffers, can be a significant factor in determining the quality of wildlife habitat. For example, buffers comprised of native vegetation with multi- canopy structure, snags, and down logs provide habitat for the greatest range of wildlife species (McMillan, 2000).

Vegetated riparian areas also provide a source of large woody debris that helps create and maintain diverse in-stream habitat, as well as create woody debris jams that store sediments and moderate flood velocities.

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

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

Habitat Associated with Species of Local Importance

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

Performance Standards – Streams and Wetlands (LUC 20.25H.080 and .095)

The City of Bellevue Land Use Code Critical Areas Overlay District (LUC 20.25H) establishes performance standards and procedures that apply to development on any site which contains in whole or in part any portion designated as critical area, critical area buffer or structure setback from a critical area or buffer. The project is subject to the performance standards found below.

A. Lights shall be directed away from the stream/wetland;

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

C. Toxic runoff from new impervious area shall be routed away from the stream/wetlands;

D. Treated water may be allowed to enter the stream/wetland critical area buffer;

E. The outer edge of the stream/wetland critical area buffer shall be planted with dense vegetation to limit pet or human use;

F. Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices," now or as hereafter amended.

Response: As conditioned, stormwater for the proposed development will be collected and then allowed to infiltrate within the stream/wetland buffer. Dispersion trenches will allow for stormwater to enter the buffer at a slow rate, preventing soil erosion and sedimentation. This system will also allow stormwater from the developed area that would naturally enter the buffer to do so. The vegetation in buffer will continue to decrease water velocity and allow for infiltration. The majority of the existing trees within the buffer area are deciduous species. The proposed enhancement plan will place native cedar trees within the stream buffer. The installation of these conifers will allow for a natural succession from deciduous to conifer forest and provide natural cover onsite in the future. The proposed enhancement plan will provide a source for woody debris in close proximity of the stream channel which will contribute to pools and other habitat features within the stream. All areas of temporary disturbance will be restored pursuant the approved enhancement plan. As conditioned, the proposal will set aside 40,050 square feet of open space within Native Growth Protection Easement

(NGPE) as mitigation for critical areas disturbance (this results in a mitigation rate of 2.65:1).

See Condition of Approval regarding maintenance in Section IX of this report.

Performance Standards – Habitat Associated with Species of Local Importance (LUC 20.25H.160)

The City of Bellevue Land Use Code Critical Areas Overlay District (LUC 20.25H) establishes performance standards and procedures that apply to development on any site which contains in whole or in part any portion designated as critical area, critical area buffer or structure setback from a critical area or buffer. If habitat associated with species of local importance will be impacted by a proposal, the proposal shall implement the wildlife management plan developed by the Department of Fish and Wildlife for such species. Where the habitat does not include any other critical area or critical area buffer, compliance with the wildlife management plan shall constitute compliance with this part.

Response: The majority of species of local importance listed in Land Use Code Section 20.25H.165.A are associated with habitats much greater in size and complexity than the subject site which is located between commercial and multifamily residential development in a highly trafficked urban area. The subject site is approximately 2.4 miles from Lake Washington and 2.4 miles from Lake Sammamish. The closest documented Osprey occurrence is on Lake Washington. The subject site is no more likely to provide potential habitat to species such as osprey than most other residential properties within that range. No ponds occur on or adjacent to the property. No terrestrial species of local importance were observed during site investigations conducted per the report prepared by Wetland Resources dated August 31, 2015 (attached) and none are identified on the Washington State Department of Fish and Wildlife Priority Habitats and Species maps within the primary association area. A bald eagle nest is identified approximately 2.7 miles southwest of the subject property. Federal management for bald eagles requires maintaining a standard 330 foot buffer zone with seasonal restrictions within 660 feet of a nest. The subject site is well outside of the bald eagle nest management area.

IV. PUBLIC NOTICE

The City initially notified the public of this proposal on October 22, 2015 with mailed notice and publication in the Weekly Permit Bulletin. One, double-sided public information sign was also installed at the site entrances on the same day. In addition, a public meeting was held October 29, 2015 at 7pm at Bellevue City Hall. The City received one written comment.

Issue: Construction Impacts – specifically the impact on habitat for osprey and mammals during construction. Could the mammals be relocated during construction and could nests be rescued before removal of any trees.

Response: The majority of species of local importance listed in Land Use Code Section 20.25H.165.A are associated with habitats much greater in size and complexity than the subject site which is located between commercial and multi-family residential development in a highly trafficked urban area. No terrestrial species of local importance were observes during site investigations conducted by Wetland Resources report dated August 31, 2015 (attached) and none are identified on the Washington State Department of Fish and Wildlife Priority Habitats and Species maps within the primary association area. City of Bellevue inspectors are also onsite continuously during construction to maintain tree protection and grading limits. The restoration of the stream buffer will be done by hand and improve the over functions and vegetation onsite. The City of Bellevue does not have any requirements to relocate mammals during construction, however, over 40,000 square feet of the site will be set aside as a Native Growth Protection Easement which will restrict any additional development in the future.

V. SUMMARY OF TECHNICAL REVIEWS

A. Utilities

The plans generally conform to the requirements applicable to this stage of the design process. It is the applicant's responsibility to verify the accuracy all field information and data gathered for the feasibility of this project. Future Utilities permit applications for this development must comply with Bellevue Codes 24.02, 24.04 and 24.06.

Water

The site currently drains southeasterly into Kelsey Creek, which conveys flow to Lake Washington.

Sewer

Domestic water will be provided by connections to an existing 8" main in 136th Ave NE. Sanitary sewer will be provided by extending an 8" main north along 136th Ave NE approximately 260'.

See Condition of Approval regarding maintenance in Section IX of this report.

B. Transportation

Site Access

This project is located on NE Bellevue-Redmond Road (NE Bel-Red Road), a major arterial. Access to the proposed project will be provided via one driveway on NE Bel-Red Road. This driveway is required to be a minimum of 26 feet in width, but may need to be wider in order to provide the required turning radius for fire access to the site from the west side. All loading/unloading will take place on-

site and is not allowed on-street. A turnaround area will be required to be provided on-site to prevent vehicles from backing out into the street.

Street Improvements

In order to provide safe pedestrian and vehicular access in the vicinity of the site, and to provide infrastructure improvements with a consistent and attractive appearance, the construction of street frontage improvements is required as a condition of development approval. The design of the improvements must conform to the requirements of the Americans with Disabilities Act, the Transportation Development Code (BCC 14.60), and the provisions of the Transportation Department Design Manual.

1. A combined street tree and street light plan is required for review and approval prior to completion of engineering and landscape plans. The goal is to provide the optimum number of street trees while not compromising the light and safety provided by streetlights. Street trees and streetlights must be shown on the same plan sheet with the proper separation (generally 25 feet apart) and the proper spacing from driveways (ten feet from Point A in standard drawing DEV-7D or equivalent). Streetlights will be required on the NE Bel-Red Road frontage meeting the City's requirements for illumination.

2. The Americans with Disabilities Act (ADA) requires that sidewalk cross slopes not exceed two percent. The sidewalk cross slope may be less than two percent only if the sidewalk has a longitudinal slope sufficient to provide adequate drainage. Bellevue's standard for curb height is six inches, except where curb ramps are needed. The engineering plans must comply with these requirements, and must show adequate details, including spot elevations, to confirm compliance. New curb and sidewalk shall be constructed in compliance with these requirements.

   ADA also requires provision of a safe travel path for visually handicapped pedestrians. Potential tripping hazards are not allowed in the main pathway. Installation of colored or textured bands to guide pedestrians in the direction of travel is advisable, subject to the requirements for non-standard sidewalk features. ADA-compliant curb ramps shall be installed where needed, consistent with City and WSDOT standard drawings. If such standards cannot be met, then deviation from standards must be justified on a Design Justification Form to be filed with the Transportation Department.

3. Full frontage improvements shall be provided on NE Bel-Red Road, including new sidewalk and replacement of defective curb and gutter. The existing driveways to the site shall be removed, and the new driveway into the site shall be constructed per standard drawing DEV-7D or DEV-7E. Care shall be taken to preserve the existing trees on the site near the frontage, and an arborist's report shall be provided with the clearing and grading permit submittal. If the trees cannot be preserved, a 4-foot planting strip and an 8-foot sidewalk shall be provided. If the trees can

be preserved, a 6-foot sidewalk without a planting strip will be allowed.

4. The driveway on NE Bel-Red Road shall have an approach width, as defined in standard drawing DEV-7D, of a minimum of 26 feet. The driveway apron design shall be consistent with standard drawing DEV-7D. Due to the acute approach angle from the west, additional width or other provisions may be required to provide an adequate turning radius for emergency access.

5. To the extent feasible, no new utility vaults that serve only one development will be allowed within a public sidewalk. Vaults serving a broader public purpose may be located within a public sidewalk. To the extent feasible, no utility vaults may be located within the primary walking path in any sidewalk.

6. No fixed objects, including fire hydrants, trees, and streetlight poles, are allowed within ten feet of a driveway edge, defined as Point A in standard drawing DEV-7D. Fixed objects are defined as anything with breakaway characteristics greater than a four-inch by four-inch wooden post.

7. No fixed objects, including fire hydrants, trees, and streetlight poles, are allowed within ten feet of a driveway edge, defined as Point A in standard drawing Dev-7A. Fixed objects are defined as anything with breakaway characteristics greater than a 4-inch by 4-inch wooden post.

8. No new overhead utility lines will be allowed within or across any right of way or sidewalk easement, and existing overhead lines must be relocated underground.

Easements

The applicant shall provide sidewalk and utility easements to the City as needed to encompass the full required width of any sidewalks located outside the city right of way fronting this site.

Use of the Right of Way

During Construction: Applicants often request use of the right of way and of pedestrian easements for materials storage, construction trailers, hauling routes, fencing, barricades, loading and unloading and other temporary uses as well as for construction of utilities and street improvements. A Right of Way Use Permit for such activities must be acquired prior to issuance of any construction permit including demolition permit. Sidewalks may not be closed except as specifically allowed by a Right of Way Use Permit.

After Construction: No loading or loading from public right of way will be permitted after approved occupancy of the proposed development.

Pavement Restoration

The City of Bellevue has established the Trench Restoration Program to provide developers with guidance as to the extent of resurfacing required when a street has been damaged by trenching or other activities. Under the Trench Restoration Program, every street in the City of Bellevue has been examined and placed in one of three categories based on the street's condition and the period of time since it has last been resurfaced. These three categories are, "No Street Cuts Permitted", "Overlay Required", and "Standard Trench Restoration". Each category has different trench restoration requirements associated with it. Damage to the street can be mitigated by placing an asphalt overlay well beyond the limits of the trench walls to produce a more durable surface without the unsightly piecemeal look that often comes with small strip patching. NE Bel-Red Road has been classified as "Overlay Required".

See Section IX for transportation related conditions of approval.

C. Fire

Fire has conceptually approved the proposal. Specific review for compliance with the International Fire Code will be done under subsequent building permits.

VI. SEPA

The environmental review indicates no probability of significant adverse environmental impacts occurring as a result of the proposal. The Environmental Checklist submitted with the application adequately discloses expected environmental impacts associated with the project. City codes and requirements, including the Clear and Grade Code, Utility Code, Land Use Code, Noise Ordinance, Transportation Facilities Plan, Building Code and other construction codes adequately mitigate expected environmental impacts. Therefore, issuance of a Determination of Non-Significance is the appropriate threshold determination under the State Environmental Policy Act requirements.

Adverse impacts which are less than significant are usually subject to City Codes or Standards which are intended to mitigate those impacts. Where such impacts and regulatory items correspond, further documentation is not necessary. For other adverse impacts which are less than significant, Bellevue City Code Sec. 22.02.140 provides substantive authority to mitigate impacts disclosed through the environmental review process.

Earth, Air and Water

The project area is within wetland and stream structure setback areas. During subsurface exploration conducted by Geotech Consultants, Inc., much of the site has been disturbed by fill soils and is underlain by glacial till. The site will be subject to the City's BMPS and sediment and erosion controls as well as the clearing and grading code BCC 23.76. All stormwater will be collected and treated prior to entry into the wetland and stream buffer.

Animals

Kelsey Creek provides habitat for Steelhead and Chinook, Sockeye, and Coho salmon. The project area is a generally degraded riparian corridor that extends from Bel-Red Road the southern property boundary. The enhancement plan proposed is intended to restore the existing riparian corridor and adjacent wetland and buffer functions by removing trash, invasive vegetation and replanting with native species. In addition to the native plantings, additional habitat structures will be installed in the stream buffer. These structures include: bird nest boxes, bat houses and bee shelters (see Habitat Package within the Critical Areas Report).

Plants

The stream, wetland and associated buffers are approximately 46,245 square feet and contain 25 trees. Approximately 5,780 square feet of buffer will be impacted in the form of control of invasive species (the dominant species within the buffer are Himalayan blackberry and holly) and plantings of native trees, shrubs and ground cover within 15,330 square feet of the stream buffer.

Noise

Given the project site's close proximity to other residences, consideration of the construction noise will be particularly important. While construction noise and increased vehicle trips are expected during the construction period, the Bellevue Noise Control Ordinance, BCC 9.18, regulates hours of construction-related noise emanating from the site. The Ordinance provides for an exemption from the noise restrictions for the hours of 7:00 a.m. to 6:00 p.m. weekdays and 9:00 a.m. to 6:00 p.m. on Saturdays which are not legal holidays.

See Condition of Approval regarding noise and construction hours in Section IX of this report.

Transportation

Long Term Impacts and Mitigation

The long-term impacts of development projected to occur in the City by 2027 have been addressed in the City's 2016 – 2027 Transportation Facilities Plan FEIS Addendum. The impacts of growth which are projected to occur within the City by 2027 are evaluated on the roadway network assuming that all the transportation improvement projects proposed in the City's 2016 - 2027 Transportation Facilities Plan are in place. The Transportation Facilities Plan EIS divides the City into several Mobility Management Areas (MMAs) for analysis purposes. (Project name) lies within MMA #8, which has a 2027 total growth projection of 2 multifamily dwelling units. This development proposes 12 multifamily dwelling units.

It is recognized that the TFP projections fall short in this area in terms of this proposed land use; however, the TFP is updated every two years at which time land use projections can be updated to meet current growth trends. With this considered, the long-term transportation impacts are fully mitigated by payment of traffic impact fees, as described

below.

Traffic impact fees are used by the City to fund street improvement projects to alleviate traffic congestion caused by the cumulative impacts of development throughout the City. Payment of the transportation impact fee, as required by BCC 22.16, contributes to the financing of transportation improvement projects in the current adopted Transportation Facilities Plan, and is considered to be adequate mitigation of long-term traffic impacts. Fee payment is required at the time of building permit issuance.

Mid-Range Impacts and Mitigation

Project impacts anticipated to occur in the next six years are assessed through a concurrency analysis. The Traffic Standards Code (BCC 14.10) requires that development proposals generating 30 or more new p.m. peak hour trips undergo a traffic impact analysis to determine if the concurrency requirements of the State Growth Management Act are maintained.

With 12 new multifamily units, this development will generate approximately 7 new p.m. peak hour trips, and is exempt from concurrency requirements.

Short Term Operational Impacts and Mitigation

City staff analyzed the short term operational impacts of this proposal in order to recommend mitigation if necessary. With only 7 p.m. peak hour trips generated, it was concluded that operational impacts would be negligible and a traffic impact analysis was not required.

See Section IX for transportation related conditions of approval.

VI. CHANGES TO THE PROPOSAL RESULTING FROM DESIGN REVIEW

- The applicant was required to provide onsite detention stormwater information.

VII. DESIGN REVIEW DECISION CRITERIA

A. Design Review:

The Director may approve, or approve with modifications, an application for Design Review if the proposal fulfills the Design Review Decision Criteria in LUC 20.30.F.145:

1. The proposal is consistent with the Comprehensive Plan.

The project is consistent with the Comprehensive Plan's Urban Design Element. The proposed development supports the following Subarea and Comprehensive Plan Policies:

Comprehensive Plan
The site is designated BR-ORT and lies within in the Bel-Red subarea of the Bellevue Comprehensive Plan. The Comprehensive Plan designation for this property is BR-ORT.

Bel-Red Subarea Policies:

Policy S-BR-5: Develop land uses consistent with the Bel-Red plan.

Policy S-BR-11: Encourage commercial and residential building siting design to incorporate stream corridors as a significant on-site amenity, while helping to restore and enhance the ecological functions of these corridors, through the use of development regulations and incentives.

Policy S-BR-27: Protect and enhance wetlands and other designated critical areas in Bel-Red, through land use development regulations, incentives and public funds.

Policy S-BR-28: Encourage natural drainage practices where feasible in public and private projects, as an alternative to traditional stormwater treatment control. All natural drainage practices to offset traditional treatment and control standards to the extent practicable, and provide other incentives to promote their use if needed.

Response: The site is zoned BR-ORT within the Bel-Red Subarea of the Comprehensive Plan. The proposed development will restore a degraded riparian corridor and associated wetland. The approved enhancement plan will restore 15,330 square feet of riparian buffer and provide additional habitat structures including: bird nest boxes, bat houses and bee shelters. Stormwater will be collected and allowed to infiltrate within the stream buffer. Dispersal trenches will allow for stormwater to enter the buffer at a slow rate preventing erosion. As approved the system will allow stormwater from the developed area that would natural enter the buffer to do so and minimize the potential water fluctuations within the buffer and stream.

Housing Policies:

Policy HO-2: Promote quality, community friendly multifamily development through features such as pedestrian connectivity.

Policy HO-5: Assure that site and building design guidelines create an effective transition between substantially different land uses and densities.

Policy HO-17: Encourage infill development on vacant or underutilized sites that have urban services and ensure that infill development is compatible with the surrounding neighborhoods.

Response: The site is underutilized as an undeveloped lot zoned BR-ORT. The proposed development is surrounded by existing commercial and multifamily development. The proposed use and design is compatible with the design of the surrounding built environment.

Environmental Policy:

Policy EN-94: Protect residential neighborhoods from noise levels that

interfere with sleep and response through development standards and code enforcement:

Response: The neighboring multifamily neighborhoods will be protected from noise during construction through the implementation of the development standards, land use codes, and the code enforcement.

2. **The proposal complies with the applicable requirements of this Code.**

   As conditioned, the proposal complies with applicable requirements of the Land Use Code as discussed in this staff report.

3. **The proposal addresses all applicable design guidelines or criteria of this Code in a manner which fulfills their purpose and intent.**

   As conditioned, the proposal complies with the Development Standards (LUC 20.25B.040) and Bel-Red Design Guidelines for development (LUC 20.25D.150). Refer to Section III of this report for how the proposal has met the Development Standards.

4. **The proposal is compatible with, and responds to, the existing or intended character, appearance, and quality of development and physical characteristics of the subject property and immediate vicinity.**

   The proposal responds to the natural character by using the existing critical area as a focal point of the development. It provides a unique residential experiences within the urban environment of the Bel-Red Corridor. With the application of rich architectural detail, the proposed buildings are compatible with the surrounding neighborhood and will fit well within the greater commercial and multifamily residential context.

5. **The proposal will be served by adequate public facilities including streets, fire protection, and utilities.**

   All required public services and facilities are available to the site.

B. Critical Areas Report – Decision Criteria (LUC 20.25H.255):
The Director may approve, or approve with modifications, a proposal to reduce the regulated critical area buffer on a site where the applicant demonstrates:

1. The modification and performance standards included in the proposal lead to levels of protections of critical area functions and values at least as protective as application of the of the regulations and standards of this code;

The applicant submitted a Critical Areas Report and Buffer Enhancement Plan prepared by Wetland Resources in addition to a Geotechnical Report prepared by Geotech Consultants, Inc (Attached). These reports concluded that the proposed development will result in an overall improvement in functions and values from the implementation of the enhancement plan.

2. Adequate resources to ensure completion of any required mitigation and monitoring efforts;

The applicant will be required to provide a performance assurance device for the required mitigation measures associated with the proposed development.

3. The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and

The functions and values of the critical areas and critical area buffers on adjacent properties will be unaffected by the actions in the proposal. As discussed in Section III of this report, the applicable performance standards of LUC Section 20.25H are being met.

4. The resulting development is compatible with other uses and development in the same land use district.

The proposed development is compatible with the surrounding multifamily and commercial land use districts.

C. Critical Areas Land Use Permit – Decision Criteria (LUC 20.30P.140):
The Director may approve, or approve with modifications, an application for a Critical Areas Land Use permit if:

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

The proposal will be required to obtain clearing and grading and building permits prior to construction.

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

The project shall be constructed and inspected by the Engineer of Record to verify implementation of the recommended procedures and practices in the geotechnical report found in the reports prepared by prepared by Geotechnical Consultants Inc. A report verifying implementation of inspection shall be submitted to Leah Chulsky prior to receipt of Temporary Certificate of Occupancy.

The project shall also provide a monitoring plan to evaluate the success of the proposed enhancement plan for a period of 5 years. Upon completion of the proposed enhancement project an inspection by a qualified ecologist will be made to determine plan compliance. A compliance report/as-built will be supplied to the City of Bellevue within 30 days after completing the planting. The City must approve the as-built document before the monitoring period commences. A qualified ecologist of landscape architect shall conduct monitoring of the plant conditions in the spring and fall annually for five years.

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

The proposal as approved meets all applicable performance standards of Part 20.25H LUC. See Ssection III of this approval for discussion.

4. The proposal is served by adequate public facilities including streets, fire protection, and utilities; and

All required public services and facilities are available to the site.

5. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC 20.25H.210; except that a proposal to modify or remove vegetation pursuant to an approved Vegetation Management Plan under LUC 20.25H.055.C.3.i; and

The proposal includes an enhancement plan that meets the requirements of LUC 20.25H.210. A final plan must be included with all subsequent construction permit applications. An installation and maintenance surety is required and the proposed planting will be monitored for 5 years.

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

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

VIII. DECISION

After conducting the various administrative reviews associated with the proposal, including applicable Land Use consistency, SEPA and City Code & Standard compliance reviews, the Development Services Department Director does hereby APPROVE WITH CONDITIONS the Design Review and Critical Areas Land Use Permit approvals for GIS Townhomes Proposal. **Approval of these Permits does not constitute a permit for construction. A building permit, clear and grade permit, and/or utility permit is required and all plans are subject to review for compliance with applicable City of Bellevue codes and standards.**

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

IX. CONDITIONS OF APPROVAL:

The following conditions are imposed under authority referenced:

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

Applicable Codes, Standards & Ordinances	**Contact Person**
Clearing & Grading Code – BCC 23.76	Tom McFarlane, 425-452-5207
Construction Codes – BCC Title 23	Bldg. Division, 425-452-6864
Fire Code – BCC 23.11	Adrian Jones, 425-452-6032
Land Use Code – BCC Title 20	Leah Chulsky, 425-452-6834
Noise Control – BCC 9.18	Leah Chulsky, 425-452-6834
Sign Code – BCC Title 22	Leah Chulsky, 425-452-6834
Right-of-Way Use Code 14.30	Tim Stever, 425-452-4294
Transportation Develop. Code – BCC 14.60	Molly Johnson, 425-452-6175
Traffic Standards Code 14.10	Molly Johnson, 425-452-6175
Utility Code – BCC Title 24	Brad Ayers, 425-452-6825

A. GENERAL CONDITIONS: The following conditions apply to all phases of development.

1. Noise & Construction Hours

The proposal will be subject to normal construction hours of 7 a.m. to 6 p.m., Monday through Friday and 9:00 a.m. to 6:00 p.m. on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Proximity to existing residential uses will be given special consideration. Upon written request to Development Services, work hours may be extended to 10:00 p.m. if the criteria for extension of work hours as stated in BCC 9.18 can be met and the appropriate mitigation employed.

The use of best available noise abatement technology consistent with feasibility is required during construction to mitigate construction noise impacts to surrounding uses.

AUTHORITY: Bellevue City Code 9.18.020.C & 9.18.040
REVIEWER: Leah Chulsky, Development Services Department

2. Water, Sewer, Storm Drainage Systems

The water, sewer, and storm drainage systems shall be designed per the current City of Bellevue Utility Codes and Utility Engineering Standards. The applicant will need to obtain over the counter side sewer, storm and water meter applications.

AUTHORITY: Bellevue City Code Title 24.02, 24.04, 24.06
REVIEWER: Brad Ayers, Utilities Department

3. Provisions for Loading

The property owner shall provide an off-street loading space which can access a public street. This must include an off-street location for garbage pick-up, which must be acceptable to the garbage hauler. On-street loading and unloading will not be permitted.

AUTHORITY: Land Use Code 20.20.590.K.4

REVIEWER: Leah Chulsky, Development Services Department

4. Building Permit

Approval of this application does not constitute an approval of a development permit. A building permit and any other associated development permits are required. Plans submitted as part of any permit application shall be consistent with the activity permitted under this approval.

AUTHORITY: Land Use Code 20.30P.140
REVIEWER: Leah Chulsky, Development Services Department

5. Approved Modification

This decision approves the modification as identified in the project site plans (Attachment 1) to construct 4 structures (12 townhomes) with mitigation. This approval does not allow future structures or improvements to be located without future review and permits.

AUTHORITY: Land Use Code 20.30P.140
REVIEWER: Leah Chulsky, Development Services Department

6. Mitigation Planting Area

The reduced buffer area requires planting to mitigate the approved structure setback reduction in accordance with the project mitigation plan included as Attachment 2. **The applicant shall submit a final planting plan as part of the clear and grade permit which is consistent with the requirements in this report.**

AUTHORITY: Land Use Code 20.25H.220
REVIEWER: Leah Chulsky, Development Services Department

7. Maintenance and Monitoring

The planting area shall be maintained and monitored for 5 years as required by LUC 20.25H.220. Annual monitoring reports are to be submitted to Land Use each of the five years. Photos from selected photo points will be included in the monitoring reports to document the planting. Annual monitoring reports are to be submitted to the Development Services Department Land Use Division at the end of the growing season by no later than November 30 for each year monitored. The reports, along with a copy of the planting plan, can be sent to Leah Chulsky at lchulsky@bellevuewa.gov or to the address below:

Environmental Planning Manager
Development Services Department
City of Bellevue
PO Box 90012
Bellevue, WA 98009-9012

AUTHORITY: Land Use Code 20.30P.140; 20.25H.220
REVIEWER: Leah Chulsky, Development Services Department

8. Installation Device

To ensure the required mitigation and restoration of areas of temporary disturbance is completed, the applicant shall post an Installation Assurance Device prior to the building permit or clearing and grading permit issuance. The device shall be equal to 150% of the value of the approved mitigation. The device will be released when the applicant demonstrates required mitigation has successfully been installed.

AUTHORITY: Land Use Code 20.25H.125.J, 20.25H.220, and 20.40.490
REVIEWER: Leah Chulsky, Development Services Department

9. Hold Harmless Agreement

The applicant shall submit a hold harmless agreement in a form approved by the City Attorney which releases the City from liability for any damage arising from the location of improvements within a critical area structure setback in accordance with LUC 20.30P.170. The hold harmless agreement is required to be recorded with King County prior to building permit issuance. Staff will provide the applicant with the hold harmless form.

AUTHORITY: Land Use Code 20.30P.170
REVIEWER: Leah Chulsky, Development Services Department

10. Rainy Season Restrictions

No clearing and grading activity may occur during the rainy season, which is defined as October 1 through April 30 without written authorization of the Development Services Department. Should approval be granted for work during the rainy season, increased erosion and sedimentation measures, representing the best available technology must be implemented prior to beginning or resuming site work.

AUTHORITY: Bellevue City Code 23.76.093.A,
REVIEWER: Janney Gwo, Development Services Department

11. Storm Water Pollution Prevention Plan

To ensure contaminated stormwater or construction-related runoff does not pollute adjacent surface water; a construction stormwater pollution prevention plan (CSWPPP) is required. The CSWPPP outline should be generally consistent with the SWPPP requirements of the National Pollutant Discharge Elimination System (NPDES) General Storm water Permit for Construction Activities.

AUTHORITY: Bellevue City Code 23.76.
REVIEWER: Janney Gwo, Development Services Department

B. PRIOR TO CLEARING & GRADING PERMIT: These conditions must be complied with on plans submitted with the Clearing & Grading or Demolition permit application:

1. Right-of-Way Use Permit

Prior to issuance of any construction or clearing and grading permit, the applicant shall secure applicable right-of-way use permits from the City's Transportation Department, which may include:

a) Designated truck hauling routes.
b) Truck loading/unloading activities.
c) Location of construction fences.
d) Hours of construction and hauling.
e) Requirements for leasing of right of way or pedestrian easements.
f) Provisions for street sweeping, excavation and construction.
g) Location of construction signing and pedestrian detour routes.
h) All other construction activities as they affect the public street system.

In addition, the applicant shall submit for review and approval a plan for providing pedestrian access during construction of this project. Access shall be provided at all times during the construction process, except when specific construction activities such as shoring, foundation work, and construction of frontage improvements prevents access. General materials storage and contractor convenience are not reasons for preventing access.

AUTHORITY: Bellevue City Code 11.70 & 14.30
REVIEWER: Tim Stever, Transportation Department

2. Civil Engineering Plans – Transportation

Civil engineering plans produced by a qualified engineer must be approved by the Transportation Department prior to issuance of the clearing and grading permit. The design of all street frontage improvements and driveway accesses must be in conformance with the requirements of the Americans with Disabilities Act, the Transportation Development Code, the provisions of the Transportation Department Design Manual, and specific requirements stated elsewhere in this document. All relevant standard drawings from the Transportation Department Design Manual shall be copied exactly into the final engineering plans. Requirements for the engineering plans include, but are not limited to:

a) Traffic signs and markings.
b) Curb, gutter, sidewalk, and driveway approach design. The engineering plans shall be the controlling document on the design of these features; architectural and landscape plans must conform to the engineering plans as needed. An arborists report shall be provided to confirm the sidewalk design requirements.
c) Curb ramps, crosswalk revisions, and crosswalk equipment such as pushbuttons.

d) Installation or relocation of streetlights and related equipment.
e) Undergrounding of existing overhead utility lines, which should be coordinated with adjacent sites. Transformers and utility vaults to serve the building shall be placed inside the building or below grade, to the extent feasible.
f) Sight distance. Show the required sight triangles and include any sight obstructions, including those off-site. Sight distance triangles must be shown at all driveway locations and must consider all fixed objects and mature landscape vegetation. Vertical as well as horizontal line of sight must be considered when checking for sight distance.
g) Landings on sloping approaches are not to exceed a 7% slope for a distance of 30 feet approaching the back edge of sidewalk. The driveway grade must be designed to prevent vehicles from bottoming out due to abrupt changes in grade.
h) City standards for driveway widths range from 30 to 36 feet on arterial streets, and 26 to 30 feet for local streets. Driveway aprons must be constructed in accordance with Design Manual Standard Drawing DEV-7D or DEV-7E.
i) Location of fixed objects in the sidewalk or near the driveway approach.
j) Trench restoration within any right of way or access easement.

Construction of all street and street frontage improvements must be completed prior to closing the clear and grade permit and right of way use permit for this project. A Design Justification Form must be provided to the Transportation Department for any aspect of any pedestrian route adjacent to or across any street that cannot feasibly be made to comply with ADA standards. Design Justification Forms must be provided prior to approval of the clear and grade plans for any deviations from standards that are known in advance. Forms provided in advance may need to be updated prior to project completion. For any deviations from standards that are not known in advance, Forms must be provided prior to project completion.

AUTHORITY: Bellevue City Code 14.60; Transportation Department Design Manual
REVIEWER: Molly Johnson, Transportation Department

4. Final Landscape and Irrigation Plan and Refuse Location

The Final Landscape and Irrigation Plans shall be submitted with the clearing and grading and building permit applications to ensure compliance will all Land Use Code requirements.

Any sleeves for irrigation mainlines shall be placed within the project property lines.

The applicant shall records a copy of the approved project drawings, including the landscape and irrigation plans, and conditions of this Design Review with the King Country Division of Records and Elections and with the Bellevue City Clerk.

The location of the refuse area shall be located within the individual garages and be taken out for pick up day only and then returned to the individual garages.

AUTHORITY: Land Use Code 20.20.520, 20.20.900.G and 20.25B.040.C
REVIEWER: Leah Chulsky, Development Services Department

5. Pesticides, Insecticides, and Fertilizers

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

AUTHORITY: Land Use Code 20.25H.220.H
REVIEWER: Leah Chulsky, Development Services Department

C. PRIOR TO ISSUANCE OF BUILDING PERMIT: Unless specified otherwise below, these conditions must be complied with on plans submitted with the **Building Permit Application:**

1. Transportation Impact Fee

Payment of the traffic impact fee will be required at the time of each building permit issuance for the number of units in that building. The total impact fee for all units is estimated to be $31,044. Impact fees are subject to change and the fee schedule in effect at the time of building permit issuance will apply.

AUTHORITY: Bellevue City Code 22.16
REVIEWER: Molly Johnson, Transportation Department

5. Existing Easements

Any utility easements contained on this site which are affected by this development must be identified. Any negative impact that this development has on those easements must be mitigated or easements relinquished.

AUTHORITY: Bellevue City Code 14.60.100
REVIEWER: Molly Johnston, Transportation Department

5. Sidewalk/Utility Easements

The applicant shall provide sidewalk and utility easements to the City such that sidewalks outside of the City right of way along the property frontage are located within a pedestrian easement area.

AUTHORITY: Bellevue City Code 14.60.100
REVIEWER: Molly Johnson, Transportation Department

D. PRIOR TO TCO: The following conditions are required by City Code and supported by City Policy. The conditions shall be complied with prior to issuance of the Temporary Certificate of Occupancy (TCO):

1. Landscape Maintenance Assurance Device

File with the Development Services Department a landscape maintenance assurance device prior to TCO approval for a five year period for 20% of the cost of labor and materials for all required landscaping. For the purpose of this permit, maintenance and monitoring shall be completed for a period of five growing seasons. Release of this assurance device is contingent upon receipt of documentation reporting successful establishment in compliance with the mitigation performance standards listed in the project mitigation plan. Land Use inspection of the planting after 5-years is required to release the surety

AUTHORITY: Land Use Code 20.40.490, 20.25H.125.J and 20.25H.220
REVIEWER: Leah Chulsky, Development Services Department

2. Transportation Improvements

All street frontage improvements and other required transportation elements, including street light revisions, must be constructed by the applicant and accepted by the City Inspector. All existing street light apparatus affected by this development, including power sources, must be relocated as necessary. Existing overhead lines must be relocated underground. All required improvements must be constructed as per the approved plans or as per direction of the Transportation Department inspector. Bonding or other types of assurance devices will not be accepted in lieu of construction, unless the City requires a delay.

AUTHORITY: Bellevue City Code 14.60; Comprehensive Plan Policy UT-39; Transportation Department Design Manual
REVIEWER: Molly Johnson, Transportation Department

3. Pavement Restoration

Pavement restoration associated with street frontage improvements or to repair damaged street surfaces shall be provided as follows:

a) NE Bel-Red Road: Based on this street's condition, it is classified with the City's overlay program as "Overlay Required." Street cutting is permitted only with extraordinary pavement restoration. Pavement restoration requirements are outlined in the right-of-way use permit.

AUTHORITY: Bellevue City Code 14.60. 250; Design Manual Design Standard #23
REVIEWER: Tim Stever, Transportation Department

4. Geotechnical Recommendations and Inspection:

The project shall be constructed and inspected by the Engineer of Record to verify implementation of the recommended procedures and practices in the geotechnical report found in the reports prepared by prepared by Geotech Consultants Inc. A report verifying implementation of inspection shall be submitted to Leah Chulsky

at lchulksy@bellevuewa.gov prior to receipt of Temporary Certificate of Occupancy.

Development Services Department
City of Bellevue
PO Box 90012
Bellevue, WA 98009-9012

AUTHORITY: Land Use Code 20.30P.140
REVIEWER: Leah Chulsky, Development Services Department

5. Native Growth Protection Easement

Record with King County a Native Growth Protection Easement that clearly delineates the area to be designated as Native Growth Area. A copy of the recorded Native Growth Protection Area Easement must be submitted to the City of Bellevue prior to the approval of the TCO.

AUTHORITY: Land Use Code 20.25H.030.B
REVIEWER: Leah Chulsky, Development Services Department

6. NGPE Boundary Fence and Signage

Prior to final building inspection, the applicant shall perform a field survey of property boundaries completed by a Washington State Licensed Surveyor. The boundary of the NGPE shall be identified, fenced, and marked with boundary signage that will be provided by the city

NGPE boundary fencing and signage shall be of permanent construction and shall be maintained for the duration of the development. Signs must be of size and location to be visible and the boundary fence shall be a minimum of four feet tall.

AUTHORITY: Land Use Code 20.25H.030
REVIEWER: Leah Chulsky, Development Services Department

DEVELOPMENT SERVICES DEPARTMENT
ENVIRONMENTAL COORDINATOR
450 110th Ave NE
BELLEVUE, WA 98009-9012

DETERMINATION OF NON-SIGNIFICANCE

PROPONENT: SKB Architects

LOCATION OF PROPOSAL: 13601 NE Bel-Red Road

DESCRIPTION OF PROPOSAL: Design Review and Critical Areas Land Use Permit approval to construct a 12-unit townhome complex with proposed stream restoration and buffer modification.

FILE NUMBERS: 15-122602-LD & 15-122890-LO **PLANNER:** Leah Chulsky

The Environmental Coordinator of the City of Bellevue has determined that this proposal does not have a probable significant adverse impact upon the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(C). This decision was made after the Bellevue Environmental Coordinator reviewed the completed environmental checklist and information filed with the Land Use Division of the Development Services Department. This information is available to the public on request.

☐ There is no comment period for this DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's office by 5:00 p.m. on _____.

☒ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's Office by 5 p.m. on **9/15/2016**

☐ This DNS is issued under WAC 197-11-340(2) and is subject to a 14-day comment period from the date below. Comments must be submitted by 5 p.m. on _____. This DNS is also subject to appeal. A written appeal must be filed in the City Clerk's Office by 5:00 p.m. on _____.

This DNS may be withdrawn at any time if the proposal is modified so as to have significant adverse environmental impacts; if there is significant new information indicating a proposals probable significant adverse environmental impacts (unless a non-exempt license has been issued if the proposal is a private project); or if the DNS was procured by misrepresentation or lack of material disclosure.

Environmental Coordinator

5/21/2015
Date

OTHERS TO RECEIVE THIS DOCUMENT:

☐ State Department of Fish and Wildlife / Stewart.Reinbold@dfw.gov; Christa.Heller@dfw.wa.gov;
☐ State Department of Ecology, Shoreline Planner N.W. Region / Jobu461@ecy.wa.gov; sepaunit@ecy.wa.gov
☐ Army Corps of Engineers Susan.M.Powell@nws02.usace.army.mil
☐ Attorney General ecyolyef@atg.wa.gov
☐ Muckleshoot Indian Tribe Karen.Walter@muckleshoot.nsn.us; Fisheries.fileroom@muckleshoot.nsn.us

SEPA ENVIRONMENTAL CHECKLIST
UPDATED 2014

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

DChudsky 8/30/16

proposal.

A. BACKGROUND

1. Name of proposed project, if applicable: [help]

   GIS Development – Bel-Red Road Townhomes

2. Name of applicant: [help]

   GIS Development

3. Address and phone number of applicant and contact person: [help]

   Applicant:
   GIS Development
   600 Stewart Street, Suite 603
   Seattle, WA 98101

   Contact:
   Eugene Gershman
   (425) 453-1151

4. Date checklist prepared: [help]

   August 2015

5. Agency requesting checklist: [help]

   City of Bellevue

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

   Construction anticipated to start early 2016 (first quarter) and will last approximately 10 months.

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.

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

   Critical Area Report and Buffer Enhancement Plan **prepared by Wetland Resources, Inc.**

DKhulsky
8/30/16

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.

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

    City of Bellevue Critical Areas Land Use Permit and Building Permit.

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) [help]

    Proposed development includes the construction of twelve townhomes, access drive, and associated infrastructure on the 1.69-acre property.

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]

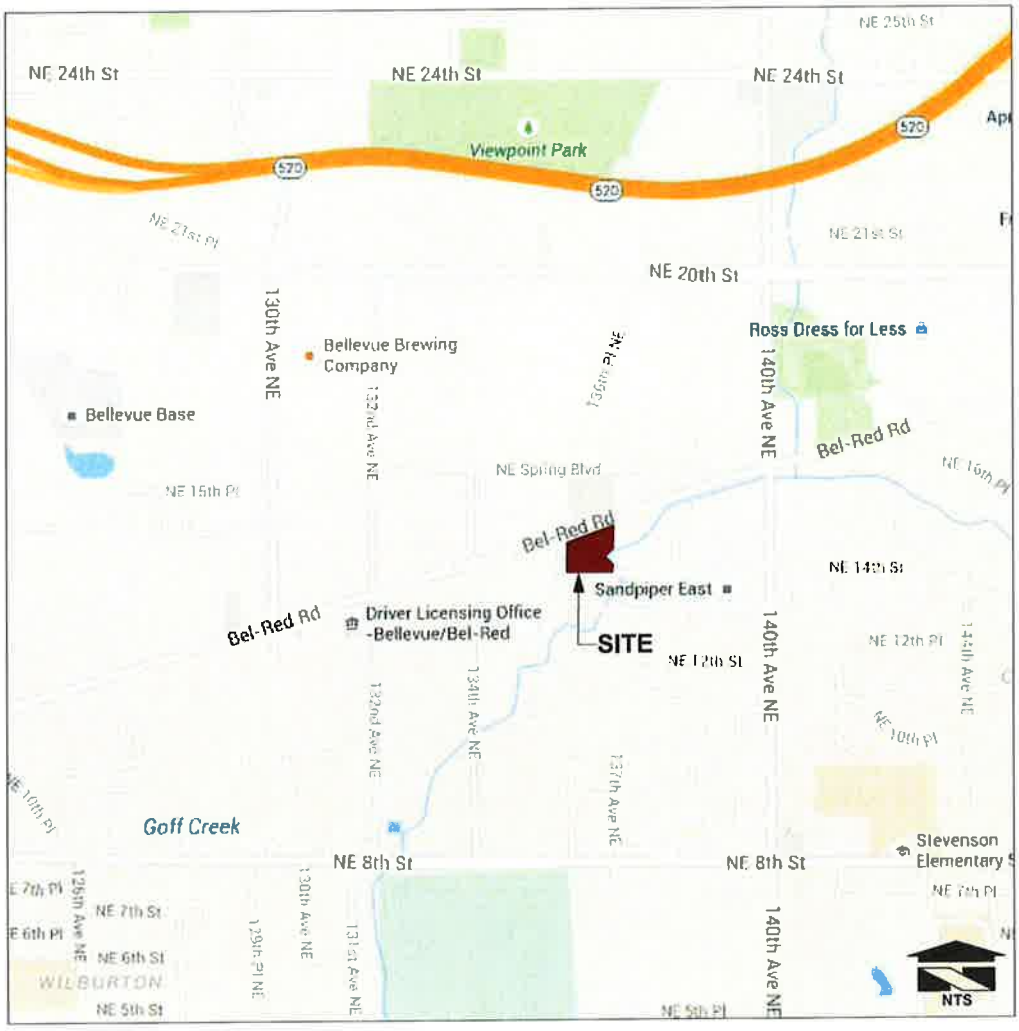
    Site address:
    13605 NE Bel-Red Road
    Bellevue, WA 98005

    Tax Parcel #: 2725059013
    Site situated in Section 27, Township 25, Range 05E, W.M.

    Access to the property is off Bellevue-Redmond Road or from 136th Avenue SE.

JChulsky
8/30/16

VICINITY MAP



B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site [help] (circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____

The west side of the site is relatively flat with an east/southeast aspect, becoming steeper near the east property line. The slope on the east side of the site is generally 40 to 50 percent.

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

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Steepest slope on the site is ~100 percent. There is a cliff in the southeast corner of the site, adjacent to Kelsey Creek.

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]

Soil test pits by Geotech Consultants, Inc. generally found gravelly, silty sand on the site. The NRCS has mapped the soil as Alderwood gravelly sandy loam 8 to 15 percent slopes.

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

Not to our knowledge. The report by Geotech Consultants, Inc. states that the site is within Seismic Zone 3 and is not susceptible to seismic liquefaction.

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.

An area of 0.76 acres will be graded during the implementation of the project. Imported fill will be obtained from an approved/permitted borrow pit or from other permitted construction site with excess material available. Cut and fill are estimated to be 2,000 cy and 8,000 cy respectively.

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

Minor erosion could occur during clearing and construction. Standard best management practices will be utilized to minimize erosion.

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

Approximately 35 percent of the 1.69-acre site will be buildings, access drive, or paved walkways.

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

Standard best management practices will be utilized to minimize erosion during construction. Silt fences and/or sediment ponds will be utilized as required to restrict sediment from leaving the site.

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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]

Emission typical of the construction of multi-unit residential development will occur, including dust and machinery exhaust. Upon completion of construction, emissions typical of residential dwellings will occur (ex. Vehicle exhaust, emissions from heating/cooling systems).

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

No.

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

Standard best management practices will be utilized to control and reduce emissions. Machinery and vehicles will be turned off when not in use. Exposed soil will be covered as needed to control dust.

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]

Kelsey Creek and a small tributary stream are located along the east side of the site. Kelsey Creek flows into Mercer Slough, which is approximately 3.4 miles from the subject site.

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

Yes. The proposed townhome development will be 110 feet from the ordinary high water mark of Kelsey Creek and the tributary stream.

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.

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

Surface water from the west side of the site will be collected and allowed to infiltrate in to the stream buffer on the east side of the site through a dispersion trench. This system is designed to mimic pre-development drainage patterns. No other surface water withdrawals or diversions are proposed.

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

The 100-year floodplain for Kelsey Creek is located in the southeast corner of the site. Development is proposed on the west side of the site. No clearing, grading, or construction is proposed within the 100-year floodplain.

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

No.

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]

No.

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]

No septic systems are proposed for this project. No waste will be discharged into the ground.

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c. Water runoff (including stormwater):

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

Stormwater generated from the proposed development will be collected, detained on-site in an ~17,000 sf underground detention vault, and released to the downstream system via dispersion trench pursuant to City of Bellevue codes and regulations.

2) Could waste materials enter ground or surface waters? If so, generally describe. [help]
No.

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

No.

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

An underground detention vault will be utilized to attenuate stormwater runoff from the developed site. Ground water, if encountered, will be disposed of in accordance with City of Bellevue codes and regulations.

4. **Plants** [help]

a. Check the types of vegetation found on the site: [help]

__X__deciduous tree: alder, maple, aspen, other
__X__evergreen tree: fir, cedar, pine, other
__X__shrubs
__X__grass
____pasture
____crop or grain
____Orchards, vineyards or other permanent crops.
____wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

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

Trees, shrubs, and herbaceous plants will be removed from west side of the site. Approximately 35 percent of the site will be cleared.

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

No known threatened or endangered plant species are known to be on or in the immediate vicinity of the site.

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

The stream buffer will be enhanced by removing non-native and invasive species and installing native trees, shrubs, and herbaceous plants. The development has been designed in a manner to keep and protect a 48" DBH fir tree in the central area of the site.

e. List all noxious weeds and invasive species known to be on or near the site.
Himalayan blackberry (*Rubus armeniacus*), holly (*Ilex aquifolium*)

5. **Animals**

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include: [help]
birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Birds: Songbirds, eagle, hawk

Mammals: raccoons, squirrels, rabbits, and other small mammals adapted to urban settings.

Fish: salmon and trout.

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

Chinook salmon (Federal Threatened species)

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

Western Washington is included within the Puget Flyway, which is a migratory bird route. Kelsey Creek is a documented salmonid stream. Coho salmon, Sockeye salmon, Chinook salmon, and steelhead trout migrate up and down Kelsey Creek.

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

As part of the buffer enhancement and landscaping plans, bat boxes, bird houses, and bee shelters will be installed within the stream buffer area.

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

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None.

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.

Energy needs for project will be provided by gas and/or electric utilities in place adjacent to the project.

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

No.

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

The proposed buildings will meet current engergy code. Irrigation for the east side of the site (stream buffer) will be temporary, and will only be used for approximately five years.

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]

No.

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

There are no known on-site contaminants.

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

There are no known existing hazardous chemicals/conditions on-site.

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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.

The only chemicals that are anticipated to be used on-site will be products generally associated with construction of multi-family residences. These will be used, stored, and disposed of according to product label specifications.

4) Describe special emergency services that might be required.

None.

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

None.

b. **Noise**

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

None other than typical ambient noise.

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]

During construction period there will be typical noise associated with heavy machinery and other tools used in constructing multi-unit residences. All construction will occur during daylight hours as allowed by the City of Bellevue. After construction, the noise level will be typical of the levels associated with residential areas.

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

None

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]

The site is currently vacant and undeveloped. Surrounding land use is a combination of commercial and multi-family residential. This proposal is consistent with the surrounding land use.

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

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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]

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:

No.

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

No structures exist on-site.

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

N/A - There are no structures on-site.

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

BR-ORT Bel-Red Office/Residential Transition

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

BR-ORT Bel-Red Office/Residential Transition

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

N/A – site does not have a shoreline designation.

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

Yes, Kelsey Creek and the tributary stream are critical areas located on-site.

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

There are 12 units. Assuming there are approximately 2-4 residents per unit (including children), there will be 24-48 residents.

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

None.

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

N/A – no displacement will occur.

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

The applicant and Design Team are working closely with the City of Bellevue (via Pre-Development, DC process) and City code to ensure that the project is compatible with existing and projected land uses and plans.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

N/A – no agricultural or forest lands of commercial significance are near the site.

9. **Housing**

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

12 Townhomes.

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

N/A – no units will be eliminated.

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

The proposed project will add 12 residential units to the area, it will not eliminate any units.

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]

Highest point on the townhomes is 40 feet. Building materials proposed are a mix of horizontal siding, metal panel, brick, stucco, and concrete.

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

The project site is in an urban area, bordered by commercial and multi-family residential buildings. The view from the apartments to the south of the property and the business to the west of the property will change. The views from these

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adjacent properties will change from a view of an unmaintained, vacant lot to another residential development.

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

Trees will be retained along the property lines. In addition, landscaping will be installed along the perimeter of the development.

11. **Light and glare**

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

Light associated with a typical multi-unit residential development will be produced. Light sources will include interior lights, exterior building lights, and lighting along the access driveway. The majority of these lights will be controlled by residents and are anticipated to be used primarily in the mornings and evenings.

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

No.

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

None.

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

None.

12. **Recreation**

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

Bellevue Highlands Park, Bellevue Skate Park, Highland Community Center, and the Bellevue Family YMCA are all located a few blocks east of the project site on Bel-Red Road.

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

No.

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

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This project is proposing to construct a short trail within the east side of the property, providing a recreational space for residents.

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]

There are no known historic buildings, structures, or sites located on or near the property.

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]

There are no known historical landmarks, features, or evidence of Native American use on the property.

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]

Information on the Washington State Department of Archaeology and Historic Preservation's searchable database (https://fortress.wa.gov/dahp/wisaard/) was reviewed. The database did not show any features on the subject property.

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.

None.

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]

Access to Bel-Red Road will be via a private driveway just east of 136th Ave. NE.

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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 routes currently serve the site. There is a bus stop on either side of Bel-Red Road near 136th Ave. NE, which is adjacent to the west edge of the subject property.

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

There is currently no parking available on-site. The proposed townhome development will provide two-car garages for each townhome unit (24 spaces) as well as uncovered, parallel parking in front of several units. Parallel parking will accommodate approximately 10 vehicles.

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]

This project will replace the sidewalk along Bel-Red Road.

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

Currently the project site is not in the vicinity of any water, rail, or air transportation. The proposed future light rail line will run north of the project a few blocks.

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]

Per City of Bellevue meeting minutes from Pre-Application Conference, no traffic study is required.

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.

h. Proposed measures to reduce or control transportation impacts, if any: [help]
None.

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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]

No.

b. Proposed measures to reduce or control direct impacts on public services, if any. [help]
None.

16. **Utilities**

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

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.

Electricity, gas, telephone, cable and domestic/fire water are available adjacent to the site from the City and/or local utility franchises. Approximately 250' of sewer main extension will be required to service the site.

C. SIGNATURE

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

Signature: Meryl A. Kamowski

Name of signee: Meryl A. Kamowski

Position and Agency/Organization: Senior Ecologist, Wetland Resources, Inc.

Date Submitted: 08/31/2015

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8/30/16

Wetland Resources, Inc.
Delineation / Mitigation / Restoration / Habitat Creation / Permit Assistance

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CRITICAL AREA REPORT
AND
BUFFER ENHANCEMENT PLAN

FOR

13605 NE BELLEVUE – REDMOND ROAD

Wetland Resources, Inc. Project #15021

Prepared By
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August 31, 2015

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Appendix A: Landscape Package
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Appendix C: Arborist Reports
Appendix D: Geotechnical Engineering Study
Existing Conditions Map (Sheet 1/2)
Critical Area Study and Buffer Enhancement Map (Sheet 2/2)

1.0 INTRODUCTION

Wetland Resources, Inc. completed a site investigation on January 23, 2015 to determine the presence of jurisdictional wetlands and streams on and in the vicinity of the 1.69-acre subject site located at 13605 NE Bellevue-Redmond Road in Bellevue, WA.

Access to the property is off Bellevue – Redmond Road or from 136th Avenue SE. A footpath weaves the center of the site. Two depressions with cement bases are present in the north central area of the site. These appear to be historic foundations for small buildings. No other structures are present on site.

The west side of the site is relatively flat with a slight east aspect, becoming steeper near the east property line. Surrounding land use is multi-family residential or commercial properties.

The majority of the site is densely vegetated. Vegetation consists of Douglas fir, cottonwood, and big leaf maple trees with an understory of western hazelnut, snowberry, Himalayan blackberry, Oregon dull grape, and sword fern. The soils underlying this site are mapped as Alderwood gravelly sandy loam, 6-15 percent slopes. No jurisdictional wetlands were found on site. Two streams, Kelsey Creek and a tributary, are located on the east side of the property.

Figure 1: Subject Property

2.0 Review of Existing Information

Prior to conducting an on-site investigation of the project area, public resource information was reviewed to identify the presence of wetlands, streams, and other critical areas within and near the project area. The following information was examined:

- *National Wetlands Inventory:* The USFWS National Wetland Inventory (NWI) depicts no wetland areas on-site.
- *USDA/NRCS Web Soil Survey:* Soils mapped within the subject site are mapped as Alderwood gravelly sandy loam, 6-15 percent slopes per the Natural Resources Conservation Service (NRCS).
- *WDFW SalmonScape Interactive Mapping System:* SalmonScape shows documented Coho, Sockeye, and Chinook salmon as well as Steelhead trout presence in Kelsey Creek.
- *WDFW Priority Habitat and Species (PHS) Maps (dated March 24, 2015):* The WDFW PHS Map documents Coho, Sockeye, and Chinook salmon as well as resident Cutthroat and Steelhead trout presence in Kelsey Creek.
- *King County iMap Interactive Map*: The iMap interactive map indicates no wetland areas on the property. This map does show Kelsey Creek in in the southeast corner of the site.

3.0 Critical Area Determination

3.1 Field Determination Methodology

Wetland conditions were evaluated using routine methodology described in the *2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*, (referred as 2010 Regional Supplement). The following criteria descriptions were used in the boundary determination: examination of the site for hydrophytic vegetation (species present and percent cover), examination of the site for hydric soils, and determining the presence of wetland hydrology.

Presence of on-site streams was determined using the methodology described in the Washington State Department of Ecology document *Determining the Ordinary High Water Mark on Streams in Washington State (Second Review Draft)* (Olson and Stockdale 2010).

No wetlands were observed on the subject site. Two streams are located on the east side of the site.

3.2 Stream Determination

Stream A - Kelsey Creek

Kelsey Creek enters the site in the southeast corner, flows west and turns to flow to the south, exiting the site. Kelsey Creek is known to support Chinook, Coho, and Sockeye salmon as well as cutthroat trout. This stream is classified as a Type F water and in the City of Bellevue receives a 100-foot buffer.

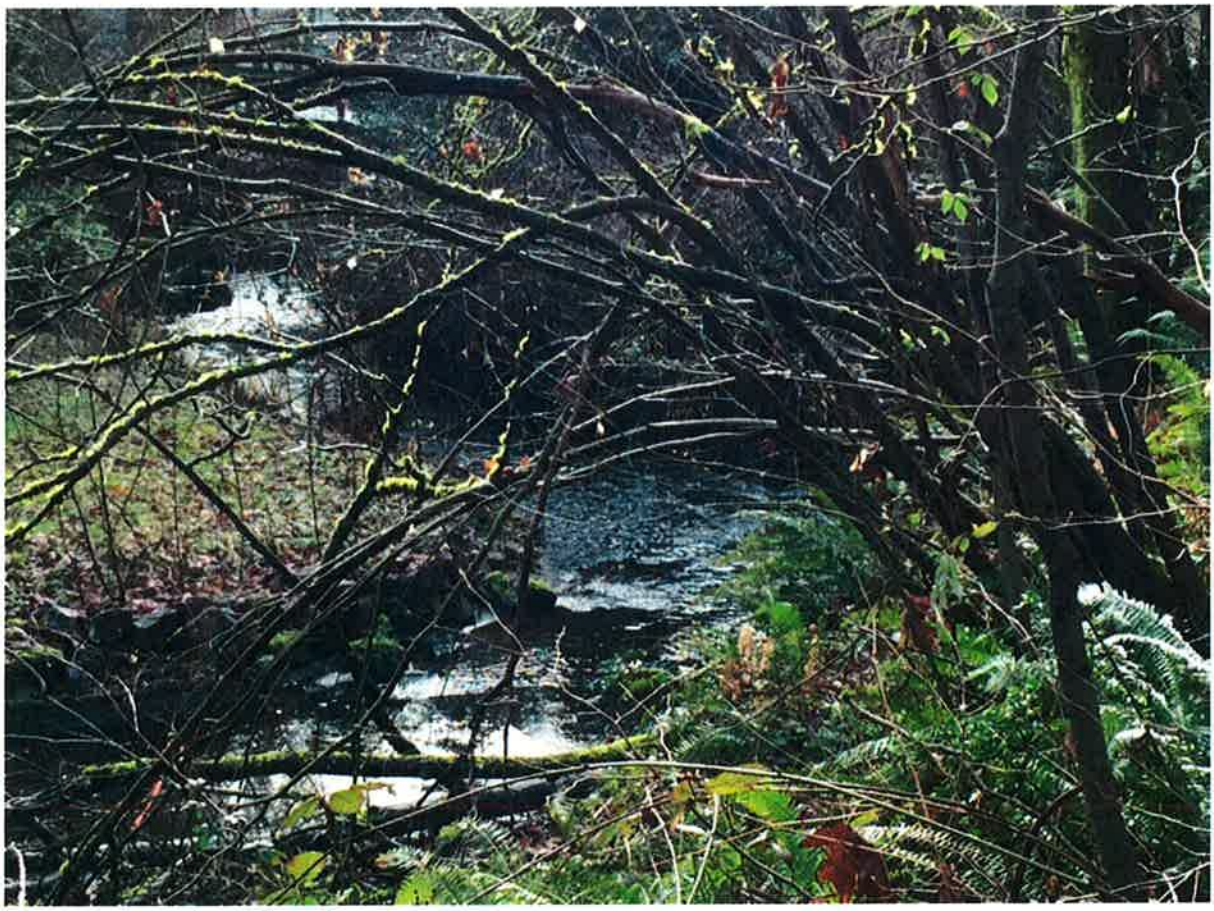

Figure 2: Kelsey Creek.
Note the armoring on the off-site bank.

Stream B
This stream enters the site through a culvert near the northeast corner and flows south to join Kelsey Creek. It is presumed this stream also provides habitat for fish, as the connection to Kelsey Creek is unobstructed. Stream B is classified as a Type F water and in the City of Bellevue receives a 100-foot buffer.

In the City of Bellevue, stream buffers are measured from the top of bank. Top of bank is defined as:

A. The point closest to the boundary of the active floodplain of a stream where a break in the slope of the land occurs such that the grade beyond the break is flatter than 3:1 at any point for minimum distance of 50 feet measured perpendicularly from the break; and

B. For a floodplain area not contained within a ravine, the edge of the active floodplain of a stream where the slope of the land beyond the edge is flatter than 3:1 at any point for a minimum distance of 50 feet measured perpendicularly from the edge.

The top of bank location was determined using theses parameters. On the subject site, the top of bank is located to the west of the delineated ordinary high water mark (OH). An Existing Conditions Map (Sheet 1) is included with this report. This map depicts both the OH line, top of bank, and standard buffer.

No other drainage features or wetlands were identified within 300 feet of the investigation area. In addition, the National Wetland Inventory, DNR stream typing maps, King County Sensitive Area maps and NRCS soils survey provide no indication of additional wetlands or streams on site or within the immediate vicinity.

4.0 HABITAT ASSESSMENT

The following habitat assessment is consistent with the requirements stipulated in Bellevue Land Use Code 20.25H.165. The purpose of the habitat assessment is to investigate and evaluate the potential presence or absence of designated species of local importance.

4.1 VEGETATION DESCRIPTION

The majority of the site is forested, with a higher concentration of trees and denser canopy on the east side of the site. The southwest area of the site contains very few trees and the understory is primarily Himalayan blackberry (*Rubus aremeniacus*). Vegetation on the site includes: Douglas fir (*Pseudotsuga menziesii*), big leaf maple (*Acer macrophyllum*), black cottonwood (*Populus balsamifera*), western hazelnut (*Corylus cornuta*), holly (*Ilex aquifolium*), snowberry (*Symphoricarpos albus*), salmonberry (*Rubus spectabilis*), western sword fern (*Polystichum munitum*), and Oregon dull grape (*Mahonia nervosa*).

4.2 SPECIES OF LOCAL IMPORTANCE

The majority of species of local importance listed in BLUC 20.25H.165.A are associated with habitats of much greater size and complexity than what is available at the subject site, which located between commercial and multi-family residential development in a high trafficked urban area. The subject parcel is approximately 2.4 miles from Lake Washington and 2.4 miles from Lake Sammamish. The closest documented Osprey occurrence is on Lake Washington. The subject site is no more likely to provide potential habitat to species such as osprey than most other residential properties within that range. No ponds occur on or adjacent to the property.

No terrestrial species of local importance were observed during the site investigation and none are identified on the Washington State Department of Fish and Wildlife Priority Habitats and Species (PHS) maps within a primary association area. A Bald Eagle (*Haliaeetus leucocephalus*) nest is identified approximately 2.7 miles southwest of the subject property.

Priority fish presence is noted on the PHS maps within Kelsey Creek. This stream provides habitat for Chinook salmon (*Oncorhynchus tsawytscha*), Coho salmon (*Oncorhynchus kisutch*), Sockeye salmon (*Ocorhynchus nerka*), resident cutthroat trout (*Oncorhynchus clarkii*), and steelhead trout

(Salvelinus confluentus). Chinook salmon and Coho salmon are listed in BLUC as species of local importance.

No other priority species or habitats are identified by the PHS online mapping application, or any other commonly available public resource, as being present on the subject property.

4.3 Federal, State, or Local Management Recommendation

Federal management for Bald Eagle requires maintaining a standard 330-foot buffer zone with seasonal restrictions within 660 feet of a nest. The subject site is well outside of the typical Bald Eagle nest management area.

Protection and management of salmonid habitat typically consists of regulating water temperature, water quality, access to areas of refuge, and substrate suitable for spawning. Especially important in regulating these habitat features is the vegetation in the riparian area, specifically along banks and within the floodplain. Riparian vegetation provides many crucial aspects of salmonid habitat including shade, bank stabilization, nutrient cycling, pollutant removal and input of large woody debris (LWD) in the channel. LWD is especially important since it facilitates the formation of important habitat features like pools through bed scour, and it buffers the severity of sedimentation and erosion. Healthy floodplains store water during floods and release it during dry periods, thereby maintaining a steady base flow throughout the year. Long-term conservation of salmonids requires protection of both the immediate functions riparian vegetation provides and the ecological conditions within the riparian area needed to maintain natural communities.

4.4 Potential Habitat Impact

No direct or indirect impacts are proposed to any habitats associated with species of local importance. The proposed development will maintain vegetation immediately adjacent to the on-site streams. This will allow the stream buffers to continue providing temperature regulation, filtration for water quality, and contributions of LWD to the system. This project plans to allow stormwater collected from the development area to infiltrate into the buffer. As a result, the project will maintain the quantity of stormwater infiltration on-site and within the on-site streams.

5.0 Proposed Development

The applicant it proposing to construct a 12-unit townhome complex, access road, and associated infrastructure on the subject site. The proposed housing complex includes a soft-surface pedestrian pathway within the stream buffer, as allowed in Bellevue Land Use Code (BLUC) 20.25H.055(C)(3)(f). In order to accommodate this development, the applicant is proposing modifications to the parameters outlined in BLUC.

5.1 Proposed Modification to BLUC

The purpose of this critical area study is to modify the standard stream buffer widths and the standard structure setback identified in BLUC 20.25H.075. Specifically, the applicant is proposing to infringe upon these critical areas and their associated setbacks in the following manner:

BLUC 20.25H.075

- Reduce the standard stream buffer area by 5,780 square feet.
- Reduce the standard stream buffer width to 62 feet at the narrowest point and 88 feet at the widest point.
- Temporary buffer disturbance associated with grading and a stormwater dispersion trench.

BLUC 20.25H.075D

- Reduce the standard structure setback to 7 feet at the narrowest and 12.5 feet at the widest point.

5.2 Proposed Mitigation

Proposed mitigation for the stream buffer and setback modification is provided through buffer enhancement at a 2.65:1 mitigation to impact ratio. Buffer enhancement will entail: removing invasive species and trash, installing native plants in 15,330 square feet of buffer area, and adding additional habitat structure to the buffer. Additional habitat structures will include bird nest boxes, bat houses, and bee shelters.

6.0 Feasibility Alternative Analysis

6.1 Objective of the Proposed New Development

The objective of this proposed development is to provide new residences while accentuating the natural setting as a predominant and desirable feature of the community.

6.2 Alternative Development Plans

6.2.1 Alternative A – Development Entirely Outside of the Buffer

This alternative would observe the standard 100-foot stream buffer and 20 foot BSBL. The total square footage of the stream buffer would remain the same, with no alteration or impact.

Under this alternative, the stream buffer would remain in its existing condition. As discussed below in Section 8 of this report, the post-development buffer area would provide the same level of functions and values as it does in its current state.

6.2.2 Alternative B – Preferred Alternative

The preferred alternative is the action proposed in this critical area study. This alternative includes 12 units with parking provided through two-car garages for each townhome unit (24 spaces) and parallel parking in front of several units.

This alternative includes reducing the width and total square footage of the stream buffer. As compensation for the buffer modification, a buffer enhancement plan is included. This enhancement plan would remove all non-native/invasive species as well as all trash and debris within the buffer. The buffer would then be planted with native species and additional habitat features would be installed.

As discussed below in Section 8 of this report, the buffer enhancement plan will provide a lift in the existing functions and values the stream buffer provides for wildlife habitat. This enhancement plan will allow the site to provide greater habitat value than it does in its current condition.

7.0 Cumulative Impacts

The subject property is surrounded by multi-family residential and commercial development. Much of this development is closer to Kelsey Creek than the current required buffer.

The proposed development could potentially impact water quality and wildlife habitat on-site. However, proposed development retains vegetated buffer between the townhomes and the on-site streams, and does not propose any additional stream crossings. The vegetation within the buffer will continue to slow stormwater velocity, allow for infiltration, and prevent sediment from entering the streams. The dispersion trenches within the buffer will allow for the volume of water infiltrating on-site to remain the same. This will maintain the water levels within the on-site streams.

8.0 Required VS Proposed Protection

8.1 Functions and Values – Existing Conditions

The stream buffer and adjacent structure setback area will be analyzed as a system rather than individual features.

8.1.1 Water Quality

Vegetated stream buffers obstruct water flow, thereby decreasing water velocity, allowing infiltration into the soil, and reducing soil erosion potential. The buffer area within this property is vegetated with a combination of trees, shrubs, and herbaceous plants. This vegetation allow for surface water filtration and velocity reduction, in turn reducing the potential of soil erosion. Several fluorescent light bulbs and other trash are present within or immediately adjacent to Stream B.

8.1.2 Stormwater Control

Stream buffers help to moderate water level fluctuations. Buffer vegetation impedes the flow of runoff, increases the humus content of soil (greater adsorption capacity), and preserves soil composition as intense rainfall hits the ground. Buffers within the subject property do perform this function. However, the areas of Himalayan blackberry limit velocity reduction and stormwater absorption functions. Blackberry is not conducive to supporting dense undergrowth of herbaceous material.

Figure 3: On-site vegetation.
Holly and blackberry are present in this area and many other areas of the stream buffer.

Figure 4: On-site vegetation.
Note the ivy on the trees and holly and blackberry in the background.

8.1.3 Wildlife Habitat

The stream buffer and setback on the subject site contains several significant trees with an understory of shrubs and herbaceous plants. The large trees are relatively important for large avian species, in particular. Overall, the vegetation in the buffer area provides cover for wildlife escape and refuge and food sources. However, a large portion of the understory within the buffer is dominated by invasive species, including Himalayan blackberry and holly. The site is surrounded by development and roads on all sides, isolating this stream buffer from other habitat areas or movement corridors for terrestrial species. The few native food sources and isolation limit the habitat benefit provided by the on-site stream buffer. Please see section 4 of this report for a detailed habitat assessment and analysis of wildlife species expected to use the site.

8.1.4 Stream Process Functions

The most important functions provided by streams and stream buffers are to maintain downstream water quality, riparian habitat, and in-stream habitat. The most common impacts to stream and stream buffers that may result from residential land use are: soil destabilization (leading to stream sedimentation), changes to the hydrologic regime (increases in peak flow that may exacerbate flashiness and low flow), and stream temperature (potential removal of stream shading vegetation).

The segment of Kelsey Creek on the subject property is within a very defined channel, with the only access to its floodplain near the confluence of the on-site tributary. The adjacent property has a building approximately 35 feet from Kelsey Creek, with maintained lawn between the

building and the stream. The lawn/yard area is several feet above the water level of the stream and appears to be somewhat armored (See Figure 2 above). Consequently, during peak flows this section of Kelsey Creek very minimally reduces the volume of velocity of its flow, if at all. The on-site bank of Kelsey Creek is vegetated, providing shade over the water. However, the open area of the lawn on the adjacent parcel leaves this portion of the stream exposed, which may contribute to a higher water temperature.

Stream B (tributary to Kelsey Creek) enters the site from a culvert and flows down a slight hill before entering Kelsey Creek. The channel of this stream is defined, but the topography is such that a small floodplain area is accessible. The banks of this stream are densely vegetated with shrubs and a few trees. This vegetation assists in moderating the temperature of the water entering Kelsey Creek.

8.1.5 Aesthetics

The subject property is located on Bellevue-Redmond Road and does provide area of green space within an urban setting. However, when driving past the site, it is obvious it has been unmaintained and abandoned for years. Multiple encampments and piles of trash have been discovered on the site in the last several years.

Figure 5: Encampment 1

Figure 6: Encampment 2

8.2 Functions and Values – Regulations and Standards Strictly Applied (Alternative A)

The streams, associated buffer, and setback will be analyzed as a system rather than individual features.

8.2.1 Water Quality

If the City's regulations and standards are strictly applied there will be no change in the existing functions and values for water quality. Overall the water quality improvement function of the on-site critical areas and their associated setbacks would remain moderately low.

8.2.2 Stormwater Control

If the City's regulations and standards are strictly applied there will be no change in the existing functions and values for water quality. Overall the stormwater improvement function of the on-site critical areas and their associated setbacks would remain low.

8.2.3 Wildlife Habitat

If the City's regulations and standards are strictly applied there will be no change in the existing functions and values for wildlife habitat. Overall, wildlife habitat may actually diminish if invasive species are not controlled. Dense Himalayan blackberry prevents native species volunteer starts from establishing, and often crowds out established native shrubs and herbaceous plants. Both blackberry and holly spread/propagate easily, reducing the chances of native

species propagation and establishment. The on-site critical areas and their associated setbacks would remain Low to moderate for wildlife habitat.

8.2.4 Stream Process Functions

If the City's regulations and standards are strictly applied, there will be no change in stream process functions. Vegetation cover will remain in the same state as the present conditions, with limited change to water temperature, recruitment of large woody debris, or sediment filtration.

8.2.5 Aesthetics

If the City's regulations and standards are strictly applied, and all development occurs outside of the buffer, no substantial change in aesthetics of the buffer will occur. It is presumed that the residents of the property would have an interest in maintaining the area immediately adjacent to the sidewalk and access road. It is unknown if development constructed strictly outside of the standard required buffer would deter people from using the interior of the buffer for a camp site or dumping ground.

8.3 Functions and Values – Proposed Development and Buffer Enhancement (Alternative B)

8.3.1 Water Quality

Stormwater for the townhome development will be collected and then allowed to infiltrate within the stream buffer. Dispersion trenches will allow for stormwater to enter the buffer at a slow rate, preventing soil erosion and sedimentation. The vegetation in the buffer will continue to decrease water velocity and allow for infiltration. Additionally, removal of all trash and debris adjacent or within the stream channel will improve the water quality of the tributary and Kelsey Creek.

8.3.2 Stormwater Control

Stormwater for the townhome development will be collected and then allowed to infiltrate within the stream buffer. Dispersion trenches will allow for stormwater to enter the buffer at a slow rate, preventing soil erosion. This system will permit stormwater from the developed area that would naturally enter the buffer to do so. This minimizes the potential of water level fluctuation within the buffer and streams.

8.3.3 Wildlife Habitat

As part of the proposed buffer/setback modification the buffer area and width will be reduced. This will require the removal of one tree that would otherwise be protected within the standard buffer/setback. As mitigation for the proposed buffer and setback modification, the remaining buffer area will be enhanced through removing invasive vegetation and all trash and debris on-site as well as installing native vegetation. Additional habitat structures (bat boxes, bird houses, etc.) will also be installed.

Installation of native plants will provide a greater diversity of vegetation structure and an increase in native food sources. Greater diversity of vegetation structure as well as the addition of constructed habitat features will provide an increase in habitat niches and opportunities for animals seeking shelter or escape.

8.3.4 Stream Process Functions

The majority of the existing trees within the stream buffer area deciduous species. As part of the native planting, cedar trees will be installed within the stream buffer. The installation of these conifers will allow for natural succession from deciduous to conifer forest. This natural succession will provide forested cover on-site in the future. This will assist in maintaining shade cover on-site. The combination of deciduous and coniferous trees will prove a source of large woody debris in close proximity of the stream channels, which often contributes to pools and other habitat features within streams.

The dense shrub and herbaceous vegetation proposed within the buffer will provide an increase in sediment filtration over time.

8.3.5 Aesthetics

Invasive species removal, trash removal, installation of new plantings, and regular maintenance will dramatically improve the aesthetics of the buffer on-site. The proposed plantings and pathway are designed in a manner to discourage unauthorized use of the on-site buffer.

Table 1. Stream Buffer and Setback Functions and Values

Function/Value	Existing Condition	Development Entirely Outside of Buffer	Post-Mitigation Condition
Water Quality	LM	LM	LM
Stormwater Storage	L	L	L
Wildlife Habitat	LM	LM	M
Aesthetic Value	L	L	MH

L-Low, M-Medium, H-High

8.4 Functions and Values Conclusion

The subject property is located within the Bel-Red/Wilburton area, for which the City of Bellevue has developed a purposeful transformation and development plan. The proposed development coincides with the Bel-Red vision for sustainable urban development by merging multi-family residential development (fairly dense development) and enrichment of urban wildlife habitat. An overall improvement in functions and values is expected from the implementation of the buffer enhancement plan. Removal of trash, control of invasive species, and installation of diverse native plants and habitat structures will result in marked improvement in function and values for both wildlife habitat and aesthetics. The pathway within the buffer will allow for use of the urban green space, while the enhancement plantings will ensure protection of the streams.

9.0 Performance Standards BLUC 20.25H.160

The primary focus of habitat management plans for salmonid habitat is protection of the riparian area vegetation. Considering the mitigation for this project is focused on enhancing the stream buffer vegetation, the applicable performance standards will be included in 10.0 Mitigation Plan section of this report.

10.0 Mitigation Plan

10.1 Project Description

The applicant is proposing to construct a 12-unit townhome complex with associated access road and utilities. This proposed plan would reduce the total area of the stream buffer by 5,700 square feet, while providing 15,330 square feet of buffer enhancement. This is a 2.65:1 mitigation to impact ratio, which is greater than the required 1:1 ratio stipulated in BLUC 20.25H.085.B. In addition to native plantings, additional habitat structures will be installed in the stream buffer. These structures include: bird nest boxes, bat houses, and bee shelters.

10.2 Mitigation Sequencing

10.2.1 Avoidance

The applicant is avoiding all impacts to the on-site streams. The proposed development will be located on the opposite side of the site from the streams. Buffer impacts have been avoided to the maximum extent practicable, while maintaining the economical feasibility of the project.

10.2.2 Minimization

The applicant is proposing to minimize impacts to the greatest extent possible by limiting buffer impact to the outer section of the buffer, which is primarily vegetated with non-native species, including Himalayan blackberry. The buffer modification will only impact one tree that would remain intact if the standard buffer were observed. This plan ensures the preservation of a large (48 inch diameter) Douglas fir tree within the buffer and provides buffer enhancement, which includes installation of additional trees and shrubs. Stormwater will be allowed to infiltrate through dispersion trenches within the stream buffer, which will minimize the impact to the hydrological regime of the streams and associated buffer.

10.2.3 Mitigation

The applicant is proposing to compensate for the buffer modification through on-site buffer enhancement. All trash and debris as well as and non-native vegetation within the stream buffer will be removed. Native species will be planted within the buffer area. The buffer enhancement plantings will be maintained to ensure success of the mitigation area. Additional habitat structures including bird nest boxes, bat houses, and bee shelters will also be installed in the buffer as part of the enhancement plan.

10.2.4 Monitoring

All mitigation areas will be monitored for a period of five years from the point of installation per the approved monitoring plan established in this report.

10.3 Goals, Objectives, and Performance Standards

10.3.1 Goal 1 – Improve Wildlife Habitat On-site

- Objective 1 – Increase diversity of native species within the stream buffer

  Performance Standard 1: 100 percent survival rate of the planted species within the first year of planting

  Performance Standard 2: 80 percent survival rate of the planted species at the end of the five-year monitoring period

- Objective 2 – Control invasive species within the stream buffer

  Performance Standard 3: 0 percent invasive species present within the enhancement area at the end of the first year of planting

  Performance Standard 4: Maximum 15 percent invasive species present within the enhancement area at the end of the five-year monitoring period

10.4 Mitigation Specifications

Mitigation for aforementioned 5,780 square feet of buffer impact will be in the form of control of invasive species and planting of native shrubs and herbs within the specified 15,330 square feet of stream buffer. Please see the attached landscaping plan in Appendix A for a detailed description of the planting schedule details. In addition to native plantings, additional habitat structures will be installed in the stream buffer. These structures include: bird nest boxes, bat houses, and bee shelters. For more details about these structures, please see the Habitat Package included in Appendix B of this report.

The majority of temporary impacts to the stream buffer is within the 15,330 square-foot buffer enhancement area, and therefore will be restored through the buffer enhancement planting. Approximately 450 square feet of temporary buffer impacts are not included within the overall buffer enhancement plan outlined in the landscaping plan. This area will also be restored with native plantings and will be subject to the performance standards listed above.

10.4.1 Buffer Enhancement Planting (15,330 square feet)

Common Name	*Latin Name*	*Quantity*
Western red cedar	*Thuja plicata*	26
Vine Maple	*Acer circinatum*	13
Red twig dogwood	*Cornus sericea*	80
Red flowering currant	*Ribes sanguineum*	53
Snowberry	*Symphoricarpos albus*	19
Western sword fern	*Polystichum munitum*	85
Dull Oregon grape	*Mahonia nervosa*	168
Bleeding heart	*Dicentra formosa*	172
Salal	*Gaultheria shallon*	272
Redwood sorrel	*Oxalis oregana*	487

10.4.2 Temporary Impact Restoration Planting (450 square feet)

Common Name	*Latin Name*	*Size*	*Spacing*	*Quantity*
Red twig dogwood	*Cornus sericea*	1 gallon	5 ft	10
Western sword fern	*Polystichum munitum*	1 gallon	5 ft	5
Dull Oregon grape	*Mahonia nervosa*	1 gallon	5 ft	5

10.5 Timing

Unless timing restrictions are established by the director for this project, all work shall be completed prior to final inspection or issuance of a temporary certificate of occupancy or certificate of occupancy, as applicable for the development.

10.6 Monitoring

10.6.1 Purpose of Monitoring

The purpose of monitoring is to evaluate the success of the proposed enhancement plan. If, at the end of five years post-installation, the criteria for success set forth below are met, then the project will be considered successful. Upon completion of the proposed enhancement project, an inspection by a qualified ecologist or landscape architect will be made to determine plan compliance. A compliance report/as-built will be supplied to the City of Bellevue within 30 days after the completion of planting. The city must approve the as-built document before the monitoring period commences. A qualified ecologist or landscape architect shall conduct monitoring of the plant conditions in the spring and fall annually for five years. For each year monitored, a written report describing the progress and condition of the mitigation plan will be submitted to the City of Bellevue after the fall inspection. Final inspection will occur five years after completion of project installation. At that time, the contracted ecologist or landscape architect shall prepare a report evaluating the success of the project.

10.6.2 Requirements for monitoring project

1. Initial compliance report
2. Yearly site inspections (twice yearly; once in the spring and fall) for five years
   Annual reports (one report submitted in the fall of each monitored year), including a final report at the conclusion of the fifth year with an assessment of mitigation success or failure.

10.6.3 Definition of Success

The goal of this enhancement plan shall be to control invasive and non-native species and establish well-vegetated buffer areas dominated by native trees and shrubs. Therefore, the criteria for success shall be a minimum 80 percent survival of the planted species at the end of five years. In addition, not more than 10 percent areal cover from non-native, invasive species shall be present in the buffer area at the end of five years, or that area shall not be considered successful.

10.6.4 Monitoring Protocol

During the initial site as-built site inspection, photo points will be established as appropriate. These will be used throughout the five-year monitoring period. Plant survival shall be measured during the first two years of monitoring. A two meter wide transect shall be established and plant mortality shall be recorded. The percentage of plant survival will be derived by subtracting the number of missing or dead plants from the number of plants that were recorded across the transects during the initial visit to assess plan compliance. Plant survival within the transects is assumed to be representative of the entire site. In addition to the transects, a visual inspection of the entire mitigation area shall be conducted to assess any high mortality areas not represented by the transects.

If one or more of the planted species exhibit a high rate of mortality and are deemed inappropriate for the site, the consulting ecologist and/or landscape architect may recommend a substitution.

To measure percent cover, two meter wide transects shall be established as appropriate. Along these transects, sample plots that are representative of the vegetative community will be chosen. These plots shall be fixed, located using stakes, GPS, or other method and used for the duration of the monitoring period.

10.7 Contingency Plan

If, during any of the semi-annual inspections, 20 percent of the plants are severely stressed or it appears 20 percent may not survive, additional plants of the same species will be added to the restoration areas. If invasive, non-native species exceed 10 percent of plant populations (as measured by percent cover), manual or chemical control (by a licensed applicator) may be necessary. If any of these situations persist to the next semi-annual inspection, a meeting with the City of Bellevue, the consulting ecologist, and the property owner will be held to decide upon contingency plans. Elements of a contingency plan may include, but will not be limited to: more aggressive weed control, mulching, replanting with larger plant material, species substitution, fertilization, soil amendments, and/or irrigation.

10.8 Vegetation Management Plan

This mitigation project will require periodic maintenance to replace mortality of planted species and control invasive, non-native plant species, and other undesirable competing species. The mitigation planting areas will be maintained (at a minimum) in spring and late summer of each year for the five-year monitoring period. Maintenance may include, but will not be limited to,

removal of competing species and non-native vegetation (by hand if necessary), irrigation, replacement of dead plants, and/or the replacement of mulch during each maintenance period. Chemical control of invasive, non-native species, if necessary, shall be applied only after approval by the City of Bellevue. Herbicide shall be applied by a licensed applicator following all label instructions. Chemical control and fertilization within the mitigation areas will only be performed if deemed necessary.

Irrigation of plantings during the dry season (generally June through September) is highly recommended for the first two years following installation. If adequate rainfall occurs during the dry season to support the establishment of plants, then irrigation measures may not be necessary.

11.0 NGPE Designation

The streams and associated buffer will be designated and recorded as a Native Growth Protection Easement. A total of 40,020 square feet of NGPE will be designated on site. Per 20.25H.030B(2)(a) all native vegetation, existing topography, and other natural features will be preserved for the purpose of preventing harm to property and the environment, including, but not limited to, controlling surface water runoff and erosion, maintaining slope stability, buffer and protecting plants and animal habitat.

12.0 Use of This Report

This Critical Area Study and Wetland Mitigation Plan is supplied to GIS Development as a means of determining on-site critical area conditions, as required by the City of Bellevue during the permitting process. This report is based largely on readily observable conditions and, to a lesser extent, on readily ascertainable conditions. No attempt has been made to determine hidden or concealed conditions.

The laws applicable to wetlands are subject to varying interpretations and may be changed at any time by the courts or legislative bodies. This report is intended to provide information deemed relevant in the applicant's attempt to comply with the laws now in effect.

The work for this report has conformed to the standard of care employed by wetland ecologists. No other representation or warranty is made concerning the work or this report and any implied representation or warranty is disclaimed.

Wetland Resources, Inc.

Meryl Kamowski
Senior Ecologist

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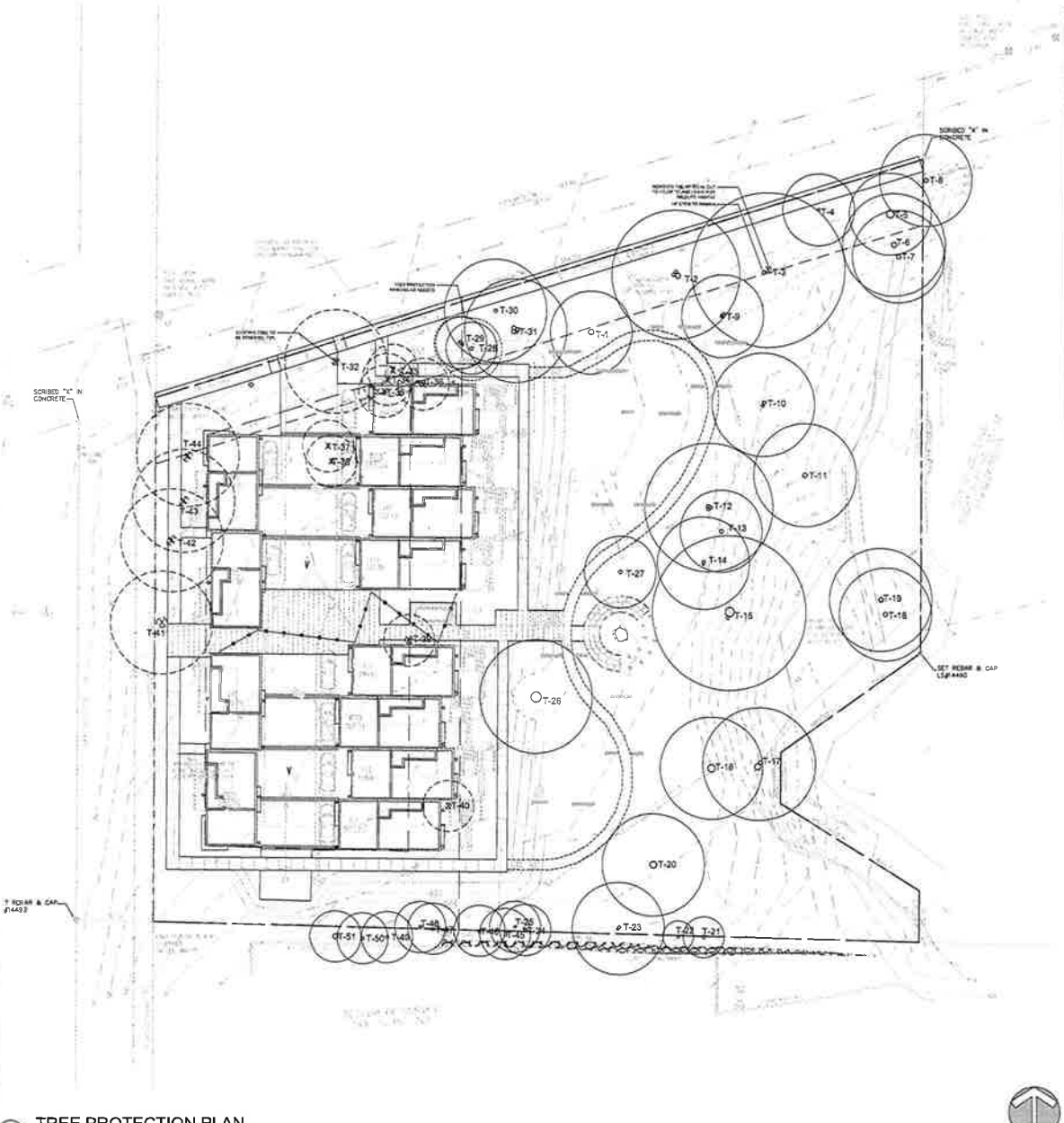
APPENDIX A: LANDSCAPE PACKAGE



1 TREE PROTECTION PLAN

Scale: 1'-0"=20'

TREE INVENTORY TABLE

TREE	SPECIES	DIAMETER (DBH)	TREES WITHIN PERIMETER	TREES WITHIN SITE INTERIOR	TREES TO BE REMOVED	TREES TO REMAIN
T-1	BLACK COTTONWOOD*	26"		13"		13"
T-2	BIGLEAF MAPLE	16,16,24"		16,16,24"		16,16,24"
T-3	BIGLEAF MAPLE	16,30"		16,30"	30"	16"
T-4	SYCAMORE	12"	12"			12"
T-5	BLACK COTTONWOOD*	36"	18"			
T-6	BIGLEAF MAPLE	24"	24"			
T-7	BLACK COTTONWOOD*	20"	10"			
T-8	SYCAMORE	20"	20"			
T-9	BIGLEAF MAPLE	8,10,10,14"		8,10,10,14"		8,10,10,14"
T-10	BIGLEAF MAPLE	12,16"		12,16"		12,16"
T-11	BIGLEAF MAPLE	22"		22"		22"
T-12	BIGLEAF MAPLE	16,16,16"		16,16,16"		16,16,16"
T-13	BITTER CHERRY	18"		18"		18"
T-14	BIGLEAF MAPLE	10,16"		10,16"		10,16"
T-15	BIGLEAF MAPLE	16,42"		16,42"		16,42"
T-16	DOUGLAS-FIR	34"		34"		34"
T-17	BIGLEAF MAPLE	18,30"		18,30"		18,30"
T-18	BIGLEAF MAPLE	20"		20"		20"
T-19	BIGLEAF MAPLE	22"		22"		22"
T-20	DOUGLAS-FIR	32"		32"		32"
T-21	LOMBARDY POPLAR	16"		16"		16"
T-22	LOMBARDY POPLAR	12"		12"		12"
T-23	BLACK COTTONWOOD*	10,14"		6"		6"
T-24	BLACK COTTONWOOD*	12,14"		6,5"		6,5"
T-25	BLACK COTTONWOOD*	12"		6"		6"
T-26	DOUGLAS-FIR	48"		48"		48"
T-27	BIGLEAF MAPLE	16"		16"		16"
T-28	DEC	16"	16"			
T-29	DEC	14,14"	14,14"			
T-30	DEC	16"	16"			16"
T-31	DEC	18,18,18"	18,18,18"			
T-32	FIR	32"	32"		32"	
T-33	DEC	18"	18"		18"	
T-34	DEC	18"		18"	18"	
T-35	DEC	16"		16"	16"	
T-36	DEC	16,16,16"		16,16,16"	16,16,16"	
T-37	DEC	18"		18"	18"	
T-38	DEC	18"		18"	18"	
T-39	FIR	36"		36"	36"	
T-40	DEC	28"		28"	28"	
T-41	BLACK COTTONWOOD*	48"	24"		24"	
T-42	BLACK COTTONWOOD*	28,28"	14"		14"	
T-43	BLACK COTTONWOOD*	28,28"	14"		14"	
T-44	BLACK COTTONWOOD*	28,28"	14"		14"	
T-45	BLACK COTTONWOOD*	16"	8"			
T-46	BLACK COTTONWOOD*	16"	8"			
T-47	BLACK COTTONWOOD*	14"	7"			
T-48	BLACK COTTONWOOD*	14"	7"			
T-49	BLACK COTTONWOOD*	14"	7"			
T-50	BLACK COTTONWOOD*	14"	7"			
T-51	BLACK COTTONWOOD*	24"	12"			
TOTAL			320"	566"	292"	441"
PERIMETER LANDSCAPE AREA TREE RETENTION REQUIREMENT 100% OF HEALTHY TREES						
SITE INTERIOR TREE RETENTION REQUIREMENT, 15% OF DIAMETER INCHES 566 x 15% = 85"						
**TOTAL SIGNIFICANT TREES ON SITE: 886"						
**COTTONWOODS DISCOUNTED BY 50%						

NOTES:

1. TREE PROTECTION ZONE TO BE 1.5 FEET FOR EVERY INCH OF DBH (8 FEET MIN.).
2. WHERE TREE CANOPY INTERSECTS BUILDING FOOTPRINT ADJUSTMENTS TO FENCING WILL BE REQUIRED & APPROVED BY LANDSCAPE ARCHITECT. ANY NECESSARY BRANCH PRUNING SHALL BE MADE ONLY BY CERTIFIED ARBORIST.

skB ARCHITECTS

Architect:
SkB Architects
2331 3RD AVENUE
SEATTLE, WA 98121
Contact: RYAN HITT
206-803-9575
rh@skbarchitects.com

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GIS Development Corp.
600 Stewart St, Suite 400
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Contact: Eugene Dunovan

Landscape
COFFMAN ENGINEERS AND LANDSCAPE ARCHITECTURE
1601 DEXTER AVE. N., SUITE 3
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Contact: KEVIN COBURN
206-285-4922

Civil
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1037 NE 65TH ST #153
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Contact: KEITH HAINES, PE
206-992-9965

Consultants:
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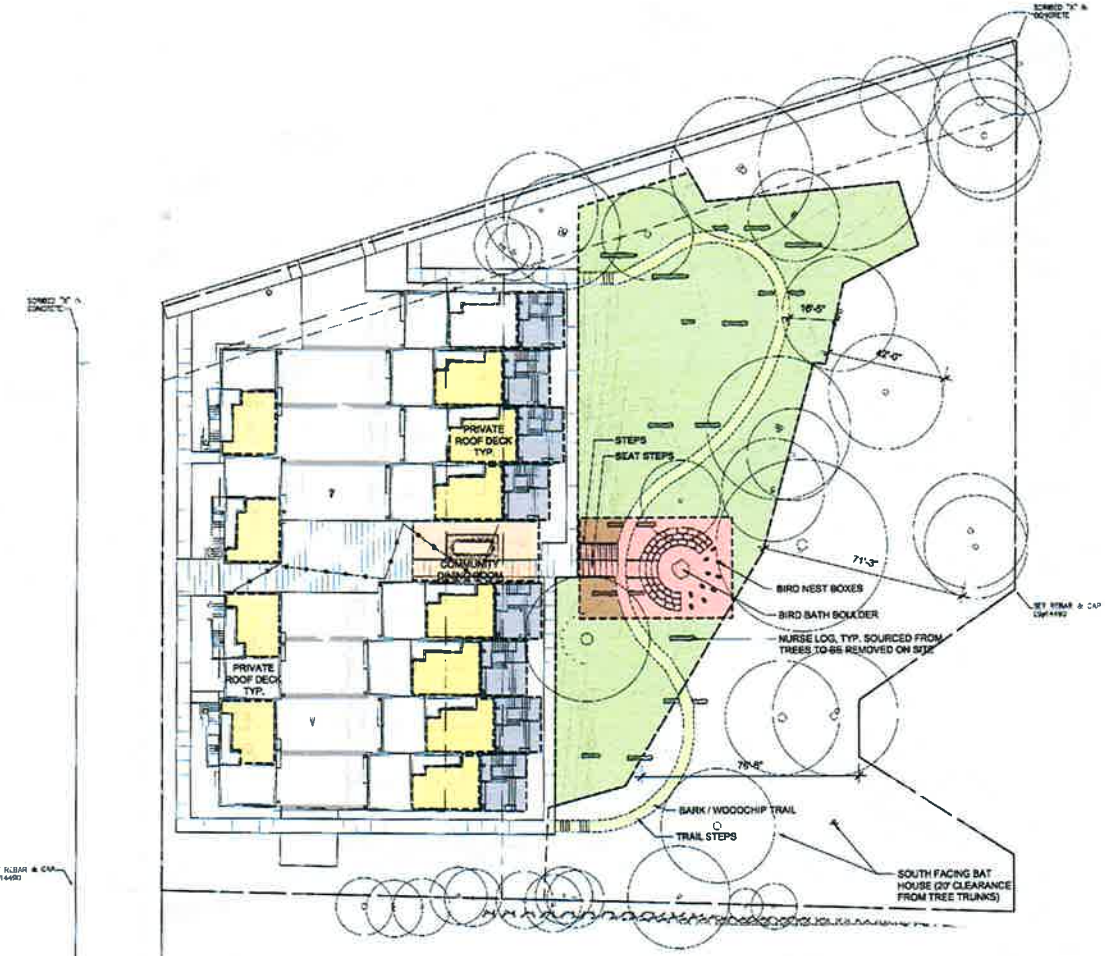
EARTH ECOLOGY SERVICES INC.
9805 51TH AVE SE #108
EVERETT, WA 98208
Contact: KEITH KAMONSKI
425-337-1974

Project:
GIS Townhomes
13501 NE 83rd (SR-202) Road
Redmond, WA 98052
Project Number 1144.00
Date: August 31, 2015
DESIGN REVIEW

Rev. No.	Description	Date

TREE PROTECTION PLAN

L101



1 AMENITY PLAN

Scale: 1'-0"=20'

AMENITY CHART

SYMBOL	AMENITY	QUANTITY
	COMMUNITY DINING ROOM	925 SF
	NATURE TRAIL	330 LF
	COMMUNITY GATHERING AREA	1,900 SF
	VIEWING DECKS	4,200 SF
	HABITAT RESTORATION AMENITY	14,900 SF
	BROWNSTONE STEPS	2,500 SF

skB ARCHITECTS

Architect
SkB Architects
2200 RIMLAND
SEATTLE, WA 98121
Contact: RYAN HITT
206.623.3325
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Ed Stewart St, Suite 900
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Contact: Eugene Goodman

Landscape
GRETCHEN CAMPLAND
LANDSCAPE ARCHITECTURE
1501 DEXTER AVE N, SUITE 3
SEATTLE, WA 98109
CONTACT: JENNY COBURN
206-285-4422

Civil
SDG ENGINEERING PS
1227 NE 50TH ST #102
SEATTLE, WA 98115
CONTACT: ALAN MITCHELL PE
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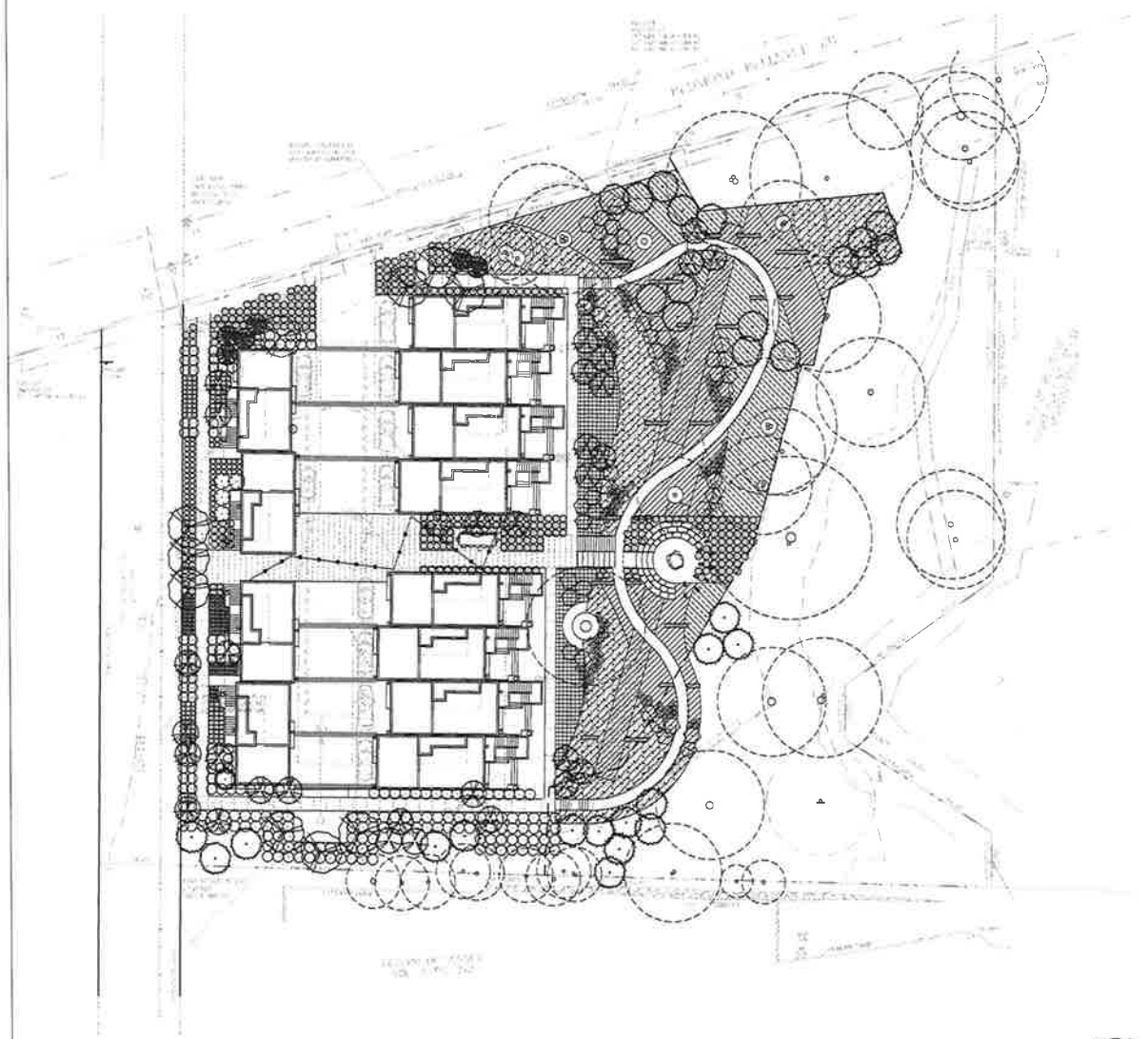
Geotechnical
Environmental
APPLIED GEOTECHNOLOGY INC.
3626 109TH AVE SE #108
EVERETT, WA 98204
CONTACT: DAVID HOWORTH
425.337.3174

No.	Description	Date

Project
GIS Townhomes
13801 NE 3RD PLACE
Bellevue, WA 98005
Project Number 1148.00
Date: August 31, 2015
DESIGN REVIEW

SITE AMENITY PLAN

L102



1 PLANTING PLAN

Scale: 1'-0"=20'

NORTH ARROW

SkB ARCHITECTS

Architect:
SkB Architects
2333 3RD AVENUE
SEATTLE, WA 98121
Contact: RYAN HITT
206-903-0915
rhitt@skbarchitects.com

Owner:
GIS Development Corp.
600 Stewart St, Suite 520
Seattle, WA 98101
Contact: Eugene Bardeman

Landscape
GCH PLANNING AND LANDSCAPE ARCHITECTURE
1601 DEXTER AVE N, SUITE 3
SEATTLE WA 98109
Contact: JERRY COBURN
206-285-4422

Civil
CSP ENGINEERING INC. PS
1037 NE 65TH ST #153
SEATTLE, WA 98115
Contact: JEFF HAYNES, PE
206-406-9965

Consultants:
Environmental
WETLAND RESOURCES INC.
1505 10TH AVE SE #106
EVERETT, WA 98203
Contact: MERYL KANOWSKI
425-337-3174

Rev. No.	Description	Date

Project:
GIS Townhomes
13601 NE BEL-RED Road
Bellevue, WA 98005
Project Number 1148.00
Date: August 31, 2018
DESIGN REVIEW

PLANTING PLAN

L201

PLANT SCHEDULE

DECIDUOUS TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	QTY
	AC	Acer circinatum / Vine Maple	1 gal		13
	AP2	Acer circinatum "Pacific Fire` / Vine Maple	B & B	3 STEM MIN. 2" EA.	19
	CS	Cornus kousa `Miss Satomi" / Red Kousa Dogwood	B & B	2" CAL. MIN.	10

EVERGREEN TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	QTY
	CD	Calocedrus decurrens / Incense Cedar	B & B		1
	TP	Thuja plicata / Western Red Cedar	1 gal		31
	TM	Tsuga mertensiana / Mountain Hemlock	B & B		6

SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	CONT	HEIGHT	QTY
	DW	Dicentra formosa / Western Bleeding-Heart	1 gal		172
	GS	Gaultheria shallon / Salal	1 gal		78
	PB	Philadelphus x `Belle Etoile` / Mock Orange	2 gal		4
	RK	Ribes sanguineum / Red Flowering Currant	2 gal		48
	SH	Sarcococca hookeriana var. hookeriana / Sweetbox	2 gal		1
	VO	Vaccinium ovatum / Evergreen Huckleberry	2 gal		124

FERN	CODE	BOTANICAL NAME / COMMON NAME	CONT	HEIGHT	QTY
	BS	Blechnum spicant / Deer Fern	1 gal		109
	PM	Polystichum munitum / Western Sword Fern	2 gal		337

PERENNIALS	CODE	BOTANICAL NAME / COMMON NAME	CONT	HEIGHT	QTY
	CO	Carex oshimensis `Evergold` / Variegated Japanese Sedge	4" pot		93
	IO	Iris tenax / Oregon Iris	4" pot		63

SHRUB AREAS	CODE	BOTANICAL NAME / COMMON NAME	CONT	SPACING	QTY
	COR	Cornus sericea / Red Twig Dogwood	1 gal	48" o.c.	80
	GS2	Gaultheria shallon / Salal	1 gal	60" o.c.	268
	MN	Mahonia nervosa / Oregon Grape	1 gal	60" o.c.	198
	SA	Symphoricarpos albus / Common White Snowberry	1 gal	84" o.c.	20

GROUND COVERS	CODE	BOTANICAL NAME / COMMON NAME	CONT	SPACING	QTY
	OR	Oxalis oregana / Redwood Sorrel	4" pot	36" o.c.	498

skB ARCHITECTS

Architect:
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2311 3RD AVENUE
SEATTLE, WA 98121
Contact: RYAN HITT
206.352.4313
ryan@skbarchitects.com

Owner:
GIS Development Corp.
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Seattle, WA 98102
Contact: Eugene Gavrilman

Landscape
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LANDSCAPE ARCHITECTURE
1601 DEXTER AVE. N. SUITE 3
SEATTLE, WA 98109
CONTACT: JEFF ROBURN
206-285-4422

Civil
[illegible]
1201 NE 65TH ST #153
SEATTLE, WA 98115
Contact: JEFF HANNEA, PE
206-422-4588

Environmental
WETLAND RESOURCES INC.
[illegible]
EVERETT, WA 98204
Contact: MARK ANKROM
425-339-5974

Project:
GIS Townhomes
[illegible]
Project Number 1148.00
Date: August 31, 2015
DESIGN REVIEW

Rev. No. Description Date

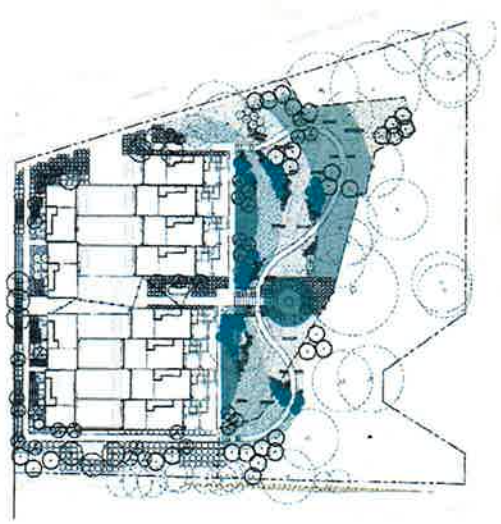
PLANTING SCHEDULE

L202

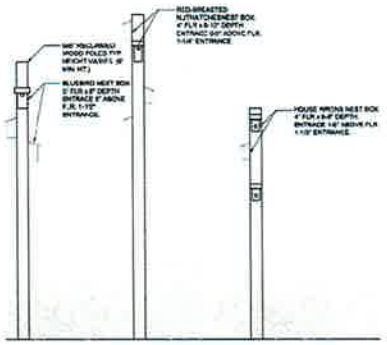
Appendix B: Habitat Package

BIRDS

HABITAT
PREDATOR PLATFORMS
PLANTS
BOXES
POLLINATORS
BIRD BATHS
NESTS
TREE CANOPY



A SELECTION OF COMMON BIRDS



Bird Nest Boxes

POTENTIAL PLANT TYPES

SHELTERS/FOOD

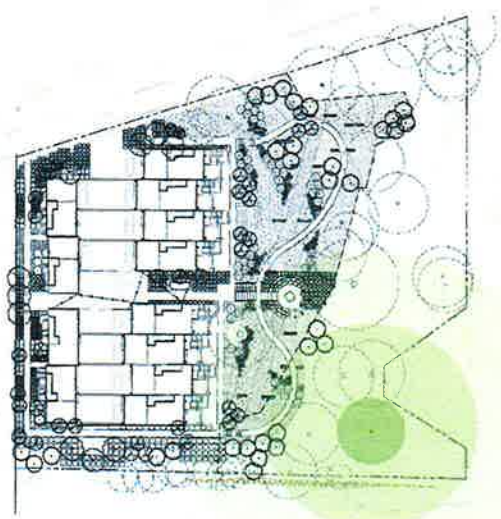
- Food sources include insects, nuts, seeds, fruit and nectar.
- When placing feeders, choose a location where they can be easily watched, enjoyed and maintained. Look for quiet, undisturbed areas away from noisy traffic, pets, house entrances, and strong winds. A variety of bird feeders will attract the greatest range of bird species.
- Planting a diverse selection of native plants can also provide a low-maintenance year-round supply of bird foods.

Important features of bird-friendly habitat:

- Water source for drinking and bathing
- Nest boxes (provide shelter for cavity-nesting birds - because different birds prefer unique shapes and sizes, know the species of bird you would like to attract before creating habitat structures)
- Nesting materials
- Food

BATS

HIBERNACULUM MIGRATION BAT HOUSE PREDATORS OF NIGHT-FLYING INSECTS



A SELECTION OF COMMON BATS

Big Brown Bat (most common species in the Seattle area)

Little Brown Bat

California Myotis

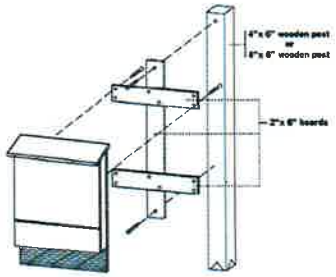
Silver-haired Bat

Spotted Bat

Townsend's Big-eared Bat

SHELTERS

- To cope with winter conditions, most bats use a hibernation site, called a "hibernaculum." Hibernation sites include cavities in large trees, caves, mine shafts, tunnels, old wells, and attics.
- Place the house in full sun, preferably on its own pole; the next-best location is on the southern side of a building in full sun. The optimal temperature range is between 85 and 104 degrees F. Don't put it on a tree, as it will be in too much shade and too close to perch sites used by hawks and owls. Keep the area around the entrance clear of obstructions for 20 feet.
- No bat house should be less than 2 feet tall, with chambers 14 inches wide and a roughened landing area below the entrance. The bat house also should face south or east to take advantage of the most sunshine.
- A roughened or screen-covered landing platform measuring 3 to 6 inches should extend below the house.
- A bat house likely will be most successful where there is a natural mixture of vegetation and different types of agriculture. Additionally, daily sunshine of 10 hours or more and internal bat house temperatures between 80 and 100 degrees F are likely to create the most ideal conditions for the summer maternity colonies.



Bat House on a Wooden Post

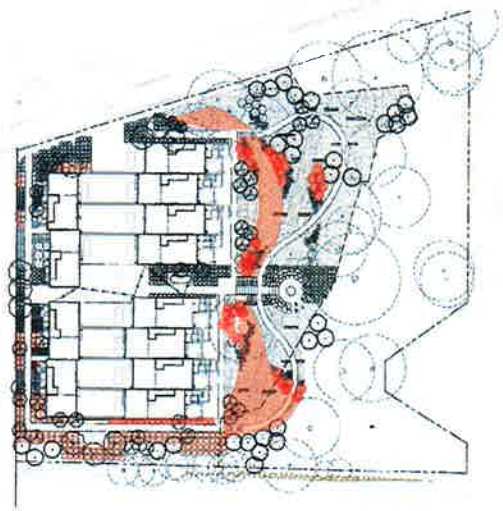
Important features of bat-friendly habitat:

- Shelter - house at least 2 feet tall with landing platform
- Hibernaculum
- Insects for food
- House located in sunny area
- Space for maternity colony

BEES

HABITAT

POLLINATORS
PLANTS
NECTAR
POLLEN
MUD
NESTING BLOCK



POTENTIAL PLANT TYPES

Red-flowering Current | Oregon Grape | Chive | Blueberry | Raspberry

Rhododendron | Huckleberry | Rosemary | Cotoneaster | Willow

SHELTERS

- Attach the nesting block to a house or other structure, out of the wind and rain, and preferably in a place that receives morning sunlight. Mud is a necessary building material for mason bee nests and the reason for the name "mason" bees.
- Bumblebees may use a nest one year and not the next. Place the box on the ground upon a flat rock or a couple of bricks to keep it off the damp earth. Put it in a shaded place on the north side of a building or behind shrubbery.

THE MASON BEE

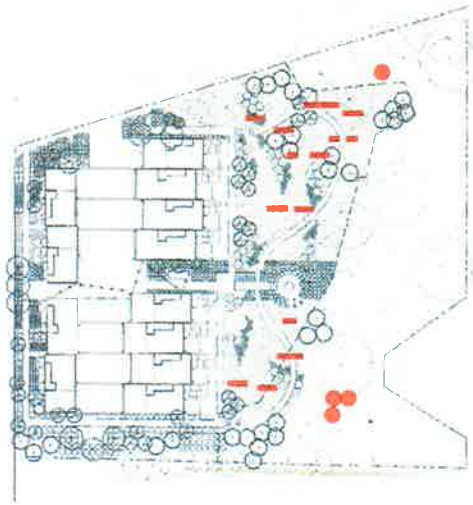
The mason bee is a Pacific Northwest native that nests singly and has no queen, hive, or honey. This bee is easily encouraged to colonize the landscape to the benefit of the gardener, orchardist, homeowners, and nature lover. It requires is a dry site for its nest, some damp soil nearby, and a supply of nectar and pollen.

Important features of bee-friendly habitat:

- Plants that supply nectar and pollen throughout the year
- Nesting Blocks within 100-200 meters of food (closer the better)
- Mud (mason bees use to cap cells in their nests)

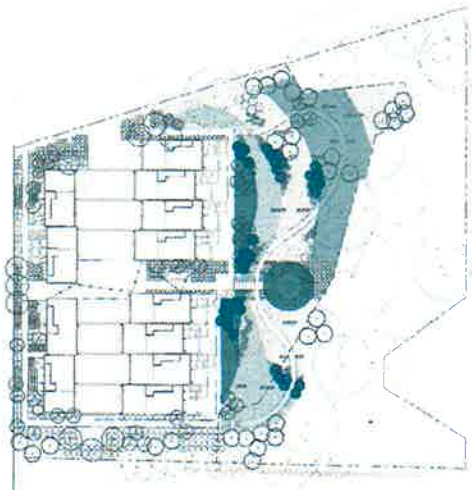
STORMWATER DISPERSION & PERVIOUS SURFACES DIAGRAM

NATIVE PLANTS & EXISTING TREES TO REMAIN DIAGRAM

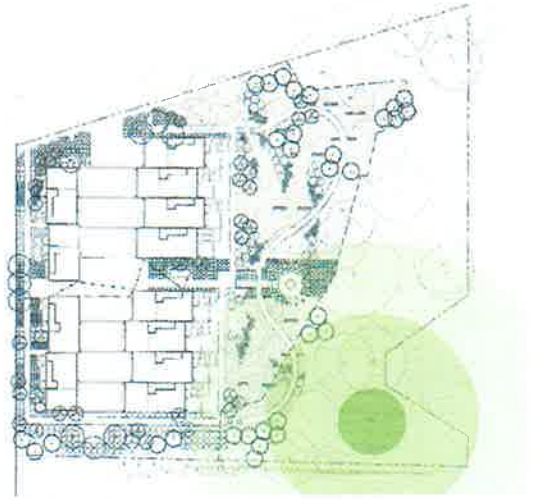


SNAG AND NURSE LOG DIAGRAM

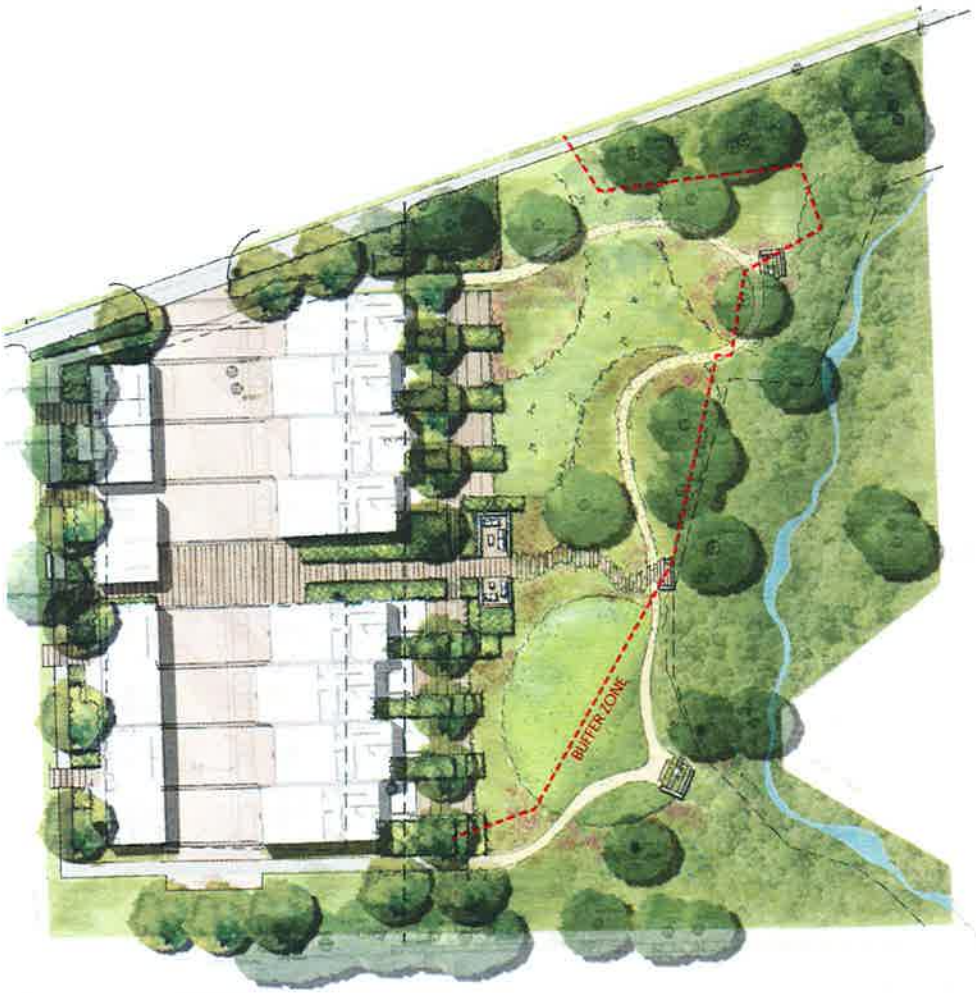
POLLINATOR DIAGRAM



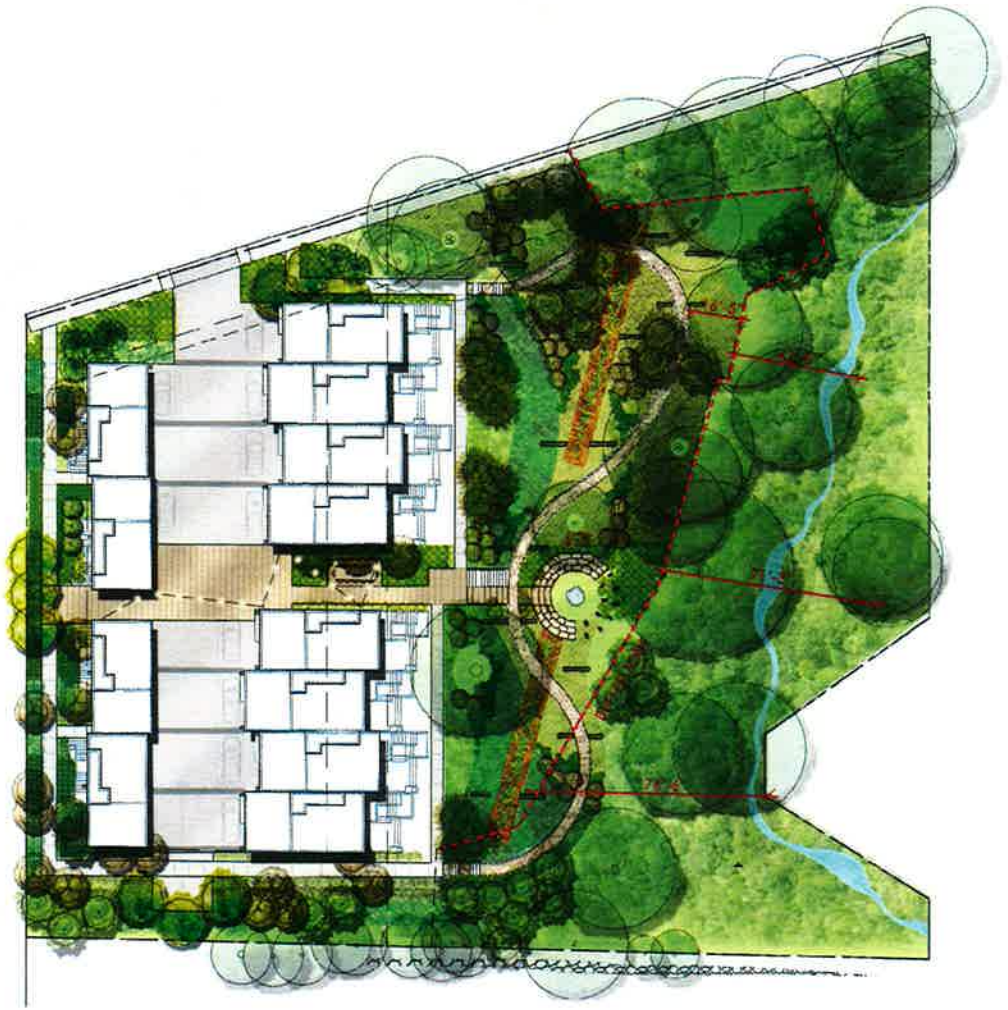
BIRDS HABITAT DIAGRAM



BAT HABITAT DIAGRAM



CONCEPTUAL SITE PLAN



CURRENT SITE PLAN

APPENDIX C: ARBORIST REPORTS

Greenforest Incorporated

Consulting Arborist

August 31, 2015

Tatyana Gershman Grams
GIS Residential Construction, LLC
Plaza 600
600 Stewart Street, Suite 603
Seattle, WA 98101

RE: Frontage Trees at GIS Townhomes, Bel Red Road, Bellevue WA

Dear Ms. Grams:

This letter is response to an email from Ray Godinez, Bellevue Transportation Dept. to Ryan Hitt dated 8/13/15, and addresses items i and ii in paragraph 1, as it pertains to trees in close proximity to the frontage of Bel Red Road.

i. Tree Survey-identify tree count, health status of each tree, estimated of tree life/health, probability of survival during construction.
ii. Best practices on how to maximize tree health and protection during and after construction.

Below is an inventory of 8 trees that are within 15 feet of the existing sidewalk parallel Bel Red Road. All these trees are healthy, though some have asymmetric canopies from space competition. All trees are likely to survive the proposed construction.

Tree No.	Feet from Existing Sidewalk	Trunk Diameter	Tree Species	Dripline Radius in Feet	Remaining Useful Life Expectancy
2	7'	16, 16, 24"	Bigleaf maple	25'	30 yrs.
4	1'	12"	Sycamore	14'	40 yrs.
5	11'	36"	Black cottonwood	16'	50 yrs.
8	2'	20"	Sycamore	18'	40 yrs.
28	2'	16"	Sycamore	14'	40 yrs.
29	8'	10,16,18,18"	Black cottonwood	15'	50 yrs.
30	9'	14,16"	Black cottonwood	16'	50 yrs.
31	13'	16"	Black cottonwood	12'	50 yrs.

4547 South Lucile Street, Seattle, WA 98118 Tel. 206-723-0656

The current plan will remove and replace the existing sidewalk. Based on the species, ages, current condition and proximity of these trees to the proposed change, it is my opinion that all these are likely to survive the proposed sidewalk demolition and replacement.

The grade is to be raised south of and near trees 29, 30 & 31. Although they are relatively young trees and will tolerate the change in grade, it will be necessary to prevent the fill from covering the base of the trunks.

Tree 26 is a large Douglas-fir tree that stands close to the east side of the development. Plans show a segmented block wall west of this tree that will retain fill soil around the townhomes and within the dripline of this tree. The size and location of the wall shown on the plans are generic, and will be modified to maximize the undisturbed area of the tree's root zone, and to minimize impact to the tree. The project arborist will approve the final placement and dimensions of the wall. Prior to site clearing, the need for pruning of low branches to accommodate construction will be assessed, and pruning specifications written and executed for any required pruning.

Protective fencing should be installed prior to site clearing and should include the area from the trees north to the existing sidewalk, and including the driplines for each tree to the south (and east and west where applicable). Where grading requires working within the driplines of these three trees, the fencing should be moved to allow the necessary grading, and then replaced when grading is completed. Equipment should not be permitted within the non-graded protection area, and the protected area should remain free from foot traffic and material storage.

Sincerely,

GreenForest, Inc.

By Favero Greenforest, M. S.

ISA Certified Arborist # PN -0143A
ASCA Registered Consulting Arborist® #379
ISA Tree Risk Assessment Qualified

Attachments:

1. Assumptions & Limiting Conditions
2. Tree Number Exhibit

Attachment No. 1 - Assumptions & Limiting Conditions

1) A field examination of the site was made 8/28/2015. My observations and conclusions are as of that date.

2) Unless stated other wise: 1) information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of inspection; and 2) the inspection is limited to visual examination of the subject trees without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied that problems or deficiencies of the subject tree may not arise in the future.

3) The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made.

4) Loss or alteration of any part of this report invalidates the entire report.

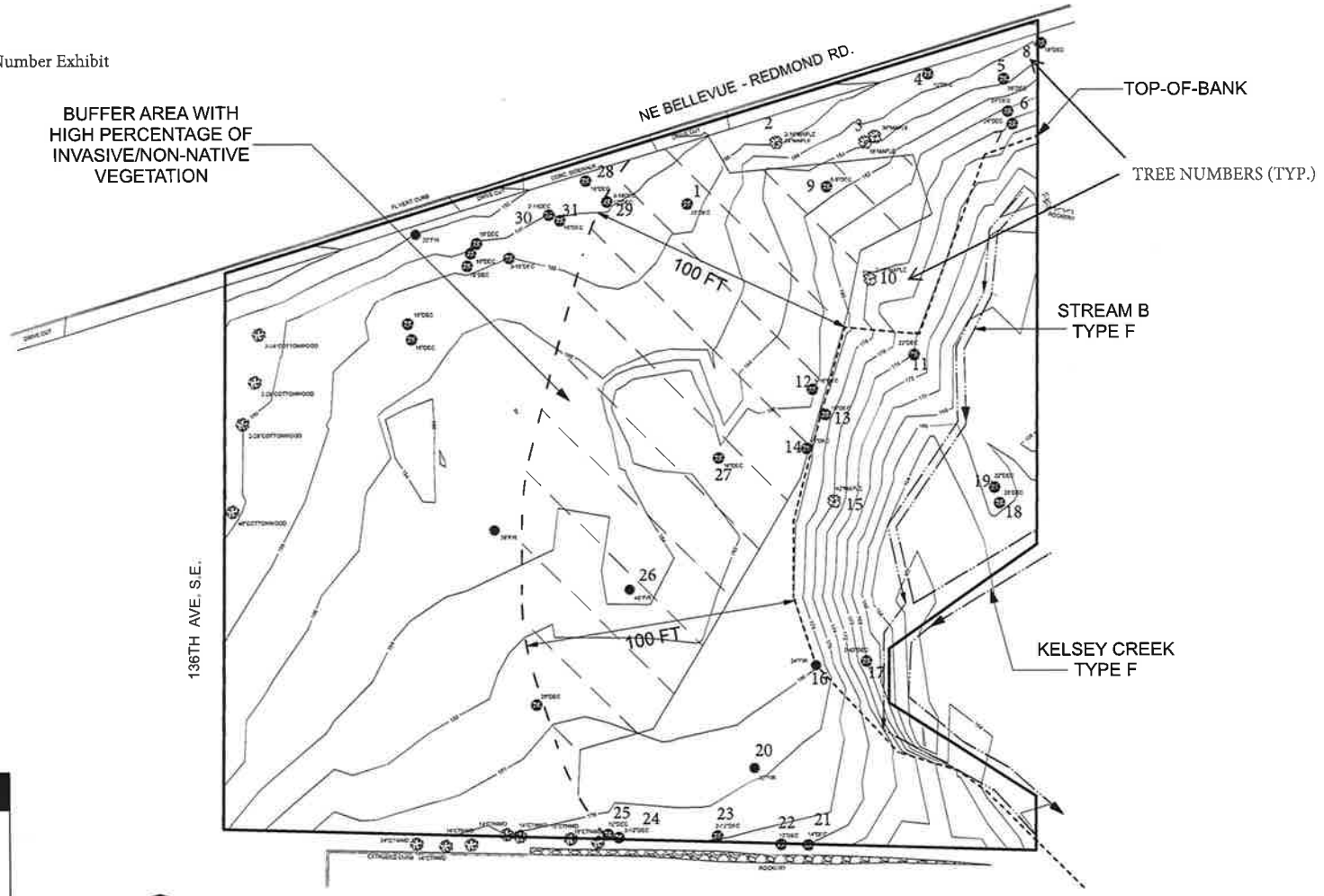
5) This report and any values/opinions expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.

6) Construction activities can impact trees in unpredictable ways. All retained trees should be inspected at the competition of construction, and regularly thereafter as part of ongoing maintenance.

Tanya Gershman Grams, GIS Residential Construction, LLC
RE: Frontage Trees at GIS Townhomes, Bel Red Road, Bellevue WA
August 31, 2015

Attachment No. 2 – Tree Number Exhibit

EXISTING CONDITIONS MAP
GIS DEVELOPMENT - NE BEL-RED ROAD
PORTION OF SECTION 27, TOWNSHIP 25, RANGE 05E, W.M.



LEGEND
- STREAM
- TOP-OF-BANK
- BUFFER
- NON-NATIVE VEGETATION IN BUFFER AREA

Scale 1" = 40'
0 20 40 60 80

Wetland Resources, Inc.
9505 19th Avenue S.E. Suite 106 Everett, Washington 98208
Phone: (425) 337-3174
Fax: (425) 337-3045
Email: mailbox@wetlandresources.com

EXISTING SITE CONDITIONS MAP
GIS DEVELOPMENT - NE BEL-RED ROAD

GIS Development Corp.
Attn: Eugene Gershman
600 Stewart St. Suite 603
Seattle WA 98005

Sheet 1/2
Drawn by: MK
Date: 08.31.2015

Greenforest Incorporated
Consulting Arborist

August 31, 2015

Tatyana Gershman Grams
GIS Residential Construction, LLC
Plaza 600
600 Stewart Street, Suite 603
Seattle, WA 98101

RE: GIS Townhomes Tree Risk Assessment, Bel Red Road, Bellevue WA

Dear Ms. Grams:

You contacted me and contracted my services as a consulting arborist. You have plans to development the above referenced site, at 13605 NE Bel Red Rd. My assignment is to inspect and inventory certain trees on the site, and to assess tree health, structure, and risk of failure with the proposed townhomes as the primary target. I received a CRITICAL AREAS AND CONCEPTUAL BUFFER MITIGATION plan prepared by Wetland Resources, Inc., showing the location of 27 trees within or to the east of the Buffer Enhancement Area. These trees are the subject of this report.

I performed a Level 2, or basic, risk assessment. This is the standard assessment that is performed by arborists in response to a client's request for tree risk assessment and follows ISAs Best Management Practices.[1]

SUMMARY: The current risk rating for the subject trees is low to moderate. Three trees have visible defects and a target within striking distance. Pruning/removal is recommended for 1 tree.

OBSERVATIONS

[1] Companion publication to the ANSI A300 Part 9: Tree Shrub and Other woody Plant Management – Standard Practices, Tree Risk Assessment. 2011. ISA.

The inspection area is covered in native vegetation with a moderate level of invasive brambles where increased sunlight reaches the ground. Except for a few ornamental trees bordering Bel-Red Road, the trees are all native species, and are predominately deciduous.

The subject area will not be developed; however, the proposed townhomes are to be built immediately to the west, Bel-Red Road and a pedestrian sidewalk border the north, and a parking area is immediately south of this area. All of these are possible targets for the subject trees.

TREE INSPECTION

I visually inspected the trees from the ground. I recorded tree species, trunk diameter (DBH), dripline extension as radius in feet (DL), and visible defects. All the trees appear healthy and few have visible defects. The most common defect is dead or hanging and broken branches as these trees have received no pruning maintenance in past. A few trees have had past failures of their upper trunks, and have open wounds at their apex with associated deadwood and decay. These defects, along with dead/hanging branches, pose minimal risk, as any failure will likely occur directly within the area of the tree's dripline. One tree has a very long wound along its lower trunk, and is mostly hollow. Its location near Bel-Red Road makes it the most hazardous tree on the site.

The following table inventories the subject trees by number, DBH, species, dripline and visible defects.

Tree No.	DBH	Species	DL	Visible Defects
1	26"	Black cottonwood	16'	None
2	**16,16,24**	**Bigleaf maple**	**25**	**Deadwood 3" >**
3	**16,30**	**Bigleaf maple**	**30**	**Copious decay in 30" stem**
4	12	Sycamore	14	None
5	36	Black cottonwood	16	No visible defects, but trunks are covered in ivy which could obscure otherwise visible problems/defects.
6	24	Bigleaf maple	20	
7	20	Black cottonwood	18	
8	20	Sycamore	18	None
9	(4) 8-14	Bigleaf maple	16	Open wound/decay on upper trunk
10	12,16	Bigleaf maple	20	None
11	22	Bigleaf maple	20	None
12	(3) 16	Bigleaf maple	25	None
13	18	Bitter cherry	16	None

Tree No.	DBH	Species	DL	Visible Defects
14	10,16	Bigleaf maple	18	None
15	16,42	Bigleaf maple	30	Deadwood & hanging dead branches 18" dia.
16	34	Douglas-fir	20	None
17	18,30	Bigleaf maple	22	Deadwood/decay in upper trunk. Previous trunk failure.
18	20	Bigleaf maple	18	Deadwood 4" dia. Ivy on trunk.
19	22	Bigleaf maple	20	Deadwood 4" dia. Ivy on trunk.
20	32	Douglas-fir	20	Deadwood 4" dia.
21	16	Lombardy poplar	8	None
22	12	Lombardy poplar	6	None
23	10,14	Black cottonwood	18	None
24	**12,14**	**Black cottonwood**	**18**	**Small stem leans south over parking area.**
25	12	Black cottonwood	14	None
26	48	Douglas-fir	22	None
27	16	Bigleaf maple	14	Previous trunk failure.

Boldface indicates trees with defects AND targets.

TARGETS

About one-third of the trees have visible defects. But only 3 of those trees have targets within striking distance that include people or vehicles. (See **boldface** trees in table above.) These targets include vehicles and pedestrians along Bel-Red Road (trees 2 & 3), and the parked cars adjacent to the south side of the subject area (tree 24).

RISK RATINGS FOR TREE 2, 3, & 24

The Likelihood of Failure for trees 2 & 3 is **Probable**- failure of the tree or branches may be expected under normal weather conditions within the specified time period, which is 1 year from this inspection. For tree 24 it is **Improbable**- the tree is not likely to fail during normal weather conditions and may not fail in many severe weather conditions within the specified time period.

The Likelihood of Impacting a Target as described above for trees 2 & 3 is **Medium**- the failed tree or branch may or may not impact the target, with nearly equal likelihood. And for tree 24 it is **High**- the failed tree or branch will most likely impact the target. This is the case when a fixed target is fully exposed to the assessed tree or near a high-use road or walkway with an adjacent street tree.

The Likelihood of failure and impacting a target is somewhat likely for trees 2 & 3, and unlikely for tree 24.

The potential consequences for these described failures is **Minor** for tree 2 (consequences are those that involve low-to-moderate property damage, small disruptions to traffic or a communications utility, or very minor injury), **Significant** for tree 24 (consequences are those that involve property damage of moderate-to-high value, considerable disruption, or personal injury), and **Severe** for tree 3 (consequences are those that could involve serious personal injury or death, damage to high-value property, or disruption of important activities).

The table below lists the three trees that have visible defects AND targets, and their risk ratings and category. For all other trees, their risk rating is *Low*, which is the lowest rating possible.

Tree No.	Likelihood Of Tree or Branch Failure	Likelihood Of Impacting Target	Likelihood of Failure and Target Impact	Consequence	**Risk Category**
2	Probable	Medium	Somewhat likely	Minor	Low
3	Probable	Medium	Somewhat likely	Severe	Moderate
24	Improbable	High	Unlikely	Significant	Low

CONCLUSIONS

Three trees have visible defects and targets within striking distance. The risk categories for these trees are Low to Moderate. All other trees in this inspection have a risk rating of Low. None of the trees pose significant risk to the proposed townhomes.

Moderate-risk situations are those for which consequences are "minor" and likelihood is "very likely" or "likely"; or likelihood is "somewhat likely" and consequences are "significant" or "severe". The tree risk assessor any recommend mitigation and/or retaining and monitoring. The decision for mitigation and timing of treatment depends upon the risk tolerance of the tree owner or manager.

The low-risk category applies when consequences are "negligible" and likelihood is "unlikely"; or consequences are "minor" and likelihood is "somewhat likely." Some trees with this level of risk may benefit from mitigation or maintenance measures, but immediate action is not usually required.

RISK MITIGATION

Moderate-risk trees may be mitigated and/or retained and monitored. Mitigation may be conducted when budget, work schedule, or pruning cycle allows, preferably before seasonal storms develop. Low-risk trees should be retained and monitored (if appropriate) and/or mitigated, if deemed necessary, when the budget, work schedule, or pruning cycle allows.

RECOMMENDATIONS

1. Removal of the 30" stem of tree #3. This stem could be cut to a height of 15 feet and left as wildlife habitat. The 16" stem can remain on site as is.

Residual risk remains as long as trees are standing, and within striking distance of targets. This risk assessment does not eliminate risk, but reduces the risk of the subject trees to their lowest possible rating.

Thank you for your business. This risk report completes my scope of work. Please let me know if you have any further questions or concerns.

Sincerely,

GreenForest, Inc.

By Favero Greenforest, M. S.

ISA Certified Arborist # PN -0143A
ASCA Registered Consulting Arborist® #379
ISA Tree Risk Assessment Qualified

Attachments:

1. Assumptions & Limiting Conditions
2. Risk Terms
3. Tree Number Exhibit

Assumptions & Limiting Conditions

1) A field examination of the site was made 5/14/2015. My observations and conclusions are as of that date.

2) Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant/arborist can neither guarantee nor be responsible for the accuracy of information provided by others. The trees are not tagged and every effort was made to match the trees on the survey with those on the site.

3) Unless stated other wise: 1) information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of inspection; and 2) the inspection is limited to visual examination of the subject trees without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied that problems or deficiencies of the subject tree may not arise in the future.

4) The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made.

5) Loss or alteration of any part of this report invalidates the entire report.

6) This report and any values/opinions expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.

7) Construction activities can impact trees in unpredictable ways. All retained trees should be inspected at the competition of construction, and regularly thereafter as part of ongoing maintenance.

8) All trees possess the risk of failure. Trees can fail at any time, with or without obvious defects, and with or without applied stress. Any treatments performed to abate current defects do not eliminate said defects, nor does it provide any guarantee against failure. Sometimes trees fail because they are trees.

9) The consultant does not assume any liability for the subject tree and does not represent the transfer of such for any risks associated with the tree from the landowner to the consultant. **Risk management is solely the responsibility of the landowner**.

10) Trees are biological systems and change over time; therefore, future inspections are required and are the responsibility of the landowner to initiate.

Attachment No. 2.

The following terms are used in this risk assessment:

Risk is the combination of the likelihood of an event and the severity of the potential consequences.

Likelihood is the chance of an event occurring.

Targets (*risks targets*) are people, property, or activities that could be injured, damaged, or disrupted by a tree.

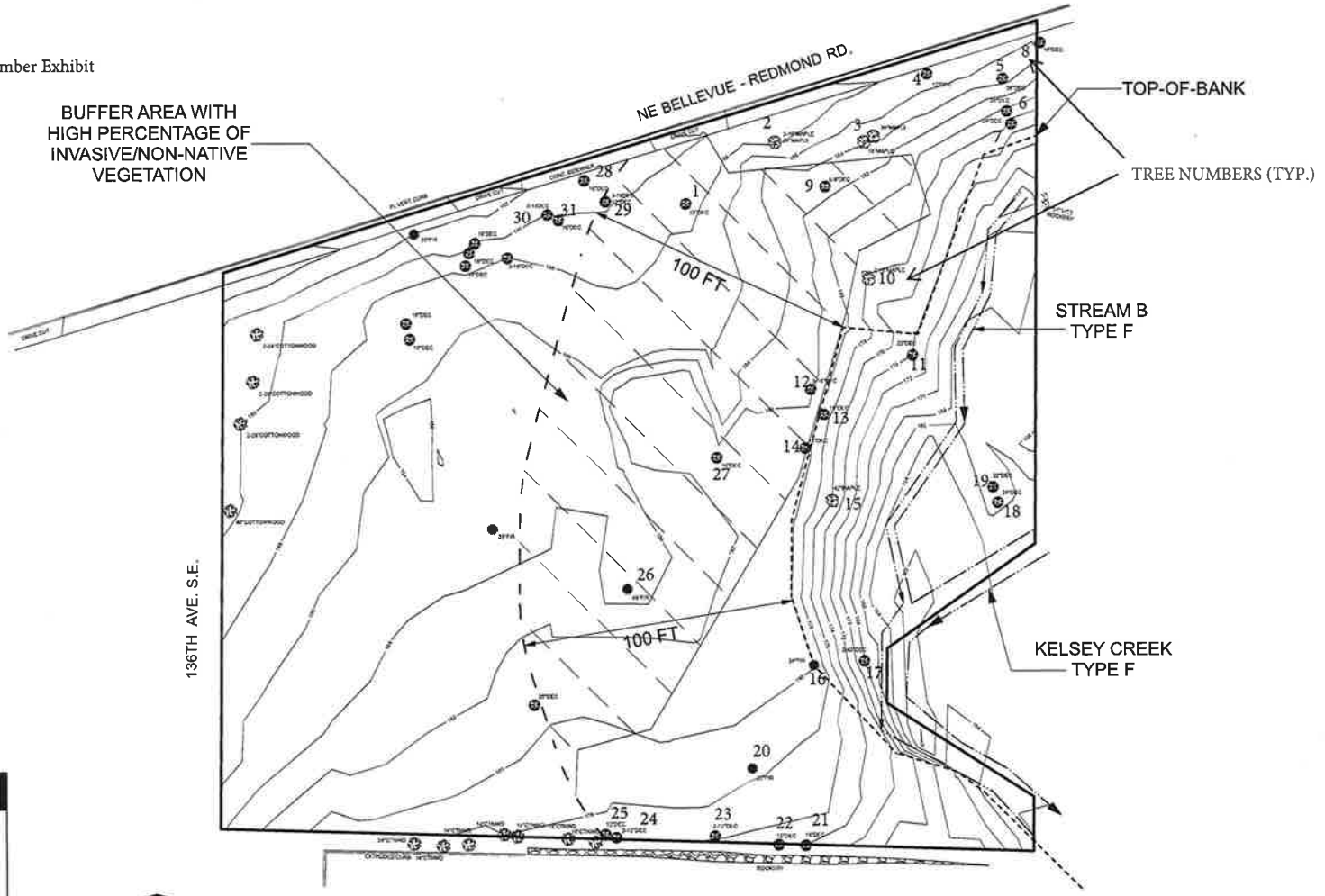
Failure (tree failure) is the breakage of stems, branches, roots or loss of mechanical support in the root system.

Likelihood is the chance of an event occurring. In the context of tree failure, likelihood refers to: 1) the chance of a tree failure occurring, 2) the chance of impacting a specific target, and 3) the combination of the likelihood of a tree failing and the likelihood of impacting a specific target.

Consequences are the effects or outcome of an event. In tree risk assessment, consequences include personal injury, property damage, or disruption of activities due to the event.

Attachment No. 3 - Tree Number Exhibit

EXISTING CONDITIONS MAP
GIS DEVELOPMENT - NE BEL-RED ROAD
PORTION OF SECTION 27, TOWNSHIP 25, RANGE 05E, W.M.



LEGEND

- STREAM
- TOP-OF-BANK
- BUFFER
- NON-NATIVE VEGETATION IN BUFFER AREA

Scale 1" = 40'

0 20 40 60 80

Wetland Resources, Inc.
9505 19th Avenue S.E. Suite 106 Everett, Washington 98208
Phone: (425) 337-3174
Fax: (425) 337-3045
Email: mailbox@wetlandresources.com

EXISTING SITE CONDITIONS MAP
GIS DEVELOPMENT - NE BEL-RED ROAD

GIS Development Corp.
Attn: Eugene Gershman
600 Stewart St. Suite 603
Seattle WA 98005

Sheet 1/2
Drawn by: MK
Date: 08.31.2015

APPENDIX D: GEOTECHNICAL ENGINEERING STUDY

GEOTECH
CONSULTANTS, INC.

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

August 11, 2000

JN 00242

Bennett Development
9 Lake Bellevue Drive, Suite 100-A
Bellevue, Washington 98005

Attention: Chris Austin

Subject: **Transmittal Letter – Geotechnical Engineering Study**
Proposed Office Building
Heritage Overlake Center
136xx Bel-Red Road Northeast
Bellevue, Washington

Dear Mr. Austin:

We are pleased to present this geotechnical engineering report for the proposed office building to be constructed in Bellevue, Washington. The scope of our work 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 confirming proposal dated June 13, 2000.

The subsurface conditions of the proposed building site were explored with seven test pits that encountered from 2 to 4 feet of weathered glacial till over dense glacial till. It is our opinion that the proposed building can be supported on conventional foundations bearing on the dense glacial till soils. The slab can be supported on the loose to medium-dense, non-organic soils. A buffer of 10 feet from the crest of the steep slope to the east should be maintained to prevent the proposed development from reducing slope stability. The on-site soils are moisture sensitive, which will make grading and earthwork more difficult and costly in wet conditions.

The attached report contains a discussion of the study and our recommendations. Please contact us if there are any questions regarding this report, or if we can be of further assistance during the design and construction phases of this project.

Respectfully submitted,

GEOTECH CONSULTANTS, INC.

Marc R. McGinnis, P.E.
Principal

GDB/MRM: alt

GEOTECHNICAL ENGINEERING STUDY
Proposed Office Building
Heritage Overlake Center
136xx Bel-Red Road Northeast
Bellevue, Washington

This report presents the findings and recommendations of our geotechnical engineering study for the site of the proposed office building in Bellevue, Washington. The Vicinity Map, Plate 1, illustrates the general location of the site.

We were provided with a boundary and topographic survey prepared by Eastside Consultants, Inc., dated December 10, 1999. We were also provided with faxed copies of preliminary site plans and cross-section views prepared by Lance Mueller and Associates, dated June 6, 2000. Based on these plans and conversations with Chris Austin of Bennett Development, we anticipate that the proposed building will have two floors over a parking level. The parking garage will have a finish floor elevation of 180 feet. The first floor, at elevation 190 feet, will contain both office space and parking stalls. The building will contain approximately 26,000 square feet for office space and 24,600 feet for parking. Surrounding the building will be an asphalt parking lot and landscaping. Cuts ranging from 2 to 6 feet are anticipated to reach the lower parking level.

SITE CONDITIONS

SURFACE

The site is located at the southeast corner of 136th Avenue Northeast and Bel-Red Road Northeast. Immediately west of the site is a utility right-of-way for power lines and underground pipelines. To the west of this is the vacant right-of-way for 136th Avenue Northeast. Currently, the subject property is undeveloped and is covered with a heavy growth of trees and blackberry bushes. Based on the research completed for our Phase I Environmental Assessment, it appears that a residence existed on the property at one time.

The ground surface on the property generally slopes gently to the southeast, towards Kelsey Creek. The slope then steepens to drop approximately 16 feet to Kelsey Creek. This slope has an inclination of 40 to 50 percent. No indications of recent instability were observed on this steep slope.

To the east of Kelsey Creek are several small office buildings. South of the site is an apartment complex.

SUBSURFACE

The subsurface conditions were explored by excavating seven 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 work outlined in our proposal.

The test pits were excavated on June 20, 2000, with a rubber-tired backhoe. A geotechnical engineer 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 backhoe bucket. The Test Pit Logs are attached to this report as Plates 2 through 6.

Soil Conditions

Beneath a layer of surface organics, forest duff, and topsoil, the test pits encountered 2 to 4 feet of weathered, gravelly, silty sand. Underlying this loose to medium-dense soil was dense, gravelly, silty sand. This dense soil has been glacially compressed, and is referred to in this report as glacial till. Although no boulders were encountered in our explorations, it is not uncommon to encounter isolated boulders in glacial till soils.

Groundwater Conditions

No groundwater seepage was observed in the seven test pits. However, it is important to note that the test pits were excavated following a relatively dry summer and they were left open for only a short time period. Therefore, the lack of seepage in the test pits does not necessarily indicate that shallow groundwater will not be present beneath the site. At least isolated groundwater can often be found perched above, and within, the glacial till soils, particularly following extended wet weather.

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

The test pits conducted for this study encountered dense glacial till soils approximately 2 to 4 feet below existing grade. The building can be supported on a conventional foundation consisting of continuous and spread footings bearing on the dense glacial till soils. Overexcavation will likely be necessary to expose the dense till soils, particularly near the southeast corner of the proposed building where only a 2-foot cut is anticipated. Overexcavated holes should be backfilled with lean-mix (1.5 sack) concrete or quarry spalls. No other types of structural fill should be placed over footing subgrades, unless the foundations are designed for a lower bearing capacity. The slab-on-grade can be placed on firm, stable, weathered soils, or on structural fill placed over these soils.

Pavements may be supported on native, weathered glacial till subgrade. The subgrade soils below pavement areas should be stable under a proof-roll prior to placement of crushed rock base. Any soft, unstable areas must be overexcavated and replaced with structural fill.

The dense glacial till that underlies the area has a high internal strength. We observed no indications of recent large-scale slope stability on the site. When using an infinite slope analysis with conservative values, we calculate the safety factor against landslides occurring with the till to be in excess of 2.0. However, shallow landslides within the weathered, silty sand can be expected to occur periodically on steep slopes. This slope movement would most likely result from excessive water in the looser soil, typically following an extended period of heavy precipitation. It is our opinion that an undisturbed buffer of at least 10 feet between the steep slope and the parking is appropriate. Wherever possible, utilities should not be installed on steep slopes. However, if this is necessary, the clearing and utility installation must be undertaken with appropriate care to prevent adverse impacts to slope stability. Any drain lines extending down the slope would best be located above the ground surface. The building foundations can safely extend to within 15 feet of the slope's crest, provided they are founded on the dense soils. Covering the site with an impervious surface and properly discharging the collected storm water away from the steep slope should actually improve the slope's stability.

If extensive grading is contemplated, it will be made more difficult by the overly moist condition, and high silt content, of the on-site soil. These fine-grained, silty materials are sensitive to moisture, which makes them impossible to adequately compact when they have moisture contents even 2 to 3 percent above their optimum moisture content. The reuse of the on-site soils as structural fill to level the site would only be possible during hot, dry weather. 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 kiln dust or cement, if approved by the City of Bellevue. Regardless of the method of drying, the earthwork process will be slowed. The earthwork contractor must be prepared to rework areas that do not achieve proper compaction. Imported granular fill will be needed wherever it is not possible to dry the on-site soils sufficiently before compaction.

The erosion control measures needed during the site development will depend heavily on the weather conditions that are encountered. We anticipate that one or more well-constructed silt fence will be needed between the clearing area and the crest of the steep slope. Access roads into the property should be covered with quarry spalls to reduce the amount of soil or mud carried off the property by trucks and equipment. During wet weather, it may be necessary to mulch or hydroseed bare areas that will not be immediately covered with landscaping or an impervious surface. In large cleared areas, temporary drainage swales combined with sedimentation facilities will likely be necessary during wet weather to control surface runoff. Adverse weather conditions may necessitate additional erosion control measures.

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.

We recommend including this report, in its entirety, in the project contract documents. This report should also be provided to any future property owners so they will be aware of our findings and recommendations.

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 on undisturbed, dense glacial till soils. We recommend that continuous and individual spread footings have minimum widths of 12 and 16 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. Footing subgrades must be cleaned of loose or disturbed soil prior to pouring concrete. Depending upon site and equipment constraints, this may require removing the disturbed soil by hand.

Depending on the final site grades, overexcavation may be required below the footings to expose competent, native soil. Unless lean concrete is used to fill an overexcavated hole, the overexcavation must be filled with compacted quarry spalls, and be at least as wide at the bottom as the sum of the depth of the overexcavation and the footing width. For example, an overexcavation extending 2 feet below the bottom of a 2-foot-wide footing must be at least 4 feet wide at the base of the excavation. If lean concrete 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 competent, 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 about one-half inch, with differential settlements on the order of one-quarter 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	0.45
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	140 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 in the walls.

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

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. If the native soils are used as wall backfill, at least 12 inches of free-draining gravel should be placed against the wall.

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 the below-grade walls. The performance of subsurface drainage systems will degrade over time. Therefore, waterproofing should be provided where moist conditions or some seepage through the walls are not acceptable in the future. This typically includes limiting cold-joints and wall penetrations, and using bentonite panels or membranes on the outside of the walls. Applying a thin coat of asphalt emulsion is not considered waterproofing, but will only help to prevent moisture, generated from water vapor or capillary action, from seeping through the concrete.

SLABS-ON-GRADE

The building floors may be constructed as slabs-on-grade atop the near-surface, weathered glacial till soils, or on structural fill. 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 Section 3.2.3 of 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 visqueen, 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. However, 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. Additionally, ACI (Section 4.1.5) recommends that a minimum of 4 inches

of compactible granular fill, such as crushed rock, should be placed over the vapor retarder or barrier for protection. Sand is not recommended by ACI for use as the protection layer.

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 soil at the subject site would generally be classified as Type A for the dense glacial till, and Type B for the weathered soils. Temporary cut slopes greater than 4 feet in height cannot be excavated at an inclination steeper than 0.75:1 (Horizontal:Vertical) in the Type A soils and 1:1 (H:V) in the Type B soils.

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 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). Water should not be allowed to flow uncontrolled over the top of any temporary or permanent slope. Also, 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 crawl spaces or basements will be below a structure, a slab is below the outside grade, or 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 9. For the best long-term performance, perforated PVC pipe is recommended for all subsurface drains.

If the structure includes an elevator, it may be necessary to provide special drainage or waterproofing measures for the elevator pit. If no seepage into the elevator pit is acceptable, it will be necessary to provide a footing drain and free-draining wall backfill, and the walls should be waterproofed. If the footing drain will be too low to connect to the storm drainage system, then it will likely be necessary to install a pumped sump to discharge the collected water. Alternatively,

the elevator pit could be designed to be entirely waterproof; this would include designing the pit structure to resist hydrostatic uplift pressures.

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. We can provide recommendations for interior drains, should they become necessary, during excavation and foundation construction.

No groundwater was observed during our field work. 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 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.

PAVEMENT AREAS

The pavement section may be supported on competent, native soil, or on structural fill compacted to a 95 percent density. Because the site soils are silty and moisture sensitive, we recommend that the pavement subgrade must be in a stable, non-yielding condition at the time of paving. Granular structural fill or geotextile fabric may be needed to stabilize soft, wet, or unstable areas. To evaluate pavement subgrade strength, we recommend that a proof roll be completed with a loaded dump truck immediately before paving. In most instances where unstable subgrade conditions are encountered, an additional 12 inches of granular structural fill will stabilize the subgrade, except for very soft areas where additional fill could be required. The subgrade should be evaluated by Geotech Consultants, Inc., after the site is stripped and cut to grade. Recommendations for the compaction of structural fill beneath pavements are given in the section entitled ***GENERAL EARTHWORK AND STRUCTURAL FILL***. The performance of site pavements is directly related to the strength and stability of the underlying subgrade.

The pavement for lightly loaded traffic and parking areas should consist of 2 inches of asphalt concrete (AC) over 4 inches of crushed rock base (CRB) or 3 inches of asphalt-treated base (ATB). We recommend providing heavily loaded areas with 3 inches of AC over 6 inches of CRB or 4 inches of ATB. Heavily loaded areas are typically main driveways, dumpster sites, or areas with truck traffic.

The pavement section recommendations and guidelines presented in this report are based on our experience in the area and on what has been successful in similar situations. As with any pavements, some maintenance and repair of limited areas can be expected as the pavement ages. To provide for a design without the need for any repair would be uneconomical.

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 placed under 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 footings, 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).

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 analyses, 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 the exclusive use of Bennett Corporation, Chris Austin, and their representatives, for specific application to this project and site. Our recommendations and conclusions are based on observed site materials, and selective laboratory testing and engineering analyses. 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

In addition to reviewing the final plans, 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 - 6	Test Pit Logs
Plates 7 - 8	Grain Size Analysis
Plate 9	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.

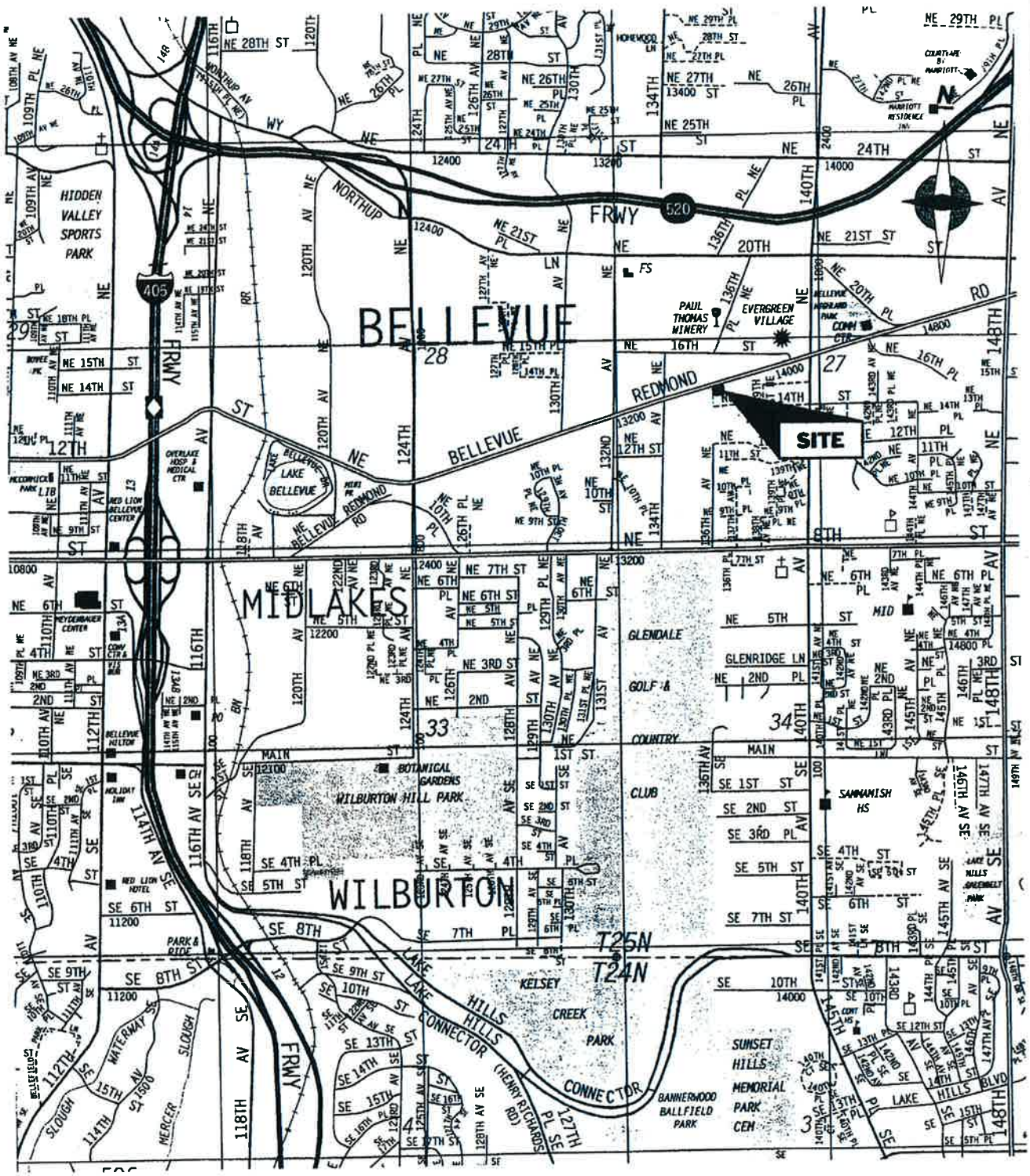
Respectfully submitted,

GEOTECH CONSULTANTS, INC.

Gerry D. Bautista, Jr.
Geotechnical Engineer

EXPIRES 10/25/2001
Marc R. McGinnis, P.E.
Principal

GDB/MRM: alt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WILBURTON
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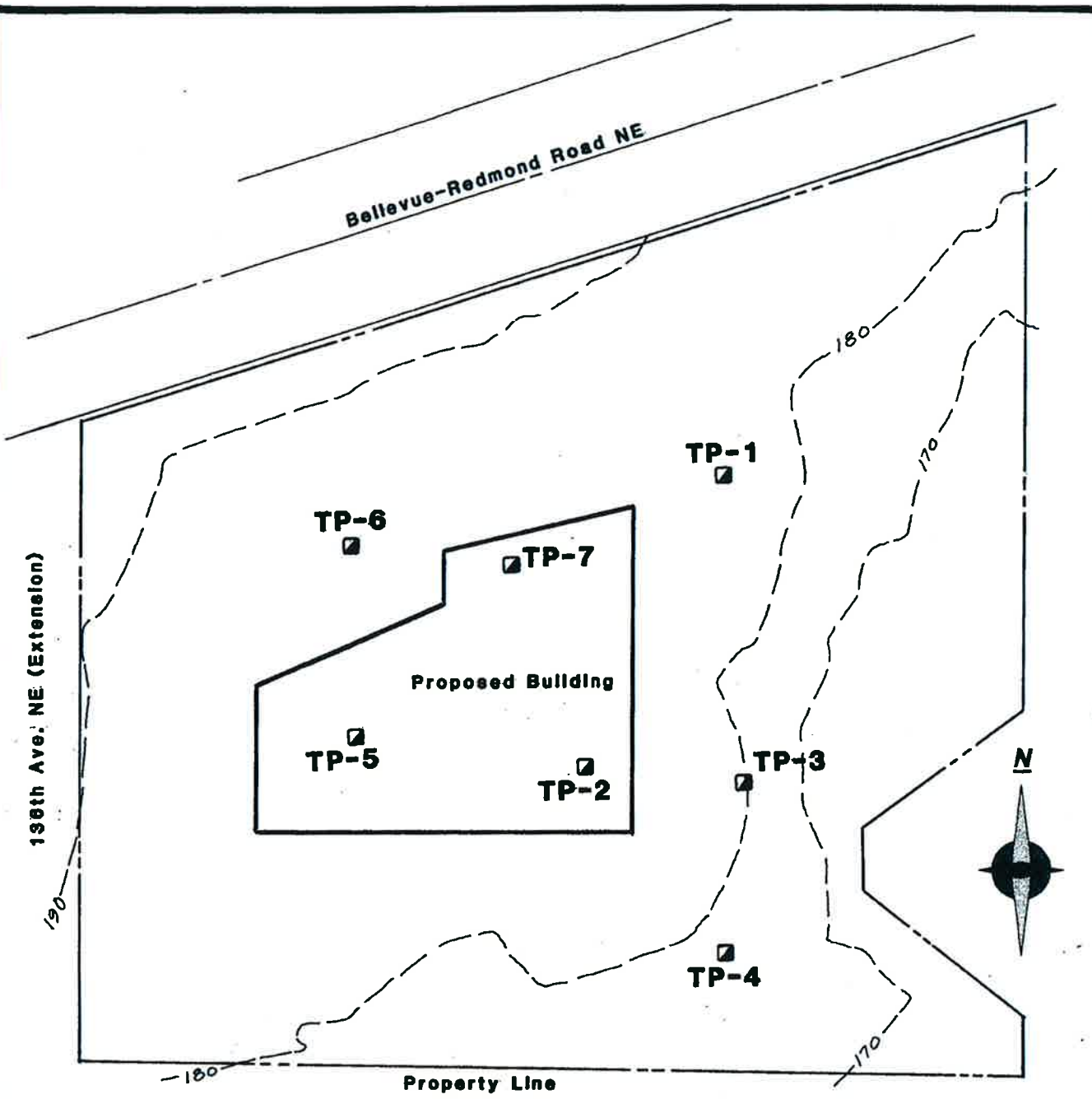


LEGEND :

TP-1 Approximate Test Pit Location

Prepared from Boundary & Topography Survey of Eastside Consultants, Inc. 12/99

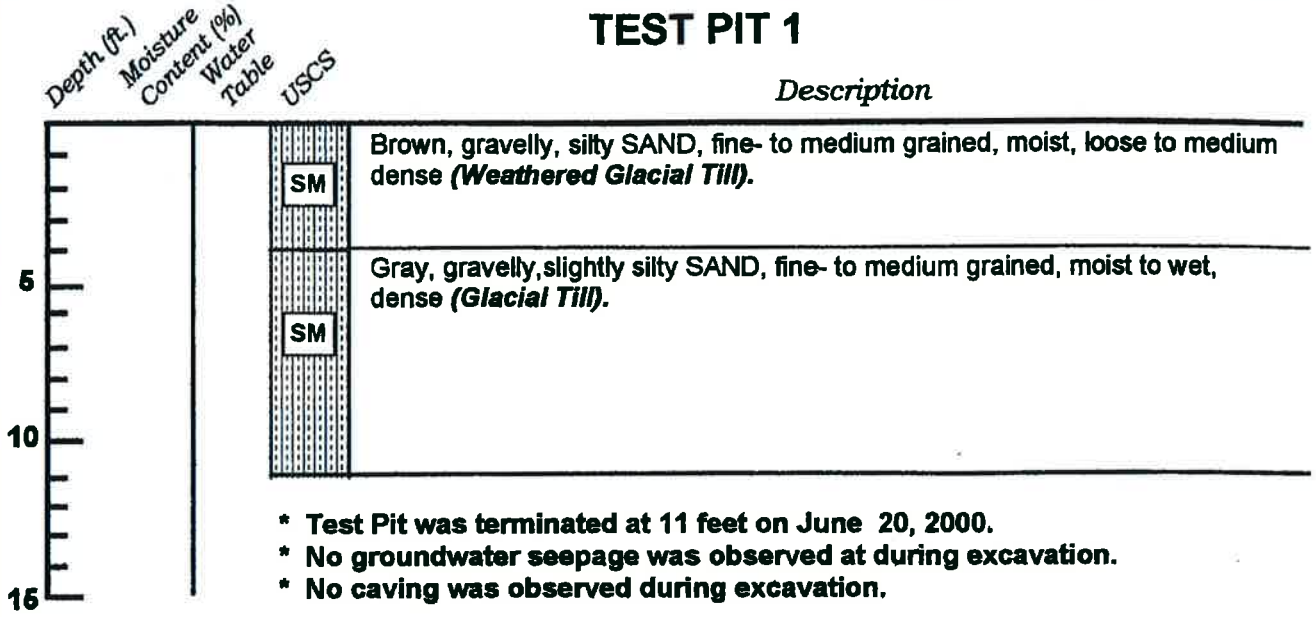
GEOTECH CONSULTANTS

SITE EXPLORATION PLAN

136xx Bel-Red Rd. NE
Bellevue, WA

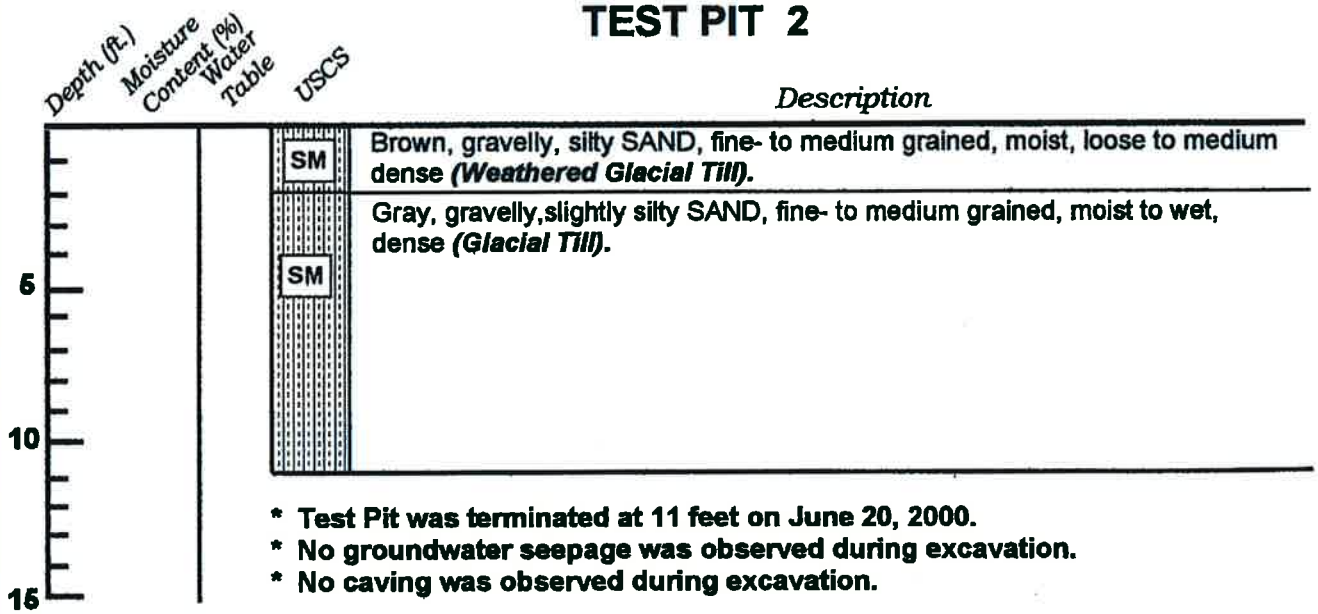
Job No.:	Date:		Plate:
00242	JUN 2000		2

TEST PIT 1



* **Test Pit was terminated at 11 feet on June 20, 2000.**
* **No groundwater seepage was observed at during excavation.**
* **No caving was observed during excavation.**

TEST PIT 2



* **Test Pit was terminated at 11 feet on June 20, 2000.**
* **No groundwater seepage was observed during excavation.**
* **No caving was observed during excavation.**

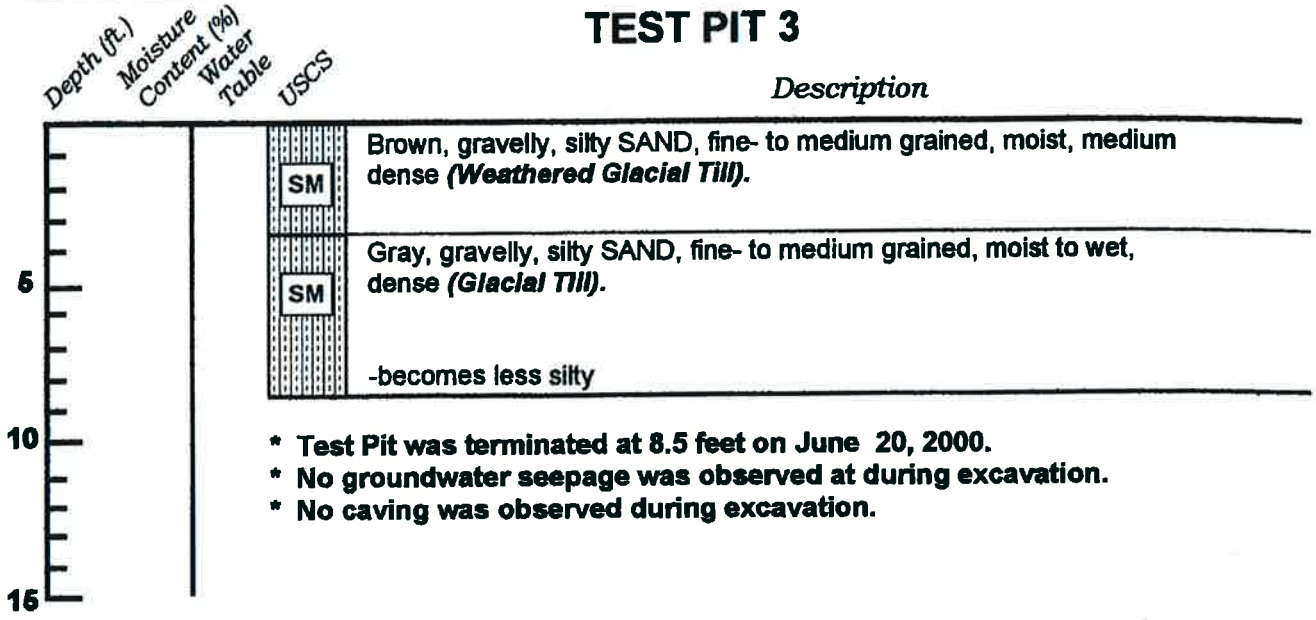
GEOTECH CONSULTANTS, INC.

TEST PIT LOG

136xx Bel-Red Road
Bellevue, WA

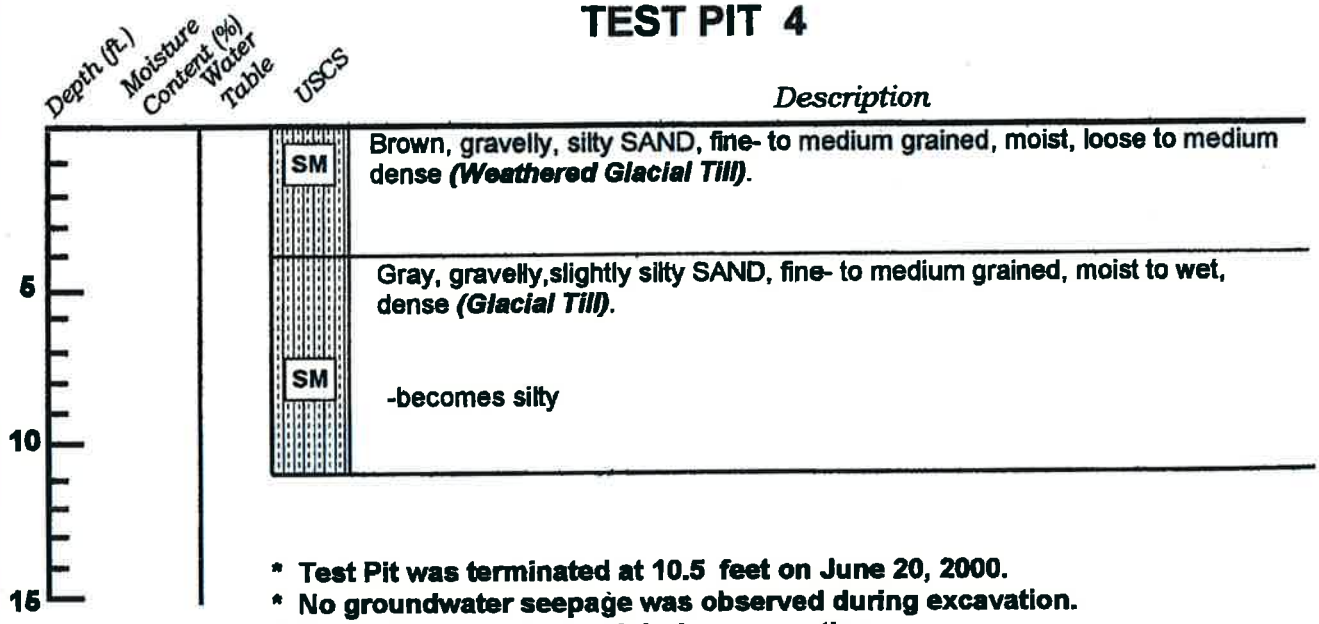
Job No:	Date:	Logged by:	Plate:
00242	JUN 2000	GDB	3

TEST PIT 3



* **Test Pit was terminated at 8.5 feet on June 20, 2000.**
* **No groundwater seepage was observed at during excavation.**
* **No caving was observed during excavation.**

TEST PIT 4



* **Test Pit was terminated at 10.5 feet on June 20, 2000.**
* **No groundwater seepage was observed during excavation.**
* **No caving was observed during excavation.**

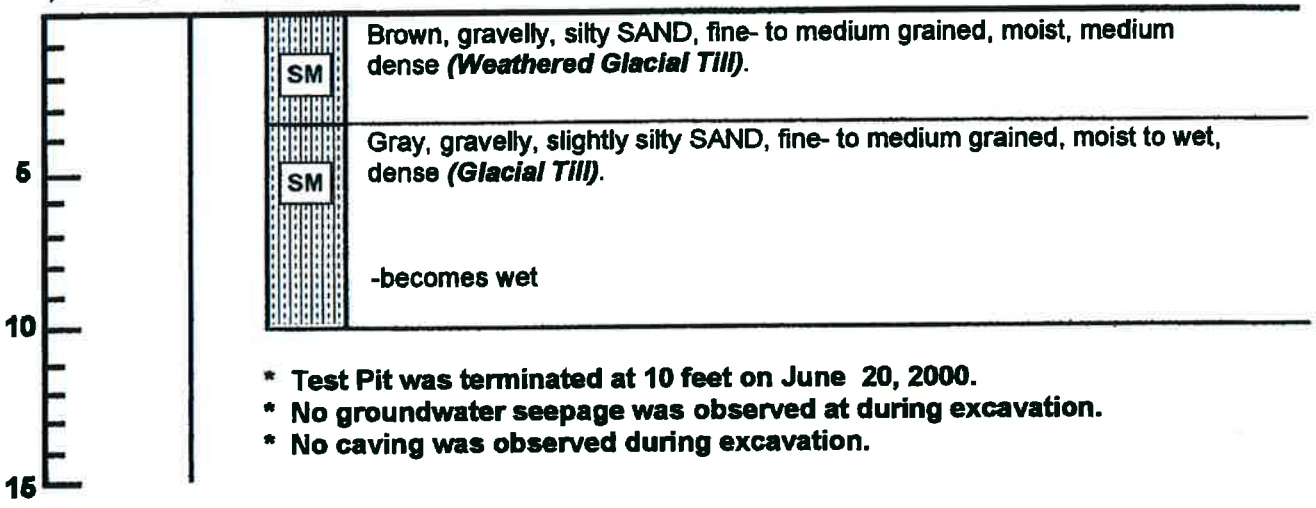
GEOTECH CONSULTANTS, INC.

TEST PIT LOG

136xx Bel-Red Road
Bellevue, WA

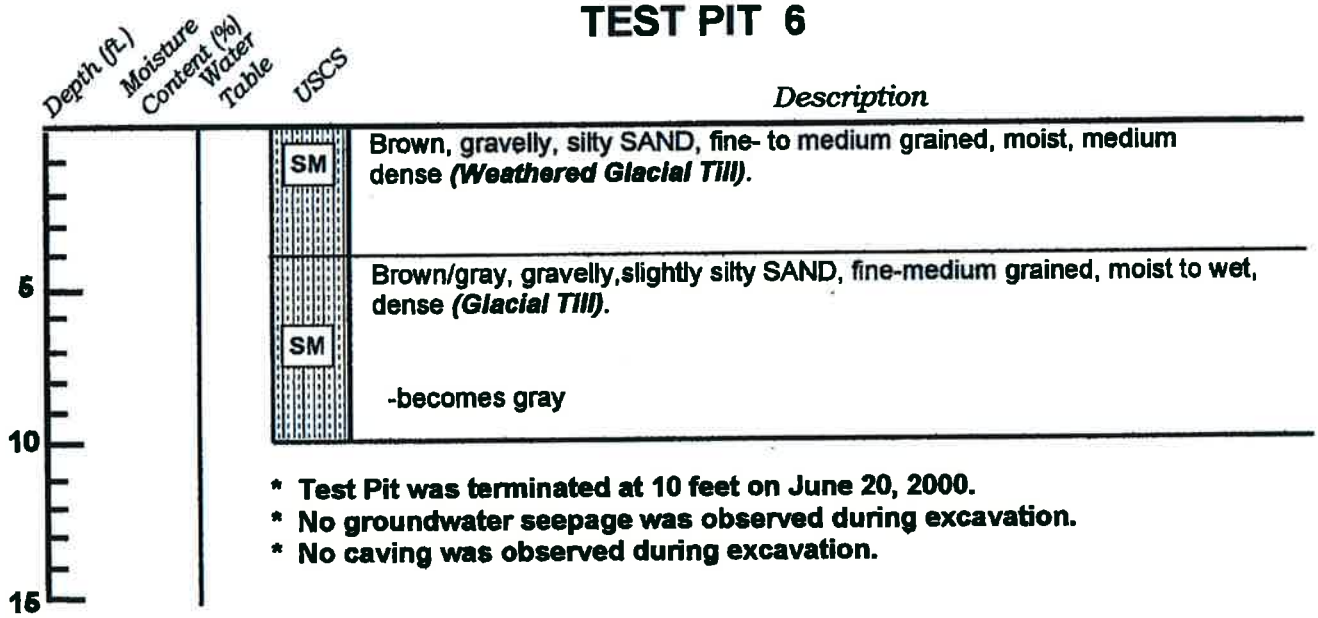
Job No:	Date:	Logged by:	Plate:
00242	JUN 2000	GDB	4

TEST PIT 5



* **Test Pit was terminated at 10 feet on June 20, 2000.**
* **No groundwater seepage was observed at during excavation.**
* **No caving was observed during excavation.**

TEST PIT 6



* **Test Pit was terminated at 10 feet on June 20, 2000.**
* **No groundwater seepage was observed during excavation.**
* **No caving was observed during excavation.**

GEOTECH
CONSULTANTS, INC.

TEST PIT LOG

136xx Bel-Red Road
Bellevue, WA

Job No:	Date:	Logged by:	Plate:
00242	JUN 2000	GDB	5

TEST PIT 7

Depth (ft.)	Moisture Content (%)	Water Table	USCS	Description
			SM	Brown, gravelly, silty SAND, fine- to medium grained, moist, medium dense ***(Weathered Glacial Till)***.
5			SM	Gray, gravelly, slightly silty SAND, fine- to medium grained, moist to wet, dense ***(Glacial Till)***.
10				
15				

* **Test Pit was terminated at 10 feet on June 20, 2000.**
* **No groundwater seepage was observed at during excavation.**
* **No caving was observed during excavation.**

GEOTECH
CONSULTANTS, INC.

TEST PIT LOG

136xx Bel-Red Road
Bellevue, WA

Job No:	Date:	Logged by:	Plate:
00242	JUN 2000	GDB	6

Sample Data:

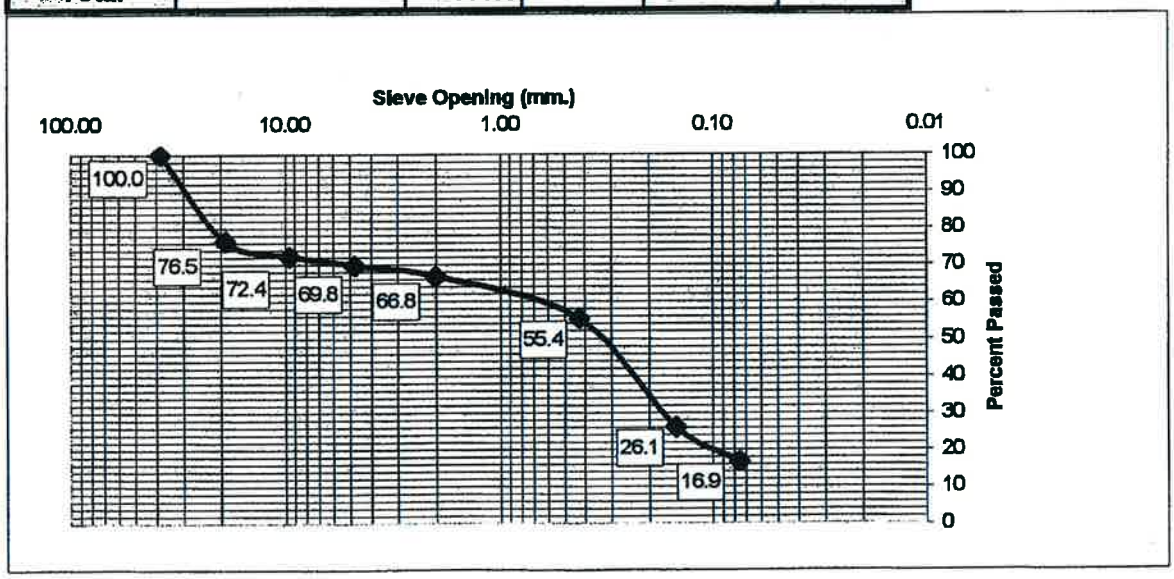
Test Pit/Boring: 1
Sample: 1
Depth: 7

Tare: 0
Wet Weight: 543.9
Dry Weight: 499.9
% Moisture: 8.8

Wash Data:

Dry Weight (before wash): 499.9 grams
Dry Weight (after wash): 424.4 grams
Washed Soil Weight: 75.5 grams

Sieve US - Inches or No.	Sieve SI - mm.	Weight Retained (grams)		Percent Retained		Percent Passed
		Each	Total	Each	Total	Total
1 1/2	38.10	0.0	0.0	0.0	0.0	100.0
3/4	19.05	117.3	117.3	23.5	23.5	76.5
3/8	9.53	20.6	137.9	4.1	27.6	72.4
4	4.75	12.9	150.8	2.6	30.2	69.8
10	2.00	15.1	165.9	3.0	33.2	66.8
40	0.43	57.1	223.0	11.4	44.6	55.4
100	0.15	146.4	369.4	29.3	73.9	26.1
200	0.08	46.2	415.6	9.2	83.1	16.9
<200	0.00	9.0	424.6	1.8	84.9	15.1
Total			500.1		100.0	0.0



GEOTECH CONSULTANTS, INC.

GRAIN SIZE ANALYSIS

136xx Bellevue-Redmond Road Northeast
Bellevue, Washington

Job No:	Date:		Plate:
00242	August 2000		7

Sample Data:

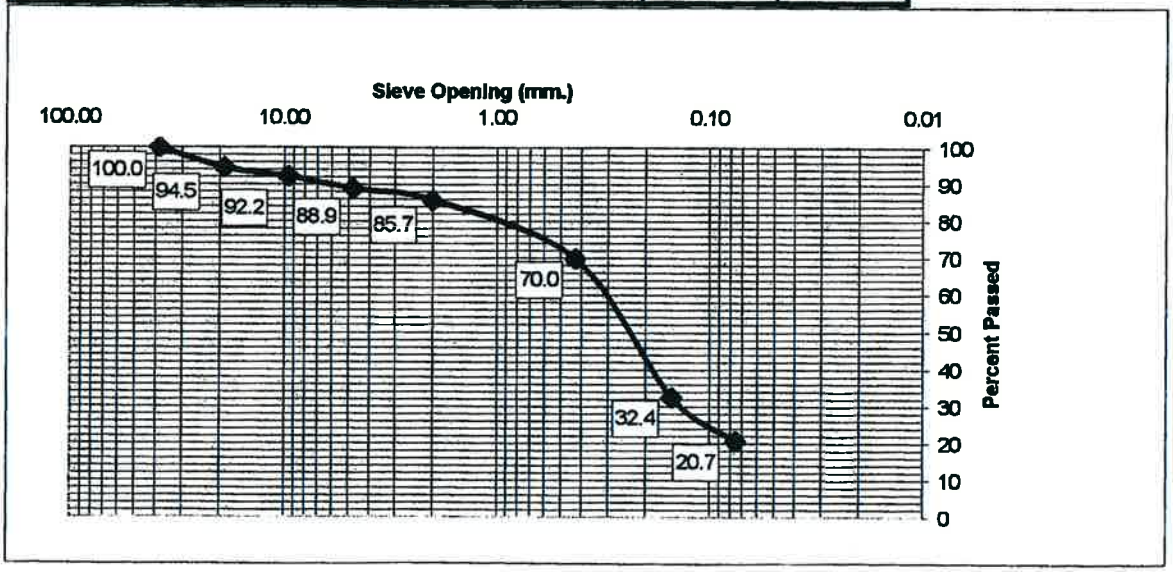
Test Pit/Boring: 5
Sample: 1
Depth: 7

Tare: 0
Wet Weight: 495.2
Dry Weight: 430.5
% Moisture: 15.0

Wash Data:

Dry Weight (before wash): 430.5 grams
Dry Weight (after wash): 353.4 grams
Washed Soil Weight: 77.1 grams

Sieve US - Inches or No.	Sieve SI - mm.	Weight Retained (grams)		Percent Retained		Percent Passed
		Each	Total	Each	Total	Total
1 1/2	38.10	0.0	0.0	0.0	0.0	100.0
3/4	19.05	23.5	23.5	5.5	5.5	94.5
3/8	9.53	10.0	33.5	2.3	7.8	92.2
4	4.75	14.5	48.0	3.4	11.1	88.9
10	2.00	13.6	61.6	3.2	14.3	85.7
40	0.43	67.7	129.3	15.7	30.0	70.0
100	0.15	161.7	291.0	37.6	67.6	32.4
200	0.08	50.6	341.6	11.8	79.3	20.7
<200	0.00	12.7	354.3	3.0	82.3	17.7
Total			431.4		100.2	-0.2

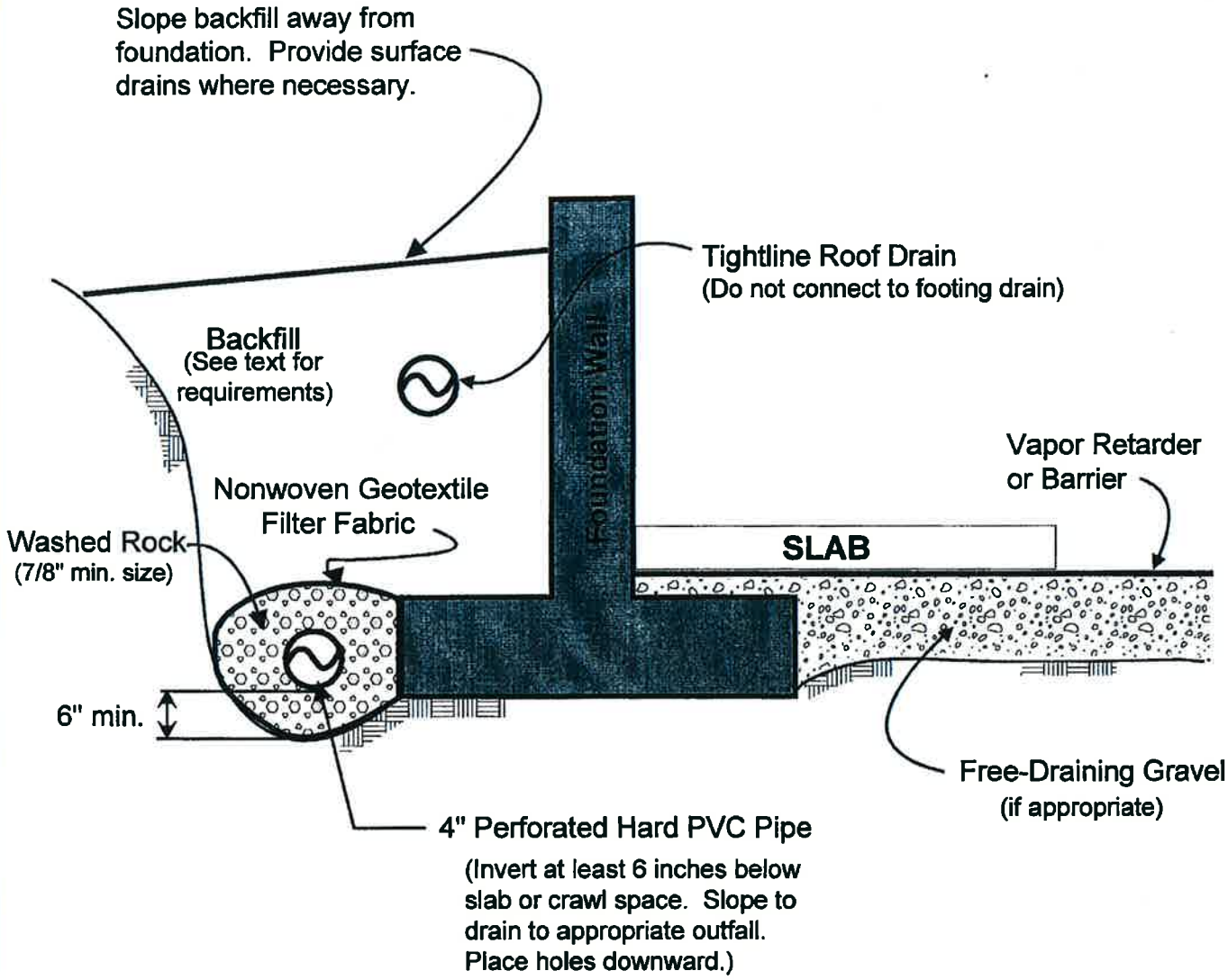


GEOTECH CONSULTANTS, INC.

GRAIN SIZE ANALYSIS

136xx Bellevue-Redmond Road Northeast
Bellevue, Washington

Job No:	Date:		Plate:
00242	August 2000		8



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

136xx Bellevue-Redmond Road NE
Bellevue, Washington

Job No:	Date:	Scale:	Plate:
00142	August 2000	Not to Scale	9

GEOTECH
CONSULTANTS, INC.

13256 Northeast 20th Street, Suite 16
Bellevue, Washington 98005
(425) 747-5618 | GEOTECHNW.COM

May 14, 2015

JN 15210

GIS Development Corp.
600 Stewart Street, Suite 603
Seattle, Washington 98101

Attention: Eugene Gershman *via email eg@gisinternational.com*

Subject: ***Update of Previous Geotechnical Engineering Report***
Proposed Townhome Development
13605 Northeast Bel-Red Road
Bellevue, Washington

Reference: *Geotechnical Engineering Study, Proposed Office Building, Heritage Overlake Center, 136xx Bel-Red Road Northeast, Bellevue, Washington*; August 11, 2000; Geotech Consultants, Inc.

Dear Mr. Gershman:

This letter is intended to be an update of the above-referenced geotechnical engineering report for the proposed new townhome development at the subject site. The scope of the project has been substantially reduced since we prepared our 2000 geotechnical report. Based on the site plan prepared by CSP Engineering, the new multi-story townhome structures will be located on the western half of the site. Paved parking and drive area will be located in the center of the development. Access will be from Northeast Bel-Red Road on the north side of the property. Up to 5 to 7 feet of fill will be needed to reach the final grades on the eastern portion of the development area. Dispersion trenches are proposed to discharge collected storm water to the east of the townhomes. No formal development of the eastern portion of the site is planned.

In order to prepare this update, we have revisited the site in April 2015 to observe the existing conditions. Our observations indicate that the conditions on the site have not changed significantly since our August 11, 2000 geotechnical report. There no signs of clearing, fill placement, or grading on the site since our previous work.

Conclusions and Recommendations

Based on our observations, and review of available information, it is our professional opinion that the geotechnical recommendations of our previous 2000 report are still applicable to this site. This update letter is intended to provide information that would clarify or supersede the recommendations of our earlier report.

The proposed buildings can be supported using footings that bear on medium-dense to dense, native soils. Footings can also bear on structural fill placed following removal of existing topsoil and loose soils. The structural fill must be compacted to a minimum relative density of 95 percent based on the Modified Proctor dry density. This fill must be placed and compacted in appropriate lifts, with regular density testing to verify that appropriate compaction is being achieved. An allowable soil bearing capacity of 2,500 pounds per square foot (psf) is appropriate for the footing design.

Where footing subgrades are comprised of silty native or fill soils, they should be protected with a thin layer of clean crushed rock in wet conditions. This will reduce the potential for disturbance or softening under foot traffic during the placement of foundation forms and rebar.

Under the International Building Code, the soil profile would best be defined by Type C (very dense soil). The glacially-compressed soil that will support the buildings is not susceptible to seismic liquefaction, even under the Maximum Considered Earthquake (MCE).

The site is underlain at a shallow depth by 'glacial till', which is impervious. These soils are not acceptable for onsite infiltration of storm water. Dispersion trenches located east of the development should be located no closer than 25 feet to the short, steep slopes located on the east edge of the property. It will be important that the ground downgradient of the dispersion trenches is well vegetated to prevent soil erosion from any surface flow out of the dispersion trenches.

The active soil pressure recommended in our previous report is appropriate for design of permanent walls with level backfill conditions (35 pcf) outside of the wall. If the design must include a seismic earth loading condition, a uniform active pressure of 7**H** pounds per square foot should be added to the active earth pressure. **H** is the design retention height of the wall.

No clearing or grading should occur within 10 feet of the short, steep slopes located on the east side of the site. If the recommendations of this letter and our previous report are followed, the planned development will not adversely impact the stability of these slopes.

Limitations

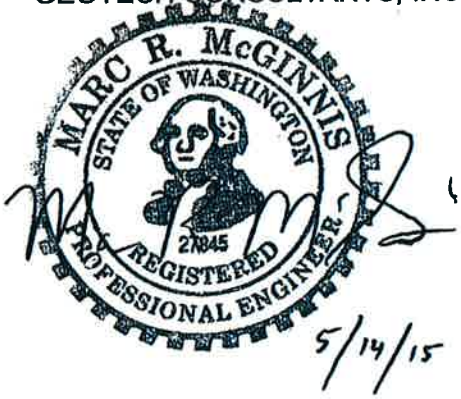
The conclusions and recommendations contained in this report are based on site conditions as they existed at the time of our site visits. If the subsurface conditions encountered during construction are significantly different from those anticipated, we should be advised at once so that we can review these conditions and reconsider our recommendations where necessary. Unanticipated soil conditions are commonly encountered on construction sites. Such unexpected conditions frequently require making additional expenditures to attain a properly constructed project.

This report update has been prepared for the exclusive use of GIS Development Corp. and its representatives, for specific application to this project and site. Our recommendations and conclusions are based on the site materials observed and on previous experience with adjacent sites that have similar surface and subsurface conditions. The conclusions and recommendations are professional opinions derived in accordance with current standards of practice within the limited scope of our services. No warranty is expressed or implied.

Please contact us is you have any questions regarding this information, or if we can be of further service.

Respectfully submitted,

GEOTECH CONSULTANTS, INC.



Marc R. McGinnis, P.E.
Principal

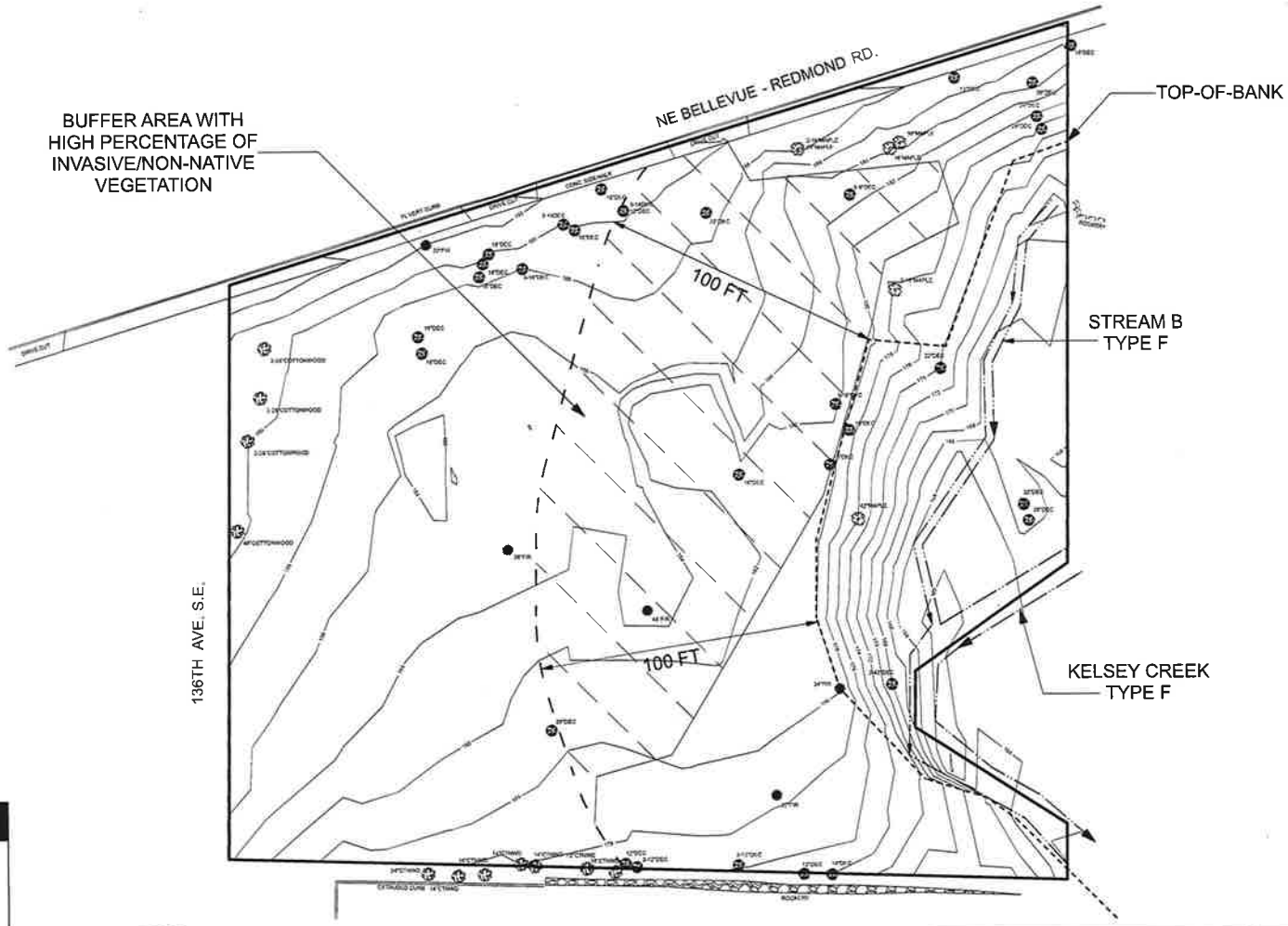
cc: **SkB Architects** – Ryan Hitt
via email rhitt@skbarchitects.com

MRM: at

EXISTING CONDITIONS MAP

GIS DEVELOPMENT - NE BEL-RED ROAD

PORTION OF SECTION 27, TOWNSHIP 25, RANGE 05E, W.M.



LEGEND

- STREAM
- TOP-OF-BANK
- BUFFER
- NON-NATIVE VEGETATION IN BUFFER AREA

Scale 1" = 40'

0 20 40 60 80

Wetland Resources, Inc.
9505 19th Avenue S.E. Suite 106 Everett, Washington 98208
Phone: (425) 337-3174
Fax: (425) 337-3045
Email: mailbox@wetlandresources.com

EXISTING SITE CONDITIONS MAP
GIS DEVELOPMENT - NE BEL-RED ROAD

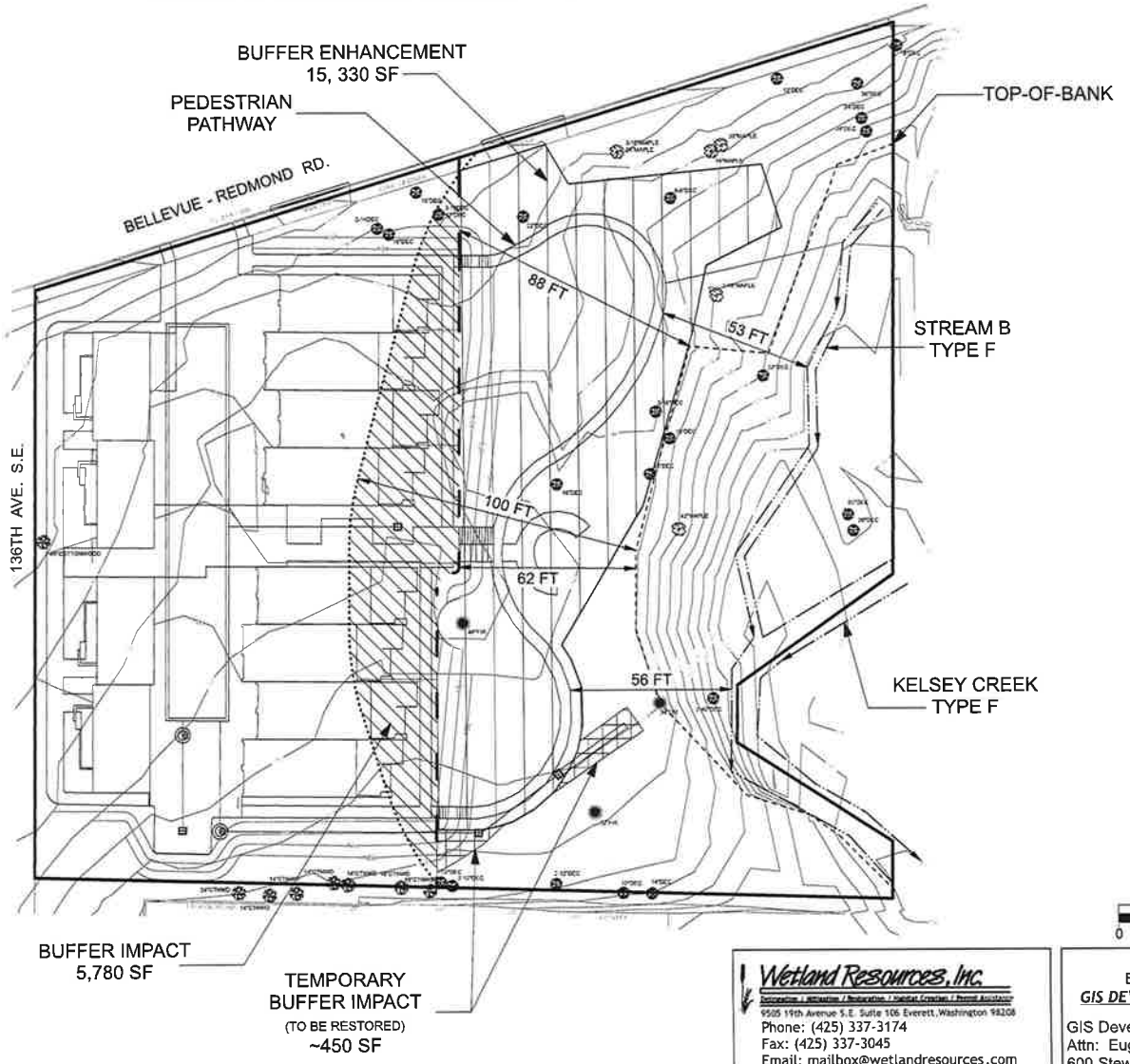
GIS Development Corp.
Attn: Eugene Gershman
600 Stewart St. Suite 603
Seattle WA 98005

Sheet 1/2
Drawn by: MK
Date: 08.31.2015

CRITICAL AREAS AND BUFFER ENHANCEMENT MAP

GIS DEVELOPMENT - NE BEL-RED ROAD

PORTION OF SECTION 27, TOWNSHIP 25, RANGE 05E, W.M.



LEGEND

- STREAM
- TOP-OF-BANK
- PROPOSED BUFFER
- STANDARD BUFFER
- BUFFER ENHANCEMENT
- BUFFER REDUCTION
- TEMPORARY BUFFER IMPACT (TO BE RESTORED)

Scale 1" = 40'

0 20 40 60 80

Wetland Resources, Inc.
Conservation / Mitigation / Restoration / Habitat Creation / Permit Assistance
9505 19th Avenue S.E. Suite 106 Everett, Washington 98208
Phone: (425) 337-3174
Fax: (425) 337-3045
Email: mailbox@wetlandresources.com

CRITICAL AREAS AND
BUFFER ENHANCEMENT MAP
GIS DEVELOPMENT - NE BEL-RED ROAD

GIS Development Corp.
Attn: Eugene Gershman
600 Stewart St. Suite 603
Seattle WA 98005

Sheet 2/2
Drawn by: MK
Date: 08.31.2015

1 CREEKSIDE UNITS - EAST ELEVATION
1/8"=1'-0"

2 CREEKSIDE UNITS - WEST ELEVATION
1/8"=1'-0"

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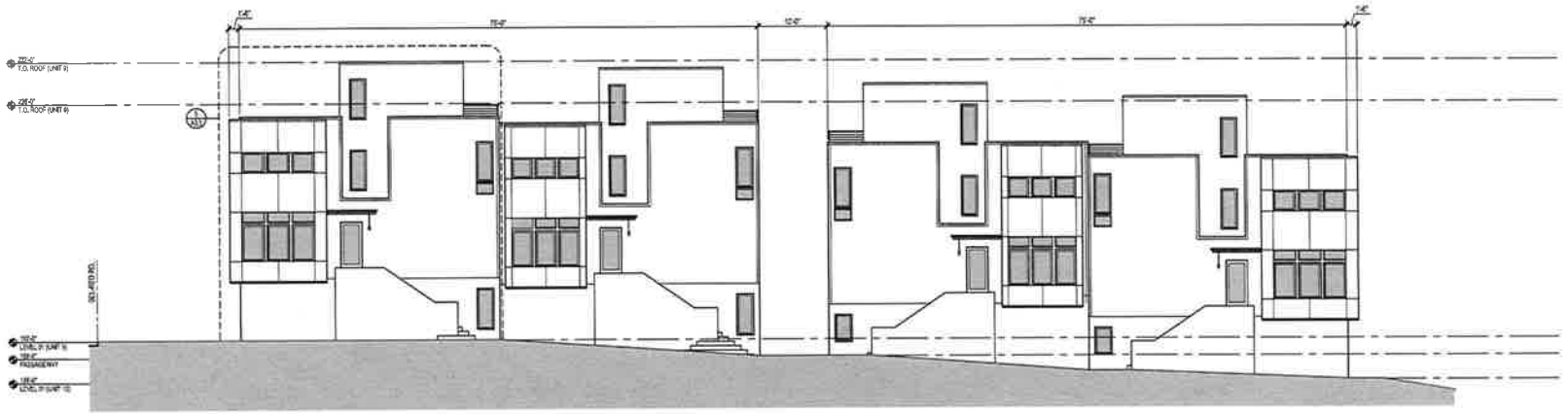
Rev. No.	Description	Date

Project
GIS Townhomes
1380 NE BEL-RED Road
Bellevue, WA 98005
Project Number 1148.00
Date: AUGUST 31, 2015
DESIGN REVIEW

EXTERIOR ELEVATIONS

A3.1



1 COURTYARD UNITS - WEST ELEVATION

2 COURTYARD UNITS - EAST ELEVATION

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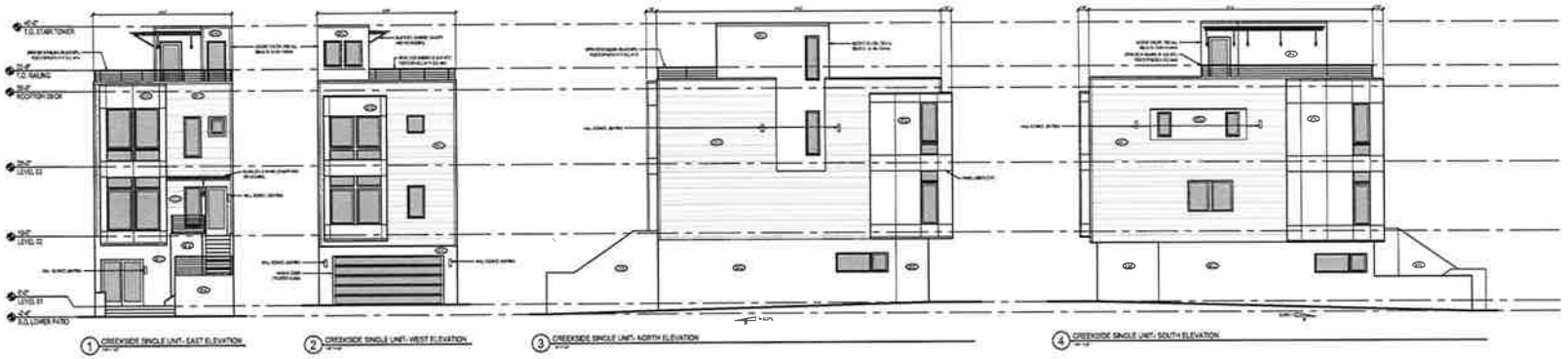
Rev. No.	Description	Date

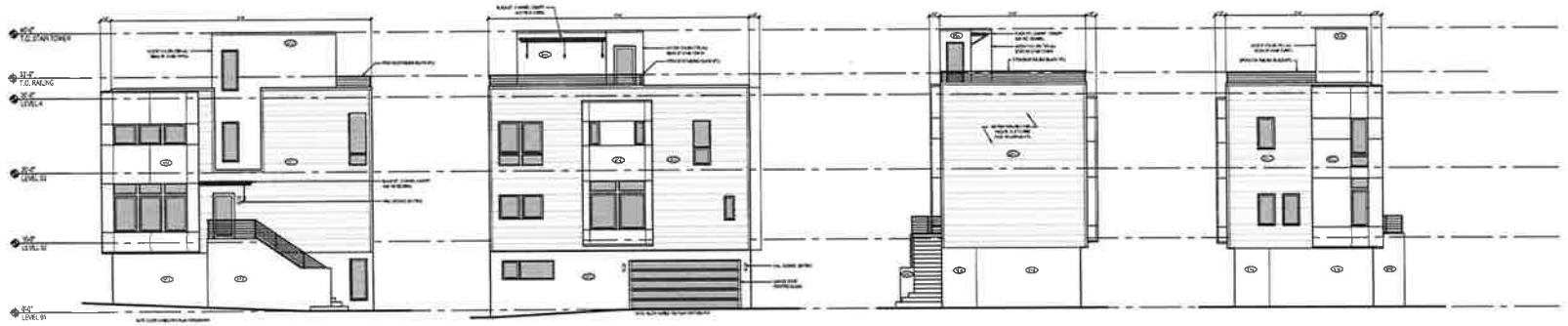
Project
GIS Townhomes
1501 NE BELRED Road
Bellevue, WA 98005
Project Number 11-03.00
Date: AUGUST 31, 2015
DESIGN REVIEW

EXTERIOR ELEVATIONS

A3.2



1 CREEKSIDE SINGLE UNIT- EAST ELEVATION
2 CREEKSIDE SINGLE UNIT- WEST ELEVATION
3 CREEKSIDE SINGLE UNIT- NORTH ELEVATION
4 CREEKSIDE SINGLE UNIT- SOUTH ELEVATION



5 STREETSIDE SINGLE UNIT- WEST ELEVATION
6 STREETSIDE SINGLE UNIT- EAST ELEVATION
7 STREETSIDE SINGLE UNIT- SOUTH ELEVATION
8 STREETSIDE SINGLE UNIT- NORTH ELEVATION

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Project Number 1148.00
Date: AUGUST 31, 2015

Rev. No.	Description	Date

DESIGN REVIEW

EXTERIOR ELEVATIONS

A3.3

Building Materials and Color Samples GIS Townhomes

DESIGN REVIEW August 31, 2015

MT-1 **CLAPBOARD SIDING**

Material: Horizontal. Clapboard Siding

Color: Dark Grey

Location: Facade of main body

MT-2 **METAL PANEL SIDING**

Material: Metal panel

Color: Grey

Location: Bay window front facade

MT-2A **METAL PANEL SIDING**

Material: Metal panel

Color: gradient of a neutral color distributed across all units.

Location: Bay window accents

MT-5 **BRICK**

Material: Brick

Color: Dark grey, black grout

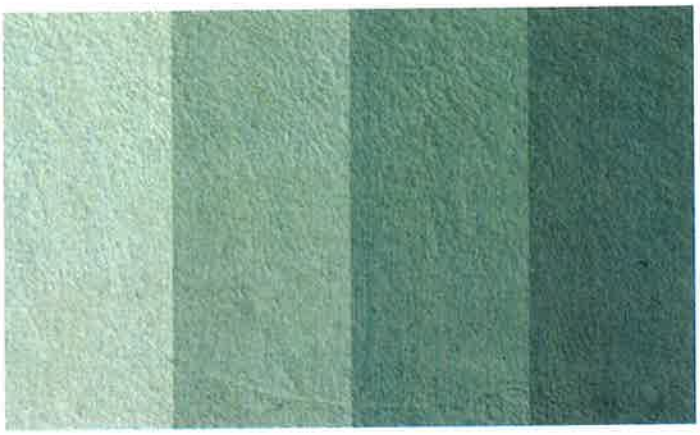
Location: Lower level entry facade

SkB ARCHITECTS

Building Materials and Color Samples GIS Townhomes

DESIGN REVIEW August 31, 2015

Gradient Direction →

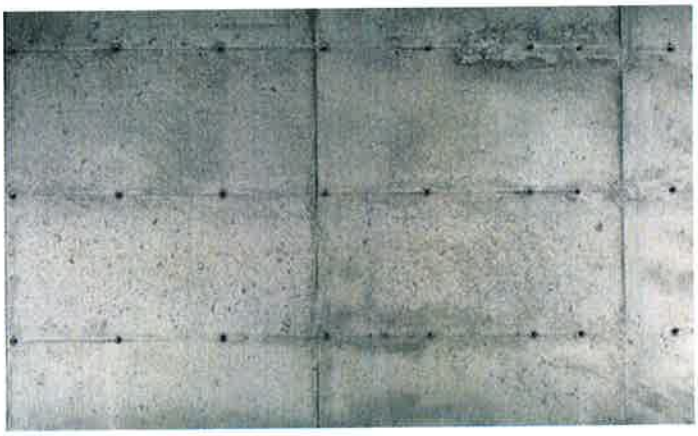


MT-3 **STUCCO**

Material: Stucco

Color: gradient of a neutral color distributed across all units.

Location: Stair Tower/ Roof access



MT-4 **CONCRETE**

Material: Poured-in-place concrete

Color: Light grey

Location: Entry stair

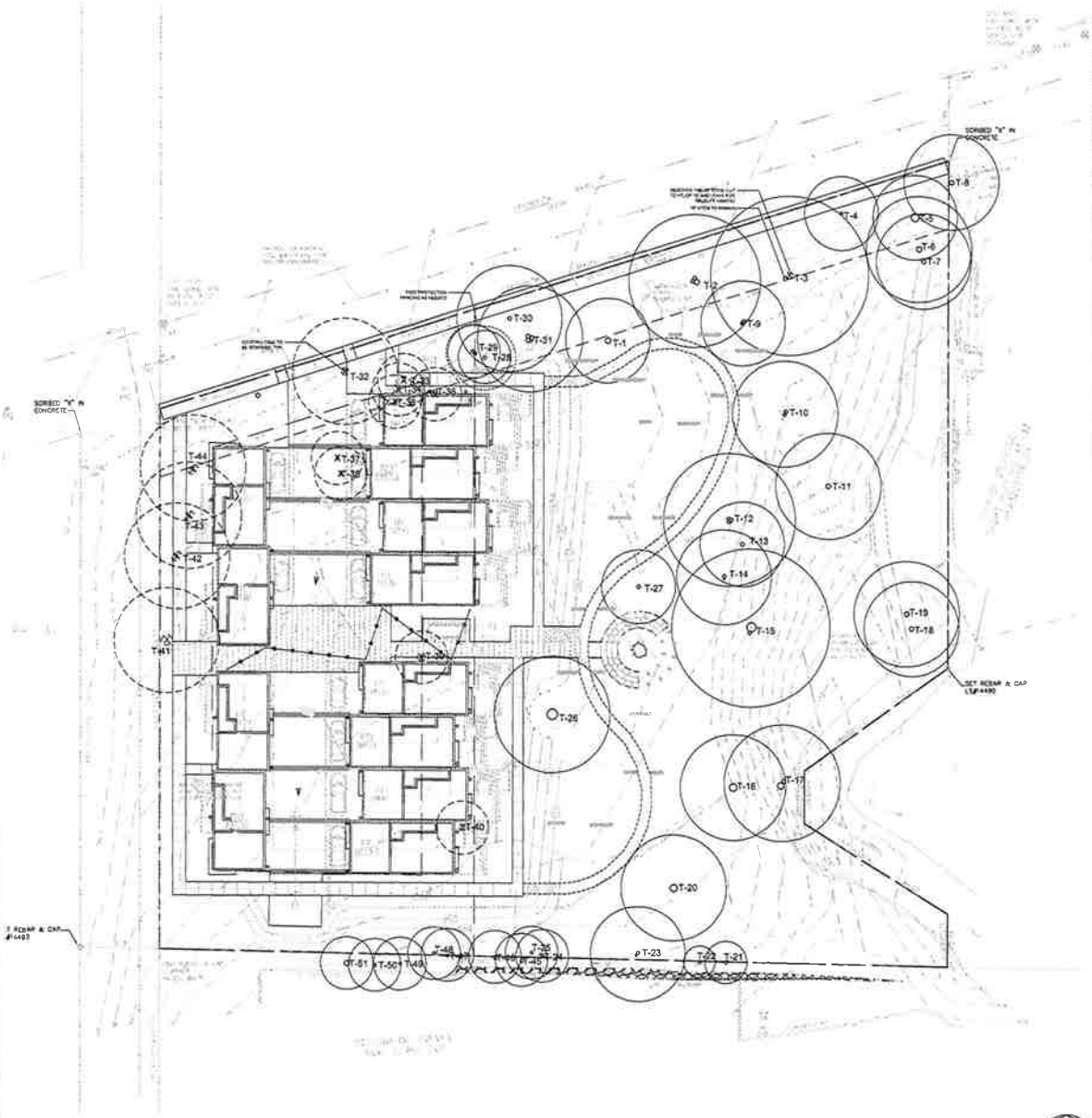
MT-5 **BENCH**

Material: Reclaimed wood and steel

Color: TBD wood species

Location: Front of townhouse against stair

SkB ARCHITECTS



1 TREE PROTECTION PLAN

Scale: 1'-0"=20'

NORTH ARROW

TREE INVENTORY TABLE

TREE	SPECIES	DIAMETER (DBR)	TREES WITHIN PERIMETER	TREES WITHIN SITE INTERIOR	TREES TO BE REMOVED	TREES TO REMAIN
T-1	BLACK COTTONWOOD*	26"		13"		13"
T-2	BIGLEAF MAPLE	16,16,24"		16,16,24"		16,16,24"
T-3	BIGLEAF MAPLE	16,30"		16,30"	30"	16"
T-4	SYCAMORE	12"	12"			12"
T-5	BLACK COTTONWOOD*	36"	18"			
T-6	BIGLEAF MAPLE	24"	24"			
T-7	BLACK COTTONWOOD*	20"	10"			
T-8	SYCAMORE	20"	20"			
T-9	BIGLEAF MAPLE	8,10,10,14"		8,10,10,14"		8,10,10,14"
T-10	BIGLEAF MAPLE	12,16"		12,16"		12,16"
T-11	BIGLEAF MAPLE	22"		22"		22"
T-12	BIGLEAF MAPLE	16,16,16"		16,16,16"		16,16,16"
T-13	BITTER CHERRY	18"		18"		18"
T-14	BIGLEAF MAPLE	10,16"		10,16"		10,16"
T-15	BIGLEAF MAPLE	16,42"		16,42"		16,42"
T-16	DOUGLAS-FIR	34"		34"		34"
T-17	BIGLEAF MAPLE	18,30"		18,30"		18,30"
T-18	BIGLEAF MAPLE	20"		20"		20"
T-19	BIGLEAF MAPLE	22"		22"		22"
T-20	DOUGLAS-FIR	32"		32"		32"
T-21	LOMBARDY POPLAR	16"		16"		16"
T-22	LOMBARDY POPLAR	12"		12"		12"
T-23	BLACK COTTONWOOD*	10,14"		6"		6"
T-24	BLACK COTTONWOOD*	12,14"		6.5"		6.5"
T-25	BLACK COTTONWOOD*	12"		6"		6"
T-26	DOUGLAS-FIR	48"		48"		48"
T-27	BIGLEAF MAPLE	16"		16"		16"
T-28	DEC	16"	16"			
T-29	DEC	14,14"	14,14"			
T-30	DEC	16"	16"			16"
T-31	DEC	18,18,18"	18,18,18"			
T-32	FIR	32"	32"		32"	
T-33	DEC	18"	18"		18"	
T-34	DEC	18"		18"	18"	
T-35	DEC	16"		16"	16"	
T-36	DEC	16,16,16"		16,16,16"	16,16,16"	
T-37	DEC	16"		16"	16"	
T-38	DEC	16"		16"	16"	
T-39	FIR	36"		36"	36"	
T-40	DEC	28"		28"	28"	
T-41	BLACK COTTONWOOD*	48"	24"		24"	
T-42	BLACK COTTONWOOD*	28,28"	14"		14"	
T-43	BLACK COTTONWOOD*	28,28"	14"		14"	
T-44	BLACK COTTONWOOD*	28,28"	14"		14"	
T-45	BLACK COTTONWOOD*	16"	8"			
T-46	BLACK COTTONWOOD*	16"	8"			
T-47	BLACK COTTONWOOD*	14"	7"			
T-48	BLACK COTTONWOOD*	14"	7"			
T-49	BLACK COTTONWOOD*	14"	7"			
T-50	BLACK COTTONWOOD*	14"	7"			
T-51	BLACK COTTONWOOD*	24"	12"			
TOTAL			320"	566"	292"	441"
PERIMETER LANDSCAPE AREA TREE RETENTION REQUIREMENT 100% OF HEALTHY TREES						
SITE INTERIOR TREE RETENTION REQUIREMENT, 15% OF DIAMETER INCHES 566 x 15% = 85"						
**TOTAL SIGNIFICANT TREES ON SITE: 866"						
**COTTONWOODS DISCOUNTED BY 50%						

NOTES:

1. TREE PROTECTION ZONE TO BE 1.5 FEET FOR EVERY INCH OF DBH (6 FEET MIN.).
2. WHERE TREE CANOPY INTERSECTS BUILDING FOOTPRINT ADJUSTMENTS TO FENCING WILL BE REQUIRED & APPROVED BY LANDSCAPE ARCHITECT. ANY NECESSARY BRANCH PRUNING SHALL BE MADE ONLY BY CERTIFIED ARBORIST.

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Project Number 1144.00
Date: August 31, 2015
DESIGN REVIEW

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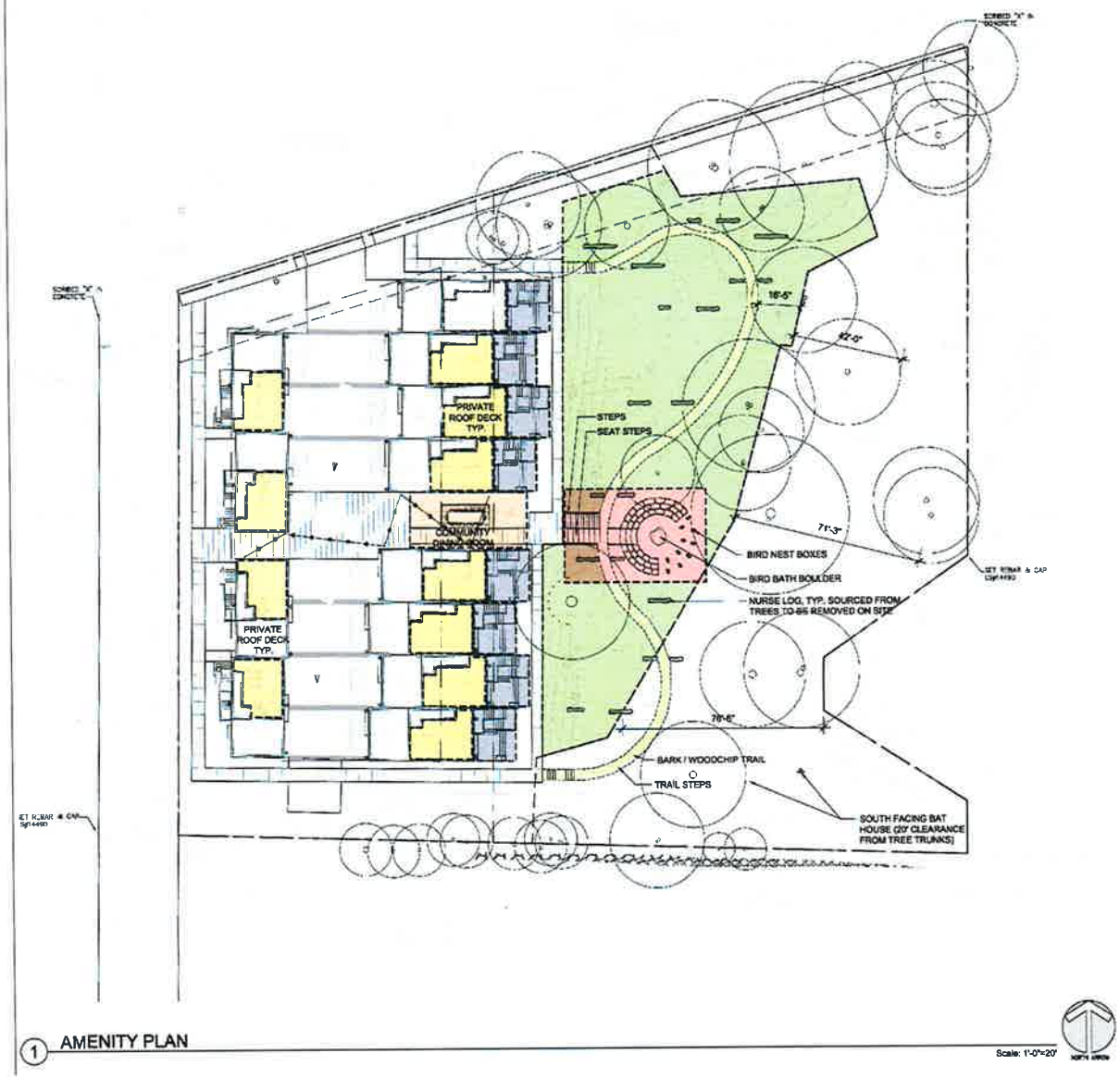
TREE PROTECTION PLAN

L101



1 AMENITY PLAN

Scale: 1'-0"=20'

AMENITY CHART

SYMBOL	AMENITY	QUANTITY
	COMMUNITY DINING ROOM	925 SF
	NATURE TRAIL	330 LF
	COMMUNITY GATHERING AREA	1,900 SF
	VIEWING DECKS	4,200 SF
	HABITAT RESTORATION AMENITY	14,900 SF
	BROWNSTONE STEPS	2,500 SF

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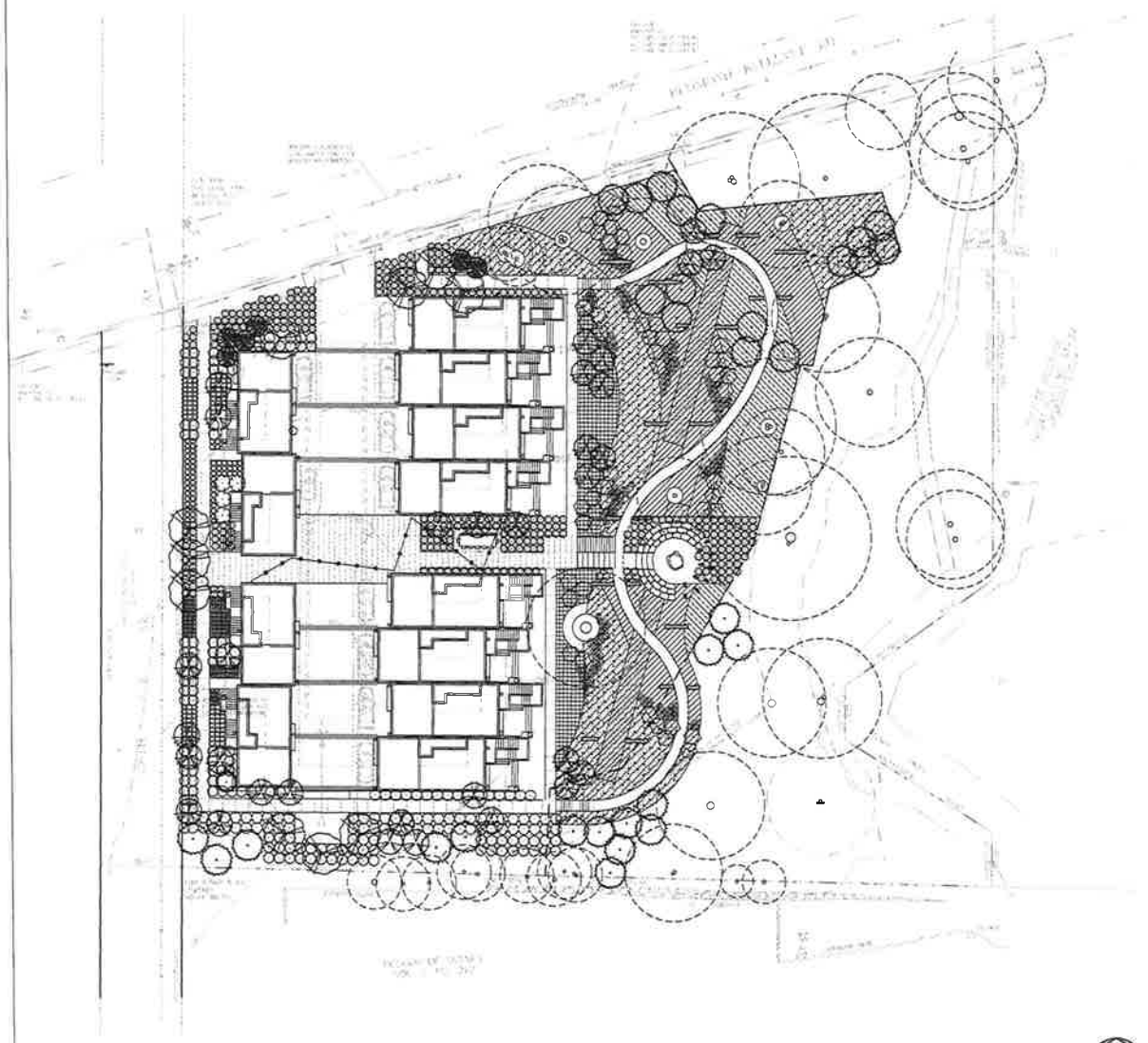
Rev No. Description

Project: GIS Townhomes
13601 NE BELLRED Road
Bellevue, WA 98005
Project Number 1148.00
Date: August 31, 2015
DESIGN REVIEW

SITE AMENITY PLAN

L102



1 PLANTING PLAN

Scale: 1'-0"=20'

NORTH ARROW

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Date: August 31, 2015
DESIGN REVIEW

PLANTING PLAN

L201

PLANT SCHEDULE

DECIDUOUS TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	QTY
	AC	Acer circinatum / Vine Maple	1 gal		13
	AP2	Acer circinatum `Pacific Fire` / Vine Maple	B & B	3 STEM MIN. 2" EA.	19
	CS	Cornus kousa `Miss Satomi` / Red Kousa Dogwood	B & B	2" CAL. MIN.	10

EVERGREEN TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	QTY
	CD	Calocedrus decurrens / Incense Cedar	B & B		1
	TP	Thuja plicata / Western Red Cedar	1 gal		31
	TM	Tsuga mertensiana / Mountain Hemlock	B & B		6

SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	CONT	HEIGHT	QTY
	DW	Dicentra formosa / Western Bleeding-Heart	1 gal		172
	GS	Gaultheria shallon / Salal	1 gal		78
	PB	Philadelphus x `Belle Etoile` / Mock Orange	2 gal		4
	RK	Ribes sanguineum / Red Flowering Currant	2 gal		48
	SH	Sarcococca hookeriana var. hookeriana / Sweetbox	2 gal		1
	VO	Vaccinium ovatum / Evergreen Huckleberry	2 gal		124

FERN	CODE	BOTANICAL NAME / COMMON NAME	CONT	HEIGHT	QTY
	BS	Blechnum spicant / Deer Fern	1 gal		109
	PM	Polystichum munitum / Western Sword Fern	2 gal		337

PERENNIALS	CODE	BOTANICAL NAME / COMMON NAME	CONT	HEIGHT	QTY
	CO	Carex oshimensis `Evergold` / Variegated Japanese Sedge	4" pot		93
	IO	Iris tenax / Oregon Iris	4" pot		63

SHRUB AREAS	CODE	BOTANICAL NAME / COMMON NAME	CONT	SPACING	QTY
	COR	Cornus sericea / Red Twig Dogwood	1 gal	48" o.c.	80
	GS2	Gaultheria shallon / Salal	1 gal	60" o.c.	268
	MN	Mahonia nervosa / Oregon Grape	1 gal	60" o.c.	198
	SA	Symphoricarpos albus / Common White Snowberry	1 gal	84" o.c.	20

GROUND COVERS	CODE	BOTANICAL NAME / COMMON NAME	CONT	SPACING	QTY
	OR	Oxalis oregana / Redwood Sorrel	4" pot	36" o.c.	498

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Bellevue, WA 98005
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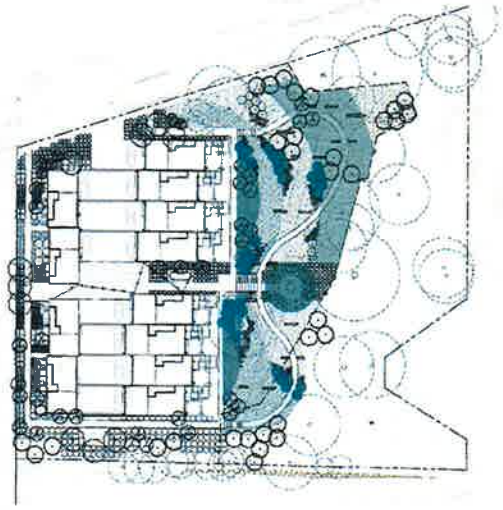
PLANTING SCHEDULE

L202

HABITAT

PREDATOR PLATFORMS
PLANTS
BOXES
POLLINATORS
BIRD BATHS
NESTS
TREE CANOPY

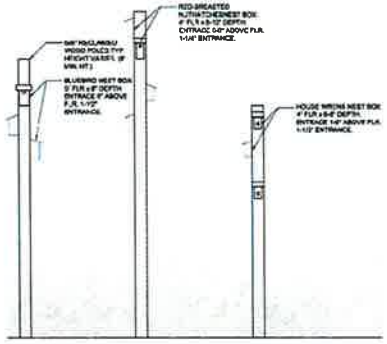


BIRDS

A SELECTION OF COMMON BIRDS

American Goldfinch | Red-winged blackbird | Northern Flicker | Red-breasted Nuthatch | Downy Woodpecker

House Sparrow | Song Sparrow | American Robin | Western Bluebird | House Wren



Bird Nest Boxes

POTENTIAL PLANT TYPES

Snowberry | Red-flowering Current | Vine Maple

Evergreen Huckleberry | Salal | Carex

SHELTERS/FOOD

- Food sources include insects, nuts, seeds, fruit and nectar.
- When placing feeders, choose a location where they can be easily watched, enjoyed and maintained. Look for quiet, undisturbed areas away from noisy traffic, pets, house entrances, and strong winds. A variety of bird feeders will attract the greatest range of bird species.
- Planting a diverse selection of native plants can also provide a low-maintenance year-round supply of bird foods.

Important features of bird-friendly habitat:

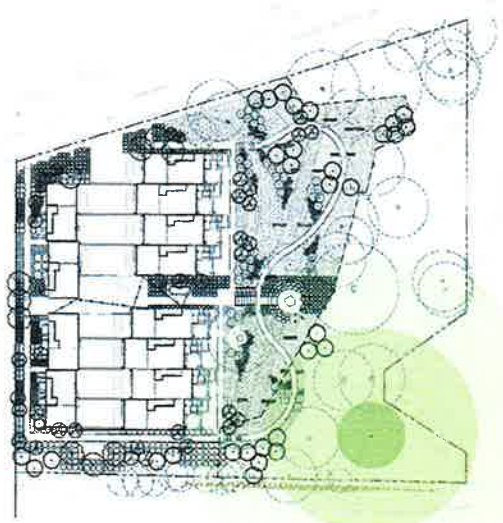
- Water source for drinking and bathing
- Nest boxes (provide shelter for cavity-nesting birds - because different birds prefer unique shapes and sizes, know the species of bird you would like to attract before creating habitat structures)
- Nesting materials
- Food

BATS

HIBERNACULUM MIGRATION

BAT HOUSE

PREDATORS OF NIGHT-FLYING INSECTS



A SELECTION OF COMMON BATS

Big Brown Bat (most common species in the Seattle area)

Little Brown Bat

California Myotis

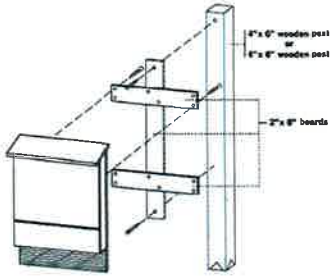
Silver-haired Bat

Spotted Bat

Townsend's Big-eared Bat

SHELTERS

- To cope with winter conditions, most bats use a hibernation site, called a "hibernaculum." Hibernation sites include cavities in large trees, caves, mine shafts, tunnels, old wells, and attics.
- Place the house in full sun, preferably on its own pole; the next-best location is on the southern side of a building in full sun. The optimal temperature range is between 85 and 104 degrees F. Don't put it on a tree, as it will be in too much shade and too close to perch sites used by hawks and owls. Keep the area around the entrance clear of obstructions for 20 feet.
- No bat house should be less than 2 feet tall, with chambers 14 inches wide and a roughened landing area below the entrance. The bat house also should face south or east to take advantage of the most sunshine.
- A roughened or screen-covered landing platform measuring 3 to 6 inches should extend below the house.
- A bat house likely will be most successful where there is a natural mixture of vegetation and different types of agriculture. Additionally, daily sunshine of 10 hours or more and internal bat house temperatures between 80 and 100 degrees F are likely to create the most ideal conditions for the summer maternity colonies.



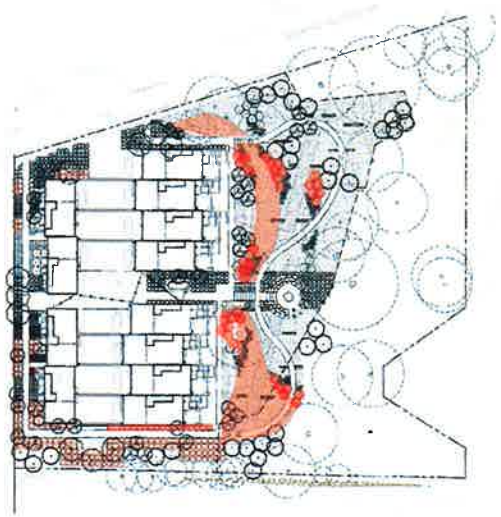
Bat House on a Wooden Post

Important features of bat-friendly habitat:

- Shelter - house at least 2 feet tall with landing platform
- Hibernaculum
- Insects for food
- House located in sunny area
- Space for maternity colony

BEES

POLLINATORS
PLANTS
NECTAR
POLLEN
MUD
NESTING BLOCK



POTENTIAL PLANT TYPES

THE MASON BEE

The mason bee is a Pacific Northwest native that nests singly and has no queen, hive, or honey. This bee is easily encouraged to colonize the landscape to the benefit of the gardener, orchardist, homeowners, and nature lover. It requires is a dry site for its nest, some damp soil nearby, and a supply of nectar and pollen.

SHELTERS

- Attach the nesting block to a house or other structure, out of the wind and rain, and preferably in a place that receives morning sunlight. Mud is a necessary building material for mason bee nests and the reason for the name "mason" bees.
- Bumblebees may use a nest one year and not the next. Place the box on the ground upon a flat rock or a couple of bricks to keep it off the damp earth. Put it in a shaded place on the north side of a building or behind shrubbery.

Important features of bee-friendly habitat:

- Plants that supply nectar and pollen throughout the year
- Nesting Blocks within 100-200 meters of food (closer the better)
- Mud (mason bees use to cap cells in their nests)

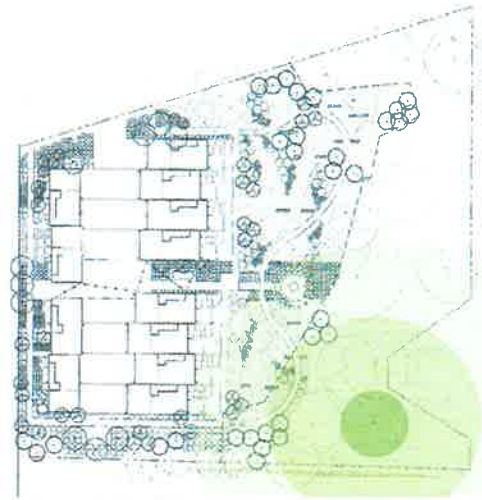
STORMWATER DISPERSION & PERVIOUS SURFACES DIAGRAM

NATIVE PLANTS & EXISTING TREES TO REMAIN DIAGRAM

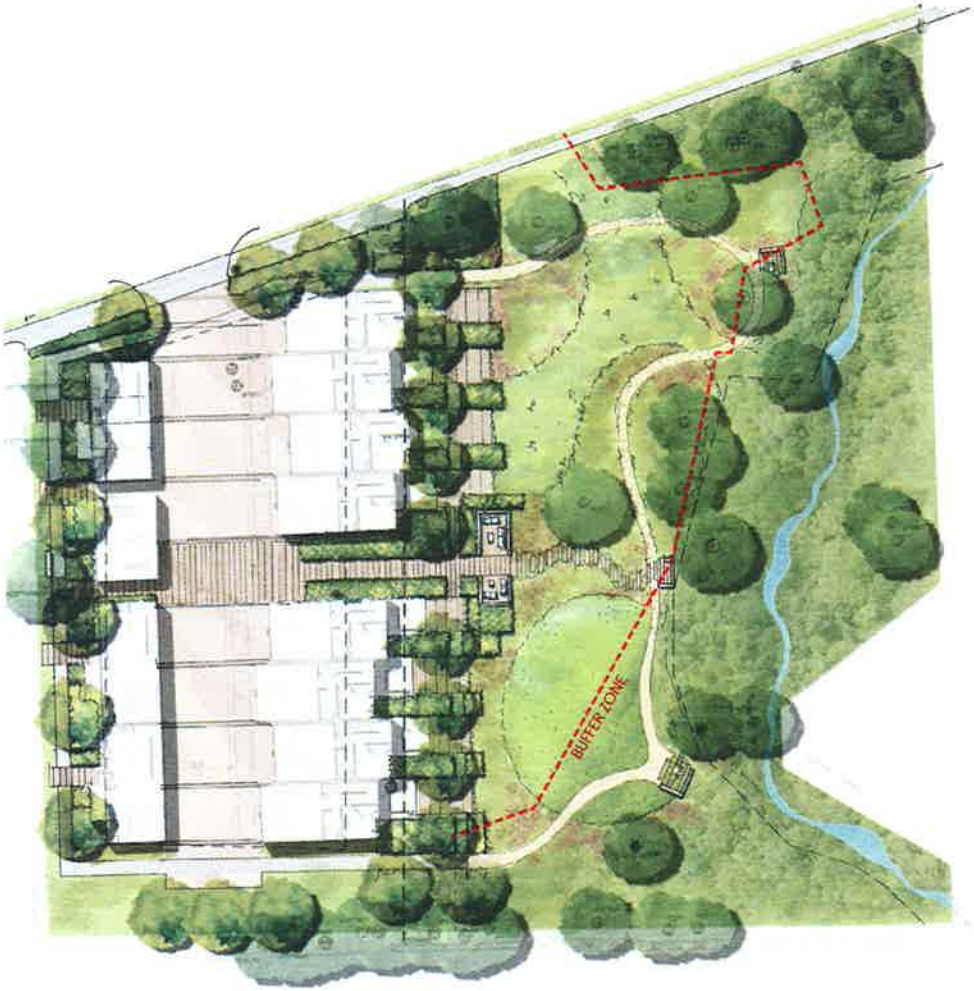
SNAG AND NURSE LOG DIAGRAM

POLLINATOR DIAGRAM

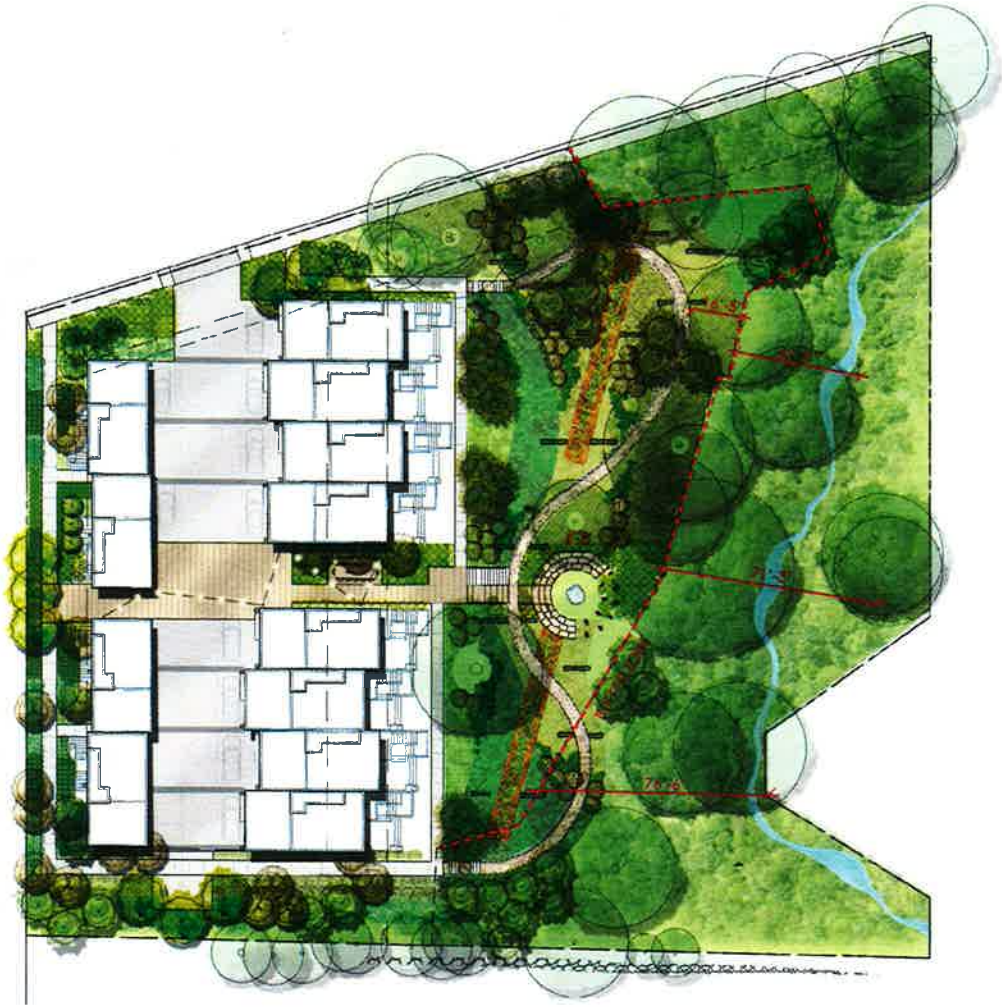
BIRDS HABITAT DIAGRAM



BAT HABITAT DIAGRAM



CONCEPTUAL SITE PLAN



CURRENT SITE PLAN