

# SHORELINE COMMITTEE AGENDA ITEM COVER SHEET

Meeting Date	Staff Contact	
7/15/2008	STEVEN SUNDIN; 778-8359	
<b>Subject:</b>		
<p><b>SQUALICUM LOFTS:</b> Phased construction of four buildings (A – D) that have a TOTAL floor area of approximately 128,500 square feet. Potential uses include a mix of commercial and light industrial uses on a 7.5 acre site.</p>		
<b>Attachments:</b>		
1. EXHIBIT A Site Plan		
2. EXHIBIT B Vicinity Map / FEMA Floodplain Schematic		
3. EXHIBIT C Storm Filter / Rock Pond / Rain Garden Design		
4. EXHIBIT D On-site Stormwater Flow Chart		
5. EXHIBIT E Storm Filter specifications		
6. EXHIBIT F Box culvert / manhole design		
7. EXHIBIT G Landscaping Plan		
8. EXHIBIT H Public Comments		
Meeting Type	Category	
<input type="checkbox"/> Public Hearing	<input type="checkbox"/> Legislative	
<input checked="" type="checkbox"/> Public Meeting	<input checked="" type="checkbox"/> Quasi-judicial	
<input type="checkbox"/> Work Session	<input type="checkbox"/> Information Only	
<input type="checkbox"/> Briefing		
Clearances	Initials	Date
Tim Stewart, Director	<i>TS</i>	7-7-08
Steven Sundin, Planning	<i>SS</i>	7-7-08
<b>Previous Commission Meeting or Action:</b>		
None.		
<b>Recommended Action:</b>		
Approve with conditions as specified in Section IX. of the STAFF REPORT.		

1 **SHORELINE COMMITTEE STAFF REPORT**

2  
3 **Agenda Item #1: Squalicum Lofts**

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5 **For: July 15<sup>th</sup>, 2008**

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7 **Staff Contact: Steve Sundin, Planner**

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8  
9 **I. SUMMARY OF PROPOSAL**

10  
11 Phased construction of four buildings (A – D) that have a TOTAL floor area of approximately  
12 128,500 square feet. Potential uses include a mix of commercial and light industrial uses on a  
13 7.5 acre site. The proposal also includes the following elements;

14  
15 ⇒ On and off-site stormwater management facilities that include two separate systems;

16  
17 One system will convey roof runoff through a rock-filter cooling / cleaning mechanism  
18 before discharging to an existing seasonal drainage ditch on the north side of the  
19 BNSF railroad grade abutting Squalicum Way.

20  
21 The other system will convey surface parking areas and drive lanes through a  
22 stormwater filter cartridge system then through an 18-inch then increasing to a 24-inch  
23 stormwater conveyance pipe (SCP) that is approximately 1900 feet in length. This SCP  
24 travels across Squalicum Way then along the southern edge of Squalicum Way (within  
25 the right-of-way) to an outfall structure located inside of the Roeder Avenue box-culvert  
26 - downstream of the subject site. Discharge point occurs within the upper portion of  
27 tidally influenced waters.

28  
29 In addition, the stormwater system outfall proposed for the Roeder Avenue box culvert  
30 as described includes a 72" manhole structure so that if the box-culvert is retrofitted or  
31 replaced the outfall itself can be reconfigured or relocated.

32  
33 ⇒ Movement of approximately 33,000 cubic yards of export and approximately 23,000  
34 cubic yards of import for building foundations and parking areas, utilities.

35 ⇒ Phased associated parking.

36 ⇒ Extension of a public sewer main into the site.

37 ⇒ Reconstruction of the entrance into the site from Squalicum Way, reconstruction of an  
38 existing internal access road to include curb and gutter and slight widening of Squalicum  
39 Way to include raised edge and catch basins so that road runoff can be conveyed in the  
40 SCP and discharge to the box culvert as mentioned above.

41 ⇒ A new retaining wall at the toe of the Lafayette hill slope.

42 ⇒ Installation of landscape screening along the Lafayette Street hill slope and around the  
43 perimeter of the wetland feature in the east corner of the site and along Squalicum Way.

44  
45 Please see EXHIBIT A.

46  
47 **II. LOCATION:**

48  
49 905 Squalicum Way. Parcel # 380224 117193. Birchwood Neighborhood, Area 15. Planned  
50 Industrial. Conservancy I Shoreline Designation. Please see EXHIBIT B.

1 **III. ATTACHMENTS:**

- 2  
3 EXHIBIT A SITE PLANS  
4 EXHIBIT B VICINITY MAP / FEMA FLOODPLAIN SCHEMATIC  
5 EXHIBIT C STORM FILTER / ROCK POND DESIGN / RAIN GARDEN DESIGN  
6 EXHIBIT D ON-SITE STORMWATER FLOW CHART  
7 EXHIBIT E STORM FILTER SPECIFICATIONS  
8 EXHIBIT F BOX CULVERT OUTFALL / MANHOLE SCHEMATIC  
9 EXHIBIT G LANDSCAPING PLAN  
10 EXHIBIT H PUBLIC COMMENT

11  
12 **IV. SHORELINE COMMITTEE RESPONSIBILITY**

13  
14 The Shoreline Committee must review the application for its consistency with the SMP and  
15 forward a recommendation to the Planning Director.

16  
17 The existing and valid Planned Contract (PDC94-11) is not available for consideration by the  
18 Shoreline Committee. Compliance with the terms in said Planned Contract will be assessed  
19 during review of the building permit submittal. Review of the building permit is ongoing as part of  
20 a consolidated review process and revisions have been required in order to comply with the  
21 terms in said contract.

22  
23 **V. RECOMMENDATION: APPROVAL with conditions.**

24  
25 **VI. BACKGROUND / FINDINGS**

- 26  
27 1. In August, 1994, the City issued a SEPA DNS for development of the 7.57-acre site for  
28 industrial uses.  
29  
30 2. In August, 1994 a Shoreline Permit (#338) was issued for this site. The permit allowed  
31 for light industrial uses and also included allowances for construction of internal road and  
32 utility improvements, construction of a new rail spur, a stormwater facility, open space  
33 enhancement, landscaping and associated building and parking areas for future uses.  
34  
35 3. In August, 1995, a Planned Development Contract (PDC94-11) was issued by the City to  
36 the developer; Henifin and Associates.  
37  
38 4. Over the course of the next several years the requested and permitted site  
39 improvements were constructed thereby 'locking in' or vesting the terms and conditions  
40 within PDC94-11. Buildings were never established on the site. PDC94-11 is still valid  
41 and will be applied to this development proposal.  
42  
43 5. In August, 1999 the shoreline permit expired.  
44  
45 6. In Fall of 2006, the new owner (Mike Allsop) applied for a rezone of the property from  
46 Planned Industrial to a Mixed-Use designation to allow industrial, commercial and multi-  
47 family residential uses.  
48

- 1 7. Planning Commission reviewed the proposal for the rezone in February 2007.
- 2
- 3 8. City Council reviewed for possible docketing in March 2007. They decided NOT to
- 4 docket this proposal for review. The property remained Planned Industrial.
- 5
- 6 9. In the Fall of 2007, the owner indicated that he would like to submit permits in order to
- 7 develop the property with a range of uses that were allowed in PDC94-11. (Residential
- 8 uses are not allowed.)
- 9
- 10 10. The owner and the City agreed to enter into a pilot project. This pilot project enabled the
- 11 city to process the necessary permits for the development proposal concurrently.
- 12 (Typically, permits are processed in a linear fashion; land use, then public improvements
- 13 then building permits.) The pilot project would then be used to inform the city's re-
- 14 structuring of the way large development applications are reviewed and approved. (One
- 15 element of the Mayor's 100-day Plan.)
- 16
- 17 11. In January, 2008 the applicants filed a complete application for a shoreline permit
- 18 including a SEPA Environmental Checklist for the City's review.
- 19
- 20 12. On June 10<sup>th</sup>, 2008 the City issued a SEPA Mitigated Determination of Non-Significance.
- 21

## 22 VII. SHORELINE MASTER PROGRAM COMPLIANCE:

### 23 24 1989 SMP: Section 19: CONSERVANCY ENVIRONMENT I

25  
26 A. DEFINITION: Areas where physical limitations would make intense development  
27 detrimental to the function of the water body or the aesthetic quality of the shoreline.

28  
29 B. PURPOSE AND INTENT: The purpose of the Conservancy Environment I is to  
30 protect those areas, which are intolerant of intense modification due to flooding and/or sliding  
31 and erosion or environmental problems. Structural modifications on the shoreline proper in a  
32 Conservancy Environment I which are not sensitive to these problems would significantly  
33 interfere with shoreline process causing detriment to other areas. Regulated use of the  
34 shoreline is allowed which recognizes the physical limitations and environmental sensitivity of  
35 the shoreline area.

36  
37 C. REGULATIONS: No clearing within 50 feet of the ordinary high water mark shall  
38 occur unless provided for in Section 26 of this ordinance. No fills, hard surfacing, permanent  
39 structures, or storage shall be located within 100 feet of the ordinary high water mark or clearing  
40 within 50 feet of the ordinary high water mark, unless permitted by Section 26 of this ordinance  
41 or the following:

- 42
- 43 1. Development may be permitted within 100 feet of the ordinary high water
- 44 mark under the following regulations:
- 45
- 46 a. Such development may not be undertaken on a slope of greater
- 47 than 15% and;
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b. Such development must be located above the level of the 100-year flood.

2. In the Whatcom Creek Flood Improvement Project area (Whatcom Creek between Interstate 5 and Racine Street) the following regulations apply:

a. Development shall be permitted between 50 feet and 100 feet from the ordinary high water mark if such development is on a slope of less than 15% percent.

b. Landfill shall be permitted within 50 feet of the ordinary high water mark except that where berms have been constructed landfill may extend up to the top of the berm, within the setback. Hard surfacing, permanent structures and storage in this flood plain modification area shall be set back to the outside top edge of any flood protection berm or 50 feet from the ordinary high water mark whichever is greater.

D. CONDITIONAL USE:

Storage may be permitted within setbacks provided:

1. No storage shall be located within 50 feet of the ordinary high water mark.
2. Such storage shall be screened with vegetation, which will attain a minimum height of eight feet after two growing seasons. (Bonding to assure compliance will be required.)
3. Storage of materials, which could be readily introduced into the water body by flooding or erosion and/or cause toxic or polluting effects, shall be prohibited.
4. The use shall not conflict with City flood plain regulations or functioning of flood prevention works.

**STAFF RESPONSE: The proposal is consistent with the purpose and intent of the Conservancy I shoreline designation. Development of the site and the off-site stormwater conveyance pipe (SCP) does not require any removal of native vegetation, modification or stabilization to the creek and its banks or modifications within required setback areas.**

**Only a small portion of the on-site development is within the 200-foot shoreline jurisdiction. There is no new development on-site within the 100-foot setback required in this location with the exception of minimal retrofit / upgrade to some existing on-site facilities within the 100-foot setback such as; re-surfacing of the internal access road including installation of new curb and gutter, new storm drainage facilities and landscaping within the wetland feature. Please see EXHIBIT A.**

1 In fact, the first phase, BLDG A and associated parking improvements are outside of  
2 shoreline jurisdiction. Some of the proposed activities such as maintenance of existing  
3 features are exempt from a shoreline permit process.

4  
5 Nonetheless, portions of the overall phased project on private property (particularly  
6 BLDG B and associated parking) are within shoreline jurisdiction so the project in its  
7 entirety is judged for it's compliance with the City's 1989 SMP.

8  
9 In this location Squalicum Creek travels approximately for 400-feet on the north side of  
10 Squalicum Way and is bookended by two large box-culverts. Approximately 200 feet of  
11 this reach abuts the site. A small portion of the adjacent uplands in the east corner of the  
12 site is within the FEMA 100-year floodplain. All development is above the level of the 100-  
13 year flood. Please see EXHIBIT B.

14  
15 The approximately 1900-footlong SCP, almost all of which is located off-site is proposed  
16 to be constructed along the southern portion of Squalicum Way (entirely within city right-  
17 of-way) and hence is completely within the shoreline jurisdiction. (See Section 26, A,  
18 below.)

19  
20 The SCP will be installed at the edge of the existing road shoulder of Squalicum Way and  
21 will also include new raised edge and new catch basins to convey road run-off (from the  
22 south half of the road) directly to marine waters.

23  
24 **Section 26: GENERAL REGULATIONS:**

25  
26 A. The following activities are allowed within the setbacks required in Section 18  
27 through 25 of this ordinance or in any water body, EXCEPT in a Natural Environment.

- 28  
29 1. Road, railroad, and utility construction necessary to span the shorelines  
30 to facilitate the circulation or utility network of the City.

31  
32 **STAFF RESPONSE:** The road elements, stormwater conveyance pipe, outfall to the box  
33 culvert and improvements to Squalicum Way are allowed in their proposed locations.

34  
35 The SCP leaves the site then crosses over Squalicum Way then travels along the  
36 southern edge until its eventual discharge to the box culvert at Roeder Avenue. Closer to  
37 the site the SCP is just outside of 100-feet from Squalicum Creek and in other locations it  
38 is as close as 15-feet. In all cases however, the SCP will be buried at the southern road  
39 edge and requires NO modification to shoreline areas or removal of native vegetation.

40  
41 The Roeder Avenue box culvert is where the outfall is located. The concept of the outfall  
42 design is to use the box culvert itself as the energy dissipater. Because it has 8-inch  
43 thick walls on all four sides, the box culvert can absorb and deflect a large amount of  
44 water moving at a high speed without causing erosion or scouring. Because it is a three-  
45 box culvert and only the northerly box is being used as an energy dissipater, it will not  
46 create a velocity barrier for fish moving upstream during high flows. Typically, the  
47 majority of anadromous fish are moving into creek systems during periods of high flows;  
48 October and November. Furthermore the outfall is at the easterly end of the culvert so

1 that discharges have the opportunity to merge with existing stream flows in the culvert  
2 between Roeder Avenue to the most downstream crossing near Bellingham Cold  
3 Storage. Please see EXHIBIT F.  
4

5 Discharge to the box culvert is also a better alternative than creating a large gabion  
6 basket or some other flow dissipater that would have to be built into the stream bank. A 24"  
7 storm main will produce a large amount of water so a large gabion basket would likely be  
8 necessary. The northern stream bank of Squalicum Creek where it would need to be  
9 located would be pinched between the existing road bed and the steep creek bank.  
10 Furthermore, aesthetically these have a difficulty blending with existing surroundings.  
11

12 The existing internal access road is located within the 100-foot setback and will be  
13 upgraded. Curb and gutter will be added in order to channel stormwater to the stormwater  
14 filter system. Also, as mentioned above Squalicum Way will be retrofitted along the south  
15 side with a raised edge and catch basins. The existing road section is not anticipated to  
16 be widened but will be retrofitted from the confluence of West Street down to within 25-feet  
17 of the Roeder Avenue box culvert.  
18

19 G. PUBLIC ACCESS: Public access shall be encouraged wherever possible. The  
20 Bellingham Open Space Plan shall be used as a guideline for where access is  
21 most desirable.  
22

- 23 1. No development shall block or interfere with the normal public use of or  
24 public access to publicly owned shorelines and water bodies.  
25
- 26 2. All developments shall be designed to protect and enhance views and  
27 visual access to the water and shorelines.  
28
- 29 3. All developments, including recreational, multi-family residential,  
30 commercial or industrial, located along public shorelines or unique  
31 shoreline areas shall be required to provide view corridors, public access-  
32 ways, trail easements or other amenities upon a determination by the City  
33 that the action would enhance public enjoyment of the shoreline, not  
34 unduly conflict with the proposed use, adjacent uses or public safety nor  
35 adversely impact the shoreline environment and is consistent with the  
36 City of Bellingham Open Space Plan.  
37
- 38 4. Any required public access easement shall be of a size and design  
39 appropriate to the site, size, and general nature of the proposed  
40 development. Such easements shall be recorded on a property deed or  
41 face of a plat as a condition running in perpetuity with the land.  
42
- 43 5. Signs which indicate the public's right of access shall be installed as  
44 required by the Director of Planning and Economic Development  
45 Department.  
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6. Public use on private property which is a condition of a shoreline permit may be limited to daylight hours or otherwise restricted to prevent use conflicts.
7. Where possible, public access sites shall have direct and easy access from the street.
8. Public access may be considered unfeasible and not be required where;
  - a. Unavoidable hazards to the public in gaining access exist.
  - b. Inherent security requirements of the use cannot be satisfied.
  - c. Unavoidable interference with the use would occur.
  - d. The cost of providing the access is unreasonably disproportionate to the total cost of the proposed development.
  - e. Where damage to the natural ecology of the area would result and could not be mitigated.
  - f. In the above, the applicant shall first demonstrate and the City shall determine that all reasonable alternatives have been exhausted, including but not limited to 1) maintaining a gate and limiting hours of use, or modifying operations and scheduling 2) designed separation of uses and activities, i.e. fences, terracing, use of one-way glazings, hedges, landscaping, etc. 3) provision of or contribution to an access at a site geographically separated from the proposal.
9. Public access to the shoreline shall be required on all public property, except as indicated above or as follows:
  - a. In harbor areas completely occupied by water-dependent uses.
  - b. In street ends or waterways occupied by water-dependent uses under permit or lease.
10. On property where public access is infeasible, the applicant may be permitted to provide off-site public access in the form of view platform, interpretive display or other public access enhancement consistent with the Open Space Plan in lieu of on-site access.
11. Required public access sites shall be fully developed and available for public use at the time of occupancy of the development unless the required public access site is on an undeveloped segment of a trail route designated in the Bellingham Open Space Plan. In this case, the required

1 public access shall be fully developed and available for use when the trail  
2 segment is developed.

3  
4 12. Where public access is not required on-site due to one of the factors cited  
5 in 8 or 9 above, a payment in lieu may be required prior to permit  
6 approval to provide a similar or equivalent amenity.

7  
8 13. "Required public access" shall include not less than a pedestrian bicycle  
9 pathway of suitable surfacing and standards to meet the intended  
10 purpose, adequate signage to inform the public of the public access,  
11 design features and landscaping to make the facility in harmony with the  
12 shoreline setting, and where appropriate, facilities which are designed to  
13 meet the anticipated use including use by disabled persons.

14  
15 Where required public access is located on a trail route indicated in the  
16 City of Bellingham Open Space Plan, the access-way shall connect to  
17 adjoining trail sections including access points and vistas, either existing  
18 or planned. If the required access does not connect to a continuous public  
19 trail, the required access shall connect to a public right-of-way.

20  
21 14. Future actions by the applicant shall not diminish the usefulness or value  
22 of the public access site.

23  
24 **STAFF RESPONSE: Access is currently provided from the Lafayette Stairs down to and**  
25 **across private property to Squalicum Way in the form of a public access easement. Safe**  
26 **access to the creek itself where it abuts the site is informal and unsafe. The railroad bed**  
27 **has been compromised and is sloughing into the creek.**

28  
29 **The Parks Department (via review of the building permit) is working with the applicant to**  
30 **relocate an existing easement across the front of the property to the northeast portion of**  
31 **the site to create a better, safer connection to Squalicum Park to the east. The Lafayette**  
32 **Stairs will remain in place until a more accessible improved linkage can be made to**  
33 **Squalicum Way. (The Parks Department has not made a final decision on the stairs or an**  
34 **alternative at this time.) Ultimately, the goal is to provide a safe and accessible trail**  
35 **linkage from the Birchwood Neighborhood through the park to the eventual Bay to Baker**  
36 **Trail.**

37  
38 **Public access through the site will be incompatible with proposed uses except for those**  
39 **that are retail, office or eating and /drinking establishments. Rather access will likely be**  
40 **established around the perimeter of the site for safety.**

41  
42 **The height of the proposed buildings is lower than the elevation of the abutting bluff to**  
43 **the west so there will be no impact to territorial views in this location.**

44  
45 H. Drain pipes from adjacent properties and other drainage structures shall not  
46 extend into a required setback. Surface storm water run-off shall be collected in  
47 grass lined swales except where land topography makes this infeasible, where

1 erosion would occur or where the City determines that another means of site  
2 drainage is preferable.

3  
4 **STAFF RESPONSE: Please see Section 27: Use Activity Regulations: UTILITIES.**

5  
6 **Section 27: USE ACTIVITY REGULATIONS:**

7  
8 The following regulations shall apply respectively to all developments established consistent  
9 with Sections 17 through 25 of this ordinance.

10  
11 F. **COMMERCIAL DEVELOPMENT:** The following regulations shall apply to  
12 wholesale and/or retail trade establishments, offices, manufacturing and  
13 warehousing facilities, public or quasi public uses, private clubs and lodges and  
14 similar uses, unless such use is located in an Urban Maritime environment.

- 15  
16 1. The area between any commercial development and the adjacent water  
17 body shall be established and maintained in a sightly condition. This  
18 requirement includes the elimination of debris and brambles, and may  
19 require the installation of suitable landscaping. This requirement shall be  
20 the continuing obligation of the property owner.
- 21  
22 2. When a commercial development on the shorelines is designed such that  
23 freight loading facilities, solid waste pick up stations or incinerators or  
24 material storage exist between the development and the water body,  
25 screening and/or landscaping shall be installed to screen such facilities  
26 from the water body. Such screening should be located as near to the  
27 facility as feasible and in no case shall it be located within the required  
28 shoreline setback. Such screening requires the approval of the Planning  
29 and Economic Development Department.
- 30  
31 3. No hazardous waste materials shall be stored on its shorelines of the  
32 City.
- 33  
34 4. Oil separation devices shall be used for the disposal of storm water from  
35 parking lots. Said devices shall be regularly maintained.

36  
37 **STAFF RESPONSE: Landscaping is proposed between the development and the**  
38 **shoreline and around a majority of the perimeter of the property. The existing non-native**  
39 **vegetation around the created wetland will be removed as part of implementing their**  
40 **landscaping plan.**

41  
42 **Storage, trash pick-up, freight loading facilities – where they might occur are well outside**  
43 **of shoreline jurisdiction.**

44  
45 **Hazardous material storage is not proposed at this time. While this type of use is allowed**  
46 **in this subject land use zone, the existing Planned Development Contract (94-11)**  
47 **requires those uses to be reviewed separately by the Planning Director.**

1 **Stormwater management is discussed at length below in Section U; UTILITIES.**  
2

3 R. ROAD AND RAILROAD DEVELOPMENT: The following regulations shall  
4 conform to all road and railroad construction on the shorelines of the City.  
5

- 6 1. Road and railroad development shall be located as far from the  
7 land/water interface as feasible and shall not interfere with other  
8 appropriate shoreline uses.  
9  
10 2. Road construction or reconstruction shall be designed to accommodate  
11 varied modes of transportation and, where feasible, be utilized as a  
12 means of increasing public access to the shorelines.  
13  
14 3. The placement of rip-rap or other materials for the purpose of erosion  
15 prevention shall be done on the bank of the road or railroad bed. No  
16 broken concrete, asphalt, or scrap metal materials shall be used on the  
17 surface of any bank protection materials. Bank protection materials shall  
18 be placed from the bank. There shall be no dumping of bank protection  
19 material directly from a truck bed onto the bank face.  
20  
21 4. Bridges and trestles shall be designed to cause minimum interference  
22 with the natural function of the water body.  
23

24 **STAFF RESPONSE: Road improvements are not required for this project. Only very**  
25 **minor improvements are proposed at the edge of the existing road edge along Squalicum**  
26 **Way. These improvements will not require additional disturbance or modification beyond**  
27 **the existing road bed. There are no proposed improvements to the BNSF railroad grade.**  
28

29 U. UTILITIES: The following regulations shall apply to the installation of  
30 electrical, gas, oil, telephone, television, sanitary and storm sewer and  
31 water utilities on the shorelines of the City.  
32

- 33 1. All utilities shall be placed underground where feasible. Following  
34 installation/maintenance projects, project areas shall be returned to pre-  
35 project configuration and shall be planted with shrubs, grasses and trees  
36 of similar types and concentration as exists in the general vicinity of the  
37 project, PROVIDED, the requirement for vegetative installation may be  
38 waived or altered if, in the opinion of the Planning and Economic  
39 Development Department the utility easement may be utilized for public  
40 access and such access is consistent with the protection of private  
41 property.  
42  
43 2. Electrical, television and telephone lines may be permitted to cross a  
44 water body by overhead suspension. However, when gas, oil, water,  
45 sanitary or storm sewer lines must necessarily cross a water body, such  
46 crossing shall be done underground or shall be integrated with road or  
47 railway bridges or dams. Undergrounding of utilities across a water body

1 must gain the approval of the State of Washington Departments of  
2 Fisheries and Wildlife.

- 3  
4 3. Where feasible, storm water drainage facilities for shoreline development  
5 shall be connected to existing storm water facilities. New storm drainage  
6 outfalls shall be designed to be aesthetically compatible with the shoreline  
7 area (i.e., placement of rock rip-rap as an energy dissipater and  
8 streambed armor, designed and constructed to resemble a natural  
9 drainage stream.)

10  
11 **STAFF RESPONSE: The applicant submitted a Stormwater Management Alternatives**  
12 **Analysis to the City in November 2007. This alternatives analysis presented four**  
13 **alternatives; Infiltration to groundwater, traditional treatment (pond or vault) and outfall**  
14 **to Squalicum Creek, outfall to drainage ditch, outfall to marine waters.**

15  
16 **Infiltration to groundwater was determined to be infeasible due to the composition of**  
17 **soils and fill material that was identified in a Geotechnical Engineering Report (October**  
18 **2005) Clay and silt were most prominent which are unsuitable for infiltration. They are**  
19 **also unsuitable as structural fill when they become saturated. Several feet of soil would**  
20 **need to be removed from the site and replaced with infiltratable soil. This alternative**  
21 **would result in a massive amount of earthwork which takes a massive amount of dump**  
22 **trucks burning a massive amount of fuel going to and from the site for a long period of**  
23 **time before building construction even began. This was determined to be economically**  
24 **infeasible.**

25  
26 **Traditional stormwater management employing a pond or underground detention vault**  
27 **with traditional discharge controls was determined to be ineffective. This traditional**  
28 **treatment method does not adequately cool water before it is released into Squalicum**  
29 **Creek. Squalicum Creek is listed by the Department of Ecology as an impaired water-**  
30 **body in regards to temperature, zinc, fecal coliform, and dissolved oxygen under Section**  
31 **303 (d) of the Clean Water Act. There is also question as to weather or not, over time,**  
32 **these systems effectively remove these same pollutants, even though this methodology**  
33 **is common and meets the required DOE stormwater standards. Furthermore, taking all**  
34 **the site's stormwater and channeling it to Squalicum Creek eliminates historic sheet flow**  
35 **that supplies a certain amount of base flow to the seasonal drainage ditch on the north**  
36 **side of the BNSF railroad tracks.**

37  
38 **Outfall to the BNSF railroad seasonal drainage ditch was also analyzed and determined**  
39 **to be problematic. This drainage ditch eventually outfalls to Bellingham Bay and is**  
40 **considered seasonal until it reaches the confluence of the "Eldridge Springs." Eldridge**  
41 **Springs supports juvenile Coho salmon and they can typically be seen within proximity**  
42 **of the Eldridge Avenue bridge. The Eldridge Springs water is cold, clear, and clean.**  
43 **However, it is too small a drainage to handle the total runoff coming from the 7.5-acre**  
44 **site. Furthermore, if traditional treatment is utilized it is ineffective and could have**  
45 **negative impact for the reasons discussed above. In addition, during high flows a certain**  
46 **amount of pollutants (from pavement) would automatically be discharged to this system.**

47  
48 **Outfall directly to Bellingham Bay (uppermost extent of tidal influence) was considered**

1 because the other alternatives had undesirable effects on groundwater, water quality and  
2 fishery resources. While this is not a typical methodology it does have merits that were  
3 worthy of consideration. Outfall directly to marine waters does not create a temperature  
4 impact. A 15-cartridge stormwater filtration mechanism would be installed as a treatment  
5 device. Stormwater would pass through it before entering the stormwater conveyance  
6 pipe. These cartridge systems are more effective in removal of solids, metals, and  
7 organics and are much easier to maintain and replace as necessary.  
8

9 Ultimately, the applicant then proposed a combination of outfall mechanisms to both the  
10 BNSF railroad seasonal drainage ditch (drainage) and to the Roeder Avenue box culvert  
11 as the best alternatives for stormwater management.  
12

13 After thorough review, extensive consultation with Department of Ecology, Department  
14 of Fish and Wildlife and internally with staff, the City determined that the proposed  
15 combination was legal and had the least amount of impact to the shoreline ecological  
16 function of Squalicum Creek.  
17

18 The outfall to the drainage will come from non-pollutant generating sources (rooftops)  
19 and will be stored and cooled in a rock pond that is approximately 400 square feet in size  
20 varying in depth from 6-8 feet. Water will move through the system and once water-depth  
21 reaches approximately 3 feet it will be discharged to the seasonal drainage. This allows  
22 for water to cool itself (and receive some additional treatment) before entering the  
23 drainage. The outlet structure has been structured such that discharges will mimic  
24 existing flow regimes so that excessive volume doesn't overload the drainage system.  
25 Please see EXHIBIT C.  
26

27 Stormwater from all other sources from the site would be directed to the on-site  
28 treatment system and SCP to the outfall within the Roeder Avenue box culvert.  
29

30 Specifically, stormwater from all other sources moves from pavement to either rain  
31 gardens or catch basins then through the 15-cartridge filter to the 18-inch storm main to  
32 the 24-inch storm main located within Squalicum Way to the 24-inch diameter outfall in  
33 the Roeder box culvert. In this matter, stormwater receives some preliminary treatment  
34 AND cooling via rain gardens which are more effective for the less severe more frequent  
35 storm events. Please see EXHIBITS C and D.  
36

37 The filter system is designed specifically to use cartridges that target specific pollutants.  
38 For the subject proposal pollutants such as oil and grease, solids, copper and zinc are  
39 the most notorious. The specific cartridges are effective at removal of these elements. By  
40 way of example these have been used for treatment of road runoff within the Lake  
41 Whatcom watershed by a variety of developers and public agencies. The key to their  
42 success of course is for regular monitoring and maintenance. Please see EXHIBIT E.  
43

44 The outfall pipe that will discharge stormwater into the Roeder Avenue box culvert is 24-  
45 inches in diameter. By way of example there is a similar outfall in the box culvert at  
46 Harris Avenue in Fairhaven. This outfall is 24-inches in diameter and discharges to the  
47 tidally influenced waters of Padden Creek.  
48

1 The outfall is directed downstream as mentioned above. Furthermore, before the outfall  
2 pipe enters the box culvert it passes through a 72" manhole unit. The purpose of this  
3 manhole is to be able to relocate and/or redirect the outfall pipe if the Roeder Avenue box  
4 culvert is ever replaced or retro-fitted. Please see EXHIBIT F.  
5

6 The possibility of this occurring is likely due to the Squalicum Creek Estuary Restoration  
7 Project sponsored by the Port of Bellingham in coordination with the City and the  
8 Bellingham Bay Action Team (BBAT). The BBAT is a by-product of the Bellingham Bay  
9 Demonstration Pilot Project (PILOT) which is comprised of local, state, federal and tribal  
10 agencies that have been involved in the Bellingham Bay Cleanup Project since 1996. The  
11 BBAT's purpose is to implement the Comprehensive Strategy that is within the original  
12 EIS for the Cleanup of the Whatcom Waterway. The Comprehensive Strategy is a  
13 document that identifies future land use and habitat restoration actions that would  
14 benefit the health and utilization of Bellingham Bay.  
15

16 This estuary project has been in the feasibility stage for several years and only recently  
17 has gained momentum. The purpose of the project is to eliminate the fish passage  
18 barrier that exists at the virtual mouth of the creek. During low tide, fish are unable to  
19 move upstream because of a grade differential between the bedland under the  
20 downstream railroad bridge and the elevation of low tide.  
21

22 In order to remove the barrier the creek bed which is actually a concrete floor, must be  
23 removed. This 'floor' is located from the upstream extent of the Roeder Avenue box-  
24 culvert to the downstream crossing adjacent to Bellingham Cold Storage. In order to  
25 remove this floor, bridges and culverts would most likely have to be replaced because  
26 retrofit is too cost-prohibitive to the project. If this occurs and the outfall is located in its  
27 proposed location it would have to be redesigned or relocated.  
28

29 The purpose of the manhole then is to have an available point of beginning for a new  
30 discharge pipe and outfall.  
31

32 The City intends to own and maintain the proposed SCP pipe (within the city right-of-  
33 way) once it is constructed and maintained privately for one year after its completion. (It  
34 is standard protocol for the City to own and maintain water, sewer and storm facilities  
35 within the right-of-way.)  
36

37 In addition, raised edges and catch basins will be installed at the back edge of the  
38 existing road-bed to catch and convey stormwater from the south one-half on Squalicum  
39 Way.  
40

41 NOTE: Department of Ecology Stormwater Manual for Western Washington (2005):  
42 Stormwater that is discharged directly to freshwater creek includes a requirement to  
43 detain its water and release it slowly so that it does not cause downstream erosion and  
44 scouring. Discharge to freshwater systems also requires 'enhanced' treatment.  
45 Enhanced treatment requires at least two mechanisms from a treatment train. Examples  
46 include providing TWO of; bio-swale, filter strip, linear sand filter, basic wet pond, wet  
47 vault, combined wet pond / wet vault, sand filter, and/or media filter.  
48

1 **Stormwater that is discharged to marine waters does not require detention because**  
2 **erosion is not a consideration. However, energy dissipaters are often required if**  
3 **discharge occurs above the level of the OHWM to minimize erosion. Discharge to marine**  
4 **systems only requires 'basic' treatment because the mixing zone into which it is**  
5 **discharged is saltwater. Basic treatment examples include providing ONE from the list of**  
6 **alternatives above.**

7  
8 **USE ACTIVITY POLICIES:**  
9

10 Commercial developments are those uses, which are involved in manufacturing, production,  
11 construction, wholesale and retail trade or business activities.

12  
13 Policy: Where navigability is a viable asset, and in appropriate environments,  
14 commercial development on the shorelines of the City should be water surface  
15 dependent or should provide an opportunity for a substantial number of general  
16 public to enjoy the shorelines.

17  
18 Policy: Where navigability is not a viable asset, and in appropriate environments,  
19 commercial development on the shorelines of the City should not interfere with  
20 the natural function of the shoreline and water body and shall provide open  
21 space along the shoreline adequate for potential public access.

22  
23 Policy: Future appropriate commercial development on the shorelines of the City should  
24 be compatible with existing appropriate uses.

25  
26 Road and railroad construction on the shorelines can inhibit or preclude the use of those  
27 shorelines for other activities. Transportation is, however, a necessary prerequisite to many  
28 appropriate shoreline uses and if properly planned and constructed can contribute to the access  
29 to the shorelines by the general public.

30  
31 Policy: Road and railroad development should be located as far from the land/water  
32 interface as feasible and should not interfere with other appropriate shoreline  
33 uses.

34  
35 Policy: Road and railroad development should not be undertaken unless necessary to  
36 accommodate appropriate shoreline uses, provided that development necessary  
37 to span the shorelines to facilitate the circulation of the City should be permitted.

38  
39 Policy: Road construction or reconstruction should be designed to accommodate varied  
40 modes of transportation and, where feasible, be utilized as a means of increasing  
41 public enjoyment of the shorelines.

42  
43 Utilities are necessary to serve shoreline uses with electricity, gas, sewer, water and  
44 communications and, if properly installed, protect the shoreline and water from contamination.

45  
46 Policy: Provisions should be made for the protection of the shoreline during utility  
47 installation. Following installation/maintenance projects, project areas must be  
48 returned to pre-project configuration and adequate vegetation installed to prevent

erosion.

Policy: Utilities on the shorelines should be installed underground.

Policy: Utility corridors should be utilized as pedestrian access ways where practical.

Policy: Undergrounding of existing facilities should be encouraged.

**SHORELINE ELEMENT GOALS AND OBJECTIVES**

**Shoreline Use Element:**

**Goal:** Coordinate the regulation of shoreline uses so as to insure uses which result in long-term over short-term benefit, protect the resources and ecology of the shorelines, increase both visual and physical public access to the shorelines, and accommodate water dependent uses.

**Objective:** Identify and reserve shoreline and water areas with unique attributes for particular long-term uses, including commercial, industrial, residential, recreational and conservational uses.

**Objective:** All uses should be developed in a manner which will result in the least modification of the shoreline unless such modification contributes to the attainment of Master Program goals.

**Objective:** Uses which will provide an opportunity for a substantial number of people to enjoy the shorelines should be permitted.

**Objective:** Inappropriate shoreline uses should be identified and established as nonconforming uses.

**STAFF RESPONSE: The proposed development does not alter shoreline water-bodies, stream banks or associated wetlands.**

**Conservation Element:**

**Goal:** Preserve, protect, and restore shoreline areas to optimize the support of wild, botanic, and aquatic life.

**Objective:** Identify those areas of unique geological or biological significance and prohibit or severely restrict development in those areas.

**Objective:** Conservation efforts should be aimed at preserving the natural function of the watercourse as well as the aesthetics and ecological qualities of the shoreline.

**Objective:** Some areas, because of unique and/or fragile geological or biological characteristics should be protected from public access.

1 Objective: Standards should be developed for shoreline use which will insure the optimal  
2 harmonious integration of human use of the shorelines with the shoreline's' natural  
3 system.  
4

5 **STAFF RESPONSE: The proposed development is anticipated to result in no net loss of**  
6 **shoreline ecological function. Stormwater is the most important element of the proposal**  
7 **and has been designed to account for the variety of agency objectives; water quality,**  
8 **fisheries resources, future restoration and habitat enhancement.**  
9

10 **Public Access Element:**

11  
12 Goal: Increase public access to the shorelines of the City and preserve and enhance  
13 views of the shoreline and water.  
14

15 Objective: Identify public properties adjacent to shorelines as well as public rights-of-way  
16 which offer physical and/or visual access to the shoreline.  
17

18 Objective: Access to shorelines should be pedestrian access from upland parking areas  
19 (where necessary) and bicycle access.  
20

21 Objective: Public agencies should be required to provide public access opportunities at new  
22 shoreline facilities and encouraged to provide similar opportunities at existing  
23 facilities.  
24

25 **STAFF RESPONSE: Public access has been retained around the site to Squalicum Park and**  
26 **the future Bay to Baker Trail as part of PDC 94-11. The small reach of Squalicum Creek in**  
27 **this location is not well suited for public access because of concerns for habitat protection.**  
28 **In fact Squalicum Creek from the Guide Meridian downstream to the mouth is best suited**  
29 **for habitat preservation and enhancement as opposed to public access to the shoreline.**  
30

31 **Economic Development Element:**

32  
33 Goal: Provide for economic activity and development of water dependent uses and  
34 permit water enjoyment uses in appropriate locations, consistent with  
35 environmental goals.  
36

37 Goal: Recognize the finite quantity of waterfront land and the limits of funds for public  
38 acquisition, direct development towards a multi-use concept to provide public  
39 access to the shorelines and protect the habitat while enhancing and maintaining  
40 the economic viability of the use.  
41

42 Objective: Economic activity on the shorelines of the City, where navigability is not a viable  
43 asset, and in appropriate environments, should not interfere with the natural  
44 function of the shoreline and water body and should provide open space along  
45 the shoreline adequate for potential public access.  
46

47 **STAFF RESPONSE: The proposal is adjacent to a 400-foot long shoreline reach that is**  
48 **constrained by two large box culverts on either end and is further prevented from**

1 meandering by a truck route established in the middle of a floodplain. This is not a  
2 natural environment through which a stream should travel.  
3

4 Open space is not appropriate in this location. Habitat preservation and enhancement  
5 should be the priority in this already heavily impacted reach. In addition, the proposal  
6 does provides opportunities for a variety of mixed commercial and industrial uses  
7 located on a truck route within close proximity to the waterfront, Interstate-5 and  
8 adjacent neighborhoods.  
9

## 10 VII. LAND USE CODE COMPLIANCE:

### 11 COMPREHENSIVE PLAN DESIGNATION – Birchwood Neighborhood - Area 15

12 This area is currently utilized as a gravel pit and is designated as a Planned Industrial area.  
13 Future plans for the area should be designed with the Roeder Avenue extension in mind.  
14 Squalicum Creek flows near this area and its shoreline and flood plain should be protected as  
15 development occurs. A vegetated buffer should be encouraged where the property abuts  
16 residential uses.  
17  
18

19  
20 **AREA 15 LAND USE DESIGNATION: INDUSTRIAL**

21  
22 **STAFF RESPONSE: The development must comply with the specific terms in PDC94-11.**  
23

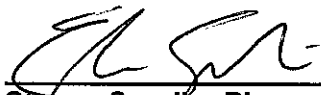
## 24 VIII. STAFF ANALYSIS SUMMARY:

- 25  
26 ⇒ The proposal is consistent with the goals, policies and regulations in the SMP.  
27 ⇒ The proposal does not alter, modify or require stabilization of the creek channel or its  
28 banks.  
29 ⇒ The proposal does not adversely impact existing buffer areas and habitat corridors  
30 downstream of the proposal.  
31 ⇒ There is no anticipated net loss of shoreline ecological function.  
32 ⇒ The proposal meets Department of Ecology requirements for stormwater management.  
33 ⇒ Representatives from WDFW and DOE have reviewed the stormwater management  
34 alternatives analysis and have agreed in concept to the stormwater alternative chosen  
35 for this particular site. (Agency permits will be processed once a City shoreline permit  
36 has been issued.)  
37 ⇒ Same representatives agree in concept to the design for its treatment and discharge  
38 management to Eldridge Springs which is known and documented to support juvenile  
39 Coho salmonids.  
40 ⇒ Public access is retained to Squalicum Way from the Birchwood Neighborhood to  
41 Squalicum Park and eventually, the Bay to Baker trail.  
42 ⇒ The site is enabled for a range of light industrial and commercial uses along a truck  
43 route (and rail spur) within proximity to Interstate-5, the waterfront and adjacent  
44 neighborhoods.  
45 ⇒ Territorial views will not be impacted from abutting properties.  
46 ⇒ The proposal has been designed cognizant of future habitat restoration and  
47 enhancement projects.

1 **IX. RECOMMENDATION: APPROVAL with the following conditions:**  
2

- 3 1. Stormwater outfall into the Roeder Avenue box culvert shall be designed in order to be  
4 reconfigured or re-located at the time that either said box-culvert or bedlands  
5 downstream of same are redesigned as an element of the future Squalicum Creek  
6 Estuary restoration project sponsored by the Port of Bellingham, City of Bellingham and  
7 the Bellingham Bay Action Team. The purpose of future reconfiguration / re-location is to  
8 avoid causing adverse impacts to the proposed designed and restoration of the stream-  
9 bed as specified above.
- 10 2. Stormwater that enters the BNSF seasonal drainage on the north side of Squalicum Way  
11 shall be generated only from non-polluting point sources and shall not contribute  
12 additional volume beyond what has historically been documented.
- 13 3. The off-site stormwater conveyance pipe shall be over-sized to include the stormwater  
14 runoff along the southern one-half of Squalicum Way from West Street to Roeder  
15 Avenue.
- 16 4. A Maintenance and monitoring program for 5-years on both stormwater systems shall be  
17 submitted to the Planning Department. This program shall demonstrate that stormwater  
18 leaving the site in both instances complies with water quality standards. A report  
19 demonstrating same shall be submitted twice each year at a time and for specific  
20 parameters to be determined by the Public Works Department. If one or both of the  
21 systems do not comply with the standards, revisions or maintenance to those systems  
22 shall be required and processed accordingly per City regulations.  
23  
24

25 Prepared by

26   
27

28 \_\_\_\_\_  
29 Steven Sundin, Planner  
30  
31