



Fall 2018

# Environmental Impact Assessment: Boulevard Park Pedestrian Overpass Removal

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# **Environmental Impact Assessment**

## **Boulevard Park Pedestrian Overpass Removal**

**ENVS 493, Fall 2018**

**Western Washington University**



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**Environmental Impact Assessment**

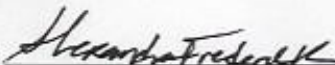
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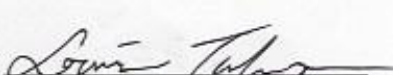
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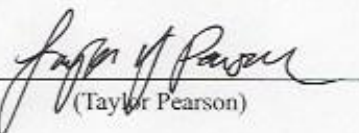
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Date 10/26/2018

## Letter to Concerned Citizens

Boulevard Park Pedestrian Overpass EIA Project Team  
Environmental Impact Assessment- ENVS 493  
Huxley College of the Environment  
Western Washington University  
Bellingham, WA, 98225

October 2018

Dear Concerned Citizens,

The City of Bellingham (COB) is removing the pedestrian overpass bridge at Boulevard Park. The overpass has been closed to the public since February 2016 due to safety concerns. The COB seeks to eliminate safety hazards as well as prevent future costs to the public. The COB plans to relocate the utilities off the overpass and reroute them underground along Bayview Drive, connecting them to Woods Coffee.

As part of a class project, our team conducted an Environmental Impact Assessment (EIA) that has been developed in accordance with the State Environmental Policy Act (SEPA, WAC-197-11). We have consulted with the COB and Gina Austin, the project engineer, along with guidance from our Professor, Dr. Tamara Laninga.

The following document includes an EIA to assess the impacts of the proposed project, the additional mitigation measures, and the no action plan on the environment. This EIA examines impacts on the environment's earth, air, land and shoreline use and water, as well as public utilities, recreation, and transportation. This information will help to make an educated decision on the best way to proceed with this project.

We thank you for your interest in the Boulevard Park Pedestrian Overpass Project.

Sincerely,

Alexandra Frederick, Sean Hecker, Taylor Pearson, Erin Rush, Louisa Talmage

## **Boulevard Park Overpass Project**

Dr. Tammi Laninga  
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### Disclaimer:

“This report represents a class project that was carried out by students of Western Washington University, Huxley College of the Environment. It has not been undertaken at the request of any persons representing local governments or private individuals, nor does it necessarily represent the opinion or position of individuals from government or the private sector.”

## Fact Sheet

### Project Title

Environmental Impact Assessment: Boulevard Overpass Project

### Description of proposed project

The City of Bellingham's (COB) proposed action at the Boulevard Overpass that connects upper and lower Boulevard Park is to completely remove the overpass and reroute all utilities along Bayview Drive. This action is needed because of structural damage to the overpass.

### Location

Boulevard Park  
470 Bayview Dr,  
Bellingham WA 98225

### Legal description of the location

48°43'57.0"N 122°30'02.9"W

### Proposers

City of Bellingham  
Parks Recreation Department  
210 Lottie Street Bellingham, WA 98225

### Lead Agency

City of Bellingham  
210 Lottie Street  
Bellingham, WA 98225

### Proponents

Gina Austin, P.E., M. ASCE  
Bellingham Park & Recreation  
3424 Meridian Street  
Bellingham, WA 98225  
(360) 778-7000  
[gaustin@cob.org](mailto:gaustin@cob.org)

### Permits

Temporary Occupancy Permit with BNSF Railway  
Deconstruction & Demolition Permit

## **Contributors**

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Executive Summary  
List of Tables, Figures and Acronyms  
Proposed Action and Alternatives  
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## **Acknowledgements**

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Dr. Tamara Laninga, WWU, Washington  
Gina Austin, COB/ Bellingham Parks & Recreation

## **Issue date**

December 7, 2018

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### Acronyms

BNSF: Burlington Northern Santa Fe

CO<sub>2</sub>: Carbon Dioxide

COB: City of Bellingham

cPAHs: Carcinogenic Polycyclic Aromatic Hydrocarbons

DOE: Department of Ecology

EIA: Environmental Impact Assessment

MTCA: Model Toxics Control Act

PSE: Puget Sound Energy

## **1.0 Executive Summary**

### **1.1 Project Objective**

The COB plans to remove the wooden overpass structure located in Boulevard Park due to it being a safety hazard. After removing the utilities, which are located on the overpass structure, they will be rerouted underground via Bayview Drive.

### **1.2 Proposed Action**

The proposed action for the Boulevard Park Pedestrian Overpass is to remove the wooden structure and reroute the utilities underground. The utilities would be routed underneath the train tracks at the park entrance, connecting to Woods Coffee and up Bayview Drive. Irrigation and sewer will still be routed into the park but electricity, telecommunications and water will be routed out of the park. The utility conduits will be in separate trenches under the tracks. The park restrooms at the north end of the park will be abandoned to reduce utilities demands (especially water, electricity and sewer). Restrooms are still available in the park at Wood's Coffee.

### **1.3 Additional Mitigation Measures**

After considering alternatives such as an off-grid park or fixing the current overpass structure, it has been determined that these alternatives are not feasible due to public safety, existing contracts with local businesses on site, and the City of Bellingham's budget. Instead extra mitigation measures are considered to make the park less reliant on utilities. This includes implementing thirsty concrete, removing invasive plants, planting native plants, and installing a green roof.

### **1.4 No Action**

The no action alternative is to leave the Boulevard Park Pedestrian Overpass unaltered.

### **1.5 Recommendations**

Continue with the proposed action to remove the pedestrian bridge and reroute utilities under the railway. Extra mitigation measures are recommended to help reduce reliance on utilities.

## 2.0 Background



**Figure 1:** Overview of Boulevard Park Site (Source: City of Bellingham, 2017)

### 2.1 Boulevard Park

Boulevard Park is located on Bellingham Bay along South State Street and Bayview Drive in the South Hill Neighborhood. Historically, Whatcom County's economy was driven by lumber mill, mining industries, and the railroad (Department of Ecology (DOE), 2018). The railroad which is adjacent to Boulevard Park, is still in use. Historically, the site hosted the South State Street Manufactured Gas Plant. The manufactured gas plant operated from the 1890s-1950s burning coal to produce gas used to heat homes in the South Hill Neighborhood. The City of Bellingham (COB) and Puget Sound Energy (PSE) have worked with the Department of Ecology (DOE) to prepare a site cleanup based on the Model Toxics Control Act (MTCA) (Guenther, n.d.). While most structures from the plant have been removed, there are two remaining in the upper park: a concrete gas holding tank and a small brick building (DOE, 2018).

The plant operated under different owners until a group of residential developers bought out the property in the 1960s (DOE, 2018). As Bellingham's extractive industries became a less dominant part of the economy, residents began advocating for waterfront access. The City of Bellingham acquired most of the property in 1975, and Boulevard Park was established in 1980 (DOE, 2018).

Boulevard Park is one of the most highly visited parks in the city of Bellingham. The park has an upper portion including historical structures from the manufactured gas plant, a small grass area,

access via a bus stop and access to South Bay Trail. The lower portion of the park includes a beach shoreline, a large grass area, an outdoor stage, a playground structure, walkways connecting to South Bay Trail, Woods Coffee, and a boardwalk connecting to Taylor Dock.

The pedestrian overpass bridge connects the upper portion of the park to the lower portion, spanning over the Burlington Northern Santa Fe (BNSF) railway. The overpass carries utilities such as electricity, sewer, and water over the railroad tracks, and is an original structure of the park. The utilities power the park's lights, restrooms, coffee shop, and watering system. High levels of contaminants and pollutants can be found in the site's surface water, soil, and sediment. The pedestrian bridge is on the edge of the gas plant cleanup site managed by the Department of Ecology (DOE, 2018).

The bridge was closed February 19, 2016 for public safety reasons (COB, 2018). It was deemed unsafe due to a rotting laminated beam (COB, 2018). Since the overpass bridge has closed, pedestrians have had to take alternative routes to get into the park. There is currently a pedestrian crossing path over the train tracks adjacent to the overpass. The trail is not ADA accessible.

## 2.2 Site Description

The project site is Boulevard Park, located on Bellingham Bay along South State Street and Bayview Drive in the South Hill Neighborhood. The wooden pedestrian overpass bridge is one of the original features of the park. While repairs were done in July 2016 to secure the structure, it remains unsafe for pedestrian use. Pedestrians can access the park via a pedestrian grade crossing on the north end of the park site (Rickett, 2017). This crossing is connected to a series of trails leading to South State Street and the South Bay Trail (Rickett, 2017).

The pedestrian bridge is constructed of Howe trusses made from two parallel timber logs and steel rods and spans approximately 100 feet over the BNSF mainline (Rickett, 2017). It is supported by a concrete abutment founded on a bluff on the east end and by a timber bent and stair structure at the west end (Rickett, 2017). The bridge carries the utilities for the park facilities including electricity, water, sewer, and telecommunications.

Woods Coffee in Boulevard Park is one of the franchise's busiest locations and helps draw people into the lower park. (Sledge, 2015). Customers go out of their way to make a stop there to enjoy the coffee and views of the water. The shop is located between the lower parking lot and the shoreline. Since the utilities of the coffee shop are currently routed along the pedestrian bridge, the no action plan could negatively impact the coffee shop. If the bridge were to collapse, Wood's Coffee would lose their utilities, negatively impacting their business.

### **3.0 Proposed Action and Alternatives**

The following list includes a proposed action, additional mitigation measures, and a no action alternative. These options are presented to the City of Bellingham to help determine which action should be taken with the Boulevard Park Pedestrian Overpass.

#### **3.1 Need for Action**

Removal of the pedestrian overpass is necessary because the current structure cannot be used by pedestrians. The structure shows signs of rot and is unsafe for public access. Since the structure contains the utilities used by the park, action needs to be taken in order to ensure a more safe and long term solution.

#### **3.2 Proposed Action**

The proposed action has two phases. Phase 1 will include the demolition and removal of the Boulevard Park Pedestrian Overpass. Removal of the overpass will have potential impacts on the natural environment. Phase 2 will include rerouting the utilities under the train tracks at the park entrance, connecting to Woods Coffee and up Bayview Drive. Rerouting utilities will have potential impacts on the built environment and environmental health. Irrigation and sewer systems will remain routed into the park but electricity, telecommunications and water will be routed out of the park. The restrooms on the north side of the park will be abandoned to reduce utilities demands (especially water, electricity and sewer) in the park.

#### **3.3 Additional Mitigation Measures**

After considering alternatives such as an off-grid park or fixing the current bridge, it has been determined that these alternatives are not feasible due to public safety and existing contracts with local businesses on site and the City of Bellingham's budget. Instead extra mitigation measures will be considered to make the park less reliant on utilities.

#### **3.4 No Action**

The no action alternative is to leave the Boulevard Park Pedestrian Overpass unaltered.

#### **3.5 Summary of Significant Impacts**

Element of the built environment and natural environment have been analyzed for impacts. Built environment elements include transportation, park access, pedestrian movement, and recreation. The natural environment elements include air, water, plants, animals, and soils.

## 4.0 Built Environment

The different elements under consideration for the built environment are transportation, recreation, utilities, land and shoreline use, and environmental health. The proposed plan has the potential to have significant environmental and social impacts on each of these elements.

### 4.1 Transportation: Train, Vehicle, Foot

#### Existing Conditions:

Within Boulevard park, there are three main modes of transportation: train, vehicle, and foot. BNSF has a railway that runs in between the north and the south section of the park. The track also carries Amtrak Cascades train transporting people north into Canada and south down the I-5 corridor. The railway is in use all months of the year, with its busiest season in October and November. Currently the park is also accessible by Bayview Drive, which crosses the BNSF tracks and has a parking lot with approximately 90 parking spots. South Bay Trail is a foot and bicycle path that runs in and out of the park. There is currently a gravel trail that leads from the upper portion of the park to the South Bay Trail but is inaccessible to handicap use due to a steep grade.



**Figure 2:** Trail connecting upper Boulevard Park to South Bay Trail (Sean Hecker, 2018)

#### 4.1.1 BNSF Railway

##### Proposed action:

During the removal of the pedestrian overpass and the utility rerouting, crews will coordinate with the railway to assure construction will occur around train schedules.

Additional Mitigation:

There would be no significant impacts as demolition and utility rerouting will occur opposite the train schedule.

No Action:

There is a potential danger that the wooden overpass could continue to degrade and collapse, blocking the train tracks or potentially collapsing onto the train. In accordance with the BNSF Railroad Company, the overpass must be removed if the overpass cannot provide a pedestrian-access (Rickett, 2017). Therefore, no action would violate the contract and could cause for legal action from BNSF Railway.

**4.1.2 Park Access via Bayview Drive**Existing Conditions:

Currently there is only one vehicular entrance which is by Bayview Drive on the south side of the park. It crosses the BNSF train tracks and leads to a parking lot with approximately 90 parking spots. Wood's Coffee shop gets deliveries by truck once a week via the park's lower parking lot.

Proposed action:

The relocation of utilities to Bayview Drive could temporarily prevent any traffic from entering the park during working hours. This could greatly reduce the number of visitors the park sees during the day time. This will also delay public services such as police, ambulance, and fire department.

During utility relocation, Wood's Coffee deliveries would be temporarily impacted. There is also a potential for Wood's Coffee to see a drop in customers temporarily due to utility relocation limiting access to the park.

Additional Mitigation:

Construction work to relocate the utilities should be done early morning or late evening to avoid peak park visitor hours. It should also be noted that visitors can still access the park by parking in the upper parking lots and walking down the trail to the park, which will mitigate losing the lower park access.

If the construction inhibits Woods Coffee's delivery truck, deliveries by boat should be considered. There is a dock on the right side of the location that could be easily used and boat traffic is already constant in that area so it would not have a significant impact on the surroundings. Or construction could be put on hold during delivery times and run late at night or early in the mornings before Woods opens.

No action:

There is no significant impact. Traffic will remain the same.



**Figure 3.** Bayview Drive crossing train tracks (Sean Hecker, 2018)

#### **4.1.3 Pedestrian Movement**

Proposed Action:

The removal of the pedestrian overpass may temporarily limit access to the park by the northern entrance.

Additional Mitigation:

Removing the overpass and placing a shortcut path for pedestrians to cross from the bus stop to the park entrance will cut walk time significantly and allow for easier access to the park. Wooden and gravel steps can be installed from the bus stop down to the upper portion of the park. The gravel path leading from the upper portion of the park to the South Bay Trail would need to be regraded to be at an acceptable grade to meet Americans with Disability Act (ADA) accessibility standards. Staircases leading from the upper portion of the park directly down to the South Bay Trail where it crosses the BNSF rail lines could be installed to allow for easier and quicker access to the park. As well as regrading of the walk from the bus stop to the entrance of the park trail as there are multiple ditches and other uneven surfaces that make entering the park more difficult.



No Action:

Pedestrians would still have to walk down the gravel path to the South Bay Trail to access the lower park from the upper park and handicap access would be still be limited.

## 4.2 Land and Shoreline Use

Existing Conditions:

Boulevard Park is one of the many attractions to Fairhaven, welcoming thousands of people every year. There is a Wood's Coffee shop located along the shore in Boulevard Park and is one of Woods' most successful cafes. The park also provides an overwater boardwalk along the beach and a small park with a playground.

### 4.2.1 Recreation

Existing Conditions:

Boulevard Park runs along Bellingham Bay and is within 200 linear feet. The overpass is not close enough to affect the shore and therefore the shoreline is not considered in this proposal. Land use will be considered as all of the construction will be done on land. The land is primarily used by pedestrians with access to a park in the upper and lower section as well as commercial use by Woods Coffee.

### 4.2.2 Aesthetics

Existing Conditions:

The location of the overpass blocks the view of the sunset at certain angles. It is also covered in moss and blackberry bushes and has not been maintained because the COB did not budget for it.

Proposed Action:

Removal of the overpass will allow for more visibility of the waterfront as well as the sunsets. It could improve the overall look of the upper and lower park. Temporary noise pollution from construction would disturb visitors of the park by breaking the peaceful aesthetic. The view from nearby apartments would be improved because they will be able to see more of the shoreline of Bellingham Bay.

Additional Mitigation:

Removal of the grass in the upper park and replacing it with native vegetation will change the aesthetics of the park but it will still be pleasant.

No Action:

The overpass would continue to degrade due to the lack of upkeep and will remain unsightly.

**4.2.3 Historical Significance**

The Boulevard Overpass is an original structure to the park. Its primary function is to run water and sewer, electricity and telecommunications utilities in and out of the park (Rickett, 2017). The other function was a shortcut for pedestrians to use to move from the upper park to the lower park and avoiding a trail. This structure is not likely considered a historical site or of significance to Boulevard Park (Rickett, 2017).

Proposed Action:

Boulevard Park would lose one of its original structures but will have no significant impacts on the history of Fairhaven.

Additional Mitigation:

Removing the overpass greatly outweighs its historical significance. There are no additional mitigations for historical significance.

No Action:

No significant impacts. Boulevard Park would get to keep one of its original structures but there would be no maintenance and it would continue to degrade.

**4.3 Environmental Health****4.3.1 Department of Ecology Cleanup Site**

Contaminants were found in soil, groundwater, and sediment. The levels of contamination are above state standards established to protect human health and the environment. These contaminants include: carcinogenic polycyclic aromatic hydrocarbons (cPAHs), benzene, naphthalene, cyanide, selenium, and lead (Guenther, n.d.). The Department of Ecology has classified the park as a cleanup site and are working to cap the contaminants to create a safe environment.

**4.3.2 Noise**Existing Conditions:

Apartments and condominiums are located adjacent to the overpass and the location of the proposed utility rerouting.

Proposed Action:

Temporary noise pollution will disturb residents of nearby apartments.

Additional Mitigation:

Warn residents about construction times through a public service announcement as well as through their leasing office.

No Action:

No significant impact on the residents.

## 4.4 Public Utilities

Existing Conditions:

All of Boulevard Park's utilities are routed across the pedestrian bridge. This includes all of the utilities for Wood's Coffee shop, sewer to the park's restrooms, electricity for the street lights, irrigation for the park's lawns and telecommunications (Rickett, 2017).

### 4.4.1 Water and Sewer

Proposed Action:

Removing Boulevard Overpass and rerouting the pipelines will be beneficial to the COB. Having pipelines above ground exposes them to all weather conditions which could lead to unforeseen damage. It is also cost effective to run them underneath the train tracks as boring is a low impact process. There are existing utilities located on Bayview Drive that the new utility pipelines can connect to. There are potential environmental impacts on the soil from the process of removing the old utilities and boring routes for the new utilities.

Rerouting the utilities by the park entrance would temporarily affect the deliveries for the coffee shop and customer traffic. Once the utilities have been placed, customers and the delivery truck would have the same access to Woods. Maintenance of Woods' utilities will be more easily accessible as well.

No Action:

With deterioration to the overpass, there is the possibility of the overpass breaking down and collapsing. This would have obvious negative outcomes and the pipelines would have to be rerouted or the overpass would have to be maintained to support itself.

#### **4.4.2 Electricity & Fiber Optics**

Proposed Action:

Electricity would be less likely to be damaged if it were underground.

Additional Mitigation:

Replacing the existing lights park with solar powered lights will reduce needs for electrical utilities.

No Action:

If the overpass holding the utilities were to continue to degrade and eventually collapse, this would cut off electricity to the park.

## 5.0 Natural Environment

The different sections under consideration are air, earth, animals, plants and water. Each aspect has the potential to have significant environmental impacts through the proposed plan. Additional mitigation measures will drastically reduce the environmental harm and disturbance of the area and its inhabitants. The elements with potential significant impacts include the impact on soil from installation and removal of public utilities, air pollution from construction, habitat disturbance for plants and animals, and impacts of water runoff from removing the overpass.

### 5.1 Air

#### 5.1.1 Pollution

##### Existing Conditions:

Current significant air pollution sources are Woods Coffee and the BNSF railway. Woods Coffee uses natural gas to heat the facility which emits methane and carbon dioxide into the atmosphere. BNSF railway transports coal and particulates are released into the air. The train itself runs on diesel generators and emits ozone-forming oxides from Nitrogen and other harmful particulate pollution (Scott, 2006).

##### Proposed Action:

The process of removing the overpass will temporarily increase traffic in the area from construction vehicles. This will increase the amount of CO<sub>2</sub> into the atmosphere. Construction vehicles will emit CO<sub>2</sub> during construction. Construction is temporary and the emissions from vehicles will not have a significant impact.

##### Additional Mitigation:

During construction and deconstruction hours, instead of idling machines, turn them off (West Coast Collaborative, n.d.). Installing a green roof (Figure 4) on Woods Coffee will provide space for plant species to filter out airborne pollutants, atmospheric deposition, and also filter noxious gases. The green roof will also aid in insulation which will reduce the energy demands for the building (Figure 5), which would reduce the amount of CO<sub>2</sub> being released into the air (Kapsalaki, 2017).



**Figure 4:** Construction of green roof (Kapsalaki, 2017)



**Figure 5:** Benefits of green roof (BCIT, 2018)

No Action:

Leaving the structure in place will have significant impact on air.

## 5.2 Earth

### 5.2.1 Sediments/Erosion

Existing Conditions:

The soil parent material is composed of volcanic ash, colluvial material derived from glacial drift, and sandstone bedrock (WSS, 2017). The parent material has an impact on the soil properties, vegetation, and buildability of the landscape. The upper park has soil with high sulfate and sodium content, high soil moisture and acidity, making it a high risk of corrosion of both concrete and steel (WSS, 2017). The upper park is composed of

steep grades and pedestrian walkways putting the soil at high risk of erosion (WSS, 2017). Due to the sandstone bedrock beneath the surface soil in the lower park, there is a restrictive depth layer at 117 cm (WSS, 2017).

Proposed Action:

The pipes being installed are less than 12 inches in diameter, therefore the project qualifies for SEPA exemption. There are no significant environmental impacts for construction. During demolition of the pedestrian overpass, there are no significant levels of erosion.

Additional Mitigation:

Remove invasive vegetation and plant deep rooting plants to hold in the soil and prevent erosion. Use of mulch around pedestrian pathways would aid in soil permeability. Build bioswales (Figure 4) to collect and filter stormwater runoff. By slowing down the runoff at the top of the park, less erosion will occur in the upper and lower sections of the park.



**Figure 6:** Example of bioswale installation. Includes depression to collect and direct rainwater to plant species that tolerate a range of moisture regimes. (Source: Science Society of America, 2018)

No Action:

Severe risk of erosion can cause the pedestrian bridge to collapse on the railway.

### 5.3 Animals

Existing Conditions:

Due to human traffic and the railway, no large fauna appear in the park. There are no endangered or protected species. Animals that have been sighted within the general vicinity of the overpass are crows, squirrels, rats, snakes, and rabbits. The overpass is not close enough to the shore to affect marine life.

Proposed Action:

Due to the overpass being closed to pedestrians for two years, animals may be nesting on or near the overpass. Removing the overpass may disturb some fauna habitat. The loud noises caused by construction and the presence of machinery could cause them temporary stress. There is no impact from rerouting utilities.

Additional Mitigation:

Clear fauna from construction area when bridge is getting removed. Consult with National Parks and Wildlife Service and Regional Fisheries Board to advise on additional measures to protect native wildlife (Department of the Environment, 2007).

No Action:

Deterioration and collapse of the pedestrian bridge can displace and cause injury to fauna.

## 5.4 Plants

Existing Conditions:

The area surrounding the overpass include many non-native, invasive plants: Himalayan Blackberry (*Rubus armeniacus*), English Ivy (*Hedera helix*), Tansy Ragwort (*Jacobaea vulgaris*). Native plants include Bigleaf Maple (*Acer macrophyllum*), Red Elderberry (*Sambucus racemosa*), and Snowberry (*Symphoricarpos albus*). The lower park contains grass and decorative vegetation.

Proposed Action:

Removing the pedestrian bridge may cause an increase in many of the non-native, invasive plants, as they thrive in disturbed soils. Heavy machinery may destroy some of the native vegetation that is growing near the pedestrian bridge. There would be no impact during utility rerouting.

Additional Mitigation:

Lower Park: Replace grass with native plants to reduce irrigation use. Native plants do not need to rely on irrigation as they are suited for a wet environment. A green roof can be installed on the roof of Wood's Coffee to make up for the loss of plant life.

Upper Park: Remove invasives and plant native plants once the pedestrian bridge is removed to protect hillside against erosion.

No Action:

There will be no significant impacts on the vegetation surrounding the overpass.



## 5.5 Water

### 5.5.1 Surface Water

The park is adjacent to Bellingham Bay, a body of saltwater that feeds into the Salish Sea. The pedestrian overpass is over 200 feet away from the body of water, therefore no significant impacts are assessed.

### 5.5.2 Groundwater

No waste material will be discharged into the groundwater system. All sewage and water will be transported through utility pipes under the railroad, therefore no significant impacts are assessed.

### 5.5.3 Runoff

#### Existing Conditions:

The soil at this site has a moderate infiltration rating. The soil is well drained and has a soil texture ranging from moderately fine to moderately coarse. The soil has a moderate rate of water transmission (WSS, n.d.).

#### Proposed Action:

No significant impact

#### Additional Mitigation:

See section 4.3.1 (Sediments/Erosion) addressing storm water runoff. Replacing the concrete in the lower parking lot of the park with thirsty concrete could significantly reduce the unfiltered runoff that feeds into the lower park.

## 6.0 Conclusion

Removal of the Boulevard Park pedestrian overpass is the strongest proposal over no action. Removing the overpass will cause for temporary negative externalities but it would be beneficial in the long run. Rerouting the utilities underground, removing the overpass, and applying the additional mitigation into the park to make it more safe, efficient and aesthetically pleasing for all of those who visit or work at the park.

Table 1: Decision Matrix

	Proposed Action	Extra Mitigation	No Action
<b>Train, Vehicle, Foot</b>			
BSNF Railway	0	0	-1
Park Access (Vehicle)	-1	-1	0
Pedestrian Movement (Foot)	0	1	0
<b>Recreation</b>			
Aesthetics	1	1	-1
<b>Land &amp; Shoreline Use</b>			
Historical Significance	0	0	0
<b>Environmental Health</b>			
Noise	-1	1	0
<b>Public Utilities</b>			
Water & Sewer	1	0	-1
Electricity & Fiber Optics	1	1	-1
<b>Natural Environment</b>			
Air	-1	1	0
Earth	0	1	-1
Animals	-1	1	-1
Plants	-1	1	0
Water	0	1	0
<b>Total</b>	<b>-2</b>	<b>8</b>	<b>-6</b>

Negative Impact = -1, Neutral = 0, Positive Impact = 1

## 7.0 Glossary

**(concrete) Abutment:** The part of a structure (such as an arch or a bridge) that directly receives thrust or pressure

**Bioswales:** A long, channeled depression or trench that receives rainwater runoff (as from a parking lot) and has vegetation (such as grasses, flowering herbs, and shrubs) and organic matter (such as mulch) to slow water infiltration and filter out pollutants.

**Colluvial (material):** Rock detritus and soil accumulated at the foot of a slope

**Corrosion:** The action, process, or effect of corroding

**(atmospheric) Deposition:** Something deposited

**Deterioration:** The action or process of becoming impaired or inferior in quality, functioning, or condition: the state of having deteriorated

**Erosion:** The action or process of eroding

**Fauna:** Animal life, *especially* : the animals characteristic of a region, period, or special environment.

**Grade:** The degree of inclination of a road or slope

**Grading:** To level off to a smooth horizontal or sloping surface

**Howe truss:** A truss having vertical and diagonal members between the upper and lower horizontal members.

**Invasive:** An organism that is not native to the place where found and tends to grow and spread easily usually to the detriment of native species and ecosystems

**Mitigation:** The act of mitigating something or the state of being mitigated : the process or result of making something less severe, dangerous, painful, harsh, or damaging

**Noxious:** Physically harmful or destructive to living beings

**Permeability:** The quality or state of being permeable

**Runoff:** The portion of precipitation on land that ultimately reaches streams often with dissolved or suspended material.

**Utilities:** Water, sewer, fiber optics, and electricity

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