

# City of Black Diamond 2017-2022 Transportation Improvement Plan

## TIP Change Proposal Priorities

1. Where a road project is near an existing culvert, include Culvert replacement to improve stream habitat and fish passage.
2. On projects that have been anticipated for years but not implemented, give additional scrutiny.
3. For projects with the busiest and poor pavement rating roads, are we doing enough?
4. Are we “kicking the can?” or fixing things correctly the first time?
5. Pedestrian Passage on busy roads, are we doing enough?

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## General Information

The following information that applies across several proposed TIP changes.

### **City of Black Diamond Comprehensive Plan, 2009.**

The Comp Plan addresses Culvert Replacement and other environmental priorities that are enhanced by improving stream health.

Comp Plan Page 2-14 (emphasis added):

*“UGA Natural Environment Objectives and Policies*

UGA Objective NE 1: Preserve the diversity and distribution of habitat types in sufficient quantities to sustain species populations, especially rare or unusual habitats.

UGA Objective NE 2: Incorporate the mitigation measures identified in the Final Environmental Impact Statement (EIS) for the PAA to protect environmentally sensitive areas.

#### **Water Quality**

UGA Policy NE 3: **Protect, and where appropriate, enhance ground and surface water quality to meet or exceed state water quality standards within the drainage basins that may be affected by development in the UGA.**

UGA Policy NE 4: Prior to annexation of the Lake 12 Annexation area, Lake 12 water quality must meet or exceed state water quality standards pursuant to WAC 173-201A-030 (5)(c).

#### **Critical Areas**

UGA Policy NE 5: Naturally occurring processes such as runoff, stream channel migration, etc., should be maintained by designing stream crossings to pass floods and debris, as well as fish.

UGA Policy NE 6: Development of headwater catchments should be limited to protect streams from temperature increases, sediment, and fish habitat degradation.

UGA Policy NE 7: **Where linkages between habitats have been severed or interrupted, connections should be restored by replacing culverts with bridges**, revegetating riparian areas, and improving in-stream habitat.”

Comp Plan Page 4-1:

#### **“4.1.1. Preserving the Natural Beauty**

The first 100 years of the City of Black Diamond’s (City’s) history were based on extraction of the natural resources. The next 100 years of the City’s future will be characterized by the preservation of the quality of its natural setting, its scenery and views, and the preservation of its historic treasures.

From the local fishing hole, to the field where deer graze, to the beaver dams, to the

eagle flight overhead; these resources are a tangible part of living in the City. The extensive natural beauty and intricate ecosystem of the City form the basis for a natural resource and open space network. The network serves to define the edges for the existing and future development areas.

This Natural Environment chapter provides the framework for protection of natural resources. The City's forests and fields—along with the natural drainage system and its connections with lakes, streams and forests—form a rich habitat for fish and wildlife that is unlike any other city in King County.:

Comp Plan Pdf Page 68:

**Rock Creek.** A small portion of the planning area drains to Black Diamond Lake and the wetlands surrounding it. The Black Diamond Lake wetlands serve as partial headwaters of Rock Creek. Rock Creek is listed as supporting coho salmon, cutthroat trout, and steelhead in the WRIA 9 Fish Distribution Map.

**Ginder Creek.** The northeast portion of the planning area drains to Ginder Creek, which drains into Rock Creek. Ginder Creek historically provided good habitat for salmonid spawning and rearing. The WRIA 9 Fish Distribution Map (2000) shows Cutthroat trout presence in Ginder Creek. Based on a 1982 sampling, Ginder Lake supports warm water fish including black crappie, largemouth bass, and pumpkinseed. An obstruction limits the passage of adult salmonids upstream as far as Ginder Lake. Electroshocking done during the 1982 survey **indicated that Ginder Creek, above State Route (SR) 169 may be able to support other species of fish if passage barriers were removed. The survey generally indicated that Ginder Creek is a relatively productive tributary** (John Henry Mine, SEIS)."

**2008 City of Black Diamond Best Available Science Review, Summary, and Recommendations for Code Update - Parametrix**

Summary of Findings, page 1:

"The recommendations for management of Sensitive Areas in City of Black Diamond and its Urban Growth Area are:

□ The City should focus protection on the areas with the most important ecological functions - the "core" stream and wetland complexes of the Rock Creek, Jones Lake/Jones Creek and Black Diamond Lake/Black Diamond Creek and provide those areas with the greatest protection indicated as the "Core" area in Figure 1-1.

□ The second priority in preservation should be the wetland complexes at the headwaters of **Ginder Creek, Lawson Creek and other tributaries that provide an important water supply to the larger system.**

□ **Other streams and wetlands in the area provide important ecological functions and should be protected."**

**City Of Black Diamond Storm And Surface Water Plan (Resolution 2010-704)**

A table on page 83 summarizes culvert projects, and can be referenced for many of the projects in the TIP proposal:

**6.0 CAPITAL IMPROVEMENT PLAN**

**6.1 PROJECT IDENTIFICATION**

The City’s Storm and Surface water capital improvement program consists of a series of projects that were identified by: 1) system deficiencies identified by hydraulic modeling; 2) system deficiencies and/or maintenance concerns identified by City staff, and 3) future development projects as identified by representatives of the anticipated development.

Project costs have been developed based on the assumption that storm drainage improvements are the only improvements being completed. Therefore, the entire cost for various items such as roadway restoration, traffic control, mobilization, etc would be funded by the stormwater utility. In some cases, the stormwater improvements may be completed in conjunction with other roadway or utility projects which may result in cost sharing.

**6.2 SUMMARY OF RECOMMENDED PROJECTS**

A map illustrating the recommended capital improvement projects has been included as **Figure 6.1 Capital Improvement Projects**. A large scale copy of the map has also been included as **APPENDIX J – CIP Map**.

**Table 6.01 Capital Improvement Projects**

ID	Project Name	Type	Sub-Basin	Priority	Est. Cost
1	224 <sup>th</sup> St Covington Creek Culvert Replacement	Culvert Replacement	NW-1	Medium	\$300,000
2	Roberts Drive – Ginder Creek Culvert Replacement	Culvert Replacement	GC-1	Low	\$85,000
3	Lake Sawyer Park Culvert Replacements	Culvert Replacement	LS-1	Low	\$110,000
4	3 <sup>rd</sup> Ave (SR-169) – Ginder Creek Culvert Replacement	Culvert Replacement	GC-1	Low	\$125,000
5	3 <sup>rd</sup> Ave (SR-169) – Mud Lake Culvert Replacement	Culvert Replacement	GC-1	Low	\$145,000
6	3 <sup>rd</sup> Ave (SR-169) Culvert Replacement at Old Lawson Road	Culvert Replacement	JL-4	Low	\$75,000
7	Ginder Creek Culvert Replacement at Morgan Street	Culvert Replacement	GC-1	Low	\$75,000
8	Rock creek Wetlands / Lake Sawyer Hydrology Study	Study	GC-1, RC-1	Medium	\$150,000



## (GM1) Roberts Drive Rehabilitation, Ph. 1

This project is changed in the TIP to a bridge "replacement" project instead of a "repair" project.

[Black Diamond Municipal Code 19.10.328](#) Water bodies—Culvert replacement. "A. Culverts on public or private roads that are a barrier to fish movement shall be replaced at the time of major reconstruction, or if additional subdivision increases the number of lots served by the roadway by twenty percent or more. Replacement structures shall meet the standards of [subsection] 19.10.330(C)(10). This provision does not limit potential requirements for replacement under other statutes or treaty rights."

### Transportation Improvement Board Letter, March 31, 2017, option 2:

2. Adopt the transportation improvement plan and separate the project into two line items in the transportation improvement plan:
    - a. The Roberts Drive Improvement project between Buckners Way and City Hall (i.e. year 1 or 2017); and
    - b. The Rock Creek Bridge replacement project (i.e. years 3-6).
- If this option is pursued, the City would need to request a scope change from the TIB Board by May 5, 2017 and commit to advertise and begin construction no later than July 15, 2017; or

### Information from Supporting Documents:

November 21, 2012- ***Rock Creek Bridge Evaluation*** - Parametrix

This document indicates that bridge replacement is a possibility, and that repairs will extend the expected life of the 100+ year old bridge for only twenty years.

Page 4: "Given a bridge of this age, it is difficult to estimate the remaining life of the structure without a more comprehensive evaluation. ... Assuming the piles are in good condition, it is estimated that the bridge should have a remaining service life of 20 years under normal traffic loading. However, periodic inspections are recommended to detect any signs of deterioration or distress."

#### BACK OF THE ENVELOPE PERMITTING COSTS

<b>Repairs/Rehabilitation</b>	
SEPA Checklist	\$2,600*
Sensitive Areas Report	\$10,000*
JARPA	\$7,000
Agency Coordination	\$3,000
<b>Total</b>	<b>\$10,000 to \$22,600</b>
(*if necessary)	

<b>Replacement</b>	
SEPA Checklist	\$2,600
Sensitive Areas Report, including Mitigation Plan	\$20,000
JARPA	\$7,000
BA	\$12,000
Cultural Resources Report	\$6,000
Agency Coordination	\$10,000
<b>Total</b>	<b>\$57,600</b>

**Rock Creek Bridge  
Cost Estimate Summary**

Alternative	Base Estimate	Rehabilitation Estimate*	Environmental/Permitting**	Estimate Total
Rehabilitation	\$ 54,300.00	NA	\$ 22,600.00	\$ 76,900.00
Attached Ped Walkway	\$ 53,700.00	\$ 54,300.00	\$ 22,600.00	\$ 130,600.00
Independent Ped Walkway	\$ 74,800.00	\$ 54,300.00	\$ 22,600.00	\$ 151,700.00
Replacement	\$ 435,000.00	NA	\$ 57,600.00	\$ 492,600.00

\* Assumes bridge rehabilitation is included with pedestrian walkway alternatives  
 \*\* Assumes upper range environmental/permitting costs for non-replacement alternatives

**Black Diamond Municipal Code – 19.10.335 Habitat other than fish and wildlife habitat conservation areas.**

**19.10.335 (C)**

Wildlife corridors. Corridors providing for migration to and from areas outside the urban growth area are provided in the core stream and wetland complex. Specific standards include:

...

Corridor Requirements and Management Measures

- All new bridges shall provide for animal passage including height sufficient for large mammals and width sufficient for a minimum 15 foot corridor adjacent to OHWM on at least one side.

...

**Existing Rock Creek/Roberts Road bridge should be replaced** to meet the same bridge standards when programmed as part of capital improvement program.

**October 11, 2016 RE: SEPA Mitigated Determination of Non-Significance (MDNS) for Roberts Drive Reconstruction, PLN16-0040 - Muckleshoot Tribe**

This letter recommends replacement of the bridge to a 30-foot span to meet standards for fish passage. From the letter (emphasis added):

“This constriction is likely to accelerate water velocities during high flows, restricting juvenile access into streams and wetlands upstream. **In addition to a being a fish passage impediment, this bridge appears to be substandard and likely has reached**

**the end of its useful life.** It should be replaced because of the extensive amount of structural work, utility access, and long-term infrastructure fortification needs due to future developments. Additionally, the City is adding a new water main line along Roberts Drive, which will include retrofitting of pipes into the bridge infrastructure.<sup>2</sup> Once in place, these water mains could make a future bridge replacement project more difficult or costly; therefore, **replacing the bridge with a larger structure will better serve the infrastructure needs of the community as well as salmon passage into the future. Further, the City has an approved HPA (2016-4-347) to remove beaver dams at this site where the narrow bridge provided an attractant to beaver activity.** Beavers are important to salmon production (Pollock et al. 2003) and their activity should not be limited by inadequate infrastructure design. This site will continue to be utilized by beaver so long as the bridge constriction remains, thus require further beaver dam removals and other actions that may further degrade salmon habitat. **A correctly sized bridge will reduce the attractant for beaver damming; minimize related maintenance needs; and has better potential to be compatible with important ecological processes for salmon habitat."**

#### TAT, Peter Rimbo and other concerns over Rock Creek Bridge

The citizen group TAT has advocated bridge replacement.

From TAT:

The proposed repair "fails to recognize the Rock Creek Bridge (RCW) portion of the proposed project is to be conducted in the City's designated core wetland and Fish and Wildlife Habitat Conservation Area (FWHCA), which is also part of the King County designated Wildlife Habitat Network (KCWHN)."

And: 'Structural Life

The Parametrix personnel have stated the bridge can carry "all Legal Load vehicles" for probably "20 years under normal traffic loading" and that "normal load conditions ... include traffic expected to be generated by nearby development, including the proposed Villages Phase 1A Preliminary Plat.'

Unfortunately, there will be voluminous construction traffic for Phase 1A and beyond, **as well as general traffic generated by development beyond Phase 1A.** Further, whether it's 20, 15, 10 years or whatever, the bridge could need replacement before the MPDs are completed and fully occupied. Ability to carry certain AASHTO loads is a necessary, but not sufficient capability, since bridge life, in general, is often governed by repeated loadings over a long period of time that contributes to fatigue-induced damage and fracture/microfracture of structural components.'

## **(GM2) Roberts Drive Rehabilitation, phase 2 City Hall to Library**

This project is highlighted because it should be considered as equal or lower priority to “Roberts Drive Rehabilitation, phase 3”. There may be opportunities to combine Phase 3 with other projects and complete Phase 3 sooner. The segment of Roberts east of the library (phase 3) is generally in worse condition. (Rename the project to be more descriptive.)

## **(GM3) Hwy 169 Pedestrian Safety**

This is a new project. Pedestrians cannot safely travel along highway 169/3<sup>rd</sup> Ave from Roberts Dr to the school / ball fields or the sidewalk on 3rd Ave that begins at James St. There is a blind corner, and almost no shoulder on either side. Consider an alternative trail or widening of part of Highway 169 to include a sidewalk. People do walk in this area, and would walk more if it were safer. It is a key part of getting from the area with the Community Center to the Elementary School, police station, and historic downtown.

One source of funding includes WashDOT and their “Pedestrian and Bike program” and “Safe Routes to Schools” programs.

## **(GM4) Roberts Drive/SR 169 Intersection Improvements**

Modify this project to require inclusion of both pedestrian safety and fish passage and stream health.

This intersection currently has no sidewalk and pedestrians must cross Roberts Drive at the triangle park. The area near the Community Center and traveling toward the Elementary School and historic downtown should be served by good pedestrian infrastructure because these are important community destinations that serve children and people whether they have a car in working condition or not.

There is a blocking culvert under the road here identified as "Mud Lake Culvert" that should be replaced.

### **City Of Black Diamond Storm And Surface Water Plan** (Resolution 2010-704)

From Page 91:

#### **6.0 CAPITAL IMPROVEMENT PLAN**

**Table 6.06 3<sup>rd</sup> Ave – Mud Lake CK Culvert Replacement**

<b>PROJECT ID #5</b>	
<b><u>3<sup>RD</sup> AVE (SR-169) – MUD LAKE CREEK CULVERT REPLACEMENT</u></b>	
<b>Description:</b>	This project includes removal, replacement and associated roadway restoration of the existing 24-inch and 48-inch culverts crossing under 3 <sup>rd</sup> Ave (SR-169) at the intersection of Black Diamond-Ravensdale Road and 3 <sup>rd</sup> Ave. This culvert system includes a two side by side 24-inch culverts, one corrugated metal and one concrete, crossing under 3 <sup>rd</sup> Ave and discharging to a landscaped intersection island (a small open basin) in the intersection. Each culvert is approximately 75-feet in length. From there flows are conveyed to a 48-inch corrugated metal culvert, 60-feet in length, flowing to the pond north of Roberts Drive. This system conveys Mud Lake Creek flows across 3 <sup>rd</sup> Ave. Wildlife and fish passage for Mud Lake Creek will be considered in the design of this project. This project may be a City and/or State funded project.
<b>Location:</b>	Intersection of Black Diamond / Ravensdale Road and 3 <sup>rd</sup> Ave (SR-169)
<b>Sub-Basin:</b>	GL-1
<b>Receiving Water:</b>	Ginder Creek / Jones Lake
<b>Priority:</b>	Low
<b>Estimated Cost:</b>	\$145,000

## **(GM5) Ravensdale / 169 interim intersection improvements**

The fish blocking culvert here is over 250 feet long and needs to be replaced.

There are serious pedestrian safety issues at this intersection. Design the project in such a way that pedestrians can safely cross highway 169 at this intersection and future pedestrian improvements headed east on the Black Diamond Ravensdale road are considered. There is a Metro bus stop at this location that could be used to access the community center, but no pedestrian crosswalk.

### **City of Black Diamond Comprehensive Plan, 2009.**

Comp Plan Pdf Page 198, Policy T-8:

- “1. Develop design standards for new roadways that incorporate features required by pedestrian, bicycle and transit facilities;
2. Promote transit by developing design standards that provide accessibility through bus pullouts, pedestrian access to bus stops and bus shelters;”

Comp Plan Pdf Page 68:

**Rock Creek.** A small portion of the planning area drains to Black Diamond Lake and the wetlands surrounding it. The Black Diamond Lake wetlands serve as partial headwaters of Rock Creek. Rock Creek is listed as supporting coho salmon, cutthroat trout, and steelhead in the WRIA 9 Fish Distribution Map.

**Ginder Creek.** The northeast portion of the planning area drains to Ginder Creek, which drains into Rock Creek. Ginder Creek historically provided good habitat for salmonid spawning and rearing. The WRIA 9 Fish Distribution Map (2000) shows Cutthroat trout presence in Ginder Creek. Based on a 1982 sampling, Ginder Lake supports warm water fish including black crappie, largemouth bass, and pumpkinseed. An obstruction limits the passage of adult salmonids upstream as far as Ginder Lake. Electroshocking done during the 1982 survey **indicated that Ginder Creek, above State Route (SR) 169 may be able to support other species of fish if passage barriers were removed. The survey generally indicated that Ginder Creek is a relatively productive tributary** (John Henry Mine, SEIS).”

**City Of Black Diamond Storm And Surface Water Plan** (Resolution 2010-704)

From page 90:

**6.0 CAPITAL IMPROVEMENT PLAN**

**Table 6.05 3<sup>rd</sup> Ave – Ginder Ck Culvert Replacement**

<b>PROJECT ID #4</b>	
<b><u>3<sup>RD</sup> AVE (SR-169) – GINDER CREEK CULVERT REPLACEMENT</u></b>	
<b>Description:</b>	This project includes removal, replacement and associated roadway restoration of the existing 36-inch culvert crossing under 3 <sup>rd</sup> Ave (SR-169) at the intersection of Black Diamond-Ravensdale Road and 3 <sup>rd</sup> Ave. This culvert system includes a 36-inch concrete culvert connecting to an existing concrete box culvert buried under 3 <sup>rd</sup> Ave (SR-169). Connected to the box culvert is an additional stretch of 36-inch concrete culvert pipe which discharges upstream of the pond north of Roberts Drive. The total length of this culvert system is approximately 250-feet. This system conveys Ginder Creek flows across 3 <sup>rd</sup> Ave. Wildlife and fish passage for Ginder Creek will be considered in the design of this project. This project may be a City and/or State funded project.
<b>Location:</b>	Intersection of Black Diamond / Ravensdale Road and 3 <sup>rd</sup> Ave (SR-169)
<b>Sub-Basin:</b>	GL-1
<b>Receiving Water:</b>	Ginder Creek / Jones Lake
<b>Priority:</b>	Low / <b>High</b> if a street project requires replacement
<b>Estimated Cost:</b>	\$200,000

## **(GM6) Roberts Drive Rehabilitation, phase 3 Library to Hwy169**

The section of Roberts Drive from the library east to highway 169 is very bumpy, very busy, and has a very low score for pavement rating. This project has been on the TIP in many forms over the years. It is a priority to improve travel on this road sooner.

Consider prioritizing this ahead of the segment from City hall to the library. (Rename the project to be more descriptive.)

Additionally, require replacement of the stream Culvert at Ginder Creek and Roberts. (To further improve Ginder Creek, the CIP should also include replacement of the Ginder Creek Culvert at Morgan Street, identified on page 93 of the 2010 Storm and Surface Water Plan).

### **City Of Black Diamond Storm And Surface Water Plan** (Resolution 2010-704)

From page 88:

#### **6.0 CAPITAL IMPROVEMENT PLAN**

**Table 6.03 Roberts Dr – Ginder Ck Culvert Replacement**

<b>PROJECT ID #2</b>	
<b><u>ROBERTS DRIVE – GINDER CREEK CULVERT REPLACEMENT</u></b>	
<b>Description:</b>	This project includes the removal and replacement of a 54-inch culvert under Roberts Drive and associated roadway restoration. This culvert conveys Ginder Creek north to south under Roberts Drive and is located approximately 800-feet southwest of the intersection of 3 <sup>rd</sup> Ave (SR-169) and Roberts Drive. The existing culvert is constructed of corrugated metal and is approximately 60-feet in length. Wildlife and fish passage for Ginder Creek will be considered in the design of this project. Repairs were made in January 2009 that should provide good service for another 10-15 years.
<b>Location:</b>	Roberts Dr. ~ 800' west of 3 <sup>rd</sup> Ave
<b>Sub-Basin:</b>	GL-1
<b>Receiving Water:</b>	Ginder Creek / Jones Lake
<b>Priority:</b>	Low
<b>Estimated Cost:</b>	\$85,000

### **(GM7) BD-Ravensdale Rd Pedestrian Safety**

This is a proposed new project. Pedestrians cannot walk from the Morgan Creek development to the nearby North Commercial retail area and Community Center. Children have been seen walking and biking down this road.

A study should be made of options to allow safe pedestrian access. Innovative trail options should be considered. Look for collaboration with King County to improve safety on this dangerous stretch of road.

### **(GM8) Railroad Avenue & Jones Lake Road Pedestrian Facilities**

This pedestrian project is lower priority than the previously mentioned pedestrian improvements. Although this project is important, the road has a wide shoulder that can be used if necessary for safety. This is in contrast with the busier highway 169 and Ravensdale Road / Roberts Drive area that has no shoulder and more pedestrians.

### **(GM9) Ravensdale / 169 intersection**

Any needed pedestrian improvements and fish passage improvements not done in the "interim" solution for this intersection (GM5) should be done when the full project is considered.