

Site #	Site Name	Waterbody Name	Flows Into	Culvert Watercourse Classification(s)	Lat, Long for Site Center Point	Total Approximate Disturbance Area (m ²)	Total Permanent Aquatic Footprint (m ²)	Total Permanent Riparian Footprint (m ²)	Total Temporary Aquatic Footprint (m ²)	Total Temporary Riparian Footprint (m ²)	Total Aquatic Footprint (m ²)	Total Riparian Footprint (m ²)	Construction Works
1	Coghlan Creek 1	Coghlan Creek	Salmon River	A	N49.107°, W122.507°	8781.6 m ²	1144.0	2659.5	2141.5	3392.5	3285.5	6051.9	<ul style="list-style-type: none"> • Replacement of two smaller culverts with a Single Box Culvert. • Watercourse realignment to tie-in at both ends of the new culvert. • Installation of boulder riffles to improve the stream grades and slow flow. • Realignment and armouring of highway ditches along the north and south sides of the Highway, to meet new culvert inlet and outlet. • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditches. • Narrowing and reconstruction of the median swale toward the west. • Removal of the median swale toward the east. • Temporary isolation of the stream work zone with dams and a pumped bypass. • Regrading, armouring, and realigning the stream at the culvert C-2/3 approaches. The highway crossing culvert is to be built in several stages to accommodate traffic, within the work zones isolated from the stream. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments. Permanent impact due to road infill.
2	Coghlan Creek 2	Coghlan Creek tributary	Coghlan Creek tributary	A	N49.104°, W122.499°	27158 m ²	2952.7	6138.0	1874.9	3087.4	4827.5	9225.4	<ul style="list-style-type: none"> • Replacement of two smaller culverts with a Single Box Culvert. • Watercourse realignment to tie-in at the north inlet of the new culvert. • Installation of a rock weir to provide backwatering and slow flows. • Relocation of the southerly culvert outlet eastward approximately 60 metres. • Realignment and armouring of highway ditches along the north and south sides to meet new culvert inlet and outlet. • Installation of 3 new culverts along the northwest side of the 264 interchange. • Replacement of two minor culverts. • Addition of a storm sewer outfall to the southerly highway ditch. • Construction of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditches. • Removal of the median swale. • Addition of a maintenance diversion culvert beside culvert C-4/5, which will remain dry except when culvert maintenance work is conducted in the future. • Installation of aquatic and riparian offsets, northwest of the 264 interchange, which include removal of placed fill from riparian area, construction of instream enhancements, and addition of riparian plantings. • Isolating (temporarily) the stream culvert work zone with dams and installing a bypass pump. • Regrading, armouring, and realigning the stream at the culvert C-4/5 approaches. The highway crossing culverts to be built in several stages to accommodate traffic, within the work zones isolated from the stream. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments. Permanent impact due to road infill.

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3	Coghlan Creek 3	Coghlan Creek tributaries	Coghlan Creek tributaries	B & C for the interchange and approach road ditches	N49.101°, W 122.493°	20436.7 m ²	5295.7	13824.6	179.8	1136.6	5475.5	14961.2	<ul style="list-style-type: none"> • Armouring of culvert inlets and outlets with local stream realignments to tie-in. • Contributing to the flow of these Coghlan Creek tributaries with numerous roadside ditches, culverts and storm sewers that lead to them. • Removal of the freeway median swale. • Connecting the northwest quadrant onsite offsets to the northwesterly Coghlan Creek tributary • Connecting the southeasterly Class C onsite offset to the adjacent class C ramp ditch. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.
4	West Creek 1	West Creek	West Creek	A(O)	N49.094°, W122.475°	13525.9 m ²	3694.7	9244.2	865.3	415.1	4560.0	9659.2	<ul style="list-style-type: none"> • Replacement of two smaller culverts with Single Box Culvert C-7/8. • Addition of a maintenance diversion culvert beside culvert C-7/8, which will remain dry except when culvert maintenance work is conducted in the future. • Watercourse realignment to tie-in at both ends of the new culvert. • Regrading, armouring, and realigning the stream at the culvert C-7/8 approaches. The highway crossing culverts to be built in several stages to accommodate traffic, within the work zones isolated from the stream. • Installation of a rock weir to provide backwatering and slow the flow. • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditches. • Narrowing of the highway median swale • Crossing the northerly highway ditch under the westbound 264th interchange exit ramp with a 29.0m 600 CSP culvert • Isolating (temporarily) the stream culvert work zone with dams and installing a bypass pump. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.
5	West Creek 2	West Creek tributary	West Creek tributary	B	N49.092°, W 122.470°	25.6 m ²	5.4	16.8	3.4	0.0	8.8	16.8	<ul style="list-style-type: none"> • Replacement of two smaller culverts with Single Box Culvert C-38/39. • Armouring highway ditches to tie-in at both ends of the new culvert. • Installation of four minor culverts interconnecting the median with roadside ditches and crossing under multi-use path. • Narrowing of the highway median swale. • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditch. • Addition of a maintenance diversion culvert beside culverts C-38/39, which will remain dry except when culvert maintenance work is conducted in the future. • Conducting onsite offsets extending the wetland that is west of 272nd Street and along the north side of the freeway. • Isolating (temporarily) the stream culvert work zone with dams and installing a bypass pump. • Regrading, armouring, and realigning the stream at the culvert C-38/39 approaches. The highway crossing culverts are to be built in several stages to accommodate traffic. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.

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6	West Creek 3	West Creek tributary	West Creek tributary	B & C	N49.090°, W 122.463°	3088.7 m ²	916.4	1888.3	94.5	189.4	1010.9	2077.7	<ul style="list-style-type: none"> • Replacement of two smaller culverts with Single Box Culvert C-9/10. • Armouring highway ditches to tie-in at both ends of the new culvert. • Narrowing of the highway median swale. • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refining roadside ditches. • Addition of a maintenance diversion culvert beside culvert C-9/10, which will remain dry except when culvert maintenance work is conducted in the future. • Isolating (temporarily) the stream culvert work zone with dams and installing a bypass pump. • Regrading, armouring, and realigning the stream at the culvert C-9/10 approaches. The highway crossing culverts to be built in several stages to accommodate traffic. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.
7	Nathan Creek 1	Westerly and central Nathan Creek tributaries	Westerly and central Nathan Creek tributaries	for Culvert C-11/12: inlet B, outlet A(O) for Culvert C-14/15: inlet C, outlet B	N49.088°, W122.459°	23509.3 m ²	4243.2	18457.5	172.3	636.4	4415.4	19093.9	<ul style="list-style-type: none"> • Replacement of four smaller culverts with Single Box Culverts C-11/12 and C-14/15. • Watercourse realignments to tie-in at both ends of the new culverts. • Installation of a rock weir to provide backwatering and slow flows. • Armouring highway ditches to tie-in at both ends of the new culvert. • Installation of five minor culverts between the median, multi-use path and sideroad ditches. • Narrowing of the highway median swale. • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refining roadside ditches. • Enhancing freeway ditches through onsite offsetting. • Isolating (temporarily) the stream culvert work zone with dams and installing a bypass pump. • Regrading, armouring, and realigning the stream at the culverts C-11/12 & C-14/15 approaches. The highway crossing culverts to be built in several stages to accommodate traffic. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.
8	Nathan Creek 2	Central Nathan Creek	Central Nathan Creek	A(O)	N 49.081°, W122.441°	5430.4 m ²	610.7	3175.2	245.8	1398.7	856.5	4573.9	<ul style="list-style-type: none"> • Replacement of two smaller culverts with Single Box Culvert C-16/17. • Watercourse realignment to tie-in at both ends of the new culvert. • Installation of a rock weir to provide backwatering and slow flows. • Narrowing of the highway median swale • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditch. • Addition of a maintenance diversion culvert beside culvert C-16/17, which will remain dry except when culvert maintenance work is conducted in the future. • Isolating (temporarily) the stream culvert work zone with dams and installing a bypass pump. • Regrading, armouring, and realigning the stream at the culvert C-16/17 approaches. The highway crossing culverts to be built in several stages to accommodate traffic. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.

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9	Nathan Creek 3	Easterly Nathan Creek tributaries	Easterly Nathan Creek tributaries	A(O)	N49.077°, W 122.430°	11925.8 m ²	1443.8	10218.9	31.7	231.4	1475.5	10450.3	<ul style="list-style-type: none"> • Installation of two new larger highway culverts on Nathan Creek tributaries. • Armouring of highway ditches to tie-in at both ends of the new culverts. • Construction of several minor culverts between the median and sideroad ditches. • Narrowing of the highway median swale. • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditches. • Isolating (temporarily) the stream culvert work zone with dams and installing a bypass pump. • Regrading, armouring, and realigning the stream at the culvert approaches. The highway crossing culverts to be built in several stages to accommodate traffic. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.
10	Bradner North Offset	Nathan Creek tributary	Nathan Creek	A	N49.081°, W122.433°	1000 m ²					0.0	1000.0	<ul style="list-style-type: none"> • Installation of concrete and boulder weirs to back flood the existing creek channel creating ponds along the ravine. • Construction of a new meandering channel that collects runoff from the Bradner Rest Area and directs this flow into Nathan Creek. • Complexing the channel with root wads and large woody debris. • Armouring the banks. • Constructing a berm between the new and existing channel. • Adding spawning gravel to the creek bed. • Connecting a new channel to the existing creek. • Clearing and grubbing for the disturbed areas adjacent to stream and constructed ponds.
11	Nathan Creek East Offset	Nathan Creek East	Nathan Creek East	A(O)	N49.078°, W122.429°	11107.6 m ²					1295.8	9811.8	<ul style="list-style-type: none"> • Installing culverts. • Installing boulders and concrete weirs. • Complexing the channel with root wads and large woody debris. • Armouring the bank. • Adding spawning gravel to the channel bed. • Connecting a new channel and upstream constructed pond to the existing creek. • Riprapping at spillways and outfalls. • Clearing and grubbing for the disturbed areas adjacent to stream, constructed ponds, and spawning area.
12	Salmon River Tributary	Salmon River tributary	Salmon River tributary	A(O)	N48.069°, W 122.411°	6030.6 m ²	957.3	3758.0	273.9	1041.4	1231.2	4799.4	<ul style="list-style-type: none"> • Replacement of two smaller culverts with Single Box Culvert C-18/19. • Watercourse realignment to tie-in at both ends of the new culvert. • Narrowing of the highway median swale • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditches. • Addition of a maintenance diversion culvert beside culvert C-16/17, which will remain dry except when culvert maintenance work is conducted in the future. • Isolating (temporarily) the stream culvert work zone with dams and installing a bypass pump. • Regrading, armouring, and realigning the stream at the culvert approaches. The highway crossing culverts to be built in several stages to accommodate traffic. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.

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13	Fishtrap Creek 1	Westerly Fishtrap Creek tributaries	Westerly Fishtrap Creek tributaries	C	N49.066°, W122.404°	239.2 m ²	239.2	828.4	0.0	0.0	239.2	828.4	<ul style="list-style-type: none"> • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Construction of one minor median culvert at an emergency turn-around. • Narrowing of the highway median swale • Refinement of roadside ditches. • Minor earthworks interfacing with existing highway ditches. • Riprapping at spillways and outfalls. • Clearing and grubbing for the disturbed areas adjacent to stream and ditch realignments.
14	Fishtrap Creek 2	Fishtrap Creek	Fishtrap Creek	CUL-3 A(O) Other culverts: B	N49.063°, W 122.395°	3462.8 m ²	86.1	428.6	332.4	2615.8	418.5	3044.3	<ul style="list-style-type: none"> • Replacement of an existing older culvert with Single Culvert CUL-3. • Watercourse realignment to tie-in at both ends of the new culvert. • Installation of boulder riffles to improve the stream grades and slow flows. • Creation of accesses to this deep culvert in the ravine on both sides of the highway. • Construction of launching and receiving platforms for jacking the pipe through the highway embankment. • Replacement of three culverts between the median and the highway ditches: CUL-2, CUL-4 and CUL-5. • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditches. • Narrowing of the highway median swale • Addition of a maintenance diversion culvert beside culvert CUL-3, which will remain dry except when culvert maintenance work is conducted in the future. • Isolating (temporarily) the stream culvert work zone with dams and installing a bypass pump. • Regrading, armouring, and realigning the stream at the culvert approaches. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.
15	Fishtrap Creek 3	Easterly Fishtrap Creek tributary	Easterly Fishtrap Creek tributary	A	N49.056°, W 122.386°	3949.3 m ²	273.1	1615.5	492.3	2807.3	765.4	3183.9	<ul style="list-style-type: none"> • Replacement of an existing older culvert with Single Culvert CUL-7. • Watercourse realignment to tie-in at both ends of the new culvert. • Installation of boulder riffles to improve the stream grades and slow the flow. • Construction of accesses to the deep culvert in the ravine on both sides of the highway. • Construction of launching and receiving platforms for jacking the pipe through the highway embankment. • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditches. • Narrowing of the highway median swale with median storm sewer. • Installation of new minor Class B CUL-6 under multi-use path. • Installation of new minor Class C CUL-8 under westbound entrance ramp from Mt. Lehman Road. • Construction of a south road shoulder storm sewer east of CUL-7. • Reconstruction of roadside ditches at the ramps. • Addition of a maintenance diversion culvert beside culvert CUL-7, which will remain dry except when culvert maintenance work is conducted in the future. • Isolating (temporarily) the stream culvert work zone with dams and installing a bypass pump. • Regrading, armouring, and realigning the stream at the culvert approaches. • Riprapping at spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.

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16	Enns Brook 1	Enns Brook westerly tributaries	Enns Brook westerly tributary	B, C	N49.056°, W 122.367°	2288.4 m ²	527.6	1347.9	350.6	254.6	878.2	1410.2	<ul style="list-style-type: none"> • Replacement of an older existing culvert with Single Culvert CUL-11. • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditches. • Narrowing of the highway median swale with median storm sewer. • Some reshaping of roadside ditches at the ramps. • Replacing Culvert CUL-11. • Reconstructing the median swale • Riprapping at spillways and outfalls • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.
17	East Fishtrap Creek	Enns Brook	Fish Trap Creek East	A	N49.051°, W 122.366°	13643.6 m ²	2920.4	8117.7	806.9	1798.6	3727.3	9916.3	<ul style="list-style-type: none"> • Removal of five existing highway culverts to create an open channel. • Pre-loading. • Construction of two bridges over the creek; one bridge for eastbound traffic and one for westbound traffic. • Armouring the channel at selected locations to reduce erosion. • Narrowing and reconstructing the median and its' swale. • Replacement of culvert CUL-13 between the median and the south ditch. • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditches. • Replacement of a minor culvert CUL-13 that connects the median to the southerly highway ditch. • Isolating stream work zones with temporary dams and later removing those dams to open the new channel. • Removing culverts. • Armouring the banks. • Realigning stream channels. • Riprapping spillways and outfalls. • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.
18	Enns Brook 2	Enns Brook easterly tributaries	Enns Brook easterly tributary	A	N49.049°, W 122.360°	486.3 m ²	0.0	0.0	0.0	486.3	0*	486.3	<ul style="list-style-type: none"> • Replacement of one minor culvert CUL-14 connecting the median to the southerly highway ditch. • Installation of new riprap lined pavement drainage spillways from the edge of pavement down to the adjacent ditches. • Refinement of roadside ditches. • Narrowing of the highway median swale. • Construction of a sound wall and retaining wall beside the northside class A highway ditch. • Reconstructing the median swale. • Regrading the north side ditch adjacent to soundwall/retaining wall. • Removing a fish bearing culvert along the south highway ditch and replacing with an open ditch. • Riprapping at spillways and outfalls • Clearing and grubbing of riparian areas adjacent to stream and ditch realignments.
19	Salmon River Offsite Offsets	Salmon River & Salmon River tributaries	Salmon River	A	N49.141°, W 122.604°	4643 m ² (length m x width m)						4685.0	<ul style="list-style-type: none"> • Connecting ponds (built in isolation) to the existing Salmon River. • Armouring the bank in select locations. • Clearing and grubbing for the disturbed areas adjacent to stream and constructed ponds realignments. • Riparian planting