



REGIONAL DISTRICT OF BULKLEY-NECHAKO
SPECIAL BOARD MEETING
Thursday, May 3, 2018

CALL TO ORDER

MOTION TO HOLD SPECIAL BOARD MEETING

In accordance with Section 220 of the *Local Government Act*, the Regional District of Bulkley-Nechako Board of Directors calls a Special Board Meeting.

PAGE NO.

ACTION

AGENDA – May 3, 2018

Approve

SUPPLEMENTARY AGENDA

Receive

DELEGATION

PRICEWATERHOUSECOOPERS LLP

Kristin Giannotti, Manager, Assurance

RE: 2017 Audit

REPORTS

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**John Illes, Chief Financial Officer
- Approval of the 2017 Audited Financial Statements**

**Recommendation
(Page 2)**

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**John Illes, Chief Financial Officer
- Amendment of Five Year Financial Plan for 2018-2022**

**Recommendation
(Page 3)**

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Rory McKenzie, Director of Environmental Services – Fort Fraser Water Distribution System Improvement Construction Award

**Recommendation
(Page 5)**

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**Jason Llewellyn, Director of Planning
- Highway 16 Trail Society**

**Direction
(Page 14)**

BYLAW

Bylaw for First, Second, Third Reading & Adoption

52-53

**No. 1830 – RDBN Financial Plan Amendment
(all/directors/two-thirds)**

**1st, 2nd, 3rd Reading
& Adoption**

NEW BUSINESS

ADJOURNMENT



Regional District of Bulkley-Nechako Memo Special Board Meeting May 3, 2018

Prepared For: Chair Miller and the Board of Directors
From: John Illes, Chief Financial Officer
Date: April 20, 2018
Issue: Approval of the 2017 Audited Financial Statements
Tracking: Budget Bylaws 1795 and 1829 and
 Legal Reference: ***Community Charter Section 167***

Background: Under Section 167 of the Community Charter Regional Districts (and Municipalities) each year must present to its Board (Council) the financial statements for its acceptance by May 15 of the following year.

Issue: PricewaterhouseCoopers LLP working with staff have prepared the Financial Statements for the calendar year of 2017 and have audited the financial proceedings of the Regional District.

The Financial Statements are presented under separate cover (and will be emailed once available) and a short presentation will be made by PricewaterhouseCoopers LLP to the Board.

It is important that any suggestions from the auditors for improvements to internal financial security are carefully considered. Staff will bring back a report if there are any suggestions presented to the next Board Meeting.

I would be pleased to answer any questions.

Recommendation:

(All/Directors/Majority)

"That the Board of the Regional District of Bulkley-Nechako receive the Chief Financial Officer's memo dated April 20, 2018 titled 'Approval of the 2017 Audited Financial Statements', and further

"That the Board of the Regional District authorize the Chair and the Chief Financial Officer to sign and date a copy of the Financial Statements" and further

"That the Board direct the Chief Financial Officer to bring back to the next Board meeting a report identifying how the Regional District will implement any Audit recommendations." *{if needed}*



Regional District of Bulkley-Nechako Memo Special Board Meeting May 3, 2018

Prepared For: Chair Miller and the Board of Directors
From: John Illes, Chief Financial Officer
Date: April 20, 2018
Issue: Amendment of Five Year Financial Plan for 2018-2022
Tracking: Budget Bylaws 1827 and 1830

Background:

The budget for a local government provides the authority to make expenditures. The Budget is required to be amended if expenditures exceed the budget amounts.

Budget amendments will be triggered if there are any changes to property value taxation, any changes to transfers (usually to and from reserves) and for any changes to debt payments. In addition the budget will also be amended if capital expenditures increase over the budget amount.

The Budget will not be amended if there is a decrease in operating or capital expenditures. Similarly, an increase or a decrease in other revenue (often associated with grants) will not trigger an amendment as long as this change is not associated with a change in transfers or an increase in expenditures over the current budget amount.

Discussion:

Local Service 5101 Environmental Services requires budget changes to reflect the initiation of service for Vanderhoof and Smithers recycling. This involves the board approved purchase of modified shipping containers and the use of Gas Tax Funds to provide the funding for these containers.

In addition, Local Service 1401 did not print on the summary for the initial approved bylaw. This budget formalizes the addition of this service as part of the bylaw. There have been no changes to this service's budget.

I would be pleased to answer any questions.

Recommendation:

(All/Directors/Majority)

"That the Board of the Regional District of Bulkley-Nechako receive the Chief Financial Officer's memo dated April 20, 2018 titled 'Amendment of Five Year Financial Plan for 2018-2022', and further

"That the Board of Directors consider providing three readings and adoption to Bylaw #1830 later in the agenda."

Regional District of Bulkley-Nechako
2018 to 2022 Financial Plan - Bylaw No. 1827

Schedule "A"

2018 Financial Plan:

Service	FUNDING					TRANSFERS From/(To)				EXPENDITURES					Total Expenditures	
	Prop. Value Taxes	Parcel Taxes	Fees and Charges	Proceeds of Borrowing	Other Revenue	Total Funding	Reserve Funds	Surplus of Prior Yr.	Equity in TCAs	Total Transfers	Debt Pmts. Int. & P'pal.	Capital Expenditures	Amortization of TCAs	Other Expenses		Deficit from Prior Year
1101 Rural Government Services	282,833				1,051,119	1,333,952		252,514		69,893				1,403,843	1,403,843	
1200 General Government Services	1,202,003		15,900		380,918	1,578,821	(21,134)	306,254	70,000	355,120	7,800	71,000	70,000	1,785,143	1,933,943	
1301 Feasibility Studies	0				2,332	2,332		17,427		17,427				19,759	19,759	
1401 Agriculture	85,280				70,333	135,612		2,077		2,077				137,689	137,689	
1501 Local Community of Fort Fraser	6,014				5,000	11,014		2,688		2,688				13,700	13,700	
1701 Chnook Community Forest								16,239		16,239				16,239	16,239	
2100 Lakes Economic Development	96,580				1,000	97,580		27,064		27,064			124,644	124,644		
2200 Area "E" Economic Development	6,927				9,392	16,319		21,981		21,981				38,300	38,300	
2300 Stuart-Nechako Economic Development								10,218		10,218				10,218	10,218	
2400 Area "A" Economic Development	10,000					10,000								10,000	10,000	
2500 Regional Economic Development	184,245				469,757	654,002	(3,253)	221,022		217,769				871,771	871,771	
3101 Member Fiscal Services					891,287	891,287					891,287			891,287	891,287	
4101 Planning	177,112		12,250		26,073	215,435	6,412	59,446	5,500	71,358		11,000	5,500	270,293	286,793	
4201 Building Inspection	131,367		217,991		349,358	349,358	(11,953)	73,431	12,485	73,963			12,485	410,836	423,321	
4301 Development Services	238,327		3,500		30,047	271,874	(4,781)	89,026	10,000	94,245			10,000	356,119	366,119	
4401 Building Numbering Extended Service	8,903				1,585	8,498	(420)	2,654		2,434				10,932	10,932	
4501 Unsanitary Premises Regulatory Control	22,881				3,147	26,028	(3,209)	14,804		11,595				37,623	37,623	
5101 Environmental Services	3,142,752		446,000		487,395	4,076,147	202,467	1,171,798	650,000	2,024,265	479,352	853,000	650,000	4,118,080	5,150,412	
5901 Weeds	37,011		5,029		15,072	57,112		13,274		13,274				70,386	70,386	
5902 Lake Kathleen Aquatic Weed Harvesting		8,272	544		150	8,966		9		9				8,975	8,975	
5903 Glacier Gulch Water Diversion		2,882	180		25	2,867		13,485		13,485				16,352	16,352	
6101 Ft Fraser Sewer System		39,359	25,500		20,000	84,859	(41,093)	38,526	16,000	13,433			16,000	82,292	88,292	
6201 Ft Fraser Water System		67,945	42,129	100,000	3,009,041	3,219,115	524,794	48,857	50,000	821,651		3,684,266	50,000	108,499,90	3,840,766	
6301 Cluculz Lake - Somerset Estates Sewer								3,358		3,358				3,358	3,358	
6401 Pump & Haul Sewer Disposal					500	500								500	500	
6402 Liquid Waste Disposal			5,000			5,000		4,839		4,839				8,839	8,839	
7101 Ft Fraser Fire Protection	50,458				5,000	55,458	(3,813)	3,423	10,800	10,610	14,617		10,800	40,651	66,068	
7102 Southside Rural Fire Protection	40,568					40,568	(4,114)	315	18,000	14,201			18,000	36,769	54,769	
7103 Topley Rural Fire Protection	71,597					71,597	(8,071)	243	23,000	15,172	17,741		23,000	46,028	66,769	
7201 Burns Lake Rural Fire Protection	105,473					105,473	5,000			5,000				110,473	110,473	
7202 Ft St James Rural Fire Protection	150,438					150,438	(10,000)			(10,000)				140,438	140,438	
7203 Houston Rural Fire Protection	25,026					25,026								25,026	25,026	
7204 Luck Bay Rural Fire Protection	38,971					38,971	(5,000)	10,162	9,300	14,462	7,095		9,300	37,038	53,433	
7205 Smithers Rural Fire Protection	191,789					191,789	(10,000)			(10,000)				181,789	181,789	
7206 Telkwa Rural Fire Protection	114,920					114,920								114,920	114,920	
7207 Vanderhoof Rural Fire Protection	36,353					36,353								36,353	36,353	
7208 Round Lake Fire Protection	8,394					8,394		3,607	400	4,007	1,025		400	10,976	12,401	
7301 Cluculz Lake Emergency Response	18,750					18,750								18,708	42	
7401 Area "A" Emergency Services	5,000					5,000								5,000	5,000	
7402 Area "F" Extinction Services																
7403 Lakes District Emergency Services								185		185				185	185	
7404 Area "D" Extinction	1,592			2,157	3,748	3,748		2,408		2,408				6,157	6,157	
7405 Area "C" Road Rescue Service	18,903					18,903		89		89				18,992	18,992	
7406 Topley Road Rescue/First Responders	8,863					8,863	(10)	100	1,000	1,090			1,000	6,953	7,953	
7501 9-1-1 Service	192,070		135,404		18,597	346,071	(52,007)	43,857	70,000	81,850			70,000	337,821	407,921	
7600 Emergency Preparedness Planning	196,834				557,121	753,955	5,585	74,797	4,000	84,362		11,000	4,000	822,265	3,052	
7701 Burns Lake & Area Victim Services	8,254				2,249	10,503		7,172		7,172				17,675	17,675	
7702 Smithers Victim Services	35,348					35,348		1,625		1,625				36,973	36,973	
8101 Lakes District Airport	109,055				43,449	152,504	(35,000)	8,521		(26,479)	36,025			90,000	126,025	
8201 Smithers Para-Transit	5,000					5,000								5,000	5,000	
8202 FSJ Seniors Helping Seniors Transportation S	43,000					43,000		700		700				43,700	43,700	
8203 Regional Public Transit & Para Transit Service	51,102		83,935		67,848	202,883		65,315		65,315				268,198	268,198	
8301 Telkwa Pedestrian Crosswalk	1,000					1,000								1,000	1,000	
9101 Decker Lake Street Lighting		9,415	350			9,765		326		326				10,091	10,091	
9102 Endako Street Lighting	3,157					3,157		221		221				3,802	3,802	
9103 Ft Fraser Street Lighting	7,304		353			7,657		805		805				8,462	8,462	
9104 Gerow Island Street Lighting	4,055					4,055		121		121				4,176	4,176	
9105 Goetjen Road Street Lighting								504		504				504	504	
9106 Colony Point Street Lighting	3,884					3,884								3,800	24	
9107 Lawlaw Street Lighting	1,496					1,496								1,496	1,496	
10101 Bulkley Valley Regional Pool and Rec Centre	834,807				20,135	954,942	(268,716)	48,416	120,000	(98,300)	1,200		120,000	735,442	856,642	
10102 Vanderhoof Pool	185,203					185,203	(15,000)			(15,000)				170,203	170,203	
10201 Ft St James Arena Grant	37,500					37,500								37,500	37,500	
10202 Burns Lake Arena	243,251				2,500	245,751	(84,371)	150		(84,221)	18,030			182,500	181,530	
10301 Smithers Rural Recreation & Culture	292,362					292,362								292,362	292,362	
10302 Vanderhoof Recreation & Culture	95,985					95,985								95,985	95,985	
10401 Ft Fraser Cemetery Grant	1,968		35			2,003								2,003	2,003	
10402 Topley Cemetery Grant	1,500					1,500								1,500	1,500	
10501 Smithers, Telkwa, Houston TV Rebroadcast	59,424				600	60,024								60,000	24	
10502 Fraser Lake and Area TV Rebroadcasting	34,623				25,621	60,244		12,756		12,756				73,000	73,000	
10503 Ft St James and Area TV Rebroadcasting	161,260				2,200	163,460		552		552				164,012	164,012	
10504 Burns Lake and Area TV Rebroadcasting	33,891				13,814	47,705		7,795		7,795				55,500	55,500	
10601 Burns Lake and Area Library Grant	155,184				71,942	227,126		3,153		3,153				230,279	230,279	
10802 Fraser Lake Rural Library Grant	10,113		60		12,948	23,121		4,235		4,235				27,356	27,356	
10603 Fort St James Library	13,683					13,683		67		67				13,750	13,750	
10701 Burns Lake Museum Society	32,551				10,378	42,929		2,571		2,571				45,500	45,500	
10801 Fort Fraser Community Hall	2,458		46			2,504								2,504	2,504	
10802 Braeside Community Hall	5,000					5,000								5,000	5,000	
Total for all Departments 4/20/2018	9,459,653	127,653	994,930	100,000	7,310,240	17,992,478	1,872	2,713,360	1,070,485	3,785,736	1,475,172	4,630,266	1,070,485	14,598,888	3,402	21,778,213

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**REGIONAL DISTRICT OF BULKLEY-NECHAKO
MEMORANDUM**

To: Chair Miller and Board of Directors (May 3, 2018)
From: Rory Mckenzie
 Director of Environmental Services
Date: April 24, 2018
Subject: Fort Fraser Water Distribution System Improvement Construction Award

The Regional District of Bulkley-Nechako (RDBN) has retained True Consulting for the engineering, designing and project management of the Fort Fraser water distribution system improvement project. On March 8, 2017, True Consulting issued a Tender Package on behalf of the RDBN for the Construction of the project via BC Bid. The tender period closed April 10, 2018 at 2:00 p.m. with three complete tender proposals received by the RDBN. True Consulting conducted a complete audit of the proposals and presented a recommendation to the RDBN on the results of the thorough audit and the proposed company for the job. Attached with this memo you will find the recommendation letter from True Consulting and the Tender Summary.

RDBN staff is recommending to the RDBN Board of directors to proceed with awarding the contract for the construction of Fort Fraser's water distribution system improvement project to LNB Construction from Kamloops BC with the Tender Price of \$3,163,733.00 plus GST. Also staff would like to recommend that the Board authorize the execution of the MMCD contract that will be revised pertaining to this project.

On the basis of the preceding, True Consulting recommends awarding the project to LNB Construction. They also recommend that the Regional District of Bulkley Nechako retain an additional \$250,000 contingency fund for this project to cover any unforeseen costs due to unknown below ground conditions.

With the approval of this recommendation by the Board, staff will award the contract to LNB Construction on May 3, 2018 followed by the pre-construction site meeting May 8, 2018. Work will depend on the weather and ground conditions but is proposed to start at the end of May 2018 with completion of the project by the end of October 2018.

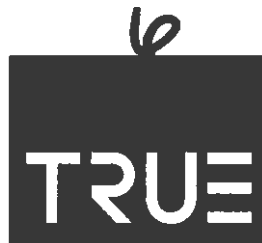
RECOMMENDATION

(All/Directors/Majority)

1. That the Board of Directors receives the memorandum titled, "Fort Fraser Water Distribution Construction Award" and dated April 24, 2018.
2. And that, the Board of Directors award the contract for the construction of Fort Fraser's Water distribution system improvement project to LNB Construction with the tender price of \$3,163,733.00 plus GST.
3. Further, that the Board of Directors authorize execution of the MMCD Construction Contract with LNB Construction, modified to reflect project specifications, and
4. Further that Board of Directors authorize Staff to retain an additional \$250,000.00 contingency fund for this project to cover any unforeseen costs.

Respectfully submitted,

Rory Mckenzie
 Director of Environmental Services



April 13, 2018

Our File: 1266-011

Regional District of Bulkley Nechako
37 3rd Avenue, PO Box 820
Burns Lake, BC
V0J 1E0

Attn: Janette Derksen, Environmental Services Coordinator

Dear Madam:

**RE: *Regional District of Bulkley Nechako – Fort Fraser Water Distribution
Recommendation of Contract Award***

On April 10, 2018 at 2:00 pm tender officially closed on the above project at the Regional District of Bulkley Nechako office. Three (3) tenders were received by the Regional District office prior to closing time, and all three tenders were amended via fax prior to closing.

The received tenders were complete and accompanied by an acceptable Bid Security consisting of a Bid Bond. The tenders were subsequently audited with a mathematical error found in one of the tenders, this error did not affect the placement order of the tenderers and reduced LNB Construction's pre-GST tender value by \$100,000.00

The audited tender results are outlined below:

Tenderer	Tender Amount (excluding GST)
1. LNB Construction Inc.	\$3,163,733.00
2. Canadian Western Mechanical Ltd.	\$3,817,630.00
3. Acres Enterprises Ltd.	\$4,032,885.00

A spreadsheet comprising the audited tender results is enclosed for your reference.

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Regional District of Bulkley Nechako
Attn: Janette Derksen

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Our File: 1266-011

On the basis of the preceding, we hereby recommend awarding the project to LNB Construction. We also recommend the Regional District of Bulkely Nechako retain an additional \$250,000 contingency fund for this project to cover any unforeseen costs due to unknown below ground conditions.

Please review the above and do not hesitate to contact the undersigned should you have any questions. If the recommendation is acceptable to the Regional District of Bulkley Nechako, we would be pleased to prepare Contract Documentation to complete the award process.

Yours truly,

TRUE CONSULTING



William Bamsey, P.Eng.

WB/ml

Enclosure

TENDER SUMMARY

REGIONAL DISTRICT OF BULKLEY NECHAKO
FORT FRASER WATER DISTRIBUTION IMPROVEMENTS

Item #	Payment Section Para		Item Description	Unit	Quant	LNB Construction		Canadian Western Mechanical		Acres Enterprises	
						Revised Unit Price	Amount	Revised Unit Price	Amount	Revised Unit Price	Amount
Division 01 - General Requirements							166,518.00		300,000.00		376,877.00
01.1	01 33 01	1.8.1	Project Record Documents	Note			N/A		N/A		N/A
01.2	01 53 01	SSpec	Temporary facility	Lump Sum	1	36,332.00	36,332.00	15,000.00	15,000.00	57,777.00	57,777.00
01.3	01 53 01	SSpec	Mobilization and de-mobilization	Lump Sum	1	52,014.00	52,014.00	125,000.00	125,000.00	79,900.00	79,900.00
01.4	01 55 00 SSpec	SSpec	Traffic control	Lump Sum	1	42,600.00	42,600.00	65,000.00	65,000.00	140,000.00	140,000.00
01.5	01 57 01 SSpec	SSpec	Environmental Protection	Lump Sum	1	7,972.00	7,972.00	40,000.00	40,000.00	37,700.00	37,700.00
01.6	01 00 00s	SSpec	Utility Locate	Lump Sum	1	27,600.00	27,600.00	55,000.00	55,000.00	61,500.00	61,500.00
01.7	01 58 01	1.3.1	Project Identification	Note			N/A		N/A		N/A
Division 31 - Earthworks							39,630.00		123,910.00		218,642.00
31.1	31 05 17 01 00 00s	1.4.1	Aggregates and granular materials	Note			N/A		N/A		N/A
31.2	31 11 01	1.4.1, 1.4.2	Watermain alignment clearing and grubbing.	sq.m.	3,860	3.50	13,510.00	3.50	13,510.00	10.70	41,302.00
31.3	31 22 01	1.4.4	Watermain top soil stripping (200mm), and stock pile.	cu.m.	770	11.00	8,470.00	20.00	15,400.00	32.00	24,640.00
31.4	31 22 01	SSpec	Remove and dispose of existing booster building	Lump Sum	1	5,150.00	5,150.00	3,000.00	3,000.00	6,700.00	6,700.00
31.5	31 22 01	SSpec	Restore private landscaping features to existing or better condition.	Lump Sum	1	12,500.00	12,500.00	92,000.00	92,000.00	146,000.00	146,000.00
Division 32 - Road and Site Improvements							533,630.00		414,470.00		527,318.00
32.1	32 11 16.1	1.4.	Supply and place 450mm of 75mm minus Select Granular Subbase.	sq.m	4,000	37.50	150,000.00	22.00	88,000.00	30.00	120,000.00
32.2	32 11 23	1.4.2, 1.4.3	Supply and place 250mm of Well Graded Base.	sq.m.	4,000	27.50	110,000.00	16.00	64,000.00	22.00	88,000.00
32.3	32 12 16	1.5.3	Supply and place 75mm of (Class 1) 16mm medium mix asphalt pavement	sq.m.	2,800	39.50	110,600.00	61.00	170,800.00	67.80	189,840.00
32.4	32 11 16.1 32 11 23	SSpec	Restore existing driveway gravel structure to existing or better condition.	each	65	2,094.00	136,110.00	600.00	39,000.00	1,250.00	81,250.00
32.5	32 12 16	1.5.3	Supply and place 50mm of (Class 1) 16mm medium mix asphalt pavement on existing paved driveway	sq.m.	200	47.75	9,550.00	80.00	16,000.00	90.60	18,120.00
32.6	32 92 20	1.8.1 SSpec	Grass seed all disturbed work areas including spreading of stock piled top soil.	sq.m.	3,860	4.50	17,370.00	9.50	36,670.00	7.80	30,108.00

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Item #	Payment Section	Para	Item Description	Unit	Quant	Revised Unit Price	Amount	Revised Unit Price	Amount	Amount	Amount
Division 33 - Utilities							2,171,639.00		2,765,550.00		2,524,408.00
33.1	33 11 01	1.8.2	Supply and install watermain C900 DR 25 PVC, 150mm diameter, for depth of cover 0.0-3.0m.	l.m.	4,184	199.00	832,616.00	250.00	1,046,000.00	267.00	1,117,128.00
33.2	33 11 01	1.8.2	Supply and place watermain C900 PVC DR 25, 200mm diameter, for depth of cover 0.0-3.0m.	l.m.	242	245.00	59,290.00	275.00	66,550.00	285.00	68,970.00
33.3	33 11 01	1.8.2	Supply and install series 160 PE, 50mm diameter, for depth of cover 0.0-3.0m.	l.m.	231	176.00	40,656.00	200.00	46,200.00	121.00	27,951.00
33.4	33 11 01	SSpec	Provide utility pole stabilization.	each	20	1,590.00	31,800.00	1,800.00	36,000.00	2,010.00	40,200.00
33.5	33 11 01	1.8.3	Supply and install 150mm diameter gate valve	each	38	1,801.00	68,438.00	1,750.00	66,500.00	1,880.00	71,440.00
33.6	33 11 01	1.8.3	Supply and install 150mmx150mmx150mmx150mm cross.	each	8	1,060.00	8,480.00	1,000.00	8,000.00	995.00	7,960.00
33.7	33 11 01	1.8.3	Supply and install 150mmx150mmx150mm tee.	each	12	915.00	10,980.00	900.00	10,800.00	850.00	10,200.00
33.8	33 11 01	1.8.3	Supply and install 150mm bend.	each	20	612.00	12,240.00	500.00	10,000.00	645.00	12,900.00
33.9	33 11 01	1.8.3	Supply and install 200mm x 150mm reducer.	each	2	752.00	1,504.00	450.00	900.00	777.00	1,554.00
33.10	33 11 01	1.8.3	Supply and install 150mm blind flange.	each	11	478.00	5,258.00	400.00	4,400.00	475.00	5,225.00
33.11	33 11 01	1.8.3	Supply and install 150mm pipe coupling.	each	11	698.00	7,678.00	700.00	7,700.00	825.00	9,075.00
33.12	33 11 01	1.8.3	Supply and install 150mm pipe flange adapter coupling.	each	19	566.00	10,754.00	450.00	8,550.00	495.00	9,405.00
33.13	33 11 01	1.8.9	Construct concrete thrust and anchor blocks.	each	112	508.00	56,896.00	200.00	22,400.00	295.00	33,040.00
33.14	33 11 01	1.8.2, 1.8.10, SSpec	Construct trenchless crossing of Highway 16 including casing, carrier, spacers, etc.	each	2	28,373.00	56,746.00	20,000.00	40,000.00	33,300.00	66,600.00
33.15	33 11 01, SSpec	1.8.5, 1.8.6	Supply and install air valve chamber and appurtenances.	each	2	12,067.00	24,134.00	4,000.00	8,000.00	5,275.00	10,550.00
33.16	33 11 01	1.8.5, SSpec	Supply and install fire hydrant assembly.	each	21	12,968.00	272,328.00	14,600.00	306,600.00	12,500.00	262,500.00
33.17	33 11 01	1.8.5	Supply and install blow-off assembly.	each	6	4,287.00	25,722.00	3,000.00	18,000.00	3,785.00	22,710.00
33.18	33 11 01	1.8.5	Supply and install test point.	each	15	2,162.00	32,430.00	1,400.00	21,000.00	1,595.00	23,925.00
33.19	33 11 01, 01 10 00S	1.8.3, 1.8.13,	Tie to existing watermain.	each	5	8,366.00	41,830.00	2,800.00	14,000.00	4,750.00	23,750.00
33.20	33 11 01	1.8.9, SSpec	Provide joint protection at watermain and sewer crossing location.	each	9	337.00	3,033.00	1,100.00	9,900.00	1,780.00	16,020.00
33.21	33 11 01	SSpec	Provide joint protection at 50mm diameter PE pipe fittings.	each	10	337.00	3,370.00	400.00	4,000.00	1,450.00	14,500.00
33.22	33 11 01, 01 10 00S	1.8.2, SSpec	Flush, test, and disinfect.	Lump Sum	1	47,533.00	47,533.00	60,000.00	60,000.00	40,000.00	40,000.00
33.23	33 11 01	1.8.2, 1.8.4	Supply and install 19mm to 50mm diameter water service connections (near side).	each	84	1,109.00	93,156.00	3,500.00	294,000.00	1,985.00	166,740.00
33.24	33 11 01	1.8.4, 1.8.10, SSpec	Supply and install 19mm to 50mm diameter trenchless water service connections (far side).	each	62	2,760.00	171,120.00	4,600.00	285,200.00	3,450.00	213,900.00
33.25	33 11 01	1.8.13	Connect existing water service to new curbstop.	each	146	1,134.00	165,564.00	2,100.00	306,600.00	1,350.00	197,100.00
33.26	33 11 01	SSpec	Supply and install 100mm water service to school.	each	1	5,840.00	5,840.00	7,000.00	7,000.00	6,995.00	6,995.00
33.27	33 11 01	SSpec	Abandon and/or dispose of existing valves, blow-offs, curbstops, and hydrants.	each	189	244.00	46,116.00	250.00	47,250.00	130.00	24,570.00
33.28	33 11 01	SSpec	Drain and abandon existing AC watermain.	Lump Sum	1	36,127.00	36,127.00	10,000.00	10,000.00	19,500.00	19,500.00

9

Item #	Payment Section Para	Item Description	Unit	Quant	Revised Unit Price	Amount	Revised Unit Price	Amount	Revised Unit Price	Amount
Division 101 - Optional Work						152,316.00		113,700.00		285,640.00
101.1	33 11 01	SSpec Temporary watermain relocation.	each	4	3,589.00	14,356.00	2,500.00	10,000.00	9,625.00	38,500.00
101.2	31 23 01	1.10.3, SSpec Remove and dispose of unsuitable trench soils	cu.m.	500	24.00	12,000.00	29.00	14,500.00	65.00	32,500.00
101.3	31 23 01	SSpec Supply and place imported granular material.	cu.m.	500	85.00	42,500.00	40.00	20,000.00	72.00	36,000.00
101.4	31 32 19	1.6.1, SSpec Supply and install geotextile lining in moist soil conditions.	l.m.	1,000	4.50	4,500.00	18.00	18,000.00	23.00	23,000.00
101.5	31 23 01, 31 32 19	SSpec Over excavate 300mm below trench bottom and supply 300mm thick geotextile wrapped drain rock in over moist soil conditions.	l.m.	1,000	58.00	58,000.00	35.00	35,000.00	127.00	127,000.00
101.6	33 42 13	1.5.2 Remove and dispose of existing 300mm CSP culvert.	l.m.	80	36.00	2,880.00	40.00	3,200.00	136.00	10,880.00
101.7	33 42 13	1.5.2 Supply and install 400mm CSP culvert.	l.m.	80	226.00	18,080.00	162.50	13,000.00	222.00	17,760.00
Contingency Allowance (See GC 1.19 and SGC 1.19.1)			allow.	1		100,000.00		100,000.00		100,000.00

Tender Price		3,163,733.00
GST 5%		158,186.65
Tender Price plus GST		3,321,919.65

3,817,630.00
190,881.50
4,008,511.50

4,032,885.00
201,644.25
4,234,529.25



MEMORANDUM

To: Board of Directors
From: Jason Llewellyn, Director of Planning
Date: April 24th, 2018
Re: Highway 16 Trail Society

INTRODUCTION

The Highway 16 Trail Society has approached staff with a request relating to the RDBN's involvement in the construction and operation of a portion of the Highway 16 Trail between Smithers and Telkwa. This report seeks the Board's direction regarding the RDBN's future involvement with the project.

As the issue was raised with staff on April 23rd a number of associated details were not available at the time of the writing of this report. Additional information is expected on the supplemental agenda.

BACKGROUND:

The Highway 16 Trail Society is a community group working on establishing a commuter trail between Smithers and Telkwa. The trail is proposed to be adjacent to the Highway within the Highway right of way. A Concept Design Report prepared for the Society is attached for the Board's information.

The proposed commuter trail involves the following.

- The majority of the trail is proposed to be within the Highway right of way.
- The trail is proposed to be approximately 3 metres wide and be either paved or have a gravel surface.
- The preferred route would involve an elevated bridge crossing of the highway or an underpass.
- A minimum of 10 crossings over private property (the registration of right of ways, or the subdivision and purchase of those lands would be required).
- Preliminary construction costs (not including land acquisition costs) are between \$4,094,752 and \$5,331,443.

As noted, the proposed trail is within the Highway right of way, which is under the jurisdiction of the Ministry of Transportation and Infrastructure (MoTI). The MoTI has clearly indicated that they will only allow the development of the trail within their right of

way if the RDBN enters into an agreement with the MoTI to their satisfaction. This agreement would involve the following.

- The RDBN being responsible for the trail including all maintenance, liability, and management.
- The RDBN being responsible for capital replacement costs.
- The RDBN being responsible for the removal of trail infrastructure should the RDBN wish to no longer operate the trail.

The following is a very preliminary estimate of the minimum annual costs associated with the RDBN's operation of the entire trail. These costs are extremely preliminary and are based on the following assumptions.

- The RDBN would enter into an agreement with a 3rd party who would provide maintenance for the RDBN under contract.
- No furniture such as garbage cans, benches, bike racks, etc. will be provided.
- The trail is for summer use only and is closed during winter.
- The below costs do not consider the highway crossing required in options 1 or 2.
- Option 3 would require higher maintenance costs.

Estimated Operating Costs

Staff time	\$5,000 - \$10,000
Shoulder and trail maintenance and repair for a gravel trail.	\$15,000 (\$7,000 if paved)
Sign maintenance (10% replacement per year)	\$5,000
Road crossing line painting	\$5,000
Insurance (easements on private land)	\$5,000
Legal fee reserve	\$5,000

Estimated Repair and Replacement Costs

Re-paving and major repair capital reserve (25 year replacement)	\$50,000
Major repair capital reserve for gravel trail	\$15,000

Annual Paved Trail = \$82,000 plus 10% contingency = \$90,200
Annual Gravel Trail = \$55,000 plus 10% contingency = 60,500

These figures do not include the costs associated with planning and developing the trail. These costs include:

Detailed design	=	?
Construction cost	=	\$4,094,752 and \$5,331,443

Private land acquisition = ??
 Legal / surveying fees = ?

Board Consideration of RDBN Involvement in June 2017

The Highway 16 Trail Society has expended much effort and resources based on the hope that the RDBN will agree to take responsibility for the trail to the satisfaction of the MoTI. It appears that the project will not be able to occur unless it becomes an RDBN project. In July of 2017 staff provided the above information to the Board and asked the Board if:

1. staff should continue working on the Highway 16 Trail project on the understanding that the project is contingent on the RDBN taking full responsibility for the Highway 16 Trail; and
2. staff should develop a Highway 16 Trail implementation strategy, for the Board's consideration, should the Board wish to consider developing the Highway 16 trail.

The July 2017 report also provided options regarding the development of a parks and recreation function for Electoral Area A.

The Regional District Board passed the following motion at the July 20th, 2017 Board meeting that "

"...the Cycle 16 Society develop a Trail Implementation Strategy in regard to the Cycle 16 Trail Project for the RDBN Board of Directors consideration at a future date; and further that staff continue to be a resource for information in regard to the Cycle 16 Trail Project."

THE CURRENT SITUATION

The Highway 16 Trail Society have not provided a Trail Implementation Strategy for the Board's consideration. However, on April 23rd, 2018 the Society informed staff that they have received grant funding to develop a detailed trail design for an area on road right of way between the Town of Smithers and Laidlaw Road. This detailed design and costing is planned to be used in making application to Cycle BC for funding to construct the trail from the Town of Smithers to Laidlaw Road.

The Society is asking the RDBN to comment on the RFP document. The Society is also asking the RDBN to make the future application to Cycle BC for construction funding with the acknowledgement that the RDBN will take responsibility for construction and long term trail maintenance.

Staff are raising the following issues for the Board's consideration.

1. The Highway 16 Trail Society is expending great effort and financial resources with no indication that the RDBN will agree to construct and maintain the trail.

2. The project is being moved forward without an implementation strategy that includes RDBN input and approval. The immediate concern relates to the proposed RFP are trail development standards. If the RDBN is to be responsible for long term maintenance the RDBN has an interest in ensuring that the trail is designed and built to an appropriate standard.
3. A Service Establishment Bylaw establishing the necessary taxation area and taxation limits for the project should be created; otherwise the RDBN's staff, and other, costs associated with the project will continue to be paid for by tax payers outside of Electoral Area A.

STAFF RECOMMENDATIONS

It is recommended that the Board determine whether staff should take a lead role in working with the Highway 16 Trail Society to ensure the development of a trail implementation strategy and associated budget, based on the understanding that the project is contingent on the RDBN taking full responsibility for the Highway 16 Trail.

Should the Board wish to be involved with moving the Highway 16 trail project forward it is recommended that the RDBN Board direct staff to initiate the process to create a Service Establishment Bylaw creating the necessary taxation area and taxation limits.

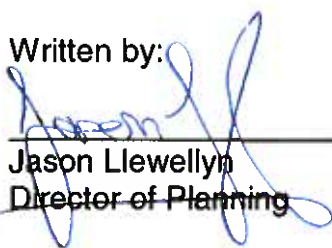
Also, should the Board wish to be involved with moving the Highway 16 trail project forward it is recommended that the RDBN Board Direct staff to review the proposed RFP for trail design to ensure that appropriate consideration is given to safety, maintenance, and other potential issues of concern to the RDBN.

Recommendations:

That the RDBN Board of Directors provide direction regarding the following tasks.

1. Taking a lead role in working with the Highway 16 Trail Society on developing a trail implementation strategy and budget, based on the understanding that the project is contingent on the RDBN taking full responsibility for the Highway 16 Trail.
2. Initiating the process to create a Service Establishment Bylaw creating the necessary taxation area and taxation limits.
3. And reviewing the RFP for trail design to ensure that appropriate consideration is given to safety and maintenance issues.

Written by:



Jason Llewellyn
Director of Planning

Proposed Telkwa-Smithers Multi-Use Pathway Concept Design Report



McElhanney

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3907 4th Avenue
Smithers, BC
VOJ 2N0

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Appendices

- Appendix A – Concept Alignment Drawings
- Appendix B – Class C Cost Estimate Sheets

1. Introduction

1.1. Project Location

The proposed Telkwa-Smithers Pathway project is located along a 12 kilometer stretch of the Highway 16 Right-of-Way corridor connection between the Village of Telkwa and the Town of Smithers. Figure 1 shows the approximate study area with key landmarks at the start and end of the proposed alignment.

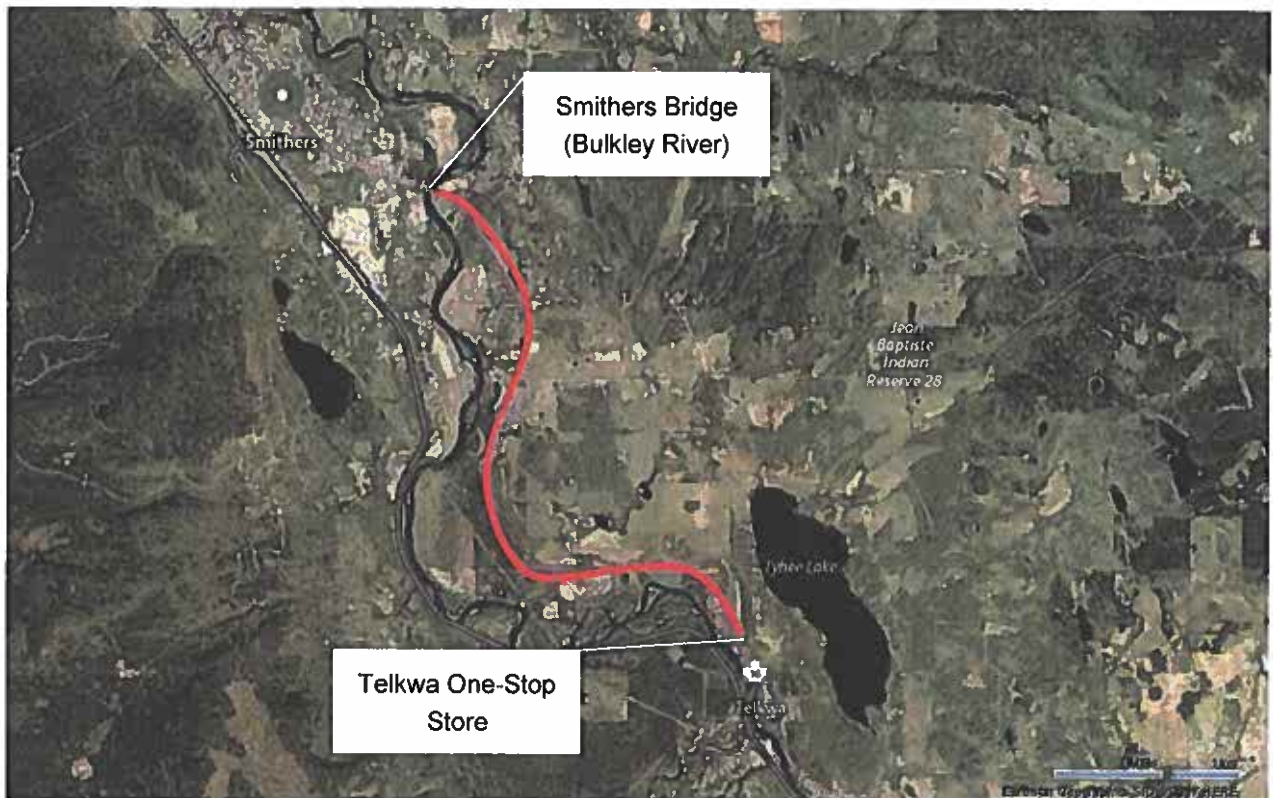


Figure 1. Site location map (source: bing.com/maps) with study area highlighted in red

1.2. Scope of Study

McElhanney Consulting Services Ltd. (McElhanney) was retained by the Cycle 16 Trail Society (Cycle 16 or the Client) for pre-design services at the conceptual level for the proposed project. The scope of work for this conceptual design report, as described in our proposal dated January 12, 2017, was to conduct a background review of relevant information provided by the Client and other stakeholders, define the project features and goals, identify the major constraints and opportunities for improvement for the alignment proposed by Cycle 16 through field and desktop review, prepare concept alignment drawings, and prepare a high-level construction cost estimate.



The main objectives and outcomes from the proposed scope of work were as follows:

- Review the proposed alignment provided by Cycle 16 and further develop technically feasible conceptual alignment options based on the physical and regulatory constraints provided by Cycle 16 and the BC Ministry of Transportation and Infrastructure (MoTI);
- Qualitatively compare various options considered;
- Prepare preliminary cost estimates for various options;
- Provide guidance to Cycle 16 for the next steps in project development; and,
- Prepare a report compiling the information above that can be used to facilitate the next steps of the project.

1.3. Vision

The proponent for the project, Cycle 16 Trail Society (Cycle 16), has put in significant preliminary effort to assess the feasibility of the proposed pathway link and begun stakeholder engagement along the corridor. The purpose of Cycle 16 Trail Society is to plan, develop, construct, maintain, and manage trails in the Bulkley Valley area of British Columbia for non-motorized use by the public to¹:

- Promote health and fitness;
- Promote safe modes of transportation that are less harmful to the environment;
- Link the various communities in the Bulkley Valley for people who are unable to use highways or do not wish to use them for lack of a suitable vehicle or for safety, environmental, or other concerns; and,
- Promote non-motorized tourism within the Bulkley Valley.

The vision of the proposed project is to provide a non-motorized pathway connection, separate from highway traffic, between the communities of Telkwa and Smithers.

1.4. Stakeholders

McElhanney attended a project kickoff meeting, liaised with Cycle 16, conducted a legal land review, and attended the Cycle 16 Annual General Meeting and Open House to compile a preliminary list of stakeholders who may be directly or indirectly affected by the proposed project. The following list on Table 1 should be considered preliminary based on the information collected to date, and should be maintained by Cycle 16 as the project progresses.

¹ Constitution of Cycle 16 Trail Society (July 29, 2016).

Table 1. Preliminary List of Project Stakeholders

Stakeholder	Contacts
Cycle 16 Trail Society	Tony Harris (President) Jeremy Shriber (Technical Director)
BC Ministry of Transportation	Carl Lutz (District Manager) Cailey Brown (Acting Programs Manager)
Town of Smithers	Mark Allen (Director of Development Services) Ariane Herzog (Engineering Tech) Greg Brown (City Councillor)
Village of Telkwa	Darcy Repen (Mayor)
Regional District of Bulkley-Nechako	Mark Fisher (Representative for Area A, Smithers Rural) Jason Llewellyn (Director of Planning)
Wet'suwet'en First Nation	David deWit (Natural Resource Manager)
Private Property Owners	All owners along alignment where private land, road access, or driveway access is crossed

2. Methodology

2.1. Background Review

McElhanney was provided with the following materials by Cycle 16:

- PDF and CAD drawings of the initial proposed alignment from Cycle 16;
- Ground survey data from 2007 (conducted by McElhanney) of the study area with permission from MoTI;
- Architectural drawings.

Additional information, such as geotechnical reports, as-built highway drawings, and environmental studies were requested from MoTI; however, were not available or did not exist.

The 2007 survey data and the initially proposed alignment by Cycle 16 was utilized as the basis for the development of the conceptual alignments described in this report. Since the 2007 ground survey, it is understood that MoTI completed widening of the shoulder of Highway 16 by approximately 1 m; however, this was not considered a significant issue for the current scope of work as the pathway alignment is generally greater than 1 m away from the highway shoulder. Additionally, new driveways, subdivisions, utilities, etc. may have been added or moved near the highway corridor which were not shown in the background data; however, for it was assumed that the data was adequately representative of existing conditions for conceptual planning purposes.

Legal boundaries shown on the drawings in Appendix A were updated in April 2017 based on the most recently available land title and cadastre files from the Land Title and Survey Authority of British Columbia.

2.2. Field Reconnaissance

Tyler Wilkes of McElhanney conducted field reconnaissance of the highway corridor with Mr. Jeremy Shriber of Cycle 16 on February 1, 2017 and March 8, 2017. During the field reconnaissance, an effort was made to visually check the 2007 survey data for representativeness of existing conditions and minor updates or additions to significant deviations were added based on approximate measurements (without survey).

2.3. Design Criteria, Standards, and Guidelines

Geometric Layout

Geometric design criteria for the conceptual design were selected based upon review of the Transportation Association of Canada's Bikeway Traffic Control Guidelines for Canada (TAC), BC Ministry of Transportation Supplement to TAC Geometric Design Guide (BC MoTI TAC Supplement), various bikeway design guidelines, and McElhanney's experience on similar projects. Based on review of these sources, the following criteria were chosen for the conceptual design:

- Design Speed 30 km/h (minimum) to 50 km/h (maximum)
- Trail Width 3.0 m paved
- Minimum Horizontal Clearance 1.0 m
- Minimum Horizontal Curve 25 m centerline radius

- K-Value 2.5
- Vertical Crest Curve Minimum 30 m
- Vertical Clearance 2.5 m
- Fill Slopes 3H:1V
- Cut Slopes 2H:1V
- Maximum Grade 10%

Highway Clear Zone

Further to the design criteria above, the pathway was specified to be aligned outside of the existing highway 16 Clear Zone by MoTI. The Clear Zone concept is described in Section 3.1.3 of TAC, and is generally intended to serve as recovery zone free of obstacles to allow a motor vehicle to recover if it runs off the road. As per Table 620.08 of the BC MoTI TAC Supplement, the Clear Zone distance varies with traffic volume, curve radius, design speed, and fill/cut slope angle at a specific location; however, a consistent Clear Zone size of 9 m may also be used for practicality. The following fixed Clear Zone limits were used for the conceptual design based on Table 620.08 of the BC MoTI TAC Supplement:

- 9.0 m wherever possible in 90 km/hr posted speed limit areas (as per direction by MoTI);
- 7.5 m wherever 9.0 m was not possible due to land or physical feature conflict and the highway was in a minimum 6H:1V cut slope; and,
- 5.5 m wherever possible in the 60 km/hr posted speed limit areas.

Intersections

Detailed intersection design was not considered at this stage of the project; however, consideration was given to overall alignment of the pathway at roadways and driveways. Given that at all roadway and driveway intersections along the highway corridor have lower traffic volume than the highway itself and that the highway RoW is extremely narrow, it is recommended that the pathway be aligned near the existing side-road stop bars (eg. possibly inside the clear zone) near intersections and near the end of driveways. This alignment would allow for sight lines for both motorists and trail users and would force vehicles on the side-roads to stop prior to reaching the pathway crossing. For this reason, pathway alignment within the clear zone at these locations were not highlighted as problem areas (see Section 3.5). Signage, site-specific sight line clearance, and other aspects of detailed intersection design were not considered at this time, but will need to be considered for further steps of design.

Surfacing

Both paved and gravel surfaces were considered in the cost estimating exercise described below in Section 4.1. The pathway structure, considered suitable for most subgrade conditions, was as follows:

- 50 mm asphalt (for paved only);
- 150 mm Crushed Base Course; and,
- 300 mm Select Granular Sub-Base.

Other Guidelines and References

Other sources and guidelines reviewed relating to pathway design and construction include:

- Trails in Alberta Highway Rights-of-Way, Policies, Guidelines, and Standards (Alberta Transportation, 2015).
- Development Guidelines and Standard Specifications: Landscape Construction (The City of Calgary, Parks, 2013).
- Planning and Design for Pedestrians and Cyclists: A Technical Guide (Velo-Quebec, 2010)

2.4. Constraints

The physical constraints considered in the development of the conceptual alignments were as follows:

- Terminus points at the Smithers Bridge existing sidewalk (eastbound side of bridge) and the Telkwa One-Stop store (eastbound or westbound side of road) near existing crosswalk.
- Follow Highway 16 right-of-way, minimize alignment on private land.
- Pathway alignment outside highway clear zone wherever possible.
- Minimize conflicts with existing infrastructure and utilities.
- Level crossing of Highway 16 not permitted as per MoTI direction.
- User and vehicle safety at driveway and road crossings.

The physical constraints considered arose from discussions with Cycle 16 and MoTI during scope development for the project, as well as logistical factors based on past experience to reduce permitting requirements and construction costs.

2.5. Other Factors Considered

In addition to the physical and regulatory constraints described above, the following factors were at least preliminarily considered in development of the conceptual alignments:

- Minimize side road crossings, particularly busy crossings;
- Preliminary stakeholder feedback regarding use of private property (provided by Cycle 16);
- Constructability, drainage, and maintenance; and,
- Permitting and engineering requirements.

3. Conceptual Alignment Summary

Three conceptual alignments (designed Options 1 through 3) were developed for the proposed project based on the field observations, design criteria, constraints, and other factors considered as described in Section 2 and are attached in Appendix A. Given the conceptual scope of the project at this point, the alignments should be considered corridors suitable for the proposed pathway based on the constraints previously described as opposed to detailed pathway geometry layouts.

3.1. Common Alignment

All proposed alignment options begin at the eastbound side of the Smithers Bridge over the Bulkley River, route around the perimeter of the Par 3 golf course (Remainder of Lot A, Plan PRP 12858), and then follow along the eastbound side of the Highway 16 corridor to approximately station 4+050. Key challenges, opportunities, and features common to all proposed options (between 0+000 and 4+100) include:

- Fill slope required to provide design grades down highway embankment at 0+050.
- Route around Par 3 golf course, as opposed to following toe of highway embankment, to avoid steep and dangerous driveway crossing of the golf course entrance at 1+100.
- Existing underground cattle crossing under Highway 16 at 1+900 must be extended.
- Two (2) residential road crossings and one (1) side road crossing with common truck traffic (gravel truck access at Laidlaw Frontage Road).
- Aside from above areas, relatively simple alignment along highway RoW with opportunity to provide higher level of user experience with views of Bulkley River and subtle flow improvements to the final alignment (gentle curves and dips).

3.2. Option 1

Initial work by Cycle 16 in previous years suggested that the most favourable alignment, based on road crossing, stakeholder feedback, and constructability, would be Option 1 (similar original alignment provided by Cycle 16 as described in Section 2.1). This alignment proposes a bridge crossing of Highway 16 at station 4+050 near Babine Lake Road to avoid a private property conflict at 20+080 with a nearby owner not currently in support of the proposed pathway crossing the property. Additionally, the conceptually proposed bridge crossing location is at a geometrically-favourable area where the highway exists in an approximately 2 to 3 m deep cut which helps to provide clearance of the highway for a bridge. Beyond the proposed bridge crossing, Option 1 then follows along the westbound side of the Highway 16 RoW to the Telkwa One-Stop store utilizing several existing gravel and/or paved segments of decommissioned highway.

The key challenges, opportunities, and features of Option 1 include:

- Bridge crossing of Highway 16 at 4+050. A bridge crossing of Highway 16 would result in Option 1 having the highest construction costs, most challenging approval/permit process, and most intensive engineering requirements of the proposed Options.
- Utilizes three (3) segments of alignment with existing improved (gravel and/or paved) surfaces from 4+200 to 4+550 (300 m length), 5+500 to 6+100 (600 m length), and 9+600 to 10+050 (450 m length) resulting in lower construction costs in these areas.

- Steep side slope area for approximately 150 m at approximately 5+350 to 5+500 may require engineering during detailed design.
- From 5+100 to 10+100, the alignment on the eastbound side of the highway is generally located on the high-side of the highway cut providing improved sight lines, better drainage, and more enjoyable user experience as opposed to the other options on the westbound side.
- Four (4) road crossings, all small residential access roads with low traffic volume expected.

3.3. Option 2

Option 2 was developed to provide a lower-cost highway crossing method of an underpass at 21+400. This location was conceptually proposed for an underpass given the convenient geometry of the existing highway, which is a fill embankment approximately 3 to 5 m high in the area. Additional justification for proposing an underpass crossing, as opposed to an overhead crossing, is that precedence for this type of infrastructure is set in the area with several underpass structures for both pedestrian and cattle use. Beyond the conceptually proposed underpass location towards Telkwa, Option 2 follows the Option 1 alignment starting at approximately 5+500.

The key challenges, opportunities, and features of Option 2 include:

- Underpass crossing of Highway 16 at 21+400. An underpass crossing of the highway is a lower-cost alternative to a bridge crossing with less-intensive engineering, permitting, and approval requirements.
- From 20+000 where Option 2 begins from the common alignment, the alignment must cross two (2) private properties and constrained by many physical boundaries, such as power poles, fences, and embankments.
- Based on preliminary stakeholder feedback provided by Cycle 16, some of the property owners in this area are not currently in support of allowing the proposed pathway to cross the properties; therefore, challenging stakeholder negotiations and/or concessions may be required for Option 2.

3.4. Option 3

Option 3 was developed to follow the eastbound side of the Highway 16 corridor for the entire alignment. The terrain and the number/type of road crossings on the eastbound side of the highway corridor are less favourable than the westbound side; however, a highway crossing is not required making Option 3 the option with the least engineering, permitting, approval and cost challenges.

The key challenges, opportunities, and features of Option 3 include:

- No crossing of Highway 16 required – alignment on eastbound side of RoW for entire length.
- Same alignment and challenges as Options 2 from 30+000 to 31+400.
- No existing improved gravel or paved surfaces available for use.
- Steep slope at 34+500 will require significant fill to achieve appropriate grades for pathway.
- Several higher-volume road and/or driveway crossings, including Raymond Road, gravel pit access at 32+600, and Donaldson Road.
- Low-lying wet area on private property from 35+500 to 36+550 will require additional earthworks and drainage work for pathway construction.

3.5. Problem Areas and Notes

On the conceptual alignment drawings in Appendix A, “problem areas” for clear zone conflicts, fence relocation, and private property are identified by coloured boxes. These areas and the annotated notes on the drawings highlight some of the challenges described above.

4. Preliminary Options Analysis

Preliminary options analysis was completed based on the concept alignments developed. Given the current scope of work for this project, the analysis was performed at a high-level with focus only on financial and technical comparison of the construction and engineering features of the conceptual alignments – many of the “soft” factors, such as stakeholder and public support and land acquisition costs have not been considered at this time. This information is intended as preliminary information to facilitate discussions and decision-making processes by Cycle 16 and engaged stakeholders to determine which alignment(s) may be selected for further consideration.

4.1. Construction Cost Estimate

Class C construction cost estimates were prepared for each alignment based on the preliminary estimated quantities from the conceptual alignment drawings. The detailed Class C construction cost estimate spreadsheets are provided in Appendix B and a summary is provided below on Table 2. The values provided on Table 2 include estimated construction costs, design/construction engineering costs (estimated 15%), and construction contingency (20%) and the highway crossing and pathway costs were separated to show the impact of crossing costs on the overall project. Property costs are not included.

Table 2. Class C Cost Estimate Summary

Item	Option 1	Option 2	Option 3
Highway Crossing Costs	\$2.0 million	\$1.0 Million	n/a
Pathway Costs	\$3.3 million (paved) \$2.6 million (gravel)	\$3.4 million (paved) \$2.7 million (gravel)	\$4.1 million (paved) \$3.4 million (gravel)
Estimated Total	\$5.3 million (paved) \$4.6 million (gravel)	\$4.4 million (paved) \$3.7 million (gravel)	\$4.1 million (paved) \$3.4 million (gravel)

Note: property costs not included.

4.2. Alignment Comparison

A qualitative comparison table was developed to give an overview of the technical characteristics of each option relative to one another. The alignment comparison focused on features of the conceptual alignments that were comparable and easily quantifiable at the high-level of the conceptual design. The conceptual alignment comparison table is provided below on Table 3.



Table 3. Conceptual Alignment Comparison Table

Item	Option 1	Option 2	Option 3
Highway Crossing	<ul style="list-style-type: none"> - Bridge. - High cost relative to other options. - Specialized contractors required - Logistics, permitting and engineering challenges. 	<ul style="list-style-type: none"> - Underground (culvert). - Intermediate cost relative to other options. - Construction impacts on highway. - logistics, permitting and engineering challenges. 	<ul style="list-style-type: none"> - No Crossing required. - Least cost and less engineering/permitting required compared to other options.
Private Property Length	2.2 km	2.1 km	3.7 km
Number of Private Properties	10	11	17
Pathway Constructability	<ul style="list-style-type: none"> - Most favourable terrain for pathway construction. - Lowest pathway construction costs due to alignment on existing improved surfaces (0.6 km paved and 0.8 km gravel). - Steep slope area at 5+400 may require engineering design. 	<ul style="list-style-type: none"> - Challenging terrain between 20+100 and 21+200. - Utilizes same existing improved surfaces as Option 1 (0.6 km paved and 0.8 km gravel). 	<ul style="list-style-type: none"> - Least favourable terrain for pathway construction relative to other options. - Steep slope at 34+500 requires large fill slope. - Challenging terrain between 30+100 and 31+300. - Wet low area requiring extra earthworks and drainage (compared to other options) from 35+500 to 36+500.
Other Crossings	<ul style="list-style-type: none"> - 2 medium, high, or industrial volume road crossings. - 4 low volume road crossings. - 12 driveway crossings. - 1 existing cattle underpass 	<ul style="list-style-type: none"> - 2 medium, high, or industrial volume road crossings. - 4 low volume road crossings. - 15 driveway crossings. - 1 existing cattle underpass 	<ul style="list-style-type: none"> - 5 medium, high, or industrial volume road crossings. - 4 low volume road crossings. - 17 driveway crossings. - 1 existing cattle underpass
Clear Zone	- 3 x <20 m length sections within clear zone.	- 3 x <20 m length within clear zone.	- 1 x <20 m length within clear zone.

5. Discussion

McElhanney has provided three (3) conceptual alignments for the proposed Smithers-Telkwa Multi-Use Pathway that are considered technically feasible to design and construct based on the current understanding of the project. The conceptual alignments face many constraints and challenges, such as the narrow Highway 16 RoW considered for use, existing infrastructure conflicts, private property crossings, and sections of unfavourable terrain. The conceptual alignment drawings represent corridors suitable for the proposed pathway based on the constraints considered in this report, but do not wholly consider public, stakeholder, nor affected private property owner sentiment. Furthermore, the alignments will require significant effort to further determine appropriate design for the challenging areas described above and may require adjustment based on new information acquired during further stages of the project.

The preliminary options analysis described in Section 4 was limited to the construction and engineering "hard" costs and technical features associated with the conceptual alignments and does not include what may be significant costs of land acquisition. The analysis presented allows for informed discussion between project stakeholders, but does not adequately cover all considerations required to recommend the most feasible alignment. The technical and economic factors presented comprise only a portion of overall project feasibility – stakeholder, public, and affected property owner factors are more likely the driving factors but have not yet been determined.

The following sections provide guidance to Cycle 16 for the next steps and key issues for the project.

5.1. Next Steps

This report should be considered the first step in the project lifecycle – significant effort will be required by Cycle 16 and other to see the proposed project to construction. The following items are provided as general guidance for the next steps for the project:

- *Preliminary Stakeholder Engagement* – important stakeholders to the project should be engaged to provide feedback regarding the information provided in this report. A formalized process should be utilized and all feedback should be collected and maintained in a format suitable for incorporation into further design stages.
- *Functional Design* – this stage will incorporate feedback collected during preliminary stakeholder engagement and may involve more detailed options analysis, stakeholder and regulatory body engagement, refinement and more detailed design for alignment and pathway features where required, regulatory approval applications, and third-party agreement applications.
- *Stakeholder and Public Consultation* – formalized stakeholder and public consultation.
- *Detailed design* – refinement of alignment and details based on public and stakeholder consultation, detailed site assessments (surveying, geotechnical, hydrotechnical, etc.), engineering design, preparation of construction and tender documents.

5.2. Ownership Structure and Private Land

A key factor for the project requiring attention is the ownership structure. The proposed project connects two municipal areas (Telkwa and Smithers), occurs on public highway RoW administrated by MoTI, and impacts many private property owners with the Regional District of Bulkley-Nechako; therefore, there is not an obvious

choice of entity or organization to ultimately take ownership responsibility of the proposed infrastructure. Currently, Cycle 16 is the prime proponent of the project lobbying the affected parties for support; however, not-for-profit societies typically do not have the legal ability or capacity to own, operate, and maintain public infrastructure such as this without some form of partnership agreement with a government body.

Ultimately, the stakeholders and proponents for the project must collaborate to develop an ownership structure appropriate for the financial, political, and legal nature of the project and practical for the specific regional situation. It is also possible for portions of the proposed infrastructure may be owned, operated, or managed by different parties.

Private land considerations are directly linked to the ownership structure of the pathway infrastructure. Typically, pathway infrastructure on private land is created as an easement on the land title like other public infrastructure or utilities. To do this, the ownership structure must involve a ubiquitous legal entity to assume this role.

5.3. Further Design

Based on McElhanney's work to date, we recommend focusing on the following items during the stakeholder engagement and functional design phases:

- Private landowner engagement;
- User and roadway safety analysis to determine if clear zone constraints can be relaxed in certain areas to avoid private land conflicts;
- Stakeholder engagement to discuss ownership structure;
- Refine concept and cost estimates for underpass and bridge highway crossing options (if required); and,
- Refinement of alignment based on preliminary stakeholder engagement feedback.

6. Closure

This report has been prepared by McElhanney Consulting Services Ltd. for the benefit of Cycle 16 Trail Society. The information and data contained herein represent MCSL's best professional judgment considering the knowledge and information available to MCSL at the time of preparation. Except as required by law, this report and the information and data contained herein are to be treated as confidential and may be used and relied upon only by the client, its officers, and employees.

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We trust this report submission meets your requirements for the project. Should you have any queries, please do not hesitate to contact the undersigned at 250.631.4068 or twilkes@mcelhanney.com.

Respectfully submitted,

McElhanney Consulting Services Ltd.

Prepared by:



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Project Manager and Trail Designer
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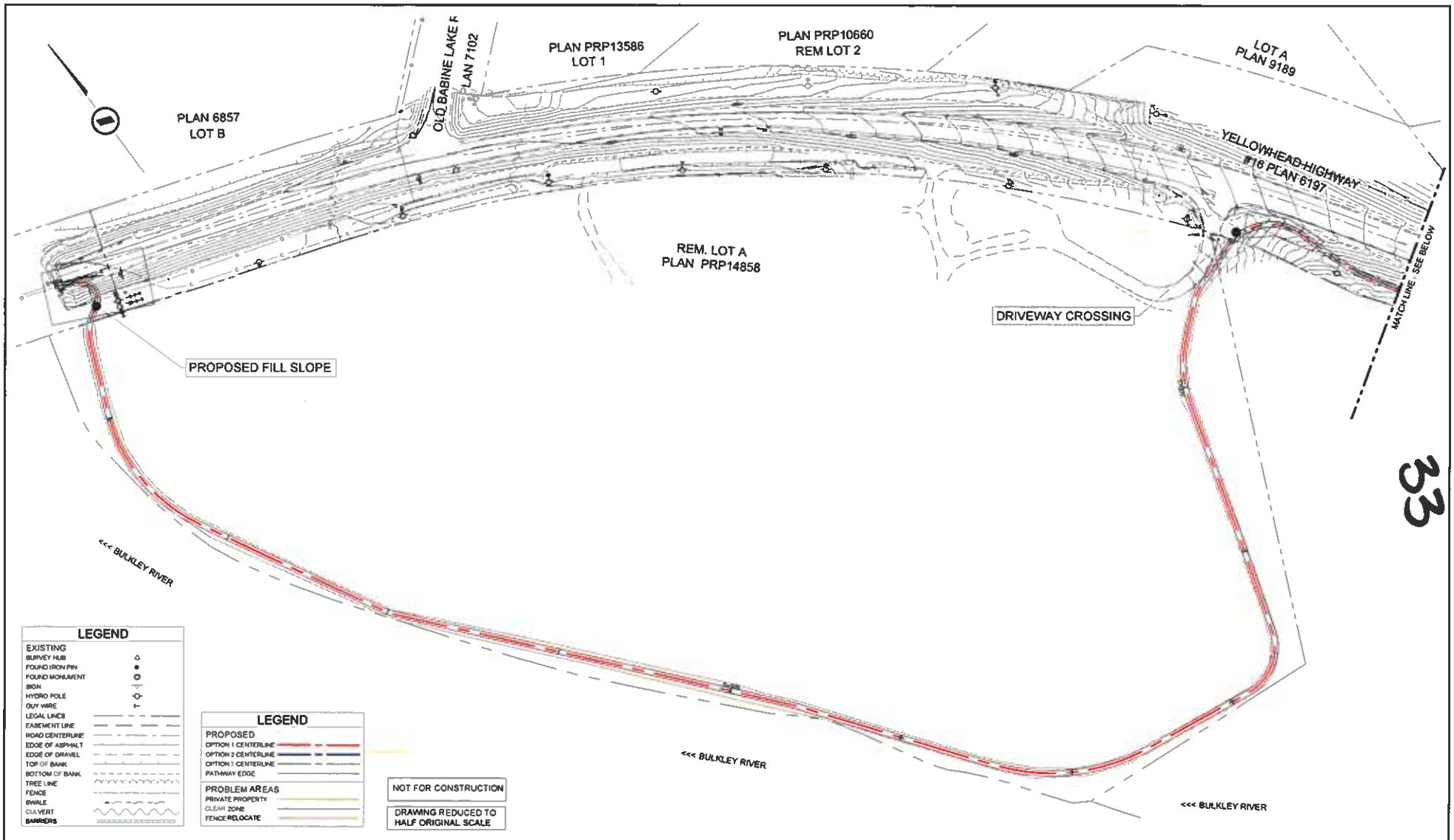
Reviewed by:



Darin Langhorst
May 9 2017

Darin Langhorst, P. Eng
Division Manager, Municipal Engineering
dlanghorst@mcelhanney.com

Appendix A – Concept Alignment Drawings



LEGEND

EXISTING	
SURVEY HUB	○
FOUND IRON PIN	△
FOUND MONUMENT	●
IRON	○
HYDRO POLE	⊕
OUT WIRE	—
LEGAL LINES	---
EASEMENT LINE	- - -
ROAD CENTERLINE	—+—
EDGE OF ASPHALT	—+—+—
EDGE OF DRIVEWAY	—+—+—+—
TOP OF BANK	—+—+—+—+—
BOTTOM OF BANK	—+—+—+—+—+—
TREE LINE	~ ~ ~
FENCE	—+—+—+—+—+—+—
SHALE	—+—+—+—+—+—+—+—
CULVERT	—+—+—+—+—+—+—+—+—
BARRENDS	—+—+—+—+—+—+—+—+—+—

LEGEND

PROPOSED	
OPTION 1 CENTERLINE	—+—+—+—+—+—+—+—+—+—
OPTION 2 CENTERLINE	—+—+—+—+—+—+—+—+—+—+—
OPTION 3 CENTERLINE	—+—+—+—+—+—+—+—+—+—+—+—
PATHWAY EDGE	—+—+—+—+—+—+—+—+—+—+—+—+—
PROBLEM AREAS	
PRIVATE PROPERTY	—+—+—+—+—+—+—+—+—+—+—+—+—
CLEAR ZONE	—+—+—+—+—+—+—+—+—+—+—+—+—+—
FENCE RELOCATE	—+—+—+—+—+—+—+—+—+—+—+—+—+—+—

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REV	DATE	DESCRIPTION	BY	CHK
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4				
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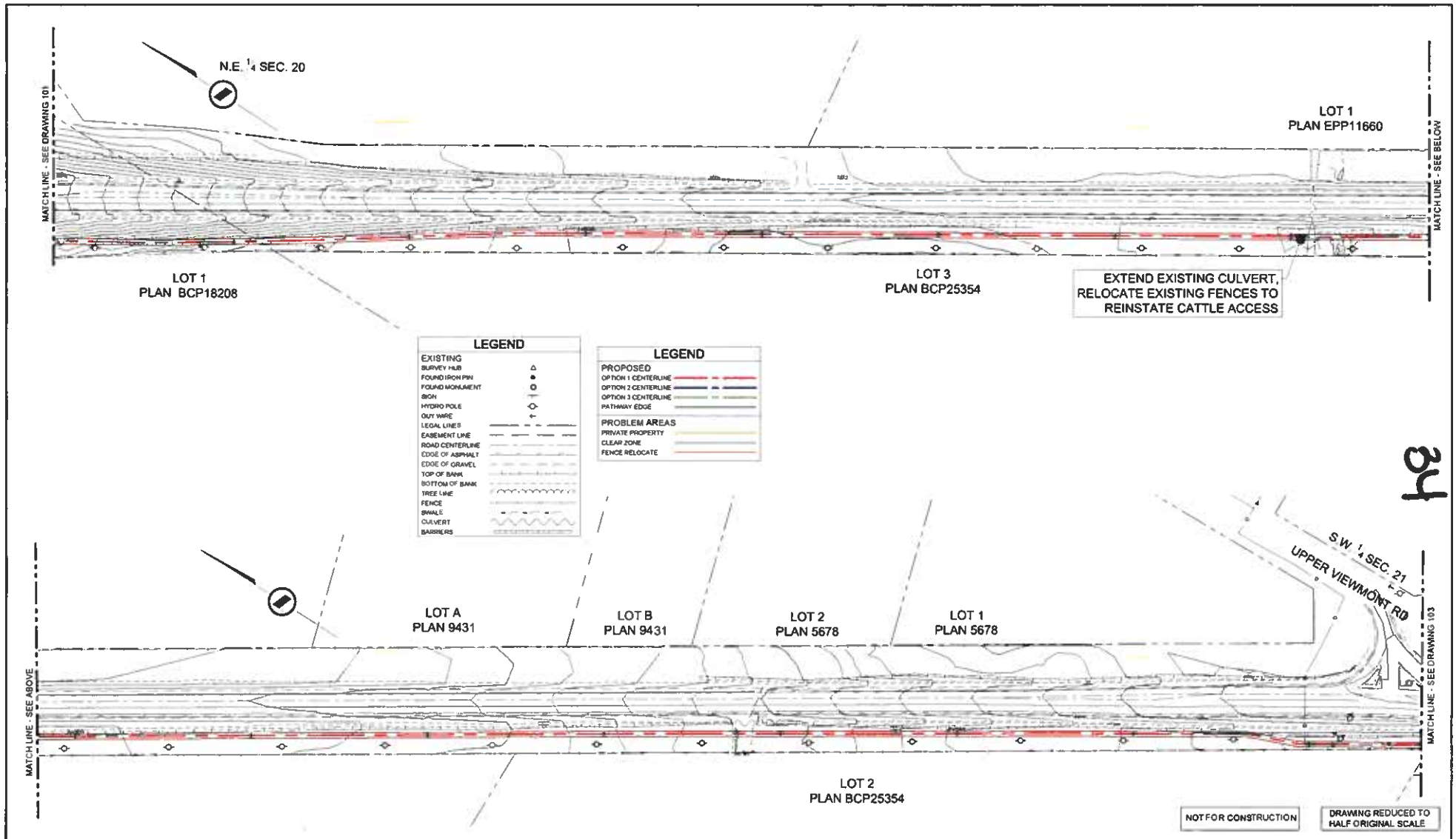
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CYCLE 16 TRAIL SOCIETY
TELKWA TO SMITHERS PATHWAY
CONCEPT ALIGNMENT

Drawing No
101

Project Number
2331-00785-00

Rev
PH



LEGEND

EXISTING SURVEY HUB	△
FOUND IRON PIN	●
FOUND MONUMENT	○
BOX	□
HYDRO POLE	⊙
OUT WIRE	+
LEGAL LINES	---
EASEMENT LINE	- - - -
ROAD CENTERLINE	—+—+—+—+—
EDGE OF ASPHALT	—+—+—+—+—
EDGE OF GRAVEL	—+—+—+—+—
TOP OF BANK	—+—+—+—+—
BOTTOM OF BANK	—+—+—+—+—
TREE LINE	~~~~~
FENCE	—+—+—+—+—
SMALL CULVERT	—+—+—+—+—
BARRIERS	—+—+—+—+—

LEGEND

PROPOSED OPTION 1 CENTERLINE	—+—+—+—+—
PROPOSED OPTION 2 CENTERLINE	—+—+—+—+—
PROPOSED OPTION 3 CENTERLINE	—+—+—+—+—
PATHWAY EDGE	—+—+—+—+—
PROBLEM AREAS PRIVATE PROPERTY	—+—+—+—+—
CLEAR ZONE	—+—+—+—+—
FENCE RELOCATE	—+—+—+—+—

102

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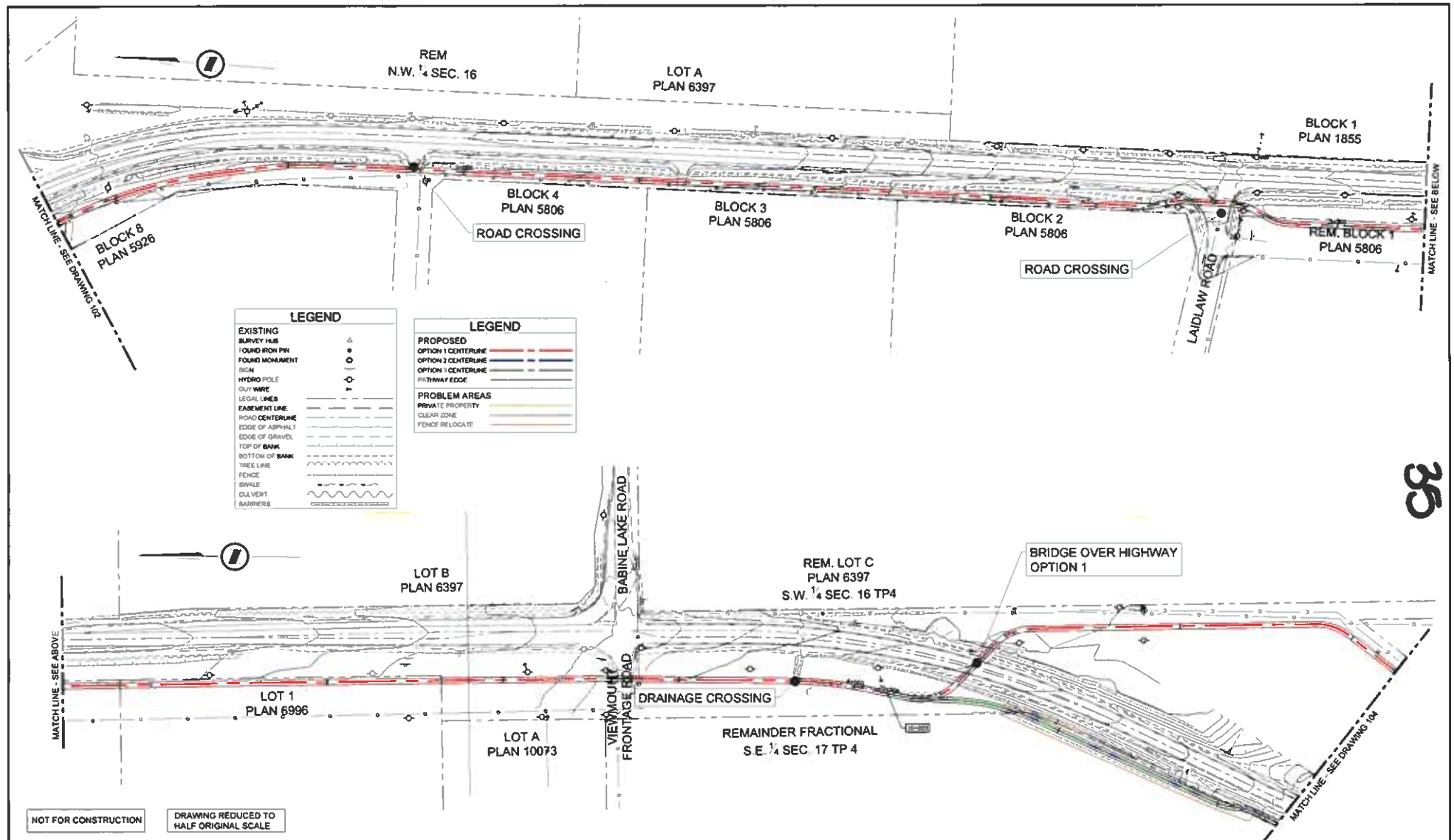
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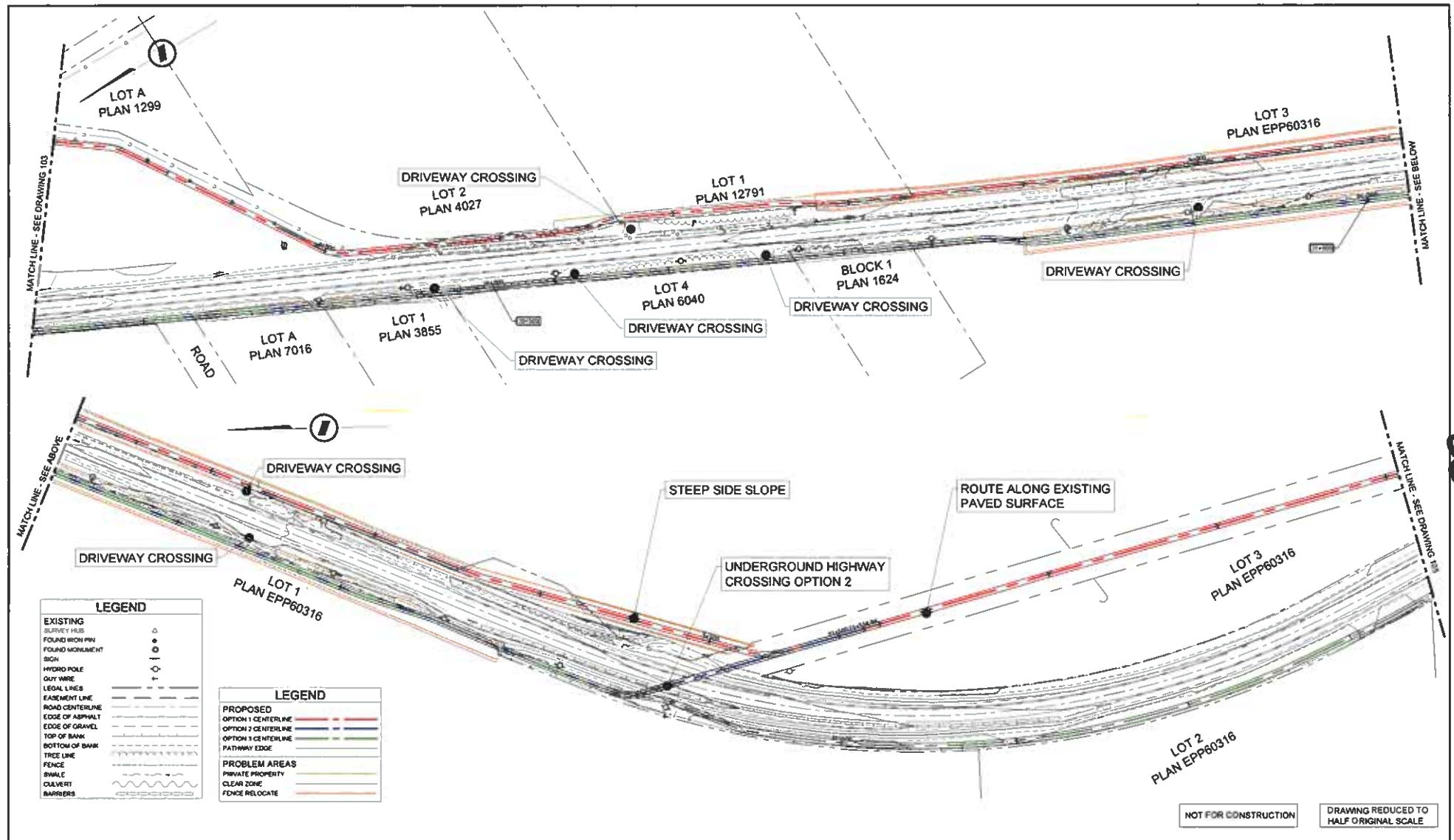
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LEGEND

EXISTING SURVEY HUB	⊙
FOUND IRON PIN	⊙
FOUND MONUMENT	⊙
SIGN	⊙
HYDRO POLE	⊙
GUY WIRE	⊙
LEGAL LINES	---
EASEMENT LINE	---
ROAD CENTERLINE	---
EDGE OF ASPHALT	---
EDGE OF GRAVEL	---
TOP OF BANK	---
BOTTOM OF BANK	---
TREE LINE	---
FENCE	---
SWALE	---
CULVERT	---
BARRIERS	---

LEGEND

PROPOSED OPTION 1 CENTERLINE	---
PROPOSED OPTION 2 CENTERLINE	---
PROPOSED OPTION 3 CENTERLINE	---
PROPOSED PATHWAY EDGE	---
PROBLEM AREAS	---
PRIVATE PROPERTY	---
CLEAR ZONE	---
FENCE RELOCATE	---

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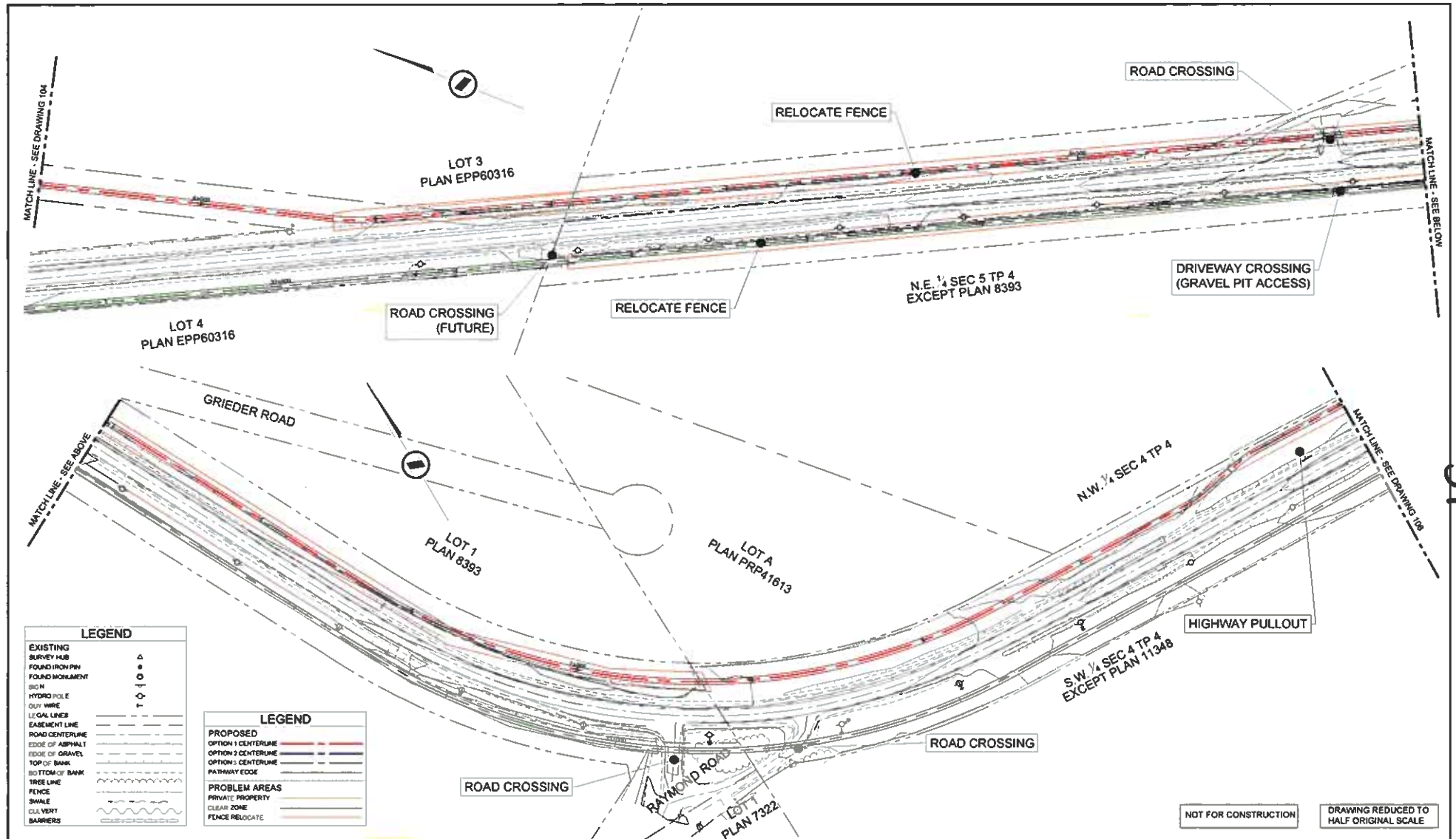
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CONCEPT ALIGNMENT

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LEGEND

EXISTING SURVEY HUB	⊙
FOUND IRON PIN	⊕
FOUND MONUMENT	⊕
BORN	⊕
HYDRO POLE	⊕
OUT WIRE	⊕
LOCAL LINES	---
EASEMENT LINE	---
ROAD CENTERLINE	---
EDGE OF ASPHALT	---
EDGE OF GRAVEL	---
TOP OF BANK	---
BOTTOM OF BANK	---
TREE LINE	---
FENCE	---
SHALE	---
CULVERT	---
BARNIERS	---

LEGEND

PROPOSED OPTION 1 CENTERLINE	---
PROPOSED OPTION 2 CENTERLINE	---
PROPOSED OPTION 3 CENTERLINE	---
PATHWAY EDGE	---
PROBLEM AREAS PRIVATE PROPERTY	---
CLEAR ZONE	---
FENCE RELOCATE	---

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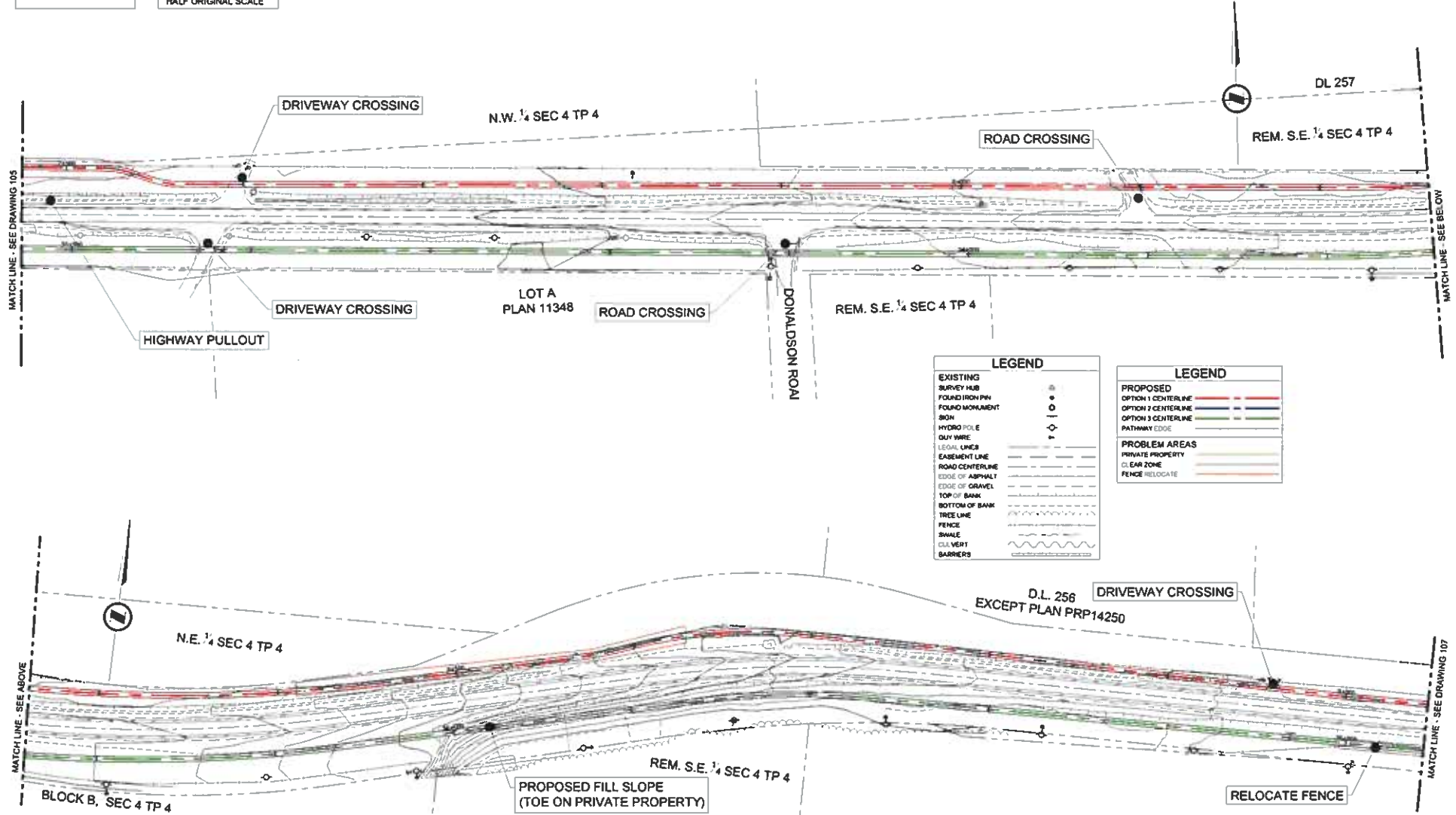
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LEGEND

EXISTING	
SURVEY HUB	○
FOUND IRON PIN	●
FOUND MONUMENT	⊙
SIGN	⊕
HYDRO POLE	⊖
GUY WIRE	—
LEGAL LINE	—
EASEMENT LINE	—
ROAD CENTERLINE	—
EDGE OF ASPHALT	—
EDGE OF GRAVEL	—
TOP OF BANK	—
BOTTOM OF BANK	—
TREE LINE	—
FENCE	—
SWALE	—
CULVERT	—
BARRIERS	—

LEGEND

PROPOSED	
OPTION 1 CENTERLINE	—
OPTION 2 CENTERLINE	—
OPTION 3 CENTERLINE	—
PATHWAY EDGE	—

PROBLEM AREAS

PRIVATE PROPERTY	—
CLEAR ZONE	—
FENCE RELOCATE	—

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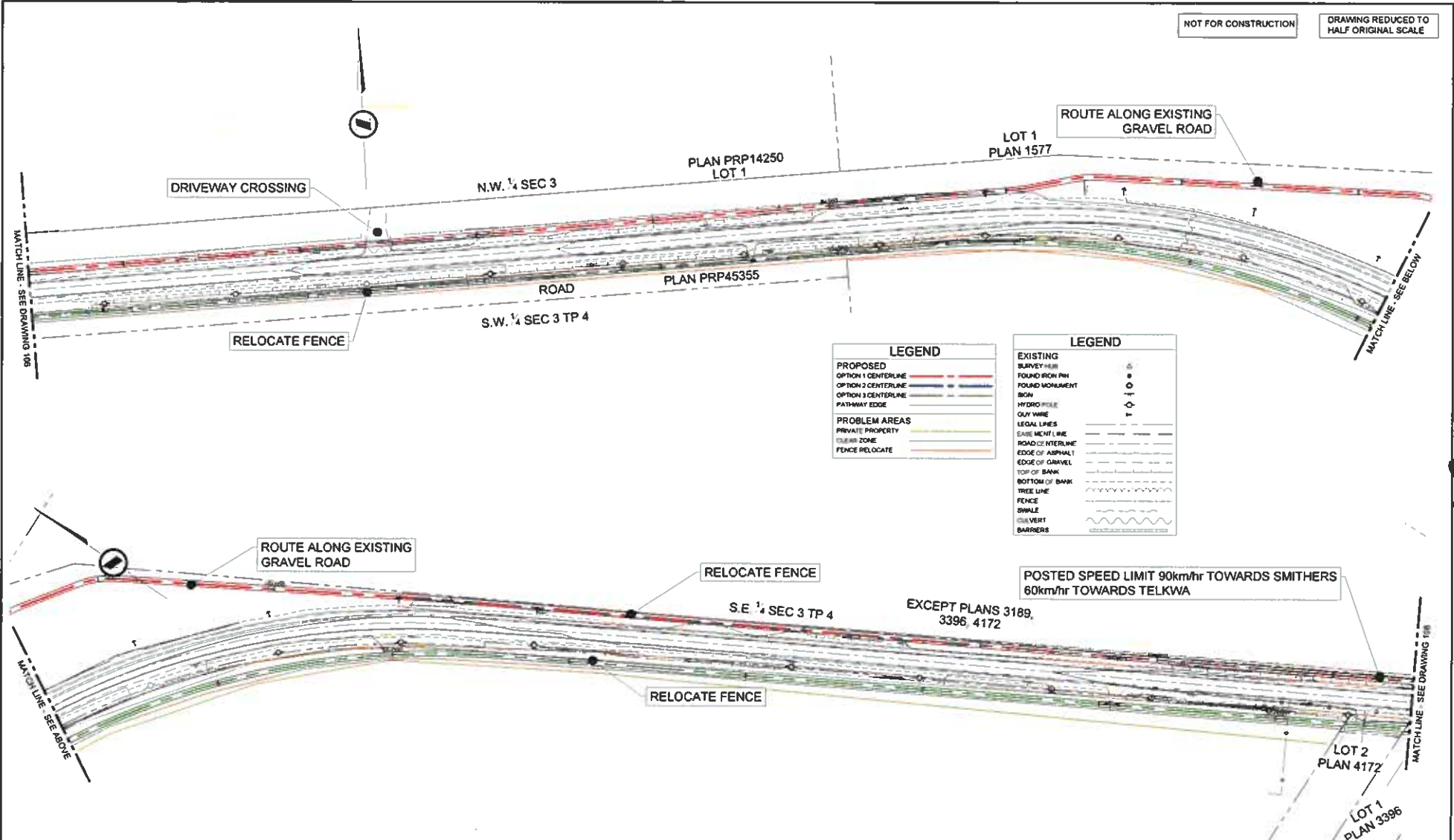
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LEGEND

PROPOSED	
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OPTION 2 CENTERLINE	— — — — —
OPTION 3 CENTERLINE	— — — — —
PATHWAY EDGE	— — — — —
PROBLEM AREAS	
PRIVATE PROPERTY	— — — — —
CLEAR ZONE	— — — — —
FENCE RELOCATE	— — — — —

LEGEND

EXISTING	
SURVEY MARK	⊙
FOUND IRON PIN	⊙
FOUND MONUMENT	⊙
BOM	⊙
HYDRO PILE	⊙
QUI WIRE	⊙
LEGAL LINES	— — — — —
EDGE MCHT. LINE	— — — — —
ROAD CENTERLINE	— — — — —
EDGE OF ASPHALT	— — — — —
EDGE OF GRAVEL	— — — — —
TOP OF BANK	— — — — —
BOTTOM OF BANK	— — — — —
TREE LINE	— — — — —
FENCE	— — — — —
SWALE	— — — — —
CUVERT	— — — — —
BARRIERS	— — — — —

PS	2017-04-21	ISSUED FOR REVIEW	200	TW
PL	2017-05-15	ISSUED FOR REVIEW	200	TW
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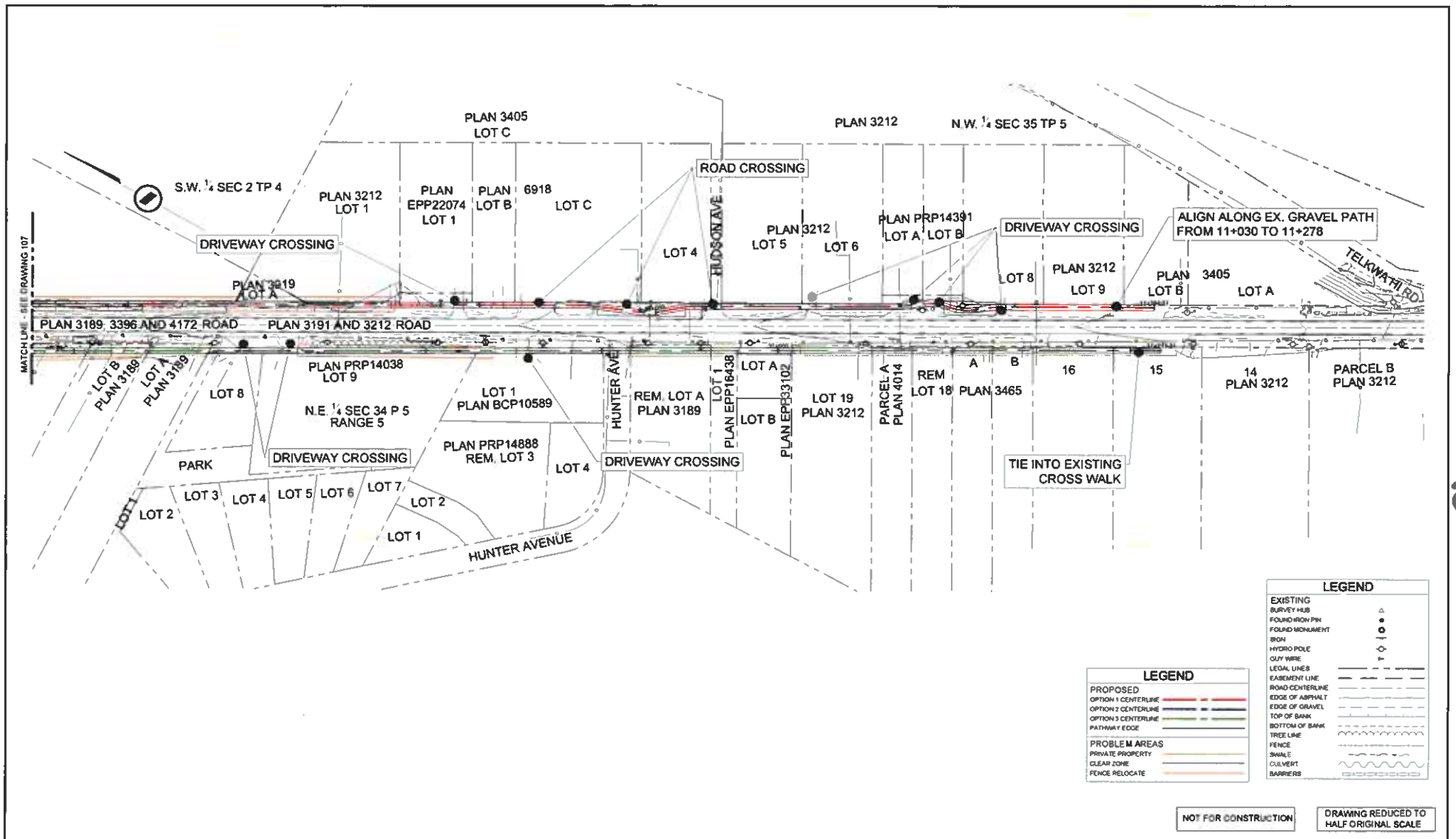
CYCLE 16 TRAIL SOCIETY

TELKWA TO SMITHERS PATHWAY
CONCEPT ALIGNMENT

107

2331-00795-00

107



LEGEND

PROPOSED	
OPTION 1 CENTERLINE	—
OPTION 2 CENTERLINE	—
OPTION 3 CENTERLINE	—
PATHWAY EDGE	—
PROBLEM AREAS	
PRIVATE PROPERTY	—
CLEAR ZONE	—
FENCE RELOCATE	—

LEGEND

EXISTING	
SURVEY NUB	△
FOUND IRON PIN	○
FOUND MONUMENT	□
IRON	—
HYDRO POLE	—
UTILITY WIRE	—
LEGAL LINES	—
EASEMENT LINE	—
ROAD CENTERLINE	—
EDGE OF ASPHALT	—
EDGE OF GRAVEL	—
TOP OF BANK	—
BOTTOM OF BANK	—
TREE LINE	—
FENCE	—
SWALE	—
CULVERT	—
BARRIERS	—

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TELKWA TO SMITHERS PATHWAY

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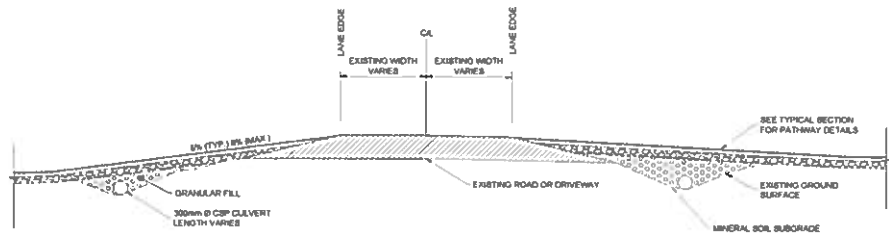
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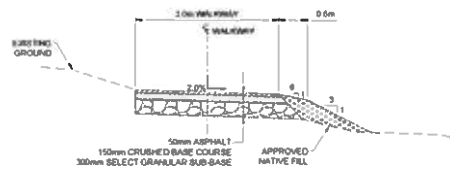
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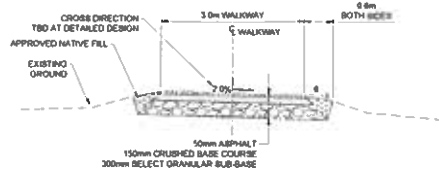
of



TYPICAL ROAD AND DRIVEWAY CROSSINGS
N.T.S



TYPICAL PATHWAY SECTION - SIDE SLOPE
SCALE 1:10



TYPICAL PATHWAY SECTION - LEVEL GROUND
SCALE 1:10

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CYCLE 16 TRAIL SOCIETY
TELKWA TO SMITHERS PATHWAY
DETAILS

Drawing No	001
Project Number	2331-00785-00
Rev	PB

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Appendix B – Class C Cost Estimate Sheets



Schedule of Quantities

Reference: MSCL 2331-00795-00 IFR report drawings 2017.04.27

Task	Units	Quantity	Unit Price	Line Total	Sub-Totals	Comment
Telkwa-Smithers Pathway - Option 1						
1.00 Construction Estimate						
1.01 General Contractor Mobilization & Demobilization	l.s.	1	\$ 80,000.00	\$ 80,000.00		
1.02 Traffic Control	l.s.	1	\$ 200,000.00	\$ 200,000.00		
1.03 Strip Topsoil	sq.m.	14,907	\$ 8.00	\$ 119,256.00		
1.04 Crushed Base Course - 150 mm	cu. m.	5,291	\$ 40.00	\$ 211,622.40		
1.05 Select Granular Sub-base - 300 mm	cu. m.	10,733	\$ 45.00	\$ 482,986.80		
1.06 Significant Fill Areas	cu. m.	2,736	\$ 45.00	\$ 123,120.00		
1.07 Asphalt - 50 mm	tonnes	3,976	\$ 130.00	\$ 516,871.68		
1.08 Root Barrier Geotextile	sq.m.	39,752	\$ 7.00	\$ 278,264.00		
1.09 Subgrade Preparation	sq.m.	39,752	\$ 3.00	\$ 119,256.00		
1.10 Topsoil/Seed/Mulch	sq. m.	11,288	\$ 5.00	\$ 56,440.00		
1.11 Signage - less than 1 sq.m.	ea.	124	\$ 500.00	\$ 62,000.00		
1.12 Highway Crossing - Bridge	l.s.	1	\$ 1,500,000.00	\$ 1,500,000.00		
1.13 Culvert - 300 mm diameter	l.m.	192	\$ 600.00	\$ 115,200.00		
1.14 Relocate Fence	l.m.	2,860	\$ 20.00	\$ 57,200.00		
1.15 Line Painting - Road Crossings	ea.	6	\$ 4,500.00	\$ 27,000.00		
					\$ 3,949,216.88	
2.00 Other Items						
2.01 Design/Construction Engineering (15% Construction)	l.s.	1	\$ 592,382.53	\$ 592,382.53		
2.03 Contingency (20%)	l.s.	1	\$ 789,843.38	\$ 789,843.38		
3.00 Property Quantities						
3.01 Private Land	l.m.	2,245	-			No costs included
3.02 Number of Properties	ea.	10				No costs included
Option #1 Total					\$ 5,331,442.79	

Remove asphalt line item and recalculate contingency and engineering percentages for gravel pathway cost.

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Task	Units	Quantity	Unit Price	Line Total	Sub-Totals	Comment
Telkwa-Smithers Pathway - Option 2						
1.00 General Requirements						
1.01 General Contractor Mobilization & Demobilization	l.s.	1	\$ 80,000.00	\$ 80,000.00		
1.02 Traffic Control	l.s.	1	\$ 200,000.00	\$ 200,000.00		
1.03 Strip Topsoil	sq.m.	15,281	\$ 8.00	\$ 122,244.00		
1.04 Crushed Base Course - 150 mm	cu. m.	5,265	\$ 40.00	\$ 210,612.60		
1.05 Select Granular Sub-base - 300 mm	cu. m.	11,002	\$ 45.00	\$ 495,088.20		
1.06 Significant Fill Areas	cu. m.	2,836	\$ 45.00	\$ 127,620.00		
1.07 Asphalt - 50 mm	tonnes	3,957	\$ 130.00	\$ 514,405.32		Remove asphalt line item and recalculate contingency and engineering percentages for gravel pathway cost
1.08 Root Barrier Geotextile	sq.m.	40,748	\$ 7.00	\$ 285,236.00		
1.09 Subgrade Preparation	sq.m.	44,948	\$ 3.00	\$ 134,844.00		
1.10 Topsoil/Seed/Mulch	sq. m.	11,237	\$ 5.00	\$ 56,185.00		
1.11 Signage - less than 1m ²	ea.	136	\$ 500.00	\$ 68,000.00		
1.12 Highway Crossing - Underpass	l.s.	1	\$ 750,000.00	\$ 750,000.00		
1.13 Culvert - 300 mm diameter	l.m.	222	\$ 600.00	\$ 133,200.00		
1.14 Relocate Fence	l.m.	2,795	\$ 20.00	\$ 55,900.00		
1.15 Line Painting - Road Crossings	ea.	6	\$ 4,500.00	\$ 27,000.00		
					\$ 3,260,335.12	
2.00 Other Items						
2.01 Design/Construction Engineering (15% Construction	l.s.	1	\$ 489,050.27	\$ 489,050.27		
2.03 Contingency (20%)	l.s.	1	\$652,067.02	\$ 652,067.02		
3.00 Property Quantities						
3.01 Private Land	l.m.	2,055				No costs included
3.02 Number of Properties	ea.	11				No costs included
Option #2 Total					\$ 4,401,452.41	

Task	Units	Quantity	Unit Price	Line Total	Sub-Totals	Comment
Telkwa-Smithers Pathway - Option 3						
1.00 General Requirements						
1.01 General Contractor Mobilization & Demobilization	l.s.	1	\$ 80,000.00	\$ 80,000.00		
1.02 Traffic Control	l.s.	1	\$ 150,000.00	\$ 150,000.00		
1.03 Strip Topsoil	sq.m.	21,111	\$ 8.00	\$ 168,885.00		
1.04 Crushed Base Course - 150 mm	cu. m.	5,573	\$ 40.00	\$ 222,928.20		
1.05 Select Granular Sub-base - 300 mm	cu. m.	15,200	\$ 45.00	\$ 683,984.25		
1.06 Significant Fill Areas	cu. m.	7,216	\$ 45.00	\$ 324,711.56		
1.07 Asphalt - 50 mm	tonnes	4,188	\$ 130.00	\$ 544,485.24		Remove asphalt line item and recalculate contingency and engineering percentages for gravel pathway cost
1.08 Root Barrier Geotextile	sq.m.	45,036	\$ 7.00	\$ 315,252.00		
1.09 Subgrade Preparation	sq.m.	45,036	\$ 3.00	\$ 135,108.00		
1.10 Topsoil/Seed/Mulch	sq. m.	11,259	\$ 5.00	\$ 56,295.00		
1.11 Signage - less than 1m ²	ea.	166	\$ 500.00	\$ 83,000.00		
1.12 Culvert - 300 mm diameter	l.m.	276	\$ 600.00	\$ 165,600.00		
1.13 Relocate Fence	l.m.	3,345	\$ 20.00	\$ 66,900.00		
1.14 Line Painting	ea.	8	\$ 4,500.00	\$ 36,000.00		
					\$3,033,149.25	
2.00 Other Items						
2.01 Design/Construction Engineering (15% Construction	l.s.	1	\$ 454,972.39	\$ 454,972.39		
2.03 Contingency (20%)	l.s.	1	\$606,629.85	\$ 606,629.85		
3.00 Property Quantities						
3.01 Private Land	l.m.	3,650	-			No costs included
3.02 Number of Properties	ea.	17	-			No costs included
Option #3 Total					\$ 4,094,751.49	

HW

PROJECT:

Telkwa – Smithers Multi-Use Pathway – Detailed Design

LOCATION:

Smithers, BC

OVERVIEW:

Village of Telkwa is seeking professional services for the detail design of phase 1 (approx. 4 kilometers) of a multi-use non-motorized path that will eventually connect Smithers and Telkwa along Highway 16. Cycle 16 Trail Society (Cycle 16) will manage the contract for these services.

BACKGROUND:

Cycle 16 Trail Society (Cycle 16) has worked since 2015 to engage and consult with stakeholders and landowners for purposes of building a non-motorized pathway of approximately 12 km. along Highway 16 Right of Way. The pathway would link Smithers (Terminus at Smithers Bridge (Bulkley River)) and Telkwa (Terminus at Tyhee Market). Cycle 16 has worked extensively with Ministry of Transportation and Infrastructure (M.o.T.I.), Regional District of Bulkley Nechako (RDBN), Town of Smithers, Village of Telkwa, and Private Landowners. The three municipalities involved have pledged support in principle and approval processes with M.o.T.I and BC Hydro have been initiated. The ownership structure has been clarified and potential grants (M.o.T.I Bike BC for example) for construction funding have been identified. Cycle 16 has successfully negotiated with one landowner and the process for creation of a Right of Way has begun. A Conceptual Design Report (including high level Cost Estimate) was completed by McElhanney Consultants in May 2017. The report identifies multiple technically feasible alignments for a 3 metre wide smooth surface pathway. Cycle 16 has decided to focus on “phase 1” of the trail, which is an approximately 4 km stretch from Smithers Bridge to the south end of Laidlaw Frontage Rd. (station 3+850 approx.). Grants from BC Active Healthy Living Society and BC Rural Dividend have been secured to pay for Detail Design for the pathway.

Successful proponent will be provided with existing drawings and documents including: CAD Drawing of Conceptual Design Alignment, Survey data along highway corridor from 2007, Land title info and cadastral information, relevant minutes from recent stakeholder

meetings/communications. LIDAR data is available for purchase through McElhanney at a rate of ???????? and acquisition/processing will need to be included in fee proposal if proponent foresees using this data.

PROJECT OBJECTIVES AND DELIVERABLES

Village of Telkwa and Cycle 16 are seeking a qualified consultant team to develop the detailed design for phase 1 of the Telkwa-Smithers Multi-use pathway. The completed pathway will be a 3 metre wide, smooth surfaced, separated, multi-use pathway constructed on the southwest side (eastbound lanes) of Highway 16. It will utilize M.o.T.I. Right of Way where possible and may also utilize Right of Ways on private land. Main deliverable of this Work will be tender-ready and grant-ready (approvals secured) design drawings (and any supporting documentation). Consultant team will also be expected to provide cost estimation of finalized design suitable for BikeBC Grant Application, and life cycle / maintenance cost analysis for Regional District. The pathway design is to be consistent with current best practices (either TAC or AASHTO Guidelines as described by BikeBC). The consultant team will also be expected to assist in the permitting/approval process with M.o.T.I., BC Hydro, Ministry of Environment, Agricultural Land Commission, Regional District of Bulkley Nechako, and any other utilities/stakeholders. Though Cycle 16 and has already engaged stakeholders and landowners, they are seeking additional assistance to complete the consultation process for phase 1. More specifically, the proponent should describe a methodology for leading the consultation process with landowner regarding driveway crossing and other safety concerns at station 1 + 100 (see Concept Design Report). Consultation with other stakeholders (BC Hydro for example) may also be necessary depending on need for additional Right of Ways, etc. Intermediate deliverables (presentation of alternative designs for example) may be necessary as part of the consultation and approval processes and should be described in Proponent's methodology. The consultant team should expect to work closely with Cycle 16 and provide frequent (weekly) updates.

Total project budget is \$65,000 which may need to include geotechnical work, LIDAR data purchase, topographical survey, title and plan purchase, application fees, advertising, meeting facilities, miscellaneous expenses, and contingency for project success (proponent may want to account for these items in proposal). Legal fees, land acquisition, and legal surveyor work related to Right of Way / subdivision process will not need to be accounted for in proposal, but proponent will be expected to coordinate with these other professionals and provide drawings for these purposes.

PROPOSED SCHEDULE AND WORKPLAN

The work to be undertaken by the successful proponent will commence upon the finalization of the work plan.

The targeted date of completion for the final detailed design and cost estimate is September 15, 2018. A Bonus of \$5,000 will be awarded for successful completion of design (including necessary consultations) by target date.

A high level project schedule and preliminary work plan will be required as part of the proposal. A detailed work plan (for coordination purposes) is to be developed once a proponent has been chosen.

PROPOSAL SUBMISSION

Please submit proposals digitally (email with PDF attachment) to the Village of Telkwa on or before **2:00 pm, Friday, May 18, 2018 local time**, to Debbie Joujan, Chief Administrative Officer, at ??????????????????????

It is the sole responsibility of the proponents to confirm with Debbie Joujan that the proposal has been received.

Responses to this RFP should include the following information:

A. Cover Letter

Submitted proposals are to contain a cover letter acknowledging the proponents understanding of, and the requirements set forth this Request for Proposals (RFP). The letter must be signed and dated by a person authorized to legally bind the respondent to a contractual relationship.

B. Team Profile, Capacities, and Experience

a. Names of specific team members who are anticipated to be assigned to the project, including the project manager, consultation lead, support team, and any sub-consultants.

- b. Overview of the proponent's client history relevant to projects of similar type and scale. Describe work which involved the anticipated team members. Please note any experience with consultation, creative solutions, M.o.T.I and BC Hydro approvals, pathway / roadway / drainage design, creative solutions.
- c. Description of particular team capacities that particularly apply to scope and related challenges of this project.

C. Methodology, Scope of Work, and Deliverables

The proposal shall address the project objectives and deliverables, including a complete description of the proponent's general approach, methodology, strategy, team member roles, and anticipated schedule. The proponent should include a work plan, including all general project requirements, proposed tasks, services and activities necessary to accomplish the scope of work.

Project Deliverables:

- 1) Tender-ready and Grant-ready (Bike BC) detailed design drawings (including any necessary signage, benches/rest areas, lighting, fencing, railing) for Phase 1 and any supporting documentation.
- 2) Presentation materials showing design options for challenging driveway crossing (for consultation with private landowner).
- 3) Construction cost estimates suitable for grant applications (i.e. Bike BC)
- 4) Life cycle / maintenance cost analysis for discussion purposes with Regional District

D. Pricing

The proponent's submission should include proposed costs for the project broken down with a separate cost for each phase of work. A list of billing rates should also be included. State any exclusions, assumptions, or qualifications to the proposal.

E. References

The proponent is to provide a minimum of three professional references for which they have provided work similar to the work proposed for this project within the last five years.

Enquiries

Direct all enquiries related to this RFP to:

Jeremy Shriber
 Vice President, Cycle 16 Trail Society
 Telephone: (250) 643-3520
 E-mail: jeremyshiber@gmail.com

Enquiries and responses may be recorded and distributed to any or all proponents.

PROPOSAL EVALUATION CRITERIA AND EVALUATION PROCEDURES:

Evaluation Criteria and Process

Proposals will be evaluated by a team (minimum of 2) of staff and/or Cycle 16 Board of Directors approved by Village of Telkwa. An evaluation breakdown is provided below. Please be advised that the Village has the right to accept or reject any proposal, for any reason, without negotiations.

Proposals will be evaluated on the following basis:

Criteria	Rating Points
Qualifications and experience of the proponent with similar projects, including experience with cycling facilities, highway corridors, and private landowner consultation	15
Qualifications, capacity, and experience of the specific team members anticipated to be assigned to the project.	30
Methodology, including demonstrated understanding of the project scope and deliverables	20
Quality of references	10
Pricing component, including demonstrated understanding of overall project budget	15
Local office and team members	10
Total Evaluation Score	100

Subsequent to the submission of proposals, interviews may be conducted with some or all of the proponents, but the Village will not be obligated to receive further information, whether written or oral, from any proponent. The successful proposal may be used to negotiate a final contract, and may become an integral part of that contract. The Village of Telkwa reserves the right to require additional terms and conditions in any final contract negotiated with the successful proponent. The lowest cost proposal or any proposal may not necessarily be accepted.

Negotiation

At any time, the Village of Telkwa may terminate negotiations with the successful proponent and negotiate a final contract with another proponent.

Village Rights

The Village of Telkwa reserves the right to:

- conduct post-submission meetings in order to correct, change or adapt proposals to the needs of the Village of Telkwa and Cycle 16 Trail Society;
- reject any or all proposals, or any parts thereof;
- accept the proposal that is in the best interest of the Village of Telkwa and Cycle 16 Trail Society, as determined;
- negotiate the terms of any contract for the work.

Conflict of Interest ??????

Timeline - Bonus

Enquiries

Direct all enquiries related to this RFP to:

Jeremy Shriber
Vice President, Cycle 16 Trail Society
Telephone: (250) 643-3520
E-mail: jeremyshriber@gmail.com

Regional District of Bulkley-Nechako
2016 to 2022 Financial Plan - Bylaw No. 1827

Schedule "A"

Service	2018 Financial Plan:						TRANSFERS From/To				EXPENDITURES:					Total
	FUNDING						Reserve Funds	Surplus of Prior Yr.	Equity in TCAs	Total Transfers	Debt Pmts. Int. & Ppal.	Capital Expenditures	Amortization of TCAs	Other Expenses	Deficit from Prior Year	
	Prop. Value Taxes	Parcel Charges	Fees and Charges	Proceeds of Borrowing	Other Revenue	Total Funding										
1101 Rural Government Services	282,833				1,051,119	1,333,952	(182,821)	252,514		89,893				1,403,843	1,403,843	
1200 General Government Services	1,202,003		15,900		360,918	1,578,821	(21,134)	306,254	70,000	355,120	7,800	71,000	70,000	1,785,143	1,933,943	
1301 Feasibility Studies	0				2,332	2,332		17,427		17,427				19,759	19,759	
1401 Agriculture	65,280				70,333	135,612		2,877		2,877				137,689	137,689	
1501 Local Community of Fort Fraser	6,014				5,000	11,014		2,688		2,688				13,700	13,700	
1701 Chetook Community Forest								16,239		16,239				16,239	16,239	
2100 Lakes Economic Development	96,580				1,000	97,580		27,064		27,064				124,644	124,644	
2200 Area "E" Economic Development	6,827				9,392	16,319		21,881		21,881				38,300	38,300	
2300 Stuart-Nechako Economic Development								10,218		10,218				10,218	10,218	
2400 Area "A" Economic Development	10,000					10,000								10,000	10,000	
2500 Regional Economic Development	184,245				489,757	654,002	(3,253)	221,022		217,769				871,771	871,771	
3101 Member Fiscal Services					891,287	891,287					891,287				891,287	
4101 Planning	177,112		12,250		26,073	215,435	6,412	59,446	5,500	71,358		11,000	5,500	270,293	286,793	
4201 Building Inspection	131,367		217,991			349,358	(11,953)	73,431	12,485	73,963			12,485	410,836	423,321	
4301 Development Services	238,327		3,500		30,047	271,874	(4,781)	89,026	10,000	94,245			10,000	356,119	366,119	
4401 Building Numbering Extended Service	6,903				1,595	8,498	(4,201)	2,854		2,434				10,932	10,932	
4501 Unsanitary Premises Regulatory Control	22,881				3,147	26,028	(3,209)	14,804		11,595				37,623	37,623	
5101 Environmental Services	3,142,752		446,000		487,395	4,076,147	202,467	1,171,798	650,000	2,024,265	479,352	853,000	650,000	4,118,060	6,110,412	
5901 Weeds	37,011		5,029		15,072	57,112		13,274		13,274				70,386	70,386	
5902 Lake Kathryn Aquatic Weed Harvesting		8,272	544		150	8,966		9		9				8,975	8,975	
5903 Glacier Gulch Water Diversen		2,662	180		25	2,867		13,485		13,485				16,352	16,352	
6101 Ft. Fraser Sewer System		39,359	25,500		20,000	84,859	(41,093)	38,526	18,000	13,433			18,000	80,292	98,292	
6201 Ft. Fraser Water System		67,945	42,129	100,000	3,009,041	3,219,115	524,794	48,857	50,000	621,651		3,684,266	50,000	106,499.90	3,840,766	
6301 Clucutz Lake - Somerset Estates Sewer								3,358		3,358				3,358	3,358	
6401 Pump & Haul Sewer Disposal			500			500								500	500	
6402 Liquid Waste Disposal			5,000			5,000		4,839		4,839				9,839	9,839	
7101 Ft. Fraser Fire Protection	50,458				5,000	55,458	(3,613)	3,423	10,800	10,810	14,617		10,800	40,651	66,068	
7102 Southside Rural Fire Protection	40,568					40,568	(4,114)	315	18,000	14,201			18,000	36,799	54,789	
7103 Topley Rural Fire Protection	71,597					71,597	(8,071)	243	23,000	15,172	17,741		23,000	46,028	86,789	
7201 Burns Lake Rural Fire Protection	105,473					105,473	5,000			5,000				110,473	110,473	
7202 Ft. St. James Rural Fire Protection	150,438					150,438	(10,000)			(10,000)				140,438	140,438	
7203 Houston Rural Fire Protection	25,026					25,026								25,026	25,026	
7204 Luck Ilwaco Rural Fire Protection	38,971					38,971	(5,000)	10,162	9,300	14,462	7,095		9,300	37,038	53,433	
7205 Smethers Rural Fire Protection	191,789					191,789	(10,000)			(10,000)				181,789	181,789	
7206 Telkwa Rural Fire Protection	114,920					114,920								114,920	114,920	
7207 Vanderhoof Rural Fire Protection	36,353					36,353		3,607	400	4,007	1,025		400	36,353	36,353	
7208 Round Lake Fire Protection	8,394					8,394								10,876	12,491	
7301 Clucutz Lake Emergency Response	18,750					18,750								16,708	18,750	
7401 Area "A" Emergency Services	5,000					5,000								3,000	5,000	
7402 Area "F" Exinction Services																
7403 Lakes District Emergency Services								185		185				185	185	
7404 Area "D" Exinction	1,592				2,157	3,749		2,408		2,408				6,157	6,157	
7405 Area "C" Road Rescue Service	18,903					18,903		89		89				18,992	18,992	
7406 Topley Road Rescue/First Responders	6,863					6,863	(10)	100	1,000	1,090			1,000	6,953	7,953	
7501 9-1-1 Service	192,070		135,404		18,597	346,071	152,007	43,857	70,000	61,850			70,000	337,921	407,921	
7600 Emergency Preparedness Planning	198,834				557,121	755,955	5,565	74,797	4,000	84,362		11,000	4,000	822,285	3,052	840,317
7701 Burns Lake & Area Victim Services	8,254				2,249	10,503		7,172		7,172				17,675	17,675	
7702 Smethers Victim Services	35,348					35,348		1,625		1,625				36,973	36,973	
8101 Lakes District Airport	109,055				43,449	152,504	(35,000)	8,521		(28,479)	36,025			90,000	126,025	
8201 Smethers Para-Transit	5,000					5,000								5,000	5,000	
8202 FSJ Seniors Helping Seniors Transportation Se	43,000					43,000		700		700				43,700	43,700	
8203 Regional Public Transit & Para Transit Service	51,102		83,935		67,646	202,683		65,315		65,315				268,198	268,198	
8301 Telkwa Pedestrian Crosswalk	1,000					1,000								1,000	1,000	
9101 Decker Lake Street Lighting		9,415	350			9,765		328		328				10,091	10,091	
9102 Endako Street Lighting	3,157		224			3,381		221		221				3,602	3,602	
9103 Ft. Fraser Street Lighting	7,304		353			7,657		805		805				8,462	8,462	
9104 Gerow Island Street Lighting	4,055					4,055		121		121				4,176	4,176	
9105 Geerjan Road Street Lighting								504		504				504	504	
9106 Colony Point Street Lighting	3,884					3,884								3,600	284	3,884
9107 Ladlaw Street Lighting	1,496					1,496								1,496	1,496	
10101 Bulkley Valley Regional Pool and Rec. Centre	934,807				20,135	954,942	(266,716)	48,416	120,000	(98,300)	1,200		120,000	735,442	856,642	
10102 Vanderhoof Pool	185,203					185,203	(15,000)			(15,000)				170,203	170,203	
10201 Ft. St. James Arena Grant	37,500					37,500								37,500	37,500	
10202 Burns Lake Arena	243,251				2,500	245,751	(64,371)	150		(64,221)	19,030			162,500	181,530	
10301 Smethers Rural Recreation/Culture	292,362					292,362								292,362	292,362	
10302 Vanderhoof Recreation & Culture	95,985					95,985								95,985	95,985	
10401 Ft. Fraser Elementary Grant	1,968		35			2,003								2,003	2,003	
10402 Topley Cemetery Grant	1,500					1,500								1,500	1,500	
10501 Smethers, Telkwa, Houston TV Rebroadcast	59,424				800	60,024								60,000	24	60,024
10502 Fraser Lake and Area TV Rebroadcasting	34,623				25,621	60,244		12,756		12,756				73,000	73,000	
10503 Ft. St. James and Area TV Rebroadcasting	161,280				2,200	163,480		552		552				164,012	164,012	
10504 Burns Lake and Area TV Rebroadcasting	33,891				13,614	47,505		7,795		7,795				55,500	55,500	
10601 Burns Lake and Area Library Grant	155,184					155,184		71,942		227,126				230,278	230,278	
10602 Fraser Lake Rural Library Grant	10,113				60	12,948		23,121		4,235				27,356	27,356	
10603 Fort St. James Library	13,663					13,663		67		67				13,750	13,750	
10701 Burns Lake Museum Society	32,551				10,378	42,929		2,571		2,571				45,500	45,500	
10801 Fort Fraser Community Hall	2,458		46			2,504								2,504	2,504	
10802 Braeside Community Hall	5,000					5,000								5,000	5,000	
Total for all Departments	9,459,653	127,853	994,930	100,000	7,310,240	17,992,478	1,872	2,713,380	1,076,485	3,785,738	1,478,172	4,830,266	1,370,485	14,598,888	3,402	21,778,218

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