

Engineered Cost Estimate

ECE ID/Map Ref #: ECE 14

Licence TFL 49

CP 991

Assoc. Block AB7021

ECE Project Type:	Road Reactivation (L)	ECE Total Length (m)	812
ECE Description/Comments (consider pictures as supporting documentation)			
4.3.6 (6)(i) Road Reactivation activities necessary to re-open a road where there were no prior road management obligations			

IAM in Effect: 2016
Cost Base Year 2014

Brushing (Accepted template with standard machines and productivities accepted by Ministry, - July 1, 2016)								
Dist (km)	Features	Brushing Head on Tractor	Bobcat with Brushing Attachment	Feller Buncher	Grader Productivity (hrs/km)	Bulldozer Productivity (hrs/km)	Hoe Productivity (hrs/km)	Cost (\$)
0.8	light brushing (roadside only)	Y						\$540.00
	<50% brush	Y	Y		2			\$0.00
	>50% brush				5	5		\$0.00
	>50% brush and 2-10cm diameter				10	10		\$0.00
	>50% brush and >10cm diameter			Y	10	10		\$0.00
Cost:								\$540.00

Ditching (Accepted template with standard machines and productivities accepted by Ministry, - July 1, 2016)								
Dist (km)	Features					Bulldozer Productivity (hrs/km)	Hoe Productivity (hrs/km)	Cost (\$)
0.8	0-25% slope					10		\$2,081.20
	25-45% slope					10	10	\$0.00
	>45% slope					15	15	\$0.00
Cost:								\$2,081.20

Snag Falling (Accepted template with standard machines and productivities accepted by Ministry, - July 1, 2016)								
	Features	Hand Falling with Spotter			Equipment Use			Cost (\$)
		Days	Snagfaller (hrs)	Spotter (hrs)	Days	Skidder (hrs)	Hoe (hrs)	
	Light snag falling >6km per day		10	10		10	10	\$0.00
	Moderate snag falling 3-6km per day		10	10		10	10	\$0.00
	Heavy snag falling <3km per day		10	10		10	10	\$0.00
Cost:								\$0.00

Additional Road Works - Road Widening, realignment, addition of pullouts, equipment walking between projects				
Add detail if needed.				
Equipment Type	Function, Comments	TOTAL HRS	EQUIP RATE (\$/HR)	TOTAL COST
Excavator			\$ 180.90	
Crawler Tractor -Med	Subgrade Re-construction	4.0	\$ 216.95	\$ 867.80
Crawler Tractor -Large			\$ 260.15	
Loader			\$ 181.75	
Gravel truck			\$ 94.40	
Artic. Dump Truck			\$ 161.45	
Lowbed 5 Axle			\$ 109.15	
Lowbed 7 Axle			\$ 137.70	
Grader			\$ 158.55	
Labourer			\$ 37.86	
Rock Drill			\$ 249.06	
Blasting (all found hourly rate)	Based on 2014-15 cost of drill/explosives/transport and insurance		\$ 520.00	
Total			\$	867.80

Road Widening Upgrade - FREDs Volume Estimate

Note: Used when a section of upgrade requires subgrade widening and volumes are determined in RoadEng/volume calculator and esimated using FREDs

CHAINAGE		Comment	DISTANCE (m)	TOTAL COST
POC	POT			
		Road Widening - Refer to FREDs	0	
		Road Widening - Refer to FREDs	0	
		Road Widening - Refer to FREDs	0	
Total			0.0	\$ -

Grading	Add detail if needed.				
Equipment Type	Comments	DISTANCE (m)	TOTAL HRS	EQUIP RATE (\$/HR)	TOTAL COST
Cat 140M, 140M2		800	1.6	\$ 158.55	\$ 253.68
				\$ 158.55	
				\$ 158.55	
				\$ 158.55	
Total Length		800		Total	\$ 253.68

Miscellaneous Activities	Add detail if needed.					
Activity	Comments	DISTANCE (m)	#	Units	Rate	TOTAL COST
Grass Seeding	1 bag/250m both sides of road	812	3.248	bags	\$ 70.00	\$ 227.36
	400m/hr both sides - min 4hrs		4	hrs	\$ 37.86	\$ 151.44
	Crew transport		1	days	\$ 50.00	\$ 50.00
Snag Falling	Crew transport		0	manday	\$ 50.00	\$ -
Signage	Km/safety signs average=\$50/km		0	Kms	\$ 50.00	\$ -
Survey-Road design	Survey Crew - day rate		0	days	\$ 800.00	\$ -
Other - Geotextile Grid				per 100 LM	\$ 635.00	
Other - Geotextile Fabric				per 100 LM	\$ 505.00	
Other - Geotech?						
Other						
Total						\$ 428.80

CULVERTS				
Culvert Diameter (mm)	NUMBER	LENGTH (m)	CULVERT COST	TOTAL COST
400	4	10	\$ 546	\$ 2,184
Total			\$	2,184

GRAVEL					
CHAINAGE in metres		DISTANCE (m)	Distance to Pit (km)	Road Group	TOTAL COST
POC	POT				
0	812	812	0.4	9	\$ 9,612
		0			\$ -
		0			\$ -
Total Cost					\$ 9,612

Project Total Cost		\$15,967.94
	Cost/km	\$ 19,664.95