



Ministry of Transportation and Infrastructure

Geotechnical and Materials Engineering

Southern Interior Region

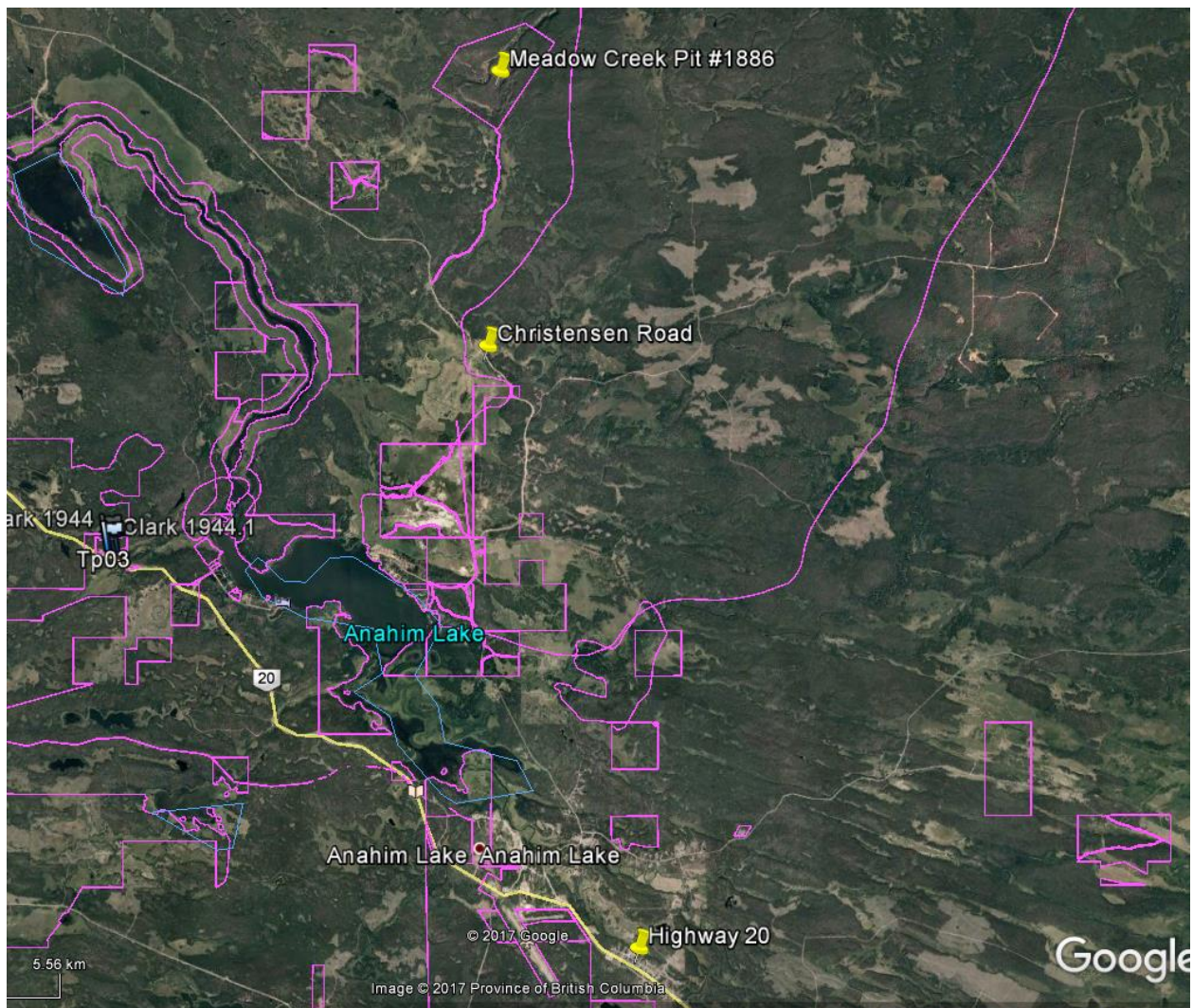
447 Columbia Street
Kamloops, BC V2C-2T3
Telephone: (250) 371-3968
Fax: (250) 828-4083

Meadow Creek Pit # 1886

2017 Technical Information Report

Location: The pit is located approximately 14 km from Anahim Lake on Christensen Road. The geographical coordinates for the entrance to the pit are Universal Transverse Mercator Grid Zone 10, 34208m Easting, 5825250m Northing. The location of the pit is then approximately 3.2 km along the pit access road off Christensen Road.

Legal Description: Meadow Creek Pit is legally described as THAT PARCEL OR TRACT OF UNSURVEYED CROWN LAND NORTH OF DISTRICT LOT 358; TOGETHER WITH THOSE UNSURVEYED PARTS OF DISTRICT LOTS 360, 358, AND 370; ALL RANGE 3 COAST DISTRICT; CONTAINING 209.995 HECTARES MORE OR LESS



Gradation: Physical testing of the north end of the pit indicates material that is generally finely graded, clean gravel with areas of significant oversize rock. The south end of pit indicates areas of fine sands and silts. The average and range of gradations for material contained within the mining and tested areas are as follows:

Laboratory Samples

Classification:		Range (%)
Gravel (4.75-75mm) Lab Tested	55	44-73
Sand (0.075-4.75mm) Lab Tested	42	26-53
Fines (<0.075mm) Lab Tested	3	1.0-10.4

Field Visual Estimates from all Test Pits

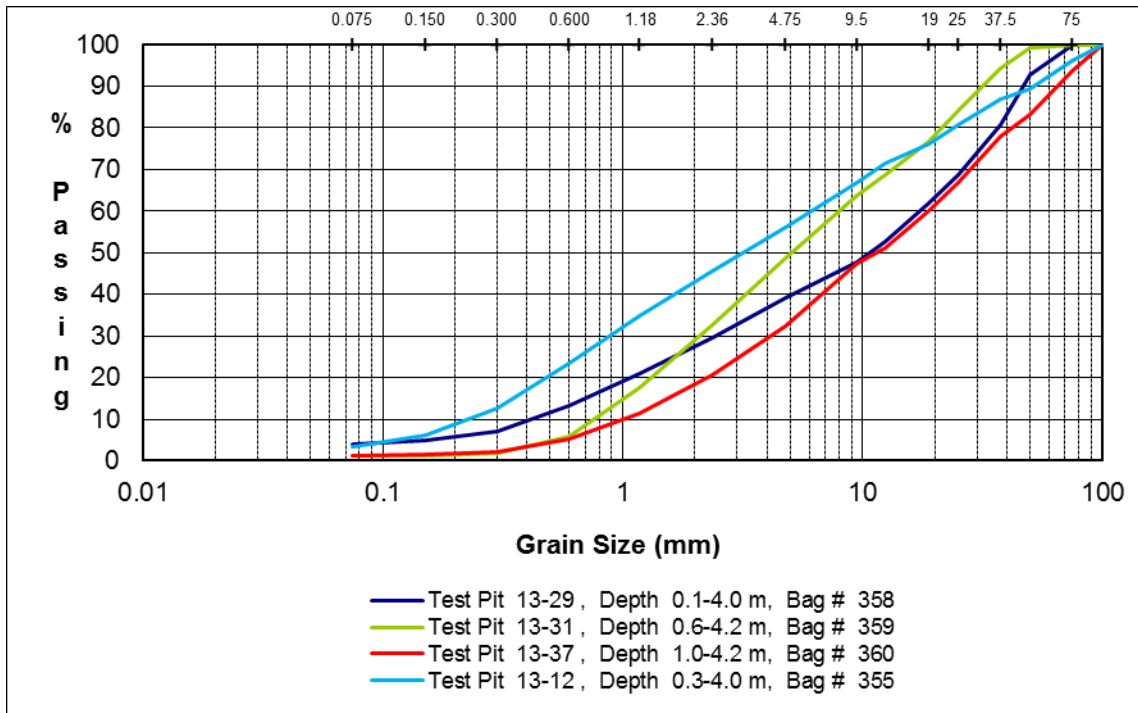
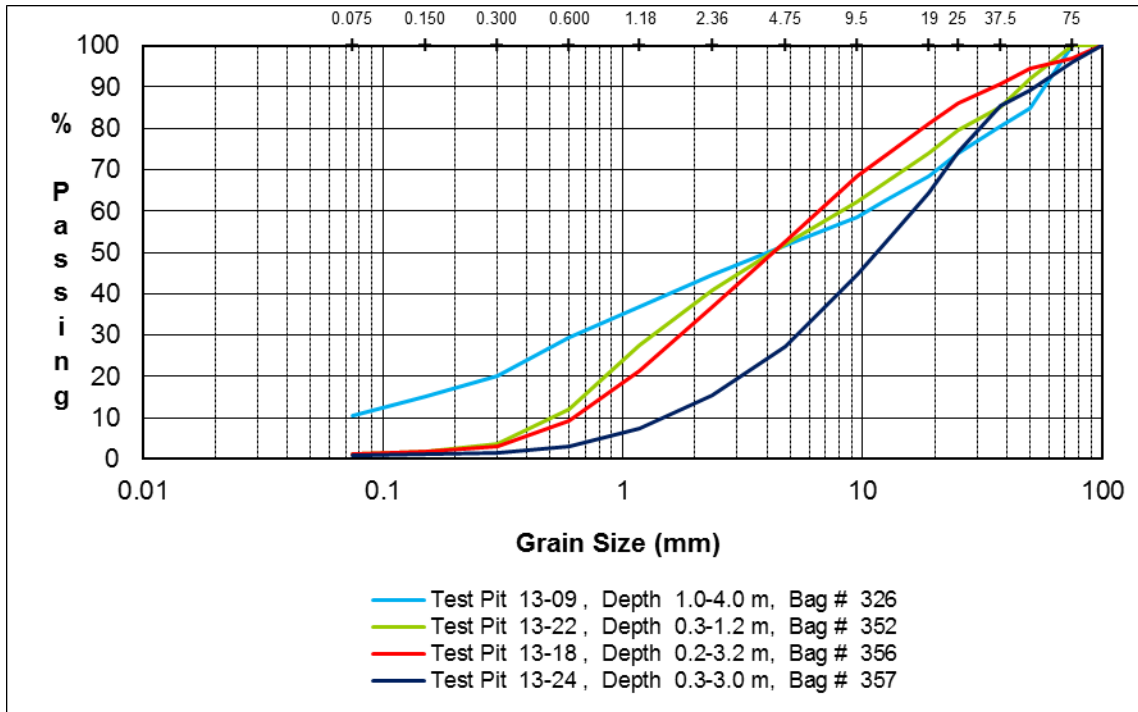
Classification:	Average (%)	Range (%)
Gravel (4.75-75mm) Visual	34	2-78
Sand (0.075-4.75mm) Visual	61	18-94
Fines (<0.075mm) Visual	5	1-32

Oversize Field Estimates

Classification:	Average (%)	Range (%)
Boulders (>375mm)	2	0-4
Cobbles (150-375mm)	3	0-4
Cobbles (75-150mm)	7	2-9

The maximum size rock observed was 800mm.

Aggregate Chart (Lab Tests):



TP13-06	0	0.3		TS -SM3															
	0.3	1.3		GP	56	40	4	150	2	0	0								
	1.3	4.2		SP	8	90	2												
TP13-07	0.0	1.2		SP/SM	0	92	8												
	1.2	4		SP	6	90	4												
TP13-08	0	1.2		SP/SM	0	92	8												
	1.2	4.0		SP	0	97	3												
TP13-09	0	1.0		SM1	0	86	14												
	1	4.0	326	GP	52	46	2	100	2										
TP13-10	0.0	0.8		SM1	6	78	16												
	0.8	1.6		GP	50	48	2	150	2										
	1.6	2.2		SP	2	96	2												
	2.2	3.0		SP	36	62	2												
	3.0	4.2		SP	6	92	2												
TP13-11	0	0.3		TS															
	0.3	2.0		GP	68	30	2												
	2	4.0		SP	38	60	2												
TP13-12	0.0	0.3		TS															
	0.3	4	351	GP	64	34	2	250	6	2	0								
TP13-13	0	0.3		TS	0	92	8												
	0.3	1.8		GP	78	18	4	250	14	5	0								
TP13-14	0	0.6		SM1	40	48	12	400											
	0.6	3.0		GP	51	47	2	800	6	3	1								
	3.0	4.0		SP	39	60	1												
TP13-15	0.0	0.2		TS															
	0.2	4.0		SP/SM	2	88	10												
TP13-16	0.0	0.2		TS															
	0.2	4.0		SP/SM	6	86	8												

GP/GM (48.3%G, 41.3% S,10.4% F)

SP (43.8%G,52.7% S,3.5% F)

TP13-17	0	0.2		TS									
	0.2	3.0		GP	62	36	2	300	6	3	1		
	3.0	4.0		SP	48	50	2	200	2	1			
TP13-18	0.0	0.2		TS									
	0.2	3.2	356	GP	51	47	2	300	4	2	1		SP (47.3%G, 51.6% S, 1.1% F)
TP13-19	0	4.2		SP/SM	2	89	9						
TP13-20	0	0.1		TS									
	0.1	0.9		SP/SM	46	47	7	400	3	2	1		
	0.9	3.0		GP	54	44	2	250	6	3	1		
	3.0	4.2		GP	50	48	2	100	2				
TP13-21	0.0	0.2		SM1	40	48	12						
	0.2	1.2		GP	58	38	4	275	3	2	1		
	1.2	2.0		SP	4	95	1						
	2.0	4.0		GP	50	48	2	100	4				
TP13-22	0	0.3		SP/SM	40	50	10						
	0.3	1.2	352	GP	65	31	4	200	4	2			SP (48.1%G, 50.6% S, 1.3% F)
	1.2	2.2		SP	2	96	2						
	2.2	3.6		SP	40	58	2						
TP13-23	0	0.3		SM1	20	68	12						
	0.3	2.8		GP	74	24	2	400	1				Sloughed in
TP13-24	0	0.3		TS									
	0.3	3.0	357	GP	72	22	4	200	3	1			GP (72.9%G, 26.2% S, .9% F)
TP13-25	0	0.3		TS									
	0.3	4.0		GP	76	20	4	350	9	4	6		
TP13-26	0.0	0.6		SM1	28	60	12						
	0.6	1.6		GP	59	37	4	300	4	2			
	1.6	4.0		SP	4	94	2						
TP13-27	0.0	0.3		SP/SM	20	79	12						
	0.3	2.2		GP	51	47	2	300	3	1	1		
	2.2	4.0		SM1	0	88	12						

TP13-28	0.0	2.0		SP/SM	10	81	9										
	2.0	4.2		SP	2	96	2										
TP13-29	0	0.1		TS													
	0.1	1.0	358	GP/GM	60	32	8	350	10	6	4						
	1.0	4.0		GP	68	28	4	350	8	4	2						GP (61.0%G, 34.9% S, 4.1% F)
TP13-30	0	0.1		TS													
	0.1	1.2		SP/SM	5	86	9										
	1.2	4.2		GP	58	40	2	350	4	2	1						
TP13-31	0	0.1		TS													
	0.1	0.6		SP/SM	6	86	8										
	0.6	4.2	359	SP	43	55	2										GP (51.4%G, 47.5% S, 1.1% F)
TP13-32	0.0	0.1		TS													
	0.3	0.3		GP/GM	49	42	9										
	0.3	3.0		GP/GM	54	45	1	100	3								
	3.0	4.0		SP	42	57	1	100	1								
					36.1	58.9	5	250	5.2	4	2.33						
TP13-33	0	0.1		TS													
	0.1	1.2		SP/SM	0	91	9										
	1.2	3.0		SP	0	98	2										
	3	4.2		GP	56	42	2	250									
TP13-34	0	0.2		TS													
	0.2	4.0		SP/SM	2	90	8										
TP13-35	0	0.3		TS													
	0.3	1.6		GP/GM	52	40	8										
	1.6	3.2		SP/SM	40	52	8										
	3.2	4.2		GP/GM	56	34	10										
TP13-36	0.0	0.3		TS													
	0.3	1.0		SM1	12	76	12										
	1.0	2.0		GP	52	46	2										
	2.0	4.2		SP	43	53	4	400	4	2	2						
TP13-37	0.0	0.2		TS													
	0.2	1.0		GP/GM	60	32	8										
	1.0	4.2	360	GP	77	21	2	300	12	6	1						GP (67.5%G,31.5% S, 1.1% F)

TP13-38	0	0.2		TS									
	0.2	2.2		SM1	12	77	11						
	2.2	4.2		GP	66	30	4	350	2	2	6		
TP13-39	0	0.2		TS									
	0.2	0.6		SP/SM	4	89	7						
	0.6	4.2		SP	10	88	2						
TP13-40	0	0.2		TS									
	0.2	2		GP	60	36	4	350	4	2	1		
	2	4.2		SP/SM	10	85	5						
TP13-41	0.0	0.3		TS									
	0.3	0.7		GP/GM	52	42	6						
	0.7	4.2		GP/GM	51	47	2	400	4	1	1		
TP13-42	0.0	0.2		TS									
	0.2	1.2		GP	70	26	4	200	4	2			
	1.2	4.2		GP	51	47	2	350	2	3	1		
TP13-43	0.0	0.3		TS									
	0.3	1.6		GP	71	25	4	600	4	8	3		
	1.6	3.2		GP	56	42	2	250	7	2	1		
	3.2	4.2		SP	2	96	2						

Aggregate Quality: The major constituents of the aggregate are basalts and granites which are apparently sound and durable. A summary of aggregate quality test results on samples obtained from selective test pits are as follows:

Location	Micro Deval	Sand Equivalent
TP 13-22		73
TP 13-09	11.4	45
TP 13-24	10.7	

Micro Deval testing indicates that Test Pit 13-09 and 13-24 contains good quality material. Sand Equivalent results indicate the material from Test Pits 13-22 and 13-09 contains non-plastic fines

Granular Volume:

Proven Volume from the 2 areas indicated on the Pit Development plan = 104,000 m³

Based on mining the suitability areas (covering approximately 26,000 m²) to an average depth of 4.0 m.

Pit Development and Recommendations:

- The suitability AREA A has been lightly stripped of most organics but may require additional stripping; AREA B has been completely stripped and should not require additional stripping.
- The crusher can be set up near Test Pit 13-14 with mining toward AREA A and AREA B.
- Processed aggregate can be stockpiled south of the crusher site where space permits. The stockpile area may require minor leveling.
- The mining area contains relatively clean and coarse granular material. In order to produce the specified Modified High Fines Surfacing Aggregate it will be necessary to utilize the existing silty material at the south end of the reserve.
- At the completion of mining, active pit faces shall be sloped to a minimum of 2:1 with granular material. **Reject material from aggregate production is not be used to slope or infill pit faces without the prior approval of the Ministry Gravel Resource Manager.**

Photographs:**Spoil material from TP 13-08**



Spoil material from TP 13-18

Information prepared by

Bill Richards
Senior Aggregate Specialist