



## Ministry of Transportation

Geotechnical and Materials Engineering

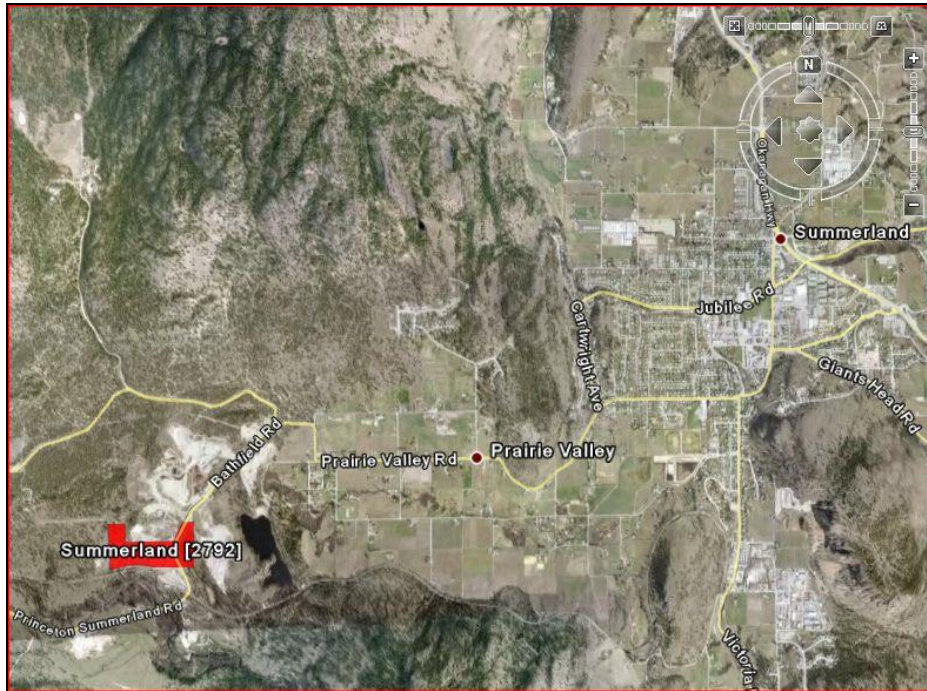
## Southern Interior Region

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# Summerland Pit No. 2792

## 2017 Technical Information Report

**Location:** The pit is located approximately 6 km southwest of Summerland via Rosedale Avenue, Prairie Valley Road, Doherty Avenue and Bathville Road.



**Legal Description:** The pit is located within a portion of District Lot 2886, Osoyoos Division of Yale District. A Crown Land Act Section 16 Map Reserve covers the pit in the name of the Ministry of Transportation and Infrastructure. UTM co ordinates for the pit are Zone 11, 302500 Easting and 5496300 Northing. The pit area consists of 11.33 hectares.

**Gradation:** Testing completed in 1996 indicates that the pit is gradationally variable throughout. The average and range of gradations for samples obtained from 1996 Test Pits are as follows:

**Laboratory Samples**

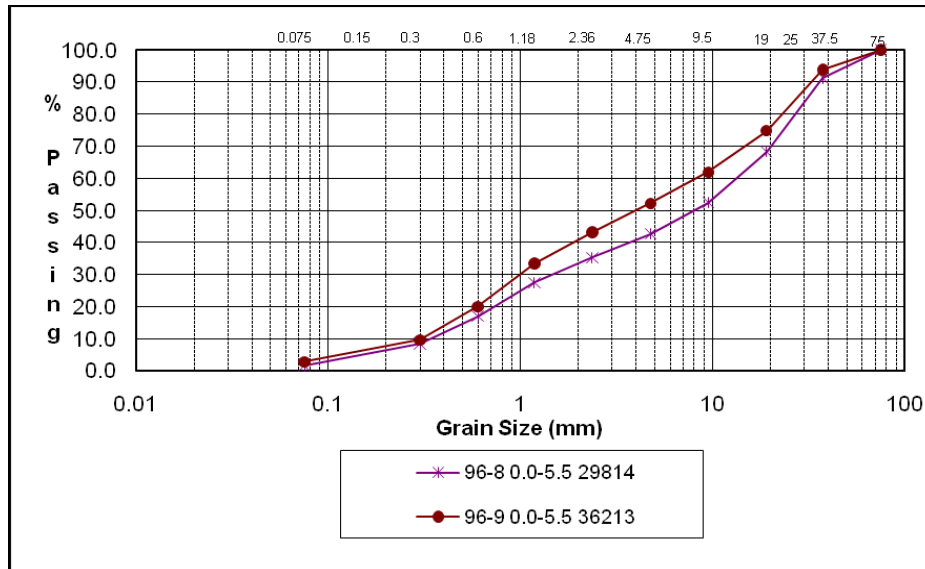
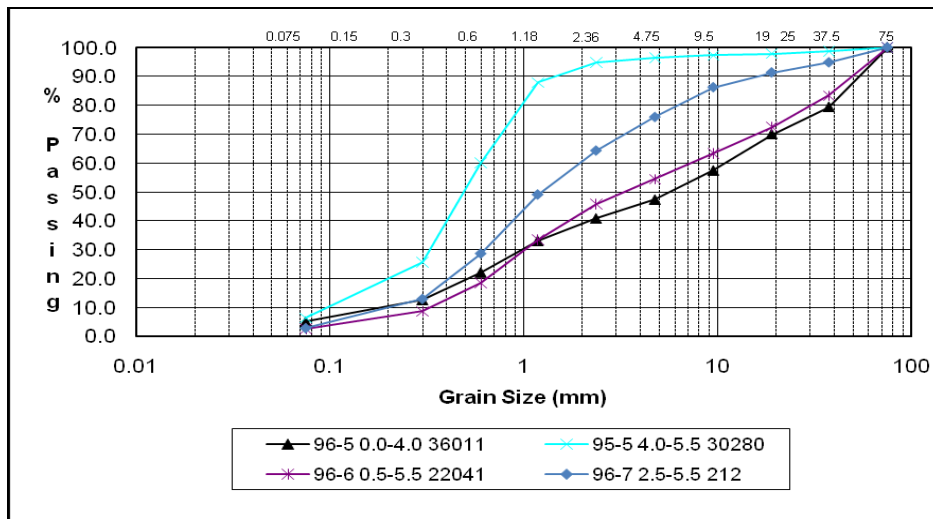
Classification:	Average (%)	Range (%)
Gravel (4.75-75mm)	45.5	24.1-57.3
Sand (0.075-4.75mm)	51.5	41.1-73.0
Fines (<0.075mm)	3.0	1.6-5.1

**Oversize Field Estimates**

Classification:	Average (%)	Range (%)
Boulders (>375mm)	7.1	0-20
Cobbles (150-375mm)	8.7	1-20
Cobbles (75-150mm)	7.3	1-10

The maximum size rock observed within Area A was 400mm.

1996 Sieve Analysis within Suitability Area A



**Aggregate Quality:** A summary of aggregate quality tests performed on samples obtained from pit are as follows:

TEST	AVERAGE	RANGE
Degradation %	80.7	NA
Sand Equivalent %	71.1	N/A
Magnesium Sulfate % (Coarse)	2.18	NA
Magnesium Sulfate % (Fine)	5.22	NA
Specific Gravity (Coarse)	2.665	2.66-2.67
Specific Gravity (Fine)	2.64	N/A
Absorption %(Coarse)	0.80	0.77-0.83
Absorption %(Fine)	0.81	0.79-0.83

### **2017 Testing**

Three test pits were dug in July 2017 in the locations noted on the Pit Development Plan. The field estimated gradations are as follows:

TP	DEPTH		SOILS CLASS	ESTIMATED GRADATION		
	FROM	TO		G	S	F
17-01	0	5	GW	70	29	1
17-02	0	2.6	GW	66	33	1
	2.6	-	SP	3	96	1
17-03	0	0.5	SP	3	96	1
	0.5	1.6	GW	66	33	1
	1.6	5	GP	76	23	1

### **Granular Volume:**

Estimated Volume: 10,000 m<sup>3</sup>

The Estimated Volume is based on mining the entire suitability boundary to an average depth of 4.0 metres.

**Site Photographs:**



Suitability Area and Potential Crusher Location



2017 Test Pit



2017 Spoil Pile



2017 Test Pit



2017 Spoil Pile

**Pit Development and Recommendations:**

- The Ministry of Transportation and Infrastructure has developed within the suitability boundary of the pit; however, it may require a minor amount of stripping prior to aggregate production. Addition development will be the responsibility of the contractor and will be completed as per the pit development plan or as directed by the Ministry Representative.
- The crusher is recommended to be set up on the pit floor adjacent to the suitability boundary with mining proceeding as per the pit development plan.
- The Trans Canada Trail borders the southern end of the pit. A 5 meter berm is to be left along the edge of the trail and the pit.
- A primary crusher capable of reducing 350mm x 450mm rock is required due to the amount of oversize contained within the deposit.
- Processed aggregate may be stockpiled to the southeast of the proposed crusher site as indicated on the pit development plan.
- At the completion of mining, all slopes shall be trimmed to a consistent, minimum slope of 1 ½:1 with native granular material. Reject material from aggregate

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production may not be utilized to slope/in fill pit faces unless approved by the Gravel  
Resource Manager.

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