PROVINCE OF BRITISH COLUMBIA

Minister of Public Works

REPORT

FOR THE FISCAL YEAR

1969/70

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in right of the Province of British Columbia.
1970

To Colonel the Honourable JOHN R. NICHOLSON, P.C., O.B.E., Q.C., LL.D.,
Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

Herewith I beg respectfully to submit the Annual Report of the Department of Public Works for the fiscal year ended March 31, 1970, in compliance with the provisions of the *Public Works Act*.

W. N. CHANT,
Minister of Public Works.

Office of the Minister of Public Works,
Parliament Buildings, December 30, 1970.

INDEX

PAGE

Report of the Deputy Minister 7

Report of the Chief Engineer, Safety Engineering Services 8

Report of the Chief Boiler Inspector 9

Report of the Chief Inspector of Electrical Energy 10

Report of the Chief Gas Inspector 13

Report of the Comptroller of Expenditure 14

Tenders Received and Contracts Awarded 19

Tribute to Centennial '71, Highlight from the First Annual Report of the Chief Commissioner of Lands and Works, 1873 27

" We must lead, not follow."

—Department of Public Works.

REPORT OF THE DEPUTY MINISTER

The Honourable W. N. Chant,
Minister of Public Works,
Parliament Buildings,
Victoria, British Columbia.

Sir,—I have the honour to submit for your consideration the Annual Report of the Department for the fiscal year ended March 31, 1970.

On this occasion the Report is submitted in form different to that of previous years. It will feature excerpts of interest from the first Annual Report of the original Lands and Works Department of the newly confederated Province of British Columbia. The year was 1873, and the first Commissioner of Lands and Works was Robert Beavan, Esq. It is hoped that members of the Legislature, and others, may find this material interesting and that the forthcoming Centennary of Confederation may be further observed and honoured by the publication of it.

During the year under review costs continued their sharp rise. The country has for some time been in the throes of attempts to curb inflationary trends. It would be a happy circumstance if it were possible to report that rising construction and maintenance costs had been halted. This is not so, however, and the Department will continue its efforts to minimize the effects of the increases.

In the last Annual Report mention was made of the changing role of the Department of Public Works. It was stated that the Department had recognized a trend and was training its more senior personnel in an administrative rather than a design role. It is becoming increasingly apparent that this action was correctly taken. It is also apparent that it should be accelerated.

In recent years changes involving new values and physical requirements have been occurring at an ever-increasing rate. Some departments, seeing their methods and functions changing in the light of advancing technologies, now also see their physical needs in a different light. It is not always easy, even when comparatively well informed as to any change, to correctly evaluate it. It is even more difficult when one is not knowledgeable. Our key personnel, therefore, must live closer to the need, understand it better, manage it better, satisfy it better, and also do it at the minimum possible cost.

The phrase " minimum possible cost " is all too easy to use, but much more difficult to achieve. Solutions which at first appear easy are found to be not so after all. The construction business, like any other in this age, is complex and changing all the time. Evaluation of good programming, modular construction, modular furniture, minimum mandatory standards, and all other devices intended to keep costs down are only good so long as they are suitable to the occasion. The battle against rising costs is a continuous operation.

It would appear that we have reason to believe that the Department is functioning well, as all the usual indicators point to this conclusion. The success of our industrial safety, in particular, would bear it out. It is with some considerable pride that I can report the winning of a succession of British Columbia Safety Council awards, together with a steadily decreasing incidence of accidents with their consequent distress. The improvement is so marked that our Department was first to win the award presented by the Honourable the Premier to the department having the greatest improvement in its safety record. This achievement in itself indicates high morale. We have reason to thank our staff for a very good year.

Yours respectfully,
A. E. WEBB,
Deputy Minister.

REPORT OF THE CHIEF ENGINEER, SAFETY ENGINEERING SERVICES DIVISION

Since this report involves the work done by my predecessor, I feet it pertinent, therefore, to pay my respect on behalf of the Division to the contribution made by the former Chief Engineer, Mr. L. Robson, P.Eng., whose retirement was announced on January 31, 1970.

Mr. L. Robson joined the Electrical Energy Inspection Branch in 1939 and diligently worked to assure that the Canadian Standards Association Codes and Specifications would provide the highest standards of safety for the user of the energy.

Mr. L. Robson assumed the duties of the Chief Engineer on October 1, 1966, and he has done much in co-ordinating the three Safety Engineering Branches which control, in so many ways, the operation of industry and the comfort and well-being of everybody within the Province. We sincerely wish him continuing good health and happiness.

Safety can be defined as *being free from danger;*

Engineering can be defined as *planning;*

Services can be defined as *work done for others;*

therefore, it can be said that the Safety Engineering Services Division is a Division which plans for others in order that they may be free from danger. It has been, and will continue to be, the policy of this Division to assist people and industry, to aid contractors and consultants, to make as safe an environment as technology will permit, without restricting the project more than necessary.

The Codes of this Division are enforced, giving consideration to all the technical requirements of the industry, and giving the most safety possible, while still maintaining viable industry. As one can never be completely free from danger, safety becomes a relative matter; that is, it becomes the matter of judgment as to the probability of an accident occurring; therefore, a great responsibility is placed on all the Inspectors of this Division for, if they overestimate the safety requirements, the industry will not be able to compete, and therefore will not contribute to the economic growth of the Province, and, if they underestimate the safety requirements, they will expose the owners and workers to risks which they need not be exposed to. Therefore the individual Inspector has a large role to play in the economy of this Province.

Industry installations are always a problem, and the Codes at the best are guides. This Division basically deals with the conversion, transmission, and utilization of energy. As transmission of energy becomes more widely spread throughout the Province, the effects are instantly felt in the areas where the energy is to be utilized. For instance, the completion of the high-voltage electrical transmission-line and the gas transmission-line from the vicinity of Prince George to Prince Rupert has greatly stimulated industry along the right-of-way and adjacent to the rights-of-way. It has stimulated the forest industry, as paper-mills are being constructed at Kitimat and Houston, and a large sawmill is being built at Fort St. James. It has been a stimulus in the mining industry at Endako, Pinchi, and Topley. These basic industries attract the associated industries, thus greatly enlarging the population in these areas. This increase in industry has placed a large stress on this Division.

A. G. KANEEN, P.ENG.,
Chief Engineer.

REPORT OF THE CHIEF INSPECTOR OF BOILERS AND PRESSURE VESSELS

GENERAL

The industrial growth throughout the Province is still continuing, although at a slower rate. There are three new pulp-mills in the design stage; in addition, chemical and gas plants are building or adding new plant facilities. Concerted efforts are being put forth to improve the efficiency of all our operations.

OPERATIONS

Up until 1967/68, the number of operating engineers examined in all centres has steadily increased, but in 1968/69 the total examined was 772, a reduction of 99 compared to those examined in 1967/68, and for 1969/70 the total is 700, a reduction of 72 from 1968/69; a total reduction of 171 examinations over a two-year period.

Canada Manpower sponsors some operating engineer candidates for British Columbia Vocational School training.

Generally, Vocational Training Centres (Welding) Vancouver, Burnaby, Nanaimo, Prince George, Dawson Creek, and Kelowna have been busy all through the year. Despite this activity, our records indicate a decided drop in the actual number of all grades of welders tested.

Canada Manpower is reducing its sponsorship to some degree for aspiring welding candidates.

ACCIDENTS

There was one fatal accident during the year. This occurred in a liquid-oxygen plant.

On March 11, 1970, an accident occurred due to a series of errors and procrastination. Had some action been taken when excessive pressure was originally noted, this unfortunate occurrence could have been avoided.

According to our investigation, an operating pressure of 5,000 p.s.i. was noted on a 9-inch diameter by 4-foot-long oil-purging cylinder which was constructed for a working pressure of 2,700 p.s.i. This incident occurred in July, 1969, when the operator on duty immediately pulled the compressor switch. Two or three months later the safety valve on this vessel was found to be continually leaking during a charging process, and the operator on duty was instructed by the superintendent of the plant to screw the safety valve down to prevent this excessive leakage. The intent was, of course, to overhaul or replace the safety valve at a more convenient time.

Unfortunately, this proposed overhauling of the safety valve was never completed, and the vessel in question burst on March 11, 1970, due to gross overpressuring of approximately 6,000 to 6,500 p.s.i., causing the instantaneous death of the superintendent of the plant.

During our investigation, this safety valve was placed on a dead-weight tester and it failed to open, although subjected to 4,500 p.s.i.

Photographs and copies of our report on this accident were mailed to all concerned, with appropriate recommendations.

S. SMITH, P.ENG.,
Chief Inspector.

REPORT OF THE CHIEF INSPECTOR OF ELECTRICAL ENERGY

CERTIFICATES OF COMPETENCY

During the calendar year 1969, certificates of competency were issued in the numbers following:—

Class A	233	Class PA	128	Temporary certificates	3
Class B	436	Class PB	240	Restricted certificates	30
Class C	472	Class PC	316	Special certificate	1

Total, 1,859

The total of 1,859 represents a 7.8 per cent increase over last year.

EXAMINATIONS FOR ELECTRICAL CONTRACTORS

During the fiscal year 1969/70, 343 candidates for certificates of competency were examined as follows:—

	Pass	Fail	Total
Class A	57	42	99
Class B	44	50	94
Class C	87	63	150
Totals	188	155	343

PERMITS

During the fiscal year 1969/70, the total number of permits issued was as follows:—

Residential	45,149
Non-residential	11,178
Total	56,327

This represents a 2.3 per cent increase over the previous fiscal year.

DISTRICT OFFICES AND INSPECTIONS

During the fiscal year 1969/70, the previously authorized Terrace District office was opened. In addition, the Delta District was divided and is now served by two Inspectors—one operating from the district office at Ladner, and the other stationed in the New Westminster office. This had the effect of reducing to a reasonable figure the work load on the District Inspector who formerly handled Langley, White Rock, and Ladner Districts offices. Despite these changes, the work load in all Lower Mainland offices continues to be well in excess of the average for the Province as a whole. The total inspections carried out in all districts for the year was 64,505, the total number of installations approved without inspection was 9,886, a total of 74,391. The number of installations approved without inspection has increased by about 2 per cent.

APPROVAL OF EQUIPMENT

The number of applications for approval of equipment is somewhat less for the fiscal year 1969/70. During the year it was recognized that further delay in insisting upon the approval of electrical equipment in trailers and mobile homes could no longer be justified, and all trailer sales outlets were accordingly notified that they would henceforth be subject to inspection and approval.

This decision was made on the basis, as indicated in another part of this report, of 18 fires reported in trailers and mobile homes, most of which were definitely of electrical origin. As a result of the adoption of this policy, considerable new work relative to the inspection of trailer electrics is now being processed through the Branch. The total number of applications for approval was 622. The total number of pieces of equipment labelled was 1,388.

PLANS INSPECTION

The Plans Inspection service received plans for 730 projects. Of these, 1,494 drawings were presented, 415 projects were examined, leaving a balance of 315 projects pending. It is hoped that the replacement of the recently retired Approvals Officer will enable us to reduce this backlog and make the Plans Inspection service current.

CANADIAN STANDARDS ASSOCIATION

The Chief Inspector attended the meetings of the Approvals Council (Electrical) and of the Committee on Canadian Electrical Code Part I at Toronto in November, at which meetings further revisions to the Electrical Code were discussed in detail. During the year the Chief Inspector was appointed as a corresponding member of 20 sub-committees of the Canadian Electrical Code Part II, which has to do with manufacturing standards for various types of electrical equipment.

PROJECTIONISTS

At the request of the Fire Marshal, the Branch assisted in conducting examinations for 11 candidates for projectionist licences. Of these, six passed and five failed.

OVERHEAD ELECTRIC-LINE CONSTRUCTION

During the fiscal year the Branch approved 1,260 applications for permits to erect or add to pole-lines on Crown land or Provincial highways. In addition, 112 applications to install television equipment on power pole-lines were processed.

ACCIDENTS

During the fiscal year the Branch investigated 93 separate incidents alleged to have been caused by electrical equipment. Of these, 77 resulted in fire, 11 resulted in injuries to one or more persons, and 7 resulted in fatalities. Of the 77 fires, 9 were declared to have been not of electrical origin, 49 were certainly, or probably, of electrical origin, and the remainder were undetermined or doubtful. Eighteen of these fires, one of which involved the injury of two people, occurred in mobile homes or trailers. Of the seven fatalities, one involved an employee in a draft-mill who contacted a 550-volt crane trolley-bus while climbing out of a newly cleaned and still wet steel head-box. One involved an electrical contractor who attempted to remove the arc chute from a high-voltage circuit-breaker after having, as he mistakenly thought, isolated it from the electrical system. One involved a

fork-lift operator who attempted to leave his machine after having backed into a 25,000-volt overhead power-line which the machine had previously knocked down. One involved a workman operating a line truck-winch for the purpose of setting a new pole, when the winch boom contacted a live high-voltage line while the operator was himself standing on the ground and touching the truck. One involved an electrician, investigating some trouble on some pole-mounted fixtures, who grasped the metal mounting-brackets of two of the fixtures, one of which was defective and alive. One involved a lineman charge-hand who attempted to tie in lines on a re-located primary pole, having forgotten that the line had been re-energized during the noon-hour lunch-break just past. The most serious involved the explosion of a propane-fired furnace, which resulted from the use of improper start-up procedures, coupled with a lack of maintenance on the electrical equipment used for the starting of the furnace. Because of damage to the equipment, the gas valve opened automatically upon restoration of power after a failure, admitting gas to the unlighted furnace. When an attempt was made some hours later to start the furnace, using the improper start-up procedure, the explosion occurred, killing one man and injuring four.

G. A. HARROWER, P.ENG.,
Chief Electrical Inspector.

REPORT OF THE CHIEF GAS INSPECTOR

THE ACT

No amendments were made to the *Gas Act* or to the pursuant regulations.

THE BRANCH

Gas Inspection services are extended into the Village of Sparwood and Fort St. James. A new district office was established in Terrace to serve Terrace, Kitimat, Prince Rupert, and the adjacent areas.

Industrial growth continued unabated throughout the Province. The impact of natural gas along Highway 16 from Prince George to Prince Rupert was considerable. Along with a large number of conversions from other fuels to natural gas, construction began on pulp- and paper-mills at Kitimat and Houston, and a large sawmill at Fort St. James, all using natural gas as their basic fuel. Also, natural gas was installed at the Endako Mines Limited concentrator at Endako.

Mr. A. G. Kaneen, P.Eng., was promoted to Chief Engineer of the Safety Engineering Services Division, and Mr. W. R. Montgomery, P.Eng., was promoted as of March 31, 1970, to Chief Inspector of the Gas Inspection Branch.

Night-school courses for Grade I gas-fitters have been given in Vancouver, Burnaby, Abbotsford, Prince George, Prince Rupert, and Dawson Creek.

Grade II courses were given in Burnaby and Prince George.

ACCIDENTS

There were 18 incidents investigated by this Branch, five of which were found to have been caused by other than gas. Two were investigated at the request of the Fire Marshal, where propane was involved. Of the remaining eleven, two involved large installations, three were caused by placing combustible material against or under gas-fired appliances, and the remainder were of a minor nature. Of the incidents that involved the two large installations, one was caused by the operators not following the manufacturer's maintenance instructions and not recognizing a hazardous condition when it showed on the control panel; the other was caused by someone bypassing the safety equipment. One person was seriously injured as a result of these incidents.

SUMMARY OF WORK

	1969/70	1968/69	1967/68
Appliance certification	1,732	1,494	1,345
New designs checked	1,240	1,210	1,180
Gas Codes distributed	782	948	862
Gas-fitters' licences issued	2,000	1,719	1,516
Gas contractors' licences issued	700	622	536
Provisional licences issued	650	606	596
Gas-fitters' examinations	316	236	152
Gas-fitters' re-examinations	70	70	73
Number of gas-fitters passed examinations	226	120	151
Number of gas permits issued, municipalities	6,383	6,866	8,527
Number of gas permits issued by this Branch	17,257	14,393	14,443

W. R. MONTGOMERY, P.ENG.,
Chief Inspector.

REPORT OF THE COMPTROLLER OF EXPENDITURE

The following pages present in detail the expenditures relating to the construction, alterations, and repairs on the various Government buildings and institutions, etc., coming under the management, charge, and direction of the Minister of Public Works.

A. E. RHODES,
Comptroller of Expenditure.

STATEMENT OF EXPENDITURES, FISCAL YEAR 1969/70

ADMINISTRATION AND MAINTENANCE VOTES

(For details, *see* Public Accounts)

Vote 257—Minister's Office		$28,632.51
Vote 258—General Administration		350,773.44
Vote 259—Government Buildings (Maintenance)	(Gross)	12,841,879.71
Vote 261—Rentals	(Gross)	2,269,735.90
Vote 262—Safety Inspection Division		1,004,128.60
Less credits—		
Items recovered from the Department of Education *re* Technical and Vocational Schools (Government Building Vote)		*1,671,467.95*
Items recovered *re* Vocational Training, Energy Board, Mental Health, etc. (Rental Vote)		*356,748.49*
		$14,466,933.72

CAPITAL

Vote 260—Construction of Provincial Buildings (*see* expenditure by building)	(Gross)	$23,630,866.65
Less credits—Items recovered from the Department of Education *re* Technical and Vocational Schools		*6,763,449.32*
		$16,867,417.33

SUMMARY

Gross expenditure, Department of Public Works—	
Administration and maintenance	$16,495,150.16
Capital	23,630,866.65
	$40,126,016.81
Less credits—	
Maintenance	*2,028,216.44*
Capital	*6,763,449.32*
Net expenditure	$31,334,351.05

VOTE 260—CONSTRUCTION OF PROVINCIAL BUILDINGS

Project No.	Description	Expenditure
461-B-1	Alberni—Government buildings (renovations)	$914.04
653-B	Alexis Creek—Highway foreman's accommodation	10,000.00
517-B-1	Allison Pass—living accommodation (Department of Highways personnel)	90,347.76
599-B-1	Alouette River Unit (Haney)—kitchen stores building	421,386.51
	Abbotsford—	
242-B-4	Random Sample Poultry (brooder-house) Testing-station	43,691.29
631-B	Fraser Valley Trout Hatchery	55,633.26
	Brannan Lake School—	
30-B-4	Special unit	157,833.61
30-B-6	Reroofing gymnasium and classroom	11,570.00
421-B-1	Bull River—Kootenay Trout Hatchery (aeration tower and pumps)	25,604.26
	Burnaby—	
539-B	British Columbia Youth Development Centre	302,161.11
636-B	Dairy Laboratory	332,368.86
645-B	Willingdon Avenue Telephone Exchange	60,889.58
656-B	Motor-vehicle Inspection Station	74,875.62
548-B	Charlie Lake—alterations (Department of Mines)	1,240.77
6-B-34	Colony Farm—repairs to piggery	13,357.12
661-B	Coquitlam—Remand Centre (Phase I)	106,223.09
	Dawson Creek—	
235-B-1	Public Library Commisison garage extension	1,204.00
684-B	Weigh-scale Station	19,733.26
25-B-13	Dellview Hospital—roads, paths, and drainage	4,560.00
468-B-1	Duncan—Provincial buildings	724,335.62
619-B	Fernie—Government Agent's residence	24,021.43
482-B	Fort Nelson—Government office building and residence	3,404.17
	General—	
289-B	General expenses	192,867.78
289-B-1	Wages and expenses (Casual Design staff)	487,660.36
384-B	Grounds improvement (various Government buildings)	126,850.07
618-B	Gold River—maintenance depot	23,767.00
123-B-19	Haney—Correctional Institution (garage and maintenance-shop)	123,668.36
654-B	Hazelton—Ksan project	40,824.54
499-B	Hutda Lake (Men's Camp)—prefabricated building for use as correctional institution	28,402.42
	Jericho Hill School—	
79-B-10	Dormitory unit and development	4,037.34
79-B-13	Playing-fields and ancillary work	56,491.61
79-B-15	Principal's residence	2,463.54
637-B	Kamloops—weigh-scale	3,189.52
541-B	Kootenay—Pass Camp	49,735.15
651-B	Lillooet—purchase of property and renovations to buildings	15,332.02
623-B	Lytton—ferryman's house	5,589.00
640-B	Maillardville—purchase of property and renovations	117,020.90
	Nelson—	
641-B	Structural alterations (Zone 5)	49,781.90
97-B-4	Courthouse (retaining-wall)	1,103.11
625-B	Employee housing	2,311.31
519-B	New Denver—dormitory (alterations)	36,988.48
	Oakalla—	
39-B-18	Security fence	5,000.00
39-B-62	Roads	10,000.00
39-B-65	Renovations to kitchen	29,197.00
39-B-70	Central Classification Section (alterations and improvements)	5,253.63
39-B-71	Piggery and cooker	1,207.35
39-B-73	Security	20,812.55
39-B-74	Tailor-shop and root-house	15,000.00
647-B	100 Mile House—Highways maintenance establishment	329,364.10
31-B-9	Pearson TB. Hospital—modifications	22,247.05

VOTE 260—CONSTRUCTION OF PROVINCIAL BUILDINGS—*Continued*

Project No.	Description	Expenditure
544-B	Port Hardy—prefabricated house (Department of Health staff)	$372.50
	Prince George—	
470-B	Addition to Men's Gaol	21.85
479-B	Structural alterations (Zone 6)	36,384.59
479-B	Structural alterations (headquarters)	17,362.91
614-B	Region 4, fencing highway yards	25,811.27
628-B	Prince Rupert—wiring courthouse	9,350.76
658-B	Quesnel—Highway maintenance establishment	263,530.82
648-B	Revelstoke—Mica Creek highway crew accommodations (Shelter Bay, Trout Lake, and Mile 54)	263,093.96
611-B	Richmond Municipality—Motor-vehicle Inspection Station	473,255.25
	Riverview—	
5-B-102	Alterations and renovations to kitchen and staff-rooms, dining-room areas	14,745.76
5-B-116	Landscaping, roads, parking, etc.	21,281.67
5-B-121	Structural alterations (Zone 3)	105,239.45
5-B-133	Centre Lawn Building (admitting suite)	197.70
5-B-134	Renovation of fire-alarm system	18,841.97
5-B-138	West Lawn Building (alterations)	234,815.90
5-B-139	Fire escapes (Valleyview Hospital and Woodlands School)	240,456.53
5-B-140	Fire equipment	35,917.39
5-B-142	Industrial Therapy storage building	988.22
659-B	Salmon Arm—Highways establishment	233,784.05
	Skeenaview Hospital—	
24-B-10	Alterations and renovations	38,101.72
24-B-12	Wiring	10,065.71
635-B	Slim Creek—maintenance depot (N.T.P.H.)	35,000.14
	Tête Jaune Cache—	
655-B	Weigh-scale	53,956.67
660-B	Living accommodation	260.14
	Tranquille—	
10-B-12	Water supply and sewage disposal	6,086.14
10-B-49	Playground	10,024.11
10-B-54	Dairy building	3,623.43
10-B-56	Structural alterations (Zone 4)	58,479.61
10-B-57	Renovations of fire-alarm system	5,058.40
10-B-58	Laundry extension	6,135.71
8-B-8	Tranquille Farm—dairy barn	57,253.72
	Vancouver—	
408-B	Structural alterations (Zone 2)	83,221.03
546-B	Willow Chest Centre alterations	136.65
546-B-1	West elevator replacement	36,258.82
605-B	411 Dunsmuir Street (exterior renovations)	745.00
608-B	Purchase of property (Mental Health)	36,991.98
610-B	Courthouse (courtroom facilities)	329,032.45
634-B	British Columbia Building	6,042.91
649-B	Roads, paths, and parking areas	20,000.00
502-B	Vanderhoof—Highways maintenance establishment	105,941.02
	Vernon—	
411-B	Department of Highways yard-site	69,789.45
604-B	Courthouse (purchase and demolition of property)	556.12
617-B	Courthouse (elevator and alterations)	57,554.42
617-B-1	Provincial buildings (landscaping)	75,257.81
	Victoria—	
211-B-1	Materials Testing Laboratory	4,940.12
292-B	Structural alterations (Zone 1)	158,838.54
385-B	Parking facilities (Parliament Buildings)	69,191.56
464-B	Eric Martin Institute	676,783.36
486-B	British Columbia Museum and Archives buildings	1,344,538.74
487-B	Acquisition of property (Parliament Buildings Precinct)	40,310.10

VOTE 260—CONSTRUCTION OF PROVINCIAL BUILDINGS—*Continued*

Project No.	Description	Expenditure
	Victoria—*Continued*	
518-B	Dogwood Building, 1019 Wharf Street	$37,059.58
536-B	Parliament Buildings (electrical distribution system)	61,504.97
550-B	Motor-vehicle Inspection Station	24,482.62
552-B	Windermere Building (purchase)	20,010.00
554-B	Glendale Hospital	4,531,332.78
601-B-2	International Airport (roof repairs to hangars)	52,440.13
627-B	Services Building, 547 Michigan Street	4,112.65
629-B	Windermere Building (roofing and parapets)	9,612.69
630-B	British Columbia Medical Plan Building (new ventilation systems)	6,931.55
639-B	Legislative Chamber (sound-amplifying equipment)	53,426.01
643-B	Temple Building, Fort Street (renovation)	50,289.96
683-B	Douglas Building (renovations, Ministers' offices)	17,092.49
690-B	Parliament Buildings (renovations, East Wing)	46,423.10
	Wiliams Lake—	
607-B-1	Courthouse	958,293.78
657-B	Highways maintenance establishment	68,707.29
	Woodlands—	
7-B-40	Landscaping, fencing, and paving, etc.	695.43
7-B-46	Structural alterations	36,264.67
7-B-48	Renovations, Centre Building	201,185.90
7-B-49	Industrial Therapy Unit	23,743.70
7-B-50	Renovations to boiler plant	117,898.20
7-B-51	Renovation to fire-alarm system	17,013.67
7-B-53	Telephone cables	8,098.46
7-B-54	Garbage handling facilities	16,901.45
	Vocational Schools*—	
	British Columbia Institute of Technology, Burnaby—	
401-B-1	Addition	15,704.91
401-B-2	Library	55,546.31
401-B-3	Extension to Mechanical Building	9,072.89
401-B-4	Alterations to (1962) Building (including instrumentation and Power Laboratory)	26,154.98
401-B-5	Underground power-distribution system	36,107.08
401-B-7	Roads and ancillary site work	326,866.86
401-B-8	Multi-purpose Student Centre	586,994.14
401-B-9	Addition to Food Training Centre	171,772.86
401-B-10	Greenhouse and animal-holding building	57,668.74
401-B-12	Extension to culvert	1,143.38
401-B-13	Emergency power system	15,011.54
	British Columbia Vocational School, Burnaby—	
299-B-4	Industrial Laboratory	282,869.03
299-B-5	Heavy-duty Diesel Mechanics workshop	125,028.43
299-B-6	Alterations to existing building for installation of Curriculum Development Programme	57,492.10
507-B	Burnaby Vocational—Teacher College	19,299.78
481-B-2	British Columbia Vocational School, Dawson Creek—Autobody shop, Welding shop, and Teaching-farm	283,880.49
79-B-14	Jericho Hill School—vocational classrooms	6,503.38
	British Columbia Vocational School, Kamloops—	
620-B	Administration, workshop, and cafeteria building	182,317.74
620-B-1	Vocational School	1,076,734.27
	British Columbia Vocational School, Kelowna—	
412-B-1	Alterations to Workshop No. 1 Administration Building and new storage building	61,815.40
412-B-2	Cafeteria and training-kitchen	705,933.61

* Credits were received from the Department of Education to offset part of these expenditures.

VOTE 260—CONSTRUCTION OF PROVINCIAL BUILDINGS—*Continued*

Project No.	Description	Expenditure
	Vocational Schools*—*Continued*	
	British Columbia Vocational School, Nanaimo—	
231-B-7	Additional floor to existing classroom building	$318,167.86
231-B-8	New workshop building	16,133.37
	British Columbia Vocational School, Nelson—	
429-B-1	Central receiving and stores depot	568.50
429-B-2	Completion and extension of parking areas	12.66
312-B-1	British Columbia Vocational School, Prince George—sawmill building and conversion of existing classrooms	65,380.22
	British Columbia Vocational School, Terrace—	
407-B	Vocational School	18,636.37
407-B-1	Dormitory and cafeteria	1,340,526.86
407-B-3	Central receiving and stores depot	3,798.29
633-B	British Columbia Vocational School, Victoria—workshop complex	1,713,053.94
		$23,630,866.65

* Credits were received from the Department of Education to offset part of these expenditures.

MAJOR TENDERS RECEIVED AND CONTRACTS AWARDED FOR BUILDINGS

Project No.	Description of Work and Names of Tenderers	Amount	Remarks
.....	*Janitorial Services, Provincial Government Buildings, Vancouver, Work Zone 2:*		
	Banner Building Maintenance Ltd.	$112,800.00	
	National Building Maintenance Ltd.	69,000.00	Awarded.
	Best Cleaners & Contractors Ltd.	86,376.00	
7-B-46	*Alterations to Wards 32 and 33, Fraserview Hospital, The Woodlands School, New Westminster:*		
	No bids received.		
407-B-1 407-B-2	*British Columbia Vocational School, Terrace, Phases 4 and 5, Cafeteria and Dormitories:*		
	Basarab Construction Co. Ltd.	1,793,000.00	
	Jarvis Construction Co. Ltd.	1,631,797.00	Awarded.
	Burns & Dutton Construction (1962) Ltd.	1,698,000.00	
30-B-4	*Special Unit B, Brannan Lake School, Wellington:*		
	D. Robinson Construction (1952) Ltd.	117,240.00	Awarded.
	Port Alberni Home Builders Ltd.	120,453.00	
	Souther Construction Co. Ltd.	125,065.00	
	A & B Construction Co. Ltd.	129,022.00	
5-B-139 7-B-55	*Fire Escapes, Valleyview Hospital, Essondale, and Woodlands School, New Westminster:*		
	Gadicke Construction Co. Ltd.	206,271.00	Awarded
	Seaward Construction Ltd.	243,700.00	
611-B	*Motor-vehicle Testing-station, Richmond:*		
	Mainland Construction Co. Ltd.	442,890.00	
	Pine Tree Construciton Co. Ltd.	450,529.00	
	Bird Construction Co. Ltd.	418,757.00	Awarded.
	Brockbank & Hemingway Ltd.	389,500.00	
	L. D. Boyd Construction Ltd.	446,000.00	
	Western Building Ltd.	466,756.00	
	Burns & Dutton Construction (1962) Ltd.	429,000.00	
299-B-4	*Industrial Instrumentation Laboratory, British Columbia Vocational School, Burnaby, Phase 4:*		
	Stevenson Construction Co. Ltd.	101,400.00	
	Argus Installations Ltd.	97,085.00	Awarded.
.....	*Janitorial Services, British Columbia Vocational School, Burnaby, Work Zone 2:*		
	Banner Building Maintenance Ltd.	46,320.00	
	Mercury Maintenance Div. of Dustbane Enterprises	73,800.00	
	P.K. Floor & Building Maintenance Ltd.	67,595.52	
	Arlen Cleaning Services	47,476.56	
	National Building Maintenance Ltd.	52,680.00	
	Best Cleaners & Contractors Ltd.	51,777.00	Not awarded.
385-B	*Paving Provincial Government Parking-lots, Victoria:*		
	O.K. Trucking Co. Ltd.	32,729.12	
	Victoria Paving Co. Ltd.	28,027.00	Awarded.
31-B-9	*Addition to Pearson Hospital, West 57th Avenue, Vancouver:*		
	A. W. Gillis Ltd.	19,714.00	Awarded.
	Seaward Construction Ltd.	21,388.00	
620-B	*British Columbia Vocational School, Kamloops, Phase I, Grading and Clearing:*		
	View Construction Co. Ltd.	162,636.00	
	W. C. Arnett & Co. Ltd.	74,455.00	Awarded.
	Allen Contracting Ltd.	87,853.00	
	McGregor Construction Ltd.	93,450.00	
.....	*Landscape Maintenance, Nanaimo:*		
	Jensen & Johnsen Landscape Contractors Ltd.	14,402.00	Awarded.
.....	*Janitorial Services, Various Rented Premises, Vancouver, Work Zone 2:*		
	National Building Maintenance Ltd.	14,160.00	Awarded.
	Best Cleaners & Contractors Co. Ltd.	9,816.00	
	Crystal Building Maintenance Ltd.	35,758.00	
.....	*Landscape Maintenance, Courthouse, Quesnel:*		
	Peter Josephy	6,720.14	Awarded.
401-B-7	*Landscaping between Library and Willingdon Avenue, British Columbia Institute of Technology, Burnaby:*		
	Stevenson Construction Co. Ltd.	221,842.00	Awarded.

MAJOR TENDERS RECEIVED AND CONTRACTS AWARDED—*Continued*

Project No.	Description of Work and Names of Tenderers	Amount	Remarks
401-B-7	*Road Widening and Underground Electrical Ducts, British Columbia Institute of Technology, Burnaby:*		
	Stevenson Construction Co. Ltd.	$35,223.00	Awarded.
	Hallcraft Construction Co. Ltd.	42,207.00	
	Standard-General Construction (International) Ltd.	40,968.00	
	Jack Cewe Ltd.	52,290.00	
601-B	*Repairs to Hangars 1 and 3A, Department of Highways, Patricia Bay:*		
	W. Campbell Ltd.	19,436.00	
	Barnett-McQueen Co. Ltd.	22,416.00	
	William A. Terry Construction	18,086.00	
	H. E. Fowler & Sons Ltd.	15,365.00	Awarded.
	Pacific Pile Driving Ltd.	24,818.00	
	Bird Construction Co. Ltd.	27,600.00	
	Basarab Construction Co. Ltd.	39,800.00	
647-B	*Highways Maintenance Establishment, 100 Mile House:*		
	Turner Construction Co. Ltd.	324,863.00	
	Johnston Bros. Construction Ltd.	307,343.00	Awarded.
	Dezell Construction Co. Ltd.	326,400.00	
	Teck Construction Ltd.	310,709.00	
	Basarab Construction Co. Ltd.	372,300.00	
	McGregor Construction Ltd.	339,500.00	
5-B-138	*Dishroom Renovations, West Lawn Building, Riverview Hospital, Essondale:*		
	Seaward Construction Ltd.	45,687.00	
	A. W. Gillis Ltd.	46,595.00	
	Ocean Park Construction Ltd.	44,380.00	Awarded.
7-B-46	*Alterations to Wards 33 and 44, Fraserview Hospital, The Woodlands School, New Westminster:*		
	Ratcliffe & Sons Construction Co. Ltd.	44,699.00	
	Seaward Construction Ltd.	33,505.00	Awarded.
	A. W. Gillis Ltd.	36,697.00	
	Argus Installations Ltd.	51,955.00	
619-B	*Government Agent's Residence, Fernie:*		
	Porta-Fab Leasales Ltd.	19,498.00	Withdrew.
	Seaward Construction Ltd.	25,585.00	
	A. E. Jones Co. Ltd.	27,135.00	
	Revelstoke Construction Ltd.	22,900.00	Awarded.
292-B	*Alterations to Douglas Building, Government Street, Victoria:*		
	W. Campbell Ltd.	27,930.00	
	E. J. Hunter & Sons Ltd.	27,750.00	
	Bird Construction Co. Ltd.	30,820.00	
	H. E. Fowler & Sons Ltd.	27,934.00	
	Burns & Dutton Construction (1962) Ltd.	26,900.00	
	J. Bobiak Construction	24,642.00	Awarded.
654-B	*Electrical Work, Ksan Project, Hazelton:*		
	Northway Electric Ltd.	59,460.00	Awarded.
	The J. H. McRae Co. Ltd.	59,536.00	
539-B	*Therapeutic Playground, Youth Development Centre, Burnaby:*		
	Stevenson Construction Co. Ltd.	99,750.00	Awarded.
643-B	*Alterations to Temple Building, 525 Fort Street, Victoria:*		
	Dillabough & Luney Ltd.	49,205.00	
	H. E. Fowler & Sons Ltd.	46,292.49	
	E. J. Hunter & Sons Ltd.	46,253.00	
	J. Bobiak Construction	43,690.00	Awarded.
610-B	*Alterations to Courthouse, Vancouver, Phase 6:*		
	Stevenson Construction Co. Ltd.	293,883.00	
	Allan & Viner Construction Co. Ltd.	291,980.00	Awarded.
	Argus Installations Ltd.	298,432.00	
519-B	*Extension to Central Heating System, Youth Centre, New Denver:*		
	Boundary Electric Ltd.	35,950.00	
	Fred Welsh Ltd.	30,338.00	Awarded.
	Ocean Park Construction Ltd.	32,711.00	
	Seaward Construction Ltd.	40,581.00	
	Mechanical Installations Co. Ltd.	39,127.00	
648-B	*Crew Accommodations, Department of Highways, Revelstoke (Shelter Bay, Mile 54, and Trout Lake):*		
	Allied Construction & Development Ltd.	245,256.00	
	Creighton Construction Co. Ltd.	269,791.00	
	Revelstoke Construction Ltd.	241,922.00	Awarded.
408-B	*Reroofing Pearson Hospital, Vancouver:*		
	Seaboard Sheet Metal Ltd.	12,986.00	
	Jackson Sheet Metal & Roofing Co. Ltd.	8,987.00	Awarded.

MAJOR TENDERS RECEIVED AND CONTRACTS AWARDED—*Continued*

Project No.	Description of Work and Names of Tenderers	Amount	Remarks
123-B-19	*Vehicle-maintenance Garage, Haney Correctional Institute, Haney:*		
	Stevenson Construction Co. Ltd.	$115,650.00	Awarded.
	Gadicke Construction Co. Ltd.	129,500.00	
	Arlen Construction Ltd.	125,000.00	
655-B	*Weigh-scale Station, Tête Jaune Cache:*		
	Ocean Park Construction Ltd.	37,942.00	Awarded.
	Crawley & Mohr Ltd.	38,200.00	
617-B-1	*Landscaping, Courthouse Grounds Extension, Phase I, Vernon:*		
	David Howrie Ltd.	26,975.00	Awarded.
412-B-2	*Cafeteria and Training-kitchen, British Columbia Vocational School, Kelowna:*		
	Douillard Construction Ltd.	763,590.00	
	W. H. Tayler Construction Ltd.	764,569.00	
	Burns & Dutton Construction (1962) Ltd.	745,000.00	Awarded.
	Crossroads Construction Co. Ltd.	783,900.00	
211-B-1	*Materials Testing Laboratory, Kingston Street, Victoria:*		
	Farmer Construction Ltd.	46,648.00	
	E. J. Hunter & Sons Ltd.	42,298.00	
	Bird Construction Co. Ltd.	44,500.00	Not awarded.
384-B	*Irrigation, Kootenay Trout Hatchery, Bull River:*		
	G. W. Ledingham & Co. Ltd.	16,945.00	
	Colchester Supplier Ltd.	7,955.78	
	Ocean Park Construction Ltd.	18,525.00	Not awarded.
479-B	*Renovations to Courthouse, Prince George:*		
	Crossroads Construction Co. Ltd.	17,912.00	
	H. Erickson & Sons Ltd.	17,094.00	Awarded.
	Edmonton Construction Ltd.	17,774.00	
401-B-8	*Multi-purpose Student Centre, British Columbia Institute of Technology, Burnaby:*		
	Van Construction Co.	1,346,366.00	
	Norwood Construction Ltd.	1,313,000.00	Awarded.
	C. J. Oliver Ltd.	1,354,952.00	
	Stevenson Construction Co. Ltd.	1,367,388.00	
	Laing Construction & Equipment Ltd.	1,372,640.00	
	E. H. Shockley & Son Ltd.	1,347,392.00	
	Bird Construction Co. Ltd.	1,317,912.00	
	Narod Construction Ltd.	1,378,637.00	
	Grimwood Construction Co. Ltd.	1,347,000.00	
	Brockbank & Hemingway Ltd.	1,383,000.00	
661-B	*Remand Centre, Coquitlam, Earth-moving and Site Services:*		
	Smith Bros. & Wilson Ltd.	525,815.00	
	United Contractors Ltd.	598,500.00	
	Cattermole-Trethewey Contractors Ltd.	570,000.00	
	Miller Cartage & Contracting Ltd.	608,839.14	
	Allen Contracting Ltd.	429,987.00	Awarded.
656-B	*Motor-vehicle Inspection Station, Burnaby:*		
	H. Haebler Co. Ltd.	777,733.00	
	Smith Bros. & Wilson Ltd.	773,138.00	
	Burns & Dutton Construction (1962) Ltd.	774,000.00	
	Grimwood Construction Co. Ltd.	757,300.00	
	Bird Construction Co. Ltd.	748,559.00	
	A. W. Gillis Ltd.	699,538.00	Awarded.
	Narod Construction Ltd.	747,750.00	
	Western Building Ltd.	780,000.00	
	C. J. Oliver Ltd.	769,300.00	
479-B	*Reroofing and Siding, Courthouse, Prince Rupert:*		
	Rupert Building Contractors Ltd.	25,720.00	Not awarded.
554-B	*Colquitz Underground Services, Saanich:*		
	Farmer Construction Ltd.	86,649.00	Awarded.
	Chew Excavating Ltd.	108,344.07	
	Burns & Dutton Construction (1962) Ltd.	90,500.00	
630-B	*General Renovations, British Columbia Medical Building, 1410 Government Street, Victoria:*		
	H. E. Fowler & Sons Ltd.	22,750.00	Awarded.
299-B-6	*Alterations to Curriculum Development Building, British Columbia Vocational School, Burnaby:*		
	Stevenson Construction Co. Ltd.	52,387.00	Awarded.
	A. W. Gillis Ltd.	60,638.00	
8-B-8	*Dairy Barn, Tranquille Farm, Tranquille:*		
	Western Building Ltd.	57,000.00	
	The Calla Bros. Cement Contractors Ltd.	67,862.00	
	Max Daburger Contracting Ltd.	62,650.00	
	Willan Construction Ltd.	48,217.00	Awarded.
	Bill Majnik, General Contractor	51,950.00	
	McGregor Construction Ltd.	76,112.00	

MAJOR TENDERS RECEIVED AND CONTRACTS AWARDED—*Continued*

Project No.	Description of Work and Names of Tenderers	Amount	Remarks
30-B-6	*Reroofing Gymnasium and Classroom, Brannan Lake School, Wellington:*		
	Pacific Sheet Metal (1965) Ltd.	$11,570.00	Awarded.
7-B-50	*Renovations to Steam Boiler Plant, Phase 4, The Woodlands School, New Westminster:*		
	Stevenson Construction Co. Ltd.	46,230.00	
	Argus Installations Ltd.	29,000.00	
	Fred Welsh Ltd.	41,775.00	Awarded.
617-B	*Demolitions and Structural Alterations, Phase I, Courthouse, Vernon:*		
	Gustavus Construction Ltd.	8,112.00	Awarded.
	David Howrie Ltd.	14,632.00	
	Mackie & Hooper Construction Co. Ltd.	15,600.00	
536-B	*Renovations to Electrical Distribution System, Temporary Building 4, 544 Michigan Street, Victoria:*		
	Mott Electric Ltd.	16,516.00	
	Hume & Rumble Ltd.	15,026.00	Awarded.
	Denford Electric Co. Ltd.	20,892.00	
638-B	*Elevator Renewal, 411 Dunsmuir Street, Vancouver:*		
	Montgomery Elevator Co. Ltd.	35,592.00	
	Otis Elevator Co. Ltd.	32,095.00	Not awarded.
5-B-116	*Alterations to Motor Transport Garage, Riverview Hospital, Essondale, Site Works:*		
	Stevenson Construction Co. Ltd.	33,266.00	
	Capital City Construction Co. Ltd.	28,980.00	
	Seaward Construction Co. Ltd.	29,000.00	
	A. W. Gillis Ltd.	29,676.00	
	Argus Installations Ltd.	24,795.00	Awarded.
486-B	*Millwork Cabinets, British Columbia Archives and Museum, Victoria:*		
	Somersby Woodworkers Ltd.	56,333.00	
	Burns & Dutton Construction (1962) Ltd.	52,900.00	
	J. Bobiak Construction	35,355.00	Awarded.
	Sigurdson Millwork Co. Ltd.	48,350.00	
517-B-1	*Residences, Highways Maintenance Establishment, Allison Pass:*		
	Russ Reid Ltd.	85,884.00	Awarded.
	McCurrie Construction	107,212.00	
	W. H. Tayler Co. Ltd.	96,492.00	
659-B	*Highways Establishment, Salmon Arm:*		
	Forest Construction Ltd.	449,494.00	
	Kenyon & Co. Ltd.	424,793.00	
	Creighton Construction Co. Ltd.	424,716.00	
	Douillard Construction Ltd.	357,140.00	Awarded.
658-B	*Highways Establishment, Quesnel:*		
	Forest Construction Ltd.	405,557.00	
	Allied Construction & Development Div.	437,935.00	
	Dezell Construction Co. Ltd.	418,400.00	
	Lucaya Development Corporation Ltd.	374,500.00	Awarded.
657-B	*Highways Establishment, Williams Lake:*		
	Forest Construction Ltd.	421,747.00	
	Allied Construction & Development Div.	413,826.00	Awarded.
	Lucaya Development Corporation Ltd.	440,000.00	
	Dezell Construction Co. Ltd.	426,400.00	
620-B-1	*British Columbia Vocational School, Kamloops:*		
	Burns & Dutton Construction (1962) Ltd.	4,557,000.00	
	Dillingham Corporation of Canada Ltd.	4,517,208.00	
	Laing Construction & Equipment Ltd.	4,510,210.00	
	Smith Bros. & Wilson Ltd.	4,451,607.00	
	Forest Construction Ltd.	4,342,268.00	Awarded.
	Dawson & Hall Ltd.	4,483,917.00	
684-B	*Weigh-scale Station, Dawson Creek:*		
	Dyke Construction Ltd.	36,880.00	Awarded.
486-B	*Herbarium Cabinets, British Columbia Archives and Museum, Victoria:*		
	Sisco Scientific Ltd.	57,454.00	
	Art Laboratory Furniture Ltd.	32,016.46	Awarded.
	Western Fabricators Ltd.	48,638.00	
	Shanahan's Ltd.	46,418.00	

MAJOR TENDERS RECEIVED AND CONTRACTS AWARDED—*Continued*

Project No.	Description of Work and Names of Tenderers	Amount	Remarks
401-B-5	*Underground Electrical System, British Columbia Vocational School and British Columbia Institute of Technology, Burnaby:*		
	Mott Electric Ltd.	$60,522.00	
	Dillingham Corporation of Canada Ltd.	82,606.00	
	Houle Electric Ltd.	67,450.00	
	C. H. E. Williams Co. Ltd.	55,555.00	Awarded.
	Flanders Installations Ltd.	56,127.00	
	Hume & Rumble Ltd.	57,456.00	
	United Power Ltd.	60,000.00	
	Paragon Electric Co. Ltd.	62,720.00	
	The J. H. McRae Co. Ltd.	64,475.00	
401-B-13	*Emergency Power System, British Columbia Institute of Technology, Burnaby:*		
	United Power Ltd.	30,289.00	Awarded.
	Mott Electric Ltd.	42,878.00	
	Ricketts-Sewell Electric Ltd.	32,985.00	
	Flanders Installations Ltd.	32,975.00	
	Paragon Electric Co. Ltd.	38,227.00	
	Dillingham Corporation of Canada Ltd.	36,857.00	
	Houle Electric Ltd.	32,840.00	
429-B-2	*Parking-areas, British Columbia Vocational School, Nelson:*		
	Creighton Construction Co. Ltd.	56,312.00	
	Trowelex Concrete Contractors Ltd.	54,462.00	Awarded.
312-B-1	*British Columbia Vocational School, Prince George, Site Works:*		
	Crossroads Construction Co. Ltd.	36,056.00	
	Parlby Construction Ltd.	33,036.00	Awarded.
401-B-12	*Extension to Culvert, British Columbia Vocational School and British Columbia Institute of Technology, Burnaby:*		
	H. Haebler Co. Ltd.	181,750.00	
	Globe Excavation Ltd.	106,429.45	
	Casano & Sons Contracting Ltd.	118,182.00	
	Van Construction Co. Ltd.	139,011.00	
	Carper's Service Ltd.	99,912.00	Awarded.
	United Contractors Ltd.	122,093.11	
	Mayo Contracting Ltd.	157,292.00	
407-B-3	*Central Receiving and Stores Depot, British Columbia Vocational School, Terrace:*		
	Jarvis Construction Co. Ltd.	63,255.00	Awarded.
	Allied Construction & Development Div.	74,359.00	
639-B	*Sound-amplifying Equipment, Legislative Chamber, Parliament Buildings, Victoria:*		
	Barvic Electronic Communications Ltd.	42,962.00	
	General Sound & Theatre Equipment Ltd.	26,200.00	
	Omni Sound Ltd.	32,372.66	
	Radio Service Engineers Ltd.	28,617.08	
	Pacific Communications Ltd.	24,859.00	Awarded.
617-B-2	*Landscaping Courthouse Grounds Extension, Phase 2, Vernon:*		
	David Howrie Ltd.	176,995.00	Not awarded.
539-B	*Replacement of Transformer, Youth Development Centre, Canada Way, Burnaby:*		
	Dillingham Corporation Canada Ltd.	11,477.00	
	Houle Electric Ltd.	11,880.00	
	Mott Electric Ltd.	8,988.00	Awarded.
	The J. H. McRae Co. Ltd.	10,521.00	
	Gamma Electric Ltd.	11,325.00	
	Paragon Electric Co. Ltd.	10,821.00	
	United Power Ltd.	9,689.00	
	C. H. E. Williams Co. Ltd.	11,427.00	
231-B-8	*Automotive Workshop, British Columbia Vocational School, Nanaimo:*		
	Souther Construction Co. Ltd.	399,941.00	
	D. Robinson Construction Ltd.	375,000.00	
	Burdett Construction Co. Ltd.	382,890.00	
	Allied Construction & Development Div.	395,572.00	
	Burns & Dutton Construction (1962) Ltd.	378,000.00	
	A & B Construction Co. Ltd.	366,357.00	
	C. J. Oliver Ltd.	389,900.00	
	Bird Construction Co. Ltd.	377,800.00	
	E. J. Hunter & Sons Ltd.	373,924.00	Not awarded.

MAJOR TENDERS RECEIVED AND CONTRACTS AWARDED—*Continued*

Project No.	Description of Work and Names of Tenderers	Amount	Remarks
429-B-1	*Central Receiving and Stores Depot, British Columbia Vocational School, Nelson:*		
	Guy Guido Construction	$48,303.00	Awarded.
	Paul Schwab Construction Ltd.	54,218.00	
	Fame Construction Ltd.	55,580.00	
	Calla Bros. Cement Contractors Ltd.	63,018.00	
	Allied Construction & Development Div.	59,632.00	
.....	*Third-floor Air-conditioning, British Columbia Medical Plan Building, 1410 Government Street, Victoria:*		
	Playsted Sheet Metal Ltd.	48,742.00	
	Universal Sheet Metal Ltd.	47,400.00	Awarded.
	J. Bobiak Construction	50,000.00	
617-B	*Renovations, Social Welfare Offices, Phase II, Courthouse, Vernon:*		
	Gustavus Construction Ltd.	46,281.00	Awarded.
	David Howrie Ltd.	48,947.00	
638-B	*Elevator Renewal, 411 Dunsmuir Street, Vancouver:*		
	Montgomery Elevator Co. Ltd.	28,868.00	
	Otis Elevator Co. Ltd.	25,809.00	
	The Dover Corporation Ltd. (Turnbull Elevator Div.)	29,980.00	Not awarded.
408-B	*Alterations, Second Floor, 635 Burrard Street, Vancouver:*		
	Gadicke Construction Co. Ltd.	38,939.00	
	Western Building Ltd.	33,000.00	
	H. Haebler Co. Ltd.	28,450.00	
	Ballarin Bros. Construction Co. Ltd.	27,836.00	
	Allan & Viner Construction Co. Ltd.	32,440.00	
	Seaward Construction Ltd.	27,800.00	Awarded.
	Burdett Construction Co. Ltd.	30,679.00	
	Ridgeway-Pacific Construction Ltd.	31,339.00	
486-B	*Carrels and Casework, British Columbia Archives and Museum, Victoria:*		
	Bird Construction Co. Ltd.	21,836.00	
	J. Bobiak Construction	22,388.00	
	Burns & Dutton Construction (1962) Ltd.	17,900.00	Awarded.
	Sigurdson Millwork Co. Ltd.	27,381.00	
625-B	*Moving Employee Housing, Nelson:*		
	Intermountain Industries Ltd.	49,083.00	Not awarded.
299-B-4	*Industrial Instrumentation Laboratory, Phase V, British Columbia Vocational School, Burnaby:*		
	A & A Plumbing & Heating Ltd.	175,427.00	
	Flanders Installations Ltd.	178,202.00	
	Fred Welsh Ltd.	139,275.00	
	Canadian Process & Control Ltd.	148,973.00	
	United Power Ltd.	123,124.00	Awarded.
	Argus Installations Ltd.	126,419.00	
	Matthias & Nicol	187,183.00	
651-B	*Conversion of Liquor Store to Health Unit, Lillooet:*		
	Willan Construction Ltd.	30,143.00	Awarded.
	Max Daburger Contracting Ltd.	31,750.00	
	Herrick Construction Ltd.	33,920.00	
	Burdett Construction Co. Ltd.	30,566.00	
	Ocean Park Construction Ltd.	32,622.00	
	Norgaard Ready Mix Ltd.	30,340.00	
	Ocean Park Plumbing & Heating Ltd.	33,865.00	
	Seaward Construction Ltd.	30,600.00	
461-B-1	*Renovations and Additions, Courtroom Facilities, Provincial Government Building, Port Alberni:*		
	Port Alberni Home Builders Ltd.	32,837.00	Awarded.
	Turner Contracting Alberni Ltd.	35,438.00	
	Souther Construction (1968) Ltd.	34,529.00	
	Danzo & Franco Construction Ltd.	34,709.00	
5-B-142	*Addition to Industrial Therapy Building, Riverview Hospital, Essondale:*		
	Ocean Park Construction Ltd.	21,538.00	
	Seaward Construction Ltd.	15,698.00	
	Commonwealth Construction Co. Ltd.	16,131.00	
	Deitcher's Construction Co. Ltd.	12,876.00	Awarded.
	Gadicke Construction Co. Ltd.	18,377.00	
	Corvan Construction Ltd.	18,333.00	

MAJOR TENDERS RECEIVED AND CONTRACTS AWARDED—*Continued*

Project No.	Description of Work and Names of Tenderers	Amount	Remarks
536-B	*Alterations to Electrical Services, Motor-vehicle Branch Building, Victoria:*		
	Mott Electric Ltd.	$45,947.00	
	Camosun Electric Co. (1969) Ltd.	44,191.00	Awarded.
	Mawson Gage Associates Ltd.	47,963.00	
	Bescor Electric Ltd.	46,456.00	
	Denford Electric Ltd.	51,307.00	
	Ricketts-Sewell Electric Ltd.	49,328.00	
	Wyder Electric Co. Ltd.	47,700.00	
----------	*Alterations to Offices, 3100 East Broadway, Vancouver:*		
	Seaward Construction Ltd.	12,992.00	
	Timm Construction Co. Ltd.	13,816.00	
	Westwood Contractors Ltd.	21,677.00	
	Corvan Construction Ltd.	12,251.00	Awarded.
	Commonwealth Construction Co. Ltd.	15,153.00	
	Gadicke Construction Co. Ltd.	18,612.00	
242-B-4	*Additions to Water and Sewer Lines, Agricultural Service Centre, Abbotsford:*		
	Globe Excavations Ltd.	14,723.00	
	Froese Bros. Excavation Ltd.	9,242.00	
	H. J. Rai Ltd.	7,100.00	
	Clayton Contracting Ltd.	8,265.00	
	J. G. Martens Landscaping & Bulldozing	9,295.00	
	M. Poschner Excavating & Contracting Ltd.	6,568.00	Awarded.
	Alberta Utility Builders Ltd.	10,500.00	
	San Juan Construction Ltd.	8,743.40	
658-B	*Water-supply System, Highways Establishment, Quesnel:*		
	Parlby Construction Ltd.	43,394.00	Awarded.
	A. L. Kos Construction Co. Ltd.	44,800.00	
	San Juan Construction Ltd.	52,670.00	
----------	*Renovation of Department of Highways Offices, Second Floor, Weiler Building, Victoria:*		
	E. J. Hunter & Sons Ltd.	28,383.00	
	J. Bobiak Construction Ltd.	19,949.00	Awarded.
231-B-8	*Automotive Workshop, British Columbia Vocational School, Nanaimo:*		
	Burdett Construction Co. Ltd.	368,468.00	
	The Foundation Co. of Canada Ltd.	367,831.00	
	D. Robinson Construction Ltd.	366,907.00	
	Cana Construction Co. Ltd.	369,000.00	
	A & B Construction Co. Ltd.	368,863.00	
	Quinney & Fuller Construction Co. Ltd.	378,400.00	
	Farmer Construction Co. Ltd.	356,120.00	Awarded.
	Bird Construction Co. Ltd.	366,490.00	
	E. J. Hunter & Sons Ltd.	363,184.00	
	Souther Construction Co. Ltd.	376,094.00	
5-B-145	*Reroofing, North Lawn Building, Riverview Hospital, Essondale:*		
	Seaboard Sheet Metal Ltd.	49,950.00	
	Coast Hudson Roofing & Sheet Metal Ltd.	36,885.00	Awarded.
	Stevenson Construction Co. Ltd.	44,927.00	
39-B-70	*Renovations to Admitting Area, Oakalla Prison Farm, Burnaby:*		
	A. W. Gillis Ltd.	65,092.00	
	Seaward Construction Ltd.	51,400.00	
	K. & F. Construction Ltd.	49,231.00	
	Timm Construction Co. Ltd.	46,980.00	Awarded.
	Westwood Contractors Ltd.	75,485.00	
	Hallcraft Construction Co. Ltd.	48,555.00	
	Gadicke Construction Co. Ltd.	64,902.00	
7-B-56	*Renovations to Wing 2, Centre Building, The Woodlands School, New Westminster, Phase III:*		
	Burdett Construction Co. Ltd.	298,792.00	Awarded.
	Ratcliffe & Sons Construction Co. Ltd.	308,000.00	
	K. & F. Construction Ltd.	311,740.00	

AS A TRIBUTE TO CENTENNIAL 71

WE HAVE PLEASURE IN presenting the reprinted HIGHLIGHTS from the 1st ANNUAL REPORT OF THE CHIEF COMMISSIONER of Lands & Works 1873

REPORT OF EXPLORATION.

NEW WESTMINSTER DISTRICT.

To the Honorable the Chief Commissioner of Lands and Works, British Columbia.

ALTHOUGH this Report is made from an exploration and actual observation of the country between the City of New Westminster and Fort Hope, embracing both sides of Fraser River, I have, from time to time, availed myself of valuable information received from practical and experienced farmers throughout the district, respecting the country in their immediate neighbourhood, the nature and value of the soil, and its adaptation to general agricultural purposes. Therefore, combining these together, I hope in this Report to lay before you such information as will enable the public to form correct conclusions respecting a district which now attracts so much attention; and by doing this to attain the object of the department under whose authority this exploration was undertaken.

On the accompanying sketch, the distances between the principal points along the river, and the direction from these points to the different tracts of land marked on the sketch, are as nearly correct as it was possible to make them with the appliances at hand.

Leaving Langley on the 18th of August, we commenced our exploration through that part of the New Westminster District lying between Boundary Bay and the Langley Settlement. In the general features of the country, very little change was observable. A few patches of swamp, grass land were met with; also two belts of alder land. (See sketch.) With the exception of these, the country is heavily timbered, with considerable fallen timber and thick undergrowth, the soil light and gravelly, and years of labour would have to be expended before even the most favourable parts could be made available for agricultural purposes. A few groves of excellent fir and cedars were passed through; one about three miles east of Hall's Prairie, and the other between the latter place and the Boundary Line. Hall's Prairie—a tract of fern and grass land—is situated west of the southern extremity of Langley Prairie, and about three miles from the Boundary Line. Soil, black loam, with clay and gravel subsoil.

In and about the Langley District, a number of excellent farms are worked with the greatest care and attention, as is apparent from the fine fields of grain, root crops, &c., the yield of the latter being in some instances very large.

The Langley Prairie, we are informed, and we have no reason to doubt, is all occupied; but a great part of it is uncultivated—a waste covered with fern and other weeds. This is much to be deplored, since, there is no doubt, that were this land in the hands of practical farmers, Langley would be one of the most flourishing settlements in the District.

Between Langley and Matsqui, is situated some of the best land met with during the exploration. Eastward from the southern extremity of Langley Prairie, say five miles, and southward towards the Boundary Line, extends a strip of country where the undergrowth is so thick as to make it very difficult to travel through, yet the soil here is of the best description (black loam) and in places very deep. The timber has been nearly all destroyed by fire, and fallen timber and matted undergrowth cover the whole face of the country, forming an almost impenetrable jungle, from which the intending settler would be apt to turn away. But a little reflection will show, and in fact actual experiments have proved, that the difficulties in the way of bringing this

LANDS AND WORKS DEPARTMENT,

BRITISH COLUMBIA.

REPORTS OF EXPLORATION

OF A PORTION OF THE

NEW WESTMINSTER DISTRICT,

THE

EAST COAST OF VANCOUVER ISLAND,

FROM MENZIES BAY TO FORT RUPERT,

AND OF THE

CASSIAR DISTRICT.

VICTORIA:
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1873.

land under cultivation, are not so formidable as at first sight would appear. A fire placed in here about the month of October, should the season be favourable, would sweep it comparatively clear. This plan might be adopted by the Government; for unless this be done, or trails cut along the exterior lines of townships, so that the intending settler may get through and satisfy himself as to the nature of the soil, it may be years before this fine tract of land will be brought into notice. For no settler, however earnestly he may be in search of a home, will be likely to penetrate this jungle of fallen timber and matted undergrowth. Between this tract and the river, the country is somewhat broken or hilly, and in places the soil light and gravelly. But eastward towards Matsqui, and reaching within one mile of the Matsqui Prairie, is situated one of the finest belts of alder land in the district. (See sketch.) It commences near the river and extends southward about seven miles, and is probably three miles wide. The timber is very uniform in size, and about six inches through. This tract of land is comparatively level and free from undergrowth, and is also far above high water mark. The soil, black loam, with clay subsoil. Upon the value of this description of land it will be unnecessary to enlarge. All through the district, wherever it has been tried, the most satisfactory results have followed.

Between this alder belt and Matsqui Prairie, the country is slightly rolling; the prairie itself being bounded on the west and south by maple and alder ridges, with here and there small openings covered with a heavy growth of fern. The timber is nearly all dead, and the obstacles in the way of clearing it off, and bringing the land to a state of cultivation, are light indeed compared with those which settlers have to contend in other countries. The fire, in fact, doing the most of the work; as the stumps and roots being in a state of decay, can be easily got rid of; the fern is the worst enemy to contend with, but this in time disappears. Some of these ridges are now under cultivation, and the result is really suprising. I was shown a field of wheat which was growing on one of them, and I have no hesitation in saying, that for yield and quality of grain, it will equal anything ever raised in the Province.

This wheat was raised on ground which had never been ploughed; the land had merely been burnt over, the stumps taken out, the seed sowed and harrowed in; and at the time I saw it (25th of August) was ready for reaping.

Matsqui Prairie is about four miles square, and is subject to overflow during extreme high water; but for the greater part of the year affords an excellent range for stock.

Nestling between the range of hills on the west, and Sumass Mountain on the east, it presents a very charming picture indeed; and viewed from one of those high ridges at its southern boundary, and at the time I saw it, the loveliness of the picture cannot be equalled on the Lower Fraser. The broad green prairie stretching away to the river, was dotted here and there with groups of cattle, partly hid in the luxuriant green grass through which they were roaming. To the left along the sides of the hills, their roofs just peeping above the dark green foliage of fruit and shade trees, were to be seen three or four farm houses, each with its field of yellow grain, or surrounded by carefully cultivated gardens rich with every necessary that the soil and climate can produce; while fruit of many descriptions were hanging in tempting clusters from out the foliage of sturdy and healthy looking trees.

I have no doubt but that most of the land bordering on the prairie is already occupied, and taking into consideration the ease with which this land can be cleared, it is somewhat surprising that more of it is not under cultivation. However, back and within easy access to the prairie, the settler who is really earnest with regard to seeking a home, will find his wants satisfied.

Between Matsqui Prairie and Sumass, with the exception of a strip of timbered land along the foot of the mountain, the Sumass Mountain fills the space.

Reaching Sumass we proceeded up the river, from which it takes its name, thence to the Boundary Line, along which we travelled and finished our exploration of the country south of Matsqui. Here and there small patches of open, fern land occur; but aside from these the country is heavily timbered, and where the fire has not crossed very fine groves of cedar and fir are found. Here again is met this immense growth of weeds, berry bushes, &c., which covers the whole country westward to Langley. The soil being of a rich loamy nature is formed, no doubt, by the constant decaying of this

mass of vegetable matter, which year after year springs up, and year after year rots away. Between Sumass and the Boundary Line the land is low and swampy.

Sumass Prairie contains an area of nearly 25,000 acres, but much of it is subject to overflow. Considerable high land is contained within its boundaries, part of which is under cultivation, and the results, so far, have been not only encouraging, but in some instances wonderful.

Root crops grow remarkably well here, thirty tons of turnips having been raised from one acre. Potatoes, carrots, onions, &c., do equally as well.

Now, to illustrate the small amount of trouble and expense attending the cultivation of this land, I will merely instance one field of wheat of eighty acres which was shown me by a farmer, giving nearly his own words. The cost of producing this wheat, that is breaking up the soil from its original state, sowing and including seed, did not amount to three hundred dollars. Now placing the average yield of this field at thirty bushels per acre (its appearance would warrant expectations above this average), the reader can form some idea as to the amount of profit on the labour and capital invested.

Yet it has been fairly proved, by practical tests, that the soil of the low land, that is the land subject to overflow, is the most productive. And it is a matter of no small regret, that some steps have not been taken, and some plan set on foot, by which the lands of this extensive valley might be reclaimed. Guarded on the east and west by the Chilliwhack and Sumass Mountains, it presents a frontage to the river two and a half miles long, across which, and between the points of these two mountains (see sketch), it is contended a dyke, the average height of which would not exceed six feet, would effectually reclaim the whole valley. It is also claimed by practical minds that the actual cost of dyking would not exceed an average of one dollar per acre. Now ten times this amount per acre would scarcely leave the most favourable timbered land in the district ready for the plough. But dyking is something from which individual effort shrinks, and which individual labour cannot be expected to accomplish in such an instance as this. The dyking of Sumass Prairie would be a benefit, not only to the people of Sumass, but to the whole Province, for it would render available for settlement many thousands of acres of highly fertile land ready for the plough. It would seem then that the enterprise is one which should be undertaken by or under the direction of the Government. It is not for me to suggest the precise mode in which this should be done; my duty is simply to report, for the information of the department, that some twenty thousand acres of the most fertile land in the district is at present available only as a "run" for cattle; and that this land can by the building of such a dyke as I have described be rendered fit for cultivation. I must mention an objection raised by some to the feasibility of this undertaking, viz.—that the water from the river soaks through some of the lower strata of the river bank, which strata are tapped by the interior sloughs, and that therefore no dyke would exclude the water; but the correctness of this theory is denied by many who speak from actual observation; and it is a question which could easily be set at rest by practical test. I may mention that land not to be compared with the prairie, is held in other parts of the district at from $7 to $10 per acre.

Leaving Sumass, we proceeded direct to Chilliwhack, thence across the country in a southerly direction, along the valley of the Choowallah River from which we strike the Boundary Line. This country, probably six miles in extent, is all timbered, with the exception of a few patches of open burnt land, the surface broken or hilly; the soil generally good, being light loam with clay subsoil; but on the hills sandy, mixed with gravel. The timber, which in places is valuable, consists of fir, cedar, and cottonwood, with thick undergrowth of vine-maple, hazel, and dogwood. In this stretch of land, and about three miles from the Sumass Settlement, is also situated a cranberry marsh of about five hundred acres.

Along the valley of the Choowallah River several flats were under cultivation by the Indians, and very good crops of wheat, timothy hay, potatoes, &c, were produced. In fact I found all along, from Sumass to Cheam, the Indians were fast following in the footsteps of the whites in the matter of farming; nearly every little settlement having its patches of cereals and root crops. Returning from this point we proceeded up the valley of the Chilliwhack River to the base of the mountains; distant from Fraser River

about eight miles. The features of the Country here are more favourable than along the valley of the Choowallah, the surface being not so much broken, and the soil richer and deeper. The timber consists of cottonwood, vine-maple, and alder, with a few scattering fir and cedar, the latter very large but of a poor quality; the undergrowth, hazel, berry-bushes, and nettles. Coal has been discovered here at the foot of the mountains (see sketch); and a prospecting company formed by the settlers are engaged in testing the extent of the lead. At present it is only traceable through a sort of cement or conglomerate rock.

Chilliwhack is perhaps the most substantial and best regulated farming district on the Mainland, if not in the Province; but it might not be considered in the nature of this report to proclaim facts which are already patent to even the casual observer, were it not for the purpose of adducing proof as to what can be attained in the matter of farming on the Lower Fraser by careful industry. Here are to be seen those signs which are the certain indications of prosperity; extensive and carefully cultivated fields, large and well filled barns, and neat and comfortable looking farm-houses, surrounded with their gardens of fruit and vegetables. These signs not only point to the great fertility of the soil, but have a tendency to inspire the new settler with hope and energy, and to this fact may be attributed the large increase of settlers in this neighbourhood during the last three months.* We found the harvest here to be a week earlier than at Sumass.

Leaving Chilliwhack we proceeded along the eastern boundary of the settlement, in a southerly direction towards the mountains. Nature of country: burnt timber, with very thick undergrowth of hazel, berry, and rose-bushes, and considerable fallen timber. Soil dark loam with clay sub soil. At the base of the mountains, and probably three miles from the Chilliwhack Settlement, we crossed a large prairie about six miles long and from two to four wide (see sketch), covered with blue joint grass, and in places pea-vine. Although at present perfectly dry, it might, in consequence of its natural drainage being obstructed by beaver dams, be at certain seasons wet, possibly partly submerged; but being much higher than high-water mark on the Fraser, there would be little difficulty in removing this objection. This prairie is about eight miles from the Chilliwhack landing; and between it and Cheam, and approaching near the river, two smaller prairies are found, each of about one mile in extent.

Leaving the large prairie, and travelling east towards Cheam, we crossed a grove of very fine green timber (fir) situated about five miles from Chilliwhack Settlement, and bordering on the Cheam Slough; and two miles further on we came upon another fine belt of alder land, something similar in extent to that west of Matsqui. The nature of the soil, black loam with clay bottom. The soil here is very deep. The surface of the country level and comparatively free from undergrowth.

Nearly all this country embraced within the following boundaries, viz: Chilliwhack on the west and Cheam on the east, a distance of twelve miles, and Fraser River on the north (including Islands) to the mountains on the south, a distance of fifteen miles, (see sketch), may be safely set down as containing more rich agricultural land unoccupied than any other section of the same extent within the limits explored. Although nearly all timbered, it is of a nature requiring no great amount of labour in clearing, if I may except the fir timber (see sketch) which is always more or less hard to get rid of. But the settler must remember he has only the timber to contend with. Here he is free from floods; and no stones exist to cover his land with unsightly heaps after the labour of clearing away the timber is finished. Towards the mountains the timber becomes more scattering, and fern openings and thick undergrowth are met with.

Leaving the valley we commenced the ascent of "Discovery" Mountain, which is situated at the eastern extremity of the valley. (It will be understood here, that this plan was always adopted wherever the opportunity occurred; not only to obtain a correct idea of the country, but to satisfy ourselves that no prairie lands were being overlooked.) The ascent of this mountain occupied five hours, and was over a succession of benches, some of which were thickly timbered with fir. One of these benches deserves more than a passing notice. Here the trees grew so close together that it was with

* During the Months of August and September, over twenty-five Pre-emptions were made in the neighbourhood of Chilliwhack.

difficulty we picked our way around them; their trunks towering upwards two hundred feet without knot or limb, while their green branches interlaced at the top, formed an impenetrable veil through which the sun's rays never penetrate, nor "shadows mark the flight of time." Within this grove the silence of death prevailed. Here was no undergrowth or fallen timber, and the ground was level and covered with a soft yielding moss, over which, as we trod, our footsteps gave back no sound. So closely huddled together were the trees, that it was almost impossible for the eye to penetrate a dozen yards in any direction; turn which way you would, their tall spectral trunks stood up like grim sentinels keeping watch and guard over the gloom beyond.

Leaving these benches behind, we cross others covered with low bushes and stunted pines, and at last scramble up to the bare peak. Perhaps the most extended view to be had on the Lower Fraser is from this point. From here the river can be traced, through all its windings, eighty miles to the Gulf; and looks still and motionless in the distance. New Westminster can be seen with the naked eye, and every settlement along the river can be readily distinguished. Sumass and Chilliwhack, the former seventeen, the latter twelve miles away, appear almost at our feet. Here also can be seen, in the country between Chilliwhack and Cheam, new openings made by recent settlers; looking upon which, as new signs of awakening prosperity, the immagination wanders into the future when these green plains shall be dotted with herds, and the tangled growth of forest which now covers the virgin soil of the uplands, shall yield to the hand of hardy industry, and fields of waving corn shall take its place; when the eye from this point will rest on many a hamlet; and the sound of human voices, and human industry, will fill the space where now is silence and solitude.

Fanciful as this picture may seem, and I have no doubt, those whose experience have never led them beyond the beaten lines of travel through this district, may think it very fanciful indeed. Yet it is not only possible for this state of things to come about, but the time is not so dimly marked in the future when this very picture will become a living reality. For it can scarcely be consistent with the natural course of events, that this beautiful valley will remain long as it is, a comparative wilderness, while so many of our fellow beings are struggling for a miserable existence in the crowded homes of the old world.

Turning to the south, and within one hour's walk from this peak, we came out upon an open country, miles in extent, of benches and rolling hills, covered with a species of fine bunch grass, and dotted here and there with groves of stunted pines. (See sketch.)

The existence of this country has been known to the Cheam Indians for years; and according to them no white man has ever been there. I have also the information from the Indians who accompanied me, that winter commences there in October, and ends in April. This country would be valuable as a summer range for stock, especially sheep. The best approach to it from the Fraser, would be up the valley of a creek which empties into the Fraser eight miles above Cheam; but I am of the opinion that this open stretch of country extends through to the valley of the Similkameen.

Returning to the river we explored round the Cheam Islands. (See sketch.) On two of these Islands, settlement has already commenced; but miles of unoccupied land still remain. These Islands are lightly timbered with fir, cedar, and white birch; with undergrowth of hazel, rose-bush, &c. The soil is the usual alluvial deposit, covered with vegetable mould, and has proved, so far, to be very productive; in fact we found here every thing in the shape of root crops, vegetables, &c., which are common to the climate of British Columbia, growing in great luxuriance.

Between Cheam and Hope no unoccupied land of any extent was found. Crossing the river at Hope, we commenced our explorations westward along the northern bank. Between Hope and Agassiz Landing, a distance of twenty-five miles, there is very little worthy of note in the shape of agricultural land. Bare and rugged mountains, with here and there small stretches of land mostly timbered with cottonwood, and subject to overflow, make up this portion of the country. At Agassiz Landing occurs the first break in the mountains. (See sketch.) This open stretch of country is partly occupied, and one of the best cultivated farms met with in the district is to be seen here. The country as far back as the mountains is lightly timbered, with here and there open patches of grass and fern land, and clumps of vine-maple and hazel bushes; and very

little difficulty would be experienced in clearing any portion it. Soil, dark loam, with clay subsoil.

At the northern extremity of this open country is found a valley, or pass in the mountains, about six miles long and three wide, leading to the foot of Harrison Lake. (See sketch). Some very good land is met with here. The valley is thinly timbered with fir and cedar (burnt). Near Harrison Lake the land is low and wet. Two Cranberry Marshes, the largest about 200 acres, are also found here.

From this point we proceeded down the Fraser to Harrisonmouth, thence up the Harrison River and Lake. Along this route the mountains hem in both rivers closely; and with the exception of a tract of wet grass land (400 acres), no unoccupied land was met with, although we ascended the mountains at different points to obtain a view of the surrounding country. At the foot of the lake, to the right, and about half a mile from its junction with the river, is situated a hot spring, the steam arising from which can be seen from some distance as we approach it. The existence of this spring has been known for years; but I am not aware that any particular attention has ever been turned towards it, or the medicinal properties of its waters determined. For ought we know, it may be as valuable as the hot springs of California, which constantly attract invalids from this country. The Indians have, for a long time, been in the habit of using it in certain cases of sickness, and the plan they adopt is this:—A piece of cedar bark is placed on the ground at the edge of the spring from where the steam is rising, and the invalid covered with a blanket, sits in a crouched position on this bark for hours at a time; and if they are to be believed, many cures have been effected. To test the temperature of the water, we threw in a salt salmon, which was cooked in a few minutes.

Leaving Harrison River we proceeded down the Fraser about three miles, and entered what is known as Harris' Slough. (See sketch). On the Island between this slough and the river, as also on the Mainland, a few stretches of high timbered land are met with; these being known by the description of timber (cedar and fir); the parts subject to overflow are covered with cottonwood. Prairie land is also met with both on the Islands and Mainland; this however is nearly all occupied. The slough is about ten miles long, and enters the Fraser at a point opposite Sumass Mountain. The best piece of unoccupied land bordering on the slough, was found near its head on the Mainland; its extent about six hundred acres, lightly timbered.

Leaving the slough we travelled westward to a lake; thence across the lake to a valley (marked Island Prairie on the sketch). The extent of this valley is about 1500 acres, is partly occupied as a range for stock, and is subject to overflow. No unoccupied high land, fit for arigcultural purposes, was found bordering on this valley, the mountains almost closing it in on three sides. In the centre of the lake, at the foot of the valley, is an Island containing about five hundred acres of the best land met with on the trip down. The soil is the same met with on the Cheam Islands. This Island is lightly timbered with cedar and fir, but the undergrowth is something wonderful; nettles and berry-bushes are found growing here seven feet high. The timber has all been killed by fire, and very little difficulty would be experienced in clearing. The Island stands about four feet above high water mark. The lake abounds with fine trout, and, at the time we crossed, the surface of the water was covered with ducks and geese, which rose before us in great flocks. The waters of this lake empty into the Fraser, through a slough or small creek, at a point two miles above St. Mary's Mission; and the distance from the mouth of the creek to the lake is about one mile. Between this point and the Mission, the country is hilly and lightly timbered with fir; the soil light and gravelly.

Reaching the Mission we proceeded back to the foot of the mountains, a distance of about five miles. The features of the country here are somewhat different from any met with on the south side of the river. The land is rolling, and stretches of open fern land occur very often. I mean by fern land, land over which the fire has passed, destroying the timber and undergrowth, and upon which fern has sprung up. Here, also, is found the first noticeable difference in the soil from that met with on the south side, which is nearly all formed by alluvial deposits and decayed vegetable matter. The soil here is a sort of red clay, mixed with sand and gravel, and is formed, no doubt, by the decomposition of rocks, and, to judge from its lightness, would not long retain its strength. Between this fern land and the river, and about one mile from the latter, is situated a

belt of alder bottom three miles in extent, the surface of which is broken, and in places wet and swampy. Along the base of the mountain, down as far as Stave River, the country is heavily timbered with fir and cedar, and the soil gravelly.

Following Stave River up as far as the lake, we found very little in the shape of agricultural land. Some very fine timber (cedar and white-pine), was met with round the foot of the lake, but the difficulties in the way of bringing to market, would, I think, be considerable, as the river is little else than rapids all the way. Stave River empties into the Fraser about eight miles below the Mission.

Between Stave River and the Keatsy and Pitt Meadows, the country in its general features much resembles that met with between Stave River and the "Mission;" it is nearly all timbered, with here and there open stretches of fern land,* soil light and gravelly.

Crossing the Keatsy and Pitt Meadows, we proceeded up Pitt River and to the head of the lake, thence back, round the foot of the mountains, to Lillooet River. No unoccupied high land fit for agricultural purposes was found in this neighbourhood, if I except a small stretch of timbered land situated near the mouth of Lillooet River.

Pitt River Meadows contain an area of nearly 20,000 acres, which is subject to overflow from all sides. The whole plain is nearly surrounded by water so that dyking is, in my opinion, out of the question. A great many stretches of cranberry marsh are met with through this country to Keatsy, and perhaps the most profitable purpose to which these meadows could be turned would be for the cultivation of this fruit. Cranberries are now considered an article of commerce, and, if I mistake not, the fact has been established, that the profit accruing from their production is greater than from other branches of agriculture. A number of stretches of swamp land, which might be turned to account in this way, were met with on both sides of Fraser River.

Between Pit River and Burrard Inlet no exploration was made.

It will be seen from this Report, that the greater amount of agricultural land lies on the south side of the river, and that the places most available for immediate settlement are in the vicinity of the Langley settlement, between Langley and Matsqui, in the neighbourhood of the latter place, and between Chilliwhack and Cheam.

It may be said that I travelled through the district at a time when parts of it appeared to best advantage. This I will not attempt to deny. But I also travelled through it when other parts were viewed under the most unfavourable circumstances; portions which, later in the season could have been travelled through with ease, were almost impassable from undergrowth. But these considerations must all be kept in view in order to form a fair estimate of the country.

It is far from the intention of this Report to mislead, or to raise expectations not justified by facts. Go where he may, in the most favourable parts of the District, the settler will find difficulties to contend, but none of such a nature as not to be overcome by industry and perseverance. There are, however, to be found arriving in all new countries, immigrants possessing expectations of such a character that nothing short of a beautiful summer land of sunshine and flowers will satisfy their glowing ideas. It is not to these, but to that class who are prepared to grapple with difficulties and trials common to all new countries, that we say come; and no matter where in the district they elect to build their home, one thing we can assure them, they will meet with a people whose kindness and hospitality is only equalled by the genuine earnestness with which they welcome the stranger within their midst, and who will be found ever ready and willing to extend those little acts of help, which the new settler only knows how to appreciate.

JOHN FANNIN.

October 25th, 1873.

* It will be understood here, that I am speaking of the country lying between the maple ridges bordering on the river, and the base of the mountains, the ridges being nearly all occupied.

REPORT OF EXPLORATION.

EAST COAST OF VANCOUVER ISLAND.

To the Honorable the Chief Commissioner of Lands and Works, British Columbia.

SIR,—I have the honor to inform you that, in accordance with your instructions directing me to proceed to Fort Rupert, and from that point explore Vancouver Island as far as Menzies Bay, with the view of ascertaining whether there was any land suitable for settlement, and in what quantities, I have visited the following places, viz.: Sacquash, Malcolm Island, the Nimkish River, Lakes Karmutzeen, Alootza, and Oh-uck-stal, Beaver Cove, the Needgilgas or Karmutzeen, the Coquish, the Beaver or Ows-huck, the Adams or Hillatti, and the Salmon or Kusam Rivers, from the upper waters of which I came through to Menzies Bay.

I have already had the honor to report to you on the former of these explorations; but a recapitulation may, under the circumstances, be considered advisable.

Sacquash.

Between Fort Rupert and Clickseeway, there are extensive ranges of open, grass swamps, running parallel to the coast, from which they are separated by a belt of timber, varying from one and a half to three-quarters of a mile in width, and consisting principally of cedar and hemlock, with some balsam fir; the underbrush is generally thick.

It is not considered that this portion of the country is well adapted for settlement; for although cattle might find good feed during the spring and summer, and a coarse hay might be cut for winter consumption, a very heavy outlay would be required for drainage, before any of this land could be brought under cultivation.

Malcolm Island.

Malcolm Island contains about thirteen thousand acres, and is not as rugged as most of the islands in this vicinity; there is no prairie land on it; the timber is open on the northern shore, and consists principally of spruce and hemlock; on the south side, the woods are not so open, and cedar and hemlock are the main products; the underbrush of sallal and berry bushes is, particularly in the interior, very thick,—in fact we had frequently to cut our way. The soil is generally of a very fair quality; but water appears to be scarce.

Nimkish River.

The Nimkish River is a large stream of about two hundred feet in width, flowing out of Lake Karmutzeen, and falling into Broughton Straits, opposite Alert Bay. Although rapid, the canoe navigation of this river is, with the exception of one riffle, far from bad. On the eastern bank, the ground does not rise in general for a considerable distance from the river; on the western side, the rise is more abrupt, and the bank higher. Adjoining the stream, the underbrush is dense; but a short distance back the

timber is open, and consists principally of hemlock and spruce, with occasional cedar and cottonwood on the low points. There is no open land on this stream; and the soil is of inferior quality. A trail might be easily constructed along its eastern bank.

Lake Karmutzeen.

Lake Karmutzeen is about fourteen miles long, with rocky and precipitous shores; which are timbered with hemlock and spruce. There is a small flat near its foot, of good soil, but wooded and partially flooded at high water.

Needgilgas or Karmutzeen River.

Into this lake, at its south-eastern extremity, the Needgilgas or Karmutzeen (falling water) River (and marked upon the chart as the Kla-anch, but not known among the Indians by any such name) falls. Ascending this river for about four miles and a half, the mountains narrow in, and form a series of small cañons for about three and a half miles; beyond this, the valley widens out again, and the banks are usually low, level, alluvial flats. The good land on this stream is estimated at about six thousand acres, most of which would not be expensive clearing. There is some fine Douglas pine in the valley, and the timber, which is generally large and open, consists of cedar, hemlock, alder, and spruce, with here and there a little maple. Unfortunately, the available land is cut up into detached blocks by the mountain spurs and gravel ridges which run down to the stream. These blocks are scattered on both sides of the river, from its mouth to the points to which I penetrated, a distance of thirty-three miles. The stream is a wide and rapid one, and not easily navigable, as the riffles are very numerous, and even occasionally dangerous.

Lake Alootza.

Between the mouth of the Karmutzeen River and Lake Alootza the majority of the land, though good, is subject to floods, and consists in great part of beaver swamps. That portion marked on the chart as good, is timbered with alder and cottonwood; and is not estimated to exceed two hundred and fifty acres.

Lake Oh-uck-stal.

From Lake Alootza to Lakes Oh-uck-stal and Atlucka the ground is broken and rocky, and the West Coast Range appears to begin in this neighbourhood. There is some fine Douglas pine on the dividing ridges between these lakes.

Beaver Cove.

The Cokish River, a small, rapid stream of about sixty feet in breadth, debouches into Beaver Cove; about half a mile from its mouth it is joined by a small tributary—Tsoultou Creek. Ascending the Cokish for about two miles, the mountains begin to narrow in, and from this point there is nothing but a series of cañons, the rocky and precipitous sides of which offer considerable obstacles to travelling. Having, from a mountain side, obtained a view of an apparently endless succession of peaks, without the slightest indication which would lead one to infer the existence of agricultural land beyond them, it was decided to retrace our steps and examine Tsoultou Creek, of which favorable Indian reports had been heard. This stream runs on the eastern side, and near the base of Mount Holdsworth; and I am happy to say we were fortunate enough to discover a beautiful little valley, well watered, and containing about fifteen hundred acres. Here there is a chain of grass prairies, varying from two or three to fifteen acres; and divided from each other by clumps of alder and patches of berry bushes. The whole of this valley might be easily cleared, while there is abundance of timber along its sides for all farming purposes. The soil is of first class quality. A trail has been blazed from the forks to the first prairie, after passing which, intending settlers could easily find their way up the valley. Near the coast, the timber is small and open, and consists almost entirely of hemlock.

A small stream falls into the northern bight of this harbour, and takes its rise in a lake to the westward. There is no indication of agricultural land in this vicinity.

Beaver River, or Ows-huck.

At the mouth of Beaver, or Ows-huck River, there is a gravelly flat, heavily timbered, and valueless for cultivation. Ascending the river, the mountains speedily narrow in; nor is it probable that any land fit for agricultural purposes will be found on this stream. A mountain in the distance was recognized as one which had been seen from the Karmutzeen River; and a monotonous succession of peaks to the southward indicated the hopelessness of seeking agricultural land in that direction.

It should, however, be mentioned, that miners or prospecting parties desirous of exploring the interior, will find an easy trail by keeping the eastern bank of the river.

Adams River, or Hilatti.

Adams River is a large stream of about two hundred feet in width, rapid, with numerous drift piles and riffles. At the mouth, there is an extensive flat of about eight thousand acres, of which, probably, four thousand are suitable for settlement; the soil is very good; the timber, which is open and easily cleared, consists principally of hemlock and spruce; the underbrush of berry bushes is occasionally thick. Ascending the river, detached flats, of from one to two hundred acres, divided from each other by mountain spurs, are passed; most of these are of good alluvial soil, the timber being alder, hemlock and spruce generally open, but with many thick patches of berry bushes. There is a trail, though but little travelled, which following a fork of this stream, crosses a low divide into the valley of Salmon River. At the head waters of Adams River there is a large wet meadow of about three hundred and fifty acres, in which a branch of Beaver River also takes its rise. This as well as several other smaller ones, requires drainage, which might be easily accomplished by cutting a few beaver dams, though it is feared that from its elevation above the sea the snow would probably lie for a considerable time. The best road to this point would be by way of Beaver River.

Salmon River or Kusam.

Last, but not least on the list, Salmon River claims attention. This is a large stream, the sources of which are believed to lie in the neighbourhood of Mount Washington and Alexandra Peak, while two considerable tributaries take their rise from Victoria Peak and Crown Mountain respectively, and add considerably to its volume in the lower portion of the river. The main stream itself is far from rapid, at all events at low water, and is easily navigable for canoes for some twenty miles from its mouth; the current, though strong, is not sufficiently so to render its ascent a matter of difficulty even to inexperienced canoemen, the riffles being unimportant and nowhere dangerous. It is believed that at moderate stages of the water, light draught steamers would be able to ascend ten or twelve miles. The valley may be described as about twenty miles long, varying in width from one and a half to five miles. It is estimated to contain forty thousand acres of land, of which at least twenty-five thousand are eminently adapted for settlement. In these figures it has been my endeavour rather to under than over-estimate. The soil throughout from one mountain range to the other is of very superior quality. On the banks of the river there is usually a narrow belt of timber, cedar, hemlock, and a little red fir and spruce, beyond this one finds dry alder bottoms with the trees ten or fifteen feet apart, while grass sometimes and sometimes berry bushes represent the underbrush; small fern prairies, of from five to ten acres, and clumps of hemlock and spruce are scattered throughout the whole valley, and with the exception that towards the mouth the soil is inclined to be rather more swampy than above, this is its character for twenty miles. In many places there is excellent feed to be found on the base of the mountains. Still higher up the river there is a considerable quantity of white pine, of fair size. The next consideration which presents itself is as to the modes of reaching this valley, of which there are two. One may be dismissed in a very few words, and is the only one at present available, viz: by canoe from Salmon Bay.

The other is by trail from Menzies' Bay which presents the following advantages:—

Firstly,—Menzies Bay is a good harbour, and lies to the southward of the Seymour Narrows;

Secondly,—That it is directly on the line of the projected railway;

Thirdly,—That it is no great distance from the head of the proposed settlement; and

Lastly,—That the country is favourable for trail making.

The only obstacle appears to be a large lake, which extends from the Menzies Mountain many miles to the southward. Even this however, offers a convenient place for crossing, since two opposing points stretch far into the lake, and only leave a gap of some three hundred feet to bridge.

Omitting a bridge at the lake, it is estimated that a good pack-trail could be constructed for a sum not exceeding $1,800, viz.: say

Twenty miles of trail, at $60 per mile	$1,200
Bridging and corduroying, say	600
	$1,800

I can lay claim to no new discoveries of minerals; the only chance I have seen of employing capital, is in the development of some extensive marble quarries, of which a small mountain range, through which the Needgilgas River has cut a cañon, appears entirely to consist. I am indebted to Mr. Huson for the information in the first place; and, on a cursory examination, found that this ridge probably extends a distance of four or five miles, with a width of at least a mile. The marble is of good quality, and it is considered practicable to build a tramway from Beaver Cove to these quarries.

To Mr. Hunt, of Fort Rupert, and Mr. Huson, of Alert Bay, I am indebted for much valuable information and assistance, as well as for great personal kindness and hospitality.

I enclose a sketch map of our explorations.

I have the honour to be, Sir,

Your most obedient Servant,

EDWARD MOHUN, C. E.

Victoria, British Columbia,
29th October, 1873.

REPORT OF EXPLORATION.

CASSIAR DISTRICT.

To the Honorable the Chief Commissioner of Lands and Works, British Columbia.

SIR,—From Fort Wrangle to the mouth of the Stickeen River the distance is about five miles; from the mouth of the river to the Big Bend, distance about eighteen miles; and the average course east. From the Big Bend to the Great Glacier seven miles—average course north by east. From the Great Glacier to the Hudson Bay Company's post, distance about thirty-eight miles; average course north by east; portion of this part of the river is a great deal cut up by sloughs, snaggy and shallow in the fall of the year. From the Hudson Bay Company's post to Salmon Creek, six miles; average course west; also a portion of this part of the river is cut up by sloughs, snaggy and shallow. From Salmon Creek to the Little Cañon, about seventeen miles; average course north. From the Little Cañon to Klutchman's Cañon, nine miles; average course north by east. From Klutchman's Cañon to Clearwater River, about fourteen miles; average course north-east by north. From Clearwater River to Collins' Bar, eight miles; average course north by east. From Collins' Bar to Shakesville, about seven miles; the average course north-east by north. From Shakesville to Miller's Bar, about nine miles; average course north-east by north. Three and a half miles above Shakesville there is one riffle, not navigable for steamboats at low water; with high water it is good; and with middling stage can go through the slough, leaving the riffle to your right. From Miller's Bar to Telegraph Creek, foot of the Great Cañon, distance nine miles; average course north north-east.

The ice leaves the river from the 24th April to the 5th or 6th of May. From that time, suitable river steamers can run the river until the first or middle of October; some seasons they may run later, from Collins' Bar to the first North Fork.

Vegetables and good potatoes are raised to good advantage. From the Little Cañon up, the snow falls light, from two to four feet. From the cañon down, snow lies after it has settled, from five to nineteen feet deep in places on the river bottoms. On the Upper Stickeen, the spring opens early; the snow disappears in the latter part of March or the first of April. The weather, from the 1st May, and through the summer months, is at times excessively warm.

When my sons and I arrived at the foot of the Great Cañon, on the 22nd May, 1873, where we expected to get an Indian for a guide; after a day or two's delay, we started without a guide. As there were no Indians on the Stickeen at that time of the year we could gather very little information about the trail. The trail follows the Stickeen River for about twenty-five miles, along a bench country, cut up by numerous deep gulches, including the first and second North Forks. At the second North Fork, we were detained two days and a half building a bridge; then the country is tolerably level and dry for twenty miles; then travelling through swamps for twelve or fourteen miles further, we came to a mountain which we were obliged to climb; we travelled on these mountains for about fifteen miles, and found ourselves getting into a slate range, which we followed for ten miles or more. This ridge of mountains runs about north and south. The waters of these mountains, as you will perceive by the map, run into the second and third North Forks of the Stickeen River. Then coming to a large valley, running north-east by north; followed this valley for twelve or fourteen miles. There is a large creek running through the centre of this valley, with numerous small creeks and gulches emptying into it. I have since proved that this creek is the head waters of Dease's Creek. Not knowing the exact locality of the lake, we turned a little more to the eastward, and struck Dease's Lake about midway between Dease's Creek and the head of the lake, on the 13th June, with double packs to each man. A day or two before we got to the lake, we crossed a creek which I prospected, and found a few fine "colours;" *cached* our provisions; went up the lake, and started back to the Stickeen

through the valley; arrived at Miller's Bar on the 17th June. The first forty miles on the road to Dease's Lake, from Stickeen, the feed for animals is good and extensive; but the balance of the way the feed is not so good, and limited.

Left Miller's Bar on the 20th for the lake, with double packs each. Anxious to to find out the best practical pack trail, I took the mountain trail, eastward of the third North Fork, which is the trail the Indians travel to Dease's Lake. To the Upper Stickeen, I found this part of the country much higher than what I anticipated; and also numerous swamps and deep moss. Patches of snow laying along the trail in the first part of July.

We arrived at the lake again on the 7th July. On the 8th, we started down the lake. On the afternoon of the 9th we arrived at the mouth of Thibert Creek. I went up a short distance and prospected a little; found a few fine colours, and came back to camp. Next morning I went up the creek again; found Mr. Thibert and his two partners, who were all the men who were on the creek; prospected some that day, and returned to camp. Next morning we started to pack our provisions up the creek, which took us several days. On the 15th July, we located our claims on Thibert Creek, and got ready to work. On the 25th, I and my son went prospecting on a creek which we call Delure Creek; it empties into Thibert Creek. I prospected there until the 30th; found a little gold, but not in paying quantities. I ran a cut in one place; found a little gold in the gravel, but none on the bed-rock, as the rock was smooth washed. In other places, I could not get to the bed-rock on account of water, as the creek was high.

Thibert Creek has turned out very good, but there is a great drawback on this creek—that is frost—in some places on the shady side of the creek the ground is frozen right down to the bed-rock.

The Rath Co., Collins Co., Reynolds Co., Discovery Co., and the Waldron Co., are considered the best claims on Thibert Creek. These companies have made from two to four ounces a day to the hand; all working with rockers, except the Waldron Co., who had sluices.

Not being well, and having a sore leg, I was unable to travel. On the 19th August, I sent my two eldest sons out prospecting. They arrived on Dease's Creek on the 20th, and on the 24th, staked off the Discovery Claim, and came back to Thibert Creek on the 27th, with a prospect of twenty cents to the pan, having prospected the creek about three miles, and found paying prospects all the time. But this did not start the miners from Thibert Creek; they said it was only a few spots of fine gold; but according to what my sons told me of the creek, I was satisfied there were good diggings on this creek, and sent them over again on the 29th. On the 2nd September, I sent my youngest son and an Indian with packs of provisions; when they came back again, I started over, and found my sons running up a drain and washing the gravel with a rocker, which paid them five ounces a day; they had been rocking then two days. I also went up the creek and prospected. Being satisfied that the creek was rich and extensive, I returned to Thibert Creek, and informed the miners the creek was good. Nearly all of them went over to Dease's Creek and located ground. All found big prospects, that will pay from ten to one hundred dollars a day with sluices.

On the 24th September, the weather turned cold, with a north-east wind, and continued so until the 29th; then it started to snow, with a north-east wind; all the miners leaving the creek. It continued cold,and snowing heavy, until the 1st October; we then packed up and left. Found Mr. Rath and brother at the mouth of the creek, and travelled out together; weather very cold, and blowing a heavy north wind, with snow. On the 3rd October, it moderated. By this time the snow was from twenty to thirty inches deep; the same day it commenced to rain. On the 7th, we arrived at Buck's Bar.

Dease's Lake opens from the 15th to 25th May.

Your's respectfully,

WILLIAM MOORE.

Victoria, British Columbia,
29th November, 1873.

REPORT

OF THE

CHIEF COMMISSIONER OF LANDS AND WORKS

OF THE PROVINCE OF

BRITISH COLUMBIA,

FROM THE

1ST DECEMBER, 1873, TO THE 31ST DECEMBER,

1873.

VICTORIA:
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1873.

REPORT

OF THE

CHIEF COMMISSIONER OF LANDS AND WORKS

OF THE

PROVINCE OF BRITISH COLUMBIA,

FROM THE 1ST JANUARY TO THE 30TH NOVEMBER, 1873.

To the Honorable JOSEPH WILLIAM TRUTCH, *Lieutenant-Governor of the Province of British Columbia, Dominion of Canada.*

MAY IT PLEASE YOUR HONOR:

In accordance with Section 13 of the "Public Works Extension Act, 1873," I have the honor to submit a Record of the work done this year, and a Statement of the Expenditure upon Provincial Public Works, from the 1st day of January, to the 30th day of November, 1873; together with a Report of the proceedings, transactions, and affairs connected with the Land Department, for a like period.

The whole respectfully submitted.

ROBERT BEAVEN,

Chief Commissioner of Lands and Works.

Lands and Works Department,
Victoria, B. C.,
30*th November*, 1873.

REPORT.

CONSTRUCTION OF ROADS, BRIDGES, AND FERRIES.

Victoria District.

This Electoral District comprises Victoria District, Lake, South and North Saanich; and the principal roads previously constructed therein are—

First.—The Saanich Road, which connects with Douglas Street at the boundary of Victoria City, and runs through Victoria District in a northerly direction for a distance of about three miles and a quarter, to the boundary line of Lake District, and continues thence in the same direction for a further distance of about 1¼ miles. At this point the road branches; one fork of which takes a more westerly direction, and is known as the West Saanich Road, and runs through the Districts of Lake, South Saanich, and North Saanich, a further distance of about 15½ miles. The other fork, which is known as the East Saanich Road, runs through the same districts, on the eastern side of the Saanich Peninsula, for a distance of about twelve miles, to Shoal Harbour.

A cross road, about 2½ miles long, connects the East and West Saanich Roads in South Saanich, and is known as the Mount Newton Cross Road.

There are also two other means of communication between the East and West Roads, partially opened out through North Saanich, but these are practically impassable in the winter months.

There is also a cross road which leaves the West Saanich Road near its termination in North Saanich, and runs in a westerly direction, and is known as Downie's Cross Road.

Second.—The Cedar Hill Road, which connects with the boundaries of Victoria City at Cook Street, and runs through Victoria District for about five miles, terminating at Cordova Bay, near the Hyde Park Reserve.

Third.—The Cadboro Bay Road, connecting with Fort Street, Victoria City, and runs in a north-easterly course to Cadboro Bay, distant about four miles.

Fourth.—The Foul Bay Road, connecting with the Victoria City Boundary on the Fairfield Road, running past Foul Bay and intersecting the Cadboro Bay Road on Section 28. This road is about 2¾ miles long.

Fifth.—The Burnside Road, which branches from the Main Saanich Road near the Municipal Boundary, and runs through Victoria District in a north-westerly direction, and is about 3½ miles long.

There are other means of communication in this District, such as the Mount Tolmie Cross Road, of which about one mile is constructed, and is intended to connect the Cadboro Bay and Cedar Hill Roads; a total distance of about 2½ miles.

A new road has also been opened this year from the Colquitz River in Lake District, and is graded to within about ¾ of a mile of the Main Saanich Road. There are several other cross roads in this District, which however it is needless to detail.

The new work done this year in the District has, as far as practicable, been built by contract, and consists of the following:—

1. Repairs, East Saanich Road, in North Saanich (from Simpson's to Reay's).
John Nicholson, contractor, at $1,979;
Grading and ditching, 2144 yards, 22 feet wide;
Do. do. 611 „ 15 „
Macadamizing, 325 yards, rock 6 inches deep, 10 feet wide;
Gravelling, 1819 yards, 6 inches deep, 10 feet wide;
Do. 611 „ 5 „ 10 „
5 cedar culverts 2½ by 2 feet, 22 feet long.

2. Repairs East Saanich Road, in South Saanich (from Royal Oak to McHugh's).
William Thompson, contractor, at $525;
Grading and ditching, 400 yards, 22 feet wide;
Clearing, 300 yards, 22 feet wide;
Macadamizing, 100 yards, rock 6 inches deep, 10 feet wide;
Gravelling, 400 yards, 6 inches deep, 10 feet wide;
1 cedar culvert, 3 by 1½ feet, 22 feet long;
Clearing drains, &c.

3. Repairs Main Saanich Road, in Victoria District (from City Boundary to Swan Lake).
Contractor, William Tierney, at $594 66;
Gravelling 901 yards, 6 inches deep, 14 feet wide.

4. Repairs, West Saanich Road, in North Saanich.
Contractors, Messrs. McIlmoyle and Imrie, at $232 70;
Grading and ditching, 131 yards, 22 feet wide;
Macadamizing, 131 yards, rock 7 inches deep, 14 feet wide;
Gravelling, 131 yards, 5 inches deep, 14 feet wide;
2 cedar culverts, 2½ by 2 feet, 22 feet long;
Removing 130 yards corduroy, and raising road 18 inches, exclusive of macadam.

5. East Saanich Road Deviation in South Saanich.
William Tierney, contractor, at $1,575;
Grading, clearing, and ditching, 2200 yards, 22 feet wide;
Forest clearing, 2200 yards, 33 feet wide;
1 cedar culvert 4 by 2½ feet, 25 feet long;
6 cedar culverts, extra, at $7 50,—$45.

6. Lake District Sleigh Road (from McKenzie's to Fiterre's).
Messrs. Russell and Gilchrist, contractors, at $725;
Clearing and partially grading, 4000 yards, 15 feet wide;
1 second class bridge, 22 feet long, 25 feet wide;
Corduroy, 30 feet long, 15 feet wide.

7. Keeping passable the Main and West Saanich Road for one year.
William Thompson, contractor, at $295.

General Repairs.—The following general repairs to Roads in the District were completed.
John Nicholson, foreman, at $100 per month.

1. Burnside Road.
Grading and ditching, 423 yards, 22 feet wide;
Do. do. 63 „ 18 „
Macadamizing, 63 yards, rock 6 inches deep, 10 feet wide;
Gravelling, 423 yards, 6 to 8 inches deep, 10 feet wide;
Do. 63 „ 6 inches deep, 10 feet wide;
1 cedar culvert, 2½ by 1½ feet, 22 feet long;
Repairs to bridge, cribbing, hand-rail, &c.;
Total cost on Burnside Road, $389 49.

2. Repairs Cross Road in North Saanich.
Grading and ditching, 380 yards, 16 feet wide;
Gravelling, 380 yards, 5 inches deep, 9 feet wide;
1 cedar culvert, 2½ by 1½ feet, 16 feet long;
Total cost, $176 25.

3. Repairs Mount Tolmie Cross Road, Cadboro Bay, and Cedar Hill Roads.
Macadamizing, 210 yards, rock 6 inches, 10 feet wide;
Gravelling, 210 yards, 6 inches deep, 10 feet wide:
Do. 200 „ 5 „ 10 „
Do. 43 „ 6 „ 11 „
2 bridges raised and repaired;
3 culverts repaired;
Graded, 39 yards, 18 feet wide;

Macadamized, 39 yards, rock 6 inches deep, 10 feet wide;
Gravelled, 39 yards, 6 inches deep, 10 feet wide;
2 cedar culverts, 3 by 2½ feet, 18 feet long;
3 Do. 2½ by 1½ „ 22 „

Total cost:—Mount Tolmie cross road,.....	$196	75
Cadboro Bay Road.....	195	50
Cedar Hill Road.....	81	12
Total	$473	37

4. Repairs to Mount Newton Cross Road.
Grading and ditching, 28 yards, 18 feet wide;
Macadamizing, 28 yards, rock 6 inches deep, 10 feet wide;
Gravelling, 28 yards, 6 inches deep, 10 feet wide;
2 culverts, 3 by 2½ feet, 18 feet long;
1 bridge taken down;
Total cost, $98 66.

North Saanich Cross Road (from Ryan's to Wain's).
This road was opened and made passable, and generally repaired by Mr. William Grey, at a cost of $246 50.

Esquimalt District.

This Electoral District comprises the Districts of Esquimalt, Metchosin, and Sooke. The principal roads previously therein constructed, are—

First.—The road from Victoria City to Esquimalt Harbour, which runs westerly through Esquimalt District for a distance of about three miles.

Second.—The Craigflower and Goldstream, which branches from Esquimalt Road near the City Boundary, and runs in a north-easterly direction round the head of Esquimalt Harbour, passing Colwood Farm and Langford Lake to the north, and terminating within about a quarter of a mile from Goldstream Bridge. Total distance about ten miles.

Third.—The Metchosin, which leaves the Craigflower and Goldstream Road near Colwood, and runs in a south-westerly direction round Pedder Bay, and terminates on the east corner of Section 59, Metchosin District, a total distance of about thirteen miles.

Fourth.—The Albert Head Road which leaves the Metchosin on Section 43, Esquimalt District, and runs easterly to Albert Head. Total length about one and half miles.

Fifth.—The Sooke, which branches from the Metchosin Road on Section 69, near Colwood, and runs in a westerly direction for about seven miles. From this point a continuation has been built this year, running round Sooke Harbour and terminating at the School House on Section 3, Sooke District, a total distance, from junction with Metchosin Road, of about fourteen and a half miles.

There are other roads in this District, such as the Esquimalt and Craigflower, roads leading through Highland District and Happy Valley, &c.

The work done this year consists of—

Sooke Road Extension.
Contractors, Muir Bros., at $2,900;
Distance, 7½ miles;
Graded 10 feet wide;
Bridging, 1147 feet, including several hand-rail bridges;
Corduroy, 125 feet, 10 feet wide;
5 new culverts, 12 feet wide.

Metchosin Sleigh Road Deviation (from Gleed's to Vine's).
Contractors, Messrs. Jack and Cameron, at $750;
Grading sleigh road, 4 miles long, 10 feet wide;
Bridging, 85 feet, 10 feet wide.

FLOATING LANDING, ESQUIMALT.
Contractor, Michael Baker, at $241 50;
Stage, 15 by 20 feet;
Gangway, 35 by 4 feet;
With substantial hand-rail, chains, moorings, &c.

GENERAL ROAD WORK THROUGHOUT DISTRICT.
Mr. John Nicholson, foreman, at $100 per month.

Metchosin and Albert Head Road.
Cutting down two hills, 2½ feet deep;
Grading and ditching, 400 yards, 22 feet wide;
Do. do. 250 „ 18 „
Gravelling, 650 yards, 10 feet wide, 6 inches deep;
Rrepairs to culverts, bridging, cribbing, &c.;
Total cost, $455 15.

Repairs to the following Bridges:—
Craigflower, Gorge, Parsons, and Esquimalt; and sundry other general repairs.

Cowichan District.

The appropriation for this District was subdivided between South Cowichan and the Municipality of North Cowichan.

SOUTH COWICHAN.
Archibald Dodds, Superintendent.
Section No. 1 (Cowichan River to Harris' Landing).
Contractor, William Gilmour, at $220;
1 bridge, 101 feet long, 12 feet wide;
Do. 95 „ 12 „

Section 2 (Harris' Landing to Kokesilah).
Contractor, James Love, at $320;
150 yards side hill grading, 9 feet wide;
450 „ new road cleared and graded;
2 bridges, 104 feet long, 12 feet wide;
Corduroy, 80 feet long, 12 feet wide.

Section 3 (Kokesilah to Dobson's Swamp).
Distance 1¼ mile;
Robert Campbell, contractor, at $180;
Forest cleared and graded 1750 yards, 8 feet wide;
2 bridges, 69 feet long, 12 feet wide.

Section 4.
James Dougan, Junr., contractor, at $190;
Graded, 131 yards, 10 feet wide;
Corduroy, 52 yards, 10 feet wide;
13 culverts, 10 feet wide;
About 4 miles of road holes filled up, and soft places brushed, and generally repaired; culverts and grading where necessary.

COWICHAN DISTRICT.
James Dougan, contractor, at $40;
Cutting out fallen timber on old Victoria Road, between Harris' Landing, Cowichan Bay, and the 11 mile-post from Goldstream Bridge, a distance of 25 miles.

NORTH COWICHAN MUNICIPALITY.
The sum of $2,958 50 was transferred to the Treasurer of the above Municipality for expenditure upon roads and bridges.

QUALICUM TO ALBERNI.
Messrs. Willson and McIntyre, contractors, at $300;
Cutting out logs, and making trail passable for men and animals; corduroying, &c.;
Distance, 20 miles.

LEECH RIVER TRAIL.

James McMillan, contractor, at $25;
Cutting out logs, and making trail passable from Goldstream to Leech River;
Distance, about

Nanaimo District.

NANAIMO-DEPARTURE BAY ROAD.

William Hassard, foreman, at $100 per month;
Grading and ditching, 5500 yards, 10 feet wide;
Forest clearing, 5500 yards, 12 feet wide;
Cedar corduroy, 263 feet, 12 feet wide;
1 hand-rail bridge, 134 feet long, 12 feet wide, 15 feet high;
4 bridges, 284 feet long, 12 feet wide, average height 5 feet;
1 culvert, 30 feet long, 18 by 18 inches.

NANAIMO-CEDAR DISTRICT ROAD.

William Hassard, Foreman;
Sleigh road, forest cleared, 5½ miles, 12 feet wide;
Grading and ditching, 4400 yards, 9 feet wide;
6 Bridges, total length 400 feet, 14 feet wide;
5 Culverts.

NANAIMO-COMOX ROAD.

Peter Sabiston, contractor, at $950;
William Hassard, Superintendent;
Sleigh road, forest cleared, 600 yards, 15 feet wide;
Graded, 600 yards, 10 feet wide;
Do. 260 " 15 "
Gravelled, 260 yards, 12 feet wide, 12 inches deep;
Do. 220 " 12 " 6 inches deep;
Filled in, 260 yards, 2½ feet deep;
3 Bridges, total length 255 feet, 12 feet wide;
3 Culverts;
Logs cut to width of 15 feet;
Total repairs extending over a distance of nine miles.

NANAIMO-CHEMAINUS ROAD.

William Hassard, Foreman;
1 Bridge, 56 feet long, 14 feet wide, 8 feet high;
Sundry repairs to bridges, &c.

NANAIMO TOWN.

William Hassard, Foreman;
1 Corduroy bridge, 66 feet long, 12 feet wide;
3 Bridges repaired;
1 Culvert, 30 feet long.

NANAIMO LATTICE BRIDGE APPROACHES.

Arthur Finney, contractor, at $445.

The work on this contract was well advanced, when the Lattice Bridge, having been badly strained during a heavy gale, fell into the river, on the 8th May, and became a total wreck.

On the 11th, Mr. Finney was formally notified to stop any further work on his contract, and has been settled with for the sum of $~~200~~ 286.

THE LATTICE BRIDGE.

This bridge was erected by contract in 1872, by Mr. Arthur Finney, over Nanaimo River.

On the 2nd of May last, the structure having been reported in a dangerous state, Mr. Farwell was dispatched to Nanaimo, with instructions to take the best steps for its protection. On his arrival at the bridge site, he found the bridge a total wreck, the lower chord on the south side being completely shattered.

Every exertion was made to raise a false bridge for its support, but before the same could be placed in position the bridge fell.

Mr. Finney took the bridge to pieces, and piled the lumber on the bank of the river.

GABRIOLA ISLAND.

The settlers in this locality were consulted as to the nature of work most required, and they decided to appoint Mr. Thomas Deigman, foreman, upon the east end, and Mr. William Hogan, for the west end of the Island, under whose supervision the sum of $500 has been expended.

Comox District.

G. Drabble, Superintendent.
Road work in this District divided into six contracts.

Section A.—From steamer landing to graveyard, 7034 yards;
Contractor, Joseph McFee, at $373;
Graded, 734 yards, 15 feet wide;
Ditching, 826 yards;
1 Hand-rail bridge, 66 feet long, 12 feet wide, 15 feet high;
5 New culverts;
General repairs, &c.

Section B.—From Mission Junction to Gordon's, 6331 yards;
Contractor, Joseph McFee, at $400;
Graded, 651 yards, 15 feet wide;
New ditching, 558 yards;
Ditches cleared, 6837 yards;
Macadamized, 22 yards, rock, 10 feet wide, 8 inches deep;
Gravelled, 22 yards, 10 feet wide, 4 inches deep;
3 New culverts;
General repairs, &c.

Section C.—From Gordon's to Beech's, 1829 yards;
Contractor, W. Beech, at $160;
Graded, 14 yards, 15 feet wide;
New ditching, 1279 yards;
1 Bridge, 30 feet long, 12 feet wide;
6 Culverts;
General repairs, &c.

Section D.—From Green's Slough to Brown's, 7484 yards;
Contractor, Joseph McFee, at $590;
Grading, 325 yards, 15 feet wide;
New ditching, 3012 yards;
Ditches cleared, 1527 yards;
Macadamized, 7 yards, rock, 10 feet wide, 8 inches deep;
Gravelled, 7 yards, 10 feet wide, 4 inches deep;
1 New bridge, 24 feet long;
1 Bridge re-covered, 30 feet long;
1 " " 126 "
10 Culverts;
47 Yards embankment, widened 2 feet.

Section E.—From Willson's Junction to Thomas', 3122 yards;
Contractor, J. Somerville, at $117;
Graded, 1081 yards, 15 feet wide;
New ditching, 5116 yards;
2 Culverts;
55 Yards embankment taken off, averaging 1½ feet deep;
General repairs, &c.

Section F.—6160 yards;
Contractor, D. Williams, at $270;
Forest clearing, 500 yards;
Grading, 6160 yards, 6 feet wide;
2 Bridges, 67 feet long;
2 Culverts;
320 Yards side-hill cutting, to widen road 3 feet.

New Westminster District.

ROAD FROM NEW WESTMINSTER TO HASTINGS, BURRARD INLET.
J. T. Scott received $125 for general repairs, grading hills, &c.
Other repairs were completed by Mr. L. F. Bonson, to Finlaison and other bridges.
The Chain Gang were also employed on this road during the season.

FALSE CREEK TRAIL.
Contractors, W. Edwards and D. J. Smith, at $180;
Distance, 9 miles;
Cutting out logs, and making passable for men and animals, and keeping open to 1st January, 1874.

FALSE CREEK BRIDGE.
Repairs to bridge;
186 feet of bridge replaced, new.

NORTH ARM TRAIL TOWARDS FALSE CREEK, BURRARD INLET.
William Lister, contractor, at $365;
Opening trail 3 miles long, 16 feet wide.

MCROBERTS' TRAIL, NORTH ARM, FRASER RIVER.
William Rowling, contractor, at $150;
To open and keep in repair to 1st November, 1873.
Trail 13 miles long, 10 feet wide.

PITT RIVER ROAD.
John T. Scott, contractor, at $1,355;
Corduroy, 250 yards, 12 feet wide;
1 substantial hand-rail bridge and approaches, across the Coquitlam River, 140 feet long, 12 feet 6 inches wide, 20 feet high;
1 bridge 50 feet long, 12 feet wide;
1 Do. 40 " 12 "
1 Do. 25 " 12 "
Repairs to bridge across Brunette River;
8 Culverts, 13 feet long.
General repairs.—Brush and logs cut out to original width of road.
Total distance, 9½ miles.
Extra.—New hand-rail, Brunette Bridge;
Cutting out drift pile, Coquitlam.

NEW WESTMINSTER AND YALE SLEIGH ROAD.
Charles Murphy, contractor, at $59;
Re-covering 1 bridge, 60 feet long, 14 feet wide;
Do. 1 " 30 " 14 "
at creek two miles below Yale, and at Texas Bar;
Cutting out logs, &c.
Charles Murphy, private contract, at $130;
1 Bridge across Silver Creek, 140 feet long, 8 feet wide, 15 feet high.

SUMASS AND CHILLIWHACK DISTRICTS.
L. F. Bonson, foreman, at $100 per month;
1 Bridge, 116 feet long, 12 feet wide;
1 " 108 " 12 "
2 "
And sundry repairs.

CHILLIWHACK RIVER BRIDGE.
L. F. Bonson, contractor, at $658;
J. McCutcheon, foreman;
One substantial hand-rail bridge, 132 feet long, 12 feet wide, 33 feet high;
Four spans, each 33 feet long;
Approaches, 60 feet long.

MATSQUI SLEIGH ROAD.

L. F. Bonson, contractor, at $595;
J. McCutcheon, Superintendent;
Sleigh road, 4 miles long, 10 feet wide;
1 Bridge, 20 feet long, 11 feet wide;
1 " 15 " 11 "
1 " 35 " 11 "
1 " 120 " 11 " } With substantial approaches.
1 " 80 " 11 "

WEST END SUMASS (outside of the Municipality).

Thomas York, foreman;
Repairs to road across the mountain, from Indian Ranch to Fraser River, $500.

MUNICIPALITY OF CHILLIWHACK.

The sum of $650 was handed to the Treasurer of the above Municipality to be expended upon roads and bridges, and to include a portion of the New Westminster and Yale Sleigh Road.

SEMIAHMOO ROAD.

Contracts for opening this road, from Brown's Farm on Fraser River, opposite New Westminster, to Semiahmoo Bay, a distance of 16 miles, divided into four sections, have been awarded this year. The Citizens of New Westminster subscribing thereto $1,227 50.

The line of road was located and surveyed by Mr. George Turner, C. E., on behalf of Government, assisted by Mr. L. F. Bonson, on behalf of the Citizens of New Westminster.

Mr. L. F. Bonson was subsequently appointed Superintendent of the District, at $100 per month, and has the supervision of the contracts.

SECTION A. TO B.

Charles McDonough, contractor, at $750;
Gravelling, 850 yards, 12 feet wide, 4 inches deep;
Corduroy, 850 " 12 "
Ditches widened, 850 yards.

Upon this Section Mr. E. Brown paid for extensive improvements, which were not specified for in the contract.

SECTION B. TO C.

Messrs. Brewer and Woodward, contractors, at $2,137. Distance 7½ miles.
This Section is still under contract.

SECTION C. TO D.

John Kirkland, contractor, at $1,100;
Forest clearing, 600 yards, 16 feet wide;
Grading, 600 " 12 "
Gravelling, 600 " 12 " 4 inches deep;
Corduroy, 600 " 12 "
Removing and rebuilding Serpentine Bridge.

SECTION D. TO E.

John Kirkland, Contractor, at $1,550;
Distance 4½ miles;
Forest clearing, 7,920 yards, 15 feet wide;
Grading, 7,920 yards, 12 feet wide;
Corduroy, 200 yards, 12 feet wide;
1 Bridge, 60 feet long, 12 feet wide;
1 " 50 " 12 "

REPAIRS SERPENTINE AND NICOMEKL RIVER BRIDGES.

John Kirkland, contractor, at $700.
This work is still under contract.

Yale District.

DEADMAN'S CREEK HILL.

John Vasey, contractor, at $600;
John Boyd, Superintendent.

Construction and completion of bridge and waggon road on the west side of Deadman's Creek; thence crossing said creek, and running along the east bank, to connect with old road;

Sleigh road, 1720 yards, 15 feet wide;
Graded, 263 yards, 15 feet wide.

NORTH THOMPSON BLUFF.

John Carrogher, contractor, at $950;
John Boyd, Superintendent.

Commencing at a point 14 miles above Kamloops, and running thence along the east side of the North Thompson River;

Distance, 3600 yards:
Sleigh road, 3597 yards, 10 feet wide;
Forest cleared, 1307 yards, 10 feet wide;
Graded, 2290 yards, 10 feet wide;
Extra,—Grading the banks of Heffly Creek, and building a bridge across the same, $50.

OKANAGAN LAKE TO SPELLUMACHEEN PRAIRIE.

Louis Dupines & Co., contractors, at $925;
John Boyd, Superintendent;
Sleigh road, 16,373 yards, 15 feet wide;
Forest cleared, 12,226 yards, 15 feet wide;
Graded, 4,147 yards, 10 feet wide.

Repairs to waggon road from Bonaparte to Savona's Ferry, exclusive of Deadman's Hill, were made under the superintendence of Mr. John Boyd.

General repairs to roads, in the Kamloops section of the country, were made under the superintendence of Mr. John Boyd.

NICOLA VALLEY ROAD.

James McIntosh, contractor, at $4,930;
Alexander Robb, Superintendent.

The road commences at Moore's ranch, on the east side of the upper end of Nicola Lake, and follows down the lake in a southerly direction, taking a curve, however, to the east, in order to cross the upper portion of the Nicola River above its entrance to the lake; thence following down the east side of the lake to its termination, and crossing over to the west side of Nicola River, at a point near Clapperton's ranch; thence following down the west side of the river to Woodward's pre-emption; a total distance of 32 miles.

Graded, 10 feet wide;
Corduroy, 120 feet long, 12 feet wide;
1 bridge, 38 feet long, 12 feet wide, 7 feet high;
Do. 34 „ 12 „ 7 „
Do. 41 „ 12 „ 9 „
Do. 19 „ 12 „ 8 „
Do. 40 „ 12 „ 9 „
17 culverts.

Lillooet District.

TRAIL FROM LILLOOET WAGGON ROAD, AT SEATON LAKE, TO SEYMOUR CREEK, BURRARD INLET.

Distance, 134½ miles;
William Sampson, foreman, at $100 per month.

This trail, which has been explored and partially constructed this year, will, if completed, connect, as far as a trail is concerned, the Lillooet District with the seaboard. The principal difficulties are to be met with in the neighbourhood of Seaton and Anderson

Lakes; these, however, are not of an insurmountable character, but will, if not overcome, render this year's work of no practical value.

Thirty-two miles of trail have been constructed on the south side of Seaton and Anderson Lakes, still leaving six miles to be made in order to connect with the Pemberton Portage waggon road.

Three rocky points or bluffs occur at the lower end of Seaton Lake, measuring about ¾ of a mile; these will require blasting and bridging.

The six miles, above referred to, on Anderson Lake, will require expensive grading; but with little blasting.

The estimated cost of completing the above portions of the trail is about $2,600.

The following is a copy of the report received from Mr. William Sampson, who was dispatched through, from the Pemberton Meadows to Burrard Inlet, to explore:—

"On the 16th, I left the 'Meadows,' reaching the north end of Green Lake, a distance of about 14½ miles, where I camped. The country consists of rolling hills, with some heavy timber. Two creeks will have to be bridged in this section, measuring respectively 100 feet, and 120 feet, wide. Feed abounds hereabouts, with good timber on the creeks for bridging purposes. The 17th, I made 6 miles, over rolling hills, intersected by flats, and covered with heavy timber. This brought me to the south end of Green Lake, where I camped. On the 18th, I travelled 12 miles, to Daisy Lake, where I camped. The country is here more level, but very heavily timbered. The east branch of the Tchiarkemish will require about 100 feet of bridging. On the 19th, I made the mouth of the Tchiarkmeish, the distance being 13 miles. The first five miles of this section are very rough, passing mostly over rocky slides, or bluffs of solid rock; there will also be two streams to bridge, wide, respectively, 60 and 120 feet each. On the 20th, I made 10 miles, and reached the mouth of the Squamish River, at Howe Sound. This section is for the most part level; heavily timbered; covered with underbrush; and considerably cut up with sloughs. The 21st, I laid over for the purpose of obtaining Indian guides to take me to Burrard Inlet, which I failed to accomplish. The 22nd, I retraced my steps for about two miles, when I branched off in a south-easterly direction, following up stream the Mauqueim River for about 8 miles. The country, through which I travelled, is heavily timbered; covered with dense underbrush; and offering steep side-hill grading, but through excellent ground for road making. On the 23rd, I left the Mauquiem, and went through a low mountain pass, reaching the head of a creek, which flows into the North Arm of Burrard Inlet. This stream I followed for six miles, and camped. The country, for the first 2 miles, is almost level to the sources of the creek, and covered with underbrush and plenty of feed. The remainder of the distance is cut up by steep side-hills. The direction is east by south-east. The 24th, I camped at the head af the North Arm. Side-hills here alternated with flats, covered with timber and thick underbrush. A big rock slide bars the way at the rapids, three miles from the mouth of the creek, and is about half a mile long. The 26th, I reached Messrs. Moody, Dietz and Nelson's Mill at the Inlet, per canoe, whence I came on to Victoria.

"I may here state that, from information obtained at the Mills, I learned that a better route exists by leaving the Pass I crossed on the left, and keeping up the Mauquiem River to its sources; when by going through another mountain pass, equally low, the head of Seymour Creek is reached, by following which latter stream, an easy grade is obtained the whole way through to the Inlet.

"A considerable portion of the trail made by the Railway Survey Party can be utilized, by simply widening it through the timber and brush.

"I believe that a good cattle trail can be constructed the whole distance from the Pemberton Meadows to Burrard Inlet, for the sum of eight thousand dollars ($8,000).

"The following is an abstract, showing the distances and feed along the route:—

DISTANCES.

	Miles.
From the Pemberton Meadows to Green Lake	14½
" north end of Green Lake to its south end	6
" south end of the above lake to Daisy Lake	12
" Daisy Lake to the mouth of the Tchiarkemish River	13
" the Tchiarkemish River mouth, to mouth of Mauquiem River	8
" mouth of the Mauquiem River to Seymour Creek mouth	23
Total	76½

FEED ON THE WHOLE ROUTE.

At Seaton and Anderson Lakes, bunch grass;
On the Pemberton Meadows, abundance of meadow grass;
At Green Lake, plenty of meadow grass;
Three miles from Daisy Lake, below Big Slide, grass and rushes;
Along the Tchiarkemish and Squamish Rivers, plenty of grass and rushes;
At Howe Sound, plenty of meadow grass;
On the Divide, ten miles from Howe Sound, plenty of mountain grass."

The work done, consists principally of side-hill grading, cutting and clearing, building stone cribbing, &c., for a trail from 3 to 5 feet wide.

CLINTON AND BIG BAR LAKE TRAIL.
John Gallagher, foreman;
Commencing at the 57 mile-post, and terminating at Big Bar, Fraser River;
Distance, 42 miles;
Opened 10 feet wide; sufficiently graded to be used as a pack trail and winter sleigh road.

LILLOOET AND LYTTON TRAIL (*via* Fraser River).
Some repairs of a trifling nature were made to this trail, the expenditure of last year having placed it in as good repair as the extent of the travel upon it would warrant. Should, however, a bridge be built at the junction of the Thompson and Fraser Rivers, this trail will require further attention the coming season.

Lillooet Ferry.

The Ferry across the Fraser River at Lillooet, has been successfully re-established this season.

The first step taken was to purchase all the plant, consisting of Ferry House, Gear, Cables, Ropes, Blocks, Tackles, Boats, &c., from the former proprietor.

A Contract was next awarded to Mr. J. W. Woods, for building a new Ferry Scow, at $850, and the necessary new gear was supplied, but some extra cable will be required the coming season.

The Ferry is now rented to Mr. Miller, at $100 per annum.

Kootenay District.

The trails in this District were subdivided; that portion, from Fort Shepherd, east, to Wild Horse Creek, and trails in the immediate neighbourhood of that mining camp, together with a portion of the Walla Walla trail to the monument, were placed under the charge of Mr. P. Fernie. It was found necessary, in order to enable travellers last spring to reach the Kootenay Mines, to open up a further portion of the Walla Walla trail, to Round Prairie, a distance of about seven miles. This course is objectionable; but in consideration of the trail through British Columbia, *via* Fort Shepherd, being practically useless for men or animals, in consequence of the great altitude of the Shepherd Mountain, the swampy nature of the Kootenay bottoms, and the want of bridges, &c., taken in connection with the fact, that the whole appropriation for the District could not have put this portion of the trail in order; and, even if in good condition, would be only used during summer, it was deemed advisable to keep such means of communication open this year as would be of the most practical use; and to endeavour to find a feasible route, entirely through British Columbia.

WALLA WALLA TRAIL.
From the Round Prairie to the Monument;
Distance, 7 miles;
Cutting new trail, 1 mile, 10 feet wide;
Corduroy, 60 feet, 10 feet wide;
General repairs to trail: cutting out fallen timber, grading, &c.

From the Monument to the Junction with the Fort Shepherd Trail.
Distance, 15 miles;
1 bridge, 54 feet long, 2½ feet wide;
General repairs: cutting out fallen timber; removing slides, drift pile, &c.

From Junction with Fort Shepherd Trail to Joseph's Prairie.
Distance, 48 miles;
1 bridge, 10 feet long, 2½ feet wide;
General repairs: cutting out logs, grading, and removing slides, &c.

Returning to Junction as above, and running to Kootenay Ferry, on the Fort Shepherd Trail.
Distance, 32 miles;
Cutting out fallen timber, grading, &c.

From Kootenay Ferry to Fort Shepherd.
Distance, 74 miles;
Cutting out fallen timber.

Returning to Joseph's Prairie, and running to Weaver Creek.
Distance, 22 miles;
New trail opened, 22 miles, 7 feet wide;
1 bridge, 70 feet long.

From Joseph's Prairie to Wild Horse Creek.
Distance, 16 miles;
New trail opened, 7 miles long, 7 feet wide;
Forest cleared, 16 miles long, 10 feet wide;
Graded, 8 miles, 10 feet wide;
1 Bridge, 55 feet long;
General repairs, &c.

From Wild Horse Creek to Perry Creek (cut off).
Distance, 20 miles;
New trail, 3 miles, 8 feet wide;
1 Bridge, 24 feet long, 9 feet wide;
General repairs, &c.

From Perry Creek up the Trail;
Distance, 8 miles;
1 Bridge, 28 feet long;
1 " 50 "
General repairs, &c.

From Perry Creek to Joseph's Prairie;
Distance, 7 miles;
General repairs, &c.

From Fort Hope to Fort Shepherd;
Distance, 250 miles;
William Bristol, foreman, at $100 per month;
New trail constructed, 5 miles long, 4 feet wide;
Corduroy, 600 feet long, from 7 to 9 feet wide;
11 Bridges, from 30 to 160 feet long, from 8 to 36 feet high;
12 Culverts, from 6 to 12 feet long;
General repairs: cutting out fallen timber, removing slides, &c.

Cariboo District.

In this District, the work has been let out by contract, whenever practicable, under the superintendence of Mr. Thomas Spence.

Nelson and Jack of Clubs Trail.
Samuel Walker, Contractor, at $740;
New Trail opened; commencing at a point 200 yards below Jack of Clubs Creek Bridge, on the Mosquito Creek Waggon Road, and terminating at the mouth of Nelson Creek; with a branch line to the "Two Brothers" mining claim on Jack of Clubs Creek.
Graded, 2 feet wide;
Forest cleared, 8 feet wide;
All corduroy and bridging 6 feet in clear.

Cunningham and Harvey Creek Trail.
Samuel Walker, contractor, at $1,100.
New trail opened.

WORKS AND BUILDINGS.

The most important public building undertaken this year is the Boarding School House at Cache Creek, the site of which is pleasantly located in the Bonaparte Valley, within half a mile of the junction of the Yale-Cameronton andKamloops Waggon roads, and in the immediate vicinity of a telegraph station, and contains 25 acres of land.

The building is a substantial two-story frame one, placed upon solid foundations, and with a verandah front, containing the following accommodation suitable for a Teacher with a family, and 36 boarders, viz.:

One school room,	18 feet	4 inches,	by	23 feet	8 inches.			
" dining "	12 "	7	"	18 "	4 "			
" dormitory,	18 "	4	"	11 "				
" Do.	18 "	4	"	25 "				
" Do.	17 "	6	"	21 "	1 "			
" bed room,	12 "	7	"	9 "	6 "			
" Do.	14 "	3	"	11 "				
" Do.	10 "	6	"	11 "				
" Do.	9 "		by	9 "				
" kitchen,	17 "	6	"	12 "				

Lavatory, Pantry, Bedroom, Halls, Lobbies, Stairs, Woodshed, and other conveniences.

The contractor is Mr. David Withrow, at $3,950, who also, as an extra, has to provide necessary Desks and Forms for Teacher and Scholars, besides numerous other articles of Furniture, which it was found desirable to construct in the neighbourhood, the total cost of which will be about Four hundred dollars.

This building is still under contract, but will be completed, furnished, and opened early next Spring.

At Kamloops, a new Gaol is being constructed by Mr. James McIntosh, contractor, at $1,725 00.

At Yale, has been built a substantial wooden fence round the Gaol, by Mr. William Maharry, contractor, at $335; this does not, however, enclose the entire lot.

At New Westminster, the Court House has been completed, and is an ornament to the city.

The principal repairs to Public Buildings are, first:—

Repairs and alterations to House of Assembly, James Bay, Victoria.

This work is at present under contract to Messrs. Hayward & Jenkinson, at $2,684.

Mr. A. J. Smith is the Architect and Superintendent; and the work principally consists of extensive repairs to the foundations of the building, putting in new sills, &c.;

The addition of a new Wing;

The removal of the former Gallery, and replacing it by a new one, running the entire distance round the interior of the Hall, by which means the Legislative Chamber is lengthened, and the main building materially strengthened, and more suitable accommodation provided for Members and visitors.

Sundry other alterations and repairs, which it is needless to enumerate, will be made to this building, when complete.

GOVERNMENT HOUSE, VICTORIA.

Sundry repairs to ceiling of Ball-room, by Messrs. Burgess & McKay.

TENDERS RECEIVED.—*Continued.*

NATURE OF WORK.	TENDERS RECEIVED.	AMOUNT.	TENDER AWARDED.
CARIBOO DISTRICT.—*Continued.*			
Beaver Lake Creek Bridge	Ah Tom	300 00	Not Awarded.
Morehead Creek Bridge	Ah Tom	150 00	Not Awarded.
Barkerville Bulkhead	S. Walker	270 00	S. Walker.
	A. Weldon & T Stain	490 00	
	P. Bourgon	300 00	
	Monroe & McEwen	435 00	
	R. Graham	377 50	

SURVEYS.

The importance of surveying the Public Lands upon an uniform system is acknowledged by all, and the sum voted by the Legislature for that purpose last session, viz., $10,000, although sufficient under the peculiar circumstances of the past season, would be totally inadequate to meet the requirements of the ensuing year.

It may not be out of place to briefly describe the nature of the surveys that have been completed throughout the Province since 1852.

Prior to the sudden advent of some thousands of miners and others in 1858, very little had been done towards surveying the Crown lands on Vancouver Island, with the exception of a few thousand acres in the immediate neighbourhood of Victoria.

During the years 1858, 1859, and 1860, the surveys were pushed ahead, and some 175,000 acres were divided into lots, each lot generally containing 100 acres.

In 1859 the Government of British Columbia laid out a large portion of the valuable delta lands at the mouth of the Fraser River into sections of 160 acres each, in a manner somewhat similar to the system adopted by the United States Government. About 41,000 acres of land were thus surveyed.

The staff connected with the Department of Lands and Works of British Columbia, among other numerous works, divided some 30,000 acres of land lying between Fraser River and Burrard Inlet, into sections of an irregular size, varying in area from fifty to five hundred acres.

Since 1860, only small sums have been appropriated for miscellaneous surveys. These sums have been expended in surveying Indian Reserves and a few pre-emptions, in various portions of the Province.

Large tracts of land have been surveyed up to December 31st, 1871, for timber cutting and pastoral purposes, but the largest proportion of the expenses have been borne by the lessees.

In regard to this season's work—

The early commencement of a systematic survey was delayed from the same causes which existed last year, viz., the restriction placed upon our lands by the Terms of Union, and the uncertainty which existed as to what lands would be claimed by the Dominion Government for railway purposes.

An attempt was first made to obviate this difficulty by endeavouring to obtain the consent of the Dominion Government to reimburse the Province for the cost of survey, should the land surveyed subsequently prove to be within the Railway belt; this, however, was unsuccessful.

In the meantime, however, Mr. George Turner, C. E., was instructed to commence operations by connecting a number of isolated pre-emptions and Military grants in the New Westminster District with some known point, in order to enable them to be correctly placed upon the map; and to accomplish this, it was necessary to run a traverse from Sumass to Boundary Bay, thus taking up all these surveys in that portion of the District. This work was completed by the middle of July.

On the 21st day of July last, viz., the day upon which the clauses contained in the

Terms of Union in reference to Provinciul lands terminated, Messrs. Mahood and Turner were instructed to run the exterior lines of Townships in New Westminster District, and upon the 31st July, Mr. William Ralph was dispatched to subdivide Township No. 1 into sections of one mile square.

The system of surveying adopted this season has been as nearly as circumstances would permit, similar to that in use in the Dominion, in the Province of Manitoba, and also by the Government of the United States on this coast, viz., laying the land off in blocks six miles square, called Townships, and subdividing these Townships into sections one mile square, placing the quarter-section posts on the section lines.

Each full Township, therefore, contains thirty-six sections of one mile square (640 acres), and by placing a post in the centre of any section, four quarter-sections are obtained, each with an area of 160 acres. One great advantage of this system is its uniformity with the system adopted elsewhere on this continent, also its simplicity, and the assistance it renders to settlers in search of land; the uniformity of distances between each post proves a certain guide to strangers as to their locality.

Another great advantage of the uniformity of this system is that it simplifies the survey, and by that means reduces the cost and liability of mistakes occurring.

In regard to the employment of Surveyors, it has been found impracticable the past season to adopt the contract system in its entirety from various causes, the principal of which are the difficulties which are constantly arising where two or more pre-emptors claim the same piece of land. Another cause which has also increased the difficulty of applying the contract system to surveys has been the limited number of surveyors at present in the Province. I trust, however, that in view of the fact that the most closely pre-empted portions of the New Westminster District were selected for survey this season, the contract system during the coming year can be more extensively adopted. One contract was, however, let to Mr. W. D. Patterson to sub-divide Township No. 7, at $19 per mile. This work is still under contract.

The exterior lines of five full Townships—viz., Nos. 2, 7, 8, 10 and 11—have been run and posted ; also the exterior lines of five fractional Townships—viz., Nos. 1, 3, 4, 5 and 6.

Fractional Township No. 1 has been subdivided, and consists of 19 full and 11 fractional Sections, containing a total acreage of 15,620 acres.

Township No. 3 has been subdivided, and consists of three full and eight fractional Sections, containing a total area of 3,758 acres.

In the north-east portion of Township No. 5 and south-east portion of Township No. 6, a number of settlers had closely pre-empted, and in some instances the land was covered by two or more pre-emption records. Under these circumstances it was necessary to first ascertain by actual survey the exact locality of the pre-emptions, and subsequently to adjust their different claims satisfactorily. This has been completed, under Mr. J. A. Mahood, in a manner satisfactory to all.

Appended to this report is a tracing of claims referred to as pre-empted and recorded, together with the same land as adjusted—the first tracing of which is a fair illustration of the claims held to the unsurveyed lands of this Province by pre-emption and otherwise, and shows clearly the difficulties encountered by present or prospective settlers until surveys are made.

EXPLORATIONS.

In reference to the explorations made, it was necessary, in order to obtain reliable information previous to dispatching survey parties, and also for the benefit of intending settlers, taken in connection with the fact that the requirements of the interior of the Province demand that communication by road should be opened between Yale and New Westminster, to thoroughly explore the land on the south side of Fraser river, and with this object in view a party, under the charge of Mr John Fannin, was dispatched with instructions to explore the land in question, the result of which will be contained in a separate report.

In regard to explorations made upon the East Coast of Vancouver Island, Mr Mohun was dispatched on the 2nd August, 1873, to explore for land suitable for settlement from Fort Rupert to Chatham Point, being a portion of the Provincial lands situate to the North and adjoining the Railway Reservation. The result of his exploration will also be contained in a separate report.

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