PROVINCE OF BRITISH COLUMBIA

Minister of Public Works

REPORT

FOR THE FISCAL YEAR

1955-56

VICTORIA, B.C.
Printed by DON MCDIARMID, Printer to the Queen's Most Excellent Majesty
1956

To His Honour FRANK MACKENZIE ROSS, C.M.G., M.C.,
Lieutenant-Governor of the Province of British Columbia.

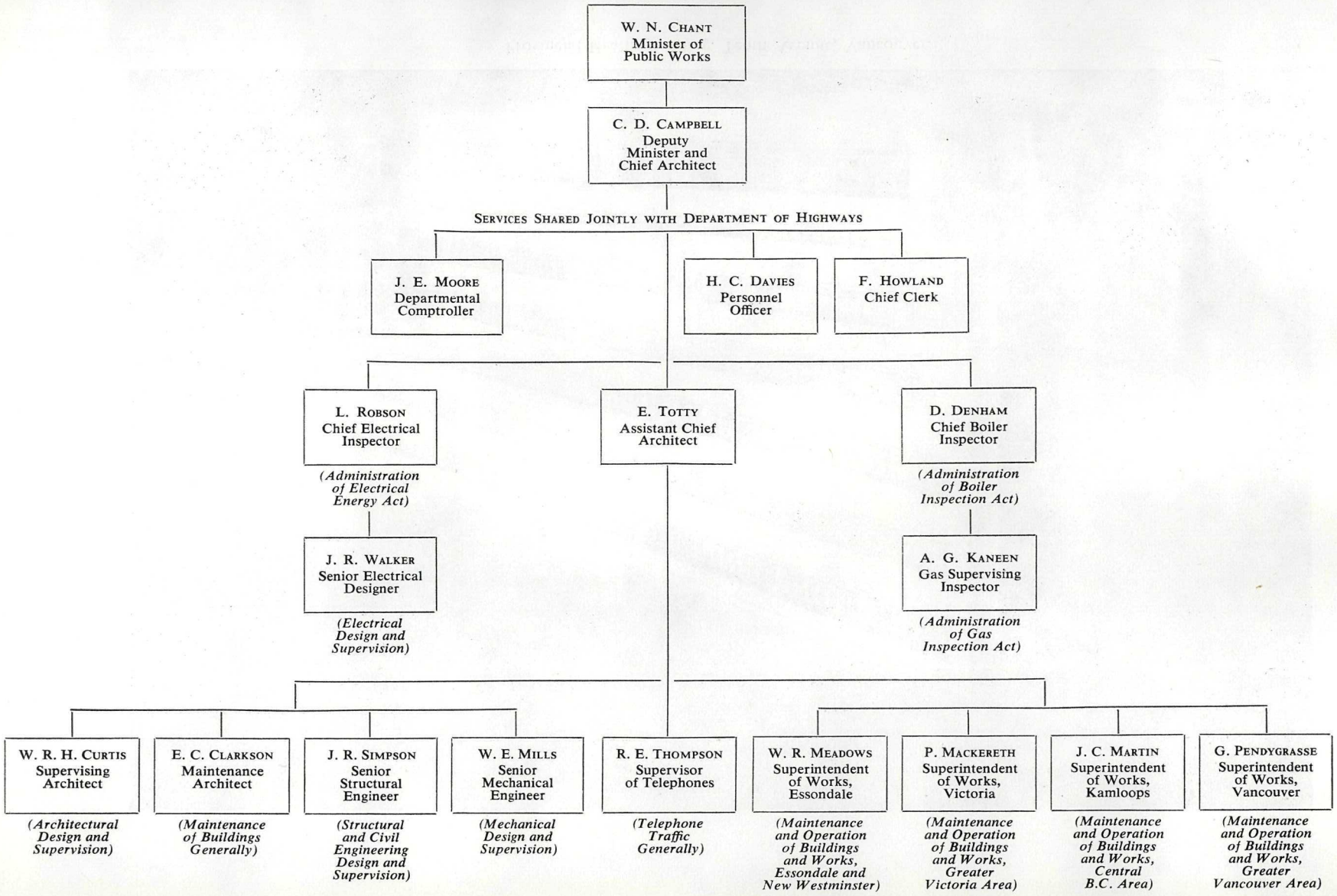
MAY IT PLEASE YOUR HONOUR:

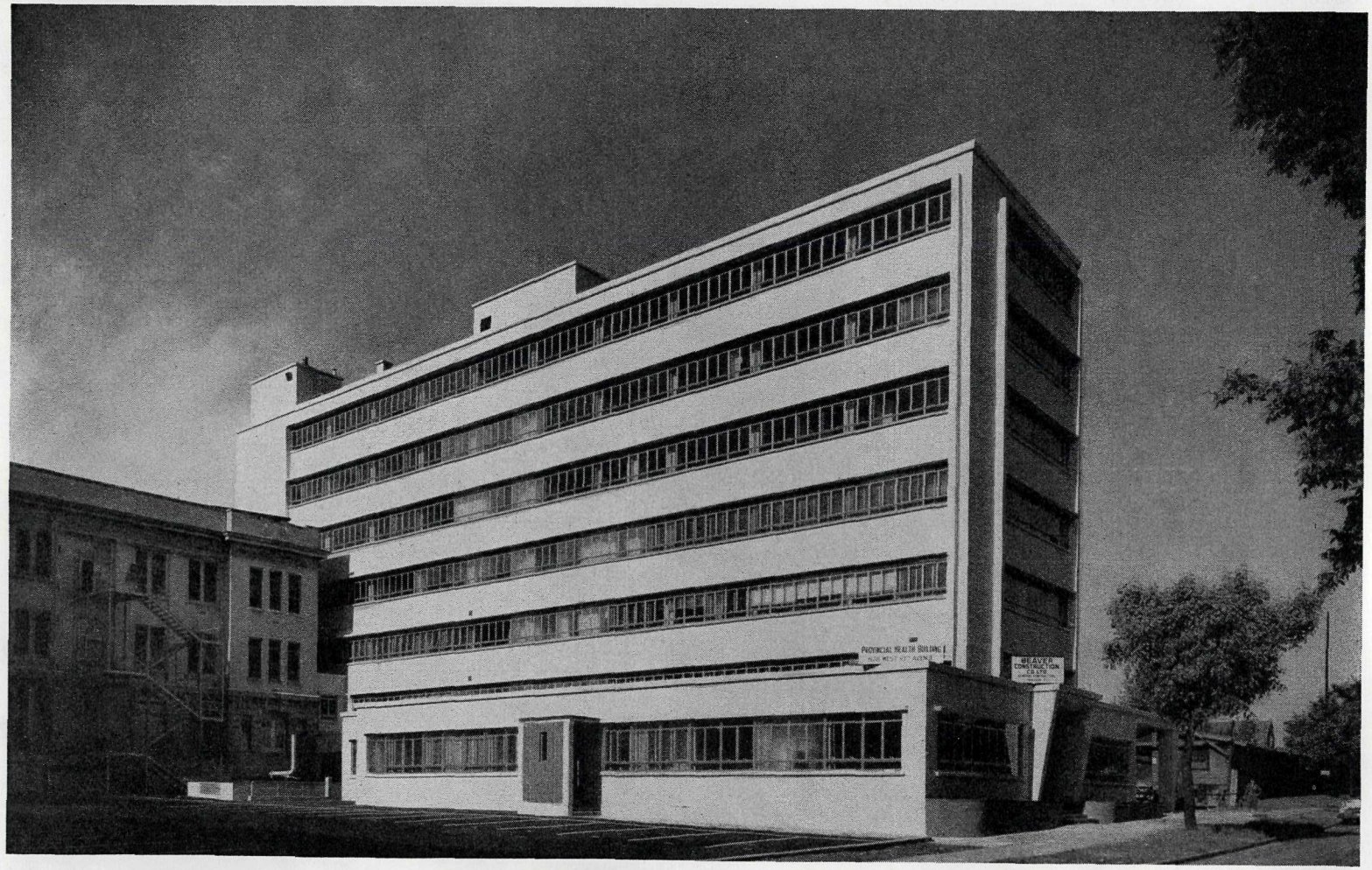
Herewith I beg respectfully to submit the Annual Report of the Department of Public Works for the fiscal year ended March 31st, 1956, in compliance with the provisions of the "Public Works Act."

W. N. CHANT,
Minister of Public Works.

Office of the Minister of Public Works,
Parliament Buildings,
October 9th, 1956.

ORGANIZATIONAL CHART AS OF MARCH 31st, 1956





Provincial Health Building, Tenth Avenue, Vancouver.

PUBLIC WORKS REPORT

REPORT OF DEPUTY MINISTER

DOUGLAS BUILDING,
VICTORIA, B.C., October 9th, 1956.

The Honourable W. N. Chant,
Minister of Public Works,
Parliament Buildings, Victoria, B.C.

SIR,—I herewith submit, for your approval and consideration, the first annual report on the progress and activities of the Department for the fiscal year 1955–56.

Commencing on April 1st, 1955, the beginning of the fiscal year, the new Department of Public Works was formed, consisting of the Architectural Branch, Boiler Inspection Division, Electrical Energy Inspection Division, and Gas Inspection Division, which had originally been branches of the former Department of Public Works, now called the Department of Highways.

An organizational chart of the Department, as of March 31st, 1956, is included in this Report, and from it will be seen that the Departmental Comptroller's Branch, Personnel Branch, and Chief Clerk's Branch (filing and mail) are shared jointly by both this Department and the Department of Highways.

The other branches and divisions consist of the Architectural, Maintenance, Structural Engineering, and Mechanical Engineering, responsible for design, construction, maintenance, and operation of Government buildings generally; Telephones, responsible for telephone traffic; and the Boiler Inspection, Electrical Energy Inspection, and Gas Inspection Divisions, responsible for the administration of their respective Acts.

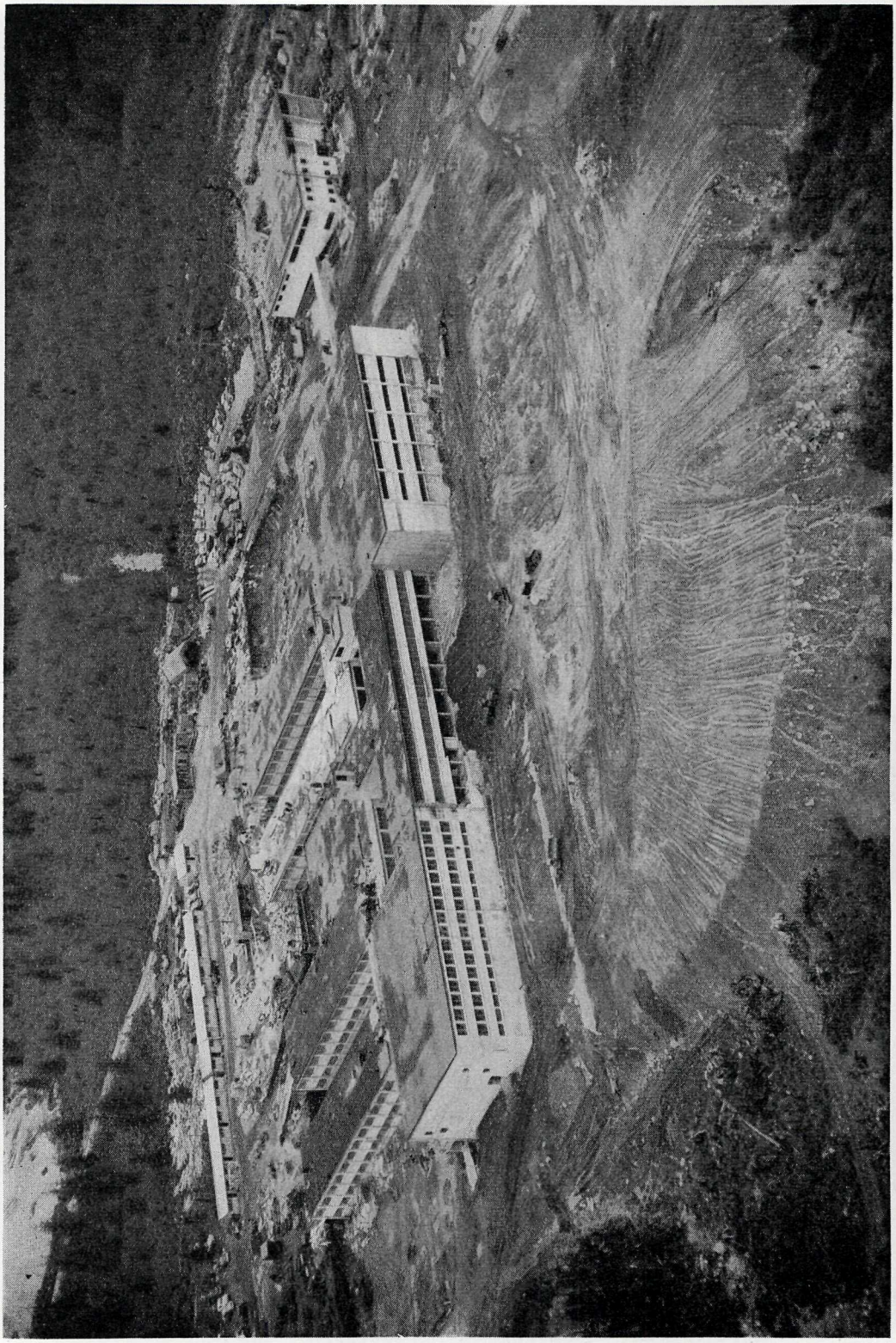
Generally speaking, good progress was made by the Department in carrying out the extensive building, maintenance, and inspection programme with which it was faced, as will be seen by studying the reports from the various branches hereinafter included.

C. D. CAMPBELL,
Deputy Minister and Chief Architect.

REPORT OF THE ASSISTANT CHIEF ARCHITECT

Satisfactory progress was made with the building programme during the fiscal year 1955–56. Several major projects under construction last year have been completed, and plans and specifications are nearing completion for several projects to be tendered early in the coming fiscal year.

A total of 147 building and mechanical projects were completed or undertaken during the fiscal year 1955–56, at a total expenditure of $5,985,362. The more important of the projects which were completed are as follows:—



British Columbia Correctional Institution, Haney.

Major Projects Completed

Location	Building	Total Cost
Burnaby	Child Guidance Centre and Day Hospital	$889,244.00
Colquitz	Sewage-disposal plant, Mental Hospital	45,082.00
Cranbrook	New Court-house	254,506.00
Essondale	Steam-lines to Tuberculosis Hospital and Home for Aged	203,903.00
Essondale	Credit Union and Tuck Shop	66,677.00
Essondale	Sewage-disposal system	210,285.00
Gibsons	Three-bay equipment-shed	24,182.00
Kamloops	Piping, new boiler installation, Provincial Home	169,741.00
Kelowna	New Court-house	453,455.00
Nanaimo	New dormitory building, Dominion-Provincial Vocational School	59,611.00
New Westminster	Root-house, The Woodlands School	45,785.00
New Westminster	Land Registry Building	39,145.00
Oakalla	Prison Farm Gymnasium	125,682.00
Vancouver	Provincial Health Building	1,605,737.00
Vancouver	Four portable classrooms, Normal School	53,864.00
Vernon	Five-bay equipment-shed	24,259.00
Victoria	New wing to Temporary Building No. 4, Michigan Street	195,689.00

Some of the larger and more important projects which were under construction at the end of the fiscal year 1955–56 are as follows:—

Major Projects under Construction

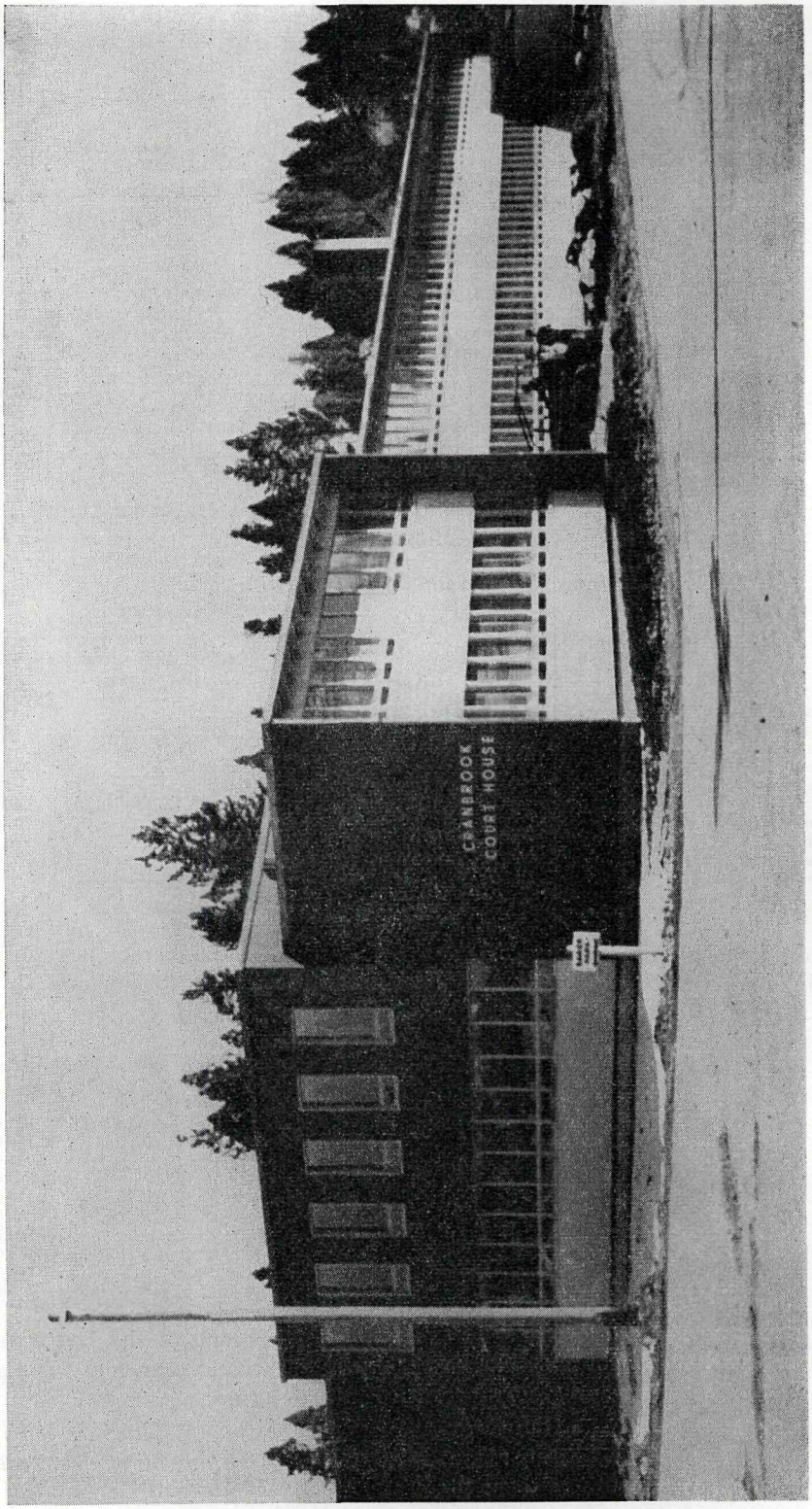
Project	Location	Percentage Completed	Building	Estimated Total Cost
5-B-48	Essondale	50	Construction of reservoir	$25,790.00
5-B-82	Essondale	50	New water-line	34,122.00
123-B	Haney	44	B.C. Correctional Institution	2,484,326.00
123-B	Haney	5	B.C. Correctional Institution, laundry and boiler-house	243,363.00
206-B	Kamloops	28	Addition to Land Registry Office	37,599.00
202-B	Nanaimo	20	New wing to Court-house	285,876.00
5-B-53	Port Coquitlam	1	300-bed Home for the Aged	1,897,195.00
79-B-1	Vancouver	73	Deaf and Blind School, new unit (dormitory)	742,190.00
79-B-1	Vancouver	14	Deaf and Blind School, recreational unit	
7-B-21	New Westminster	75	300-bed unit, Woodlands School	1,529,758.00

In addition to the aforementioned projects, there are a number of larger projects which are in an advanced stage of planning and will be ready to let for tender early in the coming fiscal year. These are as follows:—

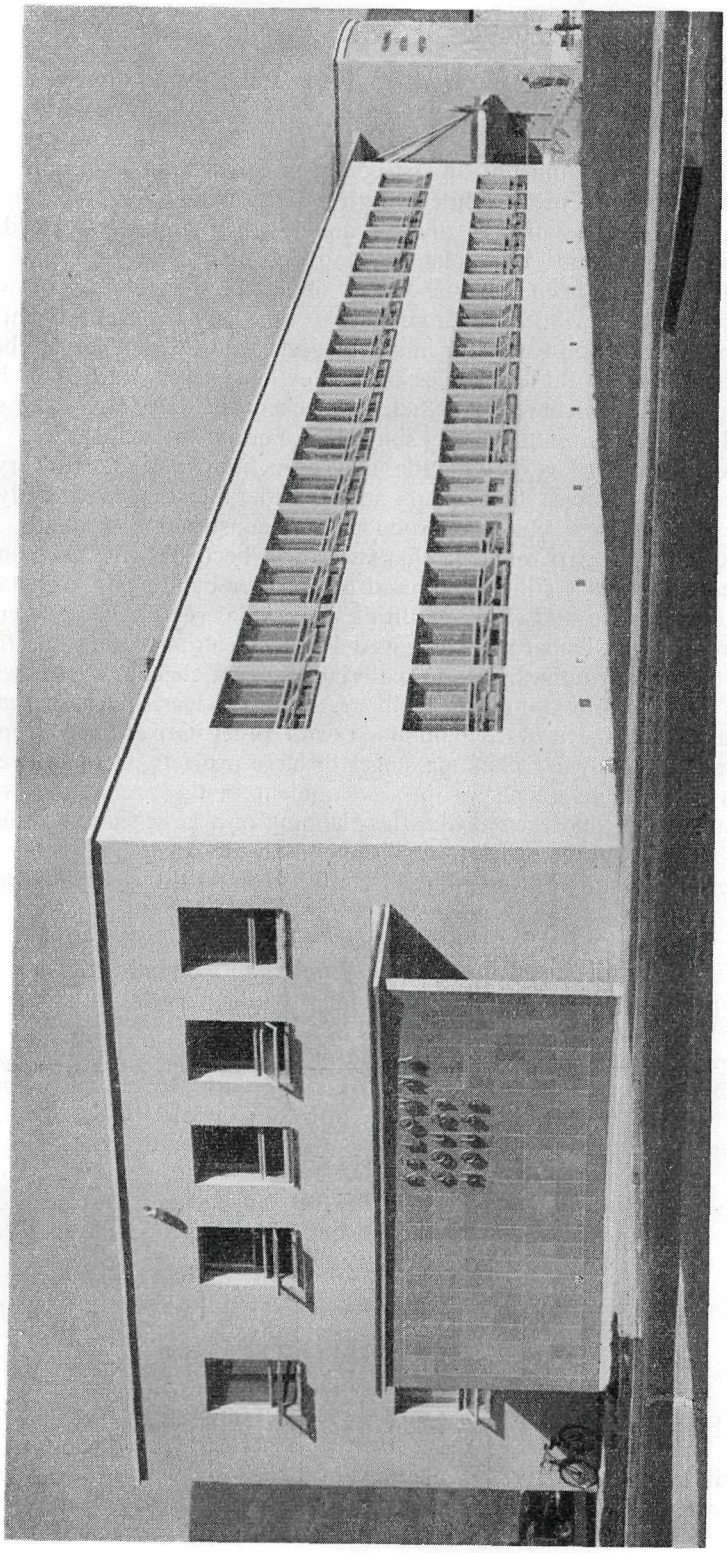
Location	Project	Estimated Cost
Atlin	New Court-house	$25,000.00
Dawson Creek	New library	145,000.00
Essondale	100-bed nurses' home	1,000,000.00
Fort St. John	New Government Office Building	325,000.00
Kamloops	Addition to Government Office	250,000.00
Kamloops	New equipment-shed	70,000.00
Prince George	New Court-house	1,600,000.00
Vancouver	New Girls' Industrial School	1,400,000.00
Victoria	Materials and Traffic Engineers' offices and shops	160,000.00

It is noted from the figures quoted above that this branch of the Department is showing a steady increase in the volume of work done each fiscal year, and I can see no decline in this volume of steady increase in the immediate future.

E. TOTTY,
Assistant Chief Architect.



New Court-house at Cranbrook.



New Court-house at Kelowna.

REPORT OF THE SUPERVISING ARCHITECT

The Architects' Branch of the Department of Public Works prepared plans for a number of projects during the fiscal year 1956–57 which are listed in detail elsewhere in the Report.

The architectural planning of all projects was carried out under the direction of the Deputy Minister and Chief Architect, with a staff which averaged, during the year, eighteen members. This staff was divided among eight architects, six draughtsmen, two specification-writers, one town-planner, and one landscape architect.

Some difficulty has been experienced in obtaining the services of well-qualified personnel to replace staff who have, from time to time, left the Department. An effort has been made to create job teams for major projects, and this has largely been successful, except where, due to the exigencies of production, staff have had to be taken off one job to expedite completion of another by a scheduled date-line. The scope of the Department does not permit the establishment of permanent teams.

The general standard of production and draughting has shown very noticeable improvement during the past fiscal year, and considerable time and study have been spent in investigating new building products and construction methods. While the majority of buildings of a permanent character have been designed in reinforced concrete, frame construction is still widely used for smaller buildings, particularly those of a more temporary nature and those requiring substantial revision at a later date.

The branch of the Department engaged in specification-writing has been actively engaged, apart from its routine work, in material research, checking drawings, and revising important specification clauses to facilitate a single, clear interpretation.

Co-operation has been well maintained with other Government departments in successfully handling the early planning stages of large projects. Committees have been established to co-ordinate all phases of development in the preliminary stages. It is frequently insufficiently appreciated that the planning of a large building, such as a hospital, requires not only very considerable discussion in the sketch-plan stage, but months of co-ordinated planning and draughting in close liaison with the mechanical, structural, and electrical branches of the Department.

The complex work of selecting equipment, either to be included in the contract or subsequently to be requisitioned through the Purchasing Commission, forms, in a building of major proportions, a very important facet of the project, entailing considerable research and time.

The more important of projects planned in the fiscal year 1956–57 were the new unit for the Deaf and Blind School, Vancouver; the Girls' Industrial School, Burnaby; the 100-bed Nurses' Home and Training Centre, Essondale; the 300-bed Home for the Aged, Port Coquitlam; and the auditorium at The Woodlands School, New Westminster.

It may be stated that a good spirit of loyalty and keenness has been evidenced by all personnel, and that the work was carried out with a high degree of efficiency.

W. R. H. CURTIS,
Supervising Architect.

REPORT OF THE MAINTENANCE ARCHITECT

The total expenditure for the maintenance of Government buildings throughout the Province was $1,876,877.58; this total includes expenditures on Court-houses, institutions, residences, laboratories, clinics, gaols, R.C.M.P. detachments, and sundry buildings.

Continued progress is being made in this section's policy of keeping the maintenance of Government buildings in the Province up to a desired standard. In addition to the normal maintenance, the policy of renovation and modernization is being continued where required and practical. Frequent inspection trips are carried out, with every building in the Province being visited at least once in the last year, and many of them on numerous other occasions. These inspection trips allow the writer to keep a close check on work done by contract, and to keep in touch with the needs and requirements of the many Government departments. These trips have been found most beneficial as the buildings are now being kept in a better over-all condition than has been previously possible.

This department is now working in close co-operation with the Government Agents in each locality. We have found that the Government Agent is usually in a better position to look after the needs of the building, and we are now directing all matters that pertain to the maintenance of Court-houses and Government buildings through them. The District Engineers of the Department of Highways still act as our representatives for all buildings where there is no Government Agent available, and they have been most helpful in acting as advisers to the Government Agents on technical matters.

E. C. CLARKSON,
Maintenance Architect.

REPORT OF THE MECHANICAL ENGINEER

In general, the Mechanical Section of the Chief Architect's office experienced an extremely busy year. It was found necessary to send out many of the larger capital projects to consulting engineers in order to keep abreast of the year's programme. Close liaison by the Section between the consultants retained and the Department's architectural staff allowed these projects to proceed to completion with a minimum of on-the-site difficulties.

During the year it was noted that there had been a considerable increase in the requests for more fully ventilated spaces, and especially so in the institutional buildings. The removal of obnoxious odours and foul air adds materially to the comfort of the patients and staff alike.

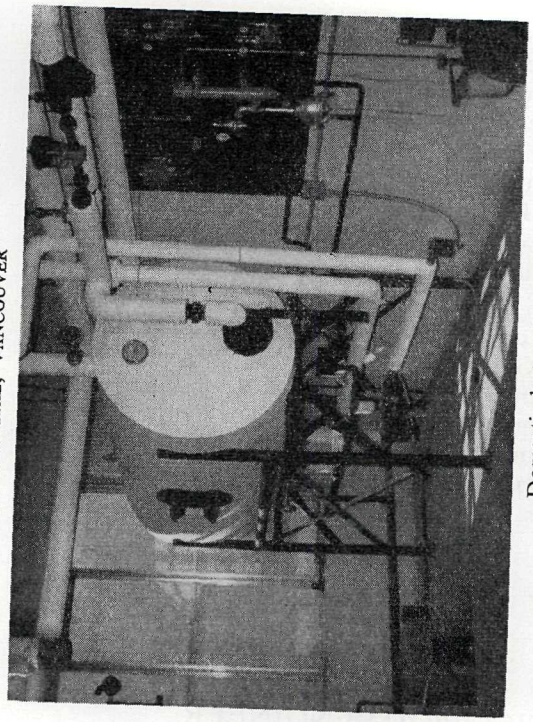
In the Interior of the Province, where the summer temperatures might reach extremes of 110° F. in the shade, a number of summer air-coolers were installed. The success of these units indicated that more summer cooling must be considered.

CAPITAL PROJECTS

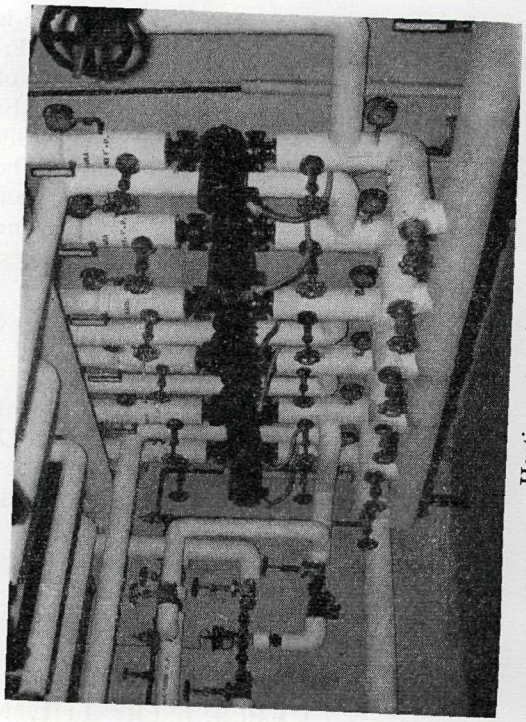
Most of the capital projects are dealt with in other sections of this Report. It is sufficient here to mention that the Mechanical Section has worked in close co-operation with the Architectural, Structural, and Electrical Sections to provide the necessary building services as unobtrusively as possible, and yet consistent with good practice.

There are, however, a few major projects which were handled solely by the Mechanical Branch, such as new boiler and piping, Provincial Home, Kamloops; water and sewage-disposal system, Terrace; underground steam-lines to 300-bed unit, The Woodlands School; and turbo-generator installation at the Vancouver Poliomyelitis Pavilion. This latter turbo-generator installation is a somewhat unusual project, in that this turbo-generator set supplies the primary electrical power for the poliomyelitis wards, with the utility company's power as stand-by. It was found that the utility company could not guarantee sufficiently firm power to protect the polio patients in the iron lungs.

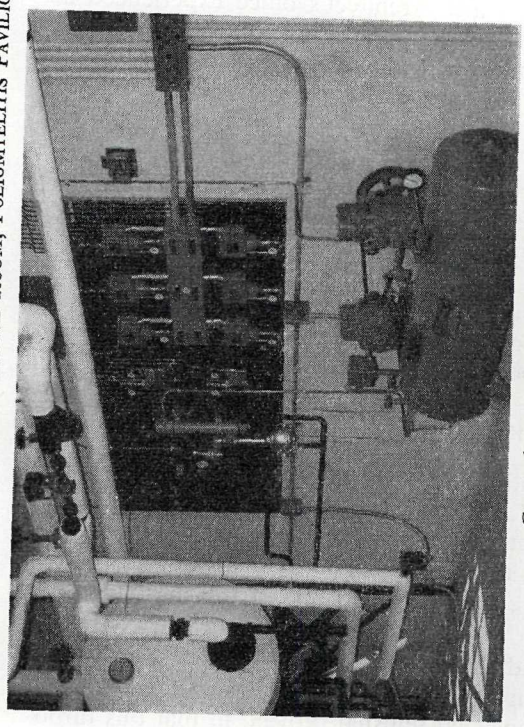
HEAT-CONTROL ROOM, POLIOMYELITIS PAVILION, PEARSON TUBERCULOSIS HOSPITAL, VANCOUVER



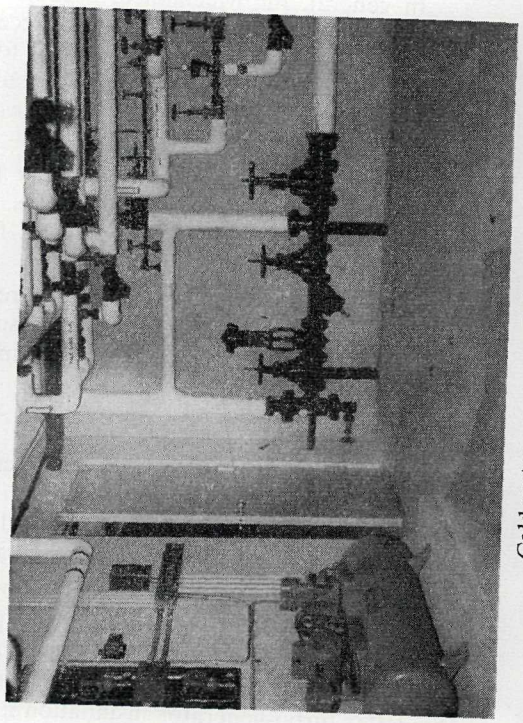
Domestic hot-water tank.



Heating return header.



Control compressor and panel.



Cold-water pressure-reducing station.

MAINTENANCE

Maintenance of mechanical equipment was carried on throughout the year, and in all of the institutions and in a large number of Government buildings.

Some of the more outstanding maintenance work is listed below:—

1. Repiping the heating system, Provincial Home, Kamloops.
2. Conversion to fuel-oil burning, Court-house, Prince Rupert.
3. Renovation of the boiler plant, Provincial Sanatorium, Tranquille. This plant was in poor condition throughout and required extensive overhaul. This programme is expected to be spread over several years. This year considerable new equipment was purchased to replace worn-out and obsolete equipment.
4. Repairs to new boiler, central heating plant, Kamloops. Due to a failure of the flame-sensing apparatus on a new boiler in this plant an explosion of unburned fuel-oil occurred. The steam-pressure parts of the boiler withstood the explosion, but the boiler casing and brickwork were severely damaged.
5. The use of natural gas in the Pouce Coupe area was extended to all Provincial Government buildings. This is the first extensive use of natural gas by the Provincial Government.

SUPERVISION OF PLANT OPERATION AND OPERATING PERSONNEL

Numerous field-trips to the various heating plants were made during the year, where plant operating difficulties were discussed with the operators. While there are many items spread over various plants that can be improved upon to increase plant efficiency, in general the efficiency of plant operation is at a satisfactory high level.

The introduction of the new type of fuel contract by the Purchasing Commission several years ago, where the fuel is matched to the characteristics of the individual plants, has been definitely effective this year, and accounts for a general gain of approximately half of 1 per cent in over-all plant efficiency.

W. E. Mills,
Mechanical Engineer.

REPORT OF THE STRUCTURAL ENGINEER

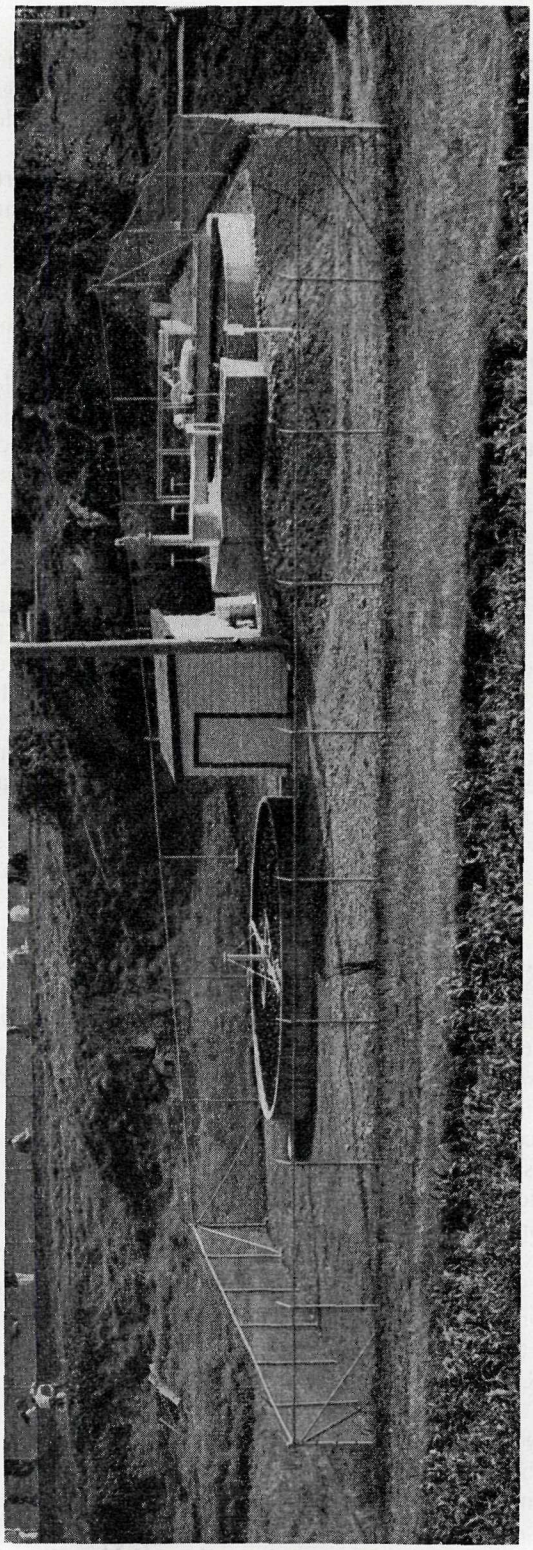
This section of the Architects' Branch was engaged on the following work during the fiscal year 1955–56:—

1. *Structural Design in Steel, Reinforced Concrete, and Timber for the Government Buildings Listed in the Architectural Report.* — The majority of large buildings were constructed in reinforced concrete, with the newer types of framing systems predominating, such as flat beams, flat plates, tin pan and tile filler floors. Formwork costs, which represent a large portion of the total cost, dictated the use of these systems. Of interest are the pre-stressed concrete units which are being used in the Nurses' Home, Essondale. These units are approximately 40 feet long and are pre-stressed with wire ropes.

2. *Drainage and Sewage-disposal Systems for Buildings and Sites Listed Previously.*— Under this heading comes the sewage-disposal plant at Colquitz Mental Home, Victoria. This plant is a complete-treatment mechanical plant which was put in to eliminate pollution of the Colquitz River and ultimately the Gorge waterway. A similar plant is proposed for the new B.C. Correctional Institute, Haney, and will serve the same purpose.

A large sewer system has just been completed at Essondale which will discharge all the sewage from this institution into the Fraser River and eliminate pollution of the Coquitlam River, an important salmon-stream.

3. *Water-supply and Irrigation Systems.*—One of the major jobs under this heading is the new water-supply system and reservoir at Essondale. This system was put in on



Sewage-disposal plant, Colquitz Mental Hospital.

the recommendation of the Greater Vancouver Water Board, which supplies water to Essondale, and serves the purpose of by-passing its present mains, which are in bad condition and fluctuate widely in service pressures.

The reservoir serves the purpose of stabilizing the main pressures and also provides an adequate supply of water for fire or other emergencies.

A complete water-supply system, including a deep-well pump, pipe-line, and reservoir has also been installed at the B.C. Correctional Institution, Haney.

J. R. SIMPSON,
Structural Engineer.

TENDERS RECEIVED AND CONTRACTS AWARDED FOR BUILDINGS

Description of Work and Names of Tenderers	Amount	Remarks
UNDERGROUND STEAM-LINE AND 300-BED UNIT, WOODLANDS SCHOOL, NEW WESTMINSTER, B.C.:		
Dawson & Hall Ltd.	$34,879.00	
Alternate	46,662.00	
The Bay Co. (B.C.) Ltd.	49,062.00	
Alternate	.....	
Ben's Plumbing & Heating Ltd.	33,956.00	
Alternate	44,868.00	
Vancouver Pipe & Engine Works Ltd.	41,949.00	
Alternate	.....	
Fred Welsh & Son Ltd.	40,991.00	
Alternate	47,943.00	
F. Fenk Plumbing & Heating	44,349.00	
Alternate	48,428.00	
Lockerbie & Hole (Western) Ltd.	42,132.00	
Alternate	47,792.00	
	37,783.00	
Leek & Co. Ltd.	42,451.00	
Alternate	27,150.00	
General Pipe Contractors	27,150.00	Awarded.
Alternate	.....	
C. B. Archibald Ltd.	43,300.00	
Alternate	47,330.00	
DEAF AND BLIND SCHOOL, VANCOUVER—NEW SCHOOL FOR THE DEAF AND BLIND AND RECREATIONAL UNIT:		
Jarvis Construction Co. Ltd.	792,367.00	
Commonwealth Construction Co. Ltd.	781,535.00	
Bennett & White Construction Co. Ltd.	773,306.00	
Smith Bros. & Wilson Ltd.	770,000.00	
Kennett Construction Ltd.	759,349.00	
E. H. Shockley & Son Ltd.	752,341.00	
John Laing & Son (Canada) Ltd.	743,012.00	
Beaver Construction Co. Ltd.	742,190.00	Awarded.
INSTALLATION OF TWO OIL-FIRED BOILERS, B.C. CORRECTIONAL INSTITUTION, HANEY, B.C.:		
Blain Boiler Works Ltd.	114,066.00	Awarded.
Vancouver Iron Works Ltd.	163,797.90	
Bumstead-Woolford Ltd.	127,714.00	
Alternate	112,995.00	
Dominion Bridge Co. Ltd.	119,300.00	
Foster-Wheeler Ltd.	117,840.00	
Vulcan Iron & Engineering Ltd.	114,138.00	
John Thompson-Leonard Ltd.	106,801.00	
C. C. Moore & Co. Engineers, Inc.	95,621.00	
H. F. Clarke (B.C.) Ltd.—		
Scheme A	78,445.00	
Scheme B	102,380.00	
NEW WESTMINSTER LAND REGISTRY BUILDING—NEW VAULT AND FILING SPACE:		
Klassen & Born	33,838.00	
Ward & Son Ltd.	31,455.00	
C. J. Oliver Ltd.	30,990.00	Awarded.

TENDERS RECEIVED AND CONTRACTS AWARDED FOR BUILDINGS—*Continued*

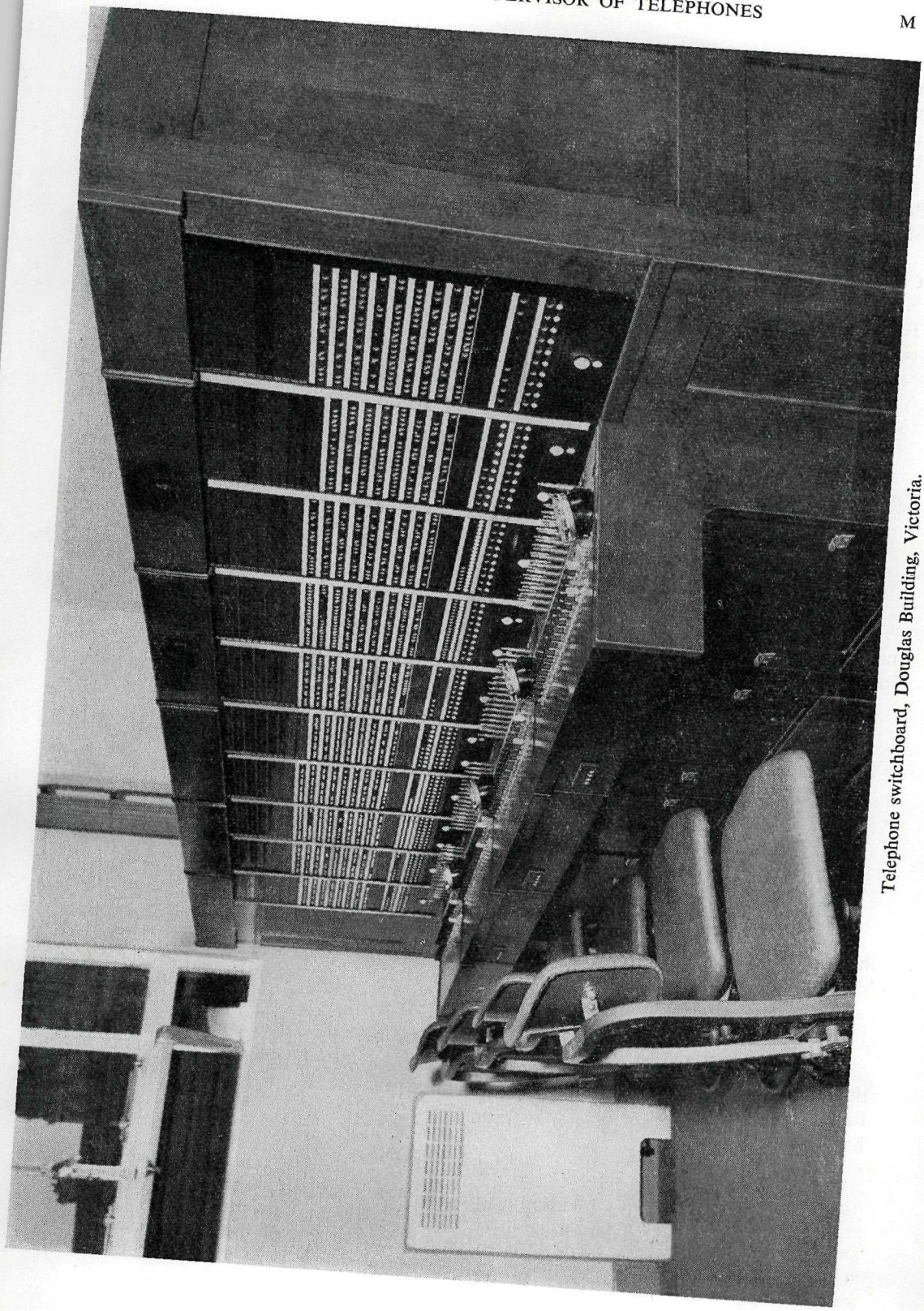
Description of Work and Names of Tenderers	Amount	Remarks
NEW WING TO COURT-HOUSE, NANAIMO, B.C.:		
Marpole Construction Co. Ltd.	314,000.00	
Narod Construction Ltd.	313,207.00	
G. H. Wheaton Ltd.	308,215.00	
C. J. Oliver Ltd.	297,921.00	
A. & B. Construction Co. Ltd.	289,329.00	
D. Robinson Construction Ltd.	285,876.00	Awarded.
ROOT STORAGE HOUSE AND EQUIPMENT-SHED, THE WOODLANDS SCHOOL, NEW WESTMINSTER, B.C.:		
Hanssen Construction Co. Ltd.	43,433.00	
Coyne & Ratcliffe Construction Co. Ltd.	42,420.00	
Dawson & Hall Ltd.	41,326.00	
Lickley Construction Co. Ltd.	36,306.00	Awarded.
LAND REGISTRY OFFICE ADDITION, KAMLOOPS, B.C.:		
Bennett & White Construction Co. Ltd.	47,000.00	
Marpole Construction Co. Ltd.	39,895.00	
Taylor & Son Ltd.	37,599.00	Awarded.
ADDITIONS TO WATER-SUPPLY SYSTEM, ESSONDALE, B.C.:		
The Bay Co. (B.C.) Ltd.	54,255.00	
G. W. Ledingham & Co. Ltd.	53,505.85	
Baynes-Manning Ltd.	34,584.00	
Christian & Allen Ltd.	34,122.00	Awarded.
BOILER-HOUSE AND LAUNDRY AND ANCILLARY WORK, B.C. CORRECTIONAL INSTITUTION, HANEY, B.C.:		
Dawson & Hall Ltd.	248,753.00	
Cerro Construction Co.	269,740.00	
A. R. Grimwood Ltd.	234,363.00	Awarded.
Coyne & Radcliffe Construction Co. Ltd.	267,777.00	
Bennett & White Construction Co. Ltd.	249,400.00	
GIRLS' INDUSTRIAL SCHOOL, BURNABY, B.C.—LAND-CLEARING:		
Murphy Excavating Co. Ltd.	11,550.00	Awarded.
Hanssen Construction Co. Ltd.	13,317.00	
Fownes Construction Co. Ltd.	15,400.00	
Breaks Bros. Construction Ltd.	15,400.00	
Sutherland Construction Co. Ltd.	15,950.00	
Weirs Truck & Tractor Ltd.	18,750.00	
300-BED UNIT, HOME FOR THE AGED, PORT COQUITLAM, B.C.:		
Dawson & Hall Ltd.	1,998,304.00	
Pyke & White Construction Co. Ltd.	1,987,235.00	
Bennett & White Construction Co. Ltd.	1,973,779.00	
Commonwealth Construction Co. Ltd.	1,957,672.00	
A. R. Grimwood Co. Ltd.	1,962,791.00	
Smith Bros. & Wilson Ltd.	1,946,764.00	
Kennett Construction Ltd.	1,927,402.00	
E. H. Shockley & Son Ltd.	1,903,787.00	
Beaver Construction Co. Ltd.	1,897,195.00	Awarded.

REPORT OF SUPERVISOR OF TELEPHONES

Herewith is submitted annual report of the Telephone Branch, Department of Public Works, covering fiscal year ended March 31st, 1956.

This Branch processed and completed 542 orders, namely, installations of entire switchboard systems, extending services from existing switchboards, installation of business exchange services, seasonal telephones for British Columbia Forest Service and British Columbia Game Commission, telephone directories for Parliament Buildings and Vancouver Court-house.

1. *Business Exchange Service.*—The largest single orders placed for this type of service were for the new Cranbrook and Kelowna Court-houses. These buildings, when under survey, were found to be lacking the necessary amount of telephone traffic to require switchboards.



Telephone switchboard, Douglas Building, Victoria.

2. *Switchboard Installations.*—Installations were completed on the following buildings: Brannen Lake School for Boys—Type 20-B P.A.B.X., replacing business service; Oakalla Prison Farm—Type 555 P.B.X., replacing business service; Child Guidance and Mental Health Centre—Type 555, 2-pos. P.B.X., new installation; Provincial Health Building—Type 50, 2-pos. P.A.B.X., replacing five smaller-type switchboards.

3. *Trunking Facilities.*—Additional trunking was added to switchboards located at Parliament Buildings; Forest Service, Vancouver; Court-house, Vancouver; Provincial Mental Hospital, Essondale.

4. *Surveys in Progress.*—(*a*) Business Service and Extension to Switchboards: Court-house, Fort St. John; Regional Highways Offices at Prince George, Kamloops, Nelson, and New Westminster; Girls' Industrial School; Provincial Mental Hospital, Essondale; The Woodlands School, New Westminster; and sixteen health units throughout the Province.

(*b*) Conversion of Existing Switchboards to Larger Switchboards: Forest Service, Vancouver; Provincial Mental Hospital, Essondale; Tuberculosis Hospital, Vancouver; Administrative Offices, Kamloops; Jericho Hill School; and Court-house, Prince George.

(*c*) New Switchboards: B.C. Correctional Institute and Nanaimo Court-house.

Traffic increase has been noticeable on all switchboards. The Parliament Buildings average daily traffic count is included below for your information:—

	1955	1956
Incoming calls	2,492	2,901
Outgoing and inter-office	7,438	8,751
Totals	9,930	11,652

The requests for new types of telephone equipment have been numerous; unfortunately, due to lack of adequate conduit and cabling, plus the high installation costs involved, we have been able to approve very few.

It is a pleasure to report a year of growth and expansion, with a minimum of personnel and equipment problems.

RUTH E. THOMPSON,
Supervisor of Telephones.

REPORT OF THE CHIEF INSPECTOR OF BOILERS AND MACHINERY

In accordance with the provisions of the "Boiler and Pressure-vessel Act," I have the honour to submit the fifty-fourth annual report of the operation of the Boilers and Machinery Inspection Division for the fiscal year ended March 31st, 1956.

THE ACT

The amendments to the Act at the 1955 Session of the Legislature, in which definitions were revised, interim certificates of inspection introduced, and provisions made for the registration of welders, have proved satisfactory to all parties concerned and have facilitated the work of administration.

REGULATIONS

In order to render fees for shop inspection more equitable, in relation to work done, our fee-list was amended by Order in Council No. 2262. Introduced at this time was a reduced fee for inspection of a batch of pressure-vessels of the same design. This gave some easement to our new propane industry, which is in stiff competition with manufacturers outside the Province.

With the preparation for the piping of natural gas at high pressure through the Province, there is a great demand for welders experienced in the special technique peculiar to pipe-line construction.

A specialized test and subsequent registration for this group was established by Order in Council No. 67. Training for pipe-line welders is conducted at the Dominion-Provincial Vocational School at Nanaimo. An Inspector visits the school periodically to examine the trainees.

BOILER AND PRESSURE-VESSEL CODE (C.S.A.-A.S.M.E.)

The annual meeting of the Boiler and Pressure-vessel Committee was held in Winnipeg on September 28th to 30th. The C.S.A. Code B-51 was reviewed and suggested amendments discussed, with the object of establishing and retaining uniformity in rules governing construction and installation throughout Canada, and to keep all jurisdictions abreast of new developments in pressure-vessel engineering.

The Chief Inspector was honoured by being elected chairman of this Committee.

The American Society of Mechanical Engineers appointed the Chief Inspector a member of their Sub-committee on Fire Tube Power Boilers.

NEW CONSTRUCTION

Expansion in our pulp-mills and oil-refineries, as well as the rapid growth in our secondary industries, continues; these, together with plans for heating plants in new buildings and design of pressure-vessels for export, have increased design office work 30.7 per cent.

Boilers and pressure-vessels built locally under our surveillance show an increase of 142 and 312 per cent respectively.

Already under way is the Huntingdon–Vancouver natural-gas pipe-line. This will be followed later by the Peace River–Huntingdon line, from which distribution-lines will be laid in the cities and municipalities en route. All such pipe-lines within municipal boundaries are subject to approval with respect to design and welding procedure, and all welders engaged on any pipe-line must be tested and registered.

ACCIDENTS AND REPAIRS

One boiler was found with badly bulged end plates and another had cracks in the butt-strap. Both these dangerous defects were repaired under an Inspector's direction. There were two other boilers which were damaged beyond repair by low water.

A dangerous defect in a series of well-known blow-down valves was discovered. Arrangements were made with the manufacturers to modify the design.

An explosion of ammonia in a refrigeration plant resulted in superficial burns to a workman.

All accidents were carefully investigated, and recommendations made to prevent recurrence.

STATIONARY ENGINEERS

At the Winnipeg meeting in September, all the Chief Inspectors gathered to discuss uniformity in the standards of examination and qualification of stationary engineers in Canada. It is the hope that eventually each Province can work out some degree of acceptance of another Province's certificate.

Encouragement has been given to the Canadian Institute of Power Engineers, who have made this objective their main project in standardization. They have appointed our examiner Chairman of the Canadian Standardization Committee for Engineers' Examinations. All Provinces have been extremely co-operative in sending in their

examination papers for analysis and subsequent compounding into standard papers, which has involved much hard spare-time work for our examiner.

Preparations are under way to amend our own engineers' regulations, which will include an Advisory Board, and to provide better credits for technical-school training and power-plant experience.

PERSONNEL

A Senior Inspector, Mr. D. G. Thomson, died in August, 1955, and a District Inspector resigned on December 31st, 1955. The loss of two Inspectors therefore left us in a desperate position with so much work in hand.

Arrangements have been made to engage two temporary Inspectors pending the appointment of permanent Inspectors by examination in July, 1956.

The volume of work of such special nature as design survey, shop inspection, and welding will cause us to withdraw two Inspectors from the field to render assistance in these phases of our work.

With the exception of one Inspector in Victoria, all Inspectors operate from headquarters in Vancouver. The gradual increase of industrial density at certain Interior points, such as Nelson, Prince George, and Prince Rupert, will cause consideration to be given to the establishment of resident District Inspectors in the course of two or three years.

SUMMARY OF WORK

Revenue was 96 per cent of expenditure. In addition, inspections were made on Public Works boilers and pressure-vessels, amounting to a revenue equivalent of $2,500.

New designs and amendments checked	754
Fees collected for designs	$7,132.46
Fees collected for work done in boiler-shops	$8,669.89
New boilers built in British Columbia	223
Second-hand boilers imported	12
Total number of all boilers inspected	4,367
Plates inspected and tested	1,053
Number of engineers examined	605
Number of welders examined	1,009
Over-all cost of Department to Government	$99,803.08
Over-all total revenue	$95,523.55

Appended is a detailed list of all work done and an analysis of examinations.

INSPECTOR'S ANNUAL REPORT, 1955–56

	Steam	Hot Water
Number of drawings and specifications calculated for registration	754	.....
Number of boilers on which calculations for W.P. were made in the field	1	.....
As Engineer-Surveyor—		
Number of boiler-plates inspected and tested	1,053	.....
Number of boiler-plates rejected	10	.....
Number of visits to boiler-shops	936	.....
Number of boilers tested built under Inspector's supervision	81	142
Miles travelled	5,475	511

	Steam	Hot Water
First inspections—		
Number of new boilers inspected and tested built in Eastern Canada	9	8
Number of new boilers inspected and tested built in United States	8	4
Number of new boilers inspected and tested built in other countries (England)	3	.....
Total number of new boilers inspected	20	12
Total horse-power of new boilers inspected	2,865	321
Number of new boiler installations inspected	95	104
Number of second-hand boilers inspected and tested (first inspection) imported from Eastern Canada	8	2
Number of second-hand boilers inspected and tested (first inspection) imported from United States	1	1
Total number of second-hand boilers inspected for first time	9	3
Total horse-power of second-hand boilers inspected for first time	1,456	39
Number of first installations of second-hand boilers inspected	9	9
Annual inspections—		
Number of annual inspections	2,509	1,253
Number of inspections, under steam	216	.....
Number of boilers inspected (under 3 horse-power)	182	164
Number of boilers subjected to hydrostatic test	1,980	782
Number of visits in addition to annual inspection	215	71
Number of boilers on which pressure was reduced	41	.....
Number of boilers repaired under Inspector's directions	65	12
Number of boilers considered unfit for further use	4	.....
Number of investigations	44	4
Total number of all boilers inspected	2,936	1,432
Total horse-power of all boilers inspected	305,777	20,024
Number of accidents to engines and boilers	9	.....
Boilers taken out of service	6	.....
Miles travelled by the Inspectors		79,529
Total travelling expenses		$12,453.13
Travelling expenses per mile		15.6¢

Results of Engineers' Examinations

Class	Number Examined	Passed	Failed
First	14	6	8
Second	53	29	24
Third	145	94	51
Fourth	281	191	90
Special heating H.P.	20	15	5
Special heating L.P.	76	57	19
Class A	16	8	8
Totals	605	400	205

Temporary, 607.

Welders' Tests

Class	Number Examined	Passed	Failed
Electric	768	681	87
Oxy-acetylene	241	213	28
Totals	1,009	894	115

New registrants, 188.

Summary of Defects Observed

Nature of Defects	Number	Dangerous
Boilers with safety-valves overloaded	4	----
Boilers with safety-valves defective	7	4
Pressure-gauges defective or over 5 lb. error	114	----
Cases of defective stays	9	----
Cases of defective riveting	9	----
Serious leakage in rivet-joints	14	----
Boilers with fractured plates	1	----
Boilers with burned plates	5	----
Boilers with bulged plates	10	----
Cases of internal corrosion	93	6
Cases of external corrosion	48	7
Cases of scale or encrustation	77	----
Cases of internal grooving	3	----
Cases of defective tubes	64	10
Defective main stop-valves	6	----
Defective blow-off pipes or cocks	9	----
Defective settings	12	----
Defective water-gauges	2	----
Cases of defective feed-water arrangement	3	----
Boilers damaged by low water	7	----
Cases of serious leakage of fittings	10	----
Number of hand-holes, doors having bolts and dogs burned off	2	----
Boilers low at front end	3	----
Unclassified defects	5	----
Totals	517	27

Pressure-vessels Inspected

Number of pressure vessels inspected in field	778
Number of pressure-vessels inspected during construction	2,132
Number of pressure-vessels inspected (imported from United States)	251
Number of pressure-vessels inspected (imported from Eastern Canada)	179
Number of pressure-vessels inspected (imported from other countries)	2

Refrigeration Plants

New plants inspected	2
Annual inspections made	12
Total tonnage of all plants inspected	60,852

Analysis of Examinations

Engineers

	Year Ended Mar. 31, 1955			Year Ended Mar. 31, 1956		
	Examined	Passed	Failed	Examined	Passed	Failed
First	15	3	12	14	6	8
Second	60	32	28	53	29	24
Third	134	84	50	145	94	51
Fourth	239	152	87	281	191	90
Low pressure "B"	78	64	14	76	57	19
High pressure "B"	14	12	2	20	15	5
Temporary	427	427	----	607	607	----
Class A	28	21	7	16	8	8
Totals	995	795	200	1,212	1,007	205

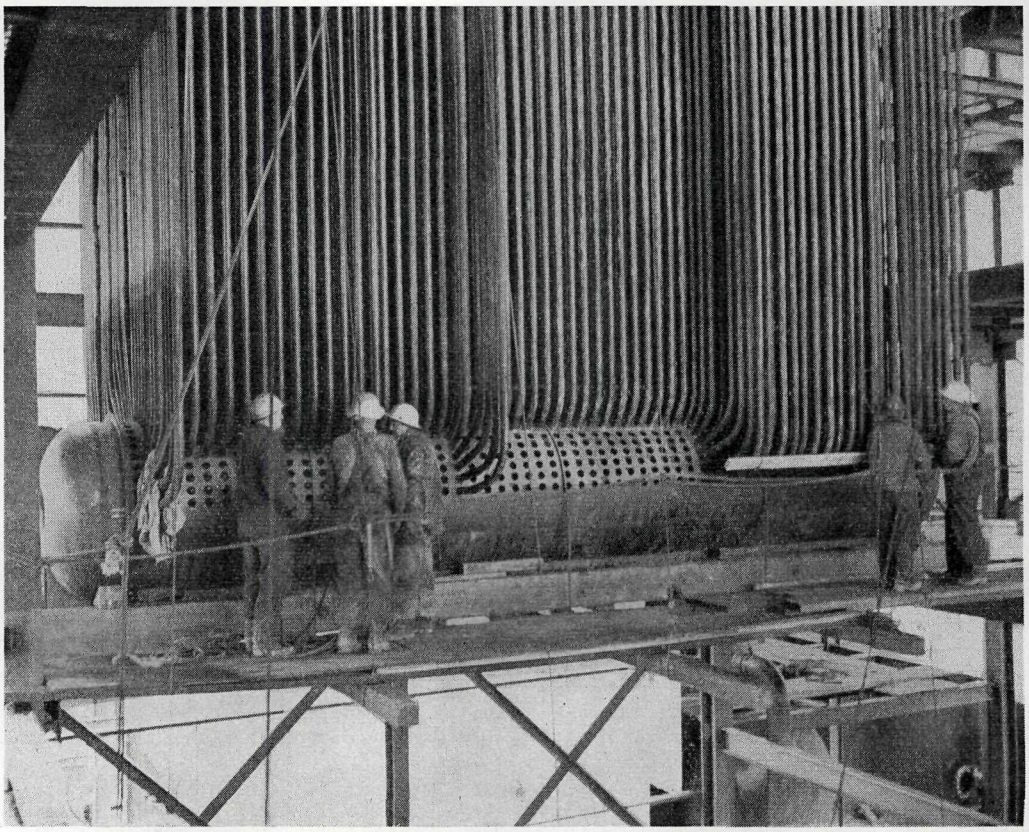
Welders

	1955			1956		
	Examined	Passed	Failed	Examined	Passed	Failed
Electric	702	592	110	768	681	87
Oxy-acetylene	201	165	36	241	213	28
Totals	903	757	146	1,009	894	115

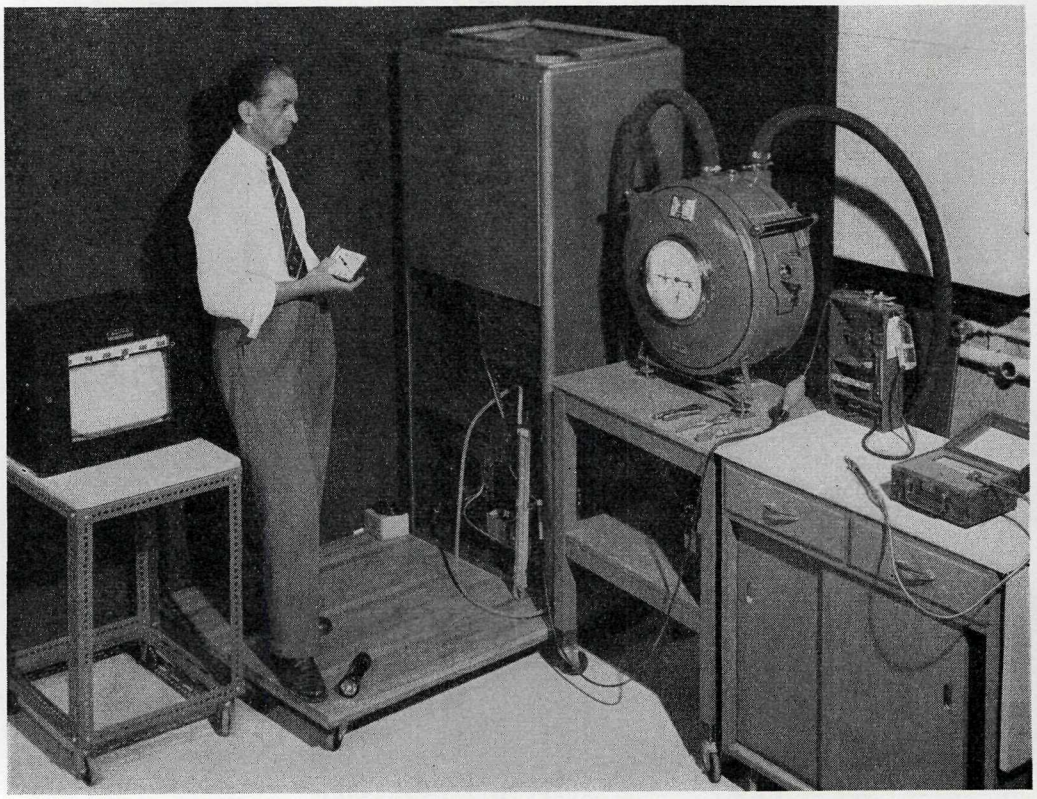
Fees Received

	1955	1956
Engineers	$4,442.50	$5,046.25
Welders	3,882.50	4,400.00
Duplicate certificates	90.00	155.00
Totals	$8,415.00	$9,601.25

D. Denham, P.Eng.
Chief Inspector of Boilers and Machinery.



A water-tube boiler at a pulp-mill.



Gas furnace under test at British Columbia Research Council laboratory.

REPORT OF THE CHIEF ENGINEER-SURVEYOR, GAS INSPECTION DIVISION

In accordance with the provisions of the "Gas Act," I have the honour to submit the second annual report of the operation of the Gas Inspection Division for the fiscal year ended March 31st, 1956.

THE ACT

At the 1956 Session of the Legislature, the "Gas Act" was amended to enable this Division to provide gas inspection services for a municipality, subject to agreement between the municipality and the Minister.

The amendment introduced the new certificate of competency, which is a mandatory requirement for all Gas Inspectors, government or municipal.

In readiness for proposed staff changes, the words "Chief Inspector" were substituted for "Chief Engineer-Surveyor."

THE DIVISION

At present the staff consists of the Chief Engineer-Surveyor, the Supervising Gas Inspector, one Gas Inspector, and one stenographer. The work of the Division has been centred on the education and training of persons engaged in various phases of the gas industry.

A short course for local Inspectors was conducted at this office to keep them abreast of new technical developments and to standardize interpretations. A course was held in Victoria, attended by fifty members of the gas trade. Concurrently the following three separate courses were conducted at the Vancouver Vocational Institute: Gas Fundamentals, Gas Fitting, and Gas Controls. An advanced course was sponsored jointly by the Division and the gas utility. More than 400 persons attended the courses in Vancouver.

The British Columbia Research Council has extended its laboratory and installed equipment in preparation for gas-appliance testing, which is expected to begin in August, 1956.

REGULATIONS

In order to accommodate developments in the gas industry, the regulations were amended by the following Orders in Council:—

Order in Council No. 2050, Regulations for Interim Approval and Interim Listing of Gas Appliances in British Columbia, amended and approved August 16th, 1955.

Order in Council No. 2051, Regulations Governing the Installation of Gas Piping, Appliances, and Venting, approved August 16th, 1956.

Order in Council No. 2052, Regulations respecting Gas Fitters, Contractors, and Dealers, approved August 16th, 1956.

Order in Council No. 2263, Regulations for Interim Approval and Interim Listing of Gas Appliances in British Columbia, approved September 16th, 1955.

ACCIDENTS

During the fiscal year there were no major explosions. There were 159 incidents of gas poisoning. Ninety-four persons survived, but there were thirty-four accidental deaths and thirty-one suicides.

SUMMARY OF WORK

New designs checked, interim approval	21
New designs checked, industrial approval	16
Number of Gas Codes distributed	1,250
Gas-fitters' licences issued	457
Contractors' licences issued	154
Provisional licences issued	230
Number of gas-fitters examined	331
Number of gas-fitters passed examination	228
Number of permits issued, municipalities	7,387

FEES COLLECTED

Examination fees	$1,430.00
Provisional licence fees	1,150.00
Contractors' licence fees	1,480.00
Renewal gas-fitters' licence fees	462.00
Sale of Gas Codes	620.50
Interim approval fees	650.00
Industrial approval fees	105.00
Interim approval seals	2,054.00
Resale approval seals	2,869.50
Identification tags (gas-fitters')	178.80
Permits	22.50
Fines	45.00
Duplicate licence issued	1.00
Total revenue	$11,068.30
Over-all cost of department to Government	$24,111.55

D. DENHAM, P. ENG.,
Chief Engineer-Surveyor.

REPORT OF THE INSPECTOR OF ELECTRICAL ENERGY

In accordance with the "Electrical Energy Inspection Act," I have the honour to submit my annual report for the fiscal year ended March 31st, 1956.

BOARD OF EXAMINERS FOR ELECTRICAL CONTRACTORS

The Honourable the Minister of Public Works has been pleased to appoint the following members to the Board, effective January 1st, 1956: H. Hume, electrical contractor, representing the Associated Electrical Contractors of British Columbia; R. Beaumont, electrical contractor, representing the Vancouver Electrical Association; and J. Harrison, electrical inspector for the City of Vancouver, representing cities and municipalities. Other members of the Board are L. Robson, Inspector of Electrical Energy (Chairman), and L. Handy, Assistant Inspector of Electrical Energy. Nine meetings were held throughout the year.

The total number of certificates in effect during the year is as follows:—

Class A	137
Class B	583
Class C	332
Class PA	52
Class PB	125
Class PC	236
Total	1,465

There were no temporary certificates issued during the year.

A total of 211 candidates sat for examination, with the following results:—

	Number of Candidates	Passed	Failed
Class A	36	19	17
Class B	72	42	30
Class C	103	62	41
Totals	211	123	88

STATEMENT OF REVENUE AND EXPENDITURE

Revenue—			
Annual permits		$3,215.00	
Regular permits		182,831.29	
Examination fees		3,080.00	
Certificates of competency		11,026.25	
Sale of publications		1,617.98	
Utilities		14,620.16	
Plan checking		1,458.12	
Collection of social services tax		70.25	
Suspense, pending refund		710.56	
Suspense, pending distribution		2,311.24	
Gross revenue		$220,940.85	
Less—			
Suspense refunds	$710.56		
Revenue refunds	1,774.12		
Social services tax	70.25		
Suspense	2,269.72		
Total debits to revenue		4,824.65	
Net revenue, Electrical Energy Inspection			$216,116.20
Operating expenses (Vote 328, Electrical Energy Inspection (gross))		$205,981.44	
Less—			
Credit for preparation of plans and specifications on behalf of Chief Architect and Traffic Engineer, J.V. No. 9834	$21,438.09		
Credit to salaries *re* expenditure from Block Vote J.V. Nos. 1046 and 1049	2,275.13		
Credit to salaries *re* Steam-boiler Inspection share of charges for stenographic service, J.V. No. 9825	1,268.28		
Credit to salaries *re* Department of Lands and Forests share of charges for stenographic service, J.V. Nos. 9835 and 9789	504.73		
Total credits		25,486.23	
Net operating expenses		$180,495.21	
Operating surplus		35,620.99	
		$216,116.20	$216,116.20

PERMITS

The total number of permits issued during the year was as follows:—

April, 1955	2,068	November, 1955	2,656
May, 1955	2,538	December, 1955	1,936
June, 1955	2,654	January, 1956	1,900
July, 1955	2,390	February, 1956	1,865
August, 1955	2,617	March, 1956	1,867
September, 1955	2,745		
October, 1955	2,710	Total	27,946

This represents an increase of 5,399 permits over the previous year, or an increase of 24 per cent.

DISTRICT OFFICES

District offices are maintained at the following centres: Victoria, Nanaimo, Courtenay, Alberni, Abbotsford, Langley Prairie, Chilliwack, Prince Rupert, Prince George, Dawson Creek, Kamloops, Vernon, Penticton, Trail, Cranbrook, and Vancouver. Three Inspectors work from the Vancouver office and inspect the following areas: West Coast (including Alert Bay, Howe Sound, Squamish, and Lillooet), Port Coquitlam, Coquitlam, Ioco, Pitt Meadows, Port Moody, Richmond, and Delta.

INSPECTIONS

The following is a record of inspections undertaken during the year:—

Office	Number of Inspections
Victoria (three Inspectors)	6,427
Nanaimo	2,640
Courtenay	2,450
Alberni	2,491
Abbotsford	2,143
Langley Prairie	2,018
Chilliwack	2,541
Prince Rupert	1,872
Prince George (two Inspectors)	4,388
Dawson Creek[1]	843
Kamloops	2,097
Vernon	2,061
Penticton	1,526
Trail	1,474
Cranbrook	1,761
Vancouver (three Inspectors)	6,453
Total	43,185

The number of inspections completed during this year represents an increase of 7,920, or 22½ per cent over the preceding year.

PROSECUTIONS

Five prosecutions were initiated during the year.

[1] This is a new office which commenced operations in September, 1955. A new District Inspector was appointed to this office.

EXAMINATION OF MOTION-PICTURE PROJECTIONISTS

The Department assisted the Provincial Fire Marshal in conducting twenty-eight examinations for projectionists. The regulations covering such examinations provide that the Inspector of Electrical Energy be a member of this Examining Board in company with the Fire Marshal. In this connection all fees arising from these examinations accrue to the credit of the Fire Marshal's department.

CANADIAN STANDARDS ASSOCIATION

The Chief Inspector continued to represent the Province on the Approvals Council of the Canadian Standards Association and on continuing committees on the Canadian Electrical Code.

Two meetings were attended, one of which was held in Charlottetown, P.E.I., during the month of June, and the other in Toronto during the month of October. Much new subject-matter was considered, as well as amendments to existing rules, in order to keep pace with the development of new materials and practices. Much is being accomplished in an endeavour to promote uniformity of practice and application in electrical systems throughout Canada. It is anticipated that amendments which have been processed since the last publication will be available for adoption at an early date. It is anticipated that a recommendaion will be made in the near future to officially adopt those amendments which have been so processed. It is also expected that a complete republication of the Code will be available some time in 1957.

The liaison between the C.S.A. laboratories and those of the British Standards Institute in Great Britain and K.E.M.A. laboratories in Arnhem, Holland, continue to react to the benefit of industry in this Province. Inquiries have been received during the past year respecting the importation of French electrical equipment for use in a large cement plant. It is likely that the facilities which have been set up will again be of considerable benefit both to industry and to this Division in the consideration of the acceptability of electrical proposals.

Due to the advent of natural gas in this Province, it has become necessary to reconsider the basis of approval of electrical equipment, particularly gas heating equipment manufactured within British Columbia. This activity is being pursued, and it is expected that an amendment may ultimately be recommended to the Honourable the Minister of Public Works for his consideration.

POLE-LINE PERMITS

The Department during the year checked 567 applications for the erection of pole-lines on Crown lands or Provincial highways. This represents an increase of twenty-four over the previous year. Recommendations on each application were forwarded to the Chief Engineer.

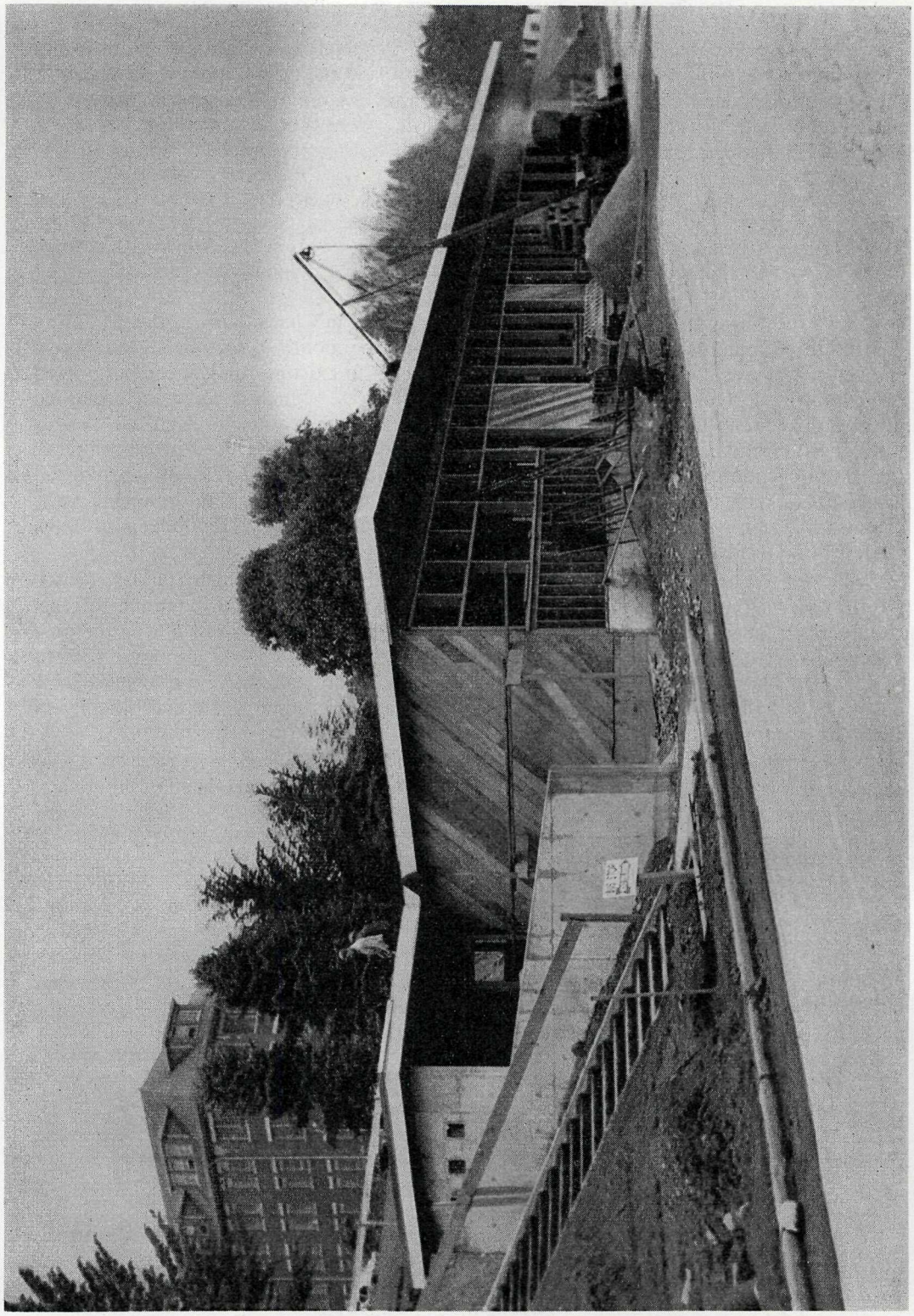
ACCIDENTS

There were thirty-eight accidents recorded during the year; of these, four were fatal. This represents a decrease of three in the number of fatalities reported for the previous year.

ELECTRICAL DESIGN

In addition to previously listed activities, this Division continued to prepare electrical plans and specifications for this Department and other Provincial departments.

L. ROBSON, P. ENG.,
Inspector of Electrical Energy.



New Credit Union and Tuck Shop Building, Provincial Mental Hospital, Essondale.

REPORT OF THE DEPARTMENTAL COMPTROLLER

Effective April 1st, 1955, the Department of Public Works, which combined the activities of road, bridge, ferry, etc., construction and repair, as well as the construction and repair, etc., of Government buildings was divided into the Department of Highways and the Department of Public Works.

This is the first annual report of the new Department of Public Works.

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

J. E. MOORE,
Departmental Comptroller.

STATEMENT OF EXPENDITURES, FISCAL YEAR 1955–56

SUMMARY

				CREDITS (Non-expendable)
Vote 320. Minister's Office—				
Office		$447.02		
Travelling		2,149.01		
Salaries		10,976.58		
			$13,572.61	
Vote 321. Administration—				
Office		$12,218.51		
Travelling		9,201.10		
Salaries		93,476.03		
Office furniture and equipment		4,860.41		
Incidentals and contingencies		125.48		
Advertising and publicity		327.39		
			120,208.92	
Vote 322. Parliament Buildings (Maintenance)—				
Salaries		$345,651.17		
Maintenance of buildings and grounds		187,588.01		
Heat, light, power, and water		135,916.10		
Motor-vehicles and accessories		1,272.48		
Installation of new lighting fixtures		5,683.12		
Taxes, telephones, etc.		877.40		
			676,988.28	
Vote 323. Government House (Maintenance)—				
Salaries		$26,988.01		
Maintenance of buildings and grounds		17,748.32		
Heat, light, power, and water		10,461.85		
Furniture, supplies, etc.		7,385.52		
Taxes, telephones, etc.		1,791.31		
			64,375.01	*$940.00*
Vote 324. Government Buildings (Maintenance)—				
Salaries		$898,636.60		
Maintenance of buildings and grounds		797,966.90		
Heat, light, power, and water		109,854.82		
Heating systems		44,364.12		
Proportionate costs, Inspector of Electrical Energy		16,488.09		
Taxes, telephones, etc.		9,567.05		
			1,876,877.58	*121,552.27*
Building maintenance expenditures detailed as follows:—				
Lockups generally	$31,436.02			
Gaols	9,753.77			
		$41,189.79		
Court-houses		190,071.73		
Normal Schools—				
Vancouver	$6,625.64			
Victoria	55,513.47			
		62,139.11		
Deaf and Blind School, Vancouver		31,291.54		
Nanaimo Vocational Training School		15,650.84		
TB. units and Provincial laboratories—				
Vancouver—				
Jericho—payment purchase of land (Credit)	*$14,000.00*			
Jericho	6,573.85			
Pearson	70,325.28			
Willow	16,431.78			
Hornby	2,809.35			
Child Guidance Clinic	298.66			
Polio Pavilion	148.99			
Health Building	578.85			
Victoria—Jubilee	2,672.25			
Tranquille Sanatorium and Farm	194,860.39			
		280,699.40		
Carried forward		$621,042.41	$2,752,022.40	$122,492.27

STATEMENT OF EXPENDITURES—*Continued*

SUMMARY—*Continued*

				CREDITS (Non-expendable)
Building maintenance expenditures—*Continued*				
Brought forward		$621,042.41	$2,752,022.40	$122,492.27
Mental Hospitals—				
Essondale	$441,329.06			
Colony Farm	38,494.19			
Woodlands School (New Westminster)	149,715.84			
Saanich Mental Home and Farm	35,509.35			
New Vista	214.89			
		665,263.33		
Industrial Schools—				
Boys' Industrial	$277.16			
Girls' Industrial	10,871.24			
Borstal (New Haven)	4,390.28			
Brannen Lake School, V.I.	41,246.75			
		56,785.43		
Provincial Infirmaries—				
Home for Incurables (Marpole)	$5,846.02			
Allco Provincial Infirmary	11,770.37			
Kamloops Provincial Home	8,837.91			
Kamloops central heating plant	76,048.65			
		102,502.95		
Home for the Aged—				
Vancouver (Port Coquitlam)	$26,049.19			
Vernon	36,594.94			
Terrace	34,641.54			
		97,285.67		
Miscellaneous—				
Residences	$21,036.40			
Garages, etc.	37,690.11			
Oakalla	77,257.88			
Sundry buildings	198,013.40			
		333,997.79		
Gross expenditure		$1,876,877.58		
Revenue (as per Public Works records) (Credit)		*121,552.27*		
Net expenditure		$1,755,325.31		
Vote 325. Rentals—				
Agriculture		$13,280.05		
Attorney-General		32,113.72		
Education		27,692.95		
Finance		4,080.07		
Fisheries		1,450.96		
Health and Welfare		90,959.42		
Labour		2,092.75		
Lands and Forests		55,168.04		
Mines		4,575.46		
Municipal Affairs		1,541.59		
Provincial Secretary		14,505.33		
Public Utilities		11,892.46		
Highways		4,508.66		
Public Works		963.85		
Railways		1,293.59		
Trade and Industry		728.03		
Non-apportionable (*re* Drost Building, Vancouver)		5,400.00		
			$272,246.93	*266,331.56*
Vote 326. Gas Division, Vancouver—				
Salaries		$10,987.01		
Office		754.86		
Travelling		1,523.58		
Carried forward		$13,265.45	$3,024,269.33	$388,823.83

STATEMENT OF EXPENDITURES—*Continued*

SUMMARY—*Continued*

VOTE 326. Gas Division, Vancouver—*Continued*

			CREDITS (Non-expendable)
Brought forward	$13,265.45	$3,024,269.33	$388,823.83
Office furniture and equipment	542.45		
Equipment and machinery	440.73		
Testing, British Columbia Research Council	7,506.59		
Printing and publications	1,252.33		
		23,007.55	*11,036.75*
Vote 327. Steam-boiler Inspection, Vancouver—			
Salaries	$79,018.90		
Office	4,661.24		
Travelling	12,490.07		
Office furniture and equipment	534.89		
Equipment and machinery	422.36		
Printing and publications	344.79		
		97,472.25	*95,482.50*
Vote 328. Electrical Energy Inspection, Vancouver—			
Salaries	$115,690.84		
Office	9,136.92		
Travelling	43,469.32		
Rentals	963.85		
Office furniture and equipment	890.19		
Printing and publications	1,101.98		
Equipment and machinery	406.06		
Motor-vehicles and accessories	5,206.56		
		176,865.72	*216,154.58*
Vote 329. Temporary Assistance		133,375.63	
Sub-total, Administration and Maintenance Votes		$3,454,990.48	*$711,497.66*

CAPITAL EXPENDITURES—BUILDINGS

"Revenue Surplus Appropriation Act, 1944," Sec. 2 (c)

Proj. No. 214-B — Four-bay equipment-shed, Prince George	$18,331.88	
Proj. No. 143-B—Equipment-shed, Westview	1,614.98	
		$19,946.86

"B.C. Loan Act, 1951," Sec. 3 (a)

Proj. No. 146-B—Burnaby equipment-shed and oil-house	$3,500.00	
Proj. No. 217-B—One-bay equipment-shed, Celista	5,000.00	
Proj. No. 148-B—Courtenay equipment-shed	3,178.74	
Proj. 220-B—Two-bay equipment-shed, Nanaimo	11,494.56	
Proj. No. 219-B—One - bay equipment - shed, Saltspring Island	2,097.48	
Proj. No. 218-B—One-bay equipment-shed, Ucluelet (Tofino)	6,000.00	
		31,270.78

Vote 344. Construction of Provincial Buildings

Proj. No. 191-B—Two-bay equipment-shed and oil-house, Alexis Creek	$14,770.27	
Proj. No. 230-B—Two-bay equipment-shed and oil-house, Ashcroft	12,000.00	
Proj. No. 229-B—R.C.M.P. offices and dwellings, Ashcroft	3,910.94	
Proj. No. 187-B—Complete four - bay equipment - shed, Athalmer	15,000.00	
Proj. No. 198-B—Two-bay equipment-shed, Atlin	12,000.00	
Proj. No. 197-B—Two-bay equipment-shed, Blue River	8,000.00	
Carried forward	$65,681.21	$51,217.64

STATEMENT OF EXPENDITURES—*Continued*

SUMMARY—*Continued*

CAPITAL EXPENDITURES—BUILDINGS—*Continued*

Vote 344. Construction of Provincial Buildings—Continued

Brought forward		$65,681.21	$51,217.64
Proj. No. 196-B—Five-bay equipment-shed, oil-house, and office, Boston Bar		48,969.00	
Proj. No. 189-B—Oil-house, Boswell		1,123.47	
Proj. No. 30-B—Brannen Lake Boys' School		44,715.38	
Proj. No. 186-B—Oil-house, Bridesville		1,568.08	
Proj. No. 194-B—Oil-house, Burns Lake		2,486.95	
Proj. No. 152-B—New Child Guidance Clinic and Day Hospital, Burnaby area		479,008.42	
Proj. No. 225-B—Addition to Magistrate's office and Courtroom, Clinton		12,636.51	
Colony Farm—			
Proj. No. 6-B-20—Conversion of Quonset loafing-barn to conventional tie stalls	$5,481.27		
Proj. No. 6-B-22—Renovation of farm cottage	5,263.23		
Proj. No. 6-B-23—Surfacing farm yards	3,990.00		
Proj. No. 6-B-24—Colony Farm boiler-house, additional fuel-oil storage	2,748.00		
Proj. No. 6-B-25—Covering over ramp, milking-parlour	3,117.00		
Proj. No. 6-B-26—Additional ten pig-pens	12,169.51		
Proj. No. 6-B-28—Extension of dykes	14,676.69		
		47,445.70	
Proj. No. 94-B-1—Sidewalks, curbs, paving, Courtenay Court-house		1,324.35	
Proj. No. 141-B—Cranbrook Court-house, includes furnishings		246,784.31	
Proj. No. 188-B—Oil-house, Creston		1,123.44	
Proj. No. 235-B—New library, Dawson Creek		468.60	
Deaf and Blind School—			
Proj. No. 79-B-1—Deaf and Blind School (School for the Blind), West Fourth Avenue, Vancouver (includes furnishings)	$393,806.02		
Proj. No. 79-B-2—Primary playing-field, Deaf and Blind School, Vancouver	450.00		
		394,256.02	
Proj. No. 234-B—R.C.M.P. detachment quarters (bedroom and office space), Dawson Creek		2,500.00	
Proj. No. 184-B—One-bay equipment-shed, Enderby		4,527.00	
Essondale—			
Proj. No. 5-B-18—TB. unit (230 beds) (includes furnishings)	$117,290.12		
Proj. No. 5-B-21 — 100-bed Nurses' Home and Training Centre (includes furnishings)	17,014.88		
Proj. No. 5-B-26 — Diet kitchens, West Lawn Buildings	4,668.91		
Proj. No. 5-B-41 — Sewage-disposal system	153,839.87		
Proj. No. 5-B-42 — Steam-lines to TB. Hospital, Home for Aged	1,880.55		
Proj. No. 5-B-44 — Traverse road, fire-hall to Boys' Industrial School	600.31		
Proj. No. 5-B-47—Conversion, old laundry-stores area	3,208.99		
Proj. No. 5-B-48—Construction of reservoir	21,230.48		
Proj. No. 5-B-52—Fire-alarm system to be completed	17,158.98		
Proj. No. 5-B-53—300-bed unit, Home for Aged, Port Coquitlam	12,637.52		
Carried forward	$349,530.61	$1,354,618.44	$51,217.64

STATEMENT OF EXPENDITURES—*Continued*

SUMMARY—*Continued*

CAPITAL EXPENDITURES—BUILDINGS—*Continued*

Vote 344. Construction of Provincial Buildings—Continued

Essondale—*Continued*			
Brought forward	$349,530.61	$1,354,618.44	$51,217.64
Proj. No. 5-B-54 — Rewiring East Lawn Building	4,454.73		
Proj. No. 5-B-55—Rewiring West Lawn Buildings	3,966.01		
Proj. No. 5-B-58—Credit Union and Tuck Shop	65,354.62		
Proj. No. 5-B-59—Renovation, stores area, East Lawn Building	10,853.52		
Proj. No. 5-B-64—Incinerators, Crease Clinic	3,862.00		
Proj. No. 5-B-66—Renovation of kitchen, West Lawn Building	11,944.64		
Proj. No. 5-B-67—Conversion of staff cottages to steam heat	2,579.00		
Proj. No. 5-B-68—Conversion to oil fuel, doctors' residences, Provincial Mental Hospital	2,529.19		
Proj. No. 5-B-69 — Vacuum pump, East Lawn Building	2,019.15		
Proj. No. 5-B-72—Landscaping and parking areas	4,547.33		
Proj. No. 5-B-73—Air-conditioning, coffee-shop, Pennington Hall	2,091.00		
Proj. No. 5-B-75—Conversion of Administration Building, B.I.S.C.O.	1,930.58		
Proj. No. 5-B-76—300-bed unit to accommodate patients from Veterans' Unit now at Colony Farm	1,034.13		
Proj. No. 5-B-78 — Wards A 1 and B 1, West Lawn Building	7,128.77		
Proj. No. 5-B-79—Completion of street-lighting, Essondale area	6,549.85		
Proj. No. 5-B-80—New fence, male airing-court	4,124.05		
Proj. No. 5-B-81—New cemetery, Essondale area	120.00		
Proj. No. 5-B-82—Distribution trunk main, Essondale water-supply	8,677.75		
Proj. No. 5-B-83 — Swill-houses and incinerators	4,200.00		
Proj. No. 5-B-84—Insulate attic, East Lawn Building	1,380.01		
Proj. No. 5-B-86—New industrial therapy	2,374.90		
		501,251.84	
Proj. No. 236-B—Fort St. John Court-house		1,066.55	
Proj. No. 193-B—Two-bay equipment-shed and oil-house, Fort St. James		13,993.81	
Proj. No. 159-B—Oil-house and garage, Fort St. John		53.23	
Proj. No. 190-B—Two-bay equipment-shed and oil-house, Fruitvale		10,064.88	
Proj. No. 165-B—Three-bay equipment-shed and oil-house, Gibsons		16,866.51	
Proj. No. 208-B—Girls' Industrial School, Burnaby		1,377.11	
Proj. No. 185-B—Oil-house, Greenwood		1,001.58	
Proj. No. 123-B—B.C. correctional institution, Haney		1,403,809.54	
Proj. No. 209-B—Female cell room and utility room, Hope Lockup		7,490.90	
Proj. No. 213-B—Reroofing Court-house, Kamloops		7,373.00	
Proj. No. 206-B—Land Registry addition, Kamloops		20,379.10	
Proj. No. 205-B—Addition to Government Office Building, Kamloops		2,904.54	
Carried forward		$3,342,251.03	$51,217.64

STATEMENT OF EXPENDITURES—*Continued*

SUMMARY—*Continued*

CAPITAL EXPENDITURES—BUILDINGS—*Continued*

Vote 344. Construction of Provincial Buildings—Continued

Brought forward		$3,342,251.03	$51,217.64
Proj. No. 163-B — New boiler and piping, Provincial Home and Government Buildings, Kamloops		19,998.45	
Proj. No. 224-B—Steam distribution system, Provincial Home, Kamloops		23,709.00	
Proj. No. 149-B — Renovation, Provincial Gaol, Kamloops		1,734.21	
Proj. No. 142-B — Kelowna Court-house (includes furnishings)		208,998.07	
Proj. No. 158-B—Agriculture storage-shed for vehicles, Kelowna		2,550.00	
Proj. No. 195-B—Oil-house, Lytton		2,500.00	
Proj. No. 215-B—Alterations to utility room, Marpole Infirmary		2,683.10	
Proj. No. 211-B—Materials and Traffic Engineer's offices and shops, Department of Highways, Victoria		1,556.57	
Proj. No. 175-B—Development of 100-acre site (services and planning), Metchosin		2,432.85	
Proj. No. 202-B—Wing to Court-house, Nanaimo		129,255.20	
Proj. No. 231-B — Extension of Nanaimo Vocational Training School		59,611.36	
Proj. No. 170-B—New garage and steel fence, Nelson Gaol		3,900.00	
Proj. No. 199-B—New vault and filing space, New Westminster Land Registry Building		39,145.17	
Oakalla—			
Proj. No. 39-B-11—New telephones and extension to present equipment	$624.73		
Proj. No. 39-B-13—Paving of road frontage	4,700.00		
Proj. No. 39-B-14—New greenhouses	4,459.43		
Proj. No. 39-B-17—Prison gymnasium	37,218.48		
Proj. No. 39-B-18—New fence, Royal Oak Avenue and South Wing and around property	9,071.66		
Proj. No. 39-B-20—Office accommodation, drug research	8,032.28		
Proj. No. 39-B-21—Renovation of hospital operating-room, doctor's office, etc.	994.39		
Proj. No. 39-B-24 — Switchboard for P.B.X. and all telephones	280.19		
Proj. No. 39-B-25—Rewiring of wings for radio materials (renewal)	578.55		
Proj. No. 39-B-26—Main retaining - wall at West Gate	1,671.47		
Proj. No. 39-B-27—Remodel South and West Wings and Isolation	4,924.04		
Proj. No. 39-B-28—Lighting of grounds	12,275.57		
Proj. No. 39-B-29—Purchase of land (adjacent to main grounds of prison)	34,500.00		
Proj. No. 39-B-30—Licence-plate shop and equipment	991.25		
Proj. No. 39-B-31 — Stand - by electrical service	13,566.63		
Proj. No. 39-B-32 — Two prefabricated buildings for drug treatment programme	27,074.42		
Proj. No. 39-B-35—Additions to Women's Gaol	1,484.55		
Proj. No. 39-B-36 — Enlarging office space, West Gate	2,696.88		
Proj. No. 39-B-37 — Complete new system, inside telephone P.A.X.	3,671.85		
		168,816.37	
Proj. No. 203-B—200 - bed unit, Pearson Tuberculosis Hospital, Vancouver (new unit)		3,267.94	
Carried forward		$4,012,409.32	$51,217.64

STATEMENT OF EXPENDITURES—*Continued*

SUMMARY—*Continued*

CAPITAL EXPENDITURES—BUILDINGS—*Continued*

Vote 344. Construction of Provincial Buildings—Continued

Brought forward		$4,012,409.32	$51,217.64
Proj. No. 210-B—Alterations to R.C.M.P. offices, Penticton Court-house		1,519.47	
Proj. No. 150-B—Vancouver Poliomyelitis Pavilion		27,278.83	
Proj. No. 201-B—New Court-house, Prince George		4,144.93	
Proj. No. 136-B—Prince George Gaol (including access road)		59,324.06	
Proj. No. 136-B-1—Garage, Prince George Gaol		5,158.80	
Proj. No. 216-B—Alterations to Old Men's Gaol (Court-house), Prince George		4,280.00	
Proj. No. 153-B—Forestry Building, Prince Rupert		69,656.08	
Proj. No. 160-B—Reception Centre, Douglas, Highway 99 (Department of Trade and Industry)		1,905.65	
Proj. No. 207-B—Red Cross outpost hospital, Masset		29,868.45	
Saanich Mental Hospital—			
Proj. No. 9-B-14—New sewage-disposal system, Saanich Mental Hospital	$44,236.63		
Proj. No. 9-B-15—Roads, renovations, and reconstruction	5,320.00		
Proj. No. 9-B-16—Brood-sow barn and slaughter-house	8,511.25		
		58,067.88	
Proj. No. 183-B—Electric-light plan and wiring, Telegraph Creek police building		4,545.65	
Proj. No. 84-B-1—New wing to Temporary Building No. 4, Michigan Street, Victoria		29,348.29	
Proj. No. 192-B—Three-bay equipment-shed, Terrace		17,553.39	
Proj. No. 24-B-1—Water-supply and sewage-disposal, Home for Aged, Terrace		29,047.30	
Tranquille Sanatorium—			
Proj. No. 10-B-20—Remodel dairy pasteurizing plant, Tranquille	$2,922.57		
Proj. No. 10-B-23—Air-conditioning unit for Main Building, Greaves Building, and Infirmary	1,130.38		
Proj. No. 10-B-26—Flatwork folder, laundry	8,852.34		
Proj. No. 10-B-27—Renovate old laundry building	7,416.32		
Proj. No. 10-B-28—Renovate basement floor, Main Building, Tranquille	1,913.34		
Proj. No. 10-B-29—Alterations to butcher-shop, Tranquille	3,459.74		
Proj. No. 10-B-30—Remodel Main Building annex, Tranquille	6,397.64		
Proj. No. 10-B-31—Air-cooling, Recreation Hall	176.11		
Proj. No. 10-B-32—Sewage-line, Tranquille	3,851.47		
		36,119.91	
Tranquille Farm—			
Proj. No. 8-B-5—Irrigation pipe-lines, Tranquille Farm	$700.00		
Proj. No. 8-B-6—Cattle shelters, Cooney Ranch, Tranquille Farm	4,258.70		
		4,958.70	
Proj. No. 89-B—Provincial Health Building, Vancouver (including furnishings)		335,020.87	
Vancouver Normal School—			
Proj. No. 204-B—Four new portable classrooms, Normal School, Vancouver	$53,864.44		
Proj. No. 204-B-1—Gymnasium equipment-room, Normal School, Vancouver	144.82		
Carried forward	$54,009.26	$4,730,207.58	$51,217.64

STATEMENT OF EXPENDITURES—*Continued*

SUMMARY—*Continued*

CAPITAL EXPENDITURES—BUILDINGS—*Continued*

Vote 344. Construction of Provincial Buildings—Continued

Vancouver Normal School—*Continued*

				CREDITS (Non-expendable)
Brought forward	$54,009.26	$4,730,207.58	$51,217.64	
Proj. No. 204-B-2—New medical room, Normal School, Vancouver	523.28			
Proj. No. 221-B—New parking-lot, Normal School, Vancouver	2,537.00			
		57,069.54		
Proj. No. 164-B—Five-bay equipment-shed, Vernon		6,126.46		
Proj. No. 25-B-6—Additional roll for flat ironer and Linospeed washing-machine, Vernon Home for Aged		4,570.97		
Proj. No. 200-B—Capital Region Planning, Victoria		4,713.12		
Proj. No. 237-B—Purchase of house and lot, 521 Michigan Street, Victoria		5,200.00		
Proj. No. 233-B — Alterations to elevator, Tuberculosis Hospital, Willow Street		5,887.98		
The Woodlands School—				
Proj. No. 7-B-21—300-bed hospital	$1,059,868.00			
Proj. No. 7-B-26—Auditorium	9,140.17			
Proj. No. 7-B-28 — Underground steam-lines to proposed 300-bed unit	33,420.33			
Proj. No. 7-B-29—Landscaping and airing-court for No. 3 unit	4,991.43			
Proj. No. 7-B-30—Equipment-shed, root storage house, greenhouse, fencing, power-line, for vegetable garden	45,785.14			
Proj. No. 7-B-31—Stucco exterior, Cedar Cottage	8,122.00			
Proj. No. 7-B-32—New fire-alarm system	10,260.00			
		1,171,587.07		
			5,985,362.72	**$413,936.12*
University Buildings				
"B.C. University Loan Act, 1945"—Sundry works			1,425.53	
"B.C. Loan Act, 1951," Sec. 3 (*c*): University—Electrical substation			43,000.00	
"B.C. Loan Act, 1951," Sec. 3 (*d*): University—Construction and equipping Medical Faculty and Pathological Building, Vancouver General Hospital, for use of the University of British Columbia			507,484.91	
"B.C. Loan Act, 1952," Sec. 3 (*b*): University—Sundry works			30.20	
Sub-total, Capital Votes (including University Loans)			$6,588,521.00	*$413,936.12*
Grand total, Public Works Department expenditures			$10,043,511.48	*$1,125,433.78*

* Federal grants received for the following in Vote 344 (Construction of Provincial Buildings):—

Proj. No. 7-B-21—300-bed unit, Woodlands School	$279,959.66
Proj. No. 5-B-18—TB. unit, Essondale	86,250.00
Proj. No. 89-B—Provincial Health Building, Vancouver	36,476.46
Proj. 152-B—Child Guidance Clinic and Day Hospital, Burnaby	11,250.00
	$413,936.12

VICTORIA, B.C.
Printed by DON MCDIARMID, Printer to the Queen's Most Excellent Majesty
1956

360-1056-5222