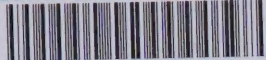
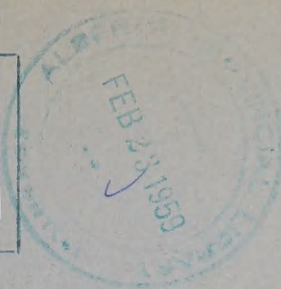


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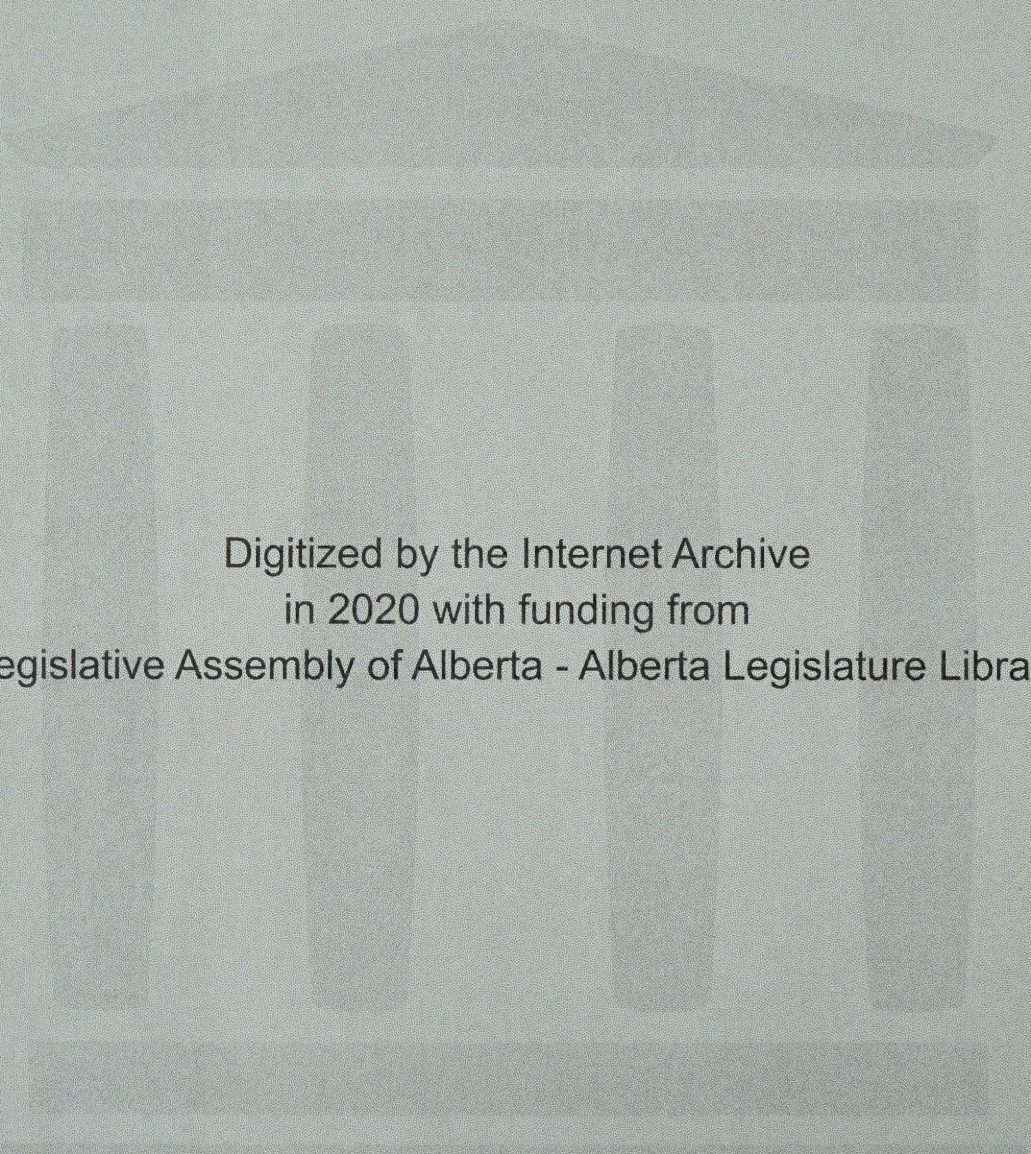
**ANNUAL REPORT**  
OF THE  
**Department of Public Works**  
OF THE  
**PROVINCE OF ALBERTA**  
**1957-58**

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PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

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EDMONTON  
Printed by LEE S. WALL, Queen's Printer  
1959



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1959



Edmonton, September 1, 1958.

To His Honour,

J. J. BOWLEN,

Lieutenant Governor of the  
Province of Alberta.

Sir,

The undersigned has the honour to submit herewith the Report of the Department of Public Works for the year ended March 31, 1958.

Respectfully submitted,

JAMES HARTLEY,

Minister of Public Works.

**DEPARTMENT OF PUBLIC WORKS**

Edmonton, Alberta,

September 1, 1958

TO:

The Honourable James Hartley,  
Minister,  
Department of Public Works:

Sir:

I have the honour to submit herewith a report covering the activities of the Department of Public Works, for the fiscal year ended March 31, 1958.

An extensive programme of construction and maintenance was undertaken this past year, the details of which are contained in the attached report. Photographs have been included in the report to better illustrate the types of buildings being constructed by this Department.

The Mechanical Branch, which is responsible for the operation and maintenance of the Power Plants and utility services at the larger Provincial Institutions, continued this year to expand its services.

In addition to the projects shown in the attached report, the Architectural Branch of this Department continued to provide its services by way of detailed planning and design of a large volume of work for the Alberta Government Telephones and the Alberta Liquor Control Board.

Respectfully submitted,

ARTHUR ARNOLD,

Deputy Minister of Public Works.

## DEPARTMENT OF PUBLIC WORKS

The Department of Public Works is responsible for the construction of all Provincial Government Buildings.

The extensive programme of construction which we are presently undertaking, requires the services of a large staff of architects, engineers, draughtsmen, surveyors and building inspectors, who design and plan the buildings and supervise the work of the contractors. Some urgent and also minor construction work is undertaken by our own forces. This requires the Department to maintain a staff of tradesmen, which is augmented by temporary staff as the requirements of the work necessitates. The Department operates various trade shops, where furniture and equipment, such as laboratory benches, etc., are made.

The Department is also responsible for the servicing and maintenance of all Provincial Government owned buildings, with the exception of various self-contained institutions, such as the Provincial Gaols, the Schools of Agriculture, and the University of Alberta. The maintenance and servicing of these buildings needs the services of a large group of men of assorted technical skills. Carpenters, plumbers, electricians and other tradesmen keep these buildings in good repair. Gardeners maintain the surrounding grounds, which are quite extensive at some points, namely the Provincial Mental Institute, Oliver, and the Institute of Technology and Art, Calgary. Caretakers keep the buildings clean, men operate the elevators, and watchmen guard the buildings at night.

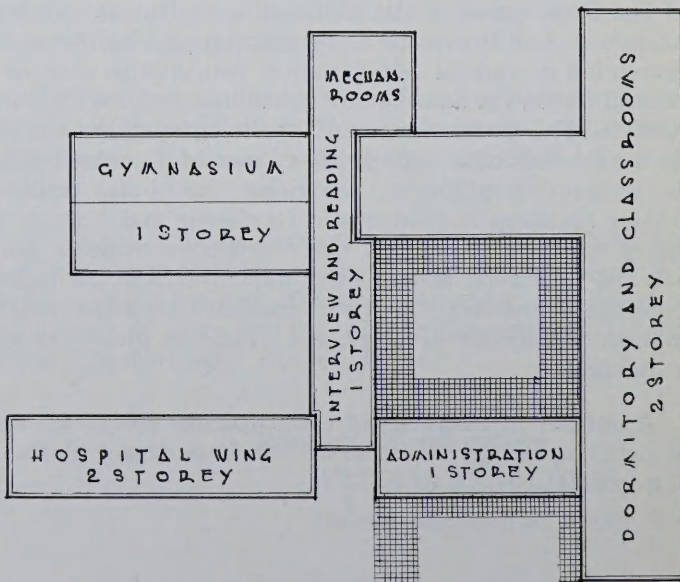
A number of buildings of contemporary design are being constructed under the direction of this Department at the following points:

## BELMONT

Since the construction programme at the Belmont Rehabilitation Centre for men, was more or less completed last year, no major construction was undertaken this fiscal year. However, facilities available were increased by the construction of a Greenhouse and Potting Shed, a Root House and a Garage. Construction was carried out on roads, curbs and walks, and landscaping continued.

On a five acre site, adjacent to the Belmont Rehabilitation Centre, construction commenced on a new institution for the rehabilitation of girls from the ages of 16 to 18 years. This building will be known as the Alberta Institute for Girls.

The structural members of the entire building are of pre-cast concrete, and also the exterior wall panels, floor slabs and roof slabs. The interior partitions are of concrete block. This building will provide accommodation for 70 girls, and is laid out as shown on the plan below. It has six classrooms to provide the necessary educational facilities, a hospital and dispensary, a gymnasium for recreational purposes, dining room and kitchen facilities, and an administration wing. The landscaping of the grounds will include an outdoor recreational area.



ALBERTA INSTITUTION FOR GIRLS



### **BOWDEN**

At the Bowden Institution construction of four staff houses was completed on a site directly south of the institution. A skating rink was built for the recreational activities, as well as a Greenhouse, with Potting Shed, and a small building used as a gas storage house.

A continuing landscaping programme is being carried out at this institution, as well as the building of roads, sidewalks and outside lighting.

### **BROOKS**

At the Demonstration Farm, Brooks, an earth reservoir was constructed. This reservoir is unique in that it is one of the first constructed in Alberta in which a plastic lining has been used to curtail seepage. Tests to date have indicated the installation was successful.

### **CALGARY**

Major construction was undertaken at the Institute of Technology and Art. An addition was constructed to the south east corner of the "A" Shops Building. A contract was let for the construction of an addition to the "B" Shops Building and work commenced, consisting of footings and foundations, and steel erection, this fiscal year. The balance of this contract will be completed in the fiscal year 1958-59.

This addition to the "B" Shops Building will provide additional shop facilities and classrooms for the automotive and building construction departments. The modern equipment in the one storey automotive shop includes several hydraulic hoists, alignment equipment, parts cleaning room and under floor exhaust system. The two storey portion will contain classrooms and a large concrete shop. The concrete shop will provide additional facilities for courses in concrete construction, and will be equipped with an overhead travelling crane. The addition is steel frame construction to match the existing "B" Shops Building.

Work also continued at this Institute on the installation of a ring main system for electrical distribution. A programme of renovating the heating system also continued.

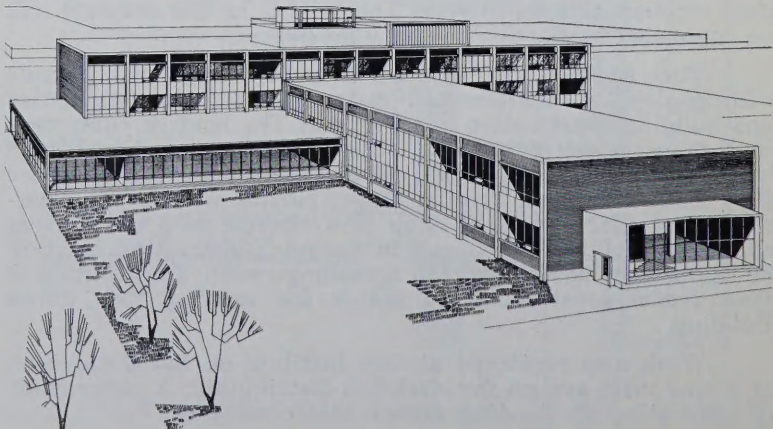
The erection of a new building, which will be known as the East Block, was started, to provide facilities for the teaching of music, art, pottery work and sculpture, radio and electronics. In addition to the teaching of these courses, a food service training centre with supplemental kitchens and diningroom, is being provided, which will be operated by the students taking training in the restaurant management course.

The total floor area of the building will approximate 148,000 sq. ft., which will include 49 classrooms, an art gallery, two libraries and a modern cafeteria. The building is of contemporary design; the exterior being built of brick with precast concrete panels. Floors are constructed of precast concrete. The main foundation basement walls and structural frame will be constructed of reinforced concrete. Consideration is being given to the accoustical qualities of the building by the installation of accoustical plaster in the classrooms and accoustical tiles in the corridors.

The extensive window area and the air conditioning equipment will provide excellent conditions for the teaching of the various courses. The building will be heated by a forced hot water system with fin radiation.

It is expected that the building will be completed in the Fall of 1958, and that occupancy by the Institute staff will be effected in time for the Fall term.

On the grounds of the Manchester Shops a small storage building was constructed to store cores for the Oil Conservation Board.



It was necessary to provide temporary quarters on the grounds of the Institute of Technology and Art, to accommodate the Highways Department. This permitted that Department to vacate their offices in the old Court House, since it is expected that the demolition of the old Court House will commence in the early Spring of 1958. This is the first step in the proposed construction of a new Court House at Calgary.

The landscaping programme continued at the site of the Auditorium, with the installation of roads, sidewalks and parking lots.

### **CLARESHOLM**

At the Provincial Auxiliary Hospital construction on the new female ward was completed this year. This is a one storey building, with partial basement, of frame and stucco, and will accommodate approximately 112 people.

The necessary additional roads, curbs and sidewalks were built, and renovation work was carried out on the Root House.

### **CAMROSE**

During this fiscal year no major construction was undertaken at the Rosehaven Home.

The facilities of the Home were enlarged however, by the construction of a concrete block building which will provide accommodation for a Carpenter Shop, a Paint Shop and additional storage space. Work was started on a Greenhouse and Potting Shed, and the programme of roads, walks, curbs and landscaping was continued.

Four-inch water mains were laid from the boiler rooms to the Laundry, and a new vacuum pump was installed.

### **CANMORE**

A Ranger Station house, double garage and storehouse, and a barn, were commenced at the new Ranger Station site at this point.

### **CANYON CREEK**

Construction commenced on a new wharf at this point for the Fisheries Branch of the Department of Lands and Forests.

### **COLEMAN**

A small cottage and garage were built at the Ranger Station.

### **DRAYTON VALLEY**

Work commenced on a staff residence, and also an addition to the offices of the Oil Conservation Board.

## EDMONTON

A major construction programme is now in progress at the University of Alberta Hospital.

In July of 1957 construction of the Polio and Pediatric Wing was completed. When planning this major addition to the University of Alberta Hospital it was necessary to consider a long range overall improvement problem. There were many problems which had to be remedied in the existing institution and it was felt that at this time such improvements as were possible should be incorporated in the new addition. One of the major problems of the existing institution was visitor congestion at the main entrance.

As the new addition was very decidedly relocating the centre of gravity of the entire hospital it was felt that the entrance should be relocated. Thus the main entrance has been located on 84th Avenue. An ample parking space for cars has been provided to relieve the great deal of traffic congestion from the east side of the hospital and 112th Street. A large entrance and waiting room has been provided in this area. The main entrance lobby will now be a bright, sunny room, attractively decorated with marble walls. An interesting aquarium for exotic fishes has been incorporated in this area. This makes a pleasant focal point of interest for those waiting in this area. The Edmonton Tropical Fish Society has graciously donated fishes and has maintained the aquarium.

As the main entrance to the institution is now located at ground level, a wonderful opportunity was made available to ease the access to the hospital for wheel chair and other disabled patients who come to this institution for therapeutic treatment. The first floor of the new addition is devoted entirely to therapy. A large hydro-therapy tank is provided. Areas are also provided for physio-therapy and diversional therapy.

From the main entrance, two passenger elevators and two service elevators rise through the building. This enables all visitors to obtain rapid and direct access to all floors in the building with a minimum of disturbance to other nursing units throughout the building.

The second floor of the addition is devoted entirely to staff facilities and administration of the hospital. Many of these facilities were removed from the old Provincial Special Unit which was demolished to make room for the new addition. A large staff cafeteria is also provided on this floor to replace the very inadequate cafeteria which existed. Locker room and lounge facilities for nursing staff are located on this floor. The general office for the University Hospital is also located here.

The third floor has been devoted entirely to the care of children. This floor is divided into two nursing units. One section is devoted to the care of children up to three years, while the second nursing unit deals with children's care up to 14

years. One of the major problems on this floor has been the necessity to maintain constant supervision of the children, thus large amounts of glass have been used on the interior corridors so that at all times the nursing staff have facilitated observation of the patients. At this level a large southern sun deck is provided to enable the children to play out of doors frequently, under medical supervision.

The fourth and fifth floors are general nursing floors. Each floor contains two 35 bed nursing units. They provide extra nursing space from the existing hospital and also for long term polio patients that are not required to be in respirators.

The sixth floor is devoted entirely to the care of poliomyelitis patients. One of the nursing wings on this floor is an isolation unit. Here the nursing wards are large open spaces capable of holding up to six respirators. Nursing care is by team nursing, which has been found to be most efficient and satisfactory. The other nursing unit on this floor is for chronic respirator cases. Here again all the latest facilities have been incorporated for efficient care of patients.

On the roof, which is accessible both by stairs and elevator, a large sheltered sun deck has again been provided. This enables chronic patients to enjoy an outing and a wonderful view from this area.

The general construction of the building is similar to the existing hospital. A steel frame was used, with poured reinforced concrete slabs. Exterior walls are masonry while Ytong and hollow tile are used for interior partitions. The fenestration of this building differs from the remainder of the institution in that this addition has continuous bands of windows. This allows a maximum amount of light into all areas and also facilitated the planning of all the floors in the building in creating a flexibility for the location of partitions.

Perimeter heating has been provided throughout. Special areas have been air conditioned while the complete building is provided with an efficient ventilation system.

Modern unobtrusive lighting has been used to provide pleasant surroundings for the patients. Oxygen and suction facilities have been provided for all beds, as well as an efficient nurses call system for the patients.

Generally as many new ideas as have been developed in recent years for improved nursing and especially for the care, treatment and rehabilitation of poliomyelitis afflicted patients by medical science, have been incorporated in the creation of this nursing addition. The overall efficiency and pleasantness of the University of Alberta Hospital will be much improved and the Province of Alberta will have a medical centre which will be second to none in Canada.

Construction commenced this year on the Clinical Services Addition to the University of Alberta Hospital, which will com-

plete the requirements of what will now be a 1,200 bed hospital. This addition will complement nursing facilities by supplying fully modern medical facilities for patient care.

The building itself is to be located at the north end of the present University of Alberta Hospital, and will project eastward to match with the 1948 addition to this institution. The structure will be of steel frame with masonry walls and stone veneer, and will match the existing institution insofar as materials are concerned. However, its design will be of contemporary nature, and will add a pleasing contrast to the present structure.

The facilities provided in this building are many and varied. Starting on the lower floor, facilities are provided for a complete medical records department and X-ray storage. There will also be staff facilities in this area, and a small chapel which will be available for patient use for meditation and such devotional services as may be desirable. This will be non-denominational.

On the second floor, the main approach to this building, there will be the admitting area for all patients, whether they be in-patients, out-patients or emergency patients. A large out-patients' clinic is developed for this area. This will replace the present outdoor clinic of the University of Alberta Hospital, which is located on this floor. This will look after the typical emergency casualty which arrives at such an institution. The admitting department for the entire hospital is also located here, and from this point all in-patients will be dispersed to their various wards.

On the third floor a complete clinical laboratory department is being set up. This will take care of all laboratory services throughout this 1,200 bed institution. Similarly, the fourth floor will provide complete X-ray facilities for treatment and diagnosis.

The fifth floor which, from the exterior appearance of the building, expresses itself as a blank wall, will be the operating room suite. On this floor there will be fourteen windowless operating rooms. These operating rooms will be equipped with the very latest in equipment, and are of ample size for present, as well as anticipated future, medical needs. Two of these operating rooms are equipped with overhead observation galleries for the training of medical students. This allows the students to observe in close detail the operation under performance and through an inter-communication system the surgeons may interpret to the students the procedures being carried on.

On the upper floor a complete obstetrics' department is located. The remainder of this floor will be occupied by mechanical services to completely air condition this building.

On the completion of this six storey structure, it will be necessary to demolish the fifth floor of the original hospital, and replace with a fifth and sixth floor so that there will be a complete horizontal tie between the new addition and all present facilities throughout the hospital. With such a system it is possible to locate the maternity section on the upper floor, completely isolated from all other departments. The fifth floor will be surgical throughout its entire horizontal direction. Fourth and third floors will be devoted to general nursing and hospitalization usage.

On the completion of the Clinical Services Addition further development will be made to the rear of the present plant where new shops maintenance departments, increased laundry facilities, with morgue attached, and a small lecture amphi-theatre for student instruction will be erected. In the amphi-theatre there will be a television monitor which will have direct communication to two of the operating rooms, whereby large gatherings of students or members of the medical profession can observe operations in progress.

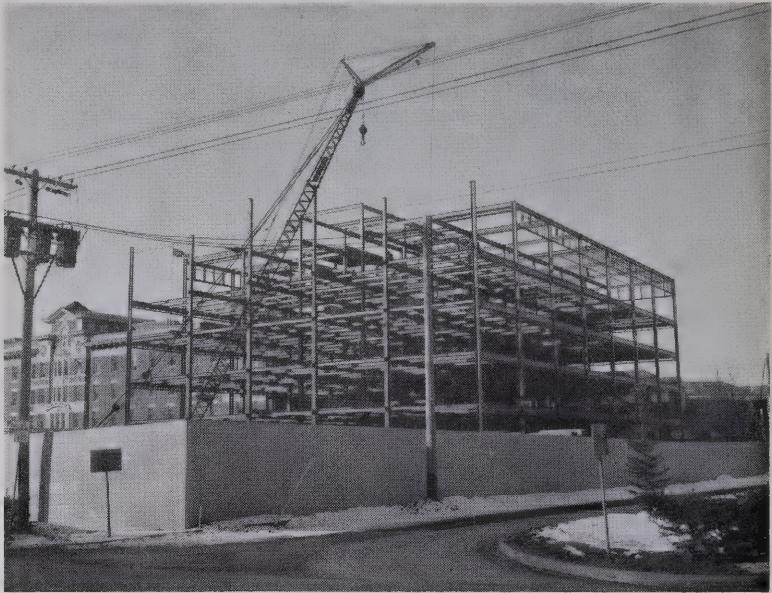
The addition to the Nurses' Residence was completed in August, 1957, in time for the Fall class of students. This addition provides accommodation for an additional 100 students and consists of two wings; the four storey high dormitory wing, L-shaped, built to the south west end of the old building, and a two storey rectangular teaching wing built to the north west end. Both new wings are steel frame structures, with precast concrete slab floors. The exterior of the buildings is face brick and stone veneer, with lightweight concrete block backing.

Each floor of the dormitory wing has 28 single rooms, a lavatory, bath with showers and tubs, janitor and linen room and a nurses' lounge. The ground floor has 24 rooms only, the space for the other two rooms taken up by a vestibule and linen sorting room. The total number of dormitory rooms in this wing therefore, is 110. A garbage and a laundry chute lead from each floor to the incinerator or the laundry respectively, in the basement. The basement also includes a linen storage room. Each single room contains a clothes closet, bed, table, chair and easy chair, bookshelf and dresser.

On the ground floor of the teaching wing are a demonstration room and a teaching room, seating 56, with a utility room between them, a large lecture room seating 144, a laboratory, four small offices, a lavatory and a cloakroom.

On the first floor there is a teaching room seating 64, and a lavatory and cloakroom.

Alterations in the adjoining old wing include a lecture room, seating 56, and two demonstration rooms with a utility room in between.



Clinical Services Addition, University of Alberta Hospital — Edmonton

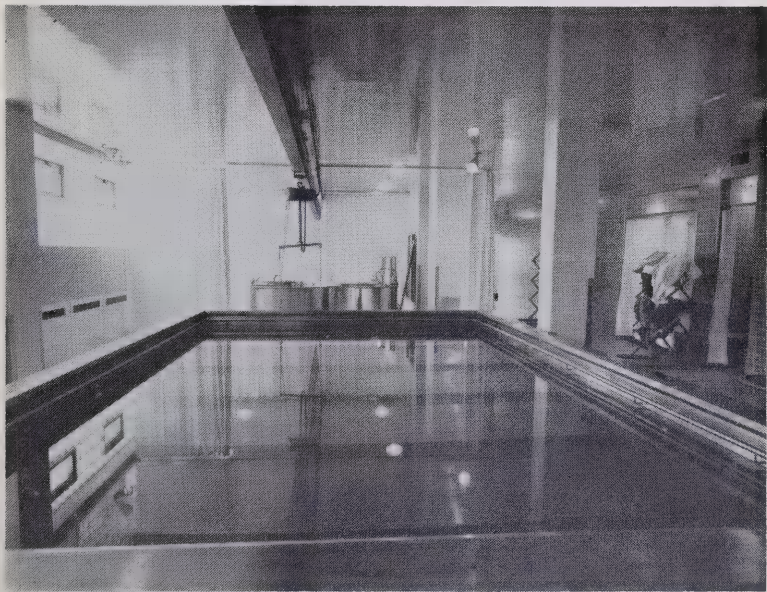


Biology Building, University of Alberta, Edmonton





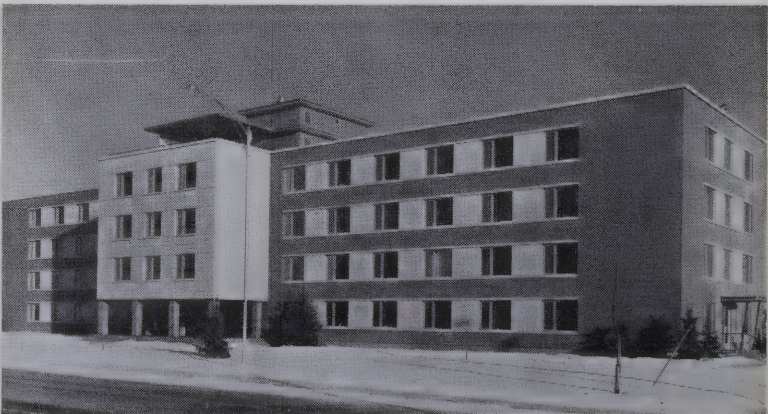
Interior of the Polio Hospital Addition, University of Alberta—Edmonton



Swimming Pool, Polio Hospital Addition, University of Alberta—Edmonton



Public Health Building Addition, University of Alberta — Edmonton



Internes' Residence, University of Alberta Hospital — Edmonton

Directly south west of the University of Alberta Hospital construction started on the Interns' Residence. The building is of a flat T-shaped design with the two larger wings to the north and south, the smaller centre wing extending to the west. The east side of the building faces the University of Alberta Hospital parking lot. Between this lot and the new building two tennis courts flanked by two parking lots, with a capacity of 60 cars, are presently under construction.

The building is of reinforced concrete frame construction with one-way reinforced concrete floor slabs. The exterior is face brick and precast stone with tile backing, ceramic mosaic tile on columns and flagstone floor on the portico. The combined picture and casement windows are of wood. Aluminum was used for continuous vertical glass screens on the west wall, exterior doors and a windscreen on the sun roof.

The north and south wings are four stories, the centre wing five stories high, basement excluded. Twenty-four couples are housed in six suites on each floor, as well as four bachelors in one single room with attached bath on each floor. The suites consist of living room, with kitchenette, separated by a folding wall, bedroom, bathroom and a small hall. Fresh air is supplied from the corridors. The kitchenettes are equipped with refrigerator, stove and built-in counters and cupboards. There is a large clothes closet in the bedroom, and a broom and linen closet in the hall.

The north wing and the west part of the centre wing house 48 single interns altogether—16 each on the three upper floors of the north wing, three each in the centre wing. Together with the 4 single rooms in the south wing a total of 52 rooms. Each of the two wings has its own toilet and bath facilities. The layout is such that by accommodating either men or women in the single rooms of the south wing and having men or women grouped in one wing, the building can be occupied to capacity at all times.

Each single room is equipped with a clothes closet and wash basin.

The main recreation room is on the first floor, taking up the whole north wing and can be made into four smaller rooms by closing folding walls. The centre core of the first floor is the vestibule with caretaker's room and a small lounge. The attractive flagstone floor extends from the east entrance over the west entrance to a portico. There is also a social room on each of the second, third and fourth floors, accessible from the centre halls. Also a library and sun roof are on the fifth floor. Laundry, drying room, trunk storage rooms and incinerator room are in the basement. From the basement a tunnel connects the new building with the hospital tunnel system.

Construction was completed on the new Administration Building for the University of Alberta. This building, which is located at the north end of 114th Street, will be the focal point for all students on the campus, and houses the Post Office and book store, as well as the office of the President and the administrative staff. The building, which is of a monumental nature, is of brick and stone exterior and harmonizes with the surrounding buildings on the Campus. It is a three storey structure of surfaced concrete, and measures 170' x 70'.

In preparation for future building projects, the electrical distribution system was extended at the University of Alberta. Additional street lighting was provided for 114th Street to the Nurses' Residence, and a parking lot was provided at the Biology Wing.

A major project on the Campus of the University was the Biology Science Addition, construction of which commenced in February, 1957. This is an addition to the Agricultural Building, which is situated at the extreme north end of the University Campus. The addition comprises a basement and four upper floors, having a gross area of over 80,000 square feet, and contains storage space, laboratories, museums, classrooms, research laboratories, administration offices, a lecture amphi-theatre and four large lecture rooms, service areas and mechanical equipment rooms. It is expected that this building will house the Departments of Entomology, Botany, Zoology and Geology of the University. A passenger and service elevator is included in the building.

The Biology wing will be a repetition of the original building with the addition of a central block and a lecture theatre, and classroom extension to the south. It will be repeating the original design with regard to the structure and architectural treatment. These comprise a reinforced concrete structural frame and floor slabs with masonry exterior walls and interior partitions; many interior partitions are also wood frame with glass. The outside finishes include facing brick and terrazzo with steel sash double glazed windows. Entrance doors and stair windows are aluminum and the south facade has aluminum window shades to match the original design. Interior finishes include linoleum and rubber tile floors, acoustical ceilings and considerable areas of faience tile in corridors. In general, materials and finishes correspond to the original design.

A special feature of the new wing is the high velocity ventilation system employed. The addition also contains a very large amount of laboratory benches and cabinet work which are being constructed by Department of Public Works shops and crews.

Construction commenced in the Fall of 1957 on an addition to the Provincial Laboratory of Public Health in Edmonton, which is located west of the University of Alberta Hospital.

This addition is a four storey reinforced concrete structure, with masonry cladding, and exterior finish in facing brick and precast terrazzo panels. It is an approximate continuation of the design and the construction of the original laboratory building.

This project was planned to provide additional teaching facilities for pathology and bacteriology, and also to give an increased working area for the usual operations of the laboratory. This includes more space for media preparation, a suite of laboratories for virology, each with sterilizing and clean-up facilities, and additional animal accommodation. The nature of the work to be done in this addition necessitated certain special provisions for ventilation and air conditioning, a system of temperature controlled cabinets and extensive bench work with water, gas and electrical services.

The materials used include reinforced concrete, facing brick, hollow clay tile, precast and cast-in-place terrazzo and wood windows and frames. Finishes comprise plaster, ceramic tile, suspended acoustic ceilings, and vinyl asbestos and lino tiles, linoleum and mosaic tiles for floors.

It is expected that this addition will be completed in the late Fall of 1958.

The rapid increase in the number and size of buildings in the University Hospital area, has taxed the University of Alberta Power Plant to its practical limit. In order to relieve the University Power Plant of supplying other than its own buildings with steam and electricity, a new Power Plant was designed to supply all buildings south of 87th Avenue in this area. An economic analysis indicated that since electricity was in demand throughout the year, and that additional steam was needed only during a portion of the year, a device which would generate electricity as a main product, and still be able to produce steam as a by-product, would be most desirable. Further investigation proved the economical justification of a gas turbine power plant.

Coincidental with the above analysis the English Electric Company of Rugby, England, offered to the University of Alberta a commercial sized gas turbine, complete with waste heat steam boiler, at a reduction of \$100,000.00, if it were installed so that engineering students could observe its operation. The offer was turned over to the Government, and after further negotiations, was accepted. The turbine is now under construction in England, and a contract has been awarded for the construction of a Power Plant Building. The Plant, to be completed in 1959, will serve the electrical needs of all buildings, and through interconnection of the steam piping, ensure adequate steam supply. It will also serve as an emergency power plant for the hospital, since it can be started within three minutes.

While all standard services are interconnected, consideration has been given to the emergency problem, and wherever possible self-sufficient units are incorporated. The switch gear and electrical services have been designed for future expansion so that this can be installed as the need arises, with minimum delay and outage.

The Power Plant building will be of concrete block and brick design, single storey power plant area, with workshop and office spaces included in a multi-storey bay. Sound-proofing and noise reduction have been incorporated as an essential feature of the building.

This building will be in harmony with its surroundings and will form an integral portion of the cultural, educational and hospital facilities provided by the Government of Alberta.

A major renovation and addition was commented on the Cerebral Palsy Clinic at 11507 - 74th Avenue, Edmonton, which provided additional classrooms and therapy equipment workshop.

At the Northern Alberta Jubilee Auditorium the construction of roads, walks, parking areas and landscaping, was completed.

To permit the consolidation of the Public Works Department into one single building, work commenced on the construction of an additional floor to Public Works Building No. 2, which is located directly south of the Legislative Buildings.

The General Office, Mechanical Branch, formerly housed in the Terrace Building, the Stock Advance records office, formerly housed in the Maintenance Shops Building, and the office of the Minister, formerly housed in the Legislative Buildings, will occupy the new third floor. The second floor will be occupied by the Deputy Minister's office, the Architectural and Engineering Offices, and a Conference Room for the public opening of tenders. This will permit the vacating of the temporary Annexe, and allow the space occupied by that building to be used as parking. A new passenger elevator will be added to serve the upper floors of the building.

The additional floor will be built in conformity with the original construction. All interior partitions are wood frame, with glazing, to permit an open view throughout the entire office areas. The heating and air conditioning system has been incorporated with the cooling system of the Highways Building.

It is expected that the work will be completed in the Spring of 1958.

In the Legislative Building Grounds an old landmark, namely, the smoke stack, which had not been used for a number of years since the installation of gas into the Power House, was demolished.

The old Garneau School in Edmonton was purchased, and re-modelled to provide facilities for the training of Nursing Aides.

At the School for the Deaf a skating rink and outside playground were built. A programme of roads, walks, landscaping and street lighting continued.

### **HANNA**

Construction was completed on a Provincial Building at Hanna. This two storey building with full basement, of steel frame and masonry construction, is approximately 100' x 60'. It is of contemporary design. The main elevation is of coloured glass curtain wall construction.

Accommodation is provided for the Provincial Treasury Branch and Government Liquor Store. On the upper floor, office space is provided for the Department of Municipal Affairs, Highways, Agriculture and Lands & Forests.

### **KEITH**

No major construction was undertaken at the Baker Memorial Sanatorium this year. However, a minor programme of landscaping, cement walks and roads, was continued. Also work continued on the renovation of the electrical system of the Sanatorium. A double garage was constructed as an additional facility for the mechanical staff who work on a 24 hour call basis.

### **OLIVER**

While no major construction project was undertaken at the Provincial Mental Institution, a programme of roads, walks, landscaping, etc., is continuing.

An additional house was provided at the institution for medical staff.

### **OLDS**

At the Agricultural School the old smoke stack was removed, and replaced by a new heating plant, with modern smoke stack. A small building was erected to provide facilities for mixing feed and storage of grain.

A new house was constructed for the Principal of this School.

## RED DEER

The new Infirmary Ward at the Provincial Training School, Red Deer, was completed this year. This building is a single storey frame and stucco structure, with a partial basement, built in the form of a letter "E". The two exterior wings accommodate 110 patients in open type wards. The centre area contains medical facilities, service areas and day rooms for general activities. A partial covered, paved, patio adjoining the day rooms, provides for outdoor recreation of the patients.

The building has a complete warm air heating and ventilating system, with steam as the source of heat, supplied from the central power plant of the institution.

In addition to the Infirmary Ward, construction was also completed on the Clinical Building, which is designed to accommodate the clinical and diagnostic services for the Provincial Training School. This building is also a one storey frame and stucco structure, over a full concrete basement.

It includes facilities for X-ray and electro-encephalographic examinations, dental and physio-therapeutic treatment, a full surgical suite, suitable for carrying out major operations, a pharmacy for compounding and dispensing drugs, a large laboratory, a mortuary with facilities for pathological examination and the necessary office and other ancillary accommodation for operating and administering all these facilities. The building is of frame construction on a full concrete basement with a flat roof. The exterior finish is stucco while the interior finishes include considerable areas of glazed tile for walls, conductive rubber tile and ordinary rubber tile, vinyl-asbestos tile and terrazzo for floors, and acoustic tile and acoustic plaster for ceilings. The laboratory and pharmacy contain a large amount of cabinet work. The building is steam heated, being connected with the Provincial Training School Power Plant. Also certain areas of the building are provided with full air conditioning.

Construction commenced on a concrete block, one storey, building, which will house the Carpenter Shop, the Paint Shop and provide additional storage.

At the Deerhome Institution construction of the Kitchen and Stores Building was completed this year. This is a one storey, steel and masonry structure, with full basement, and including the basement it contains approximately 20,000 sq. ft. It provides suitable accommodation for a kitchen, bakery, stores and staff cafeteria space. Meals will be distributed from this building to the various dispersed wards.

Construction was also completed on a third ward. This building is a two storey, steel frame and masonry structure, and will provide accommodation for approximately 160 patients, with full ward accommodation as well as adequate day room and diningroom facilities.

A programme of roads, walks, curbs and landscaping, made necessary by the construction of additional buildings, is continuing.



## **WETASKIWIN**

Considerable renovation was carried out at the Court House at this point. This included new floor covering, replastering, re-decorating, and exterior stone and brick work, etc.

Construction commenced on a 4-bay Snow Plow Shed to provide facilities for the Highways Department.

## **MISCELLANEOUS**

In order to provide accommodation for larger vehicles facilities of the Weigh Scales at Balzac, Winterburn and Midnapore, were enlarged, by the installation of a 50 ton platform scale, which replaced the 30 ton scale.

## **MECHANICAL BRANCH**

This report deals with the operation and maintenance of nine Government Boiler and Power Plants and the supply and maintenance of utility services at the major Provincial Institutions.

The total figures of the attached operating statistical sheet show a continued increase of services rendered to the institutions. Likewise, total capital expenditure for replacement and new equipment, installation, plant renovation, etc., is increased to meet the services demand.

Before dealing specifically with each institutional plant a note of one very important utility service rendered, namely, sewage treatment is deemed of interest. Sewage treatment plants are in operation at five of the institutions. Approximately 200,000,000 gallons of sewage was treated in these plants in this past year.

## **LEGISLATIVE BUILDINGS, EDMONTON**

Two vacuum pumps in service in this plant for some 45 years and obsolete, have been replaced with new pumps of larger capacity rating and their installation completed.

## **PROVINCIAL INSTITUTE OF TECHNOLOGY AND ART CALGARY**

Installation of the 30,000 pph Foster Wheeler steam boiler and auxiliaries was completed in late summer and the unit went into full operation for the winter season carrying all normal steam load of the plant and the completed Jubilee Auditorium. This is the first pressurized furnace boiler installation in any of the plants and its winter performance was entirely satisfactory.

### **PROVINCIAL MENTAL HOSPITAL, PONOKA**

A replacement evaporative condenser for the kitchen refrigeration units was purchased and installed in a manner to facilitate future servicing of the units with a minimum of service interruption to the kitchen.

A power driven metal cutting band saw was purchased and installed in the Mechanical Maintenance Workshop. This item was much needed and has been found invaluable.

At the sewage treatment plant one air blower, some thirty years old, was replaced with a new turbo-type blower complete with drive and controls. Also, the sludge transfer pump, over thirty years old, was replaced with a new pump.

Required major renovation of hot water supply facilities of the institution was commenced. A new replacement, 8,000 gallon storage tank, supporting steel structure, additional heaters, controls, etc., were purchased and delivered to the plant. Installation was commenced and will be completed in the coming summer.

### **PROVINCIAL GAOL, FORT SASKATCHEWAN**

An item of particular note was the major overhaul of the 125 KVA, larger engine-alternator unit of the plant. This engine was originally purchased new for the Oliver Provincial Mental Institute in 1926 and operated in that plant till about 1941 when it was replaced with a larger unit. It was shipped to the Baker Memorial Sanatorium and later back to the Gaol for installation in the new power plant in 1952. The engine has now been fitted with a new cylinder, piston, rod, rings, bulk-head packing, etc. The job was completed in late fall and the unit returned to service for winter operation.

Two water supply wells for the Gaol, a project including also treatment plant, all under direction of the Department of Public Works, were put into early operation on May 9th, 1957 following difficulties with purchased water supply. The treatment plant installation was completed and placed in operation a month later. The purchase of water from the Town has ceased.

### **PROVINCIAL GAOL, LETHBRIDGE**

Installation of the 156 KVA Belliss & Morcom engine-alternator unit has been completed and the unit placed in operation July, 1957.

### **PROVINCIAL MENTAL INSTITUTE, OLIVER**

Work requirement of our staff at this Institution for the past year has been that of regular operational and maintenance duties.

However, as a matter of note, the plant includes a well equipped machine shop and is staffed with skilled workmen. The services of both are utilized for other than normal maintenance work at the Provincial Gaol, Fort Saskatchewan.

## **BAKER MEMORIAL SANATORIUM, CALGARY**

Work projects at this plant included the purchase of a second new water tower service pump to replace one some thirty-five years old and obsolete thirteen years ago. The new pump is in operation.

Work was begun in late fall on the incinerator project and by late January the new incinerator was in operation, the old incinerator demolished and excavation started for the boiler room addition. At this time the concrete building walls and required boiler foundation are poured.

In late winter of 1956/57 troublesome icing conditions on the Bow River were experienced at the water supply intake serving the Sanatorium and water supply was temporarily threatened. In late fall of 1957, during low water flow, bulldozer equipment was utilized to deepen the river channel at the intake and particularly downstream. No repetition of icing was experienced during this past winter.

The item of sewage treatment and plant at this institution has now for some time been under particular observation and study and it is our intent to advise generally, with recommendation for a new plant, before preparation of next estimates.

## **DEERHOME INSTITUTE, RED DEER**

As mentioned in last year's report, this plant was first staffed in the fall of 1956 and operated that winter to supply heat and other services to the buildings still under construction.

During the year now ending, two dormitories have been occupied and the kitchen, laundry, etc., in operation for about three months. All buildings have, however, been continuously supplied with heating steam as required.

Looking at the statistical data submission and log sheets of this plant, it is noted that some 24,430,000 pounds of steam output went to the heating system and 2,714,000 pounds to other services. Some 511,200 Kwhrs. of electricity was purchased and 9,000 Kwhrs. generated by the 125 KVA diesel standby alternator unit. Water softened for laundry and domestic use amounted to 723,000 gallons and water softened and dealcalized for boiler make-up was 107,000 gallons. Total water consumption of Deerhome appears in the statistical figure for P.T.S. at Red Deer. The water towers and distribution systems of the two institutions are interconnected but the pumping station for Deerhome is not yet completed and in operation.

As noted above, two dormitories only are presently occupied. A third is under construction. The present Services Building houses two 15,000 pph boilers. Peak steam demand for the past year was 9,000 pph. For the winter of 1958/59, load increase is not expected to exceed 15,000 pph or one boiler. But, when the above additional dormitories are completed and occupied, it is anticipated that winter operation will require load

despatching from both boilers. We particularly wish to note at this time the advisability of reserving the site area between the gas service meter station and laundry portion of the Services Building for future boiler room extension.

### **PROVINCIAL TRAINING SCHOOL, RED DEER**

The required two additional storage type water heaters and controls, etc., for which capital monies were also provided, have been purchased and installed.

Monies were provided for the purchase and installation of an additional boiler for the plant to keep pace with the services demand of new buildings under construction and projected. A Foster Wheeler 25,000 pph boiler was placed on order in early September, 1957 and delivered to the plant in February, 1958.

Monies have been provided for the purchase and installation of auxiliary equipment, feed pumps, feedwater heater, additional fuel oil storage tank, transfer pumps, electrical wiring, etc.

Provision has also been made to double the capacity of our City of Red Deer power service transformer station at the plant. When the above boiler installation project is completed, as will also be certain building projects, some consideration should be given to increasing electrical generating capacity of the plant with a view to best operating heat balance of steam and electricity demand.



Administration Building, University of Alberta — Edmonton



**PROVINCIAL GOVERNMENT POWER PLANT STATISTICS**  
**For Year Ending March 31, 1958**

	FUEL		WATER		ELECTRICITY		STEAM OUTPUT		Expenditure Plant Operation and Institutional Maintenance
	Coal (Tons)	Gas (Cu. ft.)	Pumped from Local Sources (Imperial Gallons)	Purchased (Imperial Gallons)	Generated (Kilowatt Hours)	Purchased (Kilowatt Hours)	To Building Heating (Pounds)	To Other Services (Pounds)	
Parliament Buildings and Administration Buildings, Edmonton	.....	237,362,000	.....	155,099,000	4,811,400	4,291,200	118,996,000	75,566,000	\$147,874.30
Institute of Technology, Calgary	.....	82,649,000	.....	7,925,000	120,850	731,200	52,804,000	9,318,000	61,919.98
Provincial Mental Hospital, Ponoka	.....	171,526,000	73,387,000	.....	1,101,000	1,265,000	94,923,000	40,681,000	187,274.31
Provincial Gaol, Fort Saskatchewan	.....	63,716,000	18,313,000	1,027,600	555,500	121,800	36,240,000	9,060,000	56,165.58
Provincial Gaol, Lethbridge	.....	75,112,000	.....	29,699,000	366,700	24,000	27,144,000	6,786,000	61,788.73
Provincial Mental Institute, Oliver	.....	238,671,000	.....	72,072,500	2,738,500	.....	136,671,000	45,557,000	163,656.53
Baker Memorial Sanatorium, Kath	.....	73,197,000	19,414,500	.....	599,320	74,800	43,286,000	14,428,000	88,606.31
Provincial Training School, Red Deer	.....	87,807,000	.....	36,494,688	836,775	143,600	50,033,000	21,442,000	97,384.83
Deerhorne Institute, Red Deer	.....	34,059,000	.....	.....	9,000	511,200	24,430,000	2,714,000	49,009.08
	.....	1,064,099,000	111,114,500	302,317,788	11,139,045	7,162,800	584,527,000	225,552,000	\$913,679.65
Total Gas Used	.....	.....	.....	1,064,099,000	Cubic Feet	.....	.....	.....	.....
Total Water Used	.....	.....	.....	413,432,288	Imperial Gallons	.....	.....	.....	.....
Total Electricity Used	.....	.....	.....	18,301,845	Kilowatt Hours	.....	.....	.....	.....
Total Steam Generated	.....	.....	.....	810,079,000	Pounds	.....	.....	.....	.....



