

Alberta's School Building Plans

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In recent years, both educators and social historians have written about teaching and learning in the one-room rural schools and the multi-room town schools that were ubiquitous throughout most of Western Canada in the latter half of the nineteenth and in the first half of the twentieth centuries.¹ Most accounts have emphasized the social environment, anecdotes, personal recollections, and the pedagogical aspects of these schools. Comparatively little has been written about the school buildings themselves, especially why particular building designs were favoured and why school building architecture evolved as it did. An awareness and knowledge both of old school building design as well as of the evolution of school building architecture can be considered important from several points of view: accuracy of the historical record; contemporary ergonomic considerations; the psychology of pedagogy, and the application of previous architectural successes and failures to the improvement in the design of new school buildings. It seems, from several contemporary accounts, that some researchers have fallen into the trap of subscribing to the myth that "each little red or white schoolhouse looked alike." This widespread idea may be a reason why there have been few studies concerned with the development of school building design and the reasons why particular designs either prevailed or disappeared. Difficulty in obtaining primary source materials is probably another major factor why the historic study of school buildings has been neglected.

Although there are many photographs available of old school buildings, such photographic evidence does not always provide a complete historical picture. Many school districts, especially the older ones, erected temporary log structures that were soon replaced by more substantial, government-approved buildings that were, occasionally, also of log construction. In such cases, it is sometimes extremely difficult to determine whether or not a photograph depicts the initial temporary school or a later log structure. In addition, some school buildings were destroyed by fire before the taking of a photograph, so that photographic information would be unavailable. Unless a photograph was taken shortly after a particular school building was constructed, before any modifications or additions occurred, it is not easy to discern whether or not the building pictured appears in its original configuration. Surviving photographs, as well, do not necessarily represent a valid sample of all or even most school building designs of any given time period. Another drawback of

relying upon photographic information is that most photographs of schools are exterior views, which provide little information about the interior layout. The personal recollections of individuals may help to corroborate photographic information and to expand upon it, but because of the dubious reliability of such accounts, it would be most unwise for a researcher to rely heavily upon them.

Government records such as annual reports usually contain information about school buildings. In most instances, however, the information is of a general nature, so that developments in individual school districts are not discernible. Building records, where they exist, usually provide an abbreviated description of the type of building erected in particular school districts. This information is useful if the researcher happens to know what the description means. The records may indicate, for example, that a type LCF-38 school was erected in the Tawatinaw school district. Unless the researcher knows what a type LCF-38 school looks like, he/she will have a difficult time both identifying that design of school and distinguishing it from other designs. While building records may indicate the type of school erected, they usually do not indicate any special modifications made to the plan. Modifications, such as the substitution of a pitched roof for the standard hip roof, were usually made as the result of severe climatic conditions in the school district or because of financial constraints in poorer districts.

Examination of extant buildings does not provide a complete representation of earlier school architecture either, since comparatively few old schools have survived and the ones that have were usually modified after they were built. Clearly, then, another source of information to be used in combination with photographs and government records would be required for a researcher to be able to identify particular school buildings as representing particular school designs.

These obstacles and considerations faced this writer when he decided to examine the various types of school buildings erected by each school district in the Province of Alberta. The purpose of the investigation was to ascertain whether or not various theories about school design and their effect on student learning, as advocated by psychologists and education psychologists, were taken seriously and put into practice by the provincial as well as the antecedent territorial authorities. It was also this writer's intention to ascertain whether or not the influence on school architecture by psychological learning theory was a continuous phenomenon, or was limited to particular time periods.

The primary motivation for this study came from information contained with the *Annual Reports* of both the Northwest Territorial and the Alberta Departments of Education. The information established that such things as window placement, colour selection, and heating design were determined on the advice of education psychologists.² Further motivation arose from the current state of school design, which is radically different from that of the latter half of the nineteenth and the first years of the twentieth century, and which is the subject of criticism and current study by some educators.³ Several authors who promoted some of the radical school designs of the late 1950s and early 1960s, either dismiss earlier designs as being obsolete, based upon faulty concepts, or ignore the reasons why previous schools were designed as they were.⁴ Such articles suggest that what was learned in the past through experience and observation has been neglected. In addition, it seems that

school design is now largely determined by factors other than the advice given by educational psychologists.

It seemed likely that the *Annual Reports* of the Alberta Department of Education and their building records would also be of assistance. They were, but only so far as listing plan designations and the numbers of each type erected per year. There was a requirement for primary source material which described each plan in detail and which also clearly indicated which plan was selected for each individual school district. This writer was most fortunate in discovering a remarkable collection that provided this information for most of the Public, Roman Catholic Separate, Protestant Separate, Private, Consolidated, and Rural High School districts in Alberta between the years 1913 and the present time.

Prior to September 1905, education in what is now Alberta was the responsibility of the Council of Public Instruction (later the Department of Education) of the Northwest Territories. Beginning in 1884, when the first school district in the Northwest Territories was established (Moose Jaw Public #1)⁵, the design of each school building was subject to the approval of the Department of Education and was approved only if the design conformed to general guidelines set forth in the regulations.⁶ This procedure was found to be inadequate, since inspectors' reports noted many school buildings which did not have adequate window space or which were otherwise sub-standard.⁷ The solution devised was the design of a standard one-room rural school.⁸ In addition, one copy of the plans used by each school district was to be sent to the department for retention and comparison with inspectors' reports. This policy was continued in Alberta after it became a province in September 1905 and was the basis for the collection of school building plans now housed in the Provincial Archives of Alberta.

The question may be asked why the collection does not contain any plans prior to 1913, since the policy of retaining plans dates to 1903. The answer is that, before 1925, departments of the Alberta government could and often did destroy public documents on an ad hoc basis, without either the knowledge or the consent of the cabinet or legislature.⁹ While some plans have been retained which predate 1925, many appear to have been destroyed or otherwise disposed of because they were no longer required. The ones that were retained were usually of large town and city schools as well as some small rural schools that had received additions. Most of the provincially-designed standard plans were retained as well.

The collection consists, at present, of more than three thousand plans. The upper date limit is nominally 1955, although the collection contains a few examples from the 1960s and 1970s.¹⁰ Most of the plans of school buildings erected between 1925 and 1955 are in the archives' collection, but not all of the schools erected before 1913 are absent. The collection includes plans dating from the 1920s and 1930s that illustrate modifications carried out on many early one-room schools, so that they would conform to newer standards. Usual modifications could include changes to window placement or to the number of windows, the addition of an enclosed front porch or the addition of a basement and a gravity, coal-fired furnace. Windows were modified not only to improve light levels in the classroom, but also to reduce blackboard glare caused by sunlight striking the surface directly. An enclosed porch tended to reduce heat loss caused by repeated opening and closing of the door. The basement

housed the gravity furnace and its fuel supply, freeing valuable floor space in the classroom. The basement also facilitated the operation of the gravity heating system, with the added bonus of elevating the temperature in the classroom, since cold air would descend into the basement rather than gather along the floor of the classroom. In addition, the basement also served as a combination lunchroom and playroom for students. This latter feature was especially welcome in the winter months when cold temperatures and severe weather limited outdoor activities. In such cases, the plan usually depicts the original configuration of the building as well as its modified appearance.

Occasionally, radical changes were required, such as the reorientation of the school. It should be recalled that the school inspectors were supposed to check to see if the school building conformed to departmental standards. Some school districts, either by design or error, erected the school building so that the walls containing windows faced either north or south, rather than the preferred east or west orientation. In addition to reducing the available light in the classroom, a north-south orientation usually meant that the school would be colder in winter, since the prevailing wind was usually from the north and windows were not as effective insulative barriers as were solid walls. In the cases where radical alterations were called for, the plans usually show the original foundation and floor plans in dotted lines, or shaded, and the properly orientated foundation and floor plans in solid lines.

Several school districts are not represented in the collection. There are two main reasons. First, it seems that part of the collection was damaged by water at some time before it was transferred to the Provincial Archives of Alberta. Plans stored at or near the source of the water were allegedly so badly damaged that they were destroyed. Secondly, the Department of Education has lent particular plans to school boards who were renovating existing schools. Cards and memoranda exist throughout the collection which indicate that certain plans either have not been returned or have been lost by the school board. Loss of plans within the Department of Education may also be a reason why the collection is not complete.

In addition to school buildings, the collection includes plans of teachers' residences (sometimes called teacherages), rural horse barns, latrines, and plans of additions or modifications to school buildings, all of which were subject to the approval of the Department of Education. Most of the plans prior to 1936 are on bond blueprint stock which had been stored either rolled or folded. Later plans are usually diazo prints on bond stock of varying quality. These plans had all been folded before storage. Whereas the earlier blueprints have aged well and are in generally good condition, many of the diazo prints are badly faded and some of the stock has become extremely brittle. A very small number of the older standard plans were drawn with ink on draughting linen. These examples are either the original drawings or working linen tracings which were used for the production of blueprints. The plans drawn on linen appear to have survived in the best condition, despite being folded or rolled while in storage.

The information depicted on each plan varies. Most of the provincially-designed plans present front, side, overhead, and rear elevations in addition to floor, basement, and foundation views. Depending on the layout and the size of each sheet, the entire plan may appear on one sheet, or may take up several sheets. Many plans are accompanied by the specifications for the work depicted on the plans.

The large town and city schools, as well as many of the rural one- and two-room schools erected between 1920 and 1950, were designed by private architects, or in some cases by school supply concerns such as Moyers, Southbend Structures, and the Waterman-Waterbury Company. In such cases, the plans were approved by the Department of Education and a copy was retained on file. It should be noted that departmental approval of such plans was not always forthcoming. Several private and commercially-produced plans include inked changes made by or on the authority of officials of the Department of Education. In a few instances, either the architect or the school board objected to the changes because of increased cost or because of the belief that the alterations had ruined some important aspect of that particular design. In these cases, the plans were cancelled and were so indicated. It seems that most school boards in this situation either selected an approved design, or had their architect redesign the cancelled plan. Both the cancelled and approved plans were retained.

Sorting and arranging the collection proved difficult. No less than six separate systems of designation were used on the plans between 1913 and 1955. Initially, an alpha-numeric type designation was used. For example, one type of 25-pupil capacity standard one-room rural school had the designation "A-1." The alphabetic prefix referred to the general design of the school. A type "A" school, for example, was a rectangular one-room school with five or six windows located in each of the two long walls. The numeric suffix referred to the particular layout of the school. The layout usually referred to the floor plan as well as the placement of the entrance. A copy of the requisite plan was made for each school district. Each plan was also labelled with the name and number of the school district where the building was erected. The simple alpha-numeric style of identification soon proved inadequate, since there was no easy way to indicate changes to earlier plan designs. A modification to the system, the addition of a letter suffix, was tried for a short time, but did not solve the problem, since some changed and redesignated plans were further modified.

What was needed was a complete revision of the designation system. This was done some time before the First World War. The revision consisted of adding a second letter after the first letter. The plan "A-1," for example, became plan "AE-1." The second alphabetic identifier usually referred to the style of roof employed or to any modifications or variations made to the original design. There were, however, many exceptions to this system, and some plans have both earlier and later designations and sometimes more than one set of numbers, indicating that one system had not replaced another, and that there must have been some confusion.

This style of identification was superseded during the First World War by a number system following that of the Department of Public Works which consisted of a two-digit prefix, indicating the particular branch or department of the government which used the plan, followed by the letters "A" or "C," followed in turn by a two- or three-digit suffix.¹¹ The three parts of the identifier were each separated by dashes. Initially, the letter "C" was intended to represent new buildings, while "A" represented additions or renovations to existing structures. By the mid-1920s, however, the use of the letter "A" was discontinued. It is probable that this was done to limit confusion, since most school buildings constructed eventually received some renovations or modifications. The numeric suffix represented the chronological order of the plan. This system paid no heed to the particular type of building. For example, the Empress View School District #3571 built a Waterman-Waterbury

model #500 school, a privately-designed one-room rural school, but the plan is identified as "63-C-107." The tripartite identification system prevailed until 1936, when plan 63-C-999 was reached. At that juncture, the use of another system of designation became imperative. The use of four digits in the numeric suffix was not adopted, probably because of possible confusion with school district numbers. Although there were a few school districts in Alberta with either one-, two-, or three-digit numbers, the vast majority of districts had four-digit numbers.

The new designation consisted of a two-part system. The architectural and design aspects of each building were referred to by an alpha-numeric system similar in design to the designation used originally. Unlike the original system, however, the new style usually consisted of an abbreviation for the type of structure and the year that it was designed. A school plan designated LCF-38, for example, meant that it was a standard "low-cost frame" structure that was designed during 1938. Later designations became progressively more complex, with some referring to the prescribed orientation of the school on the building site. In addition to this type of indication, a three-digit number was also assigned. This number was assigned for two reasons. First, some plans were not designed by the province, but by private concerns. Privately designed plans did not always conform to provincial designs, so they were given only a number. Second, and most importantly, the numeric designation differentiated the plans of each district. This was a very important consideration, given that some designs were built in many school districts. The school design LCF-38, for example, was erected at over 190 different locations. After 999 plans, the numbering system was modified to include the prefix "SP-" (standing for "school plan"). It seems likely that the purpose of this change was to prevent possible confusion with the school district numbers which also appeared on the plans. During the 1950s, after most rural school districts were subsumed by larger school divisions and counties, the system was changed again. This time, a four-digit number was assigned without any prefix, and this system is still in use.

The processing of the collection in the Provincial Archives of Alberta was facilitated by the use of a computerized database. An Apple Macintosh Plus micro-computer was employed, and the software was a version of OverVUE. Among the advantages of using an electronic database rather than traditional hard-copy methods was ease of rapid sorting on a variety of fields, plus the ability to segregate and select items based upon particular common factors. In addition, comprehensive listings of the collection could be obtained at any time during processing.

It is anticipated that this collection will provide valuable information for researchers for many years to come. In addition to educators, the collection may be of use to those writing either school or local histories, which can now contain accurate descriptions of the school buildings in their areas. Researchers interested in architectural history and in the business of local architects may find the collection useful as well. Finally, there may be yet unexplored research applications for this collection. In any event, the Provincial Archives of Alberta's collection of school building plans represents a rare and important document collection related to the history of education in Alberta.

Notes

- * The author would like to acknowledge the cooperation and assistance of the staff of the Provincial Archives of Alberta, especially the contributions of Keith Stotyn, David Leonard, and Victoria Lemieux.
- 1 Examples include the trilogy by John C. Charyk, *The Little White Schoolhouse*, 3 vols. (Saskatoon, 1968), and by John W. Chalmers, *Schools of the Foothill Province*, (Toronto, 1968).
- 2 *Annual Report of the Council of Public Instruction of the North-West Territories*, 1896. (Regina, 1897)
- 3 Smith, L.M., Prunty, J.P., Dwyer, D.C., & Kleine, P.F. *The Fate of an Innovative School: The History and Present Status of the Kensington School*. (New York: The Falmer Press, 1987).
- 4 Examples include: K.L. Bowers, "Building for better education," *Audio-Visual Instruction*, (November 1956), pp. 168-170; P.H. Dillard, "No windows please ... And put it underground," *Audiovisual Instruction*, (October 1962), pp. 534-539; and J.L. Trump, "Places for learning," *Audiovisual Instruction*, (October 1962), pp. 516-517.
- 5 The first school district in Alberta was Edmonton Public #7, established in February 1885.
- 6 *Regulations of the Board of Education of the North-West Territories*, (Regina, 1888), pp. 3-7.
- 7 *Annual Report of the Council of Public Instruction of the North-West Territories, 1896*. (Regina, 1897), pp. 13-15.
- 8 *Annual Report of the Department of Education of the North-West Territories, 1903*. (Regina, 1904), pp. 14-15.
- 9 David Leonard, "Records Management in Alberta: An Administrative History," *Scope Notes*, Newsletter of the Edmonton Chapter, Association of Records Managers and Administrators, (February 1987), pp. 14-16.
- 10 Later plans are currently stored in the Alberta Records Centre, where they are available for use by Alberta Education (the current name of the Alberta Department of Education). As time and space permit, the remainder of the plans will be transferred to the Provincial Archives of Alberta.
- 11 Many of the plans were draughted by personnel of that department and it appears that the plans may have been stored in that department during the time that their system of identification was used.