

Ceremony Marks Official Opening of Salter Bridge

Closer Touch Between Sections of City Stressed At Inaugural Function

Winnipeg's new 2,000 feet viaduct at Salter street over the Canadian Pacific railway yards, monument to the enterprise of her people in providing work for their unemployed fellow citizens, and link in the mid-city cross-town highway connecting northern and southern sections of the city, was officially opened to vehicular traffic at 7:30 o'clock Wednesday evening, by Mayor R. H. Webb, before a large concourse of taxpayers who had gathered to witness the unique ceremony.

Long before the time set for the opening, crowds had assembled on both north and south approaches to the wide concrete and iron structure. The actual ceremony of opening commenced with a march of aldermen from the south side of the city, advancing north to the centre of the bridge, led by his worship the mayor, where they were met by ward 3 aldermen who had marched south from the northern approach, led by Ald. W. B. Simpson, senior north end alderman, with a record of 17 years service as councillor in Pines Mesa in Centre of Bridge.

Behind the civic fathers a large crowd of citizens followed. As the two parties met in the centre of the viaduct, Ald. J. Blumberg, for ward 3, and Ald. P. H. Davidson, for ward 2, shook hands in a cordial greeting, symbolizing the closer connection between the two divisions of the city, which the viaduct has effected.

Mayor R. H. Webb, as chief magistrate, next took the ceremony in hand, stating his pleasure at being there to open the viaduct to traffic in the name of the city. He then called Ald. E. D. Honeyman, K.C., chairman of the bridge committee, and of the unemployment relief works committee, to his side and invited him to address the gathering.

Ald. Honeyman said Winnipeg had reason to be proud of the magnificent structure that had been erected from funds supplied for the relief of unemployment. Following him, Ald. Simpson, senior ward 3 alderman, spoke, expressing his satisfaction with the new viaduct, and advancing

the need for a second viaduct at Sherbrook street, which he said he hoped will soon be undertaken.

W. F. Carter, head of the firm of Carter-Halls-Aldinger company, contractors, builders of the viaduct, also was introduced. He expressed the pleasure of his firm at having been privileged to construct it, and joyfully said he hoped that when the Sherbrook street bridge, mentioned by the previous speaker, was to be built, his firm would have the work.

R. H. White, of Dominion Bridge company, who supplied the steel for the viaduct, said he appreciated the co-operation given by everybody in the undertaking, and also intimated his willingness to accept the steel contract for Ald. Simpson's Sherbrook street bridge.

Also introduced to the crowd was Leo Wardle, for many years an ardent advocate of a new bridge at Salter street. He, too, expressed his extreme satisfaction that at last the city had been supplied with a long-felt need.

Not forgotten was A. J. Taunton, resident engineer, who, too, was given an opportunity to speak. Mr. Taunton complimented the city on the structure, and expressed his pleasure at being present.

Mayor Cuts Ribbon

Following the speeches, Mayor Webb cut the ribbon that separated the north and south sectors of the viaduct, and formally declared the city's new traffic channel open to all traffic.

With these words thousands of children who had congregated to participate in the ceremonies, took his stampede from the north to get pieces of ribbon for souvenirs of the memorable event. The official civic party then left the scene, Mayor Webb moving north, followed by a large stream of vehicles of various descriptions.

Also in attendance were Mayor George C. MacLean, of St. Boniface, Dominion commissioner for unemployment relief in Manitoba for the federal government, and A. MacNab, deputy minister of public works for Manitoba, and unemployment relief administrator, on behalf of the provincial government.

Two simple truss spans of 113 feet each and two continuous truss spans of 85 feet 6 inches, each, the approaches at both ends being of wood trestle type throughout. It is interesting to note that the four truss spans had previously been in service at Main street over the Assiniboine river, but with the advent of street car traffic they were to be replaced by heavier steel.

Nevertheless these spans carried citizens of Winnipeg safely and efficiently for thirty-four years at the Salter street location with practically no interruption to traffic and with little or no expense to the city, other than the replacing of the wood trestles. This would seem to speak well for the flexibility and economy of using steel structures for highway bridges. The roadway of the old bridge was only 17 feet wide and the approaches were dangerously steep, but to make matters worse there was a very sharp dog in the approach at the south end—a most undesirable feature in a bridge.

Employment Relief

A new bridge had been talked of for years, but it was not until the fall of 1931 that the efforts of its advocates reached fruition. At that time the governments, both federal and provincial, were endeavoring to co-operate with the cities and municipalities in providing funds to make possible the carrying out of certain much needed improvements, and the Salter Street bridge was one of the projects put forward by Winnipeg.

The federal government undertook to pay 50 per cent of the cost while the provincial government and the city of Winnipeg each contributed 25 per cent.

City Engineer W. P. Brezetteau was charged with the responsibility of designing the bridge and to him and his staff must go the credit for the preparation of a design which is conspicuous for its combined utility, appearance and economy.

The bridge is of the steel deck girder type supported on steel towers and bents over all of the railway tracks while the approaches at both ends are concrete. The deck of the bridge is a concrete slab with a wearing surface of sheet asphalt. The roadway is 50 feet wide from curb to curb, practically three times the width of the old bridge, while the sidewalks on each side are 7 feet 11 inches wide, giving an over all width for the bridge of 64 feet, 2 1/2 inches. The length of the bridge from approach to approach is 2,000 feet, or nearly half a mile.

The governing feature in the preparation of the design were the location of the existing railway tracks and the clearance required by the railway company under the superstructure. The truss spans on the old bridge were of the through type so that the use of deck girder spans raised the elevation of the roadway at the centre of the bridge very considerably. Notwithstanding this fact the engineers were able to maintain a maximum gradient of 4.68 per cent by means of increasing the length of the approaches and making the profile of the bridge a vertical curve from end to end of the steel portion.

Alignment Change

The north approach to the bridge is directly on the centre line of Salter street, but at the south end a marked change of alignment was made. Here, instead of making a sharp jog to the west, the approach was swung around to the east by a very easy curve so that the end of the bridge at Logan avenue would be nearly opposite the end of Park street.

The first contract in connection with this project was awarded to the Dominion Bridge company, of Winnipeg, in December, 1931. It covered the dismantling of the steel work in the existing spans and the fabrication and erection of the steel for the new spans.

Preparation of the details commenced immediately after the awarding of the contract and fabrication was carried on continuously during the winter months at the Winnipeg plant of the Dominion Bridge company. This being an unemployment relief proposition, the designing engineer specified as far as possible steel members that are produced in Canada. The only materials imported on this job were certain beam sections which were brought in from Great Britain. These were of a kind and size not rolled in Canadian mills. It should be emphasized at this time that nearly 25 per cent of the total tonnage of fabricated steel used in the bridge was produced at the Selkirk plant of the Manitoba Rolling Mills. All the bars for the railings on the bridge proper, the approaches, and stairs were made there, as was all material for the rivets, bolts, latching and bracing.

Steel Work Complicated

From a casual glance at the bridge one might conclude that the steel structure was of a comparatively simple nature, but as a matter of fact it was very different from the usual type of viaduct structure. It has already been mentioned that the profile of the bridge was a vertical curve and that the south end of the bridge curved towards the east. These two factors in themselves made the calculation for the members most involved, but in addition the location of all towers and bents was fixed by the position of the railway tracks, and many of these tracks being on a skew to the bridge it was impossible to get any uniformity of spacing. It must be borne in mind that structural steel cannot be made and cut to fit at the site in the same manner as a piece of lumber, so that an error of even a quarter of an inch in the location of holes or length of a member may cause endless trouble.

The balustrade on this bridge is particularly worthy of note. It is of simple lines, yet so well proportioned that it has a dignity and solidity that cannot fail to impress the observer. In addition to using this balustrade on the steel portion of the bridge, the engineers ordered it to be used on the concrete approaches as well.

Erection of the steel presented certain problems of its own. It was imperative that in the carrying out of this work there be no interruption to railway traffic, and when it is remembered that this is one of the most important yards of the whole Canadian Pacific railway system, with four main lines passing through it, the magnitude of the task will be appreciated. Erection commenced at the end of January, and it was carried on continuously during the winter months. This fact is worthy of note, as many people are of the opinion that construction work of this nature cannot be carried out at this season of the year. The work proceeded very rapidly and by the end of April, only four months after the awarding of the contract, the steel was all in place except for the handrailing on the approaches and the stairs. The Canadian Pacific railway officials co-operated to the fullest extent with the contractors in the carrying

out of this work, with the result that not a single train was delayed through building operations and no major accident occurred.

The entire weight of the centre spans of the structure rests on crossed timber piles driven to rock. These piles, concealed below the ground level, were installed by W. J. Holmes, a sub-contractor for Carter-Halls-Aldinger Ltd., the creators of the substructure. More than 80,000 feet of piling were driven in the foundations in the short space of two months.

Concrete pedestals, resting on the piles, carry the huge columns of the viaduct.

An interesting feature of the bridge is the provision for expansion and contraction. In a structure of this size the expansion is considerable, varying from a half to one inch in 100 feet. Expansion joints have been installed at intervals to ease the strain and prevent

damage after the bridge is in use. To complete its contract on schedule time, Carter-Halls-Aldinger company started pouring concrete in February, when the temperatures ranged below the freezing mark. While work of this kind is not in the experimental stages in Manitoba, it is a ticklish business, calling for great care to ensure a finished and satisfactory job. The concrete was kept at warm even temperatures until it had set completely. The work was finished on time.

The concrete railings and walls of the abutments, said to be the best local example of finished concrete in the city, have been the subject of many compliments by visiting engineers and contractors.

Los Angeles, Oct. 27.—Miss Wilcox Putnam, the author, Wednesday filed a suit for divorce from Arthur Ogilvie, a suit dressing manufacturer, whom she charged with cruelty.

SIXTH SUSPECT HELD IN FLORIDA FLOGGING

Accused of "Assault to Murder" After Testifying Before Jury

(Associated Press Despatch.)
Jacksonville, Fla., Oct. 27.—A sixth suspect was arrested Wednesday as he finished testifying before the Duval county grand jury investigating the recent flogging of 19 persons here.

J. C. Godwin was seized by a police lieutenant when he stepped from the grand jury room and was docked on a charge of "assault to murder." Lieutenant W. O. Silcox said one of the victims has identified Godwin as a member of the band which whipped him out and gave him a severe whipping. The nature of Godwin's testimony before the grand jury was not disclosed.

Sixteen persons, six of them women, lined the corridor outside the grand jury room. They were called one at a time for questioning. Whether they were victims or merely and evidence that believed the grand jury should hear was not known.

Of the 19 victims of the lashing, five who have reported to the police as women.

Paris, Oct. 27.—Former Premier Andre Tardieu appeared in the chamber of deputies, Wednesday, for a committee meeting with his mouth-tache shaved off. He wore agrimmed spectacles which greatly altered his facial appearance.

ANCIENT STEEL STRUCTURE REPLACED BY FINE BRIDGE OF MOST ARTISTIC DESIGN

The completion of the Salter Street bridge marks an important step in the programme of the much needed and very much needed cross-town highway in Winnipeg.

This bridge provides grade separation over Jarvis and Henry avenues, as well as over thirty-seven lines of railway tracks in the Canadian Pacific railway yards and replaces a steel structure erected at the end of the last century. The new bridge will give direct access to and from the northwest corner of the city and will relieve to a great extent the traffic congestion which at the present time exists on Main street.

It is a long cry from the days of the old cart, moving at two miles per hour, to the present day motor vehicles. The time had come when the old steel structure at Salter street had outlived its usefulness and it had to make way for a bridge adequate to cope with the bustle of modern heavy, yet rapidly moving traffic.

Built 34 Years Ago

The old bridge was built in 1898 and consisted of eleven steel girder spans, varying from 20 feet to 40

feet, with a total length of 2,000 feet. The bridge was built in 1898 and consisted of eleven steel girder spans, varying from 20 feet to 40 feet, with a total length of 2,000 feet. The bridge was built in 1898 and consisted of eleven steel girder spans, varying from 20 feet to 40 feet, with a total length of 2,000 feet.

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Upper Left: Norwood Bridge, Main Street, with lift span raised.
Lower Left: Showing railway at south end of Salter St. Bridge.
Upper Right: Showing west elevation of Salter St. Bridge.
Lower Right: Lac du Bonnet Bridge over Winnipeg River.

A few of the bridges in Winnipeg and Manitoba fabricated recently at our Winnipeg Plant

There are approximately 1,400 tons of structural steel in the new Salter Street Bridge. Every pound of this steel was completely fabricated in our Winnipeg Plant, which is located on Dublin Avenue at the end of Notre Dame Avenue West. The fabrication, together with the erection gave a great amount of employment to both skilled and unskilled Winnipeg workmen.