

nearly to position on the bottom of the river between two barges held 8 feet apart, one upstream and one downstream from the trench, and its weight transferred to these barges. A second two-length section was then made, and its weight also transferred to the barges after the ball-and-socket joint between the two sections had been made. A third two-length section after being run out and lowered was suspended on the cableway while the fourth and last two-length section was held by a derrick on the bank. When the joints had been inspected, the trench was cleaned out and the eight joined lengths lowered simultaneously with chains in the blocks from which they were supported. One of the eight-length sections was held above the water by a cable and the other by a derrick until connections could be made with the pipe line on each side of the river. The ball and socket joints had to be lowered about 9 in. afterward by a diver.

BUILDING IN GUELPH.

Building activities in Guelph this year are far in advance of any period in the history of the city. The aggregate value of public build-

ings, factories, etc., amounts to \$249,000, and of residences, etc., \$245,700, making a total of \$494,700. There has been a great improvement in the character of the houses erected. The estimated cost ranges from \$1,500 to \$5,000. Very few frame or plastered buildings have been erected. Pressed brick has been much used, displacing ordinary brick and even stone. Cement and artificial stone have rivalled Guelph stone for finishing buildings.

In connection with the Ontario Agricultural College a Mechanical building has been erected. It is a two story and basement brick structure 60 by 160 feet, costing \$40,000. A two story white brick addition has been built to the Chemical building at a cost of \$12,000. A new series of green houses has been erected, costing \$5,000.

The Crowe Iron Works have erected a modern factory building, including moulding shop, power building and finishing room, the cost of which is estimated at \$28,000. W. A. Mahoney was the architect of this work. The same architect also designed the alterations of the Tovell block for the Royal Bank offices, the cost being

\$5,000. Mr. Mahoney planned the additions to the Massey-Harris Co. building on West Market square for H. N. Norrish, the estimated cost being \$9,000.

The new Homewood Sanitarium building, a large stone structure on Delhi street, has had work to the value of \$50,000 done this year. On the new Armouries, this year, work to the value of \$40,000 has been done. The Guelph Carpet Mills propose erecting a new weaving shed this fall, to cost \$12,000.

The partnership of Sword & Ludgate, lumber contractors, Parry Sound, Ont., has been dissolved.

Amongst the papers read at the recent convention of the American Society of Municipal Improvement in Birmingham, Ala., was one on "Municipal Asphalt Plant of Hamilton," by Mr. E. S. Barrows, City Engineer, Hamilton, Ont.

Mr. Robert Surtees, formerly city engineer of Ottawa, Ont., died at his residence on McLaren street, in that city, on September 30th. He was seventy-one years of age and had held the position of city engineer for over twenty five years, and later became engineer to the Ottawa Improvement Commission.

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Year.	No Samples Tested.	Soundness Patji Test.	Specific Gravity	Residue in Test on No. 100 Sieve	Setting Time in Minutes		Tensile Strength in pounds per square inch.									
					Initial	Final	Neat.					3 (Sand) to 1 (Cement)				
							1 dy.	7 dy.	28 dy.	3 mos.	1 yr.	1 dy.	7 dy.	28 dy.	3 mos.	1 yr.
1903	20	O.K.	3.135	2.1	162	345	307	701	783	827	*	74	214	299	367	*
1904	44	O.K.	3.150	2.0	132	342	300	744	848	914	938	86	262	354	401	427

* Tests for 1 year were not completed when records closed. 1905 report not yet issued.

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