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CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL OF
PUBLIC WORKS • TENDERS •
ADVANCE INFORMATION •
AND MUNICIPAL PROGRESS

EVERY WEDNESDAY

This paper reaches every week the Town and City Clerks, Town and City Engineers, County Clerks and County Engineers Purchasers of Municipal Debentures and leading Contractors in all lines throughout Canada.

VOL. 9.

AUGUST 24, 1898

No. 30

THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY WEDNESDAY

As an Intermediate Edition of the "Canadian Architect and Builder."

Subscription price of "Canadian Architect and Builder" (including "Canadian Contract Record"), \$2 per annum, payable in advance.

C. H. MORTIMER, Publisher,

CONFEDERATION LIFE BUILDING, TORONTO.

Telephone 2362.

New York Life Insurance Building, Montreal,
Bell Telephone 2299.

Information solicited from any part of the Dominion regarding contracts open to tender.

Advertising Rates on application.

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Notice to Contractors

Tenders will be received, by registered post only, addressed to the Chairman of the Board of Control, City Hall, Toronto, up to noon on

WEDNESDAY, AUGUST 31ST, 1898,

for the construction of the following works:—

CEDAR BLOCK PAVEMENT:

Gwynne Avenue, from King Street to Queen Street
Bolton Avenue, from Gerrard Street to Queen Street.
Clarence Square, north, east and south sides.

ASPHALT PAVEMENT:

Sussex Avenue, from St. George Street to Spadina Avenue.

MACADAM ROAD:

Givens Street, from Argyle Street to Queen Street.

GRAVEL ROAD:

Victor Street, from Broadview Avenue to Logan Avenue.

TAMARAC PAVEMENT:

Scott Street, from the Esplanade to Front Street.

CONCRETE SIDEWALKS:

Bay Street, E.S., Adelaide Street to the Fire Hall.
Front Street, S.S., Lorne Street to a point 101 feet east.
Front Street East, N.S., opposite Nos. 36 to 50, inclusive.

BRICK SIDEWALKS:

Front Street, S.S., from a point 116 feet 7 inches west of Yonge to Bay Street.

Plans and specifications may be seen and forms of tender obtained at the office of the City Engineer, Toronto, on and after August 29th, 1898.

A deposit in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 2½ per cent. on the value of the work tendered for, must accompany each and every tender, otherwise they will not be entertained.

Tenders must bear the bona fide signature of the contractor and his sureties, or they will be ruled out as informal.

Lowest or any tender not necessarily accepted.

JOHN SHAW, (Mayor),

Chairman Board of Control.

City Hall, Toronto, August 17th, 1898.

Tenders Wanted

Tenders, separate or in bulk, addressed to the undersigned, will be received up till Noon, WEDNESDAY, SEPT. 7TH, for the various trades required in

REMODELLING AND ENLARGING THE COUNTY COURT HOUSE

in the City of St. Thomas, Ont.

Plans and specifications may be seen and forms of tender obtained on and after Monday, August 22nd, at the office of N. R. Darrach, Architect, St. Thomas, Ont. A marked cheque, payable to the Treasurer of the County of Elgin, for 3 per cent. of the amount, must accompany each tender.

The lowest or any tender not necessarily accepted.

K. W. MCKAY,
Clerk of the County of Elgin.

CONTRACTS OPEN.

BEACHVILLE, ONT.—Dr. Beasley intends building a residence.

EMERSON, MAN.—Mr. Christie purposes building an elevator here.

HAMPTON, N. B.—Tenders close 26th inst. for erection of Orange hall.

GRIFFITH, ONT.—Preparations are being made to erect a new presbytery here.

LACHUTE, QUE.—The town council is asking for tenders for the construction of a drain.

LOCKPORT, N.S.—Shipping men are urging the construction of a bell buoy near this place.

GRIMSBY, ONT.—Plans are being prepared for a new bank and office building to be built here.

WOODSTOCK, ONT.—It is believed that the C.P.R. will shortly take steps to erect a new depot in this city.

SUTTON, QUE.—The question of the construction of a system of waterworks is still under consideration.

PEMBROKE, ONT.—The Pembroke Southern Railway Co. have selected a site for their proposed station.

ORILLIA, ONT.—W. Tudhope & Co. have purchased property on which to erect a one-story iron clad building.

NORTH BAY, ONT.—It is again rumored that the construction of the government wharf is to be commenced shortly.

BROWNSVILLE, ONT.—Alexander Bell, township clerk, wants tenders by Saturday, 27th inst., for repairs to the Pearce drain.

KINGSTON, ONT.—It is rumored that the Richelieu and Ontario Navigation Co. will build a large hotel here, to cost \$50,000.

NEW GLASGOW, N.S.—The Board of Trade is moving in the direction of securing the establishment of iron and steel works here.

ATHENS, ONT.—The sum of \$5,000 has been subscribed towards the building of a Methodist church, which is expected to cost \$10,000.

GUELPH, ONT.—A rumor is current that the Grand Trunk Railway authorities

intend to build a passenger depot here, to cost \$18,000.

NEPAWA, MAN.—The Mayor wants applications for the position of electrician, to take charge of the electric light and telephone plants.

DUNDAS, ONT. The town has given a franchise for electric lighting to a local company, of which George H. Harper is managing director.

FREDERICTON, N.B.—It is probable that a large shoe factory, 200 x 40 feet, and three stories high, to cost \$50,000, will be erected in this city.

RAT PORTAGE, ONT.—Head & Co., architects, are taking tenders this week on a brick-veneered residence, corner Matheson and Fort streets.

CARBERRY, MAN.—A representative of an electrical company is endeavoring to obtain from the town a franchise for electric lighting for 25 years.

SHERBROOKE, QUE.—It is said that the Electric Light & Water Company will enlarge their works here, at a cost of \$10,000, and may erect an hotel.

BRIDGEPORT, ONT.—The ratepayers of Waterloo township have sanctioned a by-law to raise \$9,000 for rebuilding bridges carried away by spring freshets.

GALT, ONT.—It is understood that Messrs. Darling & Pearson, of Toronto, are preparing plans for a residence to be built by Mr. A. R. Goldie, of this city.

ALMONTE, ONT.—The question of the construction of a system of water works is still under consideration. A Toronto engineer estimates the cost of same at \$50,000.

DARTMOUTH, N. S.—The old building, corner of Water and Ochterloney streets, is being pulled down, and on the site Miss Handley will erect a large three storey building.

ST. STEPHEN, N.B.—We are advised that the town will purchase and rebuild the lower steamboat wharf, in Dufferin, for a winter landing place for passenger steamers.

LANARK, ONT.—The ratepayers of Perth having defeated the Lanark County Electric Railway bonus by-law, there is now a scheme on foot to connect this town with Carleton Place.

MONCTON, N.B.—D. Pottinger, general manager Intercolonial Railway, invites tenders up to Thursday, September 1st, for preliminary work in connection with increased accommodation at St. John.

PRESCOTT, ONT.—The by-law to raise \$100,000 for the construction of water-works and sewerage systems was carried by the ratepayers on the 18th inst. Steps will now be taken to proceed with the work.

CHARLOTTETOWN, P. E. I.—Tenders closed this week for the purchase of \$50,000 of city debentures, issued for the purpose of constructing a sewerage system. It is expected that work on the

system will be commenced this fall. Two pumping stations, east and west of the high central area, will carry the sewerage from the lowest levels of the city.

TORONTO JUNCTION, ONT.—The matter of purchasing seats for two rooms in Carlton school has been left to a committee of the School Board, consisting of Messrs. Anderson, Smith, Mavity and Raybold.

WOODSTOCK, N. B.—At the last meeting of the council, a committee, consisting of councillors Henderson, Harrington and Mooers, was named to procure plans and tenders for the erection of a new gaol.

BROCKVILLE, ONT.—It is stated that the railway tunnel built for the old Brockville & Ottawa Railway is to be closed up, and that a new dock will be built and other improvements made to the C. P. R. Co.'s property, at a total cost of \$50,000.

STRATFORD, ONT.—The Council has passed the by-law granting the sum of \$30,000 for the building of a new city hall.—A letter has been received by the Council from the Provincial Board of Health urging the adoption of a system of sewage disposal.

SANDRINGHAM, ONT.—R. C. McGregor, clerk, will receive tenders up to Monday, the 29th inst., for the deepening, widening, and improving of Hart creek, near the village of Avonmore. The estimated cost of the work is \$1,549.25. T. H. Wiggins, C.E., of Cornwall, is engineer.

HINTONBURG, ONT.—The Suburban Waterworks Company, represented by E. J. Rainboth, was granted a franchise by the village for the construction of a waterworks system, work to be commenced by August 31st. No preparations to commence work have as yet been made.

GRAND FORKS, B. C.—Alfred Woodhouse, M.E., has been instrumental in closing a deal whereby a 500-ton smelter may be built at Grand Forks in the near future. The new smelter company is a London syndicate. Ex-Mayor Manly has donated 1,000 acres of land to the company.

ST. THOMAS, ONT.—B. H. Rothwell has engaged a stage architect to remodel the Grand Opera House. The improvements will cost about \$16,000.—The Council will be asked to lay a concrete sidewalk on Lake street, north of Welland avenue.—Tyrrell Duncombe intends to make improvements in the Duncombe Opera House.

ST. JOHN, N.B.—R. C. John Dunn, architect, is preparing plans for a new building, of brick, to be erected by Chas. Phillips, of Halifax, at the corner of Douglas avenue and Main street. It will be a three-story structure, the ground floor to be used as a grocery store and the upper stories for dwellings.—Construction has commenced on the large elevator to be built here.

BRANDON, MAN.—Parrish & Lindsay, of this place, purpose erecting elevators on the Belmont extension of the Northern Pacific Railway.—The survey party of the Brandon Southwestern Railway have completed their operations. Three trial lines were surveyed into Brandon, one each from the east, south and west. Construction of the road from Deloraine will be commenced in about one month.

PARRY SOUND, ONT.—The Ottawa, Arnprior and Parry Sound Railway Company intend building some sixty dwellings for employees.—Mr. Robt. Bruce, C.E., and Mr. M. McNamara were engaged last week in surveying a line between the Egan Estate and McCawley Lake. It is Mr. J. R. Booth's intention to connect his timber limits with the O.A. & P.S. Ry. by building a branch line of railway between the places named, which is a distance of seven miles.

PORT ARTHUR, ONT.—The Port Arthur, Duluth and Western Railway is said to have been purchased by McKenzie, Mann & Co. It is understood to be their intention to extend the road 40 or 50 miles into Minnesota, so as to connect with the railroad systems of the north-western states. It is also intended to connect it with the Rainy River Railway, the charter for which Messrs. McKenzie & Mann have secured, and on the construction of which they are now working.

VANCOUVER, B.C.—W. F. Bullen states that his company are about to build a large marine slip here. When the work of construction is well under way here, work will be begun on a slip in the inner harbor at Victoria, the site for which has not yet been chosen. The slip will have a cradle sufficiently large to accommodate any of the coasting vessels. The machinery will be run by electricity. The Esquimalt slip will also be enlarged from 2,500 tons capacity to one of 3,500 tons.

BRANTFORD, ONT.—At the January elections a by-law will be submitted to the ratepayers to provide funds for the enlargement of the public hospital. A committee, consisting of His Worship the Mayor and four others, have been appointed to inspect modern hospitals.—The Public School Board is seeking information as to the cost of heating school buildings.—The Board of Directors of the Southern Fair have decided to prepare specifications and invite tenders for about 1,000 feet of water pipes, with the necessary hydrants, fountains and water troughs.

VICTORIA, B. C.—It is said that Commissioner Walsh will recommend that White Horse Rapids and Thirty Mile river be cleared of rock. He will also recommend a telegraph line from Dawson.—The Deer Park Mining Co. are said to have decided to install new machinery at their mines, having a contract with the Kootenay Electric Power Co. for the supply of power.—The corporation has decided to pave Fort street, from Government street to Douglas street, with wooden blocks, with concrete or vitrified sidewalks and curbs, at an estimated cost of \$8,200.

QUEBEC, QUE.—It is believed that tenders will be invited within the next few weeks for the construction of the proposed bridge across the St. Lawrence.—David Quellet, architect, has prepared plans for a church at St. Octave de Metis and a presbytery at St. Blandine.—The Quebec, Montmorency & Charlebois Railway Co. has purchased the property of the Montmorency Power Co. The trains of the Quebec, Montmorency & Charlebois Railway will be operated by electricity next year, and a line of railway will also be run along the side of the Beauport highway as far as Montmorency Falls.

FRASERVILLE, QUE.—A syndicate of Montrealers residing at Riviere du Loup and Cacouna are reported to have decided to extend the electric light from Fraserville to these places, and talk of buying and modernizing the St. Lawrence Hall at Cacouna.—The town council have given a franchise for the construction of a system of waterworks for the municipality to Mr. Crockett, manager of the Temiscouata railway, who is associated with a number of Montreal capitalists. The water supply will be obtained from Lake Hickson and Green river, about six miles distant. The plans adopted were prepared by E. C. Hoare, C.E., of Quebec. A system of drainage is also to be introduced.

CHATHAM, ONT.—The Lake Erie and Detroit River Railway Co. has secured control of the Erie and Huron railway. It is believed that the shops of the latter railway in this city will be removed to Walkerville.—J. W. Dyer, grocer, has purchased the McGolrick property on

Baldoo street, and will remodel the same.—The Dunkley Celery & Preserving Co., of Kalamazoo, Mich., are considering the erection of a branch factory in this city.—Fred. W. Knott has invited tenders for building a brick veneered residence, from plans by T. J. Rutley, architect.—W. J. Tighe is making arrangements for establishing an evaporating factory in this city. Two buildings will be erected, one 30 x 40 feet and the other 20 x 40 feet.

HAMILTON, ONT.—Tenders closed yesterday (Tuesday) for the construction of a patrol wagon for the city.—S. H. Kent, acting city clerk, has invited tenders for construction of pipe sewers on Ferrie street and Aikman avenue.—A. P. McKee, proprietor of a large glass factory in Anderson, Ind., was in the city recently with a view to establishing a brass factory here. He inspected several sites.—The following building permits have been granted. John Dailie, double brick residence on Waterloo street, between Simcoe and Grey street, cost \$2,500; W. A. Edwards, alterations to 39 James street south, for W. H. Glasco, cost \$2,500; J. A. Armes, 2-story brick dwelling, corner Hess and Cannon streets, for J. Johnson, cost \$1,200.

ROSSLAND, B. C.—J. B. McArthur, president of the Board of Trade, leaves for Toronto and Montreal this week, to interest eastern capitalists in a scheme to run a tunnel from the Columbia river to tap the Red Mountain mines at a depth of 1500 feet. The estimated cost of the tunnel is over \$4,000,000. The tunnel would serve for transportation of ore and drainage of the city.—The Columbia and Western Railway have purchased thirty lots for terminal purposes, on which freight and passenger depots will be erected.—The by-law authorizing the corporation to borrow \$7,000 for fire purposes was carried recently.—It is said that the C.P. R. proposes to construct a reservoir, with a capacity of 1,200,000 gallons, above the townsite of Cranbrook.

LONDON, ONT.—McBride & Farncombe, architects, are taking tenders this week for the erection of a brick warehouse.—A by-law has been passed by the City Council for the construction of a sewer on Oxford street, from Wellington to Richmond, on Richmond to Ann street, and south on George street.—H. T. Smith has been granted a permit for the erection of a one and one-half story brick veneer house on north side Dufferin avenue.—The buildings of the Canadian Packing Co. will be considerably enlarged and new facilities added.—The Council has been advised of the acceptance by the People's Telephone Co. of the franchise offered by the city.—Contracts will be let next week for a 4-story factory to be erected on Clarence street, between King and Dundas streets. The building is to be constructed for J. R. Shuttleworth, and will be occupied by Talbot & Co. and Hastings & Co. Herbert Matthews is the architect.

WINNIPEG, MAN.—The Committee on Works has recommended the construction of a large number of pavements, including a macadam pavement on Broadway, from Osborne to Maryland street, cost \$11,000, and a pavement on Portage avenue, cost \$82,600.—Mayor Andrews has gone to London, England, where he will offer for sale the debentures for the proposed waterworks system, amounting to \$700,000.—Owing to arrangements not having been completed, we have been requested by the Fire, Water & Light Committee of the council of this city to withdraw the advertisement regarding wells and pumping plant for waterworks system, which appeared in last issue.—The Northern Pacific Railway will build a station at Willow Range, on the Portage branch.—At last meeting of Board of Works, the city engineer submitted plans of the Salter street overhead bridge, as finally approved by the C.P.R. Co. The extra

cost of steel required in lengthening the spans, cement pier and foundations, will be \$2,700. The Board decided to advertise its intention to construct a sewer on Lombard street, from the end of the present sewer to the Red river.—George Browne, architect, will accept tenders up to 26th inst. for the several works required to erect a stone and brick bank building at Neepawa, Man., for the Union Bank of Canada.

OTTAWA, ONT.—E. F. E. Roy, secretary Department of Public Works, invites tenders up to Monday, September 12th, for the excavation of a supplementary outlet for increasing the outflow of Lake Manitoba through Fairford river. Plans at above department and at office of W. F. Gouin, C. E., Winnipeg. The work is quite important, as tenders are to be accompanied by marked cheques for \$4,000.—A. Benoit, secretary Department of Militia and Defence, wants tenders up to the 24th inst. for the supply of coal and wood required at military buildings in Toronto.—The Department of Public Works is open to receive tenders up to Tuesday, September 13th, for the construction of the superstructure of a railway and traffic bridge at Edmonton, N.W.T. Plans at office of F. K. Gibson, town clerk, Edmonton, W. T. Gouin, Winnipeg, C. Desjardins, Post Office Building, Montreal, and at above department.—The authorities of the Water street hospital are considering the advisability of making another addition to the institution.—George E. Kidd, solicitor for the company interested in the establishment of a stock market and abattoir, states that it is the intention to locate the concern outside of the city limits. He suggests that the city assist the enterprise by a grant of land.—The Metropolitan Electric Company, which has been given permission by the City Council to do business in this city, will shortly commence the preliminary work.—Building permits were last week granted as below: Ald. Davis, three brick veneered houses, west side Henderson avenue, cost \$1,500 each; M. Miskell, brick veneered dwelling, Hickey street, cost \$2,300; Simpson Fleming, brick veneered dwelling, Lloyd street, cost \$2,200.

MONTREAL, QUE.—Samuel Robertson, corner Ontario street and Delorimier ave., wants tenders for stone, brick, carpenter, plastering, plumbing and roofing work in connection with the erection of a skating rink.—H. Joseph & Co., real estate agents, 16 St. Sacrament street, wish offers for the pulling down and removal of buildings on Osborne and St. Martins streets and Morland avenue.—The Harbor Commissioners will this week open tenders for the purchase of land for the new dry dock.—The members of the Road Committee returned last week from a tour of inspection to the sewage farm at Massachusetts. The city surveyor will accordingly shortly make an exhaustive report on the whole question of sewage disposal.—The Water Committee has decided to call for tenders, to be received by the 25th inst., for the deepening and widening of a ditch from the aqueduct to the River St. Lawrence, crossing Messrs. Ogilvie's, Lachine Rapids Hydraulic & Land Company, and Guy farms, in the parish of Lachine.—Mr. R. A. Waite, architect of the new Grand Trunk general offices, is busily employed on the plans, which he hopes to have in such an advanced condition that the contracts can be let during the coming month, and the work immediately commenced. The new building will be the largest suite of railway offices in the world. They will cover an area of two million cubic feet. The buildings will be five storeys high, and the front will be of what is known as the Neogrec style. The contracts for some trades will be let in a few weeks. The building is to be completed in 1900.—Yesterday, the

Grand Trunk offices, tenders were opened for the roundhouses at the Sarnia and Port Huron ends of the Sarnia tunnel. The work will be a large contract.

TORONTO, ONT.—The Coleman restaurant at 113 King street west has been purchased by Mr. Albert Williams, of the Bodega. It is the intention of Mr. Williams to remodel the establishment.—Tenders are invited by Mr. S. G. Curry, architect, 90 Yonge street, for the carpenter and joiner's work of a warehouse. Tenders close August 29th.—The Canadian Meat Co. is being formed by Toronto and Chicago capitalists to operate a meat packing industry near this city. They offer to put in a plant to cost \$60,000. Mr. W. Bull, barrister, is acting for the company.—Building permits have been granted as follows: Toronto Glass Co., two storey brick factory, south side Blair street, cost \$1,600, and one storey wooden factory, south of Blair avenue; Elizabeth Young, two two storey and attic brick stores, 152-4 Queen street east, cost \$1,600; A. S. Vogt, two storey and attic dwelling, south side Bloor street, between St. George & Huron, cost \$7,000; M. A. Schwolm, 3 att. 2 story and attic bk. dwellings, 579 Leonard ave., cost \$2,700 (J. W. Watson, architect, C. A. Schwolm, builder). The following figures show the value of building permits issued by the City Commissioner for the first seven months of the past three years:

	1896.	1897.	1898.
January.....	\$ 2,950	\$ 11,725	\$147,570
February.....	73,710	19,700	78,510
March.....	32,690	58,270	126,600
April.....	81,635	117,175	208,340
May.....	63,515	102,526	178,745
June.....	90,800	138,975	165,820
July.....	66,450	103,295	122,150

It will be seen from the above comparison that the building operations of the present year are much more extensive than during the two previous years.—At the last meeting of the Board of Control, Ald. Leslie asked whether the old tenders for tower clocks would be considered. It was agreed that the architect should submit the former specifications at a meeting on Thursday, when additions and alterations will be made in them, after which new tenders will be advertised for. It was also decided to go into the question of the Major street pavement on the same day.

Elizabeth Paquette has been registered proprietress of J. B. Genin & Co., plumbers, Montreal.

FIRES.

Recent fires included the following Buildings at Elora, Ont., owned by Miss B. Foote, of Toronto.—Out buildings of the Victoria Chemical Works at Victoria, B.C.; loss \$25,000, fully covered by insurance.—Saw mill, owned by Fraser Richardson, at Nackawick, N.B.—Residence of Dr. Bruce, dentist, at Clinton, Ont., partially destroyed.—M. E. Sherwood's residence near Otterville, Ont.; insured.—Furniture store at Campbellville, Ont., owned by Murray Crawford; loss \$700.—Residence of John Duthrie at Otonabee, near Peterboro', Ont.—Saw mill at Tranquille, B.C., owned by Wm. Fortune; loss \$8,000, insurance \$3,000.—Devine Bros.' planing mill at Killaloo, Ont.—At Vankleek Hill, Ont., the residence and hardware store of Henry Cheney, residence of Rev. Dr. Anderson, and the Windsor Hotel.—Saw and shingle mills of N. D. Seaman, in Keppell township, near Owen Sound; loss, \$3,000, no insurance.

CONTRACTS AWARDED.

RAT PORTAGE, ONT.—Hilliard Opera House: Mitchell & McComb, contractors.

ST. CATHARINES, ONT.—Residence for Rev. V. H. Emory: Newman Bros., contractors.

GODERICH, ONT.—Dredging harbor: Dan McGillicuddy, this town, contractor, price \$60,000.

THOROLD, ONT.—Thomas Irvine has secured the contract for carpenter work on High school.

LACHUTE, QUE.—School building for the Dissident school trustees. Ed. Charlebois, contractor.

GUELPH, ONT.—The Gurney Foundry Co. are placing steam boilers and radiators in the Royal Hotel in this city.

COOKSHIRE, QUE.—New Model School: D. P. Matheson, contractor.—Two dwellings in Agnes: E. Weston, contractor.

VANCOUVER, B. C.—Brick block for the Fairfield Exploration Syndicate: Saul & Bell, contractors. Building will have frontage of 250 feet and will cost \$80,000.

NEW WESTMINSTER, B.C.—Exhibition machinery hall and extension to grand stand: Stephen G. Tidy, contractor. The contract for additions to main building has not yet been let.

HAMILTON, ONT.—The following contracts for sewers have been let: Cannon street west, J. J. Armstrong, 46 cts. per foot; Ferry street, E. C. Murton, 47 cts.

(Continued on page 4.)

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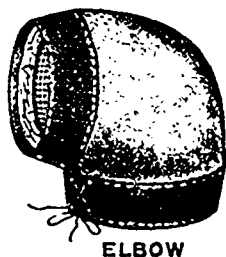
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per foot; Aikman avenue, J. J. Armstrong, 37 cts. per foot.

OTTAWA, ONT.—The contract for all trades, except heating and plumbing, for a dwelling house for George F. McCormick, has been awarded to Holtby & Shearer. The dwelling is to be erected on Wilbrod street. Hewitt & MacLaren are the architects.

MONTREAL, QUE.—Dwelling house on Maissionneuve street for Julian Therrien (J. Alcide Chausse, architect). Stone and brickwork, Isaac Boivin; woodwork, Joseph Couture; plumbing and roofing, J. S. Bourgeois; painting and glazing, E. Belanger; plastering, P. X. Charbonneau.

WOODSTOCK, ONT.—Parsonage for Central Methodist church. Carpentry, Mr. McIlwraith; bricklaying and plastering, George Adams; painting, E. I. King; plumbing, gasfitting, galvanized iron and heating, Whitney Bros.; cost, \$3,000.—W. H. Mickle, of Kingston, has secured contract for grading ten miles of the new Brantford and Woodstock Railroad.

PETERBORO', ONT.—The following tenders were received for construction of granolithic sidewalk on Charlotte street, between George and Bethune streets: Sheeby & Dolan, granite finish, 16½ cts., gravel finish, 13½ cts.; J. E. Hayes, granite finish, 16½ cts., gravel finish, 13½ cts.; Guelph Pavement Co., granite finish, 15½ cts., gravel finish, 12 cts.; A. Graham, granite finish, 17¼ cts., gravel finish, 15 cts. The tender of the Guelph Pavement Co. has been recommended for acceptance.

TORONTO, ONT.—W. Mashinter & Co. have been awarded the contract for plumbing, gas fitting and steam heating in residence on Sherbourne street for H. M. Pellat, to be the latest improved system of heating and sanitary plumbing. E. Beaumont Jarvis is architect. Also to remodel the plumbing in residence at 25 Wilton crescent, remodelling of plumbing and steam heating and supplying new gas and electric fixtures for Grand Opera House, and the steam heating in addition to printing office of Miln Bingham Printing Company.—The Board of Control opened tenders last week for the supply of elevators for the new municipal buildings. Both electric and hydraulic were tendered on, as follows: No. 1, hydraulic—One tower elevator, 4 elevators to 4th floor, with plant for 5, \$46,900; one tower elevator and 4 elevators to 3rd floor, with plant for 5, \$45,250; one tower elevator and 2 elevators to 4th floor, with plant for 5, \$37,500; one tower elevator and 2 elevators to 3rd floor, with plant for 5, \$36,250; one tower elevator and 2 elevators to 4th floor, with plant for 3, \$33,850; one tower elevator and two elevators to 3rd floor, with plant for three, \$32,600; power plant for 5 elevators, included in the above, is \$14,250, and for 3 is \$10,600, and the price of the tower elevator is \$5,000. No. 2—One tower elevator and 4 elevators to 3rd floor, with plant for 5, \$37,100; to 4th floor, \$37,500; one tower elevator and 2 elevators to 3rd floor, with plant for 5, \$26,225; to 4th floor, \$26,475; one tower elevator and 2 elevators to 3rd floor, with plant for 3, \$25,600; to 4th floor, \$25,850. No. 3, hydraulic—tower, \$8,390; 4 elevators to 4th floor, \$22,260, pumping plant for 5, \$12,750 (total, \$43,400); tower, \$8,390; 2 elevators, \$15,600; plant for 5, \$12,750 (total, \$36,800). No. 3, electric—Tower, \$6,600; 2 elevators to 3rd floor, \$17,940; plant for 5, \$7,100

(total, \$31,640); to 4th floor, \$32,440; tower, \$6,600; 2 elevators to 3rd floor, \$17,940; plant for 3, \$4,000 (total, \$28,540); to 4th floor, \$28,940. The Board of Control has accepted the tender of the Sprague Company, of New York, for three electric elevators, one in the tower and two running to fourth floor, with plant for five, at \$26,475.

BIDS.

LONDON, ONT.—Seventeen tenders were received by the Hospital Committee for heating, ventilating and plumbing of new hospital. No action has as yet been taken.

BRANTFORD, ONT.—Five tenders were received for flood prevention work, three from outside bridge companies for the iron span of the Lorne bridge, one from Elliott & Workman, of this city, for the whole work, and one from W. E. Phinn for one or two sections. Contracts will be let at once.

ASHBURNHAM, ONT.—Nine tenders were received by the council for water works construction, four being for the whole work and five for separate parts. The bulk tenders were as follows: Walter Alford, Belleville, \$7,950; McQuillan & Co., Toronto, \$6,295; Clark & Connolly, Toronto, \$6,751; Ed. J. Harnett, Toronto, \$6,427. The separate tenders were sent in by James Bogue, T. E. Wade, St. Lawrence Foundry Co., of Toronto, and the Gartshore-Thomson Co., of Hamilton. An award will be made this week.

Henderson Bros., lumber dealers, Montreal, are said to have assigned on demand.

The lumber firm of Graham, Horne & Co., lumber dealers, Fort William, Ont., are reported to have assigned to C. C. Abbot. The failure is one of considerable importance.

TORONTO'S GREAT EXHIBITION.

On August 30th Canada's Great Exposition and Industrial Fair opens at Toronto. It is no idle boast to say that the arrangements made for this year guarantee that the Exhibition will be easily the best ever held. Owing to the war, amusement matters have been very quiet in the United States. As a consequence the management have been able to secure special features that otherwise could not have been obtained. Nor is that all, for the exhibits are of a great deal better quality and more varied than usual. For the first time manufacturing establishments of both France and Great Britain are sending over collections of goods especially made for this purpose, included in them being several recent scientific inventions of a revolutionary nature. Two great spectacles are to be given, one, which will be free, by day, and the other by night. The first will be an illustration of real warfare, and will be conducted by the Royal Engineers, of Halifax, and the Dominion Artillery, of Kingston, and will comprise the exploding of submarine mines, the blowing up of ships, the storming of forts with shot and shell from quick firing and Maxim machine guns, Red Cross hospital work and so on. At night the great spectacle presented will include the blockade, bombardment and surrender of Santiago, the sinking of the Merrimac, the captive balloon, and the destruction of Cervera's fleet, concluding with a joyful celebration of victory. An exhibit of horseless carriages will be a feature of interest, while the hands of music will number a score, including three or four from the United States. On the whole there is more to be seen at Toronto for less money than at any fair in America, and such an opportunity as the present, when rates prevail on the railways that may never be so low in another year, should not be missed.

The assignment is announced of Douglas Bros., metal workers and felt roofers, Toronto. The liabilities are placed at \$9,000 and assets between \$5,000 and \$6,000.

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CLEANING RESERVOIRS.*

Cleaning a reservoir is not the kind of a job that one is anxious to do, but, when the necessity exists, the sooner it is done the better. If the reservoir has a hard, smooth bottom, with sufficient fall to the waste pipe to carry off the mud and water rapidly, the task is not a difficult one. The writer has had experience in cleaning two reservoirs; one is used for settling purposes in connection with a filter plant, and is seventy by seventy feet, seven feet six inches to nine feet six inches deep, with a fall of two feet from the point most distant to the waste pipe. After using for several months it is necessary to wash out the sediment, which at the point of inlet is usually about four to six inches deep, the balance being covered to a depth of from twelve inches to seven inches deep. After the reservoir has been drained, pumping is resumed, the filters being supplied direct from the pump, and the surplus water used for washing the mud. With nine men the sediment is removed in about three hours. The other reservoir is used for storing filtered water, and is 246 by 343 feet at the bottom, twenty-five feet deep. The bottom is of clay puddle, nearly level, except within a radius of thirty feet of the waste pipe, where the fall is about eighteen inches in that distance. The inlet has been changed, but at the time of the cleaning it was in the south-west corner, while the opening into the waste pipe is in the north-west corner, or directly opposite the inlet. There is only one hydrant accessible, and to get sufficient pressure for effective washing streams it would have been necessary to run the pressure to about 175 pounds, possibly higher in the lower districts.

It was finally decided to wash the mud with water pumped into the reservoir at the inlet, and have plenty of laborers to stir the mud in the stream of water as it flowed to the waste pipe. While the reservoir was empty the city was supplied by direct pressure; the inlet valve is

* Paper by Dow R. Gwinn, Superintendent Waterworks, Quincy, Ill., read before the American Waterworks Association.

twenty inches in diameter, requires 196 turns to open, and while cleaning was done it was open twelve turns. To prevent any damage from suddenly increased pressure or water hammer, the hydrant near the reservoir was opened, and to it was attached 150 feet of two and one-half inch hose, laid to the top of the reservoir embankment. To move and stir the mud twenty laborers were employed, who were provided with wooden scrapers such as are used to scrape snow. We tried several sizes, and found that the men did the best work with the board or blade eight inches wide and one foot six inches long, the handle being one and one-half inches square. In cleaning a reservoir in this manner it is of the utmost importance to wash that portion of the reservoir first which is not on the natural route for the water from the inlet to the waste valve. We began by making a channel in the mud about eight feet wide, commencing at the inlet and running along the foot of the south bank, thence along the north bank to the waste pipe in the north-west corner; the mud from this channel or trench made a kind of embankment, which prevented the water from making short cuts to the waste pipe. Water was then admitted, and the men scraped the mud with the stream until the space covered by the water was free from mud. The clay puddle was distinct from the mud, and there was no difficulty in deciding where the mud left off and the puddle began. Once away from the bank, it was necessary to confine the water where needed for washing; to do this we used two-inch and three-inch planks one foot wide and twenty feet long, placed on edge and end to end; near the end of each plank was nailed a triangular board, which held the plank on edge.

In preparing to clean a section two lines of these planks were used, and they were placed parallel, about eight feet apart; the upper end or inlet started at the trench along the east bank, and the lower end or outlet was near the waste pipe. The water was then admitted into this section, and the mud scraped along with it as it flowed to the waste pipe. When this space was cleaned the boards were moved south to the next section, and so on until the whole surface had been cleaned. The planks when in position were bedded into the mud and puddle with a maul, a few strokes being necessary on each plank. Where the pressure on a particular plank was

unusually heavy a stake or two was driven on the lower side. Iron clamps made of one and one-half inch iron six inches wide, shaped like a letter "U," say, ten inches long, to go over the joints where the ends of the planks come together, would be of service in keeping the line intact; stakes would not be necessary if clamps were used.

Considerable time could be saved by having sufficient boards to make three lines, so that one set of boards could be moved ahead, and as soon as one section was washed another would be ready for the water to be admitted. As stated before, the average depth of the mud in the reservoir was nine inches, and what has been written applies more particularly to that depth, but, if the mud were much deeper, it would not be necessary to have a row of planks on the side in the direction in which the work was moving, as the material itself would be a sufficient dam. We learned that it was desirable to keep the mud from drying, as it washed much easier when soft, and at night the waste pipe valve was closed and sufficient water admitted to flood the bottom. There were 2,000 cubic yards of mud removed, and the time required was eight days. The expense of removing the mud, including cost of planks, rubber boots, etc., but exclusive of water, was fifteen cents per cubic yard. The amount paid for labor was about ten cents per cubic yard.

I will say by way of explanation that this reservoir has been in use for about sixteen years—the last six years filtered water, before that raw water as taken from the river. The accumulation of mud in that time was about nine inches.

The many suggestions made for a big meeting (during the Paris Exhibition of 1900) of the firemen of the world have resulted in a determination to hold what will be called a grand International Fire Congress and Exhibition. The programme embraces a tournament, with very valuable prizes for competing brigades, and an exhibition of the engines and fire-fighting apparatus of all nations. The Duke of Marlborough and district presidents of fire brigades have promised to attend, and the success of the meeting is already virtually assured. One of the largest buildings in Paris has been secured, and the intention is to entertain the firemen selected to represent each country competing at the tournament with free board and lodging. The French government has promised the utmost assistance to the scheme.

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