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CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL

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. 10.

JULY 5, 1899

No. 23.

THE CANADIAN CONTRACT RECORD,
PUBLISHED EVERY WEDNESDAY
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and Builder."

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the Dominion regarding contracts open to
tender.

Advertising Rates on application.

Subscribers who may change their address
should give prompt notice of same. In doing
so, give both old and new address. Notify the
publisher of any irregularity in delivery of paper.

Electric Light System

TOWN OF LIVERPOOL, N.S.

Sealed tenders, marked "Light Tenders," will be received by the undersigned up to noon of FRIDAY, JULY 28th, 1899, for the installation of an

A. c. and Incandescent Light Plant
for the Town of Liverpool, according to specifications on file at the office of the Town Clerk.
No tender necessarily accepted.

D. C. MULHALL (Mayor),
Chairman of Water and Light Committee.

Liverpool, N.S., June 27th, 1899.

Notice to Architects

The Chairman of the House of Refuge Committee for the County of Essex, Windsor and Walkerville, will receive until the 25th DAY OF JULY proximo, offers from architects with plans and designs for a House of Refuge for the poor. The building to be of brick, two and a half storeys, with stone basement, containing kitchen, dining-room, laundry, heating apparatus, etc. The building to be large enough for two inmates, with male and female wards. The plans to be accompanied with an estimate and a guarantee that there will be no extras after the contract has been given; also with a letter detailing former work of the kind or otherwise done by the applying architect, and the fees required, including all plans, supervision, etc., until the building has been finished. Address,

N. A. COSTE, Esq.,
Chairman, Amherstburg, Ont.

DATE OF PUBLICATION.

Architects, Engineers, Municipal Authorities and others are reminded that the CONTRACT RECORD is printed every Tuesday afternoon, and that advertisements should reach the office of publication not later than 2 o'clock p.m. on that day to ensure insertion in the issue of the current week. Advertisements are frequently received too late for insertion, to avoid which special attention is directed to this announcement.

TENDERS FOR DEBENTURES

Sealed tenders will be received by the undersigned until Tuesday, the twenty-fifth day of July next, at six o'clock p.m., for four Thousand Dollars Town of Parrishoro DEBENTURES, payable thirty years, interest four per cent., payable here half yearly.

J. H. UPHAM,
Town Clerk and Treasurer.
Parrishoro, N.S., June 28th, 1899.

STRATFORD SEWERS

Sealed tenders, addressed to the Chairman of Sewer Committee, will be received until 6 p.m. on

Friday, the 14th Day of July, 1899,

for building about 8,000 feet of SANITARY SEWERS, including Manholes, House Drains to Street Line, etc. Plans and specifications and forms of tender can be seen at the office of the undersigned.

W. F. VANBUSKIRK, A. M. Can. Soc. C. E.,
City Engineer, Stratford.

TENDERS

FOR

Concrete Walks

Sealed tenders, marked "Tenders for Walks," will be received up to 7 p.m. on TUESDAY, JULY 27th, for the construction of about 16,000 square feet of CEMENT-CONCRETE WALKS in Kenfrew, Ont. Specifications now open for inspection. Tender to be accompanied with marked cheque for \$500, which will be returned to unsuccessful tenderers. Contractor will be required to furnish bonds to amount of contract price. The lowest or any tender not necessarily accepted. Address

W. E. SMALLFIELD, Ch. Streets Committee,
Kenfrew, Ont.



Notice to Contractors

TENDERS FOR DREDGING POLSON'S SLIP AND CITY SLIPS.

Tenders will be received, by registered post only, addressed to the Chairman of the Board of Control, City Hall, Toronto, up to noon on THURSDAY, THE 13th JULY, 1899, for dredging Polson's Slip and City Slips.

Contents of envelopes containing tenders must be plainly marked on outside.

Conditions and specifications may be seen and forms of tender obtained at the office of the City Engineer on and after Monday, the 3rd of July next.

A deposit, in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 2 1/2 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 signatures 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, June 28th, 1899.

To Contractors

PERMANENT PAVEMENTS, OTTAWA

Sealed tenders, by registered post only, endorsed "Tender for Permanent Pavements," will be received by the undersigned until (2 o'clock) noon of FRIDAY, JULY 7th, 1899, at the City Hall, Ottawa, for the construction complete of the following works:

ASPHALT PAVEMENT:

Wellington Street, Lyon to Concession.
McLaren Street, Bank to Bay.

Plans and specifications may be seen at the City Engineer's office on and after Tuesday, June 29th, from whom forms of tender and full particulars may be obtained.

Tenders must be accompanied by an accepted bank cheque, payable to the order of the City Treasurer, for not less than five per cent. of the amount of the tender. The Corporation do not bind themselves to accept the lowest or any tender.

JAMES DAVIDSON,
Chairman Board of Works.

City Hall, Ottawa, June 21, 1899.



St. Lawrence Market Improvements

Separate tenders, addressed to the undersigned, will be received through registered post up to noon on

THURSDAY, JULY 13TH, 1899

for each of the following works and services in connection with the improvement of the St. Lawrence Market:—

1. Excavation, Masonry, Piling and Brickwork.
2. Brick Paving.
3. Cut Stone Work.
4. Steel and Iron Work.
5. Sheet Metal Work.
6. Carpentering Work.
7. Plumbing and Heating.
8. Electric Wiring.
9. Hoists.

Plans, specifications and forms of contract may be seen and forms of tender obtained at the office of Mr. J. W. Siddall, Architect, James Building, 75 Yonge Street.

Tenders must be marked on the outside, so as to show plainly for which of the above mentioned works they are put in. Each and every tender must be on the form supplied by the architect, and be accompanied by a marked cheque equal to 2 1/2 per cent. on the amount of the tender. Tenders must also bear the bona fide signatures of the party tendering and his or their sureties, and must comply in every particular with the terms of this advertisement and the specifications.

Should any party or parties whose tender is accepted fail to execute the necessary contract and give security satisfactory to the City Treasurer for the due fulfilment thereof, his or their deposit will be forfeited to the city.

The deposits of unsuccessful tenderers will be returned. The lowest or any tender not necessarily accepted.

JOHN SHAW (Mayor),
Chairman Board of Control.

Toronto, June 27th, 1899.

FOR SALE

A 16-inch V Level, nearly new, to be sold at half price. Box 245, Niagara Falls, Ont.

CITY OF CALGARY**DEBENTURES FOR SALE**

Sealed tenders will be received by the undersigned, and marked "Tender for Debentures, up to noon, SATURDAY, 8th JULY, 1899, for the purchase of DEBENTURES to the amount of \$500,000, issued for the purpose of constructing a Waterworks System for the said City.

The said Debentures are payable in thirty years, and bear interest at the rate of four per cent., payable half-yearly.

The highest or any tender not necessarily accepted.

CHAS. McMILLAN,
City Treasurer.

Calgary, June 7th, 1899.

CONTRACTS OPEN.

PARKHILL, ONT.—The town clerk has taken tenders for granolithic sidewalks.

INDIAN HEAD, N.W.T.—A new flour mill will be erected by Wilson & George.

HOPEWELL HILL, N. B.—H.W. Tingley is preparing to erect a store on Main street.

HARROW, ONT.—Repairs to the school are to be made by day labor, at a cost of \$2,500.

GOLDEN, B. C.—The Board of Trade will urge the C.P.R. to build a new station here.

WELLANDPORT, ONT.—The Presbyterians will make improvements to their manse.

SHELburne, ONT.—The corporation will probably take over the electric light plant.

BERLIN, ONT.—The vestry of St. John's church has decided to build a new red brick rectory.

GRANBY, QUE.—The foundation of the new Catholic church, to cost \$80,000, is being put in.

ALMONTE, ONT.—Conn & West, merchants, are arranging for erection of grain elevator here.

BOIESTOWN, N.B.—Daniel Lynch has secured a building site, and intends putting up a residence.

STRATHROY, ONT.—James Noble desires tenders for alterations and additions to Presbyterian church.

CORNWALL, ONT.—The county council have passed a by-law to borrow \$5,000 for current expenses.

MOUNT BRIDGES, ONT.—The Baptist church will be remodelled and a new foundation put in.

BALDOON, ONT.—Rev. J. J. Haylock wants tenders for putting down about 200 feet of tile pipe.

OTTAWA EAST, ONT.—M. O'Gara will erect three brick residences on his property facing the canal.

DUNDAS, ONT.—J. W. Blasdell, of Hamilton, proposes erecting two cottages on the old screw factory site.

ST. MARY'S, ONT.—T. D. Stanley wants tenders by 6th inst. for improvements to public school.

MANITOU, QUE.—The C. P. R. will build a large hotel here and also a branch railway from St. Agathe to the hotel.

GIMLI, MAN.—It is reported that the Dominion government will call for tenders at once for construction of dock here.

ARNPRIOR, ONT.—J. P. McLaren, architect, of Ottawa, has prepared plans for skating and curling rink to be built here.

ALVINSTON, ONT.—Tenders received up to Friday, 7th inst., for painting interior of Euphemia Cameron Presbyterian church.

AYR, ONT.—W. D. McNair, of New York, and J. S. Clarke, of this town, are promoting an electric road from Ayr to Berlin.

DUNNVILLE, ONT.—By-law authorizing council to spend \$16,000 on water filter and granolithic walks was carried on 28th ultimo.

LANARK, ONT.—Tenders are wanted for remodelling and repairing St. Andrews' church. Particulars from John Manahan.

COTTAM, ONT.—The Gosfield North council have instructed Mr. Laird to make a survey for the repair of the Belle river drain.

LORETTE, QUE.—The Lorette Electric Light and Power Co. has been formed here, to light the village by electricity; capital, \$10,000.

HULL, QUE.—The council will instruct the city engineer to prepare an estimate of the cost of repairing the piers of the Gatineau bridge.

KINGSTON, ONT.—Power & Son, architects, want bids by 4 p.m. of 7th inst. for restoration of building, corner Princess and Sydenham streets.

LONDON, ONT.—Tenders close at 5 p.m. on 7th inst., for building two stands for Western Fair Association. Address, J. A. Nelles, secretary.

GRAND MERE, QUE.—The Laurentide Pulp Co. have under consideration a new plan for a water supply for their plant, obtaining it from Piles lake.

THORNDALE, ONT.—Wm. Lee, clerk West Nissouri township, is taking tenders up to to-day (Wednesday) for building two frame and iron bridges.

BELLEVILLE, ONT.—Mr. Jarvis, of London, Eng., has made a proposition to the city council to establish a factory here for the manufacture of freestone.

ROSSLAND, B. C.—The Freemasons purpose erecting a hall, to cost \$6,000.—The Knights of Pythias and Fraternal Order of Eagles will also erect halls.

ST. THOMAS, ONT.—A bylaw to grant the Lake Erie and Detroit River Railway a bonus of \$20,000 to extend the line to this city was defeated on June 30th.

HUNTSVILLE, ONT.—Tenders for construction of about 700 square feet of blackboards in the public school are invited by W. Proudfoot up to July 15th.

CARLETON PLACE, ONT.—The county of Lanark is about to build a House of Industry. The committee, of which W. Pattie is chairman, is now advertising for site.

YORKTON, N. W. T.—Tenders are invited by W. P. Hopkins up to July 12th for erection of brick schools. Plans at office of H. S. Griffith, architect, Winnipeg.

ANNAPOLIS, N.S.—W. H. Chase, fruit grower and exporter, is about to commence the erection of apple warehouses, 100x44 ft., at Berwick and Sheffield Mills.

NEW WESTMINSTER, B. C.—Plans for the new Caledonia hotel, prepared by J.G. Tiar, architect, of Victoria, have been accepted by the trustees of the Douglas estate.

TRURO, N.S.—Workmen are now engaged preparing the foundation for the new pulp mill at Union, on the Salmon river, to be built by T. G. McMullen, M.P.P., of this place.

CHARLOTTETOWN, P. E. I.—Richard Smith, secretary Provincial Public Works, this city, wants tenders by Saturday, July 29th, for building annex to lunatic asylum at Falconwood.

HAMILTON, ONT.—At a meeting of the Sewerage Committee held on Monday

last, the question of the construction and alteration of gully drains was considered, but no definite action taken.

PEMBROKE, ONT.—The Road and Bridges Committee has reported to the county council that there is no necessity of rebuilding the Taylor bridge over the Muskrat river until the winter.

STRATFORD, ONT.—H. J. Powell, architect, has been instructed by the Catholic parishoners of Comber to prepare plans for new church, to cost \$10,000, and to be erected this fall.

VICTORIA, B. C.—The design submitted by Hamilton McCarthy, artist, of Toronto, has been accepted for a bronze group figure of Robert Burns and Highland Mary, to be placed in a park here.

PORTAGE LA PRAIRIE, MAN.—T. & W. Millar, hardware merchants, are having plans prepared for a three-storey brick block, 60 x 100 feet. McKillop Bros. also contemplate building a brick block.

PICTOU, N. S.—The town council wishes to communicate with engineering and construction companies in a position to undertake the construction of a waterworks system. Address, A. J. Craig, Mayor.

MASCOUCHE, QUE.—Tenders close to-day (Wednesday) for the construction of an iron bridge and two stone abutment piers over the river St. Jean Baptiste. Particulars from J. P. Lamarche, secretary-treasurer.

PETERBORO, ONT.—The county council has decided to proceed with the new Mud Lake bridge; length 3400 feet, cost \$20,000. A committee has been appointed to advertise for tenders, on plans prepared by the county engineer.

AMHERSTBURG, ONT.—Architects are asked to submit plans for a House of Refuge for the county of Essex by July 25th; building to be brick, two and one-half storeys, with stone basement. Address, N. A. Coste, this town.

ST. JOHN, N.B.—The government has granted the New Brunswick Cold Storage Co. a site on Long wharf for a building, to be five storeys high.—The city will in all probability construct a number of sewers and borrow \$50,000 by debentures for the purpose.

WOODVILLE, ONT.—The first meeting of the Victoria Telephone Co. was held here recently, at which it was decided to build lines to Beaverton, Orillia, Midland, Barrie, Lindsay, Whitby, and other places. J. G. Eyres, of this place, was elected president.

FAIR VIEW, ONT.—The Fathers of the Order of Our Lady of Mount Carmel, who have erected a monastery here, purpose building another wing and extending the building easterly 110 feet. Plans have been prepared by H. A. Mosser, architect, of Pittsburg.

CHATHAM, ONT.—Mr. Lannoy, of Belgium, met the city council last week regarding the establishment of a window glass factory here. If the negotiations are concluded, there will be erected a main factory 80 x 200 feet, and three or four store houses 50 x 30 ft.

WOODSTOCK, ONT.—Tenders close July 8th for erection of fire hall for the town; Powell & Ure, architects; W. A. Karn, chairman of committee.—The Board of Works have recommended the construction of certain sewers on Kent, Nelson, Princess and Delatre street.

WELLAND, ONT.—H. C. Marsh, lumber merchant, of Tonawanda, will probably establish a saw mill here for the manufacture of staves and bolts.—The by-law to provide \$40,000 for new school, town hall, and streets and sidewalks has been sanctioned by the ratepayers.

ORILLIA, ONT.—Mullen & Muir, of Toronto, may establish a wall paper factory here. Council has offered free site.—It is understood that, owing to some unforeseen difficulties, the Ragged Rapids electrical transmission scheme is likely to be again thrown open to tender.

VANCOUVER, B. C.—The city council has decided to expend \$6,000 in putting in a new tunnel about half way up Caplinno Hill. Tenders for the work will be invited at once.—G. W. Grant, architect, is preparing plans for a four-storey block, 48 x 120 feet, to be built on Hastings street by R. Walker.

QUEBEC, QUE.—The Canadian Electric Light Co. expect to commence work at an early date on the development of the Chaudiere Falls water power, for which plans have been made by J. M. McCarthy, C.E., and by T. Pringle & Son, of Montreal. The project includes the construction of an electric railway. John Breakey has been elected president.

SARNIA, ONT.—Mr. Jones, engineer, has submitted a report regarding a sewerage system for the fourth ward; estimated cost, \$35,000.—A by-law to issue debentures for the enlargement of the fourth ward school has been passed in council.—Albert Johnston, druggist, is having plans prepared for new residence.

BROCKVILLE, ONT.—The Public School Board have appointed a committee to secure the services of an architect to report as to the cost of ventilating the Victoria school. The Property Committee will also invite tenders for plumbing.—Tenders are invited up to July 12th for erection of addition to county registry office. Plans on application to B. Dillon, architect.

CALGARY, N.W.T.—J. L. Wilson, architect, reports that he is in course of erection residences for R. M. Kirkpatrick, E. D. H. Wilkins and R. D. Sanson. He has also called for tenders for maternity hospital and nurses' home, for completion of upper part of a business block, and for a business block at Fernie, B.C. A few other buildings are contemplated in town and surrounding country.

NIAGARA FALLS, ONT.—A by-law to raise by debentures \$71,000 for purchase of Niagara Falls Electric Light Company's plant by the town was carried on Thursday last. It is proposed to utilize the power during the day by the Ontario Silver Plate Co., who have decided to remove their works to this town.—A New York syndicate is reported to have taken an option on an eight-acre tract of land on the Canadian side, directly in front of the falls, with a view to building a large hotel thereon.

OTTAWA, ONT.—Dr. Robillard recommends a cremating furnace for the disposal of garbage.—The congregation of St. Barnabas church purpose building a new church, after the design of Salisbury cathedral in England. Plans for same are now being prepared.—Rev. Wm. Moll, 620 King street, has just taken tenders on erection of parsonage.—The need of a hose tower at No. 7 fire station has been brought to the attention of the Fire and Light Committee.—M. C. Edey, architect, has advised the council that a 40 h.p. boiler for the police station, with 300 ft. of piping, and the rebuilding of the chimney, would cost \$1,000.—The bill of the Ottawa Suburban Railway Company was before the Railway Committee of the House of Commons last week. Geo. E. Kidd, representing the company, stated that the railway would extend along the canal reserve to Hogs Back and Graham's Bay, with lines across the Ottawa to Kingsmere, Meach's Lake and Chelsea.—The city is about to undertake the construction of a number of concrete sidewalks.—Plans are being prepared for a large addition to St. Joseph's

Hall, Dalhousie street, for the French societies of this city.

WINNIPEG, MAN.—J. H. G. Russell, architect, is receiving tenders for a large brick residence for A. M. Nanton, and is preparing plans for a brick residence at Boissevain, Man., for Thos. Nicol.—It is learned that the Merchants Bank of Canada has purchased property, corner Main and Lombard streets, for proposed building.—Plans are being prepared for an additional storey to Boyd's bakery.—Robert Kerr, general passenger traffic manager of the C.P.R., states that the company will build in this city a brick and stone hotel, station and offices, as soon as the plans are completed in Montreal.—Tenders close July 20th for the purchase of \$350,000 of drainage debentures. Address, D. H. McLellan, provincial treasurer.—J. H. G. Russell has completed plans for a four room brick school building for Wolseley, Assa. Tenders to be called immediately by Levi Thompson, Secretary of Board.—S. Frank Peters, architect, is taking tenders this week on a stone and brick building on Notre Dame street for the Manitoba College of Pharmacy.—Walter Chesteron, architect, has invited tenders for erection of building to be used as a chapel and recreation hall at the Asylum for the Insane, Selkirk, Man.—The Stewart & Harper property on Main street has been purchased by the John Abell Engine Works Co., who will likely erect a warehouse and other buildings thereon.

MONTREAL, QUE.—Tenders close at 10:30 a.m. to-day (Wednesday) for rebuilding frontage of St. Lawrence Market and for repairs to different markets.—The Board of Governors of Royal Victoria Hospital will, at next meeting, consider the erection of an additional wing for isolation purposes.—Albert Holmes is having plans prepared by McDuff & Lemieux, architects, for two houses in Western Ave., Westmount, to be completed in February.—E. Lesperance proposes erecting an apartment house of nine flats in Rue du Zouave, adjoining St. Denis street, cost \$12,000.—Benjamin Deslauriers has under construction in same locality an apartment house; plate glass windows, oak doors and carved oak fire places, cost \$36,000.—Taylor & Gordon, architects, have prepared plans for an apartment house to be built on Milton street, near University, for A. F. Gault; four stories, pressed brick and yellow sandstone, fire-places, special heating, lighting and ventilating appliances, etc., cost \$80,000.—It is reported that the management of the Intercolonial Railway contemplate making large additions to the rolling stock.—F. Bayard talks of erect-

ing an apartment house on Notre Dame street, to cost \$15,000.—Tenders will be awarded immediately by McDuff & Lemieux, architects, for Tooke Bros.' factory at St. Henri; estimated cost, \$60,000.—M. S. Foley, of the Journal of Commerce, has taken out a building permit for new offices, corner Metcalf street and Dominion square, cost \$80,000.—The council of Westmount has passed a resolution authorizing the Montreal Water Co. to lay their pipes on the boulevard from Aberdeen to Lansdowne ave.—The government will be asked to improve the approaches to the Wellington St. bridge.—Joseph Sawyer, architect, is preparing plans for a residence for Dr. H. Dubreuil.—L. O. A. Laforest, superintendent water-works, invites tenders up to July 11th for repairs to the division wall of the low level reservoir, and for service boxes and water meters.

TORONTO, ONT.—An architect is now preparing plans for remodelling the interior of the Canada Life building, to accommodate the head office staff, which will be removed here next fall.—An entertainment was given in Masonic Hall, Parkdale, last week, the proceeds to go towards a fund for the erection of a home for incurable children.—At a meeting of the Industrial Exhibition Board held last week, the erection of a stand at the horse ring and a number of repairs were approved of. It was stated that the Board had in view the erection of a new main building.—The Assessment Commissioner has reported in favor of the extension of Victoria street for the benefit of the projected palace hotel.—Mr. Seaver, of Wellsman & Seaver, Buffalo, and Mr. Louis Shilling, of Salem, N.Y., were in the city a few days ago looking over available sites for the establishment of a smelter here.—The city engineer has recommended the following works: Extension of Fort Rouille street sewer along Dominion street and Dufferin street sewer to end of wharf, cost \$7,000; extension of water main easterly on the Island to Wiman's baths, cost \$900; brick pavement on track allowance on Sherbourne street, from bridge to north drive, cost \$3,700; Admiral road, asphalt, Lowther to Bernard, cost \$9,050; Buchanan street, brick, Yonge to Teraulay, cost \$4,430; James street, macadam, Albert to Louisa, cost \$990; Markham street, asphalt, Harbord to Bloor, cost \$11,140; Broadway Place, cedar block, Spadina avenue to 160 feet west, cost \$480; Carlyle st, cedar block, St. Patrick to 376 feet north, cost \$740; Grosvenor street, gravel, Yonge to Queen's Park crescent, cost \$2580; Palmerston ave., brick, Arthur street to College, cost \$10,120; Florence street, cedar block, Dufferin to Brock ave., cost

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\$19.30; Crescent road, macadam, Yonge street to Rosedale road, cost \$3510; Gifford street, asphalt, Spruce to Carlton, cost \$29.40; lane, first south of Front street, brick, Yonge street to Scott street cost \$1820; Lowther avenue, asphalt, St. George to 158 feet east of Bedford road, cost, \$7200; lane, first south of King st., brick, John to Dorset, cost \$1000.—Building permits have been issued as follows: Trust and Loan Company, addition to 214 Jarvis street, cost \$600; E. V. Ransford, two-storey brick residence, south side Harvard street, near Triller, cost \$3000; Capt. J. P. Beatty, pair two-storey brick houses, 1562-1564 King st. west, cost \$5,500; S. H. Janes, interior alterations to 14-16 King street east, cost \$8,000; Mrs. A. J. Townsend, brick store and residence on Crescent road, cost \$4,000.—The residents of Deer Park will probably ask the town of North Toronto to furnish a water supply to the municipality.—The agreement between the city and the Sunlight Soap Co. has been signed, and Messrs. Lever Bros. have purchased the property east of the Don on which to erect their factory. Tenders for certain work to be done by the city in this connection are being asked for in conjunction with the St. Lawrence market improvements.—F. H. Herbert, architect, wants tenders by Friday, 7th inst., for erection of stone and brick residence on Bloor street west for Dr. G. S. Ryerson. Same architect invites tenders up to 5 p.m. on Thursday for the cut-stone work, plastering, painting, plumbing, sheet metal work and roofing of four residences on Walmer Road for C. S. Dimock.—Notice has been given by the council of its intention to construct the following works: Asphalt pavements on Front street, Jarvis to George, cost \$5,490, and on Lakeview ave, Dundas to Churchill, cost \$6,980; brick on Grove ave, Foxley to Dundas, cost \$4,460; macadam on Spadina ave, King to Front, cost \$8,900, and on Mutual street, Queen to Gerrard, cost \$6,390; cement concrete sidewalks on north side of Front street, from York street west, on south side of Adelaide street, Bay to York, on Bay street, King to Wellington, on Walmer road, Bloor to Lowther, and on Avenue road, Bloor to Davenport; brick sidewalks on portions of Simcoe, Bay and Wellington streets, cost about \$1800.—It is understood that Lever Bros., of the Sunlight Soap Co., are calling for tenders for the new buildings to be erected, plans for which have been prepared by Henry Sproatt, architect. Excavation work will likely be commenced about the 15th inst.—The Pantechneithca store, corner Yonge and Adelaide streets, has been leased by the W. E. Sanford Manufacturing Co., of Hamilton. The store will be remodelled and fitted up as a clothing house.—Mark Hall, architect, has been instructed to submit alternative plans for a frame and a brick building for the machinery hall at the Exhibition

grounds. Work on same will be commenced as soon as possible.—The council intends to construct an asphalt pavement on Church street, from Queen to Bloor, cost \$72,050, and on Albert street, from Yonge to James, cost \$4,100.

FIRES.

Machinery Hall at Exhibition grounds, Toronto, totally destroyed; loss \$17,000—Iroquois Waterworks Co.'s building at Iroquois, Ont., loss \$6,000—Fans, air compressor and building of No. 2 shaft of the Lethbridge Mine at Lethbridge, N.W.T.; loss \$10,000—Residence in East Zorra owned by Mrs. Wm. Chambers, of Woodstock.—About twenty buildings at Bothwell, Ont., were burned on the 2nd inst., at a loss of \$30,000.—Saw mill at Osna-bruck Centre, Ont., owned by H. P. Alguire; loss \$3,000.—Brick residence of Dr. Rowe, about three miles west of Cobourg, Ont., totally destroyed.—A number of buildings in the village of Garthby, Que.; loss \$100,000.—G. T. R. station at Brussels, Ont.—Saw mill and lumber yard at Mitchell Station, Que., owned by Mitchell, Church & Co.; loss \$25,000.—The digester building, sulphur tower and sulphur burning department of the Laurentide Pulp Co., at Grand Mere, Que., were destroyed by fire on Sunday last; loss, about \$30,000.

CONTRACTS AWARDED.

BOIESTOWN, N.B.—New school house: James Holmes, of Dnaktown, contractor.

NORVAL, ONT.—Steel bridge: Hamilton Bridge Co., successful tenderers, \$1,285.

MAISONNEUVE, QUE.—Sewerage sys-

tem: U. Pauze & Son, \$139,000 (accepted); Bastien & Valiquette, \$164,000.

NIAGARA FALLS, ONT.—Cement: B. J. Coulson, \$2.63 per barrel (accepted); W. & F. P. Currie, \$2.69; W. F. Humbert, \$2.95.

AMHERST, N.S.—St. Stephens' Presbyterian church; Elliott & Hopson, of Halifax, architects: James Reid, of Windsor, contractor.

LIVERPOOL, N. S.—The contract for constructing dam, power house, wheel-pit, conduit and tail race for the electric light system for the town has been awarded to F. W. Clarke, of Bridgewater.

MONTREAL, QUE.—G. T. R. station at Point St. Charles: Peter Lyall & Son, contractors.—Turgeon & Lefort, architects, have let the contract for houses on Massonneuve street for C. H. A. Guimond to Polycarpe Dione.

WINNIPEG, MAN.—Rebuilding Northern Pacific depot and offices: Charles Sharpe, contractor.—Walter Chesterton, architect, has let contracts for improvements to block on Main street, adjoining the Imperial Bank, for Arthur M. Frazer; price, \$7,562.

OTTAWA, ONT.—The council has finally decided to award the contract for section four of the main drainage system to Stuart & O'Leary, of this city, at the tender submitted by Robert Grant, of Toronto, viz., \$88,653.81. The original tender of the firm was \$91,177.

ACTON, ONT.—Baptist Church: Carpenter work, roofing, galvanized iron and hardware, John Evans, Acton; brick and stone work, T. H. Taylor, Nassagaweya;

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plastering, John Kennedy, Nassagaweya; building will be 30x68 ft., pressed brick, with stone foundation. J. F. Brown, Toronto, architect.

EMBRO, ONT.—Improvements to Knox church:—Clarkson Bros., of Woodstock, carpentry; William McKay, Embro, plastering; Col. Lewis, London, painting; Valley City Seating Co., Dundas, seating.

SARNIA, ONT.—Tenders for granolithic pavements were received by the council as follows: Simpson & McDonald, 12½c per square foot; Wm. Ellis, 12c for all walks south of George street, 11½c for all north of George, and 15c for crossings; Joseph Ellison, 15c. Name of successful contractor not learned.

TORONTO, ONT.—The Property Committee of the Public School Board on Monday last awarded the following tenders for galvanized iron and tinsmith work repairs:—Brant street, Phoebe street, and John street, H. Tucker, \$283; Church street and McCaul street, \$339; Cottingham street and Huron street, \$323, A. Matthews; Crawford street, Givens street and Orphans home, G. Duthie, \$260; Dovercourt and Perth ave., Douglas Bros., \$289; Duke street, George street, and Sackville street, A. Matthews, \$279; Gladstone avenue, Brock street and Shirley street, Douglas Bros., \$92; Hamilton street and Leslie street, A. B. Ormsby & Co., \$278.

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NOTES ON SPECIFICATIONS FOR CAST IRON AND GAS PIPES.*

C. A. MEISSNER, Londonderry, Nova Scotia.
(Concluded.)

And yet when a pipe breaks or shows defect, the statement is frequently made that it was not tested. To the uninitiated this may seem a correct conclusion, yet this very question of pipes that have stood the pressure and hammer tests, breaking or showing defects at a later period, is one that has attracted the attention of the best water engineers on this continent, and been discussed in the meetings of their societies without arriving at any definite conclusion as to its remedy. The tenacity of cast iron is very great and I consider the reason of subsequent breaking due to the handling the pipe receives in yard, on cars, and in trenches, which develops by fracture or concussion the weak spots that were able to resist the pressure and hammer test. The percentage of such breaks, however, is so small that if the citizens will look on it in honesty and fairness they will find no real cause for anxiety or complaint, for few pipe develop such weakness and have to

* Paper Read before Canadian Mining Association.

be replaced. It is like anything else—we cannot yet reach perfection in all work which we undertake.

In one respect the Admiralty specification differs from those used on this continent, and that is that it calls for 9 ft. lengths, while pipe made here are twelve feet lengths. The greater length saves a great deal of labor and extra lead in reducing the number of joints by one-fourth, and yet the pipe are as easy to handle and to lay in trench. I am not aware of the reason for this among Scotch and English makers.

There is one more feature that I would warn town officials against, and that is not to undertake a system without the services of an engineer, and, preferentially of an engineer who held some previous experience in waterworks construction, though his whole training will enable a capable engineer to master the details and difficulties of a smaller system. This is particularly the case where special classes of pipe are put in, such as flexible joint for crossing a river, etc. I have seen some very unfortunate and costly experiments made with this pipe because the towns begrudged the few dollars to an engineer. Yet the few dollars would have saved the town many hundreds. Such work must be studied out; it must be done right or it will invariably fail, and likely as not the blame laid on the pipe, when it is the method of "rule of thumb" and "penny wise and pound foolish" that is entirely to blame.

I trust some of these points will prove of interest and value, and that a little thought and money expended in investigating these matters will avoid many

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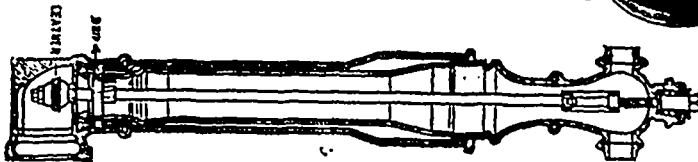
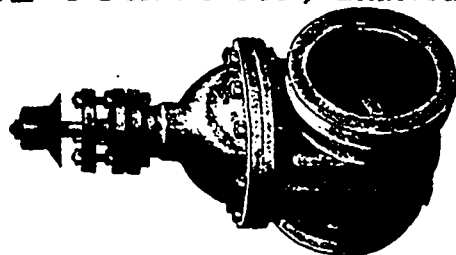
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annoyances and costly delays in future systems.

SPECIFICATION FOR CAST IRON PIPES.

(1) The pipes are to be cast to the lengths, diameters and thicknesses quoted in the schedule.

(2) The whole of the pipes, bends and other castings are to be of the best metal, remelted in the cupola, of fine grain, homogeneous, of even grey color, to be cast in dry sand moulds, and with a sufficient head of metal to ensure solidity. This head or dead end is in all cases to be cut off in the lathe.

(3) The larger pipes of 4 in. diameter and upwards are to be cast vertically, socket downwards. Pipes of small diameter may be cast on inclined beds. The pipes are to be truly cylindrical in bore, straight in axes, and to have the inner and outer surfaces as nearly as possible concentric. The internal diameter is to be such that a wooden disc of $\frac{1}{8}$ of an inch less in diameter than that specified shall pass freely through the length of the pipe.

(4) All pipes and other castings of uneven thickness, or in which any imperfections shall appear, or any sand holes, air holes, scabs or spongy places occur, or in which any defect may be found plugged or filled up, will be rejected.

(5) Test bars shall be cast from time to time as may be directed. They shall be run while the pipes are being cast, and from the same metal. These bars shall be 3 or 4 ft. long, 2 in. deep and 1 in. broad, and when placed on supports 3 feet apart shall bear without fracture a central load of 30 cwt. applied gradually, and show a deflection of $\frac{3}{8}$ of an inch.

(6) The whole of the pipes are to be subjected to a proof by hydraulic pressure of 400 ft. head.

Each pipe while under pressure shall be struck hard from end to end with a hammer of from 4 lbs. to 7 lbs. weight, according to the size and thickness of the pipe, and such pipes as may be considered defective in the opinion of the inspecting officer shall be inspected and at once marked to prevent their acceptance if delivered.

(7) Should an inspecting officer not be present while the pipes are being proved, a proof note, showing that the pipes have been tested by the contractor in accordance with this specification, shall be sent for the information of the superintending officer, and such pipes as may then be found defective will be rejected, and must, after due notice, be forthwith removed from premises by and at the cost of the contractor.

(8) The pipes after proof are to be thoroughly cleaned inside and out, and are then to be coated by Dr. Angus Smith's patent process. Each pipe is to be heated uniformly in a proper oven to 100 degrees Fahrenheit and dipped vertically into a mixture of coal tar, pitch, resin and linseed oil (5 to 6 per cent.), which must be kept at a temperature of 300 degrees Fahrenheit, and not allowed to thicken unduly. When each pipe attains the temperature of the above mixture it may be withdrawn gradually, and allowed to cool in a vertical position.

No pipe will be accepted unless perfect cohesion has been affected between the metal and the coating, both inside and out.

(9) Such marks or numbers as may be directed shall be cast on each pipe or other casting for the purpose of identification; and, after the pipes are coated, such paint marks as may be arranged shall be placed on each casting, to facilitate transport, sorting and laying.

(10) The weights of the other pipes and castings will be estimated according to the dimensions quoted in the schedule herewith.

A deviation from the weights to the extent of 5 per cent. will be permitted; that is to say, any pipe more than 2 per cent. below the specified weight will be rejected, and where the tender is by weight any excess beyond 3 per cent. on each separate casting will be paid for.

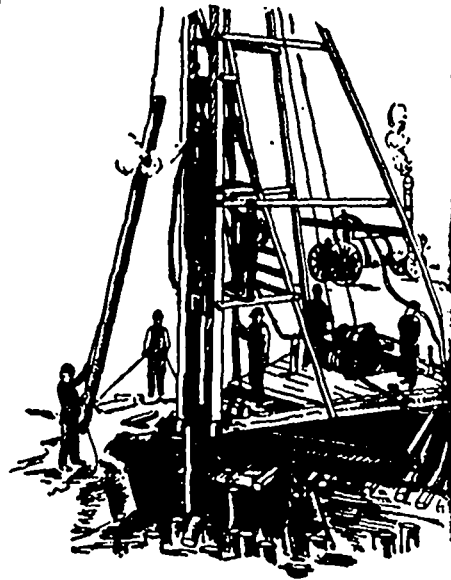
(11) All testing and proving on the contractor's premises shall be carried out at his cost, and to the satisfaction of an inspecting officer, who shall be afforded every facility in the discharge of his duties, and shall be provided by the contractor with such gauges and apparatus as may be necessary for the proper testing and inspection of the work.

OFFICER IN CHARGE OF WORKS.

Mr. E. G. Barrow, city engineer of Hamilton, Ont., has been appointed engineer of waterworks and sewage disposal. The office of street commissioner has been dispensed with, and the duties of that official will be merged in those of the city engineer. At a meeting of the council held on Monday last, Mr. E. B. Wingate, a local engineer, was chosen for the position of city engineer.

The imports of cement at Montreal last week were 1,000 barrels English, as against 300 for the previous week, making a total to date of 11,400 English and 28,130 Bel-

gian and German. There has been an improvement in trade to note. A sale of 2,000 barrels Belgian was made on local account at \$2, ex wharf. Outside of this sale business is of a jobbing character.



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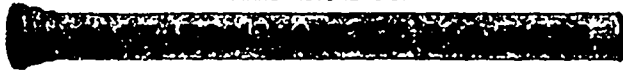
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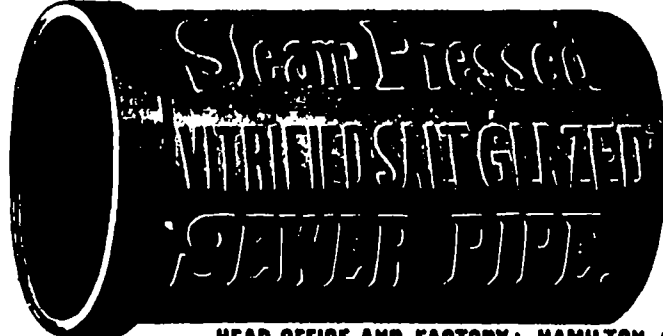
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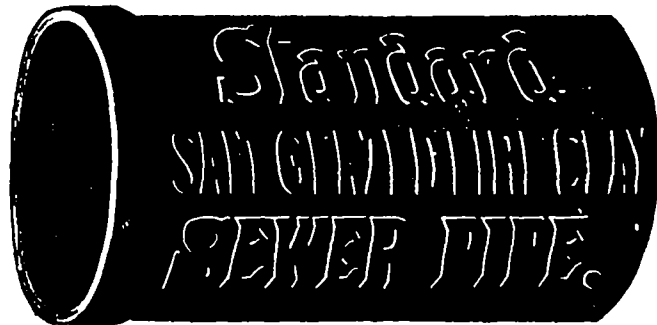


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| Quebec and Vermont rough granite for building purposes, per c. ft. f.o.b. quarry | 40 |
| For ornamental work, cu. ft. | 40 |
| Granite paving blocks, 8 in. x 12 in. x 6 in. x 4 1/4 in. per M. | 50 00 |
| Granite curbing stone, 6 in. x 20 in. per lineal foot..... | 70 |

CREDIT VALLEY STONE.

| F.O.B. Quarries. | |
|--|-----------|
| Rubble, per car of 16 tons..... | 7 00 |
| Brown Coarsing, up to 10 in., per sup. yard..... | 1 50 1 75 |
| Brown Dimension, per cub. ft. | 1 00 |
| Grey Coarsing, per sup. yard | 45 |
| Grey Dimension, per cub. ft. | |

LONGFORD STONE.

| | |
|-----------------------------|------|
| Rubble, per 30 M. car..... | 5 00 |
| Ashlar, per cub. yd..... | 2 00 |
| Dimension, per cub. ft..... | 18 |

SLATE.

| Toronto. Montreal. | |
|---------------------------------------|----------------|
| Roofing (per square), | |
| " red..... | 7 50 30 00 |
| " purple..... | 8 50 10 00 |
| " unslating green..... | 8 50 7 00 8 00 |
| " black..... | 7 50 6 00 |
| Terra Cotta Tile, per sq..... | 20 00 25 00 |
| Orr ariental Black Slate Roofing..... | 8 80 6 60 |

CEMENT, LIME, etc.

| | |
|-----------------------------------|---------------------|
| Portland Cements— | |
| German per bbl..... | 2 90 3 10 2 55 2 65 |
| London..... | 2 95 3 00 2 25 2 45 |
| Newcastle..... | 2 70 3 00 1 95 2 10 |
| " Joson Bra Portland..... | 3 05 3 25 2 70 2 80 |
| " Dyckerhuch..... | 3 05 3 25 2 75 2 90 |
| North's "Condor"..... | 2 95 3 10 2 65 2 80 |
| English, artificial, per bbl..... | 2 85 3 00 2 35 2 45 |
| Belgian, natural, per bbl..... | 2 10 2 25 2 00 2 20 |
| Canadian, artificial, "..... | 2 85 3 00 2 60 2 70 |
| Roman..... | 2 70 2 85 |
| Parian..... | 5 25 5 25 5 75 5 75 |
| Superfine..... | 1 25 7 00 2 25 9 00 |
| " Karlistadt" (German)..... | 3 05 3 25 2 75 2 90 |
| " Germania" (German)..... | 3 25 3 25 2 75 2 90 |
| " Rooter" (Belgian)..... | 2 15 2 20 |
| " Keystone" (Belgian)..... | 2 65 2 30 |
| " Anvil" (Belgian)..... | 2 95 2 05 |
| " Burham" (English)..... | 2 95 3 00 2 25 2 45 |
| Hydraulic Cements— | |
| Thorold, per bbl..... | 1 50 1 65 |
| Queenston, "..... | 1 50 1 50 1 60 |
| Napanee, "..... | 1 50 1 50 |
| Hull, "..... | 1 50 1 50 |
| Ontario, "..... | 1 25 |

| Toronto. Montreal. | |
|---------------------------------|-------------------------|
| Keene's Coarse "Whites"..... | 5 50 6 00 5 00 5 50 |
| Fire Bricks, Newcastle, per M | 30 00 35 00 26 00 21 00 |
| " Scotch..... | 30 00 35 00 19 00 21 00 |
| Lime, 100 lbs., Grey..... | 25 |
| " " White..... | 30 37 |
| Plaster, Calcined, N. B..... | 2 00 1 50 |
| " " N. S..... | 2 00 1 50 |
| Hair, Plasterers', per bag..... | 80 1 00 000 |

HARDWARE.

| | |
|---|-----------|
| The following are the quotations to builders for nails at Toronto and Montreal: | |
| Cut nails, 50d & 60d, per keg..... | 2 25 1 85 |
| Steel " " "..... | 2 25 1 95 |

CUT NAILS, FENCE AND CUT SPIKES.

| | |
|---------------------------------------|-----------|
| 40d, hot cut, per 100 lbs..... | 2 15 1 85 |
| 20 to 22d, hot cut..... | 2 25 1 95 |
| 8d, 9d, " "..... | 2 30 2 10 |
| 6d, 7d, " "..... | 2 45 2 15 |
| 4d to 5d, " "..... | 2 55 2 25 |
| 3d, " "..... | 2 80 2 85 |
| 2d, " "..... | 3 15 2 85 |
| Cut spikes, 10 cents per keg advance. | |
| Steel Nails, 11c. per keg extra. | |
| Wire nails, 20 base, 11c. | |

Iron Pipe:

| | |
|------------------------------------|-------------|
| Iron pipe, 1/2 inch, per foot..... | 6c. 6c. |
| " " 3/4 " " "..... | 7 7 |
| " " 1 " " "..... | 8 1/2 8 1/2 |
| " " 1 1/2 " " "..... | 12 12 |
| " " 2 " " "..... | 17 17 |
| " " 2 1/2 " " "..... | 24 24 |
| " " 3 " " "..... | 30 30 |
| " " 3 1/2 " " "..... | 43 43 |
| Toronto, 65 per cent. discount. | |
| Montreal, 70 per cent. discount. | |

Lead Pipe:

| | |
|-------------------------|------------------|
| Lead pipe, per lb..... | 7c. 25 per |
| Waste pipe, per lb..... | 7 1/2 cent. dis. |

Galvanized Iron:

| | |
|--|-----------------------|
| Adam's—Mar's Best and Queen's Head and Opolo: | |
| 16 to 24 gauge, per lb..... | 4 1/2c. 4 1/2c. 4 1/2 |
| 26 gauge, "..... | 4 1/2 4 1/2 4 1/2 |
| 28 " "..... | 5 5 4 1/2 |
| Gordon Crown— | |
| 16 to 24 gauge, per lb..... | 4 1/2 4 1/2 4 1/2 |
| 26 gauge, "..... | 4 1/2 4 1/2 4 1/2 |
| 28 " "..... | 4 1/2 4 1/2 4 1/2 |
| Note.—Cheaper grades about 1/2c. per lb. less. | |

Structural Iron:

| | |
|---------------------------------|-----------|
| Steel Beams, per 100 lbs..... | 2 75 2 00 |
| " channels, "..... | 2 85 2 30 |
| " angles, "..... | 2 50 2 61 |
| " tees, "..... | 2 80 2 65 |
| " plates, "..... | 2 55 2 00 |
| Sheared steel bridge plate..... | 2 00 |