

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- Coloured covers/
Couverture de couleur
- Covers damaged/
Couverture endommagée
- Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée
- Cover title missing/
Le titre de couverture manque
- Coloured maps/
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur
- Bound with other material/
Relié avec d'autres documents
- Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- Additional comments:
Commentaires supplémentaires:

- Coloured pages/
Pages de couleur
 - Pages damaged/
Pages endommagées
 - Pages restored and/or laminated/
Pages restaurées et/ou pelliculées
 - Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
 - Pages detached/
Pages détachées
 - Showthrough/
Transparence
 - Quality of print varies/
Qualité irrégale de l'impression
 - Continuous pagination/
Pagination continue
 - Includes index(es)/
Comprend un (des) index
- Title on header taken from:/
Le titre de l'en-tête provient:
- Title page of issue/
Page de titre de la livraison
 - Caption of issue/
Titre de départ de la livraison
 - Masthead/
Générique (périodiques) de la livraison

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL OF

PUBLIC WORKS • TENDERS • ADVANCE INFORMATION • AND MUNICIPAL PROGRESS

EVERY THURSDAY

THIS PAPER REACHES EVERY WEEK THE TOWN AND CITY CLERKS, TOWN AND CITY ENGINEERS, COUNTY CLERKS AND COUNTY ENGINEERS THROUGHOUT CANADA

Vol. 4.

Toronto and Montreal, Canada, March 16, 1893.

No. 5

THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY THURSDAY

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 2367.

64 Temple Building, - Montreal.

Bell Telephone 2299.

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

ADVERTISING RATES ON APPLICATION.

At its Convention held in Toronto, Nov. 20 and 21, 1889, the Ontario Association of Architects signified its approval of the CANADIAN CONTRACT RECORD, and pledged its members to use this journal as their medium of communication with contractors with respect to advertisements for Tenders.

The following resolution was unanimously adopted at the First Annual Meeting of the Province of Quebec Association of Architects, held in Montreal, Oct. 10th and 11th, 1890: "Moved by M. Perrault, seconded by A. F. Dunlop, that we the Architects of the Province of Quebec now assembled in Convention being satisfied that the CANADIAN CONTRACT RECORD affords us a direct communication with the Contractors, - Resolved, that we pledge our support to it by using its columns when calling for Tenders."

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.



NOTICE TO CONTRACTORS.

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up to eleven o'clock a.m. on MONDAY, MARCH 20, 1893, for the supply of

258 Feet 4-foot Steel and Iron Pipe.

Tenders will also be received in the same manner and on the above date for the necessary PILING and LAYING of the said pipe, being the extension of the Simcoe street sewer.

Plans and specifications may be seen and forms of tender obtained on and after Tuesday, the 14th inst., at the office of the City Engineer.

A deposit in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 5 per cent. on the value of the work tendered for under \$1,000, and 2½ per cent. on the value of the work tendered over that amount, must accompany each and every tender, otherwise it will not be entertained.

All tenders must bear the bona fide signatures of the contractor and his sureties (see specifications), or they will be ruled out as informal.

The Committee do not bind themselves to accept the lowest or any tender.

DANIEL LAMB,

Chairman of Committee on Works.

Committee Rooms, Toronto, March 9, 1893.

TENDERS WANTED.

Tenders will be received at the office of the undersigned until 6 p.m. of March 23 for the several trades and works required in the erection of a store and office building on Princess street for the Messrs. Ford. The lowest or any tender will not necessarily be accepted.

POWER & SONS, Architects,
Kingston, Ont.

TO CONTRACTORS.

TENDERS.

Sealed tenders will be received at the offices of the architects until 12 o'clock noon, on SATURDAY, the 27th INST., for all works in connection with the erection of a new building for the Bank of Toronto, corner St. James and McGill Streets, Montreal. Each contractor must be prepared to provide, if called upon, two approved sureties to the full amount of his contract. It is not guaranteed that the lowest or any tender will be accepted.

Plans and specifications may be seen after the 11th inst. at the office of

TAYLOR & GORDON, Architects,
43 St. Francois Xavier St., Montreal, Que.

TENDERS

FOR COMPLETION OF

Elliot & Neelon's Contract

OF

CITY AND COUNTY BUILDINGS

Tenders addressed to E. J. LENNOX, Architect, will be received through registered post up to noon on THURSDAY, the 30th DAY OF MARCH, 1893, for the completion of the tender and contract of Messrs. Elliot & Neelon, in connection with the erection of the New Court House and City Hall, for the City of Toronto and County of York.

Copies of the plans, specifications and general conditions and tender and contract can be seen at the offices of the Architect, Mr. E. J. Lennox, south-east corner of King and Yonge streets, Toronto, at once, where tenderers may personally procure authority whereby they may obtain a view of the present condition of the work to enable them to make the necessary calculations of the amount of work done, and the balance of work required for completion of the contract referred to.

Each tender must be sent in printed forms and enclosed in envelopes, which will be supplied by the Architect.

Tenders to be accompanied by a marked check, payable to Mr. E. J. Lennox, Architect, or by a cash deposit equal to 1 p. c. (one per cent.) on the amount thereof.

The deposits of unsuccessful tenderers will be returned as soon as the successful tender is accepted by the Architect.

The deposit of the successful tenderer will be held until the contracts are executed to the satisfaction of the Architect and satisfactory security given for the proper completion of the work tendered for.

Any party whose tender is accepted failing to carry out the same will forfeit his deposit, which will be credited in such a way in connection with the works as a Judge of the High Court of Justice, upon application, may direct.

The lowest or any tender not necessarily accepted.

The above conditions and the conditions embodied in form of tender must be strictly adhered to in tendering as informal tenders will be ruled out.

E. J. LENNOX, Architect.

TENDERS

Will be received at the office of the undersigned until MONDAY, THE 27th INST., for all trades required in the erection of a House on Burnside Place. Plans and specifications on view at my office on Monday, the 20th inst.

J. A. P. BULMAN, Architect,
156 St. James Street, Montreal.

TENDERS WANTED.

Tenders will be received at the office of the undersigned until noon, FRIDAY, 31st INST., 1893, for the artificers' works to be done in erecting a Brick School House at Woodbridge. Plans and specifications on view at my office. Tenders for whole work or parts. The lowest or any tender will not necessarily be accepted. Contractors will be required to furnish satisfactory evidence of their ability, financial and otherwise, to properly execute the work.

JAS. A. ELLIS, Architect,
GEO. ELLIOTT, Kilburn Hall, Toronto Junction.
Sec. P. S. B., Woodbridge.

TENDERS WANTED.

Tenders will be received at the office of the undersigned until THURSDAY, MARCH 23rd, 1893, for the erection of Two Pair Semi-detached Dwelling Houses in the City of Guelph. Plans, etc., on view at the office of the architect. The lowest or any tender will not necessarily be accepted. Contractors will be required to furnish satisfactory evidence of their ability, financial and otherwise, to properly execute the work.

JOHN DAY, Architect,
Guelph, Ont.



Tenders for Plumbing and Heating at New Isolation Hospital.

Tenders addressed to the undersigned will be received at the City Clerk's office through registered post up to noon on Wednesday, the 22nd inst., for the plumbing work and heating apparatus for the new Isolation Hospital.

Plans and specifications may be seen at the office of Mr. Henry Simpson, architect, 9½ Adelaide street east.

Tenders must be accompanied by a cash deposit, or a marked check equal to 2½ per cent. on tenders over \$1,000, and 5 per cent. on tenders below that amount, and must contain the names and addresses respectively of two responsible sureties for the due fulfillment thereof. The lowest or any tender not necessarily accepted.

WM. CARLYLE,

Chairman Local Board of Health.

Toronto, March 14th, 1893.

TENDERS WANTED.

Sealed tenders will be received up to MARCH 27th, 1893, for

TWO IRON OR STEEL BRIDGES,

(white oak joist and flooring), one on boundary of Downie and Fullerton Townships, County of Perth, Ont. This is 33 (Thirty-three) feet in clear, fourteen feet roadway, and crosses over Twentieth Creek. The other crosses Trout Creek, Township of Downie, near Ardali's mill, and is 70 (seventy) feet in clear, 14 (fourteen) feet roadway, not to exceed over fourteen feet panels, both to be completed on or before the 1st day of September, 1893.

Lowest or any tender not necessarily accepted. Tenders to be sent to the undersigned, separately.

JOHN CORRIE,

Bridge Inspector.

Stratford, March 7, 1893.

CONTRACTS OPEN.

ST. GROUGE, ONT.—New public schools are to be erected here.

PERTH, ONT.—The ratepayers are agitating for the establishment of a market.

ELMIRA, ONT.—Mr. Albert Lorch contemplates the erection of a cheese factory.

BELLEVILLE, ONT.—The construction of granolithic sidewalks is being agitated.

DESERONTO, ONT.—The Public School Board has decided to rebuild the school house.

SMITHS FALLS, ONT. A handsome new structure for the Union Bank will be erected here this summer.

SEAFORTH, ONT.—The ratepayers have decided to provide funds for the erection of a three-story town hall.

TILBURY CENTRE, ONT.—A new congregational church is to be built here; Rev. J. A. McCausland, pastor.

BROCKVILLE, ONT.—A new high school building is to be erected here, plans for which are now being prepared.

SCHIBER, ONT.—Mr. J. A. Ellis, architect, of Toronto Junction, is preparing plans for an hotel to be erected here.

STEWARTON, ONT.—The congregation of the Presbyterian church are considering a proposal to enlarge the church building.

BRADFORD, ONT.—The Presbyterian congregation have decided to build a new church, to cost between \$1,000 and \$5,000.

TORONTO JUNCTION, ONT.—The town authorities will ask the Government to build a new post-office and custom house here.

NEW DUBLIN, ONT.—Mr. N. E. Brown will receive tenders until Saturday, the 18th inst., for the erection of a stone church in this village.

WHITBY, ONT.—The Public School Board propose to erect a new Collegiate Institute on the Henry street property, at a cost of \$12,000.

GLEN ROBERTSON, ONT. Steps will be taken early this spring to build a new Catholic church, the present edifice proving too small for the congregation.

PORT ARTHUR, ONT.—Mr. J. A. Ellis, architect, of Toronto Junction, has received instructions to prepare plans for another residence to be erected here for Mr. Arking.

PETERBORO, ONT.—The Public School Board have accepted plans for a new four-roomed school, also for an addition of four rooms to the present Central school building.

DARTMOUTH, N. S.—It is proposed to call a meeting of the ratepayers at an early date to obtain their consent to borrow a further sum of \$30,000 for the extension of the waterworks and sewerage system.

GUELPH, ONT.—Tenders are invited until the 20th inst. for the erection of a residence on the corner of London Road and Chambers street. Plans may be seen at the office of G. B. Ryan & Co.

YARMOUTH, N. S.—At a recent meeting of the subscribers to the proposed new hotel, two plans of the building were submitted. A committee

was appointed to proceed with the erection of the building as soon as the balance of the money required was subscribed.

MITCHELL, ONT.—Messrs. Whyte & Son contemplate erecting an addition to their pork factory this spring, to cost between \$15,000 and \$20,000.

ST. JOHNS, QUE.—At a recent public meeting it was decided to recommend to council to offer Messrs. J. & A. Macdonald a bonus of \$25,000 to aid in rebuilding their works recently destroyed by fire.

PAISLEY, ONT.—Mr. S. McArton, Reeve of this town, will receive tenders until the 30th inst. for the erection of a one span iron or steel bridge over the Sauguee river, north of Paisley, also for the superstructure of the same.

NIAGARA, ONT.—The additional grant of \$16,000 for High School purposes was carried last week by a vote of the ratepayers. This will enable the Board to erect one of the finest Collegiate Institutes in the province on the six acres of land purchased in Wesley Park for that purpose.

BERLIN, ONT.—Plans are being prepared for a new Evangelical Association church, which will be built here as soon as the weather will permit. The Town Council have granted permission to the Berlin and Waterloo Street Railway Company to change their present system to that of the trolley.

AMHERST, N. S.—Upwards of \$12,000 has already been subscribed towards the fund for the building of the new Baptist church. The required amount is \$30,000, but it is understood that building operations will be commenced as soon as the amount reaches \$20,000. The plans have been prepared by Mr. J. C. Dumaresq, architect, Halifax.

CORNWALL, ONT.—Messrs. Davis & Sons, canal contractors, are making preparations to commence work on the Cornwall canal. They have commenced to cut ice at the swing bridge, so as to enable them to build the pier for the new bridge as soon as the canal is emptied of water on April 16.

WINNIPEG, MAN.—The Bank of Ottawa have purchased a site on Main street adjoining their present premises and will erect a substantial bank building at once. The Dominion Government will make another loan of one million dollars for public buildings. Capitalists are negotiating with the Manitoba Government for aid towards building another railroad between Winnipeg and Lake Superior. It is understood the Manitoba government is favorable to the scheme and will bonus the line in the province to the extent of \$450,000. The directors of the Manitoba & Southwestern and Duluth & Winnipeg roads have it is understood, joined forces with the new company.

HAMILTON, ONT.—Mr. Thomas Beasley, City Clerk will receive tenders until Wednesday, the 22nd inst., for supplying lead pipe, cast iron pipe, ordinary castings, stop cocks, 2½ inch rubber hose, service brasswork, hydrants, pig lead and tanks for street watering wagons. Mr. W. A. Edwards, architect, has called for tenders for the erection of a new Sunday school building for the First Methodist church. The Board of Education has decided to erect a new Collegiate Institute and have appointed a committee to select a site for the same. Mr. S. E. Leather will erect a large residence on the Ferris property at the head of Queen street. The Sunday school building in connection with Knox church will be enlarged this spring.

LITTLE CURRENT, ONT.—The engineers who have been out for the last six months surveying the final location of the Manitoulin and North Shore railway have just completed their work and are now engaged preparing the plans and profiles, as the company purposes to commence building early in the spring. The road runs from the town of Little Current on the Grand Manitoulin in a north-easterly direction to Nelson station, on the Sault branch of the C. P. R. a distance of 40 miles. Only one bridge of 450 feet is required to connect the island with the main land. This road has been bonused by both the Provincial and Dominion Governments to the extent of \$6,200 per mile for 30 miles, and it is

promised by both Governments that the remaining 10 miles will be subsidized, which is expected this session.

LONDON, ONT.—The Free Library Board are asking for tenders for a site on which to erect the proposed new library building. The work of putting a large addition to the Grigg house will be commenced shortly. The addition will be 40 x 50 feet, three stories high with basement and will provide eight additional sample rooms, and sixteen bedrooms. The cost will be about \$1,000. The city engineer has issued the following permits: J. K. H. Pope, brick residence on Queen street South, London, cost \$2,500; Thomas Cousins, frame residence, 133 Bathurst street cost \$1,000. A deputation from this city recently waited on the Dominion Government to urge the necessity of replacing the present drill shed in this city by a new building. The Minister promised to give the matter careful consideration. The Canadian General Electric Company have had plans prepared for the erection of their power house on the property bounded by Thames street, Bathurst street, the river and the Grand Trunk Tracks. It will be 85 by 135 feet, and will have from 1,000 to 1,200 horse power boilers and engines, with the necessary dynamos.

OTTAWA, ONT.—We learn that ex-Ald Hutchison purposes erecting a very handsome residence this spring on the two lots at the corner of Concession and Queen streets. Messrs. Arnold & Calderon are preparing plans for a new residence for Mr. J. W. McKee, which is to be erected this summer at the corner of Elgin and Lisgar streets. Ex-Mayor McDougall purposes putting up several houses, costing about \$2,500 each, on the property known as block 29, west side of Cumberland street, adjoining the college grounds and in rear of the Waller property. Ald. Corry has purchased the Blackburn property at the corner of Rideau and Sussex streets, and will probably build thereon. Mr. Billings, assistant architect of the Department of Public Works, has gone to Grosse Isle to take in hand at once the alterations and improvements which are to be made in the buildings in connection with the quarantine station there. A deputation from Chatham and vicinity recently waited on the Minister of Public Works and asked for an appropriation to dredge out about ten acres of the harbor of Rondeau, so as to form for Lake Erie a harbor of refuge for distressed vessels. The building committee of the Y. W. C. A. have secured the lot on the south east corner of Maria and Metcalfe streets on which to erect their proposed new building. Mr. David Ranges, owner of the Grand Palace Hotel lately destroyed by fire, contemplates rebuilding at an early date.

TORONTO, ONT.—A conference was held last week between the Commissioner of Public Works for Ontario and a deputation from the City Council regarding the improvement of the Queen's Park. Some improvements were decided upon, and in all probability a fence similar to the one around the Horticultural Gardens will be erected. Messrs. Dick and Wickson, architects, have prepared plans for alterations and additions to warehouses at Nos. 9 and 11 Church street for Mr. John Leckie. At the Etobicoke Township Council meeting held last week, the Reeve was instructed to ascertain the cost of placing an iron or steel bridge over the Mimico river on the Lake Shore road. The Board of Works has decided to extend the Simcoe street sewer to the new windmill line, at a cost of \$2,850. A sub-committee has been appointed by the Property Committee to select a suitable site for the proposed new fire hall, to be located west of Bay street and south of Queen street, and which will take the place of the present Bay street structure. Mr. Timothy Eaton proposes to erect a woodenware factory on a strip of land which he has purchased on Westmoreland avenue. The Separate School Board, at a meeting held on Tuesday last, decided to erect a small school east of the Don, between Gerrard and Queen streets. Building permits have been granted as follows: Geo. Sheard 3 story bk. store and dwelling, n. e. cor. Yonge and McGill sts., cost \$4,500; J. K. Kerr, 3 story bk. additions to stores, 184 to 188 King st. w., cost \$5,000; Methodist Book Room, additions to building on Temperance st., cost \$5,500. Work has commenced on pulling down the buildings at the south-west corner of Agnes and

Yonge streets prior to the building of a block of stores. Mr. H. Harris is the architect.

MONTREAL, QUE.—Building operations will be commenced shortly on the erection of the O'Brien Memorial hall at Point St. Charles. The Harbor Commissioners will invite tenders until Tuesday, the 21st inst., for the supplying of 4,000 tamarac, or hemlock, railway ties, about 6,000 tons of steam coal, and the usual supply of iron, spikes, bolts, oil and stores required during 1893. The tenders to be addressed to the Secretary, Alexander Robertson. The Superintendent of Waterworks has recommended the purchase of a new pumping engine, of 10,000,000 gallons capacity, also three new boilers of the Heaney type, at a cost of \$70,000. The waterworks Committee has decided to report to council in favor of granting the sum required for the purchase of the same. The Superintendent has also recommended the purchase of 3000 tons of waterpipe and 300 tons of castings. Mr. St. George City Surveyor has completed the plans for a tunnel under Brock street from Craig street to the rivetment wharf. It will be 550 feet long 30 feet broad, to be paved with stone, lit with electricity and will cost about \$165,000. The Town Council of St. Lambert are considering the question of improving the roads and erecting a town hall. The Secretary of the province of Quebec board of health has written to the civic authorities urging the necessity for erecting at once a suitable hospital for the treatment of contagious disease. The promoters of the new gas company will apply to Parliament for incorporation shortly. Immediately after obtaining the same, the company will commence the erection of works. The Merchants' Electric and General Service Co. contemplate erecting a new building for their electric plant. Messrs. Resther, Resther & Vanier have been appointed architects for the new police station in Hochelaga ward, and Mr. E. Mann for the station in St. Lawrence ward. The Superintendent of Waterworks has asked the Committee for \$5,000 to drain the Lower Lachine road, \$1,260 for new bridges, and \$6,900 for a new angle wall at the entrance to the aqueduct. Mr. J. Haynes, architect, is preparing plans for Champlain school, to be built on the corner of St. Hubert and Mignonne streets for the Catholic School Commissioners. The cost will be about \$50,000. A. Gendron, architect, is preparing plans for two houses to be erected on Wood Ave. Cote St. Antoine, with red sandstone front, for Mr. Jas. Douglas; also for four houses to be erected on Seymour Ave. for Mr. Peter Gillespie, solid brick with stone front. J. A. P. Bulman, architect, is preparing plans for six houses and alterations in flats, St. Catharine street east; four villas, Cote St. Antoine; private hospital 60 x 130, a house on St. Denis street to cost \$6,000.

FIRES.

The first Presbyterian church at Upper Stewiacke, Colechester county, N. S. was entirely destroyed by fire last week. The Windsor hotel at Wallaceburg, Ont., has been destroyed by fire. Loss, \$3,000, partly covered by insurance. Henry & Oldham's general store, Rychman's tailor shop, Cornwall's dry goods and grocery establishment, the Knights of Labor Hall, and C. Jeffries' boot and shoe store at Beamsville, Ont., were destroyed by fire last week. The insurances on the buildings are as follows: Henry & Oldham, \$7,000; George Beatty, \$2,000; C. Jeffries, \$1,500. The residence of Mr. John Pringle, at Owen Sound, Ont., has been recently destroyed by fire, insurance on building and contents, \$1,000. Fire at Vankleek Hill, Ont., on the 9th inst., destroyed John R. McLaurin's store, Peter McLaurin's store and M. Anderson's residence. The leather-splitting establishment of Mr. Clement, of St. Roch, Que., has been damaged by fire to the extent of \$10,000. Mr. Henry Cross' general store in Fenella Ont., was burned on Saturday morning last, together with contents and dwelling, including the postoffice and telephone office. Loss about \$3,000, insured for \$2,400.

CONTRACTS AWARDED.

LONDON, ONT.—Messrs. Tambling & Jones and Mr. James S. Loney have received the contracts for the additions to the Grigg house.

NAPANEE, ONT.—Mr. George Cliff has been awarded the contract for the erection of a resi-

dence for Mr. S. C. Warner, lawyer, of this place. The cost will be between \$6,000 and \$7,000.

TORONTO, ONT.—The successful tenderers for improvements to Ashbridge's bay are said to be Mr. F. B. McNamee, of Montreal, for section 1 and Messrs. Shields & Henderson for section 2.

WINNIPEG, MAN.—The contract for the erection of an Episcopal parsonage at Middlechurch for Rev. Jas. Page has been let to Messrs. J. & A. McKinnon, of this city. W. C. Hesteron, architect.

VALLEYFIELD, QUE.—The Cotton Company have awarded contracts as follows in connection with the construction of their works: stone work P. Lyall, Montreal, steel girders, Dominion Bridge Company, Montreal; roofing, Mr. Campbell, shafting, Mr. John McDougall.

GUELPH, ONT.—Mr. John H. Redwood has secured the contract for the stone and brick work for Mr. E. R. Boller's new residence also for the erection of a residence for Mr. George Peck on Glasgow street, and for a double dwelling for ex-Ald. Kerr on Northumberland street.

HALIFAX, N. S.—The Board of Works has accepted the tender of D. Y. Stewart & Co., of Glasgow, for the supply of cast-iron pipe. The figures are as follows: 3-inch and 1½-inch spigot and faucet pipe, \$31.50 per ton, and \$32.05 for the remainder of the pipe, specials, \$49.55 per ton for spigot and faucet joints, and \$56.10 for remainder of joints.

MONTREAL, QUE.—Theo. Daoust, architect, has awarded contracts as follows: for a house for Estate L. J. A. Comte, to be erected on St. Urban Street: Carpentry, Alph Comte; stonework, O. Frappier; brickwork, P. Brunet; plastering, St. Denis & Dube; roofing and plumbing, E. Chanteloup; painting, Mr. St. Charles. Mr. J. D. Baker has been awarded the contract to supply his plaster board for the Montreal Court House.

OTTAWA, ONT.—Messrs. E. L. Perkins & Son of the Spark street Foundry, have been awarded the contract for fitting up the Government dredge Hull about being completed by M. P. G. Watkins, the ship builder, with the extra machinery and fittings. The figures are in the vicinity of \$50,000. The contract for the western terminal section of the Ottawa, Arnprior, and Parry Sound railway, has been let to S. R. Poulin & Co. The contract is for the last 20 miles of the road, at the Parry Sound end of the line. The contract for the construction of some sixty miles west of Arnprior has yet to be let.

MUNICIPAL DEPARTMENT.

STRENGTH OF VITRIFIED SEWER PIPE.

That ordinary vitrified sewer pipe has an ultimate strength to withstand an internal pressure of 100 lbs. per square inch is a statement which will, perhaps, surprise many engineers. Professor M. A. Howe, in a paper in the *Engineering News*, reports experiments showing this to be the case, but proving the weak point of such pipe, so far as bursting pressure is concerned, is the joints. The ordinary joint fails at about one-fourth the pressure which the pipe itself will withstand, but by using improved joints the author believes that their strength may be made equal to that of the pipe. These facts are especially important in view of the use of vitrified pipe for water supply conduits. In nearly every one of the few cases where vitrified pipe has been so used, great pains have been taken to keep the pipe on the hydraulic grade line so that it should not be subject to internal pressure. The detours which this makes necessary, however, may often do much to neutralize the saving over cast-iron or steel conduits. If vitrified pipe can be safely used under moderate pressure, its cheapness, cleanliness, and freedom from corrosion and incrustation ought to bring it into extended use for water-works conduits. Of course it is to be remembered in using such pipe under pressure that while its strength is considerable its resistance is very small. Hence it should never be used where a water hammer can come upon it. A steady pressure it can

MUNICIPAL ENGINEERS, CONTRACTORS, AND MATERIALS.

bear with safety, but any gates on the conduit except at the head should be considered out of the question. Bearing this in mind and taking proper precautions whenever the water is drawn off from or let into the pipe, it ought to be possible to use conduits of vitrified pipe under considerable pressure. The saving in cost over cast-iron pipe in the case of the vitrified pipe main, 5.63 miles long, supplying Little Falls, N. Y., was over one-half, according to the paper by Mr. Stephen H. Babcock, read before the American Water-Works Association in 1888 (*Eng. News*, April 28, 1888). Mr. Babcock, in the vitrified pipe mains laid under his direction, has taken great pains not to subject the pipe to internal pressure, and has used cast-iron pipe whenever it was necessary to drop below the hydraulic grade line. In the discussion on Mr. Babcock's paper, however, Mr. J. T. Fanning said that a 2 ft. vitrified pipe conduit 7,000 ft. long was in use under an average head of 15 ft. on the water-works of an Eastern city. The pipe forms the supply main leading from an impounding reservoir toward the city, and is connected at its lower end with an iron pipe. To prevent any hammer coming on the vitrified brick an open-topped standpipe was placed on its lower end, with its top 3 ft. higher than the water in the reservoir. The joints of this conduit were covered with wrought-iron sleeves packed with Portland cement. This conduit has been in use for 20 years and has given perfect satisfaction.

LEGAL DECISIONS AFFECTING MUNICIPALITIES.

FARQUHAR v. CITY OF HAMILTON.—Under a contract with a municipality for the laying of block pavements on certain streets, with provision that "the decision of the city engineer on all points coming within this contract specifications shall be final and conclusive, whether as to the interpretation of the various clauses, the measurements, extra work, quantity, quality, and all other matters and things which may be in dispute, and from his decisions there shall be no appeal." The city engineer is not disqualified, according to the Ontario Court of Appeal, in the absence of fraud or of bad faith, from deciding whether certain work is or is not extra work, and does or does not fall within the plans and specifications. The possible bias of the engineer in favor of the plans and specifications drawn by him is not sufficient to disqualify him.

WILLIS CHIPMAN, B. A. Sc.,
M. Can. Soc. C. E.; M. Am. Soc. C. E.;
M. Am. W. W. Ass'n.

CIVIL AND SANITARY ENGINEER
Water Works, Sewerage
Sewage Disposal
103 BAY STREET - TORONTO.

J. McDougall, C. E.,

ENGINEER COUNTY OF YORK,

Consulting Engineer for Municipal Work.

Electric Railways and Bridges.

COURT HOUSE, - TORONTO.

MUNICIPAL OFFICIALS

should see to it that in the erection of town and city PUBLIC BUILDINGS, the installation of water works plant, etc., the advantages of...
MINERAL WOOL



are made use of for deadening sound in floors and partitions, insulation of hot and cold, fireproofing, etc., also SECTIONAL MINERAL WOOL COVERING for steam pipes, boilers, exposed water pipes, etc.

Montreal Agent:
GEO. A. COWAN,
1st Room 23, 201 James Street.

Canadian Mineral Wool Co., Limited,
122 Bay Street, TORONTO.

DEBENTURES WANTED.

Municipalities issuing debentures, no matter for what purpose, will find a ready purchaser by applying to
G. A. STIMSON, 9 Toronto Street, Toronto.
N.B.—Money to loan at lowest rates on first mortgage.

THOROLD CEMENT

I have tested with Reble's Testing Machine the tensile strength of six blocks made from the barrel of Thorold Hydraulic Cement sent me last summer. The blocks were made of neat cement, and were 1 1/2 inches square at the smallest part. Four of them were kept 23 days in air, and only broke under the following weights: No. 1, 420 lbs.; No. 2, 470 lbs.; No. 3, 436 lbs.; No. 4, 420 lbs., averaging 437 lbs. each, or 194 lbs. per square inch. The remaining two were kept one day in air and forty seven in water, and broke under the following weight: No. 5, 420 lbs.; No. 6, 450 lbs., averaging 435 lbs. each, or 193 lbs. per square inch.

P. A. PETERSON

Chief Engineer,
Quebec, Montreal, Ottawa & Occidental R'y.

MANUFACTURED BY

ESTATE OF JOHN BATTLE,
Thorold, Ontario.

Municipal officers, contractors and others, are requested to mention the CONTRACT RECORD when corresponding with advertisers.

ISAAC USHER & SON,
THOROLD, ONT.

Manufacturers of

QUEENSTON CEMENT

Proved by Government tests to be the best Canadian natural cement. Write for prices, &c.

ASPHALT PAVING

We are prepared to do first-class work on WALKS, FLOORS, CELLAR BOTTOMS, &c., with ROCK ASPHALT, which is conceded to be the best for this class of work.

H. WILLIAMS & CO.

Roofers and Paviers,

4 Adelaide Street East, - TORONTO.

Canada Pipe Foundry,

HAMILTON, ONTARIO.

ALEX. GARTSHORE, Proprietor

Manufacturer of

CAST IRON WATER, GAS AND SEWER PIPES.

—ALSO—

Special Castings of every description.

CAPACITY: 50 TONS PER DAY.

In use from Vancouver to Sydney, Cape Breton.
Correspondence solicited.

A. & E. LOIGNON,
CIVIL ENGINEERS.

Bridge and Structural Iron Work. Steel Beams kept in stock.
Plans, Estimates and Specifications.
WORKS: ST. COLUMBAN ST. AND CANAL SIDE, MONTREAL.
OFFICE: 7 PLACE D'ARMES, Telephone 9-77

EUREKA CONCRETE SIDEWALKS

FOR CELLARS, FLOORS, STABLES, ETC.

A. GARDNER & CO., - ROOM 17, YONGE STREET ARCADE, TORONTO.
TELEPHONE 2147.

HAMILTON AND TORONTO SEWER PIPE CO.

—FOR—

SEWERS,
CULVERTS,
AND
WATER PIPES.
INVERTS
Fire Brick Sewers

Write for Discounts.



HEAD OFFICE AND FACTORY, HAMILTON, CANADA.

Drummond McCall Pipe Foundry Company,

MONTREAL

MANUFACTURERS OF

CAST IRON WATER AND GAS PIPES

WORKS: LACHINE, QUE.

PRICES ON APPLICATION.

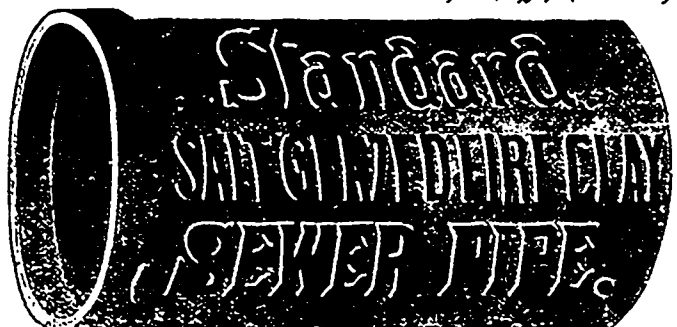
THE STANDARD DRAIN PIPE CO.

OF ST. JOHNS, P. Q., (LIM.)

Manufacturers of

Salt-Glazed,
Vitrified
SEWER PIPES

Double Strength
Railway Culvert Pipes,
Inverts, Vents,



AND ALL KINDS OF FIRE CLAY GOODS.

Ontario Water Meter Co., Ltd.

MANUFACTURERS OF

WATER METERS

Meter Supports, Dial Extensions, Fixture Locks, Water Cart Registers, Strainers, Coupling Seals and Reservoir Indicators.

Send for Price Lists and Testimonials. Our Meters are adopted and in use in over 500 cities and towns in Canada and the United States. Highly endorsed by leading Engineers. A guarantee for five years given with all Meters. All information furnished on application to

A. C. WINTON, Secretary-Treas.

OFFICE: No. 23 Toronto Street, Toronto, Ont.

THE J. G. EDWARDS

Vitrified Terra Metallic Paving Brick

—FOR—

STABLE, COACH HOUSE, BOILER HOUSE, BREWERY FLOORS AND YARDS
Also all places of heavy and light traffic.

The only Genuine Vitrified Brick. The best in the world for Sidewalks & Street Crossings
FRONT-PROOF, WATER-PROOF, TIME-PROOF

JOHN S. CUTHBERTSON

AGENT FOR CANADA,

Room 64, Temple Building, Montreal.

PRICES ON APPLICATION.

**CENTRAL BRIDGE AND - -
- - ENGINEERING COMPANY,
(LIMITED)**
Peterborough, Ont.
WM. H. LAW, Manager and Engineer,
MANUFACTURER OF

RAILWAY AND HIGHWAY BRIDGES

*Viaducts, Piers, Roofs, Turntables and
Girders in Steel and Iron.*

Tension members forged without welds. Riveting done by hydraulic or compressed air machines. Specialties: Good workmanship and strict adherence to specifications and drawings.

CAPACITY: 2,000 TONS PER ANNUM.

Municipal officers, contractors and others, are requested to mention the CONTRACT RECORD when corresponding with advertisements.

DIRECT IMPORTERS AND
DEALERS IN

**SCOTCH FIRE CLAY-
BRICK,**



**DRAIN AND WATER
PIPES,**

Double Strength for rail-
way culverts, etc.

Sewer Bottoms or Invert Blocks, Cement,

NOTE.—Only pure SCOTCH unglazed Fire Clay Linings will be kept in stock; any other quality is worthless for resisting heat. Correspondence invited. Quotations promptly furnished.

Office: 31 Wellington St., Montreal.



**FOR SEWERS, CULVERTS; also WATER
PIPES, INVERTS, VENTS, &C.**
Goods shipped by water or rail to all points.

The Thos. Nightingale Pressed Brick Co.
67 Adelaide St. East, Toronto.
Telephone 449. Works at Port Credit.

Prices of Building Materials.

LUMBER.
CAR OR CARCO LOTS.

Toronto. Montreal.

1/2 to 2 clear picks, Am ins.	34 00	36 00	40 00	45 00
1/2 to 2 three uppers, Am ins.	37 00	40 00	45 00	
1/2 to 2, pickings, Am ins.	27 00	27 00	30 00	
3 inch clear	52 50	60 00		
1 x 10 and 12 dressing and better.	20 00	22 00	18 00	20 00
1 x 10 and 12 mill run	13 00	14 00	14 00	19 00
1 x 10 and 12 dressing	14 00	16 00	16 00	18 00
1 x 10 and 12 common	12 00	13 00	8 00	10 00
1 x 10 and 12 spruce culls	10 00	11 00	10 00	11 00
1 x 10 and 12 maple culls	9 00	9 00	9 00	9 00
1 inch clear and picks	28 00	30 00	33 00	35 00
1 inch dressing and better	18 00	20 00	18 00	20 00
1 inch siding, mill run	14 00	16 00	14 00	16 00
1 inch siding, common	11 00	12 00	12 00	14 00
1 inch siding, ship culls	10 00	11 00	10 00	11 00
1 inch siding, mill culls	8 00	9 00	8 00	9 00
Call scantling	8 00	9 00	8 00	9 00
1/2 and thicker cutting up plank	22 00	25 00	22 00	25 00
1 inch strips, 4 in. to 8 in. mill run	14 00	15 00	14 00	15 00
1 inch strips, common	11 00	12 00	11 00	12 00
1/2 inch flooring	14 00	15 00	14 00	15 00
1/2 inch flooring	14 00	15 00	14 00	15 00
XXX shingles, sawn, per M	2 30	2 35	2 10	2 35
XX shingles, sawn	1 30	1 35	1 30	1 35

YARD QUOTATIONS.

Mill cull boards and scantling	10 00	10 00
Shipping cull boards, promiscuous widths	13 00	13 00
Shipping cull boards, stocks	16 00	16 00
Hemlock scantling and joist up to 16 ft.	11 00	12 00
Hemlock scantling and joist up to 18 ft.	12 00	13 00
Hemlock scantling and joist up to 20 ft.	13 00	14 00
Scantling and joist, up to 16 ft	14 00	14 00
" " " " 18 ft	15 00	15 00
" " " " 20 ft	16 00	16 00
" " " " 22 ft	17 00	17 00
" " " " 24 ft	19 00	19 00
" " " " 26 ft	21 00	21 00
" " " " 28 ft	23 00	23 00
" " " " 30 ft	25 00	25 00
" " " " 32 ft	27 00	27 00
" " " " 34 ft	29 00	29 00
" " " " 36 ft	31 00	31 00
" " " " 38 ft	33 00	33 00
" " " " 44 ft	36 00	36 00

Toronto. Montreal.

Cutting up planks, 1 1/2 and thicker, dry	25 00	26 00	25 00	26 00
Cutting up planks, 1 1/2 and thicker, board	18 00	22 00	18 00	22 00
Cedar for block paving, per cord	5 00	5 00		
Cedar for Kerbing, 4 x 14, per M	14 00	14 00		
1 1/2 in. flooring, dressed, F.M.	28 00	31 00	28 00	31 00
1 1/2 inch flooring, rough, F.M.	22 00	27 00	22 00	27 00
1 1/2 " " undressed, F.M.	30 00	37 00	30 00	37 00
1 1/2 " " dressed, F.M.	19 00	18 00	19 00	19 00
1 1/2 " " undressed	12 00	15 00	12 00	15 00
1 1/2 " " dressed	22 00	25 00	22 00	25 00
Clapboarding, dressed	12 00	12 00		
XXX sawn shingles, per M	2 65	2 75	3 00	3 00
Sawn lath	2 00	2 20	2 00	2 20
Cedar	2 90	2 90		
Red oak	30 00	40 00	30 00	40 00
White	35 00	45 00	35 00	45 00
Baswood, No. 1 and 2	18 00	20 00	18 00	20 00
Cherry, No. 1 and 2	70 00	70 00	70 00	70 00
White ash, No. 1 and 2	25 00	30 00	25 00	30 00
Black ash, No. 1 and 2	18 00	30 00	18 00	30 00
Dressing stocks	16 00	22 00	16 00	22 00
Picks, American inspection	40 00	40 00		
Three uppers, Am. inspection	50 00	50 00		

BIICK—M

Common Walling	7 50	6 00
Good Facing	9 00	8 50
Sewer	8 50	9 00

Pressed Brick, Per M:

Plain brick, f. o. l. at Milton	18 00	
" " and quality	14 00	
" " 3rd	10 00	
Hard Building	8 00	
Moulded and Ornamental, per 100	3 00	10 00
Roof Tiles	24 00	
Diamond locking tile	16 00	
First quality, f.o.b. at Campbellville	18 00	25 00
2nd quality, f.o.b.	14 00	20 00
3rd	11 00	17 00
Ornamental, per 100	3 00	10 00
Tiles	24 00	26 00
Plain brick, "A" f.o.b. Don Valley	18 00	25 00
" " "B"	16 00	22 00
" " "C"	15 00	18 00
Trojan or Buffalo	24 00	30 00
Ornamental, per 100	3 00	60 00
Plain brick, f.o.b. Port Credit	18 00	
" " and quality	13 00	
" " 3rd	10 00	
Hard Building	8 00	
Ornamental, per 100	3 00	10 00

SAND.

Per Load of 1 1/2 Cubic Yards	1 25	1 25
-------------------------------	------	------

STONE.

Common Rubble, per ton, delivered	14 00	14 00
Large flat Rubble, per ton, delivered	18 00	18 00
Foundation Blocks, per c. ft.	50	50
Kent Freestone Quarries		
Mencton, N. B., per cu. ft., f.o.b.	1 00	
River John, N. S., brown Freestone, per cu. ft., f.o.b.	95	
Ballochmyle	80	90
New York Blue Stone	65	75
Granite (Stanstead) Ashlar, 6 in. to 12 in., rise 9 in., per ft.	70	80
Most Freestone	75	80
Thomson's Gatelawbridge, cu. ft.	75	80

Credit Valley Rubble, per ton, delivered

Credit Valley Rubble, per ton, delivered	13 00	14 00
Credit Valley Brown Coursing, per superficial yard	2 50	3 00
Credit Valley Brown Dimension, per cubic foot	90	90
Credit Valley Grey Coursing, per superficial yard	2 50	3 00
Credit Valley Grey Dimension, per cubic foot	75	80
Madoc Rubble, delivered, per ton	14 00	14 50
Madoc dimension floating, f. o. b. Toronto, per cubic ft.	70	32
Ohio Freestone, No. 1 Blue Promiscuous, f.o.b.	60	
No. 1 Blue Dimension	65	
No. 1 Buff Promiscuous	80	
No. 1 Buff Dimension	85	

The above prices means freight and duty paid.

SLATE.

2 in. sawed flagging per sq. ft	12	
2 1/2 " " " "	12 1/2	
3 " " " "	16 1/2	
4 " " " "	22	
5 " " " "	27 1/2	
6 " " " "	33	

Duty to be added to these prices.

Quebec and Vermont rough granite for building purposes, per c. ft. f.o.b. quarry

For ornamental work, cu. ft.	33	1 50
Granite paving blocks, 8 in. to 12 in. x 6 in. x 1 1/2 in., per M	50 00	
Granite curbing stone, 6 in. x 20 in., per lineal foot	70	

PAINTS. (In oil, 1 lb.)

White lead, Can., per 100 lbs.	6 25	6 50	6 00	6 25
" zinc, Can., "	6 50	7 50	7 50	8 00
Red lead, Eng.	5 1/2	6 1/2		
" venetian, per 100 lbs.	1 60	1 75	1 60	1 75
" vermilion, "	90	1 00	90	1 00
" Indian, Eng.	10	12	10	12
Yellow ochre	5	10	4	6
Yellow chrome	15	20	15	20
Green, chrome	7	12	7	12
" Paris	25	40		

Toronto. Montreal.

Black, lamp	15	25	12	25
Blue, ultramarine	15	20	12	18
Oil lined, raw, & Imp. 1/2	65	68	61	65
" " " " " " " "	68	71	66	68
Putty	78	85	75	75
Whiting, dry, per 100 lbs.	2 1/2	2 1/2	2 1/2	2 1/2
Paris white, Eng., dry	75	1 00	60	75
Litharge, Am.	6 1/2	8	6 1/2	8
Sienna, burnt	15	20	17	15
Umber	8 1/2	12	12	15

CEMENT. LIME, etc.

Cement, Portland, per bbl.	2 60	2 50
" Thorold	1 50	
" Queenston	1 50	
" Napanee	1 50	
" Hull	1 50	
" Ontario	1 10	
" German	2 65	2 85
" London	2 45	2 90
" Newcastle	2 25	2 30
" Belgian	2 3	2 40
" Canadian	2 25	2 30
" Roman	2 75	
" Parian	4 10	4 75
" Superfine	6 50	7 00
Keene's Coarse " Whites"	4 50	4 75
Calced plaster, per barrel	1 55	1 70
Fire Bricks, Newcastle, per M Scotch	20 00	24 00
Lime, Per Barrel, Grey	40	
" " White	55	
Plaster, Calcined, N. H.	2 00	
" " N. S.	2 00	
Hair, Plasterers', per bag	8 1/2	1 00

HARDWARE.

Cut nails, 5 d & 6 d, per keg	2 40	2 25
Steel	2 50	2 35
" CUT NAILS, FENCE AND CUT SPIKES.		
40d, hot cut, per 10 lbs	5	5
30d, "	1	10
20d, 16d and 12d, hot cut, per 100 lbs.	15	15
10d, ho. cut, per 100 lbs.	20	20
8d, 9d, "	25	25
6d, 7d, "	40	40
4d to 5d, "	60	60
3d, "	1 00	1 00
2d, "	1 50	1 50
1d to 5d cold cut, not polished or blued, per 100 lbs.	50	50

Toronto. Montreal.

3d to 5d cold cut, not polished or blued, per 100 lbs.	90	90
--	----	----

PINK BLIND NAILS.

3d, per 100 lbs.	1 50	1 5
2d, "	2 00	2 00

CABING AND BOX, FLOORING, SHOOK AND TOBACCO BOX

12d to 30d, per 100 lbs.	50	50
10d, "	60	60
8d and 9d, "	75	75
6d and 7d, "	90	90
4d to 5d, "	1 10	1 10
3d, "	1 50	1 20

FINISHING NAILS.

3 1/2 inch, per 100 lbs.	85	85
2 1/2 to 2 3/4 " " "	1 00	1 00
2 to 2 1/2 " " "	1 10	1 15
1 1/2 to 1 3/4 " " "	1 35	1 35
1 1/4 " " "	1 75	1 75
1 " " "	2 25	2 25

COMMON BARREL NAILS.

1 inch, per 100 lbs.	1 50	1 50
3/4 " " "	1 75	1 75
1/2 " " "	2 25	2 25

CLINCH NAILS.

3/4 and 2 1/4 inch, per 100 lbs.	85	85
2 and 2 1/4 " " "	1 00	1 00
1 1/2 and 1 3/4 " " "	1 15	1 15
1 1/4 " " "	1 35	1 35
1 " " "	2 00	2 00
3/4 " " "	2 50	2 50

SHARP AND FLAT PRESSED NAILS.

3 1/2 inch, per 100 lbs.	1 35	1 35
2 1/2 and 2 3/4 " " "	1 50	1 50
2 and 2 1/4 " " "	1 65	1 65
1 1/2 and 1 3/4 " " "	1 85	1 85
1 1/4 " " "	2 50	2 50
1 " " "	3 00	