

The relative merits of bricks and stone as materials for cellar walls and foundations have recently been the subject of considerable newspaper discussion here.

With respect to the strength of these materials, there is little if any room for preference. A well-built hard brick foundation wall will sustain any superstructure that can be placed upon it. And the same may be said of first-class stone foundation. The only drawback to the latter in this vicinity is the difficulty which has heretofore prevailed of quarrying stone suitably shaped to make a good bed and bond. If the stones placed in such walls are angular in shape they are rather a source of weakness than strength to the structure. Another reason for the disfavor with which stone foundations have been regarded has been the carelessness of the masons in laying and filling in with stones of all shapes and too much mortar. But it is undoubtedly possible to get suitable stone here and labor to lay it so that foundations which can not be surpassed may be made of that material.

As to the exclusion of moisture, where both kinds of walls are well laid, there is no advantage between brick and stone. If the brick is laid in first-class cement and solidly flushed joints, no water can pass, and good stone wall is equally impervious to moisture, the only problem in this respect being one of honest workmanship.

HOW TO BREAK BOWLERS.

A western correspondent of the *Scientific American* gives the following as his method of breaking large bowlders: "Some ten years ago I superintended the sinking of a large well in which we got great quantities of very hard granite bowlders, varying from 100 pounds to 150 pounds in weight. The heaviest sledge we had brought to bear on them by a powerful man had little or no effect on them, but we broke them easily by means of giant powder without drilling holes into them. We placed from one to eight sticks of seven-eight giant on a bowlder, according to the size, and put a shovelful of moist earth on the powder, just to keep it in position, fired the charge and never failed to break our bowlder. If the pieces were too large to handle, and would not yield to the sledge, we repeated the operation until they were small enough."

COMPETENT DRAUGHTSMAN

Having spare time at his disposal, is prepared to make plans and tracings. Terms moderate. Apply

"X. Y. Z."

Montreal office of the CANADIAN ARCHITECT AND BUILDER, 62 Temple Building.

TENDERS

Will be received up to noon on Saturday, 26th inst., for the various works required in the erection of a Residence for Dr. T. Norton, Shelburne. Plans, etc., can be seen at the Doctor's office. The lowest or any tender not necessarily accepted.

J. A. ELLIS, Architect, Dundas Chambers, West Toronto Junction.

TENDERS

Will be received at the office of the undersigned, where plans and specifications may be seen, on or before FRIDAY, JULY 27TH, at 12 o'clock noon, for a brick school building at Swansea for West Toronto Junction Public School Board. No tender necessarily accepted.

J. A. ELLIS, Architect, Room 7, Dundas Chambers, West Toronto Junction.



NOTICE TO CONTRACTORS.

Tenders will be received by registered post, addressed to the City Engineer, up to noon on Tuesday, the 29th of July inst., for the supply of the following quantities of

PAVING MATERIAL to be used for the paving of King street west — Four hundred thousand (400,000) feet, b. m., of four-inch tamarac planks, sound and free from defects, in widths varying from eight inches to twelve inches.

Six thousand lineal feet of six-inch stone kerbing, in lengths not less than four feet and two feet six inches deep, to be of Medina sandstone, or stone of equal quality, the face of stone to be dressed twelve inches deep, and back of stone six inches deep.

One hundred and fifty lineal feet of six-inch stone circular kerbing, similar quality to above, nine feet six inches radius, in lengths not less than three feet, and dressed as above.

Stone flags four inches thick, eight feet long by not less than four feet wide, sufficient to lay a total length of 1,720 feet.

All material to be delivered at the King street subway.

Plans can be seen, quantities and forms of tender obtained on and after July 22nd inst., at the City Engineer's office.

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. 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.

JOHN SHAW,

Chairman Committee on Works. Committee Rooms, Toronto, July 18, 1890.



NOTICE TO CONTRACTORS.

Tenders will be received by registered post, addressed to the City Engineer, up to noon on TUESDAY, JULY 29TH, 1890, for the following works:

CEDAR BLOCK PAVEMENTS.

Dunbar Road, from Elm avenue to Hill street; Hamburg avenue, from Bloor street to Union street;

Palmerston avenue, from Bloor street to railway tracks;

Sydenham lane, from Sydenham street to south terminus;

Grafton avenue, from Roncesvalles avenue to east terminus;

Brunswick Place, from Walmer road to Brunswick avenue;

Palmerston avenue, from College street to a point 600 feet north, on concrete foundation, and with stone kerbs.

ASPHALT PAVEMENT

on Palmerston avenue, from College street to a point 600 feet north, with stone kerbs.

Plans can be seen, quantities and forms of tender obtained on and after July 22nd inst., at the City Engineer's office.

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. 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.

NOTICE TO PROPERTY OWNERS.

Property owners on the above named streets are hereby notified, by order of the City Engineer, that unless private drain connections, water and gas services, where required, are made before the construction of the pavements, a charge of \$2.50 per square yard of surface to be broken will be made if permission be asked to lay them in afterwards.

JOHN SHAW,

Chairman Committee on Works. Committee Rooms, July 18, 1890.

Prices of Building Materials.

LUMBER.

1½ and thicker clear picks, Am. ins.	\$30 00 @ 38 00
1½ and thicker, three uppers, Am. ins.	37 00
1½ and thicker, pickings, Am. ins.	18 00
1 x 10 and 12 dressing and better.	15 00 14 00
1 x 10 and 12 mill run.	14 00 16 00
1 x 10 and 12 dressing.	13 00 13 00
1 x 10 and 12 common.	10 00 11 00
1 x 10 and 12 spruce culls.	28 00 30 00
1 x 10 and 12 maple culls.	18 00 20 00
1 inch clear and picks.	14 00 15 00
1 inch dressing and better.	11 00 12 00
1 inch siding, mill run.	8 00 9 00
1 inch siding, common.	14 00 15 00
1 inch siding, ship culls.	10 00 11 00
1 inch siding, mill culls.	8 00 9 00
Cull scantling.	22 00 25 00
1½ and thicker cutting up plank.	14 00 15 00
1 inch strips, 4 in. to 8 in. mill run.	11 00 12 00
1 inch strips, common.	14 00 15 00
1½ inch flooring.	14 00 16 00
1½ inch flooring.	2 30 @ 2 35
XXX shingles, sawn.	1 30
XX shingles, sawn.	6 00
Eastlake galvanized steel shingles, 24 W. G., per square.	5 50
Eastlake galvanized steel shingles, 26 W. G., per square.	4 00
Eastlake painted steel shingles, per sq.	6 00
Round pointed galvanized steel shingles, per sq.	4 25
Round pointed painted steel shingles.	4 00
Round pointed, unpainted, Terne tin shingles.	5 00
Manitoba galvanized steel siding, per square.	3 50
Manitoba painted steel siding, per sq.	3 50
Painted sheet steel pressed brick.	3 50
Painted crimped steel sheeting.	3 40
Price of Copper shingles according to weight.	

YARD QUOTATIONS.

Mill cull boards and scantling.	10 00
Shipping cull boards, promiscuous widths.	13 00
Shipping cull boards, stocks.	14 00
Hemlock cantling and joist up to 16 ft.	11 00 12 00
" " " 18 "	12 00 13 00
" " " 20 "	13 00 14 00
Scantling and joist, up to 16 ft.	14 00
" " " 18 ft.	15 00
" " " 20 ft.	17 00
" " " 22 ft.	19 00
" " " 24 ft.	21 00
" " " 26 ft.	23 00
" " " 28 ft.	25 00
" " " 30 ft.	27 00
" " " 32 ft.	29 50
" " " 34 ft.	31 00
" " " 36 ft.	33 00
" " " 38 ft.	35 00
" " " 40 to 44 ft.	25 00 26 00
Cutting up planks, 1½ and thicker, dry board.	18 00 22 00
Cedar for block paving, per cord.	5 00
Cedar for Kerbing, 4 x 14, per M.	14 00

1½ inch flooring, dressed, F. M.	28 00 32 00
1½ inch flooring rough, B. M.	18 00 22 00
1½ " " dressed, F. M.	25 00 28 00
1½ " " undressed, B. M.	18 00 19 00
" " dressed.	18 00 22 00
" " undressed.	12 00 15 00
Beaded sheeting, dressed.	22 00 35 00
Clapboarding, dressed.	12 00
XXX sawn shingles, per M, 16 in.	2 65 2 75
Sawn lath.	2 00 2 20
Red oak.	30 00 40 00
White.	35 00 45 00
Basswood, No. 1 and 2.	18 00 20 05
Cherry, No. 1 and 2.	70 00 70 00
White ash, No. 1 and 2.	25 00 25 00
Black ash, No. 1 and 2.	20 00 30 00
Dressing stocks.	16 00 22 00
Picks, American inspection.	40 00
Three uppers, American inspection.	50 00

BRICK—M

Common Walling.	7 50
Good Facing.	9 00
Sewer.	8 50 9 00
Pressed Brick:	
Plain brick, f. o. b. at Milton, per M.	\$15 00
" " 2nd quality, per M.	13 00
" " 3rd " " " "	10 00
Hard Building.	8 00
Moulded and Ornamental, per 100.	\$3 to 10 00
First quality, f. o. b. at Campbellville, per M.	16 00
2nd " " "	13 00
Ornamental, per 100.	\$3 to 10 00
Tiles.	24 00

Stono.	
Common Rubble, Per Tonne, delivered	14 00
Large flat " "	18 00
Foundation Blocks, " Cubic Foot	35
Slate: Roofing (per square).	
" red.	16 00
" purple.	9 00
" untinting green.	9 00
" black slate.	7 50
Terra Cotta Tile, per sq.	25 00
Ornamental Black Slate Roofing	8 00

Sand:	
Per Load of 1½ Cubic Yards.	1 25
PAINTS. (In oil, per lb.)	
White lead, Can.	6 25 6 50
" zinc, Can.	6 50 7 50
Red lead, Eng.	5 50 6 50
" venetian.	1 60 1 75
" vermilion.	90 1 00
" Indian, Eng.	10 12
Yellow ochre.	5 10
Yellow chrome.	15 20
Green, chrome.	7 12
" Paris.	8 50 40