

4. Re: Engineering Services for the 1974
Street Local Improvement Program

Following is a report from the Municipal Engineer regarding proposals for Engineering Services for the 1974 Local Improvement Program.

It should be pointed out that whether or not one proceeds with the actual construction work as planned, it is imperative that designs are finalized and kept "on the shelf" to be ready to take advantage of special Government funding programs and to allow for an orderly and efficient progression of work.

RECOMMENDATIONS:

THAT authority be given to execute a contract for Engineering Services for Projects 1, 2 and 4 with R.F. Binnie Ltd.; and

THAT authority be given to execute a contract for Engineering Services for Projects 3 and 5 with Vector Engineering Services Ltd.; and

THAT the upset limits to the fees, excluding disbursements, be as follows:

Project	Firm	Amount
1	R.F. Binnie Ltd.	\$ 17,402.00
2	R.F. Binnie Ltd.	15,986.00
3	Vector Engineering Services Ltd.	15,650.00
4	R.F. Binnie Ltd.	13,706.00
5	Vector Engineering Services Ltd.	15,200.00

with actual payment of fees to be based on the scale of minimum fees as recommended by the Association of Professional Engineers of British Columbia.

* * * * *

Mr. M.J. Shelley
MUNICIPAL MANAGER.

Engineering Department
27 September, 1973.

Dear Sir:

Re: Engineering Services for 1974 Street Local Improvement Program

Reference is made to the 1974 Capital Expenditure Program contained in the current Six-Year Capital Improvement Program 1973-78, Page 8, Code 40-01, Schedule G, which provides an amount of \$2.5 million for street local improvements.

A proposed 1974 program of street improvements of this magnitude has been developed and divided into five approximately equal projects as shown on the attached lists. By our letter dated 13 September, 1973, a copy of which is attached, proposals for engineering services as set out in that letter were invited and have now been received from three consultants specializing in this type of work, namely, R.F. Binnie Ltd., Vector Engineering Services Ltd., and McElhanney Surveying and Engineering Ltd.

The proposals offer to undertake the work for upset limits to their fees, as calculated by the Scale of Minimum Fees recommended by the Association of Professional Engineers of British Columbia (excluding disbursements), as set out in the following tabulation:

Project	R.F. Binnie Ltd.	Vector Engineering Services Ltd.	McElhanney Surveying & Engineering Ltd.
Project 1	<u>\$17,402.00</u>	\$20,450.00	\$23,200.00
Project 2	<u>\$15,986.00</u>	\$19,800.00	\$26,800.00
Project 3	* \$13,283.00	<u>\$15,650.00</u>	\$21,250.00
Project 4	<u>\$13,706.00</u>	\$17,500.00	/\$17,300.00
Project 5	\$16,128.00	<u>\$15,200.00</u>	\$21,000.00

*R.F. Binnie Ltd. are unable to undertake and complete more than three projects within the time specified.

Vector Engineering Services Ltd. are unable to undertake and complete more than two projects within the time specified.

It should be noted that a completion date of 31 December, 1973, for this work has been called for in order to permit preparation of tenders and contracts as early as possible in 1974 in order to obtain the most favourable prices which are received on early tender calls.

Study of the above tabulation shows that the lowest aggregate cost for this work in accordance with the stipulated conditions is provided by the five figures underlined, namely, the proposals by R.F. Binnie for Project 1 at \$17,402, Project 2 at \$15,986, and Project 4 at \$13,706, together with those by Vector Engineering Services Ltd. for Project 3 at \$15,650. and Project 5 at \$15,200. This lowest total, being \$77,944, or approximately 3% of the estimated value of the construction, is a reasonable amount.

Funds have been allocated in the current 1973 Budget, Code 1-23100, Eng.22-01-19, for this type of work and there remains available approximately \$39,000, further funds to finance the balance will be made available in the 1974 budget.

IT IS RECOMMENDED:

THAT agreements for engineering services as stipulated in our letter dated 13 September, 1973, attached, be entered into for Projects 1, 2 and 4 with R.F. Binnie Ltd. and for Projects 3 and 5 with Vector Engineering Services Ltd. for the upset limits to their fees (excluding disbursements) as tabulated above and contained in their letters of proposal dated 25 September, 1973. Fees to be based on the scale of minimum fees recommended by the Association of Professional Engineers of British Columbia.

Respectfully submitted,



E.E. Olson
MUNICIPAL ENGINEER

AP:op
Atts.

c.c. () Municipal Solicitor
() Municipal Treasurer

1974 STREET LOCAL IMPROVEMENT PROGRAM

ITEM 4

MANAGER'S REPORT NO. 73

COUNCIL MEETING Oct. 1/73

PROJECT 1 - 730048

Street	Width	Improvement
1. Dent - Kitchener to Graveley	28'	Curb/Walks both sides.
2. Whitsell - William to Graveley	28'	Curb/Walks both sides.
3. Rosser - William to Graveley	28'	Curb/Walks both sides.
4. Graveley - Carleton to Willingdon	36'	Curb/Walks both sides.
5. Kitchener - Carleton to Willingdon	28'	Willingdon to Madison, Curb/walks S/S, Curb and 5' walk 4' off N/S. Madison to Carleton Curb/Walks B/S Madison to Willingdon Curbs B/S Carleton to Madison
6. Grant - Madison to Carleton	28'	Curb/walks B/S.
7. William - Madison to Carleton	28'	Curbs only N/S. Curb and 5' c/w 6' off on S/S.
8. Charles - Madison to Carleton	28'	Curb/walks B/S.
9. Carleton - Albert to Yale	28'	Curb/walk W/S and curb only E/S, Albert to Cambridge Curb/walk B/S Cambridge to Yale.
10. Madison - Hastings to Albert	46'	Curbs and abutting walks B/S.
11. Madison - Albert to Cambridge	28'	Curb/walk B/S. Dundas to Albert Curbs only B/S Dundas to Cambridge. Curbs only B/S Boundary to Gilmore. Curbs B/S and separate walk N/S. Gilmore to Carleton Curbs B/S and separate walk S/S. Carleton to Madison Curbs B/S, Sep. walk N/S \pm 200 ft. E. of Madison, sep. walk S/S
12. Pandora - Boundary to Rosser	28'	Madison to Willingdon Curb/Walks B/S. Curbs B/S, walk S/S Boundary to Esmond & Ingleton to MacDonald
13. Dundas - Gilmore to Willingdon	28'	
14. Union - Boundary to MacDonald	28'	

PROJECT 2 - 730049

1. Linwood - Boundary to Smith	28'	Curb/walk B/S.
2. Laurel - Boundary to Smith	36'	Curb/walk B/S.
3. Douglas - Spratt to Hwy. 401	46'	Curbs with abutting walks B/S.
4. Spratt - Douglas to Hwy 401	46'	Curbs with abutting walks B/S.
5. Sutliff - Duthie to D/E east	28'	Curb/walks B/S.
6. Halley - Moscrop to Spruce	28'	Curb/walks B/S.
7. Darwin & Pine - Moscrop to Huxley	28'	Curb/walks B/S.
8. Barker - Moscrop to Spruce	28'	Curb/walks B/S.
9. Spruce - Halley to Huxley	28'	Curb/walks B/S.
10. Spruce - McDonald to Carleton	28'	Curb/walks B/S.
11. Fir - Huxley to Carleton	28'	Curb/walks B/S.
12. Huxley - Moscrop to Spruce	28'	Curb/walks B/S.
13. Forest - Smith to Carleton	36'	Curb/walks B/S.
14. Morley - Canada Way to D/E West	28'	Curb/walks B/S.
15. Wakefield Ct. - Smith to D/E west	36'	Curb/walks B/S.
16. Spruce - Royal Oak to Canada Way	28'	Curb/walks B/S.
17. Atlee - Spruce to D/E South	28'	Curb/walks B/S.

1974 STREET LOCAL IMPROVEMENT PROGRAM

PROJECT 1 - 730048

Street	Width	Improvement
1. Dent - Kitchener to Graveley	28'	Curb/Walks both sides.
2. Whitsell - William to Graveley	28'	Curb/Walks both sides.
3. Rosser - William to Graveley	28'	Curb/Walks both sides.
4. Graveley - Carleton to Willingdon	36'	Curb/Walks both sides. Willingdon to Madison, Curb/walks S/S, Curb and 5' walk 4' off N/S.
5. Kitchener - Carleton to Willingdon	28'	Madison to Carleton Curb/Walks B/S Madison to Willingdon Curbs B/S Carleton to Madison
6. Grant - Madison to Carleton	28'	Curb/walks B/S.
7. William - Madison to Carleton	28'	Curbs only N/S. Curb and 5' c/w 6' off on S/S.
8. Charles - Madison to Carleton	28'	Curb/walks B/S.
9. Carleton - Albert to Yale	28'	Curb/walk W/S and curb only E/S, Albert to Cambridge Curb/walk B/S Cambridge to Yale.
10. Madison - Hastings to Albert	46'	Curbs and abutting walks B/S.
11. Madison - Albert to Cambridge	28'	Curb/walk B/S. Dundas to Albert Curbs only B/S Dundas to Cambridge.
12. Pandora - Boundary to Rosser	28'	Curbs only B/S Boundary to Gilmore. Curbs B/S and separate walk N/S. Gilmore to Carleton Curbs B/S and separate walk S/S. Carleton to Madison Curbs B/S, Sep. walk N/S \pm 200 ft. E. of Madison, sep. walk S/S Madison to Willingdon
13. Dundas - Gilmore to Willingdon	28'	Curb/Walks B/S.
14. Union - Boundary to MacDonald	28'	Curbs B/S, walk S/S Boundary to Esmond & Ingleton to MacDonald

PROJECT 2 - 730049

1. Linwood - Boundary to Smith	28'	Curb/walk B/S.
2. Laurel - Boundary to Smith	36'	Curb/walk B/S.
3. Douglas - Sprott to Hwy. 401	46'	Curbs with abutting walks B/S.
4. Sprott - Douglas to Hwy 401	46'	Curbs with abutting walks B/S.
5. Sutliff - Duthie to D/E east	28'	Curb/walks B/S.
6. Halley - Moscrop to Spruce	28'	Curb/walks B/S.
7. Darwin & Pine - Moscrop to Huxley	28'	Curb/walks B/S.
8. Barker - Moscrop to Spruce	28'	Curb/walks B/S.
9. Spruce - Halley to Huxley	28'	Curb/walks B/S.
10. Spruce - McDonald to Carleton	28'	Curb/walks B/S.
11. Fir - Huxley to Carleton	28'	Curb/walks B/S.
12. Huxley - Moscrop to Spruce	36'	Curb/walks B/S.
13. Forest - Smith to Carleton	28'	Curb/walks B/S.
14. Morley - Canada Way to D/E West	36'	Curb/walks B/S.
15. Wakefield Ct. - Smith to D/E west	28'	Curb/walks B/S.
16. Spruce - Royal Oak to Canada Way	28'	Curb/walks B/S.
17. Atlee - Spruce to D/E South	28'	Curb/walks B/S.

1974 STREET LOCAL IMPROVEMENT PROGRAM (cont'd)

PROJECT 3 - 730050

Street	Width	Improvement
1. Mary - Elwell to Vista	28'	Curb/walks B/S.
- Vista to Edmonds	36'	Curb/walks B/S.
2. Chaffey - Burke to Sardis	28'	Curb/walks B/S.
- Sardis to Grange	36'	Curb/walks B/S.
3. Halley - Burke to Sardis	28'	Curb/walks B/S.
- Sardis to Grange	36'	Curb/walks B/S.
4. Sardis - Halley to Patterson	36'	Curb/walks B/S.
5. Bond - Halley to Patterson	28'	Curb/walks B/S.
6. Booth - Grange to Grafton	36'	Curb/walks B/S.
7. McKay - Imperial to Maywood	36'	Curb/walks B/S.
8. Brantford - Imperial to Oakland	28'	Curb/walks B/S.
9. Walker - Imperial to Stanley	36'	Curb/walks B/S.
- Stanley to Burriss	46'	Curb & abutting walks B/S.
10. Maywood - Telford to Cassie	36'	Curb/walks B/S.
11. 18th Ave. - 2nd to Newcombe	36'	Curb/walks B/S.
12. 19th Ave. - 2nd to Newcombe	28'	Curb/walks B/S.

PROJECT 4 - 730051

1. McKay - Rumble to Boxer	28'	Curb/walks B/S.
2. Joffre - Rumble to Southwood	36'	Curb/walks B/S.
- Southwood to Marine	28'	Curb/walk W/S Curb only E/S.
3. Irmin - Boundary to Joffre	28'	Curb/walk B/S,
4. Watling - Boundary to Joffre	28'	Curb/walk B/S,
5. Southwood - Boundary to Joffre	28'	Curb/walk B/S,
6. Southwood - McKay to Patterson	28'	Curb/walk N/S, Curb only S/S.
7. Clinton - Boundary to D/E east of Joffre	28'	Curb/walk B/S.
8. Portland - Boundary to Joffre	28'	Curb/walks B/S.
9. Hurst - Boundary to Mandy	28'	Curb/walk N/S. Curb/walk S/S Boundary to Joffre. Curb only S/S Joffre to Mandy.
10. Peter - Boundary to Joffre	28'	Curb/walks B/S.
11. Victory - Boundary to Joffre	28'	Curb/walks B/S.
12. Arbor - Boundary to Joffre	28'	Curb/walks B/S.
13. Joffre - Imperial to Rumble	28'	Curb/walks B/S.
14. Dubois - Boundary to Mandy	28'	Curb/walk B/S Boundary to Joffre Curb/walk S/S Joffre to Mandy.
15. Mandy - Imperial to Hurst	28'	Curb/walk W/S, Curb E/S.
16. Winnifred - Bradley to Sussex	28'	Curb/walk N/S, Curb S/S.
17. Carson - Bradley to Sussex	28'	Curb/walk B/S.
18. Portland - Bradley to Sussex	28'	Curb/walk B/S.
19. Bradley - Portland to Carson	28'	Curb/walk B/S.

PROJECT 5 - 730052

1. Sperling - Kingsway to Arcola	36'	Curb/walks B/S.
2. Neville - Dow to D/E E. of Gray	28'	Curb/walks B/S.
3. Neville - Nelson to D/E West	28'	Curb/walks B/S.
4. Portland - Royal Oak to D/E E. of MacPherson	28'	Curb/walk N/S Curb/walk S/S MacPherson to D/E. East. Curb only S/S Royal Oak to MacPherson
5. McKee - Royal Oak to MacPherson	28'	Curb/walk N/S Curb/walk S/S Roslyn to MacPherson Curb only S/S Rosly to Royal Oak.
6. Carson - Gilley to D/E West of Buller	28'	Curb/walks B/S.
7. Patrick - Gilley to D/E West of Buller	28'	Curb/walks B/S.
8. Ewart - MacPherson to D/E East	28'	Curb/walks B/S.
9. Carson - MacPherson to D/E East	28'	Curb/walk S/S Curb only N/S
10. 12th Ave. - 2nd to Cumberland	28'	Curb/walk N/S to match that existing
11. 11th Ave. - Cumberland to Coquitlam	28'	Curb/walks B/S. S/S
12. Buller - Keith to Irmin	28'	Curb/walks B/S.
- Irmin to Beresford	36'	Curb/walks B/S.
13. Graham - 6th to Canada Way	28'	Curb/walks B/S.

ITEM 4

MANAGER'S REPORT NO. 73

COUNCIL MEETING Oct. 1/73

September 13, 1973

The Office of the Engineer

R. F. Binnie Ltd.
650 Clyde Avenue
West Vancouver, B. C.

Dear Sirs:

Re: Engineering Services for 1974 Street Local Improvement Program

Our 1974 Street Local Improvement Program has been divided into five approximately equal projects as set out in the attached lists.

We invite you to submit proposals for your engineering services for field survey, drafting, design and quantity take-off for any or all of the five projects listed. Your proposals should indicate an upset limit to your fee for each of the five projects and if you so desire, a proposal for the five projects in the event that the total program is placed with your firm.

The work shall be performed in accordance with our current standards with which you are familiar and as detailed on the attached sheets which specify our requirements.

You should be aware that our schedule for this program calls for the completion of this work by 31 December, 1973 in order that tenders may be prepared in January 1974. The completion by 31 December will therefore be a mandatory requirement of the engineering agreements which may result from your proposals. We anticipate that consultants for this work will be appointed in the first week of October.

Please submit your proposals by not later than 25 September, 1973.

Yours truly,

E. E. Olson
MUNICIPAL ENGINEER

AP

by: A. Phillips
DESIGN ENGINEER

AP:wlb

THE CORPORATION OF THE DISTRICT OF BURNABY

ENGINEERING DEPARTMENT

Design Division

Engineering Requirements for Preliminary Field Survey of Streets

It is intended that all topographical details and variations in grades within the street allowance, together with details on abutting properties which may be affected by the proposed works shall be recorded for plotting on the design plans.

The following is intended to indicate general requirements for this work. It should be recognized that any block may have special features, other than those indicated below which must be included in the survey. It is the responsibility of the Engineer in charge of the design to ensure that all existing features on the street are recorded by the surveyor for design consideration and compilation of quantities for tendering.

1. Establish a base line along the centre of the street allowance, the base line shall be accurately tied in to legal property markers at each end of each block. The off-sets from the property markers shall be recorded together with a description of property markers used.
2. All elevations shall be related to the bench marks provided and each series of levels shall be started and closed to the bench marks provided without significant difference between the value provided and the value calculated by the survey readings. Location of intermediate temporary bench marks shall be recorded.
3. Chainages along the base lines shall commence at 0 approximately 150' south or west of the intersection from which the survey commences and shall extend approximately 150' north or east of the intersection at which it terminates.
4. Secondary base lines shall be established on all intersecting streets and lanes, related to legal property markers and shall be extended approximately 150' in each direction from the main base line for the work.
5. Locate and relate to the base line and datum elevation all topographical detail existing within the street allowance and as required for design consideration on adjoining private property, including the following:
 - (a) Cross sections at a maximum interval of 50' along the base line chainage (use shorter interval where non-uniform changes in conditions occur), recording all elevations to accurately plot the surface conditions within the street allowance and extending 15' beyond the street property lines on each side.
 - (b) Spot elevations in street or lane intersection areas in order to plot an accurate surface profile.
 - (c) Locate and record the size of all poles, trees, bushes, signs, hydrants, valve boxes, manholes, catch basins, etc.
 - (d) All sidewalks, private walkways extending to the street, driveways, curbs, stone entrances etc. shall be located and width and type of surface recorded together with sufficient detail of these facilities on private property to permit evaluation of modification required by design.

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- (e) Location of all existing pavements of gravel, asphalt, or concrete shall be recorded.
 - (f) Location, height, and type of all retaining walls shall be recorded.
 - (g) Location, size and invert elevation of all culverts.
 - (h) Particular attention shall be given to record the location invert elevation and cross section of all street ditches.
6. Where the base line is curved, the curve characteristics shall be recorded and cross section lines extended radially.
 7. House numbers for existing houses shall be recorded.
 8. All survey notes shall be recorded in hard cover, bound field books. Pages shall be numbered and indexed. Title, descriptive notes, diagrams, etc. shall be provided to clearly describe all entries in a manner which will enable them to be clearly understood.

ON COMPLETION OF THE DESIGN THE FIELD BOOKS SHALL BECOME THE PROPERTY OF THE CORPORATION AND SHALL BE DELIVERED WITH THE DESIGN PLANS.

THE CORPORATION OF THE DISTRICT OF BURNABY

ENGINEERING DEPARTMENT

Design Division

Engineering Requirements for Drafting of Streets and Lanes

It is the intent of these requirements to prepare a drawing to show all details relating to streets and or lanes which have been recorded by the surveyor in his field book in order that a full assessment of the street conditions can be made by the designer. The designer shall in turn, indicate all relevant details of his design superimposed on the existing features.

Detailed requirements are as follows:

1. Use standard 10 by 10 cross section tracing paper 20 inches wide. No restrictions for the length of drawing, but not less than 36 inches.
2. Place standard title block (see attachment) at lower right hand corner. Complete in ink. Show surnames of persons involved in survey and drafting. Place standard end roll labels (see attachment) on outside of drawing at both ends.
3. All drafting symbols are to be in accordance with the attached legend for road design.
4. Draft the plan at a scale at 1 inch equals 20 feet with the base line 5 inches below the top of the grid. Orientate the plan as nearly as possible so that the north or west is at the top of the drawing, and indicate the orientation with north arrow.
5. The plans shall consist of property lines, lot lines, lot numbers, house numbers, and all other topographical surface features as recorded by the surveyor in the field book.
6. Show on plan, chainage of property line at each intersection, curve data and chainage stations, along the top and bottom of the drawing.
7. Place street names on plan at each intersection and place them outside the road allowance.
8. Record bench mark information in the top right hand corner of the drawing.
9. Show on the plan all ground elevations taken in and adjoining the street or lane including the cross section elevations at 50' intervals. These elevations are the actual ground elevations at their relative locations as recorded by the surveyor.
10. Draw profile of existing base line directly below the plan at a vertical scale 1 inch equals 2 feet and a horizontal scale 1 inch equals 20 feet in ink. A vertical scale ladder at convenient horizontal intervals should be shown to indicate the vertical scale of the profile.
11. Plot similar profiles on side streets for 150' in both directions from the base line.
12. Draw out cross sections of the full width of the right of way to the same scale as indicated above for the profile, at 50 foot intervals, as recorded by the surveyor. These cross sections shall be located on the drawing below the plan such that their centre line is on the same vertical chainage lines as its relevant location on the plan and profile.

NOTE: ALL THE ABOVE WORK SHALL BE PLOTTED IN INK AND SHALL SHOW FULLY ALL INFORMATION RECORDED BY THE SURVEYOR IN HIS FIELD BOOK

THE CORPORATION OF THE DISTRICT OF BURNABY

ENGINEERING DEPARTMENT

Design Division

Engineering Requirements for Design of Streets and Lanes

The intent of the design is to provide the stipulated improvements meeting the existing conditions on the street as closely as possible. The primary design consideration shall be the retention of the existing pavement and provision of an overlay thickness to provide adequate strength has determined by Benkleman Beam readings. Based on this concept, curbs and sidewalks shall be designed to meet established boulevard conditions with the least possible modification. This is a general concept of design which may require modification in some circumstances. It is therefore essential that the designer maintain close liaison with the Corporation design staff in order that special conditions prevailing on any section of any street or lane may be considered before establishing a final design analysis. Designs shall be based on accepted good practice for this class of work based on the understanding that the improvements are to be made to existing developed street where major grade change and reconstruction is seldom acceptable. The designer shall endeavor to meet the following limitations wherever possible:

- (a) Gutter grades shall be not less than 0.5%.
- (b) Pavement cross-fall shall be a minimum of 3% and a maximum of 6%.
- (c) Longitudinal grades shall be as required to conform to that existing on the unimproved street.
- (d) Sidewalk cross-falls shall be a minimum of $\frac{1}{2}$ " and a maximum of $\frac{1}{2}$ " per foot, normally to gutter but may be reversed in severe grade problems.
- (e) At entrance crossings, curbs shall be 1" high on high side and 2" high on low side of street or $1\frac{1}{2}$ " on symmetrical cross-sections.
- (f) Vertical curves for driveways shall not produce more than 4" rise at the vertex of a 10 ft. base to prevent bottoming.

The design shall be superimposed in pencil upon the ink drawings showing existing conditions and shall indicate the following:

1. On the street plan, at not more than 50 foot intervals, the design elevations of the centre line, gutters on both sides, back of sidewalk elevations, at intersecting gutter lines and at quarter points of each 20 foot radius curb return. These elevations shall be circled to distinguish them from existing ground elevations.
2. The plan shall clearly indicate drainage requirements both those existing on the street as picked up by the surveyor and required in the design, and those not existing but nevertheless required by the design. Those catch basins existing not required by the design shall be so noted.
3. The plan shall indicate the curb lines and curb returns as required by the improvement and shall indicate where conflict occurs between the location of the proposed curbs and any existing features on the street. Where major conflicts of this type occur, the location of the curbs may be adjusted with the approval of the Design Engineer in order to minimize such conflict.
4. Indicate on the profile, the profile line of the centre line of the pavement and both gutter lines.
5. Indicate on each cross section the design location and grades of pavement curbs, sidewalks, and the restoration work required between the limits of the improvement and the property line. This section should indicate all modifications to driveways, proposed grading work, on boulevards, retaining walls, access steps etc.

6. All crossings and modifications thereto at lanes or private property entrances shall be indicated on the plan.
7. Where the design encroaches on to the abutting private land beyond the limit of the right of way the private land required to implement improvement shall be lightly cross hatched and so noted.

THE STANDARD CONSTRUCTION SPECIFICATIONS INCLUDING THE DRAWINGS THEREIN SHALL BE THE BASIS OF THIS DESIGN WORK.

ORIGINAL DESIGN PLAN SHALL BE DELIVERED TO CORPORATION

THE CORPORATION OF THE DISTRICT OF BURNABY

ENGINEERING DEPARTMENT

Design Division

Engineering Requirements for Quantity Take-off for Streets and Lanes

In general it is required that quantities be taken off conforming to the Schedule of Quantities forming part of the tender documents currently in use by the Corporation. All quantities and work items must be compiled as accurately as is practically possible in order to achieve as close a relationship between the quantity take-off and the actual quantities used for the construction of the work as possible. The Engineer must use his judgement and experience of actual construction methods in order to achieve reasonable accuracy related to actual construction methods. Quantities shall be taken-off separately for each of the streets listed in the project and shall be summarized by indicating these quantities on the standard summary sheet used by the Municipality for each total project.

Both detailed quantity take-off for each sheet and completed summary sheet shall be provided to the Corporation.