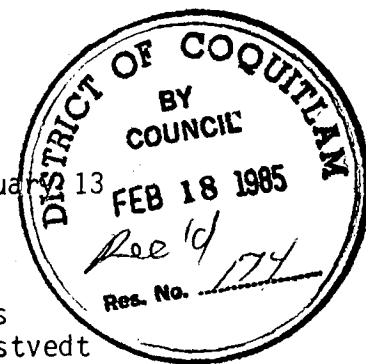


DRAINAGE COMMITTEE

MINUTES
of the
DRAINAGE COMMITTEE MEETING

held at the
Engineering Committee Room at 1200 h, 1985 February 13



Attending: Ald. R. Mitchuk, Chairman
Ald. H. Reid, Member
Ald. E. Parker, Member

Neil Nyberg
Tony Edwards
Sever Rondestvedt

5.05.1 CALL TO ORDER

The Chairman called the meeting to order at 1205 h.

5.05.2 PRE-BUDGET APPROVAL OF ENGINEERING FOR 1985 DITCH ELIMINATION AND TOWN CENTRE DRAINAGE PROGRAMS

The Committee considered Engineering Report 05 03 01 dated 1985 February 13 which recommends advance approval of engineering for Town Centre.

Council Action Requested:

*APP'D B1
C# 172/84*

A. That the sum of \$22,950 be approved for the engineering design and preparation of contract documents for the Ditch Elimination Program from account number 532343-009 of the 1984⁸ annual budget.

*APP'D B1
C# 174/84*

B. That the sum of \$20,000 for the engineering design and preparation of contract documents for the Walton Avenue Trunk, the Glen Drive Extension and the Johnson Street Trunk portions be approved from account number 834916-200 of the 1985 annual budget.

5.05.3 JOYCE ROAD

The Chairman requested that the Engineering Dept. study the concept of prepaying for ditch elimination and arranging for possible future credits. A study will be brought forward.

5.05.4 The Chairman asked that a presentation on the Town Centre Drainage Study by Ker Priestman for the next meeting be carried out by the Engineering Dept.

5.05.5 The Chairman asked for a status report on the basement flooding service provided to District taxpayers.

5.05.6 ADJOURNMENT

The Chairman adjourned the meeting at 1335 h.

N. Nyberg

N. Nyberg, P. Eng.
Secretary

DISTRICT OF COQUITLAM

Inter-Office Communication

TO: J. L. Tonn
Municipal Manager

DEPARTMENT: Administration

DATE: 1985 02 13

FROM: Neil Nyberg

DEPARTMENT: Engineering

YOUR FILE:

SUBJECT: PRE-BUDGET APPROVAL OF THE ENGINEERING FOR THE 1985 DITCH
ELIMINATION AND TOWN CENTRE DRAINAGE TRUNKS PROGRAMS

OUR FILE: 05 03 01
02
03

1.00 BACKGROUND

1.01 The Ditch Elimination Program was started in 1983 in the Ranch Park area. The intent of the program is to improve public safety and convenience by eliminating hazardous ditches and to make Coquitlam neighbourhoods more attractive to live in. Costs of the program to date are:

1983 - \$327,000

1984 - \$190,000

The program has been funded by interest proceeds from the approximate amount of \$4,000,000 in the Land Sales Reserve. To date, about 90% of the ditches in the Ranch Park area have been filled.

1.02 The Town Centre Drainage Trunk Program is intended to facilitate development in the Town Centre by pre-servicing with a municipally installed trunk drainage system. It is the responsibility of the Municipality to install trunk storm sewer mains with funds collected in accordance with the Development Cost Charge Bylaws # 847 and # 1124 which currently has a balance of \$760,000.

2.00 DISCUSSION

2.01 The 1985 Ditch Elimination Program improvement areas are:

- 1) the remainder of the Ranch Park ditches - estimated cost \$59,500;
- 2) the Chines Escarpment area - estimated cost \$69,600; and
- 3) the Clarke Road area - estimated cost \$340,900.

1985 02 13

Pre-Budget Approval of the Engineering for the 1985
Ditch Elimination and Town Centre Drainage Trunks Programs

2.02 The proposed Town Centre Drainage Trunk program consists of 4 projects:

- 1) Christmas Way Storm Drain from the Lougheed Highway to Scott Creek - estimated cost: \$320,000
- 2) Glen Drive Extension, located between Johnson Street and Pinetree Way - estimated cost: \$ 50,000
- 3) Walton Avenue Trunk, located between Johnson Street and Erskine Street, estimated cost: \$ 55,000
- 4) Johnson Street Trunk, located between Guildford Way to Hoy Creek, estimated cost: \$ 35,900

2.03 Project descriptions which explain the scope, justification, design factors, cost and location for each proposed project are attached.

2.04 McElhanney Engineering and Surveying Ltd. has been selected to do the engineering for the Ditch Elimination Program for a fee of \$22,950.


2.05 It is estimated that the engineering costs for design and document preparation for the Town Centre Trunk Drainage Program, excluding the Christmas Way Trunk system, will be no greater than \$20,000.

3.00 RECOMMENDATIONS

3.01 That the sum of \$22,950 be approved for the engineering design and preparation of contract documents for the Ditch Elimination Program from account number 532343-009 of the 1985 annual budget.

3.02 That the sum of \$20,000 for the engineering design and preparation of contract documents for the Walton Avenue Trunk, the Glen Drive Extension and the Johnson Street Trunk portions of the Town Centre Program be approved from account number 834916-200 of the 1985 annual budget.

AJE/mw
Attach.


Neil Nyberg, P. Eng.
Municipal Engineer

DISTRICT OF COQUITLAM
TOWN CENTRE DRAINAGE TRUNKS

OBJECTIVES

To allow development of the Town Centre by pre-servicing with a municipally installed drainage system.

To collect and convey runoff from a 1:10 year storm event and direct larger flows to safe overland routes.

DESIGN FACTORS

Hoy Creek, which drains most of the Town Centre, is a fish bearing stream and must be suitably protected.

Lafarge Lake acts as a storage/detention facility for Hoy Creek flows from north of the Town Centre.

FUNDING

The Town Centre Drainage Development Cost Charge Reserve fund has a 1984 year end surplus of \$

Further revenues of \$1,800,000 are expected by 1989.

Total system cost is estimated at \$1,651,000.

Some projects may be partially funded by developers with the District paying "oversizing" costs only.

1985 02 12

File: 05 04 06

PROJECT DESCRIPTION

JOHNSON STREET STORM TRUNK

ACCOUNT: 532342-021
FINANCE: Development Cost Charge Bylaw
SCHEDULE: Engineering: May-June 1985
Construction: July - August 1985

OBJECTIVE:

- 1) To provide pre-service storm utilities for future residential development in the immediate area.
- 2) To provide 1:10 year storm outflow system for future Guildford Way connector.
- 3) To reduce maintenance costs of ditch erosion repair.

DESCRIPTION

- Ditch enclosure on Johnson Street from Hoy Creek to Guildford Way R/W with 180 m of 525 mm \emptyset pipe.

DESIGN CRITERIA

- 1) Fisheries and/or Environment permits/approvals for:
 - (i) silt control
 - (ii) outfall location and design
 - (iii) work scheduling during spawning seasons
- 2) Provide services for parcels still undeveloped.
- 3) Little or no native backfill available.
- 4) Curbing and surface water control on Johnson Street necessary to retain shoulder gravel over installation.
- 5) Possible conflict with 200 mm \emptyset water main in west ditch line. Offset from P/L as per our asbuilts 16' - 21' (see attached).
- 6) B.C.H.P.A. line 50 mm \emptyset HP in east shoulder as shown on sanitary sewer asbuilt (attached).

JUSTIFICATION

Trunk forms part of the Town Centre.

1985 02 11

File: 05 04 06

CHRISTMAS WAY TRUNK

ACCOUNT NO.: 532342-017

OBJECTIVE:

To upgrade the storm system in the Town Centre area to eliminate retention systems.- 655 m of 1200 mm \emptyset pipe including highway and railway tunneling from Lougheed Highway to Scott Creek.

JUSTIFICATION:

1. Current storm main operating at full capacity due to current development.
2. Elimination of retention system at Pinetree Village.
3. Adequate storm mains will be necessary should further development north of Lougheed Highway takes place.

DESIGN CONSIDERATIONS:

1. Open cut or jacking with casing at railway tunneling and highway crossings.
2. Traffic control and detours to enable adequate traffic flow.
3. Maintenance of existing storm utilites.
4. M.O.H. work schedule approval.
5. C.P.R. crossing approval.

1985 02 11

File: 05 04 06

GLEN DRIVE STORM EXTENSION

ACCOUNT NO.: 532342-019

OBJECTIVE:

To extend existing 640 mm storm main on Glen Drive from Pacific St. to 200 m east.

JUSTIFICATION:

1. Provide pre-service storm utilities for future commercial/residential developments.
2. Revenue available from Development Cost Charge Fund.
3. Installation as outlined in Town Center Drainage Study by Ker Priestman, 1984.

DESIGN CONSIDERATIONS:

1. Servicing south side properties conflicts with two 100 mm \emptyset Hydro gas, 200 mm \emptyset D.I. water and abandoned 150 mm \emptyset water main. (see also 5)
2. Future road widening and surface drainage.
3. Arterial route, heavy traffic flow.
4. Fisheries and Environment approvals for silt control.
5. 760 mm \emptyset steel watermain 1.93 m south on centers. Problem re: installation of manholes and clearance with water main. G.V.W.D. approvals necessary.
6. Intake on north ditch, east of Pacific Street. Field measurement of inflow is 640 mm I.D. Proposal said 675 mm. Glenview Manor (Bosa Bros.) construction plan shows 610 mm. Actual pipe size should be verified.

DISTRICT OF COQUITLAM
DITCH ELIMINATION PROGRAM

OBJECTIVES

To eliminate all road side ditches in southwest Coquitlam.

To collect and convey all storm drainage normally flowing to ditches from a 1:10 year storm and to direct larger storms to safe overland flow routes.

DESIGN FACTORS

Existing drainage pattern to remain relatively unchanged.

Storm sewer pipes are generally laid in the existing ditch alignment... with connections to existing draintiles.

Gravel shoulders are used except where danger of gravel erosion exists.

FUNDING

\$4,000,000 drainage reserve fund established from Land Sales Reserve Fund in 1983.

Program financed from interest proceeds, therefore, annual funding will vary with the interest rate.

PROJECT DESCRIPTION

1985 02 13

File: 05 04 06

DITCH ELIMINATION - RANCH PARK PHASE III

FILE: 05 03 03
BUDGET: 532343 DITCH ELIMINATION
FINANCE: Drainage Reserve Fund
SCHEDULE: Engineering - Feb - March 1985
Construction- May - Sept. 1985

OBJECTIVES

To complete ditch elimination in the Ranch Park area of Coquitlam.

DESCRIPTION

Work consists of 60 m of 200 mm Ø storm sewer on Pasture Circle and 270 m of 200 to 300 mm Ø on Ranch Park Way/Butternut. Work includes ditch cleaning, laying of PVC pipe, backfilling and resurfacing with gravel or topsoil and seed. Catch basins and curbing will be included as required for drainage.

SADDLE - SPURWAY

JUSTIFICATION

The Ranch Park area has been established as the first of 15 areas for ditch elimination. Works in 1983 and 1984 have completed all but the above areas.

ESTIMATED COST:

\$69,000



**CAPITAL
WORKS
PLAN**

SUMMARY SHEET

program ... Ditch Elimination

account no. ... 532343

priority	description	years	Coquitlam estimated costs in 1985 dollars (DCF)										
			1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	
1	RANCH PARK DRAINAGE AREA, 330 m of 200 & 300 mm Ø pipe in five sections.		190,000	59,500									
2	CHINES ESCARPMENT DRAINAGE AREA, 490 m of ditches in eight sections.			69,600									
2	CLARKE RD DRAINAGE AREA, 4080 m of ditches in twenty-three sections.			340,900	230,300								
3	GUILBY/SUNSET AREA, scope to be determined.					X							
3	MARMONT/BRUNETTE DRAINAGE AREA, scope to be determined.					X	X						
4	LAVAL/CARTIER DRAINAGE AREA, scope to be determined.						X						
4	CAYER/BRUNETTE DRAINAGE AREA, scope to be determined.						X						
TOTAL			190,000	470,000	400,000	360,000							

DISTRICT OF COQUITLAM
FLOODING AND EROSION CONTROL PROGRAM

OBJECTIVES

To progressively remedy problems of slope failure and watercourse flooding or erosion.

DESIGN FACTORS

Slope erosion control projects involve controlling drainage to stabilize the slope and may include slope restoration.

Watercourse and ditch erosion projects are warranted when annual maintenance or restoration costs are greater than amortized construction costs.

Projects are prioritized considering public safety, property damage and maintenance costs.

FUNDING

All projects are funded from general revenue.



**CAPITAL
WORKS
PLAN**

SUMMARY SHEET

program ... FLOODING AND EROSION CONTROL

account no. ... 532341, 532344

priority	description	Coquitlam estimated costs in 1985 (REV)										
		years	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
6	FLOOD CONTROL: Como Creek: 1) Predesign study 2) Flood gates 3) Pump station				20,000	100,000	200,000					
7	CHANNEL IMPROVEMENTS: Nelson Creek, Lougheed to Trans-Canada Highway, 250 m of channel dredging.				5,000							
8	DITCH ENCLOSURE: Hart Street, Girard to Roderick, 110 m of 525 mm Ø sewer.				31,300							
9	DITCH ENCLOSURE: Lane S Foster Avenue, Collinet to Macintosh, 100 m of 250 mm Ø storm sewer.				18,500							
10	FLOOD CONTROL: Como Lake Ave, Green St to Scott Creek, tidal gate.				75,000							
11	DITCH ENCLOSURE: Lane N Ebert, W off Fairview, 180 m of 600 mm Ø sewer.						47,400					
12	DITCH ENCLOSURE: Cape Horn Ave, Mundy to Warrick, 260 m of 375 mm Ø storm sewer.						56,200					

TOTAL				204,000		200,000						
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