

ITEM	12
MANAGER'S REPORT NO.	50
COUNCIL MEETING	1983 07 25

TO: MUNICIPAL MANAGER

83 07 19

FROM: DIRECTOR ENGINEERING

SUBJECT: B.N.R. GRADE SEPARATION PROGRESS REPORT TO 1983 JUNE 30

RECOMMENDATION:

1. THAT this report be received for information purposes.

REPORT:

The bar chart attached as Appendix I forms a visual presentation of progress to date, the monthly control progress reports attached as Appendix II show the detailed progress to date for ongoing contracts and the Cumulative Construction Cost Chart attached as Appendix III shows a cash flow for each contract, a cumulative expenditure to date and the expenditure per calendar year. The difference between original estimates, updated estimates and actual contract bids are shown on the attached Appendix IV.

Contracts 8109 (Earthworks) and 8211 (Foundations I) are complete and final payments made. Contract 8212A (Foundations II) is complete and final payment will be made shortly. Contract 8213 (Steelworks I) is substantially complete and a notice of acceptance should be issued next week.

Contracts 8301 (Concrete Deck I), 8302 (Foundations III), and 8303 (Steelworks II) are underway and proceeding satisfactorily. Contract 8309 (Roadworks - Broadway) did encounter some delays, mainly because of time-consuming but necessary work on complete renewal of gas and water mains. Staff have maintained close liaison with the residents and most of the problems have been solved. Curb and gutter construction is now underway and the next two weeks should show a substantial improvement in road conditions. Contract completion date of 1983 September 02 is expected to be met.

Application for Provincial Revenue sharing and U.T.A.P. funding is on schedule and to date the following invoices have been processed:

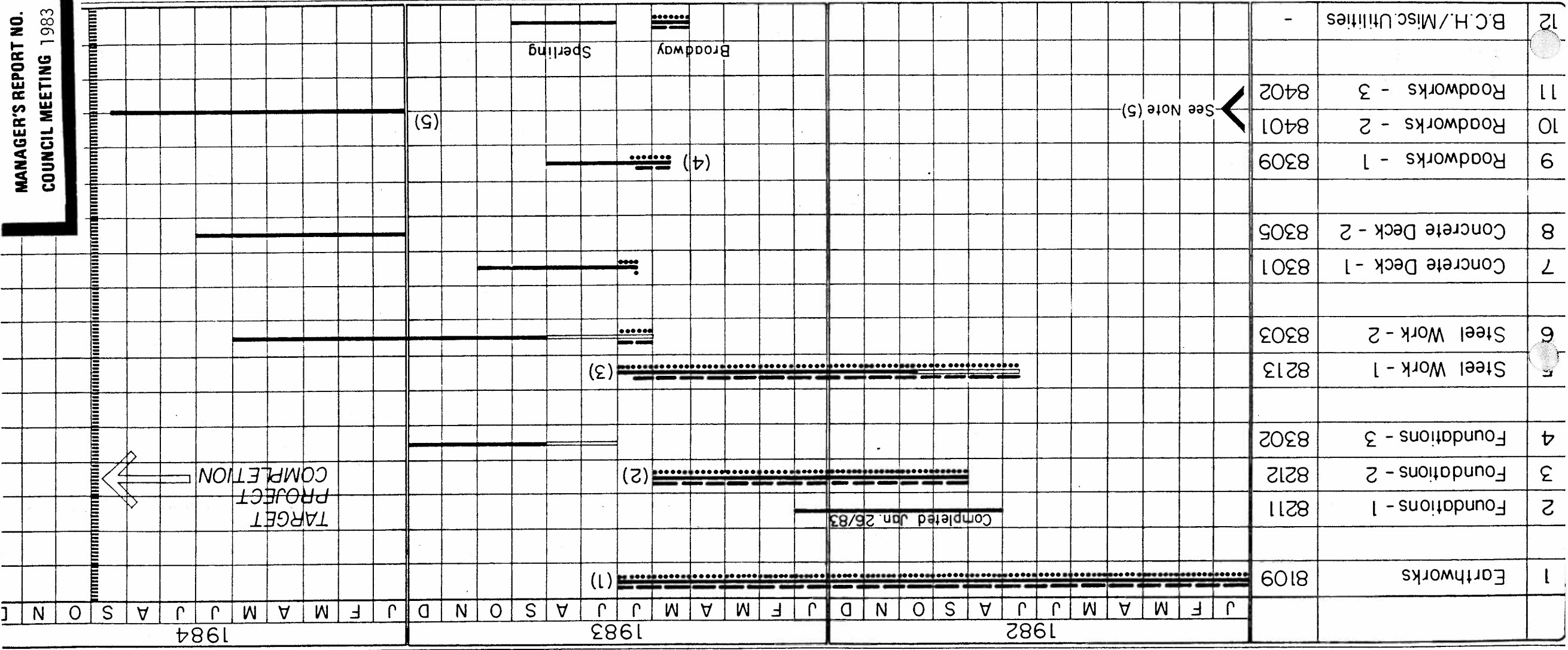
Provincial Revenue Sharing - \$2,913,055  
 U.T.A.P. Funds - \$3,440,234

The Engineering Department is pleased to advise Council that the Federal Department of Transport, Ottawa, has confirmed the earlier advice transmitted to His Worship Mayor Lewarne by The Honorable Alex V. Fraser, Minister of Transportation and Highways, British Columbia Government, that approval has been given to transfer \$170,085 of surplus U.T.A.P. funds from the North Road Grade Separation Project to the B.N.R. Kensington Project.

ASSOCIATED ENGINEERING SERVICES LTD  
 Corporation of the District of Burnaby  
 B.N.R. Grade Separation  
 Project Schedule June 1983

LEGEND :  
 - - - - - % Actual completion  
 ..... % Scheduled completion  
 = = = = = Order materials  
 ————— Duration of Contract

Progress as of June, 1983



NOTES : The contract duration shown on this schedule are indicative only and do not refer to contract dates unless specifically shown.

- 1) Contract completed May 31, 1983.
- 2) Contract completed May 31, 1983, except for deficiencies which the contractor is refusing to correct.
- 3) Completion of steelwork - 1 expected July 8, 1983.
- 4) Actual and scheduled completion based on payments and estimated cash flow.
- 5) Contracts 8401 and 8402 will be combined and called as one contract.

ITEM  
MANAGER'S REPORT NO. 12  
50  
COUNCIL MEETING 1983 07 25

# AESL

ASSOCIATED ENGINEERING SERVICES LTD 1661 W. 8TH AVE., VANCOUVER, B.C., V6J 1V1, TEL: (604) 736-7361, TELEX: 045-4577, CABLE: CANENCO

July 6, 1983  
File: V64F

RECEIVED IN  
ENGINEERING DEPT.

JUL 06 1983

Re: To	Noted	Date
ML		YC

Corporation of the  
District of Burnaby  
4949 Canada Way  
BURNABY, B.C.  
V5G 1M2

Attention: Mr. C. Sinclair, P.Eng.  
Assistant Director Engineering,  
Works

Dear Sirs:

Re: BNR Grade Separation  
Progress Payment Certificates  
June, 1983

We enclose Progress Payment Certificates (PPC) covering work done under various contracts as follows:

<u>Contract</u>	<u>Contractor</u>	<u>PPC No.</u>	<u>Amount of Payment</u>
8213	Hafer Machine	7	\$ 450,485.00
8309	Coquitlam Excavating	2	\$ 39,844.30
8301	Hansa Construction	1	\$ 4,675.00

We certify that payment to the Contractors of the respective amounts shown is now due. We also enclose the monthly Contract Progress Reports and Construction Cumulative Cost Chart for your information. Final progress payments for Contract No.'s 8109 (Miller) and 8212A (Grimwood) to follow under separate cover once quantities agreed to by the respective contractors.

Yours truly,

*NPD'Andrea*

N. P. D'Andrea, P.Eng.  
Project Engineer

NPD:dh  
Encs.

APPENDIX II  
VANCOUVER VICTORIA NANAIMO PRINCE GEORGE KAMLOOPS PRINCE RUPERT WHITEHORSE EDMONTON CALGARY REGINA

ITEM  
 MANAGER'S REPORT NO. 12  
 50  
 COUNCIL MEETING 1983 07 25

**MONTHLY CONTRACT  
 PROGRESS REPORT**

ASSOCIATED  
 ENGINEERING  
 SERVICES LTD



PROJECT BNR GRADE SEPARATION  
 CONTRACT #8213 - Steelwork - 1  
 CONTRACTOR Hafer Machine Co.  
 MONTH ENDING June 30/83 NO. 10 SHEET 1 OF 1

**CONTRACTOR'S WORK FORCE**

LABOUR: a) On Site SUPERVISORS 3 ENG/SURV. 0 CARP. 0 IRON WORKERS 9  
 PLANT OPS. 3 LABOURERS 0  
 b) In Victoria: Welders: 20, Fitters: 12, Drillers: 10, Helpers: 10  
 PLANT ON SITE: 1-25 ton Crane, 1-50 ton Crane, 1-200 ton Crane, Impact Wrenches,  
Compressors, Welder

WEATHER: Rainy

**MAJOR PROGRESS**

ITEM	DESCRIPTION	% COMPLETION		WEEKS + OR -
		SCHEDULED	ACTUAL	
1.	Production of Shop Drawings	100	100	0
2.	Steel Delivery	100	100	0
3.	Steel Cutting	100	100	0
4.	Box Girder Fabrication			
	a) Store Street	100	100	0
	b) Cecelia Street	100	100	0
5.	Box Girder Trial Assembly	100	100	0
6.	Sandblasting	100	100	0
7.	Transportation	100	95	+1
8.	Erection	100	95	+1

ITEM  
**MANAGER'S REPORT NO.** 12  
 50  
**COUNCIL MEETING 1983 07** 25

PROBLEMS ENCOUNTERED ON SITE			EFFECT	
ITEM	DESCRIPTION	DELAY	COST	EXTENSION

CHANGES TO CONTRACT VALUE			COST	
ITEM	DESCRIPTION	DELAY	UNIT PRICE	EXTENSION
	SUB-TOTAL			\$ 10,692.00
	CHANGES B/F FROM PREVIOUS MONTH			\$
	TOTAL CHANGES TO DATE			\$ 10,692.00

**SUMMARY**

CONTRACT COMPLETION DATE June 30, 1983 ORIGINAL CONTRACT VALUE \$ 3,082,780.00  
 EXPECTED COMPLETION DATE July 8, 1983  
 ESTIMATED FINAL CONTRACT VALUE \$ 3,052,472.00

COMMENTS: Box girder fabrication and trial assembly completed by June 30, 1983.  
 Erection completed except for last three girders on "L" Line. Contract completion expected to be one week behind schedule, i.e. July 8, 1983.

SIGNED *NPD Androse* AESL REPRESENTATIVE  
 APPENDIX II

**MONTHLY CONTRACT  
 PROGRESS REPORT**

ASSOCIATED  
 ENGINEERING  
 SERVICES LTD



PROJECT BNR GRADE SEPARATION

CONTRACT #8309 - Roadworks - 1

CONTRACTOR Coquitlam Excavating Ltd.

MONTH ENDING June 30/83 REPORT NO. 2 SHEET 1 OF 1

CONTRACTOR'S WORK FORCE

LABOUR: SUPERVISORS 1 ENG/SURV. 2 CAPP. 0 STEEL WORKERS 0

PLANT OPS. 3 LABOURERS 4

PLANT ON SITE: 1-Hitachi 122 Backhoe, 1-Case 680C Backhoe, 2-Tandem Dump Trucks, 1-SP42 Roller, 1-JD 450 Dozer and 1-930 Loader.

WEATHER: Rainy

MAJOR PROGRESS

ITEM	DESCRIPTION	% COMPLETION		WEEKS + OR -
		SCHEDULED	ACTUAL	
1.	Existing Structures and Utility Works	43	43	0
2.	Clearing and Grubbing	100	100	0
3.	Drainage Works	44	44	0
4.	Road Base Preparation	36	36	0
5.	Concrete Curbs, Curb and Gutter and Sidewalk	0	0	0
6.	Asphaltic Concrete Pavement	0	0	0
7.	Miscellaneous Work	0	0	0
8.	Roadway Lighting and Miscellaneous Electrical			
	Ducts	1.7	1.7	0

ITEM 12  
 MANAGER'S REPORT NO. 50  
 COUNCIL MEETING 1983 07 25

PROBLEMS ENCOUNTERED ON SITE						EFFECT	
ITEM	DESCRIPTION	DELAY	QUANTITY	UNIT PRICE	EXTENSION	DELAY	COST
1.	Delays caused by the installation of 335 m of 200 mm diameter watermain, and installation of 19 mm diameter gas main.				696.79		
CHANGES TO CONTRACT VALUE						COST	
ITEM	DESCRIPTION	DELAY	QUANTITY	UNIT PRICE	EXTENSION		
1.	Work at west and north abutments.	0			696.79		
	The supply and installation cost of the 200 mm diameter watermain is not in this contract. Burnaby is reimbursing the Contractor directly.						
	SUB-TOTAL				\$ 696.79		
	CHANGES B/F FROM PREVIOUS MONTH				\$		
	TOTAL CHANGES TO DATE				\$ 696.79		

**SUMMARY**

CONTRACT COMPLETION DATE 120 Calendar Days ORIGINAL CONTRACT VALUE \$ 380,132.25  
 EXPECTED COMPLETION DATE August 30, 1983  
 ESTIMATED FINAL CONTRACT VALUE \$ 350,829.04  
 COMMENTS: Installed 335 m of 200 mm diameter ductile iron pipe watermain.  
 Completed 43% of existing structures and utility works.  
 Completed 44% of drainage works.  
 Completed 36% of roadbase preparation.

SIGNED N. Anderson AESL REPRESENTATIVE  
 APPENDIX II

ITEM

MANAGER'S REPORT NO.

COUNCIL MEETING 1983 07 25

12  
50

129

**MONTHLY CONTRACT  
PROGRESS REPORT**

ASSOCIATED  
ENGINEERING  
SERVICES LTD



PROJECT BNR GRADE SEPARATION

CONTRACT #8301 - Concrete Deck - 1

CONTRACTOR Hansa Construction Ltd.

MONTH ENDING June 30/83 NO. 1 SHEET 1 OF 1

CONTRACTOR'S WORK FORCE

LABOUR: SUPERVISORS 0 ENG/SURV. 0 CARP. 0 STEEL WORKERS 0

PLANT OPS. 0 LABOURERS 0

PLANT ON SITE: 2 Officés

WEATHER: Rainy

MAJOR PROGRESS

ITEM	DESCRIPTION	% COMPLETION		WEEKS + OR -
		SCHEDULED	ACTUAL	
1.	No progress during month following issue of Notice to Proceed on June 6, 1983.			
2.	Contractor has however been actively engaged in prefabricating deck formwork off site.			



ITEM 12  
 MANAGER'S REPORT NO. 50  
 COUNCIL MEETING 1983 07 25

PROBLEMS ENCOUNTERED ON SITE									
ITEM	DESCRIPTION	DELAY	COST			EFFECT			
			QUANTITY	UNIT	UNIT PRICE	EXTENSION	DELAY	COST	
CHANGES TO CONTRACT VALUE									
1.	Claim regarding metal decking support (currently under negotiation).	--	(estimated)				\$12,500.00		
SUB-TOTAL							\$	12,500.00	
CHANGES B/F FROM PREVIOUS MONTH							\$		
TOTAL CHANGES TO DATE							\$	12,500.00	

**SUMMARY**

CONTRACT COMPLETION DATE October 31, 1983 ORIGINAL CONTRACT VALUE \$ 1,087,489  
 EXPECTED COMPLETION DATE October 31, 1983  
 ESTIMATED FINAL CONTRACT VALUE \$ 1,074,989

COMMENTS: The claim on metal deck support revolves around conflict with horizontal top diagonal bracing of the steel box girders and what the Contractor could have reasonably expected. Negotiations are presently underway and we expect a satisfactory solution will be reached.

SIGNED NP Anderson AESL REPRESENTATIVE  
 APPENDIX II

ITEM 12  
 MANAGER'S REPORT NO. 50  
 COUNCIL MEETING 1983 07 25

ASSOCIATED  
 ENGINEERING  
 SERVICES LTD



CONTRACT NO.	ITEM	1982												1983			
		TENDER VALUE	CUMULATIVE COST TO DATE											ESTIMATED FINAL COST	ESTIMATED FINAL COST		
		June 1982	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July		
8109	EARTHWORKS *	1,119,725	664,001	26,844	0	11,149	58,330	16,302	90,000	9,243	3,227	32,739	96,651	89,639	0	1,215,600	1,439,131
8211	FOUNDATIONS - 1 *	1,483,590		36,777	128,138	191,103	338,593	406,733	121,917	215,870						1,439,131	
8212A	FOUNDATIONS - 2 *	1,622,155		0	48,494	144,966	142,769	93,683	297,826	197,495	176,515	87,442	53,680	0	0	1,564,540	
8302	FOUNDATIONS - 3	860,400															
8213	STEELWORK - 1 *	3,082,780		0	0	0	221,819	565,813	148,874	237,006	379,487	488,877	450,485			3,052,472	
8303	STEELWORK - 2	2,392,000															
8301	CONCRETE DECK - 1 *	1,087,489													4,675	1,074,989	
8305	CONCRETE DECK - 2																
8309	ROADWORKS - 1 *	380,132												12,947	39,844	350,829	
8401	ROADWORKS - 2																
8402	ROADWORKS - 3																
TOTAL EXPENDITURE PER MONTH		-	26,844	36,777	187,781	394,399	497,664	812,235	994,799	505,06	495,247	563,580	645,143	495,004			
CUMULATIVE EXPENDITURE TO DATE		664,001	690,845	727,622	915,403	1,309,802	1,807,466	2,619,701	3,614,500	4,179,966	4,675,213	5,238,793	5,883,936	6,378,940			
CALENDAR YEAR EXPENDITURE		545,851	572,695	609,472	797,253	1,191,652	1,689,316	2,501,551	994,799	1,560,265	2,055,512	2,619,092	3,264,235	3,759,239			
REVENUE SHARING - 1982 - 3 *		122,231	149,075	185,852	373,633	768,032	1,265,696	2,077,931	3,072,730	3,638,196	4,133,443	4,697,023	5,242,166	5,837,170			
REVENUE SHARING - 1983 - 4																	
REVENUE SHARING - 1984 - 5																	

NOTE 1 ALL CONTRACT EXPENDITURES REPRESENT PAYMENT TO THE CONTRACTOR, 4 FINAL CONTRACT VALUE THEREFORE 15% HOLDBACK HAS BEEN DEDUCTED  
 2 REVENUE SHARING VALUES REPRESENT THE CUMULATIVE TOTAL TO THE MONTH SHOWN AND EXCLUDE THE 15% HOLDBACK  
 3 HOLDBACK RELEASE

ITEM 12  
 MANAGER'S REPORT NO. 50  
 COUNCIL MEETING 1983 07 25

B.N.R. GRADE SEPARATION  
 PROJECT COSTS TO DATE SHOWING ORIGINAL ESTIMATES,  
 UPDATED ESTIMATES AND ACTUAL CONTRACT BIDS

CONTRACT/ITEM	ORIGINAL \$ ESTIMATE	UPDATED \$ ESTIMATE	ACTUAL \$ CONTRACT BID	COMPLETED \$ CONTRACT	\$ DIFFERENCE
1. PROPERTY ACQUISITION	500,000	444,027		ON-GOING	+ 55,973.
2. EARTHWORKS - CONTRACT #8109	1,200,000	1,119,725	1,119,725	1,215,600	- (95,875)
3. FOUNDATIONS I - CONTRACT #8211	1,718,000	1,483,590	1,483,590	1,439,131	+ 278,869
4. FOUNDATIONS II - CONTRACT #8212A	1,863,000	1,622,155	1,622,155	ON-GOING	+ 240,845
5. STEELWORK I - CONTRACT #8213	2,772,000	3,082,780	3,082,780	ON-GOING	-(310,780)
6. CONCRETE DECK I - CONTRACT #8301	1,167,000	1,087,489	1,087,489	ON-GOING	+ 79,511
7. ROADWORKS I - CONTRACT #8309	466,000	380,132	380,132	ON-GOING	+ 85,868
8. STEELWORKS II - CONTRACT #8303	2,850,000	2,392,000	2,392,000	ON-GOING	+ 458,000
9. FOUNDATIONS III - CONTRACT #8302	1,054,000	860,400	860,400	ON-GOING	+ 193,600
<b>TOTAL WORK CONTRACTED TO DATE</b>					<b>\$12,028,271</b>
<b>BALANCE</b>					<b>+ 986,011</b>

