STATE OF VERMONT
AGENCY OF TRANSPORTATION

EARTHWORKS

Metric

STATION km + m	DIST m	TOTAL EXCAVATION EARTH AND ROCK AREA m²	TOTAL EXCAVATION EARTH AND ROCK VOLUME m³	ROCK EXCAVATION AREA m²	ROCK EXCAVATION VOLUME m³	EMBANKMENT AREA m²	EMBANKMENT VOLUME m³	AREA m²	VOLUME m³
HIGHGATE									
1+000		0.0				0			
	20		0				220		
1+020		0.0				22			
	20		13				363		
1+040		1.3				14.4			
	20		89				184		
1+060		7.5				4			
	20		176				40		
1+080		10.0				0			
	20		133				33		
1+100		3.2				3.3			
	20		46				83		
1+120		1.4				4.9			
	20		14				197		
1+140		0.0				14.8			
	20		0				307		
1+160		0.0				15.9			
	20		8				267		
1+180		0.8				10.7			
	20		8				156		
1+200		0.0				4.8			
	20		0		5.2		130		
1+220		0.0		0.5		8.2			
	20		29		5.2		243		
1+240		2.9				16.1			
	20		41				253		
1+260		1.2				9.2			
	20		12				131		
1+280		0.0				4			
	20		4				59		
1+300		0.4				1.9			
	20		19				32		
1+320		1.5				1.3			
	20		39				40		
1+340		2.4				2.8			
	20		51				38		
1+360		2.7				1			
	20		61				10		
1+380		3.4				0			
	20		77				0		
1+400		4.3				0.6			
	20		77				21		
1+420		3.4				1.5			
	20		52				21		
1+440		1.8				0.7			
	20		40				38		
1+460		2.2				3.2			
	20		47				32		
1+480		2.5				0			
	20		57				0		
1+500		3.2				0			
								C=	1093
								F=	2898
								R=	10
								FR=	0.495
								FF=	1.15
TOTALS			1093		10		2898	EXF=	2235

STATION km + m	DIST m	TOTAL EXCAVATION EARTH AND ROCK AREA m²	TOTAL EXCAVATION EARTH AND ROCK VOLUME m³	ROCK EXCAVATION AREA m²	ROCK EXCAVATION VOLUME m³	EMBANKMENT AREA m²	EMBANKMENT VOLUME m³	AREA m²	VOLUME m³
1+500		3.2				0			
	20		61				3		
1+520		2.9				0.3			
	20		53				34		
1+540		2.4				3.2			
	20		27				57		
1+560		0.3				2.5			
	20		52				52		
1+580		4.9				2.7			
	20		71				33		
1+600		2.2				0.7			
	20		35				8		
1+620		1.3				0.2			
	20		64				6		
1+640		5.2				0.5			
	20		140				15		
1+660		8.8				1			
	20		203				10		
1+680		11.5				0			
	20		277				0		
1+700		16.2				0			
	20		213				17		
1+720		5.1				1.7			
	20		71				115		
1+740		2.0				9.9			
	20		35				110		
1+760		1.5				1.1			
	20		23				11		
1+780		0.8				0			
	20		60				0		
1+800		5.2				0			
	20		118				20		
1+820		6.7				2			
	20		87				68		
1+840		2.1				4.8			
	20		64				48		
1+860		4.4				0			
	20		104				0		
1+880		6.0				0			
	20		221				0		
1+900		16.1				0			
	20		326				0		
1+920		16.5				0			
	20		357				0		
1+940		19.2				0			
	20		350				0		
1+960		15.8				0			
	20		248				2		
1+980		9.0				0.2			
	20		110				48		
2+000		2.0				4.7			
								C=	3370
								F=	657
								R=	0
								FR=	0.495
								FF=	1.15
TOTALS			3370		0		657	EXC=	2615

STATION km + m	DIST m	TOTAL EXCAVATION EARTH AND ROCK AREA m²	TOTAL EXCAVATION EARTH AND ROCK VOLUME m³	ROCK EXCAVATION AREA m²	ROCK EXCAVATION VOLUME m³	EMBANKMENT AREA m²	EMBANKMENT VOLUME m³	AREA m²	VOLUME m³
2+000		2.0				4.7			
	20		48				75		
2+020		2.8				2.8			
	20		28				30		
2+040		0.0				0.2			
	20		22				7		
2+060		2.2				0.5			
	20		62				27		
2+080		4.1				2.1			
	20		78				39		
2+100		3.7				1.7			
	20		66				37		
2+120		2.9				1.9			
	20		105				118		
2+140		7.7				9.9			
	20		93				241		
2+160		1.6				14.2			
	20		20				297		
2+180		0.4				15.5			
	20		13				303		
2+200		0.8				14.8			
	20		26				280		
2+220		1.8				13.2			
	20		99				184		
2+240		8.1				5.2			
	20		104				52		
2+260		2.3				0			
	20		35				0		
2+280		1.2				0			
	20		70				0		
2+300		5.7				0			
	20		152				0		
2+320		9.4				0			
	20		183				0		
2+340		8.8				0			
	20		176				0		
2+360		8.8				0			
	20		180				0		
2+380		9.2				0			
	20		166				6		
2+400		7.4				0.6			
	20		89				73		
2+420		1.5				6.8			
	20		32				336		
2+440		1.7				26.8			
	20		21				592		
2+460		0.4				32.4			
	20		12				525		
2+480		0.8				20.1			
	20		14				338		
2+500		0.6				13.7			
								C=	1894
								F=	3560
								R=	0
								FR=	0.495
								FF=	1.15
TOTALS			1894		0		3560	EXF=	2200

SUMMARY AND BALANCES

STATION TO STATION km + m	km + m	TOTAL EXC. EARTH+ROCK m³	ROCK EXCAVATION m³	EMBANKMENT m³	EXCESSES CUT	EXCESSES FILL	ACCUMULATIVE EXCESSES CUT	ACCUMULATIVE EXCESSES FILL
MAINLINE								
1+000	1+500	1093	10	2898		2235		2235
1+500	2+000	3370	0	657	2615		380	
2+000	2+500	1894	0	3560		2200		1820
2+500	3+000	2456	0	1679	525			1295
3+000	3+500	2772	0	2210	231			1064
3+500	4+000	564	0	3666		3652		4716
4+000	4+500	1818	2	2939		1561		6277
4+500	5+000	1238	28	3195		2422		8699
5+000	5+500	1269	0	4830		4286		12985
5+500	6+000	1797	6	1461	120			12865
6+000	6+500	878	18	3936		3640		16505
6+500	7+000	636	88	2751		2484		18989
7+000	7+500	964	0	3319		2853		21842
7+500	8+000	2116	0	836	1155			20687
8+000	8+500	1776	0	1924		437		21124
8+500	9+000	1863	0	4290		3071		24195
9+000	14+840	3345	0	7768		5588		29783
14+840	15+034	1564	0	536	948			28835

REMARKS

EARTH AND ROCK EXCAVATION	34841
SOLID ROCK EXCAVATION	177
EARTH EXCAVATION	34664
PLANIMETERED FILL	58423
LESS FACTORED SOLID ROCK	-177 x 1.3 = 230
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	
NET PLANIMETERED FILL	58193
FACTOR	x 1.15 =
PLANIMETERED FILL INCLUDING FACTOR	66922
MATERIALS AVAILABLE FOR FILLS	
EARTH EXCAVATION	34664
CHANNEL EXCAVATION	80 x 0.65 = 52
UNDERDRAIN EXCAVATION	5757 x (0.65) = 3742
STRUCTURE EXCAVATION	1625 x (0.65) = 1056
TOTAL MATERIAL AVAILABLE FOR FILL	39514
TOTAL FILL INCLUDING FACTOR	66922
TOTAL MATERIAL FOR FILL	39514
BORROW	27408
EXCESS EXCAVATION	

PROJECT NAME: HIGHGATE - FRANKLIN
PROJECT NUMBER: STP RS 0301(1) SA

FILE NAME: ...85c060/design/dc060frm.dgn
PROJECT LEADER: DELLASANTA
DESIGNED BY: SQUAD B
IPARM FILE NAME: dc060ewl.1
PLOT DATE: 09-MAY-2005
DRAWN BY: SQUAD B
CHECKED BY: SQUAD B
SHEET 20 OF 450