STATE OF VERMONT
AGENCY OF TRANSPORTATION

EARTHWORKS

US ROUTE 2

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	ROCK EXCAVATION AREA S.F.	ROCK EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.		
6+00		0				0			
	50		65				0		
6+50		70				0			
	50		129				0		
7+00		69				0			
	50		185				3		
7+50		131				3			
	50		238				4		
8+00		126				1			
	50		225				1		
8+50		117				0			
	50		200				1		
9+00		99				1			
	50		125				1	CUT	2331
9+50		36				0		ROCK	0
	50		65				0	R.FAC	.495
10+00		34				0		FILL	9
	50		34				0	F.FAC	1.15
10+50		3				0		EX. C	2321
	50		2				0		
11+00		0				0			
	50		0				0		
11+50		0				0			
	50		0				0		
12+00		0				0			
	50		0				0		
12+50		0				0			
	50		0				0		
13+00		0				0			
	50		0				0		
13+50		0				0			
	50		0				0		
14+00		0				0			
	50		0				0		
14+50		0				0			
	50		0				0		
15+00		0				0			
	50		0				0		
15+50		0				0			
	50		0				0		
16+00		31				0			
	50		57				0		
16+50		31				0			
	50		61				0		
17+00		34				0			
	50		69				0		
17+50		41				0			
	50		38				0		
18+00		0				0			
	50		45				0		
18+50		48				0			
	50		89				0		
19+00		48				0			
	50		100				0		
19+50		60				0			
	50		106				0		
20+00		54				0			
	50		100				0		
20+50		54				0			
	50		98				0		
21+00		53				0			
	50		95				0		
21+50		50				0			
	50		82				0		
22+00		39				0			
	50		66				0		
22+50		32				0			
	50		30				0		
23+00		0				0			
	50		0				0		
23+50		0				0			
	50		0				0		
24+00		0				0			
	50		0				0		
24+50		0				0			

VT ROUTE 117

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	ROCK EXCAVATION AREA S.F.	ROCK EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.		
30+00		2				0		CUT	6
	50		4				0	ROCK	0
30+50		2				0		R.FAC	.495
	50		2				0	FILL	0
31+00		0				0		F.FAC	1.15
								EX. C	6

I-89 RAMP "A/F"

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	ROCK EXCAVATION AREA S.F.	ROCK EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.		
35+28		31				0		CUT	49
	22		25				0	ROCK	0
35+50		31				0		R.FAC	.495
	21		24				0	FILL	0
35+71		31				0		F.FAC	1.15
								EX. C	49

I-89 RAMP "D"

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	ROCK EXCAVATION AREA S.F.	ROCK EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.		
51+83		31				0			
	17		20				0		
52+00		31				0		CUT	400
	50		61				0	ROCK	0
52+50		35				0		R.FAC	.495
	50		64				0	FILL	6
53+00		34				0		F.FAC	1.15
	50		87				3	EX. C	393
53+50		60				4			
	50		93				3		
54+00		40				0			
	32		76				0		
54+32		88				0			

STATION	DIST	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	ROCK EXCAVATION AREA S.F.	ROCK EXCAVATION VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.		

SUMMARY AND BALANCES

RICHMOND STP 0284 (17)

STATION TO STATION		TOT EXC EARTH & ROCK C.Y.	ROCK EXCAV C.Y.	EMBANK C.Y.	EXCESSES CUT	EXCESSES FILL	ACUMULATIVE EXCESSES CUT	ACUMULATIVE EXCESSES FILL
6+00	24+50	2321		9	2311		2311	
30+00	31+00	6		0	6		2317	
35+25	35+71	49		0	49		2365	
51+83	54+32	400		6	393		2758	
3% CONTINGENCY			83					
	SUB-TOTAL	2776	83	15	2758			
	TOTAL	2776	83	15	2758			

REMARKS

EARTH AND ROCK EXCAVATION		2776
SOLID ROCK EXCAVATION		83
EARTH EXCAVATION		2693
BACKFILL FOR TRENCH EXCAVATION (CB AND PIPES)		4
PLANIMETERED FILL		15
LESS FACTORED SOLID ROCK		
LESS DISPLACEMENT OF ANY LARGE STRUCTURES		
NET PLANIMETERED FILL		19
FACTOR		1.15
PLANIMETERED FILL INCLUDING FACTOR		22
MATERIALS AVAILABLE FOR FILLS		
EARTH EXCAVATION		2693
CHANNEL EXCAVATION		
UNDERDRAIN EXCAVATION		80
STRUCTURE EXCAVATION		
TRENCH EXCAVATION FOR DRAINAGE		17
TRENCH EXCAVATION OF ROCK		
TOTAL MATERIAL AVAILABLE FOR FILL		2790
TOTAL FILL INCLUDING FACTOR		22
TOTAL MATERIAL FOR FILL		2490
BORROW		
EXCESS EXCAVATION		2768

PROJECT NAME: **RICHMOND**
PROJECT NUMBER: **STP 0284 (17)**

FILE NAME: **Z97C186EWQTY.XLS**
PROJECT LEADER: **ERIK ATKINS**
DESIGNED BY: **T. BIGELOW**
EARTHWORK SHEET

PLOT DATE: **11/15/2012**
DRAWN BY: **A. ACHARYA**
CHECKED BY: **E.ATKINS**
SHEET **41** OF **133**