GRADING QUANTITIES SHEET

Computed By: T Snow
Checked By:
Route: SR 237

Sheet: 1 of 2
Project No.: 1116007
County: Montgomery

Stage 2 Traffic Control/Construction

Total Excav.		49207 CY	
Excess Excav. Stage 1	+	1957 CY	
Topsoil Excav.	-	11275 CY	
Unclass Excav.		39889 CY	

Unclass Embank. 47916 CY

Factor(s): SHR. 15%

Balance Calculation: Unclass. Embank -(Unclass Excav./(1+SHR)
47916-(39889/1.15) = 13229.82 CY (BORROW)

Borrow Material: 13229.82 CY

GRADING QUANTITIES SHEET

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Route: SR 237

Sheet: 2 of 2
Project No.: 1116007
County: Montgomery

Tabulation of Earthwork Volumes

Alignment	Excavation (CY)		Embank (CY)
	Earth	Topsoil	
SR 237	16788	6526	40807
Ramp A (stage 2)	4252	696	51
Ramp A (stage 2A)	832	224	88
Ramp B (stage 2)	935	846	3952
Ramp B (stage 2A)	930	446	178
Ramp C (stage 2)	4066	1034	1045
Ramp C (stage 2A)	317	0	5
Ramp C (stage 2B)	500	44	1304
Ramp D (stage 2)	5168	712	105
Ramp D (stage 2A)	3554	572	202
International Blvd	470	105	81
Powell Rd	44	70	83
driveways	40		15
EPSC	36		
Totals	**37932**	**11275**	**47916**

7-9-14 T. SNOW
SR 237 STAGE 2
EARTHWORK

```
Input  File: ewkprj.inp
Output File: SR 237 STAGE 2 EARTH.log
 1     1     1
 1     2     2
 1     3     3 Earthwork
 1     4     4
 1     5     5 tolerance = 0.010000
 1     6     6
 1     7     7 vertical search distance = 500.000000
 1     8     8
 1     9     9 xs dgn = H:\1116007\DGN\Traffic control working
files\Mainline XS Stage 2.dgn
 1    10    10
 1    11    11     Proposed Finish Grade
 1    12    12         soil type = EARTH
 1    13    13         roadway exc mult factor = 1.000000
 1    14    14         subsoil exc mult factor = 1.000000
 1    15    15         fill mult factor = 1.000000
 1    16    16             type = line
 1    17    17             lvname = DESIGN - TYPICAL - Finished Grade and
Subgrade
 1    18    18             lc = 0
 1    19    19             wt = 4
 1    20    20
 1    21    21     Existing Ground Line
 1    22    22         soil type = EARTH
 1    23    23         roadway exc mult factor = 1.000000
 1    24    24         subsoil exc mult factor = 1.000000
 1    25    25         fill mult factor = 1.000000
 1    26    26             type = line_string
 1    27    27             lvname = SURVEY - GROUND - Top of Ground
 1    28    28             lc = 3
 1    29    29             wt = 2
 1    30    30             co = 0
 1    31    31
 1    32    32     Existing Unsuitable Material
 1    33    33         soil type = TOPSOIL
 1    34    34         roadway exc mult factor = 1.000000
 1    35    35         subsoil exc mult factor = 1.000000
 1    36    36         fill mult factor = 1.000000
 1    37    37             type = line
 1    38    38             lvname = SURVEY - GROUND - Bottom of Topsoil
Layer
 1    39    39             lc = 2
 1    40    40             wt = 2
 1    41    41             co = 2
 1    42    42
 1    43    43     Excavation Limit
 1    44    44             type = line
 1    45    45             lvname = DESIGN - EARTHWORK - Excavation Limit
Lines
 1    46    46             lc = 0
 1    47    47             wt = 0
 1    48    48             co = 0
```

```
 1     49     49
 1     50     50      Skip Areas
 1     51     51         from 85+36.71 R 1 to 87+21.71 R 1
 1     52     52         from 91+78.42 R 1 to 93+62.42 R 1
 1     53     53
 1     54     54      Ignore Areas
 1     55     55         from 85+36.71 R 1 to 87+21.71 R 1
 1     56     56         from 91+78.42 R 1 to 93+62.42 R 1
 1     57     57
 1     58     58      Write Earthwork Shapes
 1     59     59          plot param
 1     60     60              lv = 347
 1     61     61              lvname = DESIGN - EARTHWORK - Shapes
 1     62     62              co = ByLevel
 1     63     63              wt = ByLevel
 1     64     64              lc = ByLevel
 1     65     65
 1     66     66      combine common exc + subgrade exc + subsoil exc
 1     67     67
 1     68     68      End Area Decimal Places = 0
 1     69     69
 1     70     70      write column base ascii file = SR237 STAGE 2 EARTH.TXT
 1     71     71
 1     72     72      column 1 formula = abs( ["EARTH", Common Exc, End
Area]  )
 1     73     73      column 1 number of decimal place = 0
 1     74     74      column 1 total length = 10
 1     75     75
 1     76     76      column 2 formula = abs( ["EARTH", Fill, End Area]  )
 1     77     77      column 2 number of decimal place = 0
 1     78     78      column 2 total length = 10
 1     79     79
 1     80     80      column 3 formula = abs( ["TOPSOIL", Subsoil Exc, End
Area]  )
 1     81     81      column 3 number of decimal place = 0
 1     82     82      column 3 total length = 10
 1     83     83
 1     84     84
 1     85     85      Process Earthwork for Baseline = SR237
 1     86     86          job number = 098
 1     87     87
 1     88     88          beg sta = 70+00.00 R 1
 1     89     89          end sta = 124+50.00 R 1
 0      0     90 END_OF_FILE
COMPUTING EARTHWORKS FOR BASELINE = SR237
COMPUTING EARTHWORKS FOR JOB = 098
FORMING LIST OF XSCELLS
BEGINNING EARTHWORKS COMPUTATION
```

Station Ordinate	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass
70+50.00	EARTH					
	Excavation	4	0	0	1.00	
	Fill	5	0	0	1.00	0
	TOPSOIL					
	Excavation	7	0	0	1.00	
	Fill	0	0	0	1.00	0
	Mass ordinate for TOPSOIL = 0					
71+00.00	EARTH					
	Excavation	4	7	7	1.00	
	Fill	9	13	13	1.00	-6
	TOPSOIL					
	Excavation	8	13	13	1.00	
	Fill	0	0	0	1.00	-6
	Mass ordinate for TOPSOIL = 13					
71+50.00	EARTH					
	Excavation	4	7	7	1.00	
	Fill	12	19	19	1.00	-18
	TOPSOIL					
	Excavation	10	16	16	1.00	
	Fill	0	0	0	1.00	-18
	Mass ordinate for TOPSOIL = 29					
72+00.00	EARTH					
	Excavation	4	7	7	1.00	
	Fill	14	24	24	1.00	-35
	TOPSOIL					
	Excavation	12	20	20	1.00	
	Fill	0	0	0	1.00	-35
	Mass ordinate for TOPSOIL = 49					
72+50.00	EARTH					
	Excavation	10	13	13	1.00	
	Fill	12	24	24	1.00	-46
	TOPSOIL					
	Excavation	15	25	25	1.00	
	Fill	0	0	0	1.00	-46
	Mass ordinate for TOPSOIL = 74					
73+00.00	EARTH					
	Excavation	22	30	30	1.00	
	Fill	6	17	17	1.00	-33
	TOPSOIL					
	Excavation	16	29	29	1.00	
	Fill	0	0	0	1.00	-33
	Mass ordinate for TOPSOIL = 103					

73+50.00	EARTH					
	Excavation	33	51	51	1.00	
	Fill	6	11	11	1.00	7
	TOPSOIL					
	Excavation	19	32	32	1.00	
	Fill	0	0	0	1.00	7
	Mass ordinate for TOPSOIL = 135					
74+00.00	EARTH					
	Excavation	32	60	60	1.00	
	Fill	2	7	7	1.00	60
	TOPSOIL					
	Excavation	21	37	37	1.00	
	Fill	0	0	0	1.00	60
	Mass ordinate for TOPSOIL = 172					
74+50.00	EARTH					
	Excavation	35	62	62	1.00	
	Fill	21	21	21	1.00	101
	TOPSOIL					
	Excavation	25	42	42	1.00	
	Fill	0	0	0	1.00	101
	Mass ordinate for TOPSOIL = 214					
75+00.00	EARTH					
	Excavation	36	66	66	1.00	
	Fill	42	58	58	1.00	109
	TOPSOIL					
	Excavation	27	48	48	1.00	
	Fill	0	0	0	1.00	109
	Mass ordinate for TOPSOIL = 262					
75+50.00	EARTH					
	Excavation	30	61	61	1.00	
	Fill	65	99	99	1.00	71
	TOPSOIL					
	Excavation	29	52	52	1.00	
	Fill	0	0	0	1.00	71
	Mass ordinate for TOPSOIL = 314					
76+00.00	EARTH					
	Excavation	16	43	43	1.00	
	Fill	72	127	127	1.00	-13
	TOPSOIL					
	Excavation	29	53	53	1.00	
	Fill	0	0	0	1.00	-13
	Mass ordinate for TOPSOIL = 367					
76+50.00	EARTH					
	Excavation	0	15	15	1.00	
	Fill	9	75	75	1.00	-73
	TOPSOIL					
	Excavation	20	45	45	1.00	
	Fill	0	0	0	1.00	-73

Mass ordinate for TOPSOIL = 412

77+00.00	EARTH					
	Excavation	84	78	78	1.00	
	Fill	44	49	49	1.00	-44
	TOPSOIL					
	Excavation	41	56	56	1.00	
	Fill	0	0	0	1.00	-44

Mass ordinate for TOPSOIL = 468

77+50.00	EARTH					
	Excavation	65	138	138	1.00	
	Fill	39	77	77	1.00	17
	TOPSOIL					
	Excavation	38	73	73	1.00	
	Fill	0	0	0	1.00	17

Mass ordinate for TOPSOIL = 541

78+00.00	EARTH					
	Excavation	75	130	130	1.00	
	Fill	33	67	67	1.00	80
	TOPSOIL					
	Excavation	37	69	69	1.00	
	Fill	0	0	0	1.00	80

Mass ordinate for TOPSOIL = 610

78+50.00	EARTH					
	Excavation	91	154	154	1.00	
	Fill	27	56	56	1.00	178
	TOPSOIL					
	Excavation	35	66	66	1.00	
	Fill	0	0	0	1.00	178

Mass ordinate for TOPSOIL = 676

79+00.00	EARTH					
	Excavation	154	227	227	1.00	
	Fill	19	43	43	1.00	362
	TOPSOIL					
	Excavation	38	68	68	1.00	
	Fill	0	0	0	1.00	362

Mass ordinate for TOPSOIL = 744

79+50.00	EARTH					
	Excavation	92	228	228	1.00	
	Fill	20	36	36	1.00	554
	TOPSOIL					
	Excavation	39	72	72	1.00	
	Fill	0	0	0	1.00	554

Mass ordinate for TOPSOIL = 816

80+00.00	EARTH					
	Excavation	60	141	141	1.00	
	Fill	18	35	35	1.00	660
	TOPSOIL					

	Excavation	34	68	68	1.00	
	Fill	0	0	0	1.00	660
	Mass ordinate for TOPSOIL = 884					
80+50.00	EARTH					
	Excavation	58	109	109	1.00	
	Fill	45	58	58	1.00	711
	TOPSOIL					
	Excavation	39	68	68	1.00	
	Fill	0	0	0	1.00	711
	Mass ordinate for TOPSOIL = 952					
81+00.00	EARTH					
	Excavation	31	82	82	1.00	
	Fill	114	147	147	1.00	646
	TOPSOIL					
	Excavation	44	76	76	1.00	
	Fill	0	0	0	1.00	646
	Mass ordinate for TOPSOIL = 1028					
81+50.00	EARTH					
	Excavation	29	56	56	1.00	
	Fill	338	419	419	1.00	283
	TOPSOIL					
	Excavation	53	89	89	1.00	
	Fill	0	0	0	1.00	283
	Mass ordinate for TOPSOIL = 1117					
82+00.00	EARTH					
	Excavation	53	76	76	1.00	
	Fill	315	605	605	1.00	-246
	TOPSOIL					
	Excavation	50	95	95	1.00	
	Fill	0	0	0	1.00	-246
	Mass ordinate for TOPSOIL = 1212					
82+50.00	EARTH					
	Excavation	74	118	118	1.00	
	Fill	28	318	318	1.00	-446
	TOPSOIL					
	Excavation	18	63	63	1.00	
	Fill	0	0	0	1.00	-446
	Mass ordinate for TOPSOIL = 1275					
83+50.00	EARTH					
	Excavation	0	137	137	1.00	
	Fill	827	1583	1583	1.00	-1892
	TOPSOIL					
	Excavation	55	136	136	1.00	
	Fill	0	0	0	1.00	-1892
	Mass ordinate for TOPSOIL = 1411					
84+00.00	EARTH					
	Excavation	0	0	0	1.00	

```
                Fill        2003        2620        2620   1.00    -4512
        TOPSOIL
            Excavation        78         123         123   1.00
                Fill           0           0           0   1.00    -4512
            Mass ordinate for TOPSOIL = 1534

84+50.00 EARTH
            Excavation         0           0           0   1.00
                Fill        2297        3981        3981   1.00    -8493
        TOPSOIL
            Excavation        80         146         146   1.00
                Fill           0           0           0   1.00    -8493
            Mass ordinate for TOPSOIL = 1680

85+00.00 EARTH
            Excavation         0           0           0   1.00
                Fill        2190        4155        4155   1.00   -12648
        TOPSOIL
            Excavation        80         148         148   1.00
                Fill           0           0           0   1.00   -12648
            Mass ordinate for TOPSOIL = 1828

SKIP STATION RANGE = 85+36.71 to 87+21.71
87+50.00 EARTH
            Excavation         0           0           0   1.00
                Fill        2161        5237        5237   1.00   -17885
        TOPSOIL
            Excavation        79         191         191   1.00
                Fill           0           0           0   1.00   -17885
            Mass ordinate for TOPSOIL = 2019

88+00.00 EARTH
            Excavation         0           0           0   1.00
                Fill        2011        3863        3863   1.00   -21748
        TOPSOIL
            Excavation        75         143         143   1.00
                Fill           0           0           0   1.00   -21748
            Mass ordinate for TOPSOIL = 2162

88+50.00 EARTH
            Excavation         0           0           0   1.00
                Fill        1900        3621        3621   1.00   -25369
        TOPSOIL
            Excavation        71         135         135   1.00
                Fill           0           0           0   1.00   -25369
            Mass ordinate for TOPSOIL = 2297

89+00.00 EARTH
            Excavation         0           0           0   1.00
                Fill        1597        3238        3238   1.00   -28607
        TOPSOIL
            Excavation        65         126         126   1.00
                Fill           0           0           0   1.00   -28607
            Mass ordinate for TOPSOIL = 2423
```

```
89+50.00 EARTH
            Excavation        0          0          0   1.00
                Fill       1057       2457       2457   1.00   -31064
         TOPSOIL
            Excavation       56        112        112   1.00
                Fill          0          0          0   1.00   -31064
            Mass ordinate for TOPSOIL = 2535

90+00.00 EARTH
            Excavation        0          0          0   1.00
                Fill        564       1501       1501   1.00   -32565
         TOPSOIL
            Excavation       47         95         95   1.00
                Fill          0          0          0   1.00   -32565
            Mass ordinate for TOPSOIL = 2630

90+50.00 EARTH
            Excavation        0          0          0   1.00
                Fill        254        757        757   1.00   -33322
         TOPSOIL
            Excavation       39         80         80   1.00
                Fill          0          0          0   1.00   -33322
            Mass ordinate for TOPSOIL = 2710

91+00.00 EARTH
            Excavation        0          0          0   1.00
                Fill        138        363        363   1.00   -33685
         TOPSOIL
            Excavation       35         69         69   1.00
                Fill          0          0          0   1.00   -33685
            Mass ordinate for TOPSOIL = 2779

91+50.00 EARTH
            Excavation        0          0          0   1.00
                Fill        122        241        241   1.00   -33926
         TOPSOIL
            Excavation       35         65         65   1.00
                Fill          0          0          0   1.00   -33926
            Mass ordinate for TOPSOIL = 2844

SKIP STATION RANGE = 91+78.42 to 93+62.42
94+00.00 EARTH
            Excavation        3          4          4   1.00
                Fill        225        424        424   1.00   -34346
         TOPSOIL
            Excavation       46         99         99   1.00
                Fill          0          0          0   1.00   -34346
            Mass ordinate for TOPSOIL = 2943

94+50.00 EARTH
            Excavation        4          6          6   1.00
                Fill        271        459        459   1.00   -34799
         TOPSOIL
```

	Excavation	48	87	87	1.00	
	Fill	0	0	0	1.00	-34799
	Mass ordinate for TOPSOIL = 3030					
95+00.00	EARTH					
	Excavation	5	8	8	1.00	
	Fill	131	372	372	1.00	-35163
	TOPSOIL					
	Excavation	30	73	73	1.00	
	Fill	0	0	0	1.00	-35163
	Mass ordinate for TOPSOIL = 3103					
95+50.00	EARTH					
	Excavation	0	5	5	1.00	
	Fill	44	162	162	1.00	-35320
	TOPSOIL					
	Excavation	20	47	47	1.00	
	Fill	0	0	0	1.00	-35320
	Mass ordinate for TOPSOIL = 3150					
97+00.00	EARTH					
	Excavation	112	311	311	1.00	
	Fill	73	325	325	1.00	-35334
	TOPSOIL					
	Excavation	33	148	148	1.00	
	Fill	0	0	0	1.00	-35334
	Mass ordinate for TOPSOIL = 3298					
97+50.00	EARTH					
	Excavation	1	105	105	1.00	
	Fill	83	144	144	1.00	-35373
	TOPSOIL					
	Excavation	29	57	57	1.00	
	Fill	0	0	0	1.00	-35373
	Mass ordinate for TOPSOIL = 3355					
98+00.00	EARTH					
	Excavation	2	3	3	1.00	
	Fill	82	153	153	1.00	-35523
	TOPSOIL					
	Excavation	31	55	55	1.00	
	Fill	0	0	0	1.00	-35523
	Mass ordinate for TOPSOIL = 3410					
98+50.00	EARTH					
	Excavation	19	19	19	1.00	
	Fill	78	148	148	1.00	-35652
	TOPSOIL					
	Excavation	32	59	59	1.00	
	Fill	0	0	0	1.00	-35652
	Mass ordinate for TOPSOIL = 3469					
99+00.00	EARTH					
	Excavation	38	53	53	1.00	

		Fill	78	144	144	1.00	-35743
	TOPSOIL						
		Excavation	31	58	58	1.00	
		Fill	0	0	0	1.00	-35743
		Mass ordinate for TOPSOIL = 3527					
99+50.00	EARTH						
		Excavation	50	81	81	1.00	
		Fill	74	141	141	1.00	-35803
	TOPSOIL						
		Excavation	37	63	63	1.00	
		Fill	0	0	0	1.00	-35803
		Mass ordinate for TOPSOIL = 3590					
100+00.00	EARTH						
		Excavation	63	105	105	1.00	
		Fill	65	129	129	1.00	-35827
	TOPSOIL						
		Excavation	38	69	69	1.00	
		Fill	0	0	0	1.00	-35827
		Mass ordinate for TOPSOIL = 3659					
100+50.00	EARTH						
		Excavation	52	106	106	1.00	
		Fill	68	123	123	1.00	-35844
	TOPSOIL						
		Excavation	35	67	67	1.00	
		Fill	0	0	0	1.00	-35844
		Mass ordinate for TOPSOIL = 3726					
100+88.68	EARTH						
		Excavation	0	37	37	1.00	
		Fill	229	213	213	1.00	-36020
	TOPSOIL						
		Excavation	40	54	54	1.00	
		Fill	0	0	0	1.00	-36020
		Mass ordinate for TOPSOIL = 3780					
101+00.00	EARTH						
		Excavation	1	0	0	1.00	
		Fill	147	79	79	1.00	-36099
	TOPSOIL						
		Excavation	42	18	18	1.00	
		Fill	0	0	0	1.00	-36099
		Mass ordinate for TOPSOIL = 3798					
101+35.67	EARTH						
		Excavation	0	1	1	1.00	
		Fill	106	167	167	1.00	-36265
	TOPSOIL						
		Excavation	37	52	52	1.00	
		Fill	0	0	0	1.00	-36265
		Mass ordinate for TOPSOIL = 3850					

101+50.00	EARTH					
	Excavation	63	17	17	1.00	
	Fill	74	48	48	1.00	-36296
	TOPSOIL					
	Excavation	35	19	19	1.00	
	Fill	0	0	0	1.00	-36296
	Mass ordinate for TOPSOIL = 3869					
102+00.00	EARTH					
	Excavation	189	233	233	1.00	
	Fill	0	69	69	1.00	-36132
	TOPSOIL					
	Excavation	37	67	67	1.00	
	Fill	0	0	0	1.00	-36132
	Mass ordinate for TOPSOIL = 3936					
102+50.00	EARTH					
	Excavation	240	397	397	1.00	
	Fill	0	0	0	1.00	-35735
	TOPSOIL					
	Excavation	40	71	71	1.00	
	Fill	0	0	0	1.00	-35735
	Mass ordinate for TOPSOIL = 4007					
103+00.00	EARTH					
	Excavation	241	445	445	1.00	
	Fill	0	0	0	1.00	-35290
	TOPSOIL					
	Excavation	41	75	75	1.00	
	Fill	0	0	0	1.00	-35290
	Mass ordinate for TOPSOIL = 4082					
103+50.00	EARTH					
	Excavation	194	403	403	1.00	
	Fill	0	0	0	1.00	-34887
	TOPSOIL					
	Excavation	40	75	75	1.00	
	Fill	0	0	0	1.00	-34887
	Mass ordinate for TOPSOIL = 4157					
104+00.00	EARTH					
	Excavation	103	275	275	1.00	
	Fill	0	0	0	1.00	-34612
	TOPSOIL					
	Excavation	36	70	70	1.00	
	Fill	0	0	0	1.00	-34612
	Mass ordinate for TOPSOIL = 4227					
104+50.00	EARTH					
	Excavation	33	126	126	1.00	
	Fill	4	4	4	1.00	-34490
	TOPSOIL					
	Excavation	33	64	64	1.00	
	Fill	0	0	0	1.00	-34490

Mass ordinate for TOPSOIL = 4291

105+00.00	EARTH					
	Excavation	17	46	46	1.00	
	Fill	36	37	37	1.00	-34481
	TOPSOIL					
	Excavation	34	62	62	1.00	
	Fill	0	0	0	1.00	-34481
	Mass ordinate for TOPSOIL = 4353					
105+50.00	EARTH					
	Excavation	55	67	67	1.00	
	Fill	2	35	35	1.00	-34449
	TOPSOIL					
	Excavation	33	62	62	1.00	
	Fill	0	0	0	1.00	-34449
	Mass ordinate for TOPSOIL = 4415					
106+00.00	EARTH					
	Excavation	112	155	155	1.00	
	Fill	0	2	2	1.00	-34296
	TOPSOIL					
	Excavation	34	62	62	1.00	
	Fill	0	0	0	1.00	-34296
	Mass ordinate for TOPSOIL = 4477					
106+50.00	EARTH					
	Excavation	174	265	265	1.00	
	Fill	0	0	0	1.00	-34031
	TOPSOIL					
	Excavation	36	65	65	1.00	
	Fill	0	0	0	1.00	-34031
	Mass ordinate for TOPSOIL = 4542					
107+00.00	EARTH					
	Excavation	247	390	390	1.00	
	Fill	0	0	0	1.00	-33641
	TOPSOIL					
	Excavation	37	68	68	1.00	
	Fill	0	0	0	1.00	-33641
	Mass ordinate for TOPSOIL = 4610					
107+50.00	EARTH					
	Excavation	298	505	505	1.00	
	Fill	0	0	0	1.00	-33136
	TOPSOIL					
	Excavation	40	71	71	1.00	
	Fill	0	0	0	1.00	-33136
	Mass ordinate for TOPSOIL = 4681					
107+75.09	EARTH					
	Excavation	498	370	370	1.00	
	Fill	0	0	0	1.00	-32766
	TOPSOIL					

	Excavation	52	43	43	1.00	
	Fill	0	0	0	1.00	-32766
	Mass ordinate for TOPSOIL = 4724					
108+00.00	EARTH					
	Excavation	564	490	490	1.00	
	Fill	0	0	0	1.00	-32276
	TOPSOIL					
	Excavation	54	49	49	1.00	
	Fill	0	0	0	1.00	-32276
	Mass ordinate for TOPSOIL = 4773					
108+24.92	EARTH					
	Excavation	634	553	553	1.00	
	Fill	1	0	0	1.00	-31723
	TOPSOIL					
	Excavation	57	51	51	1.00	
	Fill	0	0	0	1.00	-31723
	Mass ordinate for TOPSOIL = 4824					
108+50.00	EARTH					
	Excavation	487	521	521	1.00	
	Fill	0	0	0	1.00	-31202
	TOPSOIL					
	Excavation	46	47	47	1.00	
	Fill	0	0	0	1.00	-31202
	Mass ordinate for TOPSOIL = 4871					
109+00.00	EARTH					
	Excavation	577	985	985	1.00	
	Fill	0	0	0	1.00	-30217
	TOPSOIL					
	Excavation	46	85	85	1.00	
	Fill	0	0	0	1.00	-30217
	Mass ordinate for TOPSOIL = 4956					
109+50.00	EARTH					
	Excavation	607	1096	1096	1.00	
	Fill	0	0	0	1.00	-29121
	TOPSOIL					
	Excavation	46	85	85	1.00	
	Fill	0	0	0	1.00	-29121
	Mass ordinate for TOPSOIL = 5041					
110+00.00	EARTH					
	Excavation	524	1047	1047	1.00	
	Fill	0	0	0	1.00	-28074
	TOPSOIL					
	Excavation	42	81	81	1.00	
	Fill	0	0	0	1.00	-28074
	Mass ordinate for TOPSOIL = 5122					
110+50.00	EARTH					
	Excavation	386	843	843	1.00	

		Fill	0	0	0	1.00	-27231
	TOPSOIL						
		Excavation	37	73	73	1.00	
		Fill	0	0	0	1.00	-27231
		Mass ordinate for TOPSOIL = 5195					
111+00.00	EARTH						
		Excavation	283	619	619	1.00	
		Fill	1	1	1	1.00	-26613
	TOPSOIL						
		Excavation	33	65	65	1.00	
		Fill	0	0	0	1.00	-26613
		Mass ordinate for TOPSOIL = 5260					
111+50.00	EARTH						
		Excavation	235	480	480	1.00	
		Fill	1	2	2	1.00	-26135
	TOPSOIL						
		Excavation	32	60	60	1.00	
		Fill	0	0	0	1.00	-26135
		Mass ordinate for TOPSOIL = 5320					
112+00.00	EARTH						
		Excavation	192	395	395	1.00	
		Fill	1	2	2	1.00	-25742
	TOPSOIL						
		Excavation	31	58	58	1.00	
		Fill	0	0	0	1.00	-25742
		Mass ordinate for TOPSOIL = 5378					
112+50.00	EARTH						
		Excavation	147	314	314	1.00	
		Fill	3	4	4	1.00	-25432
	TOPSOIL						
		Excavation	31	58	58	1.00	
		Fill	0	0	0	1.00	-25432
		Mass ordinate for TOPSOIL = 5436					
113+00.00	EARTH						
		Excavation	97	226	226	1.00	
		Fill	7	9	9	1.00	-25215
	TOPSOIL						
		Excavation	29	55	55	1.00	
		Fill	0	0	0	1.00	-25215
		Mass ordinate for TOPSOIL = 5491					
113+50.00	EARTH						
		Excavation	22	110	110	1.00	
		Fill	5	11	11	1.00	-25116
	TOPSOIL						
		Excavation	16	41	41	1.00	
		Fill	0	0	0	1.00	-25116
		Mass ordinate for TOPSOIL = 5532					

114+00.00	EARTH					
	Excavation	36	54	54	1.00	
	Fill	0	5	5	1.00	-25067
	TOPSOIL					
	Excavation	15	29	29	1.00	
	Fill	0	0	0	1.00	-25067
	Mass ordinate for TOPSOIL = 5561					
114+50.00	EARTH					
	Excavation	43	73	73	1.00	
	Fill	0	0	0	1.00	-24994
	TOPSOIL					
	Excavation	15	28	28	1.00	
	Fill	0	0	0	1.00	-24994
	Mass ordinate for TOPSOIL = 5589					
115+00.00	EARTH					
	Excavation	44	81	81	1.00	
	Fill	0	0	0	1.00	-24913
	TOPSOIL					
	Excavation	20	32	32	1.00	
	Fill	0	0	0	1.00	-24913
	Mass ordinate for TOPSOIL = 5621					
115+50.00	EARTH					
	Excavation	11	51	51	1.00	
	Fill	24	22	22	1.00	-24884
	TOPSOIL					
	Excavation	20	37	37	1.00	
	Fill	0	0	0	1.00	-24884
	Mass ordinate for TOPSOIL = 5658					
116+00.00	EARTH					
	Excavation	44	51	51	1.00	
	Fill	21	42	42	1.00	-24875
	TOPSOIL					
	Excavation	36	51	51	1.00	
	Fill	0	0	0	1.00	-24875
	Mass ordinate for TOPSOIL = 5709					
116+50.00	EARTH					
	Excavation	108	141	141	1.00	
	Fill	6	25	25	1.00	-24759
	TOPSOIL					
	Excavation	34	65	65	1.00	
	Fill	0	0	0	1.00	-24759
	Mass ordinate for TOPSOIL = 5774					
117+00.00	EARTH					
	Excavation	164	252	252	1.00	
	Fill	1	6	6	1.00	-24513
	TOPSOIL					
	Excavation	36	65	65	1.00	
	Fill	0	0	0	1.00	-24513

Mass ordinate for TOPSOIL = 5839

117+50.00	EARTH					
	Excavation	213	349	349	1.00	
	Fill	0	1	1	1.00	-24165
	TOPSOIL					
	Excavation	36	67	67	1.00	
	Fill	0	0	0	1.00	-24165

Mass ordinate for TOPSOIL = 5906

118+00.00	EARTH					
	Excavation	212	394	394	1.00	
	Fill	0	0	0	1.00	-23771
	TOPSOIL					
	Excavation	36	67	67	1.00	
	Fill	0	0	0	1.00	-23771

Mass ordinate for TOPSOIL = 5973

118+50.00	EARTH					
	Excavation	171	355	355	1.00	
	Fill	0	0	0	1.00	-23416
	TOPSOIL					
	Excavation	35	66	66	1.00	
	Fill	0	0	0	1.00	-23416

Mass ordinate for TOPSOIL = 6039

119+00.00	EARTH					
	Excavation	122	271	271	1.00	
	Fill	2	2	2	1.00	-23147
	TOPSOIL					
	Excavation	34	64	64	1.00	
	Fill	0	0	0	1.00	-23147

Mass ordinate for TOPSOIL = 6103

119+50.00	EARTH					
	Excavation	52	161	161	1.00	
	Fill	6	7	7	1.00	-22993
	TOPSOIL					
	Excavation	35	63	63	1.00	
	Fill	0	0	0	1.00	-22993

Mass ordinate for TOPSOIL = 6166

120+00.00	EARTH					
	Excavation	0	48	48	1.00	
	Fill	56	57	57	1.00	-23002
	TOPSOIL					
	Excavation	30	60	60	1.00	
	Fill	0	0	0	1.00	-23002

Mass ordinate for TOPSOIL = 6226

120+50.00	EARTH					
	Excavation	0	0	0	1.00	
	Fill	135	177	177	1.00	-23179
	TOPSOIL					

		Fill	0	0	0	1.00	-24073
	TOPSOIL						
		Excavation	12	20	20	1.00	
		Fill	0	0	0	1.00	-24073
		Mass ordinate for TOPSOIL = 6507					
124+50.00	EARTH						
		Excavation	10	56	56	1.00	
		Fill	2	2	2	1.00	-24019
	TOPSOIL						
		Excavation	8	19	19	1.00	
		Fill	0	0	0	1.00	-24019
		Mass ordinate for TOPSOIL = 6526					

G R A N D S U M M A R Y T O T A L S

Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
EARTH				
	Excavation	16788	16788	1.00
	Fill	40807	40807	1.00
TOPSOIL				
	Excavation	6526	6526	1.00
	Fill	0	0	1.00

S P L I T S U M M A R Y T O T A L S

Material Name		XS Quant Unadjusted Volume (cu. yd.)	XS Quant Adjusted Volume (cu. yd.)	Add/Sub Quant Unadjusted Volume (cu. yd.)	Add/Sub Quant Adjusted Volume (cu. yd.)	Mult Factor
EARTH						
	Excavation	16788	16788	0	0	1.00
	Fill	40807	40807	0	0	1.00
TOPSOIL						
	Excavation	6526	6526	0	0	1.00
	Fill	0	0	0	0	1.00

B A L A N C E P O I N T S U M M A R Y

Material Name		Cumulative Unadjusted Volumes (cu. yd.)	Cumulative Adjusted Volumes (cu. yd.)	Incremental Unadjusted Volumes (cu. yd.)	Incremental Adjusted Volumes (cu. yd.)	Mult Factor
Station = 73+41.25						
EARTH						
	Excavation	106	106	106	106	1.00
	Fill	106	106	106	106	1.00
TOPSOIL						
	Excavation	130	130	130	130	1.00
	Fill	0	0	0	0	1.00
Station = 75+92.26						
EARTH						
	Excavation	400	400	294	294	1.00
	Fill	400	400	294	294	1.00
TOPSOIL						
	Excavation	359	359	229	229	1.00
	Fill	0	0	0	0	1.00
Station = 77+36.07						
EARTH						
	Excavation	600	600	200	200	1.00
	Fill	600	600	200	200	1.00
TOPSOIL						
	Excavation	520	520	161	161	1.00
	Fill	0	0	0	0	1.00
Station = 81+76.75						
EARTH						
	Excavation	1806	1806	1206	1206	1.00
	Fill	1806	1806	1206	1206	1.00
TOPSOIL						
	Excavation	1168	1168	648	648	1.00

		Fill	0	0	0
0	1.00				

7-11-14 T. Snow
Powell Rd.
Earthwork

```
Input  File: ewkprj.inp
Output File: POWELL EARTH.log
 1     1     1
 1     2     2
 1     3     3 Earthwork
 1     4     4
 1     5     5 tolerance = 0.010000
 1     6     6
 1     7     7 vertical search distance = 500.000000
 1     8     8
 1     9     9 xs dgn = H:\1116007\DGN\MTSR237Powell XS.dgn
 1    10    10
 1    11    11     Proposed Finish Grade
 1    12    12         soil type = EARTH
 1    13    13         roadway exc mult factor = 1.000000
 1    14    14         subsoil exc mult factor = 1.000000
 1    15    15         fill mult factor = 1.000000
 1    16    16             type = line
 1    17    17             lvname = DESIGN - TYPICAL - Finished Grade and
Subgrade
 1    18    18             lc = 0,ByLevel
 1    19    19             wt = 4,ByLevel
 1    20    20
 1    21    21     Existing Ground Line
 1    22    22         soil type = EARTH
 1    23    23         roadway exc mult factor = 1.000000
 1    24    24         subsoil exc mult factor = 1.000000
 1    25    25         fill mult factor = 1.000000
 1    26    26             type = line_string
 1    27    27             lvname = SURVEY - GROUND - Top of Ground
 1    28    28             lc = 3
 1    29    29             wt = 2
 1    30    30             co = 0
 1    31    31
 1    32    32     Existing Unsuitable Material
 1    33    33         soil type = TOPSOIL
 1    34    34         roadway exc mult factor = 1.000000
 1    35    35         subsoil exc mult factor = 1.000000
 1    36    36         fill mult factor = 1.000000
 1    37    37             type = line
 1    38    38             lvname = SURVEY - GROUND - Bottom of Topsoil
Layer
 1    39    39             lc = 2
 1    40    40             wt = 2
 1    41    41             co = 2
 1    42    42
 1    43    43     Excavation Limit
 1    44    44             type = line
 1    45    45             lvname = DESIGN - EARTHWORK - Excavation Limit
Lines
 1    46    46             lc = 0
 1    47    47             wt = 0
 1    48    48             co = 0
 1    49    49
```

```
 1     50     50      Write Earthwork Shapes
 1     51     51          plot param
 1     52     52              lv = 347
 1     53     53              lvname = DESIGN - EARTHWORK - Shapes
 1     54     54              co = ByLevel
 1     55     55              wt = ByLevel
 1     56     56              lc = ByLevel
 1     57     57
 1     58     58      combine common exc + subgrade exc + subsoil exc
 1     59     59
 1     60     60      End Area Decimal Places = 0
 1     61     61
 1     62     62      write column base ascii file = POWELL EARTH.TXT
 1     63     63
 1     64     64      column 1 formula = abs( ["EARTH", Common Exc, End
Area]  )
 1     65     65      column 1 number of decimal place = 0
 1     66     66      column 1 total length = 10
 1     67     67
 1     68     68      column 2 formula = abs( ["EARTH", Fill, End Area]  )
 1     69     69      column 2 number of decimal place = 0
 1     70     70      column 2 total length = 10
 1     71     71
 1     72     72      column 3 formula = abs( ["TOPSOIL", Subsoil Exc, End
Area]  )
 1     73     73      column 3 number of decimal place = 0
 1     74     74      column 3 total length = 10
 1     75     75
 1     76     76
 1     77     77      Process Earthwork for Baseline = POWELL
 1     78     78          job number = 098
 1     79     79
 1     80     80          beg sta = 30+30.00 R 1
 1     81     81          end sta = 31+25.00 R 1
 0      0     82 END_OF_FILE
COMPUTING EARTHWORKS FOR BASELINE = POWELL
COMPUTING EARTHWORKS FOR JOB = 098
FORMING LIST OF XSCELLS
BEGINNING EARTHWORKS COMPUTATION
```

Station Ordinate	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass
30+30.00	EARTH					
	Excavation	1	0	0	1.00	
	Fill	89	0	0	1.00	0
	TOPSOIL					
	Excavation	38	0	0	1.00	
	Fill	0	0	0	1.00	0
	Mass ordinate for TOPSOIL = 0					
30+50.00	EARTH					
	Excavation	6	3	3	1.00	
	Fill	40	48	48	1.00	-45
	TOPSOIL					
	Excavation	25	24	24	1.00	
	Fill	0	0	0	1.00	-45
	Mass ordinate for TOPSOIL = 24					
30+75.00	EARTH					
	Excavation	3	4	4	1.00	
	Fill	17	26	26	1.00	-67
	TOPSOIL					
	Excavation	18	20	20	1.00	
	Fill	0	0	0	1.00	-67
	Mass ordinate for TOPSOIL = 44					
31+00.00	EARTH					
	Excavation	27	14	14	1.00	
	Fill	1	8	8	1.00	-61
	TOPSOIL					
	Excavation	16	16	16	1.00	
	Fill	0	0	0	1.00	-61
	Mass ordinate for TOPSOIL = 60					
31+15.00	EARTH					
	Excavation	57	23	23	1.00	
	Fill	1	1	1	1.00	-39
	TOPSOIL					
	Excavation	18	10	10	1.00	
	Fill	0	0	0	1.00	-39
	Mass ordinate for TOPSOIL = 70					

G R A N D S U M M A R Y T O T A L S

Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
EARTH				
	Excavation	44	44	1.00
	Fill	83	83	1.00
TOPSOIL				
	Excavation	70	70	1.00
	Fill	0	0	1.00

S P L I T S U M M A R Y T O T A L S

Material Name		XS Quant Unadjusted Volume (cu. yd.)	XS Quant Adjusted Volume (cu. yd.)	Add/Sub Quant Unadjusted Volume (cu. yd.)	Add/Sub Quant Adjusted Volume (cu. yd.)	Mult Factor
EARTH						
	Excavation	44	44	0	0	1.00
	Fill	83	83	0	0	1.00
TOPSOIL						
	Excavation	70	70	0	0	1.00
	Fill	0	0	0	0	1.00

7-11-14 T. Snow
International
Earthwork

```
Input  File: ewkprj.inp
Output File: INTERNATIONAL EARTH.log
 1     1     1
 1     2     2
 1     3     3 Earthwork
 1     4     4
 1     5     5 tolerance = 0.010000
 1     6     6
 1     7     7 vertical search distance = 500.000000
 1     8     8
 1     9     9 xs dgn = H:\1116007\DGN\MTSR237InternationalXS.dgn
 1    10    10
 1    11    11     Proposed Finish Grade
 1    12    12         soil type = EARTH
 1    13    13         roadway exc mult factor = 1.000000
 1    14    14         subsoil exc mult factor = 1.000000
 1    15    15         fill mult factor = 1.000000
 1    16    16             type = line
 1    17    17             lvname = DESIGN - TYPICAL - Finished Grade and
Subgrade
 1    18    18             lc = 0
 1    19    19             wt = 4
 1    20    20
 1    21    21     Existing Ground Line
 1    22    22         soil type = EARTH
 1    23    23         roadway exc mult factor = 1.000000
 1    24    24         subsoil exc mult factor = 1.000000
 1    25    25         fill mult factor = 1.000000
 1    26    26             type = line_string
 1    27    27             lvname = SURVEY - GROUND - Top of Ground
 1    28    28             lc = 3
 1    29    29             wt = 2
 1    30    30             co = 0
 1    31    31
 1    32    32     Existing Unsuitable Material
 1    33    33         soil type = TOPSOIL
 1    34    34         roadway exc mult factor = 1.000000
 1    35    35         subsoil exc mult factor = 1.000000
 1    36    36         fill mult factor = 1.000000
 1    37    37             type = line
 1    38    38             lvname = SURVEY - GROUND - Bottom of Topsoil
Layer
 1    39    39             lc = 2
 1    40    40             wt = 2
 1    41    41             co = 2
 1    42    42
 1    43    43     Excavation Limit
 1    44    44             type = line
 1    45    45             lvname = DESIGN - EARTHWORK - Excavation Limit
Lines
 1    46    46             lc = 0
 1    47    47             wt = 0
 1    48    48             co = 0
 1    49    49
```

```
 1     50     50      Write Earthwork Shapes
 1     51     51          plot param
 1     52     52              lv = 347
 1     53     53              lvname = DESIGN - EARTHWORK - Shapes
 1     54     54              co = ByLevel
 1     55     55              wt = ByLevel
 1     56     56              lc = ByLevel
 1     57     57
 1     58     58      combine common exc + subgrade exc + subsoil exc
 1     59     59
 1     60     60      End Area Decimal Places = 0
 1     61     61
 1     62     62      write column base ascii file = INTERNATIONAL EARTH.TXT
 1     63     63
 1     64     64      column 1 formula = abs( ["EARTH", Common Exc, End
Area]  )
 1     65     65      column 1 number of decimal place = 0
 1     66     66      column 1 total length = 10
 1     67     67
 1     68     68      column 2 formula = abs( ["EARTH", Fill, End Area]  )
 1     69     69      column 2 number of decimal place = 0
 1     70     70      column 2 total length = 10
 1     71     71
 1     72     72      column 3 formula = abs( ["TOPSOIL", Subsoil Exc, End
Area]  )
 1     73     73      column 3 number of decimal place = 0
 1     74     74      column 3 total length = 10
 1     75     75
 1     76     76
 1     77     77      Process Earthwork for Baseline = INTERNTL
 1     78     78          job number = 098
 1     79     79
 1     80     80          beg sta = 48+00.00 R 1
 1     81     81          end sta = 49+50.00 R 1
 0      0     82 END_OF_FILE
COMPUTING EARTHWORKS FOR BASELINE = INTERNTL
COMPUTING EARTHWORKS FOR JOB = 098
FORMING LIST OF XSCELLS
BEGINNING EARTHWORKS COMPUTATION
```

Station Ordinate	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass
48+50.00	EARTH					
	Excavation	109	0	0	1.00	
	Fill	8	0	0	1.00	0
	TOPSOIL					
	Excavation	19	0	0	1.00	
	Fill	0	0	0	1.00	0
	Mass ordinate for TOPSOIL = 0					
49+00.00	EARTH					
	Excavation	112	205	205	1.00	
	Fill	8	15	15	1.00	190
	TOPSOIL					
	Excavation	21	37	37	1.00	
	Fill	0	0	0	1.00	190
	Mass ordinate for TOPSOIL = 37					
49+25.00	EARTH					
	Excavation	141	117	117	1.00	
	Fill	44	24	24	1.00	283
	TOPSOIL					
	Excavation	38	27	27	1.00	
	Fill	0	0	0	1.00	283
	Mass ordinate for TOPSOIL = 64					
49+50.00	EARTH					
	Excavation	178	148	148	1.00	
	Fill	47	42	42	1.00	389
	TOPSOIL					
	Excavation	50	41	41	1.00	
	Fill	0	0	0	1.00	389
	Mass ordinate for TOPSOIL = 105					

G R A N D S U M M A R Y T O T A L S

Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
EARTH				
	Excavation	470	470	1.00
	Fill	81	81	1.00
TOPSOIL				
	Excavation	105	105	1.00
	Fill	0	0	1.00

S P L I T S U M M A R Y T O T A L S

Material Name		XS Quant Unadjusted Volume (cu. yd.)	XS Quant Adjusted Volume (cu. yd.)	Add/Sub Quant Unadjusted Volume (cu. yd.)	Add/Sub Quant Adjusted Volume (cu. yd.)	Mult Factor
EARTH						
	Excavation	470	470	0	0	1.00
	Fill	81	81	0	0	1.00
TOPSOIL						
	Excavation	105	105	0	0	1.00
	Fill	0	0	0	0	1.00

7-9-14 T. Snow
RAMP A STAGE 2
EARTHWORK

```
Input  File: ewkprj.inp
Output File: RAMP A STAGE 2 EARTH.log
 1     1     1
 1     2     2
 1     3     3 Earthwork
 1     4     4
 1     5     5 tolerance = 0.010000
 1     6     6
 1     7     7 vertical search distance = 500.000000
 1     8     8
 1     9     9 xs dgn = H:\1116007\DGN\Traffic control working
files\Traffic Control RampA XS.dgn
 1    10    10
 1    11    11     Proposed Finish Grade
 1    12    12         soil type = EARTH
 1    13    13         roadway exc mult factor = 1.000000
 1    14    14         subsoil exc mult factor = 1.000000
 1    15    15         fill mult factor = 1.000000
 1    16    16             type = line
 1    17    17             lvname = DESIGN - TYPICAL - Finished Grade and
Subgrade
 1    18    18             lc = 0
 1    19    19             wt = 4
 1    20    20
 1    21    21     Existing Ground Line
 1    22    22         soil type = EARTH
 1    23    23         roadway exc mult factor = 1.000000
 1    24    24         subsoil exc mult factor = 1.000000
 1    25    25         fill mult factor = 1.000000
 1    26    26             type = line_string
 1    27    27             lvname = SURVEY - GROUND - Top of Ground
 1    28    28             lc = 3
 1    29    29             wt = 2
 1    30    30             co = 0
 1    31    31
 1    32    32     Existing Unsuitable Material
 1    33    33         soil type = TOPSOIL
 1    34    34         roadway exc mult factor = 1.000000
 1    35    35         subsoil exc mult factor = 1.000000
 1    36    36         fill mult factor = 1.000000
 1    37    37             type = line
 1    38    38             lvname = SURVEY - GROUND - Bottom of Topsoil
Layer
 1    39    39             lc = 2
 1    40    40             wt = 2
 1    41    41             co = 2
 1    42    42
 1    43    43     Excavation Limit
 1    44    44             type = line
 1    45    45             lvname = DESIGN - EARTHWORK - Excavation Limit
Lines
 1    46    46             lc = 0
 1    47    47             wt = 0
 1    48    48             co = 0
```

```
 1     49     49
 1     50     50     Write Earthwork Shapes
 1     51     51         plot param
 1     52     52             lv = 347
 1     53     53             lvname = DESIGN - EARTHWORK - Shapes
 1     54     54             co = ByLevel
 1     55     55             wt = ByLevel
 1     56     56             lc = ByLevel
 1     57     57
 1     58     58     combine common exc + subgrade exc + subsoil exc
 1     59     59
 1     60     60     End Area Decimal Places = 0
 1     61     61
 1     62     62     write column base ascii file =  RAMPA STAGE 2
EARTH.TXT
 1     63     63
 1     64     64     column 1 formula = abs( ["EARTH", Common Exc, End
Area]  )
 1     65     65     column 1 number of decimal place = 0
 1     66     66     column 1 total length = 10
 1     67     67
 1     68     68     column 2 formula = abs( ["EARTH", Fill, End Area]  )
 1     69     69     column 2 number of decimal place = 0
 1     70     70     column 2 total length = 10
 1     71     71
 1     72     72     column 3 formula = abs( ["TOPSOIL", Subsoil Exc, End
Area]  )
 1     73     73     column 3 number of decimal place = 0
 1     74     74     column 3 total length = 10
 1     75     75
 1     76     76
 1     77     77     Process Earthwork for Baseline = RAMPA
 1     78     78         job number = 098
 1     79     79
 1     80     80         beg sta = 35+25.00 R 1
 1     81     81         end sta = 39+63.00 R 1
 0      0     82 END_OF_FILE
COMPUTING EARTHWORKS FOR BASELINE = RAMPA
COMPUTING EARTHWORKS FOR JOB = 098
FORMING LIST OF XSCELLS
BEGINNING EARTHWORKS COMPUTATION
```

Station Ordinate	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass
35+25.00	EARTH					
	Excavation	36	0	0	1.00	
	Fill	1	0	0	1.00	0
	TOPSOIL					
	Excavation	22	0	0	1.00	
	Fill	0	0	0	1.00	0
	Mass ordinate for TOPSOIL = 0					
35+50.00	EARTH					
	Excavation	61	45	45	1.00	
	Fill	1	1	1	1.00	44
	TOPSOIL					
	Excavation	27	23	23	1.00	
	Fill	0	0	0	1.00	44
	Mass ordinate for TOPSOIL = 23					
36+00.00	EARTH					
	Excavation	151	196	196	1.00	
	Fill	1	2	2	1.00	238
	TOPSOIL					
	Excavation	37	59	59	1.00	
	Fill	0	0	0	1.00	238
	Mass ordinate for TOPSOIL = 82					
36+50.00	EARTH					
	Excavation	286	405	405	1.00	
	Fill	0	1	1	1.00	642
	TOPSOIL					
	Excavation	41	72	72	1.00	
	Fill	0	0	0	1.00	642
	Mass ordinate for TOPSOIL = 154					
37+00.00	EARTH					
	Excavation	394	630	630	1.00	
	Fill	0	0	0	1.00	1272
	TOPSOIL					
	Excavation	44	79	79	1.00	
	Fill	0	0	0	1.00	1272
	Mass ordinate for TOPSOIL = 233					
37+50.00	EARTH					
	Excavation	475	805	805	1.00	
	Fill	0	0	0	1.00	2077
	TOPSOIL					
	Excavation	45	82	82	1.00	
	Fill	0	0	0	1.00	2077
	Mass ordinate for TOPSOIL = 315					

G R A N D S U M M A R Y T O T A L S

Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
EARTH				
	Excavation	4252	4252	1.00
	Fill	51	51	1.00
TOPSOIL				
	Excavation	696	696	1.00
	Fill	0	0	1.00

S P L I T S U M M A R Y T O T A L S

Material Name		XS Quant Unadjusted Volume (cu. yd.)	XS Quant Adjusted Volume (cu. yd.)	Add/Sub Quant Unadjusted Volume (cu. yd.)	Add/Sub Quant Adjusted Volume (cu. yd.)	Mult Factor
EARTH						
	Excavation	4252	4252	0	0	1.00
	Fill	51	51	0	0	1.00
TOPSOIL						
	Excavation	696	696	0	0	1.00
	Fill	0	0	0	0	1.00

7-11-14 T. Snow
RAMP A STAGE 2A
EARTHWORK

```
Input  File: ewkprj.inp
Output File: RAMP A STAGE 2A EARTH.log
 1     1     1
 1     2     2
 1     3     3 Earthwork
 1     4     4
 1     5     5 tolerance = 0.010000
 1     6     6
 1     7     7 vertical search distance = 500.000000
 1     8     8
 1     9     9 xs dgn = H:\1116007\DGN\Traffic control working
files\RampA XS Stage 2A.dgn
 1    10    10
 1    11    11     Proposed Finish Grade
 1    12    12         soil type = EARTH
 1    13    13         roadway exc mult factor = 1.000000
 1    14    14         subsoil exc mult factor = 1.000000
 1    15    15         fill mult factor = 1.000000
 1    16    16             type = line, line_string
 1    17    17             lvname = DESIGN - TYPICAL - Finished Grade and
Subgrade
 1    18    18             lc = 0,ByLevel
 1    19    19             wt = 4,ByLevel
 1    20    20
 1    21    21     Existing Ground Line
 1    22    22         soil type = EARTH
 1    23    23         roadway exc mult factor = 1.000000
 1    24    24         subsoil exc mult factor = 1.000000
 1    25    25         fill mult factor = 1.000000
 1    26    26             type = line, line_string
 1    27    27             lvname = SURVEY - GROUND - Top of Ground
 1    28    28             lc = 3
 1    29    29             wt = 2
 1    30    30             co = 0
 1    31    31
 1    32    32     Existing Unsuitable Material
 1    33    33         soil type = TOPSOIL
 1    34    34         roadway exc mult factor = 1.000000
 1    35    35         subsoil exc mult factor = 1.000000
 1    36    36         fill mult factor = 1.000000
 1    37    37             type = line
 1    38    38             lvname = SURVEY - GROUND - Bottom of Topsoil
Layer
 1    39    39             lc = 2
 1    40    40             wt = 2
 1    41    41             co = 2
 1    42    42
 1    43    43     Excavation Limit
 1    44    44             type = line
 1    45    45             lvname = DESIGN - EARTHWORK - Excavation Limit
Lines
 1    46    46             lc = 0
 1    47    47             wt = 0
 1    48    48             co = 0
```

```
 1     49     49
 1     50     50      Write Earthwork Shapes
 1     51     51          plot param
 1     52     52              lv = 347
 1     53     53              lvname = DESIGN - EARTHWORK - Shapes
 1     54     54              co = ByLevel
 1     55     55              wt = ByLevel
 1     56     56              lc = ByLevel
 1     57     57
 1     58     58      combine common exc + subgrade exc + subsoil exc
 1     59     59
 1     60     60      End Area Decimal Places = 0
 1     61     61
 1     62     62      write column base ascii file =  RAMPA STAGE 2A
EARTH.TXT
 1     63     63
 1     64     64      column 1 formula = abs( ["EARTH", Common Exc, End
Area]  )
 1     65     65      column 1 number of decimal place = 0
 1     66     66      column 1 total length = 10
 1     67     67
 1     68     68      column 2 formula = abs( ["EARTH", Fill, End Area]  )
 1     69     69      column 2 number of decimal place = 0
 1     70     70      column 2 total length = 10
 1     71     71
 1     72     72      column 3 formula = abs( ["TOPSOIL", Subsoil Exc, End
Area]  )
 1     73     73      column 3 number of decimal place = 0
 1     74     74      column 3 total length = 10
 1     75     75
 1     76     76
 1     77     77      Process Earthwork for Baseline = RAMPA
 1     78     78          job number = 098
 1     79     79
 1     80     80          beg sta = 35+00.00 R 1
 1     81     81          end sta = 39+63.00 R 1
 0      0     82 END_OF_FILE
COMPUTING EARTHWORKS FOR BASELINE = RAMPA
COMPUTING EARTHWORKS FOR JOB = 098
FORMING LIST OF XSCELLS
BEGINNING EARTHWORKS COMPUTATION
```

Station Ordinate	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass
35+25.00	EARTH					
	Excavation	36	0	0	1.00	
	Fill	3	0	0	1.00	0
	TOPSOIL					
	Excavation	14	0	0	1.00	
	Fill	0	0	0	1.00	0
	Mass ordinate for TOPSOIL = 0					
35+50.00	EARTH					
	Excavation	36	33	33	1.00	
	Fill	3	3	3	1.00	30
	TOPSOIL					
	Excavation	13	13	13	1.00	
	Fill	0	0	0	1.00	30
	Mass ordinate for TOPSOIL = 13					
36+00.00	EARTH					
	Excavation	35	66	66	1.00	
	Fill	11	13	13	1.00	83
	TOPSOIL					
	Excavation	16	27	27	1.00	
	Fill	0	0	0	1.00	83
	Mass ordinate for TOPSOIL = 40					
36+50.00	EARTH					
	Excavation	36	66	66	1.00	
	Fill	14	23	23	1.00	126
	TOPSOIL					
	Excavation	16	30	30	1.00	
	Fill	0	0	0	1.00	126
	Mass ordinate for TOPSOIL = 70					
37+00.00	EARTH					
	Excavation	38	69	69	1.00	
	Fill	15	27	27	1.00	168
	TOPSOIL					
	Excavation	16	30	30	1.00	
	Fill	0	0	0	1.00	168
	Mass ordinate for TOPSOIL = 100					
37+50.00	EARTH					
	Excavation	41	73	73	1.00	
	Fill	2	16	16	1.00	225
	TOPSOIL					
	Excavation	11	25	25	1.00	
	Fill	0	0	0	1.00	225
	Mass ordinate for TOPSOIL = 125					

38+00.00	EARTH					
	Excavation	46	81	81	1.00	
	Fill	1	3	3	1.00	303
	TOPSOIL					
	Excavation	16	25	25	1.00	
	Fill	0	0	0	1.00	303
	Mass ordinate for TOPSOIL = 150					
38+50.00	EARTH					
	Excavation	81	118	118	1.00	
	Fill	1	2	2	1.00	419
	TOPSOIL					
	Excavation	19	33	33	1.00	
	Fill	0	0	0	1.00	419
	Mass ordinate for TOPSOIL = 183					
39+00.00	EARTH					
	Excavation	78	147	147	1.00	
	Fill	0	1	1	1.00	565
	TOPSOIL					
	Excavation	9	26	26	1.00	
	Fill	0	0	0	1.00	565
	Mass ordinate for TOPSOIL = 209					
39+50.00	EARTH					
	Excavation	72	139	139	1.00	
	Fill	0	0	0	1.00	704
	TOPSOIL					
	Excavation	0	8	8	1.00	
	Fill	0	0	0	1.00	704
	Mass ordinate for TOPSOIL = 217					
39+63.00	EARTH					
	Excavation	93	40	40	1.00	
	Fill	1	0	0	1.00	744
	TOPSOIL					
	Excavation	30	7	7	1.00	
	Fill	0	0	0	1.00	744
	Mass ordinate for TOPSOIL = 224					

G R A N D S U M M A R Y T O T A L S

Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
EARTH				
	Excavation	832	832	1.00
	Fill	88	88	1.00
TOPSOIL				
	Excavation	224	224	1.00
	Fill	0	0	1.00

S P L I T S U M M A R Y T O T A L S

Material Name		XS Quant Unadjusted Volume (cu. yd.)	XS Quant Adjusted Volume (cu. yd.)	Add/Sub Quant Unadjusted Volume (cu. yd.)	Add/Sub Quant Adjusted Volume (cu. yd.)	Mult Factor
EARTH	Excavation	832	832	0	0	1.00
	Fill	88	88	0	0	1.00
TOPSOIL	Excavation	224	224	0	0	1.00
	Fill	0	0	0	0	1.00

7-10-14 T. SNOW
RAMP B STAGE 2
EARTHWORK

```
Input  File: ewkprj.inp
Output File: RAMP B STAGE 2 EARTH.log
 1      1      1
 1      2      2
 1      3      3 Earthwork
 1      4      4
 1      5      5 tolerance = 0.010000
 1      6      6
 1      7      7 vertical search distance = 500.000000
 1      8      8
 1      9      9 xs dgn = H:\1116007\DGN\Traffic control working
files\RampB XS Stage 2.dgn
 1     10     10
 1     11     11     Proposed Finish Grade
 1     12     12         soil type = EARTH
 1     13     13         roadway exc mult factor = 1.000000
 1     14     14         subsoil exc mult factor = 1.000000
 1     15     15         fill mult factor = 1.000000
 1     16     16             type = line
 1     17     17             lvname = DESIGN - TYPICAL - Finished Grade and
Subgrade
 1     18     18             lc = 0
 1     19     19             wt = 4
 1     20     20
 1     21     21     Existing Ground Line
 1     22     22         soil type = EARTH
 1     23     23         roadway exc mult factor = 1.000000
 1     24     24         subsoil exc mult factor = 1.000000
 1     25     25         fill mult factor = 1.000000
 1     26     26             type = line_string
 1     27     27             lvname = SURVEY - GROUND - Top of Ground
 1     28     28             lc = 3
 1     29     29             wt = 2
 1     30     30             co = 0
 1     31     31
 1     32     32     Existing Unsuitable Material
 1     33     33         soil type = TOPSOIL
 1     34     34         roadway exc mult factor = 1.000000
 1     35     35         subsoil exc mult factor = 1.000000
 1     36     36         fill mult factor = 1.000000
 1     37     37             type = line
 1     38     38             lvname = SURVEY - GROUND - Bottom of Topsoil
Layer
 1     39     39             lc = 2
 1     40     40             wt = 2
 1     41     41             co = 2
 1     42     42
 1     43     43     Excavation Limit
 1     44     44             type = line
 1     45     45             lvname = DESIGN - EARTHWORK - Excavation Limit
Lines
 1     46     46             lc = 0
 1     47     47             wt = 0
 1     48     48             co = 0
```

```
 1    49    49
 1    50    50     Write Earthwork Shapes
 1    51    51         plot param
 1    52    52             lv = 347
 1    53    53             lvname = DESIGN - EARTHWORK - Shapes
 1    54    54             co = ByLevel
 1    55    55             wt = ByLevel
 1    56    56             lc = ByLevel
 1    57    57
 1    58    58     combine common exc + subgrade exc + subsoil exc
 1    59    59
 1    60    60     End Area Decimal Places = 0
 1    61    61
 1    62    62     write column base ascii file =  RAMPA STAGE 2
EARTH.TXT
 1    63    63
 1    64    64     column 1 formula = abs( ["EARTH", Common Exc, End
Area]  )
 1    65    65     column 1 number of decimal place = 0
 1    66    66     column 1 total length = 10
 1    67    67
 1    68    68     column 2 formula = abs( ["EARTH", Fill, End Area]  )
 1    69    69     column 2 number of decimal place = 0
 1    70    70     column 2 total length = 10
 1    71    71
 1    72    72     column 3 formula = abs( ["TOPSOIL", Subsoil Exc, End
Area]  )
 1    73    73     column 3 number of decimal place = 0
 1    74    74     column 3 total length = 10
 1    75    75
 1    76    76
 1    77    77     Process Earthwork for Baseline = RAMPB
 1    78    78         job number = 098
 1    79    79
 1    80    80         beg sta = 40+50.00 R 1
 1    81    81         end sta = 49+50.00 R 1
 0     0    82 END_OF_FILE
COMPUTING EARTHWORKS FOR BASELINE = RAMPB
COMPUTING EARTHWORKS FOR JOB = 098
FORMING LIST OF XSCELLS
BEGINNING EARTHWORKS COMPUTATION
```

Station Ordinate	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass
40+50.00	EARTH					
	Excavation	34	0	0	1.00	
	Fill	449	0	0	1.00	0
	TOPSOIL					
	Excavation	61	0	0	1.00	
	Fill	0	0	0	1.00	0
	Mass ordinate for TOPSOIL = 0					
41+00.00	EARTH					
	Excavation	5	36	36	1.00	
	Fill	480	860	860	1.00	-824
	TOPSOIL					
	Excavation	47	100	100	1.00	
	Fill	0	0	0	1.00	-824
	Mass ordinate for TOPSOIL = 100					
41+50.00	EARTH					
	Excavation	11	15	15	1.00	
	Fill	331	751	751	1.00	-1560
	TOPSOIL					
	Excavation	41	81	81	1.00	
	Fill	0	0	0	1.00	-1560
	Mass ordinate for TOPSOIL = 181					
42+00.00	EARTH					
	Excavation	19	28	28	1.00	
	Fill	203	494	494	1.00	-2026
	TOPSOIL					
	Excavation	37	72	72	1.00	
	Fill	0	0	0	1.00	-2026
	Mass ordinate for TOPSOIL = 253					
42+50.00	EARTH					
	Excavation	33	48	48	1.00	
	Fill	128	306	306	1.00	-2284
	TOPSOIL					
	Excavation	34	66	66	1.00	
	Fill	0	0	0	1.00	-2284
	Mass ordinate for TOPSOIL = 319					
43+00.00	EARTH					
	Excavation	37	65	65	1.00	
	Fill	110	220	220	1.00	-2439
	TOPSOIL					
	Excavation	33	62	62	1.00	
	Fill	0	0	0	1.00	-2439
	Mass ordinate for TOPSOIL = 381					

43+50.00	EARTH					
	Excavation	37	69	69	1.00	
	Fill	265	347	347	1.00	-2717
	TOPSOIL					
	Excavation	41	69	69	1.00	
	Fill	0	0	0	1.00	-2717
	Mass ordinate for TOPSOIL = 450					
44+00.00	EARTH					
	Excavation	33	65	65	1.00	
	Fill	197	428	428	1.00	-3080
	TOPSOIL					
	Excavation	38	73	73	1.00	
	Fill	0	0	0	1.00	-3080
	Mass ordinate for TOPSOIL = 523					
44+50.00	EARTH					
	Excavation	30	58	58	1.00	
	Fill	94	269	269	1.00	-3291
	TOPSOIL					
	Excavation	30	63	63	1.00	
	Fill	0	0	0	1.00	-3291
	Mass ordinate for TOPSOIL = 586					
45+00.00	EARTH					
	Excavation	31	56	56	1.00	
	Fill	58	141	141	1.00	-3376
	TOPSOIL					
	Excavation	25	51	51	1.00	
	Fill	0	0	0	1.00	-3376
	Mass ordinate for TOPSOIL = 637					
45+50.00	EARTH					
	Excavation	31	57	57	1.00	
	Fill	22	74	74	1.00	-3393
	TOPSOIL					
	Excavation	20	42	42	1.00	
	Fill	0	0	0	1.00	-3393
	Mass ordinate for TOPSOIL = 679					
46+00.00	EARTH					
	Excavation	32	58	58	1.00	
	Fill	6	26	26	1.00	-3361
	TOPSOIL					
	Excavation	13	31	31	1.00	
	Fill	0	0	0	1.00	-3361
	Mass ordinate for TOPSOIL = 710					
46+50.00	EARTH					
	Excavation	33	60	60	1.00	
	Fill	2	7	7	1.00	-3308
	TOPSOIL					
	Excavation	12	24	24	1.00	
	Fill	0	0	0	1.00	-3308

Mass ordinate for TOPSOIL = 734

47+00.00	EARTH					
	Excavation	33	61	61	1.00	
	Fill	6	7	7	1.00	-3254
	TOPSOIL					
	Excavation	17	26	26	1.00	
	Fill	0	0	0	1.00	-3254

Mass ordinate for TOPSOIL = 760

47+50.00	EARTH					
	Excavation	33	61	61	1.00	
	Fill	5	10	10	1.00	-3203
	TOPSOIL					
	Excavation	15	29	29	1.00	
	Fill	0	0	0	1.00	-3203

Mass ordinate for TOPSOIL = 789

48+00.00	EARTH					
	Excavation	35	63	63	1.00	
	Fill	2	6	6	1.00	-3146
	TOPSOIL					
	Excavation	10	23	23	1.00	
	Fill	0	0	0	1.00	-3146

Mass ordinate for TOPSOIL = 812

48+50.00	EARTH					
	Excavation	36	66	66	1.00	
	Fill	1	3	3	1.00	-3083
	TOPSOIL					
	Excavation	8	17	17	1.00	
	Fill	0	0	0	1.00	-3083

Mass ordinate for TOPSOIL = 829

49+00.00	EARTH					
	Excavation	39	69	69	1.00	
	Fill	2	3	3	1.00	-3017
	TOPSOIL					
	Excavation	10	17	17	1.00	
	Fill	0	0	0	1.00	-3017

Mass ordinate for TOPSOIL = 846

G R A N D S U M M A R Y T O T A L S

Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
EARTH				
	Excavation	935	935	1.00
	Fill	3952	3952	1.00
TOPSOIL				
	Excavation	846	846	1.00
	Fill	0	0	1.00

S P L I T S U M M A R Y T O T A L S

Material Name		XS Quant Unadjusted Volume (cu. yd.)	XS Quant Adjusted Volume (cu. yd.)	Add/Sub Quant Unadjusted Volume (cu. yd.)	Add/Sub Quant Adjusted Volume (cu. yd.)	Mult Factor
EARTH						
	Excavation	935	935	0	0	1.00
	Fill	3952	3952	0	0	1.00
TOPSOIL						
	Excavation	846	846	0	0	1.00
	Fill	0	0	0	0	1.00

7-11-14 T. Snow
RAMP B STAGE 2A
EARTHWORK

```
Input  File: ewkprj.inp
Output File: RAMP B STAGE 2A EARTH.log
 1     1     1
 1     2     2
 1     3     3 Earthwork
 1     4     4
 1     5     5 tolerance = 0.010000
 1     6     6
 1     7     7 vertical search distance = 500.000000
 1     8     8
 1     9     9 xs dgn = H:\1116007\DGN\Traffic control working
files\RampB XS Stage 2A.dgn
 1    10    10
 1    11    11     Proposed Finish Grade
 1    12    12         soil type = EARTH
 1    13    13         roadway exc mult factor = 1.000000
 1    14    14         subsoil exc mult factor = 1.000000
 1    15    15         fill mult factor = 1.000000
 1    16    16             type = line
 1    17    17             lvname = DESIGN - TYPICAL - Finished Grade and
Subgrade
 1    18    18             lc = 0
 1    19    19             wt = 4
 1    20    20
 1    21    21     Existing Ground Line
 1    22    22         soil type = EARTH
 1    23    23         roadway exc mult factor = 1.000000
 1    24    24         subsoil exc mult factor = 1.000000
 1    25    25         fill mult factor = 1.000000
 1    26    26             type = line, line_string
 1    27    27             lvname = SURVEY - GROUND - Top of Ground
 1    28    28             lc = 3
 1    29    29             wt = 2
 1    30    30             co = 0
 1    31    31
 1    32    32     Existing Unsuitable Material
 1    33    33         soil type = TOPSOIL
 1    34    34         roadway exc mult factor = 1.000000
 1    35    35         subsoil exc mult factor = 1.000000
 1    36    36         fill mult factor = 1.000000
 1    37    37             type = line
 1    38    38             lvname = SURVEY - GROUND - Bottom of Topsoil
Layer
 1    39    39             lc = 2
 1    40    40             wt = 2
 1    41    41             co = 2
 1    42    42
 1    43    43     Excavation Limit
 1    44    44             type = line
 1    45    45             lvname = DESIGN - EARTHWORK - Excavation Limit
Lines
 1    46    46             lc = 0
 1    47    47             wt = 0
 1    48    48             co = 0
```

```
 1     49     49
 1     50     50      Write Earthwork Shapes
 1     51     51          plot param
 1     52     52              lv = 347
 1     53     53              lvname = DESIGN - EARTHWORK - Shapes
 1     54     54              co = ByLevel
 1     55     55              wt = ByLevel
 1     56     56              lc = ByLevel
 1     57     57
 1     58     58      combine common exc + subgrade exc + subsoil exc
 1     59     59
 1     60     60      End Area Decimal Places = 0
 1     61     61
 1     62     62      write column base ascii file =  RAMPB STAGE 2A
EARTH.TXT
 1     63     63
 1     64     64      column 1 formula = abs( ["EARTH", Common Exc, End
Area]  )
 1     65     65      column 1 number of decimal place = 0
 1     66     66      column 1 total length = 10
 1     67     67
 1     68     68      column 2 formula = abs( ["EARTH", Fill, End Area]  )
 1     69     69      column 2 number of decimal place = 0
 1     70     70      column 2 total length = 10
 1     71     71
 1     72     72      column 3 formula = abs( ["TOPSOIL", Subsoil Exc, End
Area]  )
 1     73     73      column 3 number of decimal place = 0
 1     74     74      column 3 total length = 10
 1     75     75
 1     76     76
 1     77     77      Process Earthwork for Baseline = RAMPB
 1     78     78          job number = 098
 1     79     79
 1     80     80          beg sta = 40+50.00 R 1
 1     81     81          end sta = 49+50.00 R 1
 0      0     82 END_OF_FILE
COMPUTING EARTHWORKS FOR BASELINE = RAMPB
COMPUTING EARTHWORKS FOR JOB = 098
FORMING LIST OF XSCELLS
BEGINNING EARTHWORKS COMPUTATION
```

Station Ordinate	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass
40+50.00	EARTH					
	Excavation	25	0	0	1.00	
	Fill	0	0	0	1.00	0
41+00.00	EARTH					
	Excavation	38	58	58	1.00	
	Fill	0	0	0	1.00	58
	TOPSOIL					
	Excavation	12	11	11	1.00	
	Fill	0	0	0	1.00	58
	Mass ordinate for TOPSOIL = 11					
41+50.00	EARTH					
	Excavation	23	56	56	1.00	
	Fill	2	2	2	1.00	112
	TOPSOIL					
	Excavation	15	25	25	1.00	
	Fill	0	0	0	1.00	112
	Mass ordinate for TOPSOIL = 36					
42+00.00	EARTH					
	Excavation	25	44	44	1.00	
	Fill	8	9	9	1.00	147
	TOPSOIL					
	Excavation	13	25	25	1.00	
	Fill	0	0	0	1.00	147
	Mass ordinate for TOPSOIL = 61					
42+50.00	EARTH					
	Excavation	25	46	46	1.00	
	Fill	33	38	38	1.00	155
	TOPSOIL					
	Excavation	22	33	33	1.00	
	Fill	0	0	0	1.00	155
	Mass ordinate for TOPSOIL = 94					
43+00.00	EARTH					
	Excavation	31	52	52	1.00	
	Fill	19	48	48	1.00	159
	TOPSOIL					
	Excavation	19	38	38	1.00	
	Fill	0	0	0	1.00	159
	Mass ordinate for TOPSOIL = 132					
43+50.00	EARTH					
	Excavation	38	64	64	1.00	
	Fill	6	23	23	1.00	200
	TOPSOIL					

	Excavation	14	31	31	1.00	
	Fill	0	0	0	1.00	200
	Mass ordinate for TOPSOIL = 163					
44+00.00	EARTH					
	Excavation	40	72	72	1.00	
	Fill	2	7	7	1.00	265
	TOPSOIL					
	Excavation	12	25	25	1.00	
	Fill	0	0	0	1.00	265
	Mass ordinate for TOPSOIL = 188					
44+50.00	EARTH					
	Excavation	40	74	74	1.00	
	Fill	1	3	3	1.00	336
	TOPSOIL					
	Excavation	11	22	22	1.00	
	Fill	0	0	0	1.00	336
	Mass ordinate for TOPSOIL = 210					
45+00.00	EARTH					
	Excavation	39	73	73	1.00	
	Fill	4	5	5	1.00	404
	TOPSOIL					
	Excavation	14	24	24	1.00	
	Fill	0	0	0	1.00	404
	Mass ordinate for TOPSOIL = 234					
45+50.00	EARTH					
	Excavation	36	69	69	1.00	
	Fill	1	5	5	1.00	468
	TOPSOIL					
	Excavation	11	24	24	1.00	
	Fill	0	0	0	1.00	468
	Mass ordinate for TOPSOIL = 258					
46+00.00	EARTH					
	Excavation	33	64	64	1.00	
	Fill	2	3	3	1.00	529
	TOPSOIL					
	Excavation	12	22	22	1.00	
	Fill	0	0	0	1.00	529
	Mass ordinate for TOPSOIL = 280					
46+50.00	EARTH					
	Excavation	29	57	57	1.00	
	Fill	2	4	4	1.00	582
	TOPSOIL					
	Excavation	13	23	23	1.00	
	Fill	0	0	0	1.00	582
	Mass ordinate for TOPSOIL = 303					
47+50.00	EARTH					
	Excavation	24	98	98	1.00	

S P L I T S U M M A R Y T O T A L S

Material Name		XS Quant Unadjusted Volume (cu. yd.)	XS Quant Adjusted Volume (cu. yd.)	Add/Sub Quant Unadjusted Volume (cu. yd.)	Add/Sub Quant Adjusted Volume (cu. yd.)	Mult Factor
EARTH						
	Excavation	930	930	0	0	1.00
	Fill	178	178	0	0	1.00
TOPSOIL						
	Excavation	446	446	0	0	1.00
	Fill	0	0	0	0	1.00

7-10-14 T. SNOW
RAMP C STAGE 2
EARTHWORK

```
Input  File: ewkprj.inp
Output File: RAMP C STAGE 2 EARTH.log
 1      1      1
 1      2      2
 1      3      3 Earthwork
 1      4      4
 1      5      5 tolerance = 0.010000
 1      6      6
 1      7      7 vertical search distance = 500.000000
 1      8      8
 1      9      9 xs dgn = H:\1116007\DGN\Traffic control working
files\RampC XS Stage 2.dgn
 1     10     10
 1     11     11     Proposed Finish Grade
 1     12     12         soil type = EARTH
 1     13     13         roadway exc mult factor = 1.000000
 1     14     14         subsoil exc mult factor = 1.000000
 1     15     15         fill mult factor = 1.000000
 1     16     16             type = line
 1     17     17             lvname = DESIGN - TYPICAL - Finished Grade and
Subgrade
 1     18     18             lc = 0
 1     19     19             wt = 4
 1     20     20
 1     21     21     Existing Ground Line
 1     22     22         soil type = EARTH
 1     23     23         roadway exc mult factor = 1.000000
 1     24     24         subsoil exc mult factor = 1.000000
 1     25     25         fill mult factor = 1.000000
 1     26     26             type = line_string
 1     27     27             lvname = SURVEY - GROUND - Top of Ground
 1     28     28             lc = 3
 1     29     29             wt = 2
 1     30     30             co = 0
 1     31     31
 1     32     32     Existing Unsuitable Material
 1     33     33         soil type = TOPSOIL
 1     34     34         roadway exc mult factor = 1.000000
 1     35     35         subsoil exc mult factor = 1.000000
 1     36     36         fill mult factor = 1.000000
 1     37     37             type = line
 1     38     38             lvname = SURVEY - GROUND - Bottom of Topsoil
Layer
 1     39     39             lc = 2
 1     40     40             wt = 2
 1     41     41             co = 2
 1     42     42
 1     43     43     Excavation Limit
 1     44     44             type = line
 1     45     45             lvname = DESIGN - EARTHWORK - Excavation Limit
Lines
 1     46     46             lc = 0
 1     47     47             wt = 0
 1     48     48             co = 0
```

```
 1     49     49
 1     50     50      Write Earthwork Shapes
 1     51     51          plot param
 1     52     52              lv = 347
 1     53     53              lvname = DESIGN - EARTHWORK - Shapes
 1     54     54              co = ByLevel
 1     55     55              wt = ByLevel
 1     56     56              lc = ByLevel
 1     57     57
 1     58     58      combine common exc + subgrade exc + subsoil exc
 1     59     59
 1     60     60      End Area Decimal Places = 0
 1     61     61
 1     62     62      write column base ascii file =  RAMPC-1 EARTH.TXT
 1     63     63
 1     64     64      column 1 formula = abs( ["EARTH", Common Exc, End
Area]  )
 1     65     65      column 1 number of decimal place = 0
 1     66     66      column 1 total length = 10
 1     67     67
 1     68     68      column 2 formula = abs( ["EARTH", Fill, End Area]  )
 1     69     69      column 2 number of decimal place = 0
 1     70     70      column 2 total length = 10
 1     71     71
 1     72     72      column 3 formula = abs( ["TOPSOIL", Subsoil Exc, End
Area]  )
 1     73     73      column 3 number of decimal place = 0
 1     74     74      column 3 total length = 10
 1     75     75
 1     76     76
 1     77     77      Process Earthwork for Baseline = RAMPC
 1     78     78          job number = 098
 1     79     79
 1     80     80          beg sta = 40+00.00 R 1
 1     81     81          end sta = 49+64.00 R 1
 0      0     82 END_OF_FILE
COMPUTING EARTHWORKS FOR BASELINE = RAMPC
COMPUTING EARTHWORKS FOR JOB = 098
FORMING LIST OF XSCELLS
BEGINNING EARTHWORKS COMPUTATION
```

Station Ordinate	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass
40+40.00	EARTH					
	Excavation	8	0	0	1.00	
	Fill	7	0	0	1.00	0
	TOPSOIL					
	Excavation	15	0	0	1.00	
	Fill	0	0	0	1.00	0
	Mass ordinate for TOPSOIL = 0					
40+50.00	EARTH					
	Excavation	12	4	4	1.00	
	Fill	4	2	2	1.00	2
	TOPSOIL					
	Excavation	13	5	5	1.00	
	Fill	0	0	0	1.00	2
	Mass ordinate for TOPSOIL = 5					
41+50.00	EARTH					
	Excavation	136	274	274	1.00	
	Fill	14	33	33	1.00	243
	TOPSOIL					
	Excavation	30	79	79	1.00	
	Fill	0	0	0	1.00	243
	Mass ordinate for TOPSOIL = 84					
42+00.00	EARTH					
	Excavation	232	341	341	1.00	
	Fill	20	31	31	1.00	553
	TOPSOIL					
	Excavation	36	61	61	1.00	
	Fill	0	0	0	1.00	553
	Mass ordinate for TOPSOIL = 145					
42+50.00	EARTH					
	Excavation	341	531	531	1.00	
	Fill	22	39	39	1.00	1045
	TOPSOIL					
	Excavation	40	71	71	1.00	
	Fill	0	0	0	1.00	1045
	Mass ordinate for TOPSOIL = 216					
43+00.00	EARTH					
	Excavation	191	493	493	1.00	
	Fill	24	43	43	1.00	1495
	TOPSOIL					
	Excavation	36	71	71	1.00	
	Fill	0	0	0	1.00	1495
	Mass ordinate for TOPSOIL = 287					

43+50.00	EARTH					
	Excavation	196	358	358	1.00	
	Fill	25	45	45	1.00	1808
	TOPSOIL					
	Excavation	38	69	69	1.00	
	Fill	0	0	0	1.00	1808
	Mass ordinate for TOPSOIL = 356					
44+00.00	EARTH					
	Excavation	209	375	375	1.00	
	Fill	25	46	46	1.00	2137
	TOPSOIL					
	Excavation	39	72	72	1.00	
	Fill	0	0	0	1.00	2137
	Mass ordinate for TOPSOIL = 428					
44+50.00	EARTH					
	Excavation	168	349	349	1.00	
	Fill	26	47	47	1.00	2439
	TOPSOIL					
	Excavation	39	73	73	1.00	
	Fill	0	0	0	1.00	2439
	Mass ordinate for TOPSOIL = 501					
45+00.00	EARTH					
	Excavation	166	309	309	1.00	
	Fill	20	43	43	1.00	2705
	TOPSOIL					
	Excavation	36	70	70	1.00	
	Fill	0	0	0	1.00	2705
	Mass ordinate for TOPSOIL = 571					
45+50.00	EARTH					
	Excavation	127	271	271	1.00	
	Fill	15	32	32	1.00	2944
	TOPSOIL					
	Excavation	31	62	62	1.00	
	Fill	0	0	0	1.00	2944
	Mass ordinate for TOPSOIL = 633					
46+00.00	EARTH					
	Excavation	144	251	251	1.00	
	Fill	9	22	22	1.00	3173
	TOPSOIL					
	Excavation	37	63	63	1.00	
	Fill	0	0	0	1.00	3173
	Mass ordinate for TOPSOIL = 696					
46+50.00	EARTH					
	Excavation	88	215	215	1.00	
	Fill	5	13	13	1.00	3375
	TOPSOIL					
	Excavation	29	61	61	1.00	
	Fill	0	0	0	1.00	3375

Mass ordinate for TOPSOIL = 757

47+00.00	EARTH					
	Excavation	73	149	149	1.00	
	Fill	6	10	10	1.00	3514
	TOPSOIL					
	Excavation	27	52	52	1.00	
	Fill	0	0	0	1.00	3514
	Mass ordinate for TOPSOIL = 809					
47+50.00	EARTH					
	Excavation	33	98	98	1.00	
	Fill	22	26	26	1.00	3586
	TOPSOIL					
	Excavation	22	45	45	1.00	
	Fill	0	0	0	1.00	3586
	Mass ordinate for TOPSOIL = 854					
48+00.00	EARTH					
	Excavation	7	37	37	1.00	
	Fill	48	65	65	1.00	3558
	TOPSOIL					
	Excavation	20	39	39	1.00	
	Fill	0	0	0	1.00	3558
	Mass ordinate for TOPSOIL = 893					
48+50.00	EARTH					
	Excavation	0	6	6	1.00	
	Fill	80	119	119	1.00	3445
	TOPSOIL					
	Excavation	20	37	37	1.00	
	Fill	0	0	0	1.00	3445
	Mass ordinate for TOPSOIL = 930					
49+00.00	EARTH					
	Excavation	1	1	1	1.00	
	Fill	95	162	162	1.00	3284
	TOPSOIL					
	Excavation	25	42	42	1.00	
	Fill	0	0	0	1.00	3284
	Mass ordinate for TOPSOIL = 972					
49+50.00	EARTH					
	Excavation	3	4	4	1.00	
	Fill	193	267	267	1.00	3021
	TOPSOIL					
	Excavation	42	62	62	1.00	
	Fill	0	0	0	1.00	3021
	Mass ordinate for TOPSOIL = 1034					

G R A N D S U M M A R Y T O T A L S

Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
EARTH				
	Excavation	4066	4066	1.00
	Fill	1045	1045	1.00
TOPSOIL				
	Excavation	1034	1034	1.00
	Fill	0	0	1.00

S P L I T S U M M A R Y T O T A L S

Material Name	Mult Factor	XS Quant Unadjusted Volume (cu. yd.)	XS Quant Adjusted Volume (cu. yd.)	Add/Sub Quant Unadjusted Volume (cu. yd.)	Add/Sub Quant Adjusted Volume (cu. yd.)	
EARTH						
Excavation		4066	4066	0	0	1.00
Fill		1045	1045	0	0	1.00
TOPSOIL						
Excavation		1034	1034	0	0	1.00
Fill		0	0	0	0	1.00

7-10-14 T. Snow
Ramp C Stage 2A
Earthwork

```
Input  File: ewkprj.inp
Output File: RAMP C STAGE 2A EARTH.log
 1     1     1
 1     2     2
 1     3     3 Earthwork
 1     4     4
 1     5     5 tolerance = 0.010000
 1     6     6
 1     7     7 vertical search distance = 500.000000
 1     8     8
 1     9     9 xs dgn = H:\1116007\DGN\Traffic control working
files\RampC XS Stage 2A.dgn
 1    10    10
 1    11    11     Proposed Finish Grade
 1    12    12         soil type = EARTH
 1    13    13         roadway exc mult factor = 1.000000
 1    14    14         subsoil exc mult factor = 1.000000
 1    15    15         fill mult factor = 1.000000
 1    16    16             type = line
 1    17    17             lvname = DESIGN - TYPICAL - Finished Grade and
Subgrade
 1    18    18             lc = 0
 1    19    19             wt = 4
 1    20    20
 1    21    21     Existing Ground Line
 1    22    22         soil type = EARTH
 1    23    23         roadway exc mult factor = 1.000000
 1    24    24         subsoil exc mult factor = 1.000000
 1    25    25         fill mult factor = 1.000000
 1    26    26             type = line_string
 1    27    27             lvname = SURVEY - GROUND - Top of Ground
 1    28    28             lc = 3
 1    29    29             wt = 2
 1    30    30             co = 0
 1    31    31
 1    32    32     Existing Unsuitable Material
 1    33    33         soil type = TOPSOIL
 1    34    34         roadway exc mult factor = 1.000000
 1    35    35         subsoil exc mult factor = 1.000000
 1    36    36         fill mult factor = 1.000000
 1    37    37             type = line
 1    38    38             lvname = SURVEY - GROUND - Bottom of Topsoil
Layer
 1    39    39             lc = 2
 1    40    40             wt = 2
 1    41    41             co = 2
 1    42    42
 1    43    43     Excavation Limit
 1    44    44             type = line
 1    45    45             lvname = DESIGN - EARTHWORK - Excavation Limit
Lines
 1    46    46             lc = 0
 1    47    47             wt = 0
 1    48    48             co = 0
```

```
 1     49     49
 1     50     50      Write Earthwork Shapes
 1     51     51          plot param
 1     52     52              lv = 347
 1     53     53              lvname = DESIGN - EARTHWORK - Shapes
 1     54     54              co = ByLevel
 1     55     55              wt = ByLevel
 1     56     56              lc = ByLevel
 1     57     57
 1     58     58      combine common exc + subgrade exc + subsoil exc
 1     59     59
 1     60     60      End Area Decimal Places = 0
 1     61     61
 1     62     62      write column base ascii file =  RAMPC 2 EARTH.TXT
 1     63     63
 1     64     64      column 1 formula = abs( ["EARTH", Common Exc, End
Area]  )
 1     65     65      column 1 number of decimal place = 0
 1     66     66      column 1 total length = 10
 1     67     67
 1     68     68      column 2 formula = abs( ["EARTH", Fill, End Area]  )
 1     69     69      column 2 number of decimal place = 0
 1     70     70      column 2 total length = 10
 1     71     71
 1     72     72      column 3 formula = abs( ["TOPSOIL", Subsoil Exc, End
Area]  )
 1     73     73      column 3 number of decimal place = 0
 1     74     74      column 3 total length = 10
 1     75     75
 1     76     76
 1     77     77      Process Earthwork for Baseline = RAMPC
 1     78     78          job number = 098
 1     79     79
 1     80     80          beg sta = 40+00.00 R 1
 1     81     81          end sta = 49+64.00 R 1
 0      0     82 END_OF_FILE
COMPUTING EARTHWORKS FOR BASELINE = RAMPC
COMPUTING EARTHWORKS FOR JOB = 098
FORMING LIST OF XSCELLS
BEGINNING EARTHWORKS COMPUTATION
```

Station Ordinate	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass
41+50.00	EARTH					
	Excavation	31	0	0	1.00	
	Fill	0	0	0	1.00	0
42+00.00	EARTH					
	Excavation	26	53	53	1.00	
	Fill	0	0	0	1.00	53
42+50.00	EARTH					
	Excavation	12	35	35	1.00	
	Fill	0	0	0	1.00	88
43+00.00	EARTH					
	Excavation	13	23	23	1.00	
	Fill	0	0	0	1.00	111
43+50.00	EARTH					
	Excavation	14	25	25	1.00	
	Fill	0	0	0	1.00	136
44+00.00	EARTH					
	Excavation	13	25	25	1.00	
	Fill	0	0	0	1.00	161
44+50.00	EARTH					
	Excavation	13	24	24	1.00	
	Fill	0	0	0	1.00	185
45+00.00	EARTH					
	Excavation	13	24	24	1.00	
	Fill	0	0	0	1.00	209
45+50.00	EARTH					
	Excavation	13	24	24	1.00	
	Fill	0	0	0	1.00	233
46+00.00	EARTH					
	Excavation	13	24	24	1.00	
	Fill	0	0	0	1.00	257
46+50.00	EARTH					
	Excavation	12	23	23	1.00	
	Fill	0	0	0	1.00	280
47+00.00	EARTH					
	Excavation	9	19	19	1.00	
	Fill	0	0	0	1.00	299

47+50.00 EARTH						
	Excavation	5	13	13	1.00	
	Fill	0	0	0	1.00	312
48+00.00 EARTH						
	Excavation	0	5	5	1.00	
	Fill	1	1	1	1.00	316
49+00.00 EARTH						
	Excavation	0	0	0	1.00	
	Fill	1	4	4	1.00	312

G R A N D S U M M A R Y T O T A L S

Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
EARTH				
	Excavation	317	317	1.00
	Fill	5	5	1.00

S P L I T S U M M A R Y T O T A L S

Add/Sub Quant Adjusted Volume (cu. yd.)	Material Name	Mult Factor	XS Quant Unadjusted Volume (cu. yd.)	XS Quant Adjusted Volume (cu. yd.)	Add/Sub Quant Unadjusted Volume (cu. yd.)
	EARTH				
0	Excavation	1.00	317	317	0
0	Fill	1.00	5	5	0

[redacted]

SR 237 SIA serving Hankook Tires
Ramp C
Stage 2B Construction
Earthwork Quantities

STATION	AREAS			VOLUMES		
	EARTH EXCAVATION	TOPSOIL EXCAVATION	EMBANKMENT	EARTH EXCAVATION	TOPSOIL EXCAVATION	EMBANKMENT
40+00.00	0	0	0			
40+40.00	34.32			25.42	0.00	0.00
40+50.00	26.86			11.33	0.00	0.00
41+00.00	6.7			31.07	0.00	0.00
41+50.00	6.7			12.41	0.00	0.00
42+00.00	6.7			12.41	0.00	0.00
42+50.00	6.7			12.41	0.00	0.00
43+00.00	6.8			12.50	0.00	0.00
43+50.00	7.1			12.87	0.00	0.00
44+00.00	7.4			13.43	0.00	0.00
44+50.00	7.5			13.80	0.00	0.00
45+00.00	53.6	0.8	3.9	56.57	0.74	3.61
45+50.00	47.2		9.2	93.33	0.74	12.13
46+00.00	32	3.7	32.7	73.33	3.43	38.80
46+50.00	8.6		86.5	37.59	3.43	110.37
47+00.00	2.7	1.7	142.1	10.46	1.57	211.67
47+50.00	0.2	7.5	160.8	2.69	8.52	280.46
48+00.00	0	7	151.7	0.19	13.43	289.35
48+50.00	0	2.8	87	0.00	9.07	221.02
49+00.00	1.3		30.3	1.20	2.59	108.61
49+50.00	55.3			52.41	0.00	28.06
49+64.00	0			14.34	0.00	0.00
TOTAL VOLUMES (CY)				499.76	43.52	1304.07

7-10-14 T. SNOW
RAMP D STAGE 2
EARTHWORK

```
Input  File: ewkprj.inp
Output File: RAMP D STAGE 2 EARTH.log
 1      1      1
 1      2      2
 1      3      3 Earthwork
 1      4      4
 1      5      5 tolerance = 0.010000
 1      6      6
 1      7      7 vertical search distance = 500.000000
 1      8      8
 1      9      9 xs dgn = H:\1116007\DGN\Traffic control working
files\RampD XS Stage 2.dgn
 1     10     10
 1     11     11     Proposed Finish Grade
 1     12     12         soil type = EARTH
 1     13     13         roadway exc mult factor = 1.000000
 1     14     14         subsoil exc mult factor = 1.000000
 1     15     15         fill mult factor = 1.000000
 1     16     16             type = line
 1     17     17             lvname = DESIGN - TYPICAL - Finished Grade and
Subgrade
 1     18     18             lc = 0
 1     19     19             wt = 4
 1     20     20
 1     21     21     Existing Ground Line
 1     22     22         soil type = EARTH
 1     23     23         roadway exc mult factor = 1.000000
 1     24     24         subsoil exc mult factor = 1.000000
 1     25     25         fill mult factor = 1.000000
 1     26     26             type = line_string
 1     27     27             lvname = SURVEY - GROUND - Top of Ground
 1     28     28             lc = 3
 1     29     29             wt = 2
 1     30     30             co = 0
 1     31     31
 1     32     32     Existing Unsuitable Material
 1     33     33         soil type = TOPSOIL
 1     34     34         roadway exc mult factor = 1.000000
 1     35     35         subsoil exc mult factor = 1.000000
 1     36     36         fill mult factor = 1.000000
 1     37     37             type = line
 1     38     38             lvname = SURVEY - GROUND - Bottom of Topsoil
Layer
 1     39     39             lc = 2
 1     40     40             wt = 2
 1     41     41             co = 2
 1     42     42
 1     43     43     Excavation Limit
 1     44     44             type = line
 1     45     45             lvname = DESIGN - EARTHWORK - Excavation Limit
Lines
 1     46     46             lc = 0
 1     47     47             wt = 0
 1     48     48             co = 0
```

```
 1    49    49
 1    50    50     Write Earthwork Shapes
 1    51    51         plot param
 1    52    52             lv = 347
 1    53    53             lvname = DESIGN - EARTHWORK - Shapes
 1    54    54             co = ByLevel
 1    55    55             wt = ByLevel
 1    56    56             lc = ByLevel
 1    57    57
 1    58    58     combine common exc + subgrade exc + subsoil exc
 1    59    59
 1    60    60     End Area Decimal Places = 0
 1    61    61
 1    62    62     write column base ascii file =  RAMPC 2 EARTH.TXT
 1    63    63
 1    64    64     column 1 formula = abs( ["EARTH", Common Exc, End
Area]  )
 1    65    65     column 1 number of decimal place = 0
 1    66    66     column 1 total length = 10
 1    67    67
 1    68    68     column 2 formula = abs( ["EARTH", Fill, End Area]  )
 1    69    69     column 2`number of decimal place = 0
 1    70    70     column 2 total length = 10
 1    71    71
 1    72    72     column 3 formula = abs( ["TOPSOIL", Subsoil Exc, End
Area]  )
 1    73    73     column 3 number of decimal place = 0
 1    74    74     column 3 total length = 10
 1    75    75
 1    76    76
 1    77    77     Process Earthwork for Baseline = RAMPD
 1    78    78         job number = 098
 1    79    79
 1    80    80         beg sta = 50+50.00 R 1
 1    81    81         end sta = 56+00.00 R 1
 0     0    82 END_OF_FILE
COMPUTING EARTHWORKS FOR BASELINE = RAMPD
COMPUTING EARTHWORKS FOR JOB = 098
FORMING LIST OF XSCELLS
BEGINNING EARTHWORKS COMPUTATION
```

Station Ordinate	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass
50+50.00	EARTH					
	Excavation	11	0	0	1.00	
	Fill	11	0	0	1.00	0
	TOPSOIL					
	Excavation	26	0	0	1.00	
	Fill	0	0	0	1.00	0
	Mass ordinate for TOPSOIL = 0					
51+00.00	EARTH					
	Excavation	200	195	195	1.00	
	Fill	17	26	26	1.00	169
	TOPSOIL					
	Excavation	41	62	62	1.00	
	Fill	0	0	0	1.00	169
	Mass ordinate for TOPSOIL = 62					
51+50.00	EARTH					
	Excavation	394	550	550	1.00	
	Fill	4	19	19	1.00	700
	TOPSOIL					
	Excavation	46	80	80	1.00	
	Fill	0	0	0	1.00	700
	Mass ordinate for TOPSOIL = 142					
52+00.00	EARTH					
	Excavation	488	817	817	1.00	
	Fill	11	14	14	1.00	1503
	TOPSOIL					
	Excavation	44	83	83	1.00	
	Fill	0	0	0	1.00	1503
	Mass ordinate for TOPSOIL = 225					
52+50.00	EARTH					
	Excavation	463	881	881	1.00	
	Fill	10	19	19	1.00	2365
	TOPSOIL					
	Excavation	44	81	81	1.00	
	Fill	0	0	0	1.00	2365
	Mass ordinate for TOPSOIL = 306					
53+00.00	EARTH					
	Excavation	382	782	782	1.00	
	Fill	6	15	15	1.00	3132
	TOPSOIL					
	Excavation	44	81	81	1.00	
	Fill	0	0	0	1.00	3132
	Mass ordinate for TOPSOIL = 387					

G R A N D S U M M A R Y T O T A L S

Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
EARTH				
	Excavation	5168	5168	1.00
	Fill	105	105	1.00
TOPSOIL				
	Excavation	712	712	1.00
	Fill	0	0	1.00

S P L I T S U M M A R Y T O T A L S

Material Name		XS Quant Unadjusted Volume (cu. yd.)	XS Quant Adjusted Volume (cu. yd.)	Add/Sub Quant Unadjusted Volume (cu. yd.)	Add/Sub Quant Adjusted Volume (cu. yd.)	Mult Factor
EARTH						
	Excavation	5168	5168	0	0	1.00
	Fill	105	105	0	0	1.00
TOPSOIL						
	Excavation	712	712	0	0	1.00
	Fill	0	0	0	0	1.00

7-11-14 T. Snow
Ramp D Stage 2A
Earthwork

```
Input  File: ewkprj.inp
Output File: RAMP D STAGE 2A EARTH.log
 1      1      1
 1      2      2
 1      3      3 Earthwork
 1      4      4
 1      5      5 tolerance = 0.010000
 1      6      6
 1      7      7 vertical search distance = 500.000000
 1      8      8
 1      9      9 xs dgn = H:\1116007\DGN\Traffic control working
files\RampD XS Stage 2A.dgn
 1     10     10
 1     11     11     Proposed Finish Grade
 1     12     12         soil type = EARTH
 1     13     13         roadway exc mult factor = 1.000000
 1     14     14         subsoil exc mult factor = 1.000000
 1     15     15         fill mult factor = 1.000000
 1     16     16             type = line
 1     17     17             lvname = DESIGN - TYPICAL - Finished Grade and
Subgrade
 1     18     18             lc = 0
 1     19     19             wt = 4
 1     20     20
 1     21     21     Existing Ground Line
 1     22     22         soil type = EARTH
 1     23     23         roadway exc mult factor = 1.000000
 1     24     24         subsoil exc mult factor = 1.000000
 1     25     25         fill mult factor = 1.000000
 1     26     26             type = line, line_string
 1     27     27             lvname = SURVEY - GROUND - Top of Ground
 1     28     28             lc = 3
 1     29     29             wt = 2
 1     30     30             co = 0
 1     31     31
 1     32     32     Existing Unsuitable Material
 1     33     33         soil type = TOPSOIL
 1     34     34         roadway exc mult factor = 1.000000
 1     35     35         subsoil exc mult factor = 1.000000
 1     36     36         fill mult factor = 1.000000
 1     37     37             type = line
 1     38     38             lvname = SURVEY - GROUND - Bottom of Topsoil
Layer
 1     39     39             lc = 2
 1     40     40             wt = 2
 1     41     41             co = 2
 1     42     42
 1     43     43     Excavation Limit
 1     44     44             type = line
 1     45     45             lvname = DESIGN - EARTHWORK - Excavation Limit
Lines
 1     46     46             lc = 0
 1     47     47             wt = 0
 1     48     48             co = 0
```

```
 1    49    49
 1    50    50     Write Earthwork Shapes
 1    51    51         plot param
 1    52    52             lv = 347
 1    53    53             lvname = DESIGN - EARTHWORK - Shapes
 1    54    54             co = ByLevel
 1    55    55             wt = ByLevel
 1    56    56             lc = ByLevel
 1    57    57
 1    58    58     combine common exc + subgrade exc + subsoil exc
 1    59    59
 1    60    60     End Area Decimal Places = 0
 1    61    61
 1    62    62     write column base ascii file =  RAMPD 2A EARTH.TXT
 1    63    63
 1    64    64     column 1 formula = abs( ["EARTH", Common Exc, End
Area]  )
 1    65    65     column 1 number of decimal place = 0
 1    66    66     column 1 total length = 10
 1    67    67
 1    68    68     column 2 formula = abs( ["EARTH", Fill, End Area]  )
 1    69    69     column 2 number of decimal place = 0
 1    70    70     column 2 total length = 10
 1    71    71
 1    72    72     column 3 formula = abs( ["TOPSOIL", Subsoil Exc, End
Area]  )
 1    73    73     column 3 number of decimal place = 0
 1    74    74     column 3 total length = 10
 1    75    75
 1    76    76
 1    77    77     Process Earthwork for Baseline = RAMPD
 1    78    78         job number = 098
 1    79    79
 1    80    80         beg sta = 50+50.00 R 1
 1    81    81         end sta = 56+00.00 R 1
 0     0    82 END_OF_FILE
COMPUTING EARTHWORKS FOR BASELINE = RAMPD
COMPUTING EARTHWORKS FOR JOB = 098
FORMING LIST OF XSCELLS
BEGINNING EARTHWORKS COMPUTATION
```

Station Ordinate	Material Name	End Areas (sq. ft.)	Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor	Mass
50+50.00	EARTH					
	Excavation	34	0	0	1.00	
	Fill	40	0	0	1.00	0
	TOPSOIL					
	Excavation	12	0	0	1.00	
	Fill	0	0	0	1.00	0
	Mass ordinate for TOPSOIL = 0					
51+00.00	EARTH					
	Excavation	243	256	256	1.00	
	Fill	47	81	81	1.00	175
	TOPSOIL					
	Excavation	28	37	37	1.00	
	Fill	0	0	0	1.00	175
	Mass ordinate for TOPSOIL = 37					
51+50.00	EARTH					
	Excavation	231	439	439	1.00	
	Fill	22	64	64	1.00	550
	TOPSOIL					
	Excavation	30	54	54	1.00	
	Fill	0	0	0	1.00	550
	Mass ordinate for TOPSOIL = 91					
52+00.00	EARTH					
	Excavation	213	411	411	1.00	
	Fill	5	25	25	1.00	936
	TOPSOIL					
	Excavation	27	53	53	1.00	
	Fill	0	0	0	1.00	936
	Mass ordinate for TOPSOIL = 144					
52+50.00	EARTH					
	Excavation	240	419	419	1.00	
	Fill	0	5	5	1.00	1350
	TOPSOIL					
	Excavation	36	59	59	1.00	
	Fill	0	0	0	1.00	1350
	Mass ordinate for TOPSOIL = 203					
53+00.00	EARTH					
	Excavation	244	448	448	1.00	
	Fill	8	7	7	1.00	1791
	TOPSOIL					
	Excavation	38	69	69	1.00	
	Fill	0	0	0	1.00	1791
	Mass ordinate for TOPSOIL = 272					

53+50.00	EARTH					
	Excavation	239	447	447	1.00	
	Fill	1	8	8	1.00	2230
	TOPSOIL					
	Excavation	36	69	69	1.00	
	Fill	0	0	0	1.00	2230
	Mass ordinate for TOPSOIL = 341					
54+00.00	EARTH					
	Excavation	191	398	398	1.00	
	Fill	1	2	2	1.00	2626
	TOPSOIL					
	Excavation	34	65	65	1.00	
	Fill	0	0	0	1.00	2626
	Mass ordinate for TOPSOIL = 406					
54+50.00	EARTH					
	Excavation	152	318	318	1.00	
	Fill	1	2	2	1.00	2942
	TOPSOIL					
	Excavation	32	61	61	1.00	
	Fill	0	0	0	1.00	2942
	Mass ordinate for TOPSOIL = 467					
55+00.00	EARTH					
	Excavation	114	246	246	1.00	
	Fill	3	4	4	1.00	3184
	TOPSOIL					
	Excavation	29	56	56	1.00	
	Fill	0	0	0	1.00	3184
	Mass ordinate for TOPSOIL = 523					
55+50.00	EARTH					
	Excavation	72	172	172	1.00	
	Fill	1	4	4	1.00	3352
	TOPSOIL					
	Excavation	24	49	49	1.00	
	Fill	0	0	0	1.00	3352
	Mass ordinate for TOPSOIL = 572					

G R A N D S U M M A R Y T O T A L S

Material Name		Unadjusted Volumes (cu. yd.)	Adjusted Volumes (cu. yd.)	Mult Factor
EARTH				
	Excavation	3554	3554	1.00
	Fill	202	202	1.00
TOPSOIL				
	Excavation	572	572	1.00
	Fill	0	0	1.00

S P L I T S U M M A R Y T O T A L S

Material Name		XS Quant Unadjusted Volume (cu. yd.)	XS Quant Adjusted Volume (cu. yd.)	Add/Sub Quant Unadjusted Volume (cu. yd.)	Add/Sub Quant Adjusted Volume (cu. yd.)	Mult Factor
EARTH						
	Excavation	3554	3554	0	0	1.00
	Fill	202	202	0	0	1.00
TOPSOIL						
	Excavation	572	572	0	0	1.00
	Fill	0	0	0	0	1.00