

**Appendix 1**

**FIELD USE TABLES**

**Angles** Use Tangent for Switchbacks, Full Arc for Sweep Turns

<u>Side-slope</u>	<u>between</u>		<u>Side-slope</u>	<u>between</u>		
	<u>Tangents angle</u>	<u>Full Arc angle</u>		<u>Tangents angle</u>	<u>Full Arc angle</u>	
20%	127°	153°	15% at R = 8'	112°	123°	
25%	136°	158°	10'	"	125°	* (In the field, use 132° for R of 20' to 30')
30%	143°	162°	15'	"	130°	
			20'	"	131°*	
			25'	"	132°*	
			30'	"	133°*	

**Sweep Turn Runout**

<u>Side-Slope:</u>	<u>RUNOUT @ clinometer reading</u>				
	<u>15%</u>	<u>20%</u>	<u>25%</u>	<u>30%</u>	
<u>R =</u>					
8'	9.5' @ 6%	8.5' @ 0%	16' @ 0%	24' @ 0%	
10'	12' @ 5%	10.5' @ 0%	20' @ 0%	30' @ 0%	
15'	12' @ 4%	16' @ 0%	30' @ 0%	45' @ 0%	NOTE: For Runout distance at 12% trail grade, multiply by 0.83, at 15% trail grade, multiply by 0.67.
20'	15' @ 3%	22' @ 0%	41' @ 0%	60' @ 0%	
25'	17' @ 3%	27' @ 0%	51' @ 0%	75' @ 0%	
30'	19' @ 3%	33' @ 0%	62' @ 0%	91' @ 0%	

**Sweep Turn**

**Entrenchment & Centerline Excavation Depth at 15% SS**

<u>Tread width:</u>	<u>trench margin</u>	<u>at tread centerline</u>						
		<u>2'</u>	<u>2.5'</u>	<u>3'</u>	<u>4'</u>	<u>5'</u>	<u>6'</u>	<u>8'</u>
<u>R</u>								
8'	0.4	0.5	0.5	0.6	na	na	na	na
10'	0.4	0.6	0.6	0.7	0.7	na	na	na
15'	0.6	0.7	0.8	0.8	0.9	1.0	1.0	1.2
20'	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4
25'	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.6
30'	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.7

**Entrenchment & Centerline Excavation Depth at 20% SS**

<u>Tread width:</u>	<u>trench margin</u>	<u>at tread centerline</u>						
		<u>2'</u>	<u>2.5'</u>	<u>3'</u>	<u>4'</u>	<u>5'</u>	<u>6'</u>	<u>8'</u>
<u>R</u>								
8'	0.9	1.1	1.1	1.2	na	na	na	na
10'	1.1	1.3	1.3	1.4	1.5	na	na	na
15'	1.6	1.8	1.9	1.9	2.0	2.1	2.2	2.4
20'	2.2	2.4	2.4	2.5	2.6	2.7	2.8	3.0
25'	2.7	2.9	3.0	3.0	3.1	3.2	3.3	3.5
30'	3.3	3.5	3.6	3.6	3.7	3.8	3.9	4.1

**Entrenchment & Centerline Excavation Depth at 25% SS**

<u>Tread width:</u>	<u>trench margin</u>	<u>at tread centerline</u>						
		<u>2'</u>	<u>2.5'</u>	<u>3'</u>	<u>4'</u>	<u>5'</u>	<u>6'</u>	<u>8'</u>
<u>R</u>								
8'	1.6	1.9	1.9	2.0	na	na	na	na
10'	2.0	2.3	2.3	2.4	2.5	na	na	na
15'	3.0	3.3	3.4	3.4	3.6	3.7	3.8	4.1
20'	4.1	4.4	4.4	4.5	4.6	4.7	4.9	5.1
25'	5.1	5.4	5.4	5.5	5.6	5.7	5.9	6.1
30'	6.2	6.4	6.5	6.6	6.7	6.8	6.9	7.2

**Entrenchment & Centerline Excavation Depth at 30% SS**

<u>Tread width:</u>	<u>trench margin</u>	<u>at tread centerline</u>						
		<u>2'</u>	<u>2.5'</u>	<u>3'</u>	<u>4'</u>	<u>5'</u>	<u>6'</u>	<u>8'</u>
<u>R</u>								
8'	2.4	2.7	2.8	2.8	na	na	na	na
10'	3.0	3.3	3.4	3.4	3.6	na	na	na
15'	4.5	4.8	4.9	5.0	5.1	5.3	5.4	5.7
20'	6.0	6.3	6.4	6.5	6.6	6.8	6.9	7.2
25'	7.5	7.8	7.9	8.0	8.1	8.3	8.4	8.7
30'	9.1	9.4	9.4	9.5	9.7	9.8	10.0	10.3