SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	PCLE90-6		
What e_{max} table would you like to use?	0.060 MAX		
V =	60	mph	(design speed, mph)
Dc =	1.75		(degree of curve of alignment)
Radius =	3,274.04	feet	(radius of curve of alingment)
e_d =	**0.041**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	right		Is the curve to the left or right (in the direction of stationing)?
	right		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.188		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.375		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	YES		Divided roadway?

P.C. ROTATION DATA

	1.60%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =	36	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =	60		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.45		(maximum relative gradient)
G =	222		(maximum relative slope)
L(r) =	**327.6720**	feet	(Superelevation Runoff Length to flat)
L(t) =	**127.8720**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	0.00%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	36	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	60		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.45		(maximum relative gradient)
G =	222		(maximum relative slope)
L(r) =	**327.6720**	feet	(Superelevation Runoff Length to flat)
L(t) =	**127.8720**	feet	(Tangent Runout Length)

P.C. Station	194+36.2858	Percent of super to achieve at P.C.?	66.67%
Is there a spiral for this curve?	NO	Is the roadway rotating past flat at the P.C. transition?	NO
P.T. Station	200+37.9213	Percent of super to achieve at P.T.?	72.10%
Is there a spiral for this curve?	NO	Is the roadway rotating past flat at the P.T. transition?	NO

P.C. SUPER INFORMATION

	Station	Super Rate
normal crown =	193+45.7098	-0.016
full super =	195+45.5098	-0.041

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	199+46.4912	-0.041
normal crown =	201+46.2912	-0.016
cross slope rotating to =	202+74.1632	0.000

Curve Information

Full super length =	400.98 ft.	
Slope at PC =	-0.0273	
P.C. L(r) =	199.80	
G-value of P.C. L(r) =	222	
Slope at PT =	-0.0296	
P.T. L(r) =	327.67	
G-value of P.T. L(r) =	222	
Curve length is	10.03	times design spee
time at full super =	4.56	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve	194+57.5978	-0.0300	-0.0400	195+37.5178	-0.0400	-0.0400
	195+45.5098	-0.0410	-0.0290	195+45.5098	-0.0410	-0.0410
P.T. part of curve	199+46.4912	-0.0410	-0.0290	199+46.4912	-0.0410	-0.0410
	200+34.4032	-0.0300	-0.0400	199+54.4832	-0.0400	-0.0400

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

SIMPLE CURVE CONFIGURATION

CLEAR SHEET

Designer name:	DCL		
Curve name:	PCLE90-7		
What e_{max} table would you like to use?	0.060 MAX		
V =	60	mph	(design speed, mph)
Dc =	4.25		(degree of curve of alignment)
Radius =	1,348.45	feet	(radius of curve of alingment)
e_d =	**0.060**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	LEFT		Is the curve to the left or right (in the direction of stationing)?
	RIGHT		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.875		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening required for WB-62.	**1.125**		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	YES		Divided roadway?

P.C. ROTATION DATA

	0.00%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =	36	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =	60		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.45		(maximum relative gradient)
G =	222		(maximum relative slope)
L(r) =	**479.5200**	feet	(Superelevation Runoff Length to flat)
L(t) =	**127.8720**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	1.60%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	24	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	60		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.45		(maximum relative gradient)
G =	222		(maximum relative slope)
L(r) =	**319.6800**	feet	(Superelevation Runoff Length to flat)
L(t) =	**85.2480**	feet	(Tangent Runout Length)

P.C. Station	207+94.1632		
Is there a spiral for this curve?	YES	Is the roadway rotating past flat at the P.C. transition?	NO
What is the length of the spiral?	520.00'	Spiral G-value and corresponding design speed:	241; 65-mph

P.T. Station	221+32.4248		
Is there a spiral for this curve?	YES	Is the roadway rotating past flat at the P.T. transition?	YES
What is the length of the spiral?	520.00'	Spiral G-value and corresponding design speed:	361; 70-mph
Do you want the tangent runout length recalculated to match the g-value of the spiral?	YES	New L(t) =	138.6240

P.C. SUPER INFORMATION

	Station	Super Rate
cross slope rotating from =	202+74.1632	0.000
full super =	207+94.1632	0.060

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	221+32.4248	0.060
flat =	226+52.4248	0.000
normal crown =	227+91.0488	-0.016

Curve Information

Full super length =	1338.26 ft.	
Slope at PC =	0.0600	
P.C. Spiral Length =	520.00	
G-value of P.C. Spiral =	241	
Slope at PT =	0.0600	
P.T. Spiral Length =	520.00	
G-value of P.T. Spiral =	361	
P.T. L(t) =	138.62	
G-value of P.T. L(t) =	361	
Curve length is	22.30	times design spee
time at full super =	15.21	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve	206+20.8299	0.0400	-0.0400	205+34.1632	0.0300	-0.0400
	207+94.1632	0.0600	-0.0600	207+94.1632	0.0600	-0.0100
P.T. part of curve	221+32.4248	0.0600	-0.0600	221+32.4248	0.0600	-0.0100
	223+05.7582	0.0400	-0.0400	223+92.4248	0.0300	-0.0400

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate
225+13.7335	0.0160	26.67%	-0.0400	-0.0400

CROSS SLOPE INFORMATION

Super Rate	Station in P.C. Area	Station in P.T. Area
0.0160	204+12.8299	225+13.7335
0.0530	207+33.4965	221+93.0876

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	PCLE90-8		
What e_{max} table would you like to use?	0.060 MAX		
V =	60	mph	(design speed, mph)
Dc =	1.00		(degree of curve of alignment)
Radius =	5,729.58	feet	(radius of curve of alingment)
e_d =	**0.027**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	LEFT		Is the curve to the left or right (in the direction of stationing)?
	RIGHT		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.000		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.000		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	YES		Divided roadway?

P.C. ROTATION DATA

	1.60%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =	24	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =	60		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.45		(maximum relative gradient)
G =	222		(maximum relative slope)
L(r) =	**143.8560**	feet	(Superelevation Runoff Length to flat)
L(t) =	**85.2480**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	1.60%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	24	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	60		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.45		(maximum relative gradient)
G =	222		(maximum relative slope)
L(r) =	**143.8560**	feet	(Superelevation Runoff Length to flat)
L(t) =	**85.2480**	feet	(Tangent Runout Length)

P.C. Station	247+95.6471	Percent of super to achieve at P.C.?	66.67%
Is there a spiral for this curve?	NO	Is the roadway rotating past flat at the P.C. transition?	YES
P.T. Station	254+35.2641	Percent of super to achieve at P.T.?	59.26%
Is there a spiral for this curve?	NO	Is the roadway rotating past flat at the P.T. transition?	YES

P.C. SUPER INFORMATION

	Station	Super Rate
normal crown =	246+14.4951	-0.016
flat =	246+99.7431	0.000
reverse crown =	247+84.9911	0.016
full super =	248+43.5991	0.027

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	253+76.6561	0.027
reverse crown =	254+35.2641	0.016
flat =	255+20.5121	0.000
normal crown =	256+05.7601	-0.016

Curve Information

Full super length =	533.06 ft.	
Slope at PC =	#N/A	
P.C. L(r) =	143.86	
G-value of P.C. L(r) =	222	
P.C. L(t) =	85.25	
G-value of P.C. L(t) =	222	
Slope at PT =	0.0160	
P.T. L(r) =	143.86	
G-value of P.T. L(r) =	222	
P.T. L(t) =	85.25	
G-value of P.T. L(t) =	222	
Curve length is	10.66	times design spee
time at full super =	6.06	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve						
P.T. part of curve						

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	TRE90CHE-1		
What e_{max} table would you like to use?	0.060 MAX		
V =	60	mph	(design speed, mph)
Radius =	1598.95	feet	(radius of curve of alingment)
Dc =	3.58		(degree of curve of alignment)
e_d =	0.058		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
			Is the curve to the left or right (in the direction of stationing)?
			Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.646		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.896		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
			Divided roadway?

P.C. ROTATION DATA

			From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =		feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =			
b(w) =	#N/A		(adjustment factor for number of lanes rotated)
% =	#N/A		(maximum relative gradient)
G =	#N/A		(maximum relative slope)
L(r) =	**#N/A**	feet	(Superelevation Runoff Length to flat)
L(t) =	**#N/A**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

			To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =		feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =			
b(w) =	#N/A		(adjustment factor for number of lanes rotated)
% =	#N/A		(maximum relative gradient)
G =	#N/A		(maximum relative slope)
L(r) =	**#N/A**	feet	(Superelevation Runoff Length to flat)
L(t) =	**#N/A**	feet	(Tangent Runout Length)

P.C. Station

Is there a spiral for this curve?

Is the roadway rotating past flat at the P.C. transition?

P.T. Station

Is there a spiral for this curve?

Is the roadway rotating past flat at the P.T. transition?

P.C. SUPER INFORMATION

	Station	Super Rate
cross slope rotating from =	#N/A	0.000
normal crown =	#N/A	-0.016
full super =	#N/A	-0.058

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	#N/A	-0.058
normal crown =	#N/A	-0.016
cross slope rotating to =	#N/A	0.000

Curve Information

Full super length =	#N/A	
Slope at PC =	#N/A	
P.C. L(r) =	#N/A	
G-value of P.C. L(r) =	#N/A	
P.C. L(t) =	#VALUE!	
G-value of P.C. L(t) =	#VALUE!	
Slope at PT =	#N/A	
P.T. L(r) =	#VALUE!	
G-value of P.T. L(r) =	#VALUE!	
P.T. L(t) =	#N/A	
G-value of P.T. L(t) =	#N/A	
Curve length is	0.00	times design spee
time at full super =	#N/A	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve	#N/A	FALSE	FALSE	#N/A	FALSE	FALSE
P.T. part of curve	#N/A	FALSE	FALSE	#N/A	FALSE	FALSE

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	TRE90CHE-2		
What e_{max} table would you like to use?	0.060 MAX		
V =	50	mph	(design speed, mph)
Dc =	3.50		(degree of curve of alignment)
Radius =	1,637.02	feet	(radius of curve of alingment)
e_d =	**0.048**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	LEFT		Is the curve to the left or right (in the direction of stationing)?
	left		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.625		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.875		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	YES		Divided roadway?

P.C. ROTATION DATA

	6.00%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =	24	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =	60		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.45		(maximum relative gradient)
G =	222		(maximum relative slope)
L(r) =	**255.7440**	feet	(Superelevation Runoff Length to flat)
L(t) =	**85.2480**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	5.50%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	24	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	50		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.5		(maximum relative gradient)
G =	200		(maximum relative slope)
L(r) =	**230.4000**	feet	(Superelevation Runoff Length to flat)
L(t) =	**76.8000**	feet	(Tangent Runout Length)

P.C. Station	908+64.1376	Percent of super to achieve at P.C.?	100.00%
Is there a spiral for this curve?	NO	Is the roadway rotating past flat at the P.C. transition?	no
P.T. Station	911+76.8849	Percent of super to achieve at P.T.?	100.00%
Is there a spiral for this curve?	NO	Is the roadway rotating past flat at the P.T. transition?	no

P.C. SUPER INFORMATION

	Station	Super Rate
cross slope rotating from =	908+00.2016	-0.060
full super =	908+64.1376	-0.048

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	911+76.8849	-0.048
cross slope rotating to =	912+10.4849	-0.055

Curve Information

Full super length =	312.75 ft.	
Slope at PC =	-0.0480	
P.C. L(r) =	63.94	
G-value of P.C. L(r) =	222	
Slope at PT =	-0.0480	
P.T. L(r) =	33.60	
G-value of P.T. L(r) =	200	
Curve length is	6.25	times design spee
time at full super =	4.26	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve	909+28.0736	-0.0600	-0.0600	909+28.0736	-0.0600	-0.0100
	908+64.1376	-0.0480	-0.0480	908+64.1376	-0.0480	-0.0220
P.T. part of curve	911+76.8849	-0.0480	-0.0480	911+76.8849	-0.0480	-0.0220
	911+43.2849	-0.0550	-0.0550	911+43.2849	-0.0550	-0.0150

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	TRE90CHE-3		
What e_{max} table would you like to use?	0.060 MAX		
V =	45	mph	(design speed, mph)
Dc =	6.00		(degree of curve of alignment)
Radius =	954.93	feet	(radius of curve of alingment)
e_d =	**0.055**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	LEFT		Is the curve to the left or right (in the direction of stationing)?
	left		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening required for WB-50.	**1.000**		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening required for WB-62.	**1.250**		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	YES		Divided roadway?

P.C. ROTATION DATA

	4.80%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =	24	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =	50		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.5		(maximum relative gradient)
G =	200		(maximum relative slope)
L(r) =	**264.0000**	feet	(Superelevation Runoff Length to flat)
L(t) =	**76.8000**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	1.60%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	24	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	45		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.54		(maximum relative gradient)
G =	185		(maximum relative slope)
L(r) =	**244.2000**	feet	(Superelevation Runoff Length to flat)
L(t) =	**71.0400**	feet	(Tangent Runout Length)

P.C. Station	911+76.8849	Percent of super to achieve at P.C.?	87.27%
Is there a spiral for this curve?	NO	Is the roadway rotating past flat at the P.C. transition?	no
P.T. Station	915+02.0688	Percent of super to achieve at P.T.?	66.67%
Is there a spiral for this curve?	NO	Is the roadway rotating past flat at the P.T. transition?	no

P.C. SUPER INFORMATION

	Station	Super Rate
cross slope rotating from =	911+76.8849	-0.048
full super =	912+10.4849	-0.055

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	914+20.6688	-0.055
normal crown =	915+93.8288	-0.016

Curve Information

Full super length =	210.18 ft.	
Slope at PC =	-0.0480	
P.C. L(r) =	33.60	
G-value of P.C. L(r) =	200	
Slope at PT =	-0.0367	
P.T. L(r) =	173.16	
G-value of P.T. L(r) =	185	
Curve length is	7.23	times design spee
time at full super =	3.18	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve	911+76.8849	-0.0480	-0.0480	911+76.8849	-0.0480	-0.0220
	912+10.4849	-0.0550	-0.0550	912+10.4849	-0.0550	-0.0150
P.T. part of curve	914+20.6688	-0.0550	-0.0550	914+20.6688	-0.0550	-0.0150
	914+87.2688	-0.0400	-0.0400	915+31.6688	-0.0300	-0.0400

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	TRE90CHE-4		
What e_{max} table would you like to use?	0.060 MAX		
V =	40	mph	(design speed, mph)
Dc =	2.00		(degree of curve of alignment)
Radius =	2,864.79	feet	(radius of curve of alingment)
e_d =	**0.025**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	right		Is the curve to the left or right (in the direction of stationing)?
	left		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.250		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.500		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	yes		Divided roadway?

P.C. ROTATION DATA

	1.60%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =	24	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =	45		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.54		(maximum relative gradient)
G =	185		(maximum relative slope)
L(r) =	**111.0000**	feet	(Superelevation Runoff Length to flat)
L(t) =	**71.0400**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	1.04%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	24	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	40		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.58		(maximum relative gradient)
G =	172		(maximum relative slope)
L(r) =	**103.2000**	feet	(Superelevation Runoff Length to flat)
L(t) =	**66.0480**	feet	(Tangent Runout Length)

P.C. Station	917+23.3849	Percent of super to achieve at P.C.?	52.72%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.C. transition?	yes
P.T. Station	919+80.9440	Percent of super to achieve at P.T.?	66.67%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.T. transition?	no

P.C. SUPER INFORMATION

	Station	Super Rate
normal crown =	915+93.8288	-0.016
flat =	916+64.8688	0.000
reverse crown =	917+35.9088	0.016
full super =	917+75.8688	0.025

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	919+46.5440	0.025
normal crown =	919+83.6960	0.016
cross slope rotating to =	920+06.8128	0.010

Curve Information

Full super length =	170.68 ft.	
Slope at PC =	0.0207	
P.C. L(r) =	111.00	
G-value of P.C. L(r) =	185	
P.C. L(t) =	71.04	
G-value of P.C. L(t) =	185	
Slope at PT =	0.0167	
P.T. L(r) =	60.27	
G-value of P.T. L(r) =	172	
Curve length is	6.44	times design spee
time at full super =	2.91	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve						
P.T. part of curve						

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	TRE90SUP-1		
What e_{max} table would you like to use?	0.060 MAX		
V =	60	mph	(design speed, mph)
Dc =	2.75		(degree of curve of alignment)
Radius =	2,083.48	feet	(radius of curve of alingment)
e_d =	**0.053**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	left		Is the curve to the left or right (in the direction of stationing)?
	left		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.438		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.688		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	yes		Divided roadway?

P.C. ROTATION DATA

	6.00%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =		feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =			
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	#N/A		(maximum relative gradient)
G =	#N/A		(maximum relative slope)
L(r) =	**#N/A**	feet	(Superelevation Runoff Length to flat)
L(t) =	**#N/A**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	1.60%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	16	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	60		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.45		(maximum relative gradient)
G =	222		(maximum relative slope)
L(r) =	**188.2560**	feet	(Superelevation Runoff Length to flat)
L(t) =	**56.8320**	feet	(Tangent Runout Length)

P.C. Station	1000+00.0000	Percent of super to achieve at P.C.?	113.21%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.C. transition?	no
P.T. Station	1002+59.0802	Percent of super to achieve at P.T.?	70.00%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.T. transition?	yes

P.C. SUPER INFORMATION

	Station	Super Rate
cross slope rotating from =	#N/A	-0.060
full super =	#N/A	-0.053

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	1002+02.6034	-0.053
reverse crown =	1003+34.0274	-0.016
flat =	1003+90.8594	0.000
normal crown =	1004+47.6914	0.016

Curve Information

Full super length =	#N/A	
Slope at PC =	#N/A	
P.C. L(r) =	#N/A	
G-value of P.C. L(r) =	#N/A	
Slope at PT =	-0.0371	
P.T. L(r) =	188.26	
G-value of P.T. L(r) =	222	
P.T. L(t) =	56.83	
G-value of P.T. L(t) =	222	
Curve length is	4.32	times design spee
time at full super =	#N/A	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve	#N/A	-0.0600	-0.0600	#N/A	-0.0600	-0.0100
	#N/A	-0.0530	-0.0530	#N/A	-0.0530	-0.0170
P.T. part of curve	1002+02.6034	-0.0530	-0.0530	1002+02.6034	-0.0530	-0.0170
	1002+48.7794	-0.0400	-0.0400	1002+84.2994	-0.0300	-0.0400

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	TRE90SUP-2		
What e_{max} table would you like to use?	0.060 MAX		
V =	50	mph	(design speed, mph)
Dc =	2.50		(degree of curve of alignment)
Radius =	2,291.83	feet	(radius of curve of alingment)
e_d =	**0.040**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	right		Is the curve to the left or right (in the direction of stationing)?
	left		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.375		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.625		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	yes		Divided roadway?

P.C. ROTATION DATA

	1.60%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =	16	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =	60		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.45		(maximum relative gradient)
G =	222		(maximum relative slope)
L(r) =	**142.0800**	feet	(Superelevation Runoff Length to flat)
L(t) =	**56.8320**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	1.60%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	16	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	50		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.5		(maximum relative gradient)
G =	200		(maximum relative slope)
L(r) =	**128.0000**	feet	(Superelevation Runoff Length to flat)
L(t) =	**51.2000**	feet	(Tangent Runout Length)

P.C. Station	1006+54.0174	Percent of super to achieve at P.C.?	70.00%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.C. transition?	no
P.T. Station	1008+72.4401	Percent of super to achieve at P.T.?	66.67%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.T. transition?	yes

P.C. SUPER INFORMATION

	Station	Super Rate
normal crown =	1006+11.3934	0.016
full super =	1006+96.6414	0.040

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	1008+29.7734	0.040
reverse crown =	1009+06.5734	0.016
flat =	1009+57.7734	0.000
normal crown =	1010+08.9734	-0.016

Curve Information

Full super length =	133.13 ft.	
Slope at PC =	0.0280	
P.C. L(r) =	85.25	
G-value of P.C. L(r) =	222	
Slope at PT =	0.0267	
P.T. L(r) =	128.00	
G-value of P.T. L(r) =	200	
P.T. L(t) =	51.20	
G-value of P.T. L(t) =	200	
Curve length is	4.37	times design spee
time at full super =	1.82	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve	1006+61.1214	0.0300	-0.0400	1006+96.6414	0.0400	-0.0400
	1006+96.6414	0.0400	-0.0300			
P.T. part of curve	1008+29.7734	0.0400	-0.0300			
	1008+61.7734	0.0300	-0.0400	1008+29.7734	0.0400	-0.0400

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate
1006+54.7099	0.0282	70.49%	-0.0400	-0.0400

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	TRE90SUP-3		
What e_{max} table would you like to use?	0.060 MAX		
V =	45	mph	(design speed, mph)
Dc =	4.00		(degree of curve of alignment)
Radius =	1,432.39	feet	(radius of curve of alingment)
e_d =	**0.046**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	left		Is the curve to the left or right (in the direction of stationing)?
	left		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.500		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.750		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	yes		Divided roadway?

P.C. ROTATION DATA

	1.60%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =	16	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =	50		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.5		(maximum relative gradient)
G =	200		(maximum relative slope)
L(r) =	**147.2000**	feet	(Superelevation Runoff Length to flat)
L(t) =	**51.2000**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	1.60%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	16	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	45		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.54		(maximum relative gradient)
G =	185		(maximum relative slope)
L(r) =	**136.1600**	feet	(Superelevation Runoff Length to flat)
L(t) =	**47.3600**	feet	(Tangent Runout Length)

P.C. Station	1011+73.9325	Percent of super to achieve at P.C.?	66.67%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.C. transition?	no
P.T. Station	1015+50.2525	Percent of super to achieve at P.T.?	66.67%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.T. transition?	yes

P.C. SUPER INFORMATION

	Station	Super Rate
normal crown =	1011+26.9991	-0.016
full super =	1012+22.9991	-0.046

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	1015+04.8658	-0.046
reverse crown =	1015+93.6658	-0.016
flat =	1016+41.0258	0.000
normal crown =	1016+88.3858	0.016

Curve Information

Full super length =	281.87 ft.	
Slope at PC =	-0.0307	
P.C. L(r) =	96.00	
G-value of P.C. L(r) =	200	
Slope at PT =	-0.0307	
P.T. L(r) =	136.16	
G-value of P.T. L(r) =	185	
P.T. L(t) =	47.36	
G-value of P.T. L(t) =	185	
Curve length is	8.36	times design spee
time at full super =	4.27	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve	1012+03.7991	-0.0400	-0.0400	1011+71.7991	-0.0300	-0.0400
	1012+22.9991	-0.0460	-0.0460	1012+22.9991	-0.0460	-0.0240
P.T. part of curve	1015+04.8658	-0.0460	-0.0460	1015+04.8658	-0.0460	-0.0240
	1015+22.6258	-0.0400	-0.0400	1015+52.2258	-0.0300	-0.0400

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	TRE90SUP-4		
What e_{max} table would you like to use?	0.060 MAX		
V =	45	mph	(design speed, mph)
Dc =	1.50		(degree of curve of alignment)
Radius =	3,819.72	feet	(radius of curve of alingment)
e_d =	**0.024**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	right		Is the curve to the left or right (in the direction of stationing)?
	left		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.125		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.250		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	yes		Divided roadway?

P.C. ROTATION DATA

	1.60%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =	16	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =	45		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.54		(maximum relative gradient)
G =	185		(maximum relative slope)
L(r) =	**71.0400**	feet	(Superelevation Runoff Length to flat)
L(t) =	**47.3600**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	1.60%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	16	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	45		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.54		(maximum relative gradient)
G =	185		(maximum relative slope)
L(r) =	**71.0400**	feet	(Superelevation Runoff Length to flat)
L(t) =	**47.3600**	feet	(Tangent Runout Length)

P.C. Station	1019+76.2193	Percent of super to achieve at P.C.?	66.67%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.C. transition?	no
P.T. Station	1024+45.1246	Percent of super to achieve at P.T.?	66.67%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.T. transition?	no

P.C. SUPER INFORMATION

	Station	Super Rate
normal crown =	1019+76.2193	0.016
full super =	1019+99.8993	0.024

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	1024+21.4446	0.024
normal crown =	1024+45.1246	0.016

Curve Information

Full super length =	421.55 ft.	
Slope at PC =	0.0160	
P.C. L(r) =	23.68	
G-value of P.C. L(r) =	185	
Slope at PT =	#N/A	
P.T. L(r) =	23.68	
G-value of P.T. L(r) =	185	
Curve length is	10.42	times design spee
time at full super =	6.39	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve						
P.T. part of curve						

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	TRE90E30-1		
What e_{max} table would you like to use?	0.060 MAX		
V =	45	mph	(design speed, mph)
Dc =	2.00		(degree of curve of alignment)
Radius =	2,864.79	feet	(radius of curve of alingment)
e_d =	**0.030**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	right		Is the curve to the left or right (in the direction of stationing)?
	left		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.250		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.500		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	yes		Divided roadway?

P.C. ROTATION DATA

	1.60%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =	16	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =	45		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.54		(maximum relative gradient)
G =	185		(maximum relative slope)
L(r) =	**88.8000**	feet	(Superelevation Runoff Length to flat)
L(t) =	**47.3600**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	1.60%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	16	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	45		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.54		(maximum relative gradient)
G =	185		(maximum relative slope)
L(r) =	**88.8000**	feet	(Superelevation Runoff Length to flat)
L(t) =	**47.3600**	feet	(Tangent Runout Length)

P.C. Station	1200+00.0000	Percent of super to achieve at P.C.?	66.67%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.C. transition?	no
P.T. Station	1203+13.6844	Percent of super to achieve at P.T.?	66.67%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.T. transition?	no

P.C. SUPER INFORMATION

	Station	Super Rate
normal crown =	1199+88.1600	0.016
full super =	1200+29.6000	0.030

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	1202+84.0844	0.030
normal crown =	1203+25.5244	0.016

Curve Information

Full super length =	254.48 ft.	
Slope at PC =	0.0200	
P.C. L(r) =	41.44	
G-value of P.C. L(r) =	185	
Slope at PT =	0.0200	
P.T. L(r) =	41.44	
G-value of P.T. L(r) =	185	
Curve length is	6.97	times design spee
time at full super =	3.86	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve	1200+29.6000	0.0300	-0.0400			
P.T. part of curve	1202+84.0844	0.0300	-0.0400			

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	TRE90E30-2		
What e_{max} table would you like to use?	0.060 MAX		
V =	25	mph	(design speed, mph)
Dc =	28.00		(degree of curve of alignment)
Radius =	204.63	feet	(radius of curve of alingment)
e_d =	**0.057**		(design superelevation rate)
normal crown (e_{NC}) =	0.016		
	right		Is the curve to the left or right (in the direction of stationing)?
	left		Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.000		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.000		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	yes		Divided roadway?

P.C. ROTATION DATA

	1.60%		From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =	16	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =	30		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.66		(maximum relative gradient)
G =	152		(maximum relative slope)
L(r) =	**138.6240**	feet	(Superelevation Runoff Length to flat)
L(t) =	**38.9120**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

	0.39%		To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =	16	feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =	25		
b(w) =	1		(adjustment factor for number of lanes rotated)
% =	0.7		(maximum relative gradient)
G =	143		(maximum relative slope)
L(r) =	**130.4160**	feet	(Superelevation Runoff Length to flat)
L(t) =	**36.6080**	feet	(Tangent Runout Length)

P.C. Station	1206+68.4536	Percent of super to achieve at P.C.?	66.67%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.C. transition?	no
P.T. Station	1209+23.7981	Percent of super to achieve at P.T.?	66.67%
Is there a spiral for this curve?	no	Is the roadway rotating past flat at the P.T. transition?	yes

P.C. SUPER INFORMATION

	Station	Super Rate
normal crown =	1206+14.9496	0.016
full super =	1207+14.6616	0.057

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	1208+80.3261	0.057
reverse crown =	1209+74.1341	0.016
flat =	1210+10.7421	0.000
cross slope rotating to =	1210+19.6653	-0.004

Curve Information

Full super length =	165.66 ft.	
Slope at PC =	0.0380	
P.C. L(r) =	99.71	
G-value of P.C. L(r) =	152	
Slope at PT =	0.0380	
P.T. L(r) =	130.42	
G-value of P.T. L(r) =	143	
P.T. L(t) =	8.92	
G-value of P.T. L(t) =	143	
Curve length is	10.21	times design spee
time at full super =	4.52	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve	1206+48.9976	0.0300	-0.0400	1206+73.3176	0.0400	-0.0400
	1207+14.6616	0.0570	-0.0130	1207+14.6616	0.0570	-0.0570
P.T. part of curve	1208+80.3261	0.0570	-0.0130	1208+80.3261	0.0570	-0.0570
	1209+42.1021	0.0300	-0.0400	1209+19.2221	0.0400	-0.0400

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

CLEAR SHEET

SIMPLE CURVE CONFIGURATION

Designer name:	DCL		
Curve name:	TRCHEE90-1		
What e_{max} table would you like to use?	0.060 MAX		
V =	40	mph	(design speed, mph)
Dc =	1.00		(degree of curve of alignment)
Radius =	5,729.58	feet	(radius of curve of alingment)
e_d =	**0.016**		(design superelevation rate)
normal crown (e_{NC}) =			
	right		Is the curve to the left or right (in the direction of stationing)?
			Will the dependent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.000		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.000		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
			Divided roadway?

P.C. ROTATION DATA

			From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =		feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =			
b(w) =	#N/A		(adjustment factor for number of lanes rotated)
% =	#N/A		(maximum relative gradient)
G =	#N/A		(maximum relative slope)
L(r) =	**#N/A**	feet	(Superelevation Runoff Length to flat)
L(t) =	**#N/A**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

			To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =		feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =			
b(w) =	#N/A		(adjustment factor for number of lanes rotated)
% =	#N/A		(maximum relative gradient)
G =	#N/A		(maximum relative slope)
L(r) =	**#N/A**	feet	(Superelevation Runoff Length to flat)
L(t) =	**#N/A**	feet	(Tangent Runout Length)

P.C. Station

Is there a spiral for this curve?

Is the roadway rotating past flat at the P.C. transition?

P.T. Station

Is there a spiral for this curve?

Is the roadway rotating past flat at the P.T. transition?

P.C. SUPER INFORMATION

	Station	Super Rate
normal crown =	#N/A	0.000
full super =	#N/A	0.016

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	#N/A	0.016
normal crown =	#N/A	0.000

Curve Information

Full super length =	#N/A	
Slope at PC =	#N/A	
P.C. L(r) =	#N/A	
G-value of P.C. L(r) =	#N/A	
P.C. L(t) =	#VALUE!	
G-value of P.C. L(t) =	#VALUE!	
Slope at PT =	#N/A	
P.T. L(r) =	#VALUE!	
G-value of P.T. L(r) =	#VALUE!	
P.T. L(t) =	#N/A	
G-value of P.T. L(t) =	#N/A	
Curve length is	0.00	times design spee
time at full super =	#N/A	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve						
P.T. part of curve						

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

SIMPLE CURVE CONFIGURATION

CLEAR SHEET

Designer name:	DCL		
Curve name:	TRCHEE90-2		
What e_{max} table would you like to use?	0.060 MAX		
V =	50	mph	(design speed, mph)
Dc =	0.75		(degree of curve of alignment)
Radius =	7,639.44	feet	(radius of curve of alingment)
e_d =	**0.016**		(design superelevation rate)
normal crown (e_{NC}) =			
	left		Is the curve to the left or right (in the direction of stationing)?
			Will the dependent geopak shapes be to the left or right of the baseline?
CHECK CURVE WIDENING BY HAND.	**#N/A**		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
CHECK CURVE WIDENING BY HAND.	**#N/A**		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
			Divided roadway?

P.C. ROTATION DATA

			From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =		feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =			
b(w) =	#N/A		(adjustment factor for number of lanes rotated)
% =	#N/A		(maximum relative gradient)
G =	#N/A		(maximum relative slope)
L(r) =	**#N/A**	feet	(Superelevation Runoff Length to flat)
L(t) =	**#N/A**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

			To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =		feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =			
b(w) =	#N/A		(adjustment factor for number of lanes rotated)
% =	#N/A		(maximum relative gradient)
G =	#N/A		(maximum relative slope)
L(r) =	**#N/A**	feet	(Superelevation Runoff Length to flat)
L(t) =	**#N/A**	feet	(Tangent Runout Length)

P.C. Station

Is there a spiral for this curve?

Is the roadway rotating past flat at the P.C. transition?

P.T. Station

Is there a spiral for this curve?

Is the roadway rotating past flat at the P.T. transition?

P.C. SUPER INFORMATION

	Station	Super Rate
normal crown =	**#N/A**	0.000
full super =	**#N/A**	0.016

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	**#N/A**	0.016
normal crown =	**#N/A**	0.000

Curve Information

Full super length =	#N/A	
Slope at PC =	#N/A	
P.C. L(r) =	#N/A	
G-value of P.C. L(r) =	#N/A	
P.C. L(t) =	#VALUE!	
G-value of P.C. L(t) =	#VALUE!	
Slope at PT =	#N/A	
P.T. L(r) =	#VALUE!	
G-value of P.T. L(r) =	#VALUE!	
P.T. L(t) =	#N/A	
G-value of P.T. L(t) =	#N/A	
Curve length is	0.00	times design spee
time at full super =	#N/A	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve						
P.T. part of curve						

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate

SUPERELEVATION TRANSITION LENGTH

ODOT L&D VOL. 1 - FIGURES 202-7E, 202-8E, 202-9E, FIGURE 202-10E, FIGURE 301-5B AND FIGURE 301-5C

SIMPLE CURVE CONFIGURATION

CLEAR SHEET

Designer name:	DCL		
Curve name:	TRCHEE90-3		
What e_{max} table would you like to use?	0.060 MAX		
V =	50	mph	(design speed, mph)
Dc =	0.75		(degree of curve of alignment)
Radius =	7,639.44	feet	(radius of curve of alingment)
e_d =	**0.016**		(design superelevation rate)
normal crown (e_{NC}) =			
	right		Is the curve to the left or right (in the direction of stationing)?
			Will the dependent geopak shapes be to the left or right of the baseline?
CHECK CURVE WIDENING BY HAND.	**#N/A**		feet of pavement widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)
CHECK CURVE WIDENING BY HAND.	**#N/A**		feet of pavement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
			Divided roadway?

P.C. ROTATION DATA

			From what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PC =		feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PC transition =			
b(w) =	#N/A		(adjustment factor for number of lanes rotated)
% =	#N/A		(maximum relative gradient)
G =	#N/A		(maximum relative slope)
L(r) =	**#N/A**	feet	(Superelevation Runoff Length to flat)
L(t) =	**#N/A**	feet	(Tangent Runout Length)

P.T. ROTATION DATA

			To what cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Width of rotating pavement @ PT =		feet	(do not include curve widening, gore areas or entrance and exit lanes)
Design speed of PT transition =			
b(w) =	#N/A		(adjustment factor for number of lanes rotated)
% =	#N/A		(maximum relative gradient)
G =	#N/A		(maximum relative slope)
L(r) =	**#N/A**	feet	(Superelevation Runoff Length to flat)
L(t) =	**#N/A**	feet	(Tangent Runout Length)

P.C. Station

Is there a spiral for this curve?

Is the roadway rotating past flat at the P.C. transition?

P.T. Station

Is there a spiral for this curve?

Is the roadway rotating past flat at the P.T. transition?

P.C. SUPER INFORMATION

	Station	Super Rate
normal crown =	**#N/A**	0.000
full super =	**#N/A**	0.016

P.T. SUPER INFORMATION

	Station	Super Rate
full super =	**#N/A**	0.016
normal crown =	**#N/A**	0.000

Curve Information

Full super length =	#N/A	
Slope at PC =	#N/A	
P.C. L(r) =	#N/A	
G-value of P.C. L(r) =	#N/A	
P.C. L(t) =	#VALUE!	
G-value of P.C. L(t) =	#VALUE!	
Slope at PT =	#N/A	
P.T. L(r) =	#VALUE!	
G-value of P.T. L(r) =	#VALUE!	
P.T. L(t) =	#N/A	
G-value of P.T. L(t) =	#N/A	
Curve length is	0.00	times design spee
time at full super =	#N/A	seconds

SHOULDER INFORMATION FOR CURVE

	Station	Mainline Super Rate	Left Shoulder Super Rate	Station	Mainline Super Rate	Right Shoulder Super Rate
P.C. part of curve						
P.T. part of curve						

STATION INFORMATION

Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate