SUPERELEVATION TRANSITION				
SIMPLE CUPVE CONFIGURATION	2-6E, 202-9E, F	-IGURE 202-1	UE, FIGURE 301-5B AND FIGURE 301-5C	_
Designer name:	DCL			
Curve name:	pclw90-5			JEET
What emax table would you like to use?	0.060 max		CLEAR SI	
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 <sub>d</sub> =	= 0.027		(design superelevation rate)	
normal crown (e <sub>NC</sub> ) =	0.016			
	right	Is the curve	to the left or right (in the direction of stationing)?	
	left	Will the depe	endent geopak shapes be to the left or right of the baselir	ie?
Curve widening NOT required for WB-50.	0.000	feet of paver	ment widening per lane (for 12' lane and WB-50 design v	ehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.000	feet of paver	ment widening per lane (for 12' lane and WB-62 design v	ehicle; L&D Fig. 301-5c)
	yes	Divided road	lway?	
P.C. ROTATION DATA				
	1.60%	From what c	ross slope is the roadway being rotated? (i.e. 1.6% for N	C, etc.)
Width of rotating pavement @ PC =	24	feet	(do not include curve widening, gore areas or entranc	e 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				
	0.00%	To what cros	ss 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 entranc	e and exit lanes)
Design speed of PT transition =	60			
D(W) =	1		(adjustment factor for number of lanes rotated)	
% =	0.45		(maximum relative gradient)	
G =	222		(maximum relative slope)	
L(r) =	215.7840	feet	(Superelevation Runoff Length to flat)	
L(t) =	127.0720	leet	(Tangent Kunout Length)	
P.C. Station	100±45 5803		Percent of super to achieve at $P \cap 2$	66 67%
Is there a spiral for this curve?	130745.5005		Is the readway rotating past flat at the P.C. transition?	VOE
	10		is the roadway rotating past hat at the r.o. transition:	yes
P.T. Station	202+37.4919		Percent of super to achieve at P.T.?	69.65%
Is there a spiral for this curve?	no		Is the roadway rotating past flat at the P.T. transition?	no

P.C. SUPER INFORMATION				Curve Information	tion		
	Station	Super Rate			Full super length =	1078.46 ft.	
normal crown =	188+64.4283	-0.016			Slope at PC =	#N/A	
					P.C. L(r) =	143.86	
flat =	189+49.6763	0.000		G-v	alue of P.C. L(r) =	222	
reverse crown =	190+34.9243	0.016			P.C. L(t) =	85.25	
full super =	190+93.5323	0.027		G-\	alue of P.C. L(t) =	222	
					Slope at PT =	0.0188	
P.T. SUPER INFORMATION					P.T. L(r) =	215.78	
	Station	Super Rate		G-\	alue of P.T. L(r) =	222	
full super =	201+71.9959	0.027					
normal crown =	202+59.9079	0.016					
					Curve length is	19.87	times design speed
				1	time at full super =	12.26	seconds
cross slope rotating to =	203+87.7799	0.000					
SHOULDER INFORMATION FOR CURVE							
		Mainline	Left Shoulder			Mainline	Right Shoulder
	Station	Super Rate	Super Rate		Station	Super Rate	Super Rate
P.C. part of curve							
P.T. part of curve							
STATION INFORMATION							
		-	% of e(d)	Left Shoulder	Right Shoulder		
	Station	Super Rate	Achieved	Super Rate	Super Rate		
	Station	Super Rate	Achieved	Super Rate	Super Rate		
	Station	Super Rate	Achieved	Super Rate	Super Rate		

UPERELEVATION TRANSITION L	ENGTH	GURE 202-10	EIGURE 301-58 AND EIGURE 301-50
IMPLE CURVE CONFIGURATION	02,202 02,11		
Designer name:	DCL		
Curve name:	pclw90-6		CLEAR SHEET
What emax table would you like to use?	0.060 max		
V =	60	mph	(design speed, mph)
Dc =	4.25		(degree of curve of alignment)
Radius =	1,348.14	feet	(radius of curve of alingment)
e <sub>d</sub> =	0.060		(design superelevation rate)
normal crown (e <sub>NC</sub> ) =	0.016		
	left	Is the curve to	the left or right (in the direction of stationing)?
	left	Will the deper	ndent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.875	feet of pavem	ent widening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b
Curve widening required for WB-62.	1.125	Freet of pavern	ent widening per lane (for 12 lane and WB-62 design vehicle; L&D Fig. 301-50
	yes	Divided toadv	vay r
C. ROTATION DATA			
	0.00%	From what cro	oss 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)
% = G =	0.45		(maximum relative gradient)
G =	479 5200	feet	(Superalevation Runoff Length to flat)
L(I) -	127 9720	foot	(Tangant Runout Longth)
L(I) =	127.0720	ieet	(Tangeni Kullout Lengin)
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 =	36	feet	(do not include curve widening, gore areas or entrance and exit lanes)
besign speed of PT transition =	1		(adjustment factor for number of lanes rotated)
5(w) = % =	0.45		(maximum relative gradient)
	222		(maximum relative slope)
L(r) =	479.5200	feet	(Superelevation Runoff Length to flat)
L(t) =	127.8720	feet	(Tangent Runout Length)
P.C. Station	209+07.7799		
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	222+47.1838		
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: 241; 65-mph
Do you want the tangent runout lengt	th recalculated	to match the g-	value of the spiral? yes New L(t) = 138.8160
C. SUPER INFORMATION			Curve Information
	Station	Super Rate	Dc = 4°15'0"
cross slope rotating from =	203+87.7799	0.000	Full super length = 1339.40 ft.
			Slope at PC = -0.0600
			P.C. Spiral Length = 520.00
			G-value of P.C. Spiral = 241

full super =	209+07.7799	-0.060			
P.T. SUPER INFORMATION	Station	Super Pate	Slope at PT =	-0.0600	
full super =	222+47.1838	-0.060	G-value of P.T. Spiral =	241	
			P.T. L(t) =	138.82	
flat =	227+67.1838	0.000	G-value of P.T. L(t) =	241	
normal crown =	229+05.9998	0.016	time at full super =	22.32 15.22	times design speed seconds
SHOULDER INFORMATION FOR CURVE					

		Mainline	Left Shoulder		Mainline	Right Shoulder
	Station	Super Rate	Super Rate	Station	Super Rate	Super Rate
P.C. part of curve	207+34.4466	-0.0400	-0.0400	206+47.7799	-0.0300	-0.0400
	209+07.7799	-0.0600	-0.0600	209+07.7799	-0.0600	-0.0100
P.T. part of curve	222+47.1838	-0.0600	-0.0600	222+47.1838	-0.0600	-0.0100
	224+20.5171	-0.0400	-0.0400	225+07.1838	-0.0300	-0.0400

STATION INFORMATION					
	Station	Super Rate	% of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate
	226+00.0902	-0.0193	32.13%	-0.0400	-0.0400

## CROSS SLOPE INFORMATION

	Station in	Station in P.T.
Super Rate	P.C. Area	Area
-0.0200	205+61.1132	225+93.9291
-0.0160	205+26.4466	226+28.6036
-0.0300	206+47.7799	225+07.2427

SUPERELEVATION TRANSITION				
SIMPLE CUPVE CONFIGURATION	2-8E, 202-9E, F	-IGURE 202-1	UE, FIGURE 301-5B AND FIGURE 301-5C	
Designer name:	DCL			
Curve name:	pclw90-7			JEET
What emay table would you like to use?	0.060 max		CLEAR SI	
	60	mph	(design speed mph)	
Dc =	1.00	mpn	(degree of curve of alignment)	
Radius =	5.729.58	feet	(radius of curve of alingment)	
e <sub>d</sub> =	= 0.027		(design superelevation rate)	
normal crown (e <sub>NC</sub> ) =	0.016			
	left	Is the curve t	to the left or right (in the direction of stationing)?	
	left	Will the depe	endent geopak shapes be to the left or right of the baselir	ne?
Curve widening NOT required for WB-50.	0.000	feet of paven	nent widening per lane (for 12' lane and WB-50 design v	ehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.000	feet of paven	nent widening per lane (for 12' lane and WB-62 design v	ehicle; L&D Fig. 301-5c)
	yes	Divided road	way?	
P.C. ROTATION DATA				
	1.60%	From what c	ross slope is the roadway being rotated? (i.e. 1.6% for N	C, etc.)
Width of rotating pavement @ PC =	24	feet	(do not include curve widening, gore areas or entranc	e 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 cros	s 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 entranc	e 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	248+37.6833		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+93.3637		Percent of super to achieve at P.T.?	<b>66.67%</b>
Is there a spiral for this curve?	no		Is the roadway rotating past flat at the P.T. transition?	yes

P.C. SUPER INFORMATION				Curve Information	tion		
	Station	Super Rate			Dc =	1°0'0''	
normal crown =	246+56.5313	0.016		I	Full super length =	559.78 ft.	
					Slope at PC =	-0.0180	
flat =	247+41.7793	0.000			P.C. L(r) =	143.86	
reverse crown =	248+27.0273	-0.016		G-v	alue of P.C. L(r) =	222	
full super =	248+85.6353	-0.027			P.C. L(t) =	85.25	
				G-\	alue of P.C. L(t) =	222	
P.T. SUPER INFORMATION					Slope at PT =	-0.0180	
	Station	Super Rate			P.T. L(r) =	143.86	
full super =	254+45.4117	-0.027		G-\	alue of P.T. L(r) =	222	
reverse crown =	255+04.0197	-0.016			P.T. L(t) =	85.25	
flat =	255+89.2677	0.000		G-1	value of P.T. L(t) =	222	
					Curve length is	10.93	times design speed
normal crown =	256+74.5157	0.016		1	time at full super =	6.36	seconds
SHOULDER INFORMATION FOR CURVE							
		Mainline	Left Shoulder			Mainline	Right Shoulder
	Station	Super Rate	Super Rate		Station	Super Rate	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		
	256+70.0000	0.0152	56.12%	-0.0400	-0.0400		
	248+27.0000	-0.0160	59.24%	-0.0400	-0.0400		

SUPERELEVATION TRANSITION			
DDOT L&D VOL. 1 - FIGURES 202-7E, 202	2-8E, 202-9E,	FIGURE 202-	10E, FIGURE 301-5B AND FIGURE 301-5C
Designer name:	DCL		
Curve name:	trw90che-1		
What emax table would you like to use?	0.060 max		CLEAR SHEET
V =	60	mph	(design speed, mph)
Radius =	10,520.94	feet	(radius of curve of alingment)
Dc =	0.54		(degree of curve of alignment)
e <sub>d</sub> =	0.016		(design superelevation rate)
normal crown (e <sub>NC</sub> ) =			
	left	Is the curve	to the left or right (in the direction of stationing)?
		Will the dep	pendent geopak shapes be to the left or right of the baseline?
CHECK CURVE WIDENING BY HAND.	#N/A	feet of pave	ement 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 pave	ement widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
		Divided roa	dway?
C. ROTATION DATA		From what	$\alpha_{1}$
Width of rotating powement @ DC		From what	cross slope is the roadway being rotated? (i.e. 1.6% for NC, etc.)
Design speed of PC transition -		ieei	(do not include curve widening, gore areas or entrance and exit lanes)
besign speed of 1 o transition =	#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)
T. ROTATION DATA			
		To what cro	oss 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 =	#NI/A		(adjustment factor for number of lance retated)
D(W) = %	#N/A #N/Δ		(adjustment factor for humber of fates rotated)
	#N/Δ		(maximum relative slope)
L(r) =	#N/A	feet	(Superelevation Runoff Length to flat)
L(t) = 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?



SUPERELEVATION TRANSITION				
SIMPLE CUPVE CONFIGURATION	2-6E, 202-9E, F	-IGURE 202-10	E, FIGURE 301-36 AND FIGURE 301-5C	_
Designer name:	DCL			
Curve name:	trw90che-2			JEET
What emax table would you like to use?	0.060 max		CLEAR SI	
V =	50	mph	(design speed mph)	
Dc =	3.25		(degree of curve of alignment)	
Radius =	1,762.95	feet	(radius of curve of alingment)	
e <sub>d</sub> =	0.047		(design superelevation rate)	
normal crown (e <sub>NC</sub> ) =	0.016			
	right	Is the curve to	o the left or right (in the direction of stationing)?	
	left	Will the depe	ndent geopak shapes be to the left or right of the baselin	ne?
Curve widening NOT required for WB-50.	0.563	feet of pavem	ent widening per lane (for 12' lane and WB-50 design v	ehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.813	feet of pavem	ent widening per lane (for 12' lane and WB-62 design v	ehicle; L&D Fig. 301-5c)
	yes	Divided road	vay?	
P.C. ROTATION DATA				
	1.60%	From what cr	oss slope is the roadway being rotated? (i.e. 1.6% for N	C, etc.)
Width of rotating pavement @ PC =	16	feet	(do not include curve widening, gore areas or entranc	e 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) =	165.1680	feet	(Superelevation Runoff Length to flat)	
L(t) =	56.8320	feet	(Tangent Runout Length)	
P.T. ROTATION DATA				
	1.60%	To what cross	s 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 entranc	e 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) =	148.8000	feet	(Superelevation Runoff Length to flat)	
L(t) =	51.2000	feet	(Tangent Runout Length)	
P.C. Station	403+90.7048		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
	400 00 0 115			<b>FO 0</b> 494
P.T. Station	409+60.6412		Percent of super to achieve at P.T.?	52.34%
Is there a spiral for this curve?	no		is the roadway rotating past flat at the P.T. transition?	yes

P.C. SUPER INFORMATION			Curve Information		
	Station	Super Rate	Dc =	3°15'0"	
normal crown =	403+37.4248	0.016	Full super length =	443.96 ft.	
			Slope at PC =	0.0310	
			P.C. L(r) =	108.34	
			G-value of P.C. L(r) =	222	
full super =	404+45.7608	0.047			
P.T. SUPER INFORMATION			Slope at PT =	0.0243	
	Station	Super Rate	P.T. L(r) =	148.80	
full super =	408+89.7230	0.047	G-value of P.T. L(r) =	200	
reverse crown =	409+87.3230	0.016	P.T. L(t) =	51.20	
flat =	410+38.5230	0.000	G-value of P.T. L(t) =	200	
			Curve length is	11.40	times design speed
normal crown =	410+89.7230	-0.016	time at full super =	6.05	seconds
SHOULDER INFORMATION FOR CURVE					

		Mainline	Left Shoulder		Mainline	Right Shoulder
	Station	Super Rate	Super Rate	Station	Super Rate	Super Rate
P.C. part of curve	403+87.1528	0.0300	-0.0400	404+22.6728	0.0400	-0.0400
	404+45.7608	0.0465	-0.0235	404+45.7608	0.0465	-0.0465
P.T. part of curve	408+89.7230	0.0465	-0.0235	408+89.7230	0.0465	-0.0465
	409+42.5230	0.0300	-0.0400	409+10.5230	0.0400	-0.0400

## CROSS SLOPE QUERY

		% of e(d)
Station	Super Rate	Achieved
407+07.0500	0.0465	100.00%

Left Shoulder Super Rate -0.0235 -0.0465

SUPERELEVATION TRANSITION	LENGTH			
SIMPLE CURVE CONFIGURATION	2-0L, 202-9L, I	IGOILE 202-	INC, FIGURE 301-30 AND FIGURE 301-30	
Designer name:	DCL			
Curve name:	trw90che-3		CLEAR SI	HEET
What emax table would you like to use?	0.060 max		OLLAR O	
V =	45	mph	(design speed, mph)	
Dc =	6.00		(degree of curve of alignment)	
Radius =	954.93	feet	(radius of curve of alingment)	
e <sub>d</sub> =	• 0.055		(design superelevation rate)	
normal crown (e <sub>NC</sub> ) =	0.016			
	left	Is the curve	to the left or right (in the direction of stationing)?	
	left	Will the dep	endent geopak shapes be to the left or right of the baselir	
Curve widening required for WB-50.	1.000	feet of pave	ment widening per lane (for 12' lane and WB-50 design v	enicle; L&D Fig. 301-5b)
Curve widening required for WB-62.	Ves	Divided road	twav?	enicle, Lad Fig. 301-30)
	yes	Divided road	indy.	
P.C. ROTATION DATA				
	1.60%	From what o	ross slope is the roadway being rotated? (i.e. 1.6% for N	C, etc.)
Width of rotating pavement @ PC =	16	feet	(do not include curve widening, gore areas or entranc	e 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	foot	(maximum relative slope) (Superclovation Rupoff Longth to flat)	
E(I) =	F1 2000	feet	(Superelevation Runoit Length)	
L(i) =	51.2000	IEEL		
P.T. ROTATION DATA				
	1.60%	To what cros	ss 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 entranc	e and exit lanes)
Design speed of PT transition =	45			
D(W) =	1		(adjustment factor for number of lanes rotated)	
% =	0.54			
G =	185	foot	(maximum relative slope)	
L(I) =	47.3600	feet	(Superelevation Runout Length)	
-(-) =		1001	(rangoin ranoa zonga)	
	444.00.0440			50.04%
P.C. Station	411+30.6413		Percent of super to achieve at P.C.?	52.34%
is there a spiral for this curve?	no		is the roadway rotating past hat at the P.C. transition?	10
P.T. Station	415+04.1954		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?	ves

P.C. SUPER INFORMATION			Curve Information		
	Station	Super Rate	Dc =	6°0'0''	
normal crown =	410+89.7230	-0.016	Full super length =	235.41 ft.	
			Slope at PC =	-0.0288	
			P.C. L(r) =	124.80	
			G-value of P.C. L(r) =	200	
full super =	412+14.5230	-0.055			
P.T. SUPER INFORMATION			Slope at PT =	-0.0367	
	Station	Super Rate	P.T. L(r) =	162.80	
full super =	414+49.9287	-0.055	G-value of P.T. L(r) =	185	
reverse crown =	415+65.3687	-0.016	P.T. L(t) =	47.36	
flat =	416+12.7287	0.000	G-value of P.T. L(t) =	185	
			Curve length is	8.30	times design spee
normal crown =	416+60.0887	0.016	time at full super =	3.57	seconds
SHOLILDED INFORMATION FOR CURVE	-				
SHOULDER INFORMATION FOR CORVE		·			

		Mainline	Left Shoulder		Mainline	Right Shoulder
	Station	Super Rate	Super Rate	Station	Super Rate	Super Rate
P.C. part of curve	411+66.5230	-0.0400	-0.0400	411+34.5230	-0.0300	-0.0400
	412+14.5230	-0.0550	-0.0550	412+14.5230	-0.0550	-0.0150
P.T. part of curve	414+49.9287	-0.0550	-0.0550	414+49.9287	-0.0550	-0.0150
	414+94.3287	-0.0400	-0.0400	415+23.9287	-0.0300	-0.0400

## CROSS SLOPE QUERY

Station Super Rate

% of e(d) Left SI Achieved Supe

Left Shoulder Right Shoulder Super Rate Super Rate

SUPERELEVATION TRANSITION LENGTH						
	1 - FIGURES 202-7E	202-8E 202-0E	FIGURE 202-10E	FIGURE 301-5B	AND FIGURE 301-5C	

SIMPLE CURVE CONFIGURATION	-6E, 202-9E, F	IGURE 202-10	E, FIGURE 301-3B AND FIGURE 301-3C	
Designer name:	DCL			
Curve name:	trw90che-4		CLEAR SH	IEET
What emax 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 <sub>d</sub> =	0.046		(design superelevation rate)	
normal crown (e <sub>NC</sub> ) =	0.016			
	right	Is the curve to	o the left or right (in the direction of stationing)?	
	left	Will the depe	ndent geopak shapes be to the left or right of the baselin	
Curve widening NOT required for WB-50.	0.500	feet of paven	tent widening per lane (for 12 lane and WB-50 design ve	hicle; L&D Fig. 301-5D)
Curve widening NOT required for WB-62.	0.750	Divided road	vev2	Flicle, LaD Fig. 301-50)
	yes	Divided load	way:	
P.C. ROTATION DATA				
	1.60%	From what cr	oss 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	4	(maximum relative slope)	
L(f) =	136.1600	reet	(Superelevation Runoff Length to flat)	
L(t) =	47.3600	feet	(Tangent Runout Length)	
P.T. ROTATION DATA				
	1.60%	To what cros	s slope is the roadway being rotated? (i.e. 1.6% for NC, e	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		(adjustment factor for number of lance rotated)	
D(w) =	0.54		(adjustment factor for humber of lanes folated)	
/8 =	105			
G =	185	foot	(maximum relative slope) (Superclevation Pupeff Length to flat)	
L(1) = 1	47.3600	feet	(Tangent Runout Length)	
=(() =	41.0000	1001	(rangent Kanoat Lengar)	
P.C. Station	418+46.6112		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	422+66.1735		Percent of super to achieve at P.T.?	50.00%
In there a pairal for this outpo?	no		Is the roadway rotating past flat at the P.T. transition?	no
is there a spiral for this curve?				
is there a spiral for this curve?				

P.C. SUPER INFORMATION				<b>Curve Informat</b>	ion		
	Station	Super Rate			Dc =	4°0'0''	
normal crow	n = 418+03.1979	0.016		1	Full super length =	306.10 ft.	
					P.C. L(r) =	88.80	
				G-v	alue of P.C. L(r) =	185	
full supe	r = <mark>418+91.9979</mark>	0.046					
P.T. SUPER INFORMATION					Slone at PT -	0.0230	
	Station	Super Rate			P.T. L(r) =	88.80	
full supe	r = 421+98.0935	0.046		G-\	value of P.T. L(r) =	185	
					Curve length is	9.32	times design speed
normal crow	n = 422+86.8935	0.016		1	time at full super =	4.64	seconds
SHOULDER INFORMATION FOR CUR	VE						
		Mainline	Left Shoulder			Mainline	Right Shoulder
	Station	Super Rate	Super Rate		Station	Super Rate	Super Rate
P.C. part of curve	418+44.6379	0.0300	-0.0240		418+74.2379	0.0400	-0.0400
		0.0100	0.02.10			0.0100	
P.T. part of curve	421+98.0935	0.0460	-0.0240		421+98.0935	0.0460	-0.0460
	422+45.4535	0.0300	-0.0400		422+15.8535	0.0400	-0.0400
CROSS SLOPE QUERY			% of e(d)	l oft Shoulder	Right Shoulder		
	Station	Super Rate	Achieved	Super Rate	Super Rate		
				•			
STATION QUERY							
	Super Rate	Station in P.C. Area	Station in P.T. Area				
	0.0200	418+15.0379	422+75.0535				

SUPERELEVATION TRANSITION				
SIMPLE CUPVE CONFIGURATION	2-6E, 202-9E, F	-IGURE 202-1	UE, FIGURE 301-36 AND FIGURE 301-30	
Designer name:	DCI			
Curve name:	trw90che-5			
What e table would you like to use?	0.060 max		CLEAR SI	
	20	mph	(design speed mph)	
v = Dc =	4 75	прп	(degree of curve of alignment)	
Radius =	1 206 23	feet	(radius of curve of alingment)	
e, =	= 0.032		(design superelevation rate)	
normal crown ( $e_{NC}$ ) =	0.016		(accign caperoleration rate)	
(-NC)	left	Is the curve t	o the left or right (in the direction of stationing)?	
	left	Will the depe	ndent geopak shapes be to the left or right of the baselir	ne?
Curve widening NOT required for WB-50.	0.688	feet of paven	nent widening per lane (for 12' lane and WB-50 design v	ehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.938	feet of paven	nent widening per lane (for 12' lane and WB-62 design v	ehicle; L&D Fig. 301-5c)
	yes	Divided road	way?	
P.C. ROTATION DATA	1.60%		$r_{\rm resc}$ along in the reactively being rotated $2$ (i.e. 4 CO/ for N	C ata)
Width of estation and an DO	1.60%	From what ci	oss slope is the roadway being rotated? (I.e. 1.6% for N	C, etc.)
Design speed of PC transition -	24	leel	(do not include curve widening, gore areas or entranc	e and exit lanes)
besign speed of FC transition =	1		(adjustment factor for number of lanes rotated)	
S(W) = %=	0.62		(maximum relative gradient)	
G =	161		(maximum relative slope)	
L(r) =	123.6480	feet	(Superelevation Runoff Length to flat)	
L(t) =	61.8240	feet	(Tangent Runout Length)	
P.T. ROTATION DATA				
	0.84%	To what cros	s slope is the roadway being rotated? (i.e. 1.6% for NC,	etc.)
Width of rotating pavement @ PI =	24	feet	(do not include curve widening, gore areas or entranc	e and exit lanes)
Design speed of P1 transition =	30		(adjustment factor for number of lange rotated)	
D(W) =	0.66		(adjustment factor for number of fattes folated)	
/8 = 0	150			
G =	102	foot	(maximum relative slope) (Superclevation Runoff Length to flot)	
L(t) = L(t)	58.3680	feet	(Tangent Runout Length)	
P.C. Station	426+64.7771		Percent of super to achieve at P.C.?	<b>66.67%</b>
Is there a spiral for this curve?	no		Is the roadway rotating past flat at the P.C. transition?	yes
DT Station	420 - 44 0224		Bereast of super to achieve at D.T.2	50.00%
F.I. Station	423+44.UZZ4		Is the roadway rotating past flat at the P T transition?	JU.JU 70
is there a spiral for this curve?	10		is the roadway rotating past lidt at the P.T. transition?	yes

P.C. SUPER INFORMATION				Curve Information		
	Station	Super Rate		Dc =	4°45'0"	
normal crown =	425+20.5211	0.016		Full super length =	179.66 ft.	
				Slope at PC =	-0.0213	
flat =	425+82.3451	0.000		P.C. L(r) =	123.65	
reverse crown =	426+44.1691	-0.016		G-value of P.C. L(r) =	161	
full super =	427+05.9931	-0.032		P.C. L(t) =	61.82	
				G-value of P.C. L(t) =	161	
P.T. SUPER INFORMATION				Slope at PT =	-0.0160	
	Station	Super Rate		P.T. L(r) =	116.74	
full super =	428+85.6544	-0.032		G-value of P.T. L(r) =	152	
reverse crown =	429+44.0224	-0.016		P.T. L(t) =	30.64	
flat =	430+02.3904	0.000		G-value of P.T. L(t) =	152	
				Curve length is	9.31	times design speed
cross slope rotating to =	430+33.0336	0.008		time at full super =	4.08	seconds
SHOULDER INFORMATION FOR CURVE						
		Mainline	Left Shoulder		Mainline	Right Shoulder
	Station	Super Rate	Super Rate	Station	Super Rate	Super Rate
P.C. part of curve				426+98.2651	-0.0300	-0.0400
				427+05.9931	-0.0320	-0.0380
P.T. part of curve				428+85.6544	-0.0320	-0.0380
				428+92.9504	-0.0300	-0.0400

CR	oss	SL	OPE	QL	JER'
••••			•••	_	

Station	Super Rate	% of e(d) Achieved
430+17.3797	0.0041	12.84%

Left Shoulder Super Rate -0.0400 -0.0400

SIMPLE CURVE CONFIGURATION				
Designer name:	DCL		_	
Curve name:	trw90e24-1		CLEAR SI	HEET
What e <sub>max</sub> table would you like to use?	0.060 max			
V =	45	mph	(design speed, mph)	
Radius =	1,420.39	feet	(radius of curve of alingment)	
Dc =	4.03		(degree of curve of alignment)	
$e_d = $	0.046		(design superelevation rate)	
fiormar crown (e <sub>NC</sub> ) =	0.016	le the curve	to the left or right (in the direction of stationing)?	
	left	Will the depe	endent geopak shapes be to the left or right of the baselin	ie?
Curve widening NOT required for WB-50.	0.508	feet of paver	ment widening per lane (for 12' lane and WB-50 design v	ehicle: L&D Fia. 301-5b
Curve widening NOT required for WB-62. 0.7		feet of paver	ment widening per lane (for 12' lane and WB-62 design v	ehicle; L&D Fig. 301-5c
	yes	Divided road	lway?	
.C. ROTATION DATA				
	1.60%	From what c	ross slope is the roadway being rotated? (i.e. 1.6% for N	C, etc.)
Width of rotating pavement @ PC =	16	feet	(do not include curve widening, gore areas or entrance	e 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) =	136.7602	feet	(Superelevation Runoff Length to flat)	
L(t) =	47.3600	feet	(Tangent Runout Length)	
.T. ROTATION DATA				
	2.00%	To what cros	ss 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	e and exit lanes)
Design speed of PT transition =	45		(adjustment factor for number of lance retated)	
D(W) = %	0.54		(aujustiment factor for humber of fames rotated)	
70 - G -	185		(maximum relative gladient)	
(r) =	136 7602	feet	(Superelevation Runoff Length to flat)	
L(t) =	47.3600	feet	(Tangent Runout Length)	
P.C. Station	602+44 9912		Percent of super to achieve at P.C.2	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	606+61.0386		Percent of super to achieve at P.T.?	50.00%
le there a soural for this curve?	no		is the roadway rotating past flat at the P. L. transition?	no

P.C. SUPER INFORMATION				<b>Curve Informat</b>	tion		
	Station	Super Rate			Dc =	42'1.66"	
normal crown =	602+01.1778	0.016		I	Full super length =	302.08 ft.	
					Slope at PC =	0.0308	
					P.C. L(r) =	89.40	
				G-v	alue of P.C. L(r) =	185	
full super =	602+90.5779	0.046					
P.T. SUPER INFORMATION					Slope at PT =	0.0231	
	Station	Super Rate			P.T. L(r) =	77.56	
full super =	605+92.6585	0.046		G-\	alue of P.T. L(r) =	185	
					0 1 11	0.05	
		0.000			Curve length is	9.25	times design speed
cross slope rotating to =	606+70.2187	0.020		1	time at full super =	4.58	seconds
	-						
SHOULDER INFORMATION FOR CURVE		Mainling				M = !	Disk Observation
	01-11-11	Mainline	Left Shoulder		Otatian	wainine	Right Shoulder
	Station	Super Rate	Super Rate		Station	Super Rate	Super Rate
P.C. part of curve	602+42.6178	0.0300	-0.0400		602+72.2178	0.0400	-0.0400
	602+90.5779	0.0462	-0.0238		602+90.5779	0.0462	-0.0462
B.T. port of ourse	COE . 02 CE9E	0.0462	0 0 2 2 0		COE . 02 CE9E	0.0462	0.0462
F.I. part of curve	606+40 6187	0.0402	-0.0230		606+11 0187	0.0402	-0.0402
	000+40.0107	0.0300	-0.0400		000+11.0107	0.0400	-0.0400
CROSS SLOPE QUERY							
			% of e(d)	Left Shoulder	Right Shoulder		
	Station	Super Rate	Achieved	Super Rate	Super Rate		

UPERELEVATION TRANSITION	LENGTH	FIGURE 202-	10E FIGURE 301-5B AND FIGURE 301-5C	
MPLE CURVE CONFIGURATION	202,202 02,1	IGONE 202		
Designer name:	DCL			
Curve name:	trw90e24-2			HEET
What emax table would you like to use?	0.060 max			
V =	35	mph	(design speed, mph)	
Dc =	8.00		(degree of curve of alignment)	
Radius =	716.20	feet	(radius of curve of alingment)	
e <sub>d</sub> =	0.048		(design superelevation rate)	
normal crown (e <sub>NC</sub> ) =	0.016			
	right	Is the curve	to the left or right (in the direction of stationing)?	
Ourse wide size as wire difer WD 50	left	Will the dep	endent geopak shapes be to the left or right of the baselin	ne?
Curve widening required for WB-50.	1.250	feet of pave	ment widening per lane (for 12 lane and WB-50 design v	venicle; L&D Fig. 301-50
Curve widening required for WB-02.	ves	Divided roa	dwav?	enicle, Lab Fig. 501-50
	,			
C. ROTATION DATA				
	2.00%	From what	cross slope is the roadway being rotated? (i.e. 1.6% for N	IC, etc.)
Width of rotating pavement @ PC =	16	feet	(do not include curve widening, gore areas or entranc	e and exit lanes)
Design speed of PC transition =	40			
b(w) =	1		(adjustment factor for number of lanes rotated)	
% =	0.58		(maximum relative gradient)	
G =	122 0060	foot	(maximum relative slope)	
L(1) = 1.4(1) = 1.4(1)	132.0900	foot	(Superelevation Runoit Length to flat)	
L(t) =	44.0320	leel	(Tangent Kundut Length)	
T. ROTATION DATA				
	5.50%	To what cro	ss 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 entranc	e and exit lanes)
Design speed of PT transition =	35		(adjustment faster for number of lance rotated)	
D(W) = %	0.62		(adjustment lactor for humber of lanes fotated)	
// - G -	161		(maximum relative slope)	
G =   (r) =	123 6480	feet	(Superelevation Runoff Length to flat)	
L(t) =	41.2160	feet	(Tangent Runout Length)	
P.C. Station	607+53.9652		Percent of super to achieve at P.C.?	50.00%
Is there a spiral for this curve?	no		Is the roadway rotating past flat at the P.C. transition?	no
PT Station	609+35 9496		Percent of super to achieve at P T 2	100 00%
la thora a apiral for this aurua?	000+00.0490		In the readingy rotating part flat at the DT transition?	100.0070

P.C. SUPER INFORMATION			Curve Information	
	Station	Super Rate	Dc =	8'0'0''
cross slope rotating from =	607+42.9572	0.020	Full super length =	115.94 ft.
			Slope at PC =	0.0240
			P.C. L(r) =	77.06
			G-value of P.C. L(r) =	172
full super =	608+20.0132	0.048		
P.T. SUPER INFORMATION			Slope at PT =	0.0480
	Station	Super Rate	P.T. L(r) =	18.03
full supor –	600+35 0/06	0.048	$G_{\rm V}$ alug of $P_{\rm T} = 1 (r) =$	161

full super =	608+20.0132	0.048		G-v	alue of P.C. L(r) =	172	
P.T. SUPER INFORMATION					Slope at PT =	0.0480	
	Station	Super Rate			P.T. L(r) =	18.03	
full super =	609+35.9496	0.048		G-v	value of P.T. L(r) =	161	
cross clope retating to -	600+53 0816	0.055			Curve length is	5.20	times design speed
cross slope rotating to =	009+55.9010	0.055		ı	ime at fuil super =	2.20	Seconds
SHOULDER INFORMATION FOR CURVE	Ξ						
		Mainline	Left Shoulder			Mainline	Right Shoulder
	Station	Super Rate	Super Rate		Station	Super Rate	Super Rate
P.C. part of curve	607+70.4772	0.0300	-0.0400		607+97.9972	0.0400	-0.0400
	608+20.0132	0.0480	-0.0220		608+20.0132	0.0480	-0.0480
P.I. part of curve	609+35.9496	0.0480	-0.0220		609+35.9496	0.0480	-0.0480
	609+17.9176	0.0550	-0.0150		609+17.9176	0.0550	-0.0550
CROSS SLOPE QUERY							
	Station 609+38.0700	Super Rate 0.0488	% of e(d) Achieved 101.71%	Left Shoulder Super Rate -0.0212	Right Shoulder Super Rate -0.0488		

rampD4-2
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SUPERELEVATION TRANSITION				
SIMPLE CUPVE CONFIGURATION	2-8E, 202-9E, F	-IGURE 202-	10E, FIGURE 301-5B AND FIGURE 301-5C	
Designer name:	DCL			
Curve name:	trw90e24-3			JEET
What emax table would you like to use?	0.060 max		CLEAR SI	
V =	25	mph	(design speed, mph)	
Dc =	25.00		(degree of curve of alignment)	
Radius =	229.18	feet	(radius of curve of alingment)	
e <sub>d</sub> =	= 0.055		(design superelevation rate)	
normal crown (e <sub>NC</sub> ) =	0.016			
	right	Is the curve	to the left or right (in the direction of stationing)?	
	left	Will the dep	endent geopak shapes be to the left or right of the baselir	ne?
Curve widening NOT required for WB-50.	0.000	feet of pave	ment widening per lane (for 12' lane and WB-50 design v	ehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.000	feet of pave	ment widening per lane (for 12' lane and WB-62 design v	ehicle; L&D Fig. 301-5c)
	yes	Divided roa	dway?	
P.C. ROTATION DATA				
	4.80%	From what	cross slope is the roadway being rotated? (i.e. 1.6% for N	C, etc.)
Width of rotating pavement @ PC =	16	feet	(do not include curve widening, gore areas or entranc	e and exit lanes)
Design speed of PC transition =	35			
b(w) =	1		(adjustment factor for number of lanes rotated)	
% =	0.62		(maximum relative gradient)	
G =	161	6	(maximum relative slope)	
L(f) =	141.6800	reet	(Superelevation Runoff Length to flat)	
L(t) =	41.2160	feet	(Tangent Runout Length)	
P.T. ROTATION DATA				
	1.00%	To what cro	ss 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 entranc	e 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) =	125.8400	feet	(Superelevation Runoff Length to flat)	
L(t) =	30.0000	leel	(Tangent Kunout Length)	
P.C. Station	600+35 0406		Percent of super to achieve at P.C.2	87 27%
Is there a spiral for this curve?	no		Is the roadway rotating past flat at the P.C. transition?	07.2770
	10		is the roadway rotating past hat at the r.o. transition:	10
P.T. Station	612+32.4286		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

Is the roadway rotating past flat at the P.T. transition? no

P.C. SUPER INFORMATION				Curve Information			
	Station	Super Rate			Dc =	25℃'0''	
cross slope rotating from =	609+35.9496	0.048		I	Full super length =	236.50 ft.	
					Slope at PC =	0.0480	
					P.C. L(r) =	18.03	
				G-v	alue of P.C. L(r) =	161	
full super =	609+53.9816	0.055					
P.T. SUPER INFORMATION					Slope at PT =	0.0367	
	Station	Super Rate			P.T. L(r) =	102.96	
full super =	611+90.4819	0.055		G-\	alue of P.T. L(r) =	143	
normal crown =	612+79.7139	0.016					
					Curve length is	11.86	times design speed
cross slope rotating to =	612+93.4419	0.010		1	time at full super =	6.45	seconds
	_						
SHOULDER INFORMATION FOR CURVE	-	Mainline				Mainline	District Ob sould as
	Station		Left Shoulder		Ctation	Mainline	Right Shoulder
	Station	Super Rate	Super Rate		Station	Super Rate	Super Rate
P.C. part of curve	609+35.9496	0.0480	-0.0220		609+35.9496	0.0480	-0.0480
	009+00.9010	0.0550	-0.0150		009+00.9010	0.0550	-0.0550
P T part of curve	611+90 4819	0.0550	-0.0150		611+90 4819	0.0550	-0.0550
	612+47,6819	0.0300	-0.0400		612+24,8019	0.0400	-0.0400
		0.0000				0.0100	
CROSS SLOPE QUERY							
			% of e(d)	Left Shoulder	Right Shoulder		
	Station	Super Rate	Achieved	Super Rate	Super Rate		
	609+38.0700	0.0488	88.77%	-0.0212	-0.0488		

Station	Super Rate	Achieved
609+38.0700	0.0488	88.77%

SUPERELEVATION TRANSITION				
SIMPLE CUPVE CONFIGURATION	2-6E, 202-9E, F	-IGURE 202-1	UE, FIGURE 301-3B AND FIGURE 301-3C	
Designer name:	DCL			
Curve name:	trsupw90-1			UEET
What emax table would you like to use?	0.060 max		CLEAR SI	
V =	30	mph	(design speed, mph)	
Dc =	4.00		(degree of curve of alignment)	
Radius =	1,432.39	feet	(radius of curve of alingment)	
e <sub>d</sub> =	0.028		(design superelevation rate)	
normal crown (e <sub>NC</sub> ) =	0.016			
	left	Is the curve t	to the left or right (in the direction of stationing)?	
	left	Will the depe	endent geopak shapes be to the left or right of the baselin	ne?
Curve widening NOT required for WB-50.	0.500	feet of paven	nent widening per lane (for 12' lane and WB-50 design v	ehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.750	feet of paven	nent widening per lane (for 12' lane and WB-62 design v	ehicle; L&D Fig. 301-5c)
	yes	Divided road	way?	
P.C. ROTATION DATA				
	0.30%	From what c	ross slope is the roadway being rotated? (i.e. 1.6% for N	C, etc.)
Width of rotating pavement @ PC =	24	feet	(do not include curve widening, gore areas or entranc	e 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) =	102.1440	teet	(Superelevation Runott Length to flat)	
L(t) =	58.3680	feet	(Tangent Runout Length)	
P.T. ROTATION DATA				
	1.60%	To what cros	s 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 entranc	e 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) =	124.3200	feet	(Superelevation Runoff Length to flat)	
L(t) =	71.0400	reet	(Tangent Runout Length)	
				70.000/
P.C. Station	502+17.3316		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?	yes
DT Station	503+01 5501		Percent of super to achieve at P T 2	68.84%
Is there a spiral for this curve?	no		Is the roadway rotating past flat at the P.T transition?	Ves
			i i i i i i i i i i i i i i i i i i i	,

P.C. SUPER INFORMATION				<b>Curve Informat</b>	tion		
	Station	Super Rate			Dc =	4°0'0''	
cross slope rotating from =	501+34.8868	0.003		I	Full super length =	104.85 ft.	
					Slope at PC =	-0.0196	
flat =	501+45.8308	0.000			P.C. L(r) =	102.14	
reverse crown =	502+04.1988	-0.016		G-v	alue of P.C. L(r) =	152	
full super =	502+47.9748	-0.028			P.C. L(t) =	10.94	
				G-\	alue of P.C. L(t) =	152	
P.T. SUPER INFORMATION					Slope at PT =	-0.0193	
	Station	Super Rate			P.T. L(r) =	124.32	
full super =	503+52.8252	-0.028		G-\	/alue of P.T. L(r) =	185	
reverse crown =	504+06.1052	-0.016			P.T. L(t) =	71.04	
flat =	504+77.1452	0.000		G-1	value of P.T. L(t) =	185	
					Curve length is	5.81	times design speed
normal crown =	505+48.1852	0.016		1	time at full super =	2.38	seconds
SHOULDER INFORMATION FOR CURVE							
		Mainline	Left Shoulder			Mainline	Right Shoulder
	Station	Super Rate	Super Rate		Station	Super Rate	Super Rate
P.C. part of curve							
P.T. part of curve							
STATION INFORMATION							
			% of e(d)	Left Shoulder	Right Shoulder		
	Station	Super Rate	Achieved	Super Rate	Super Rate		

SUPERELEVATION TRANSITION			
SIMPLE CUPVE CONFIGURATION	2-6E, 202-9E, 1	-IGURE 202-10E	E, FIGURE 301-3B AND FIGURE 301-3C
Designer name:	DCL		
Curve name:	trsupw90-2		
What emay table would you like to use?	0.060 max		CLEAR SHEET
V -	45	mph	(design speed mph)
Dc =	3.00	mpn	(degree of curve of alignment)
Radius =	1,909.86	feet	(radius of curve of alingment)
e, =	0.039		(design superelevation rate)
normal crown (e <sub>vo</sub> ) =	0.016		(
	right	Is the curve to	the left or right (in the direction of stationing)?
	left	Will the depend	dent geopak shapes be to the left or right of the baseline?
Curve widening NOT required for WB-50.	0.500	feet of paveme	ent 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 paveme	ent widening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)
	yes	Divided roadwa	ay?
P.C. ROTATION DATA		_	
	1.60%	From what cros	ss 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		(adjustment faster for number of lance related)
D(W) =	0.54		(adjustment factor for humber of fames folated)
% = G =	185		(maximum relative slope)
L(r) =	173.1600	feet	(Superelevation Runoff Length to flat)
L(t) =	71.0400	feet	(Tanaent 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		
D(W) =	1		(adjustment factor for number of lanes rotated)
% =	0.5		
G =	200	foot	(maximum relative slope) (Superclayation Runoff Length to flot)
L(r) =	51 2000	feet	(Superelevation Runoi) Length to flat)
-(-) -	0112000		(rangori ranoa zongan)
P.C. Station	505+96.3537		Percent of super to achieve at P.C.? 68.84%
Is there a spiral for this curve?	no	ls	the roadway rotating past flat at the P.C. transition? no
P.T. Station	507+75.3039		
is there a spiral for this curve?	yes	IS	s the roadway rotating past flat at the P.T. transition? <b>no</b>

Is there a spiral for this curve?	yes	Is the roadway rotating past flat at the P.T. transition?	no	
What is the length of the spiral?	200.00'	Spiral G-value and corresponding design speed:		543; 70-mph

P.C. SUPER INFORMATION				Curve Informat	ion		
	Station	Super Rate			Dc =	30'0"	
normal crown =	505+48.1852	0.016		F	Full super length =	125.00 ft.	
					Slope at PC =	0.0268	
				0	P.C. L(r) =	102.12	
full our or	E00 - E0 20E2	0.020		G-V	alue of P.C. L(r) =	185	
iui super =	500+50.5052	0.039					
P.T. SUPER INFORMATION					Slope at PT =	0.0390	
	Station	Super Rate		Ρ.	T. Spiral Length =	200.00	
full super =	507+75.3039	0.039		G-val	ue of P.T. Spiral =	543	
					· · · · · · · · · · · · · · · · · · ·		
	F00 75 0000	0.040			Curve length is	3.98	times design speed
normal crown =	509+75.3039	0.016		t	ime at full super =	1.89	seconds
SHOULDER INFORMATION FOR CURVI	E						
		Mainline	Left Shoulder			Mainline	Right Shoulder
	Station	Super Rate	Super Rate		Station	Super Rate	Super Rate
P.C. part of curve							
i loi part el carto	506+10.3452	0.0300	-0.0400				
	506+10.3452 506+50.3052	0.0300 0.0390	-0.0400 -0.0310				
	506+10.3452 506+50.3052	0.0300 0.0390	-0.0400 -0.0310				
P.T. part of curve	506+10.3452 506+50.3052 507+75.3039	0.0300 0.0390 0.0390	-0.0400 -0.0310 -0.0310				
P.T. part of curve	506+10.3452 506+50.3052 507+75.3039 508+21.4577	0.0300 0.0390 0.0390 0.0300	-0.0400 -0.0310 -0.0310 -0.0400				
P.T. part of curve	506+10.3452 506+50.3052 507+75.3039 508+21.4577	0.0300 0.0390 0.0390 0.0300	-0.0400 -0.0310 -0.0310 -0.0400				
P.T. part of curve	506+10.3452 506+50.3052 507+75.3039 508+21.4577	0.0300 0.0390 0.0390 0.0390 0.0300	-0.0400 -0.0310 -0.0310 -0.0400				
P.T. part of curve	506+10.3452 506+50.3052 507+75.3039 508+21.4577	0.0300 0.0390 0.0390 0.0300	-0.0400 -0.0310 -0.0310 -0.0400 % of e(d)	Left Shoulder	Right Shoulder		
P.T. part of curve	506+10.3452 506+50.3052 507+75.3039 508+21.4577 Station	0.0300 0.0390 0.0390 0.0300 Super Rate	-0.0400 -0.0310 -0.0400 % of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate		
P.T. part of curve	506+10.3452 506+50.3052 507+75.3039 508+21.4577 Station	0.0300 0.0390 0.0300 0.0300	-0.0400 -0.0310 -0.0400 -0.0400 % of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate		

SimPLE CURVE CONFIGURATIONDesigner name:DCL Curve name:Curve name:trchew90-2What $e_{max}$ table would you like to use?0.060 maxV =30 Dc =mphdegiDc =24.75(degi (degi Radius =231.50feetfeet of pavement (e_nc) =0.016rightIs the curve to the left (Will the dependent of yes)Curve widening required for WB-50.3.708 (feet of pavement widening required for WB-62.Curve widening required for WB-62.5.187 (feet of pavement widen of pavement (e) PC =Curve widening pavement @ PC =2.00% (feet of pavement widen of pavement (e) PC =Vidth of rotating pavement @ PC =2.4 (feet (do nadway?))P.C. ROTATION DATA1 (adju) % =Width of rotating pavement @ PC =24 (feet (do nadva))b(w) =1 (adju) % =0.66 (max) C (max) C =1 (feet (do nadva))P.T. ROTATION DATA3.00% (feet (do nadva))Width of rotating pavement @ PT =24 (feet (do nadva))Width of rotating pavement @ PT =24 (feet (do nadva))Width of rotating pavement @ PT =24 (feet (do nadva))Design speed of PT transition =50 (b(w) =b(w) =1 (adju) % =0.5 (max) C =200 (max) (feet (TanCurve widening pavement @ PT =24 (feet (do nadva))P.C. Station807+96.2472 (feet (TanP.C. Station807+96.2472 (feet (TanSthere a spi																																									
Curve name: trchew90-2 What $e_{max}$ table would you like to use? 0.060 max V = 30 mph (desi Dc = 24.75 (degi Radius = 231.50 feet (radii $e_d = 0.060$ (desi normal crown ( $e_{NC}$ ) = 0.016 right Is the curve to the le left Will the dependent of Curve widening required for WB-50. 3.708 feet of pavement wide Curve widening required for WB-62. 5.187 feet of pavement wide Curve widening required for WB-62. 5.187 feet of pavement wide Curve widening required for WB-62. 5.187 feet of pavement wide Curve widening required for WB-62. 5.187 feet of pavement wide Curve widening required for WB-62. 5.187 feet of pavement wide Curve widening required for WB-62. 5.187 feet of pavement wide Curve widening required for WB-62. (a do not be the set of pavement wide Curve widening pavement @ PC = 24 feet (do not be the set of pavement wide Width of rotating pavement @ PC = 24 feet (do not be the set of pavement wide Curve be the set of pavement @ 1 (adju % = 0.66 (not pavement wide) Curve be the set of pavement @ T = 24 feet (do not be the set of pavement @ PT = 24 feet (do not pavement @ PT = 288.0000 feet (Tanother pavement @ PC. Station 807+96.2472 ls there a spiral for this curve? no ls the not pavement pavement % pavement pavement % pavement % pavemen																																									
Virial emax maxU V e Dc e a30 24.75mph (desi (deg) Radius = 231.50mph (desi (deg) Radius = 231.50mph (desi (deg) Radius = 231.50mph (desi (desi normal crown (e_NC) = 0.016mph (desi (desi right feet of pavement with feet of pavement with 	CLEAR SHEET																																								
Dc = 24.75 $Dc = 24.75$ $(degins) = 24.75$ $(degins) = 24.75$ $(degins) = 231.50$ $(degins) = 231.50$ $(degins) = 231.50$ $(degins) = 231.50$ $(degins) = 24.75$	an speed mph)																																								
Radius =231.50feet(radius = $e_d$ =0.060(desinormal crown ( $e_{NC}$ ) =0.016rightIs the curve to the leftWill the dependent Qfeet of pavement willCurve widening required for WB-50.3.708Curve widening required for WB-62.5.187Fect of pavement willfeet of pavement willVidth of rotating pavement @ PC =24Vidth of rotating pavement @ PC =24Design speed of PC transition =30b(w) =1(adju)% =0.66(max)L(r) =218.8800P.T. ROTATION DATAVidth of rotating pavement @ PT =24feet (do not see the curve)b(w) =1(adju)% =0.5(max)G =152(do not see the curve)Design speed of PT transition =50b(w) =1(adju)% =0.5(max)G =200(max)G =200(max)L(r) =288.0000feet (Tan)P.C. Station807+96.2472Is there a spiral for this curve?noIs there a spiral for this curve?noNoIs the respiration	ree of curve of alignment)																																								
$e_d =$ 0.060(desinormal crown ( $e_{NC}$ ) =0.016rightIs the curve to the leftCurve widening required for WB-50.3.708feet of pavement widen of the to pavement widen of the top	us of curve of alingment)																																								
normal crown ( $e_{NC}$ ) =0.016right leftIs the curve to the leftCurve widening required for WB-50.3.708 feet of pavement wid feet of pavement wid max G = 152P.C. ROTATION DATA1P.T. ROTATION DATA3.00%Vidth of rotating pavement @ PT =24Vidth of rotating pavement @ PT =24Midth of rotating pavement @ PT =24Supposed of PT transition =50b(w) =1(adju % =0.5(max) G =200L(r) =288.0000feet (Sup L(r) =76.8000Feet (TanP.C. Station807+96.2472Is there a spiral for this curve?noIs the real spiral for this curve?no	gn superelevation rate)																																								
right leftIs the curve to the left Will the dependent of feet of pavement with feet of pavement with feet of pavement with feet of pavement with teet of teacher and with teacher and pavement with teacher and																																									
Curve widening required for WB-50. Curve widening required for WB-62.3.708 5.187 yesfeet of pavement widet of pavement of pavement widet of pavem	ft or right (in the direction of stationing)? geopak shapes be to the left or right of the baseline?																																								
Curve widening required for WB-62.5.187 yesfeet of pavement wide Divided roadway?P.C. ROTATION DATA2.00%From what cross sloped feet (do n 	dening per lane (for 12' lane and WB-50 design vehicle; L&D Fig. 301-5b)																																								
yesDivided rotatively?P.C. ROTATION DATAWidth of rotating pavement @ PC =24feet(do nDesign speed of PC transition =30 $b(w) = 1$ (adju $\% = 0.66$ (max $G = 152$ (max $L(r) = 218.8800$ feet(Sup $L(t) = 58.3680$ feet(TanP.T. ROTATION DATAWidth of rotating pavement @ PT =24feet(do nDesign speed of PT transition =50 $b(w) = 1$ (adju $\% = 0.5$ (max $G = 200$ (max $L(r) = 288.0000$ feet(Sup $L(t) = 76.8000$ feet(Sup $L(t) = 76.8000$ feet(SupP.C. Station $807+96.2472$ Is there a spiral for this curve?noIs there a spiral for this curve?	dening per lane (for 12' lane and WB-62 design vehicle; L&D Fig. 301-5c)																																								
P.C. ROTATION DATA2.00%From what cross slopWidth of rotating pavement @ PC =24feet(do nb(w) =1(adju $\% = 0.66$ (maxL(r) =218.8800feet(SupL(r) =218.8800feet(SupL(r) =218.8800feet(SupL(r) =218.8800feet(SupL(r) =218.8800feet(SupL(r) =218.8800feet(SupL(r) =288.000%feet(SupL(r) =288.0000feet(SupL(r) =288.0000feet(SupL(r) =288.0000feet(SupL(r) =288.0000feet(SupL(r) =288.0000feet(SupL(r) =288.0000feet(SupL(r) =288.0000feet(Sup <tr <td="" colspan="2">L(r) =<th></th></tr> <tr><th>2.00%From what cross slopWidth of rotating pavement @ PC =24feet(do nDesign speed of PC transition =30<math>b(w) = 1</math>(adju% =0.66(maxG =152(maxL(r) =218.8800feet(SupL(t) =58.3680feet(TanP.T. ROTATION DATAWidth of rotating pavement @ PT =24feet(do nDesign speed of PT transition =50b(w) =1(adju% =0.5(maxG =200(maxL(r) =288.0000feet(SupL(t) =76.8000feet(SupL(t) =76.8000feet(SupL(t) =76.8000feet(SupP.C. Station807+96.2472Is there a spiral for this curve?noIs the r</th><th></th></tr> <tr><th>Width of rotating pavement @ PC =24feet(do nDesign speed of PC transition =30<math>b(w) = 1</math>(adju<math>b(w) = 1</math>(adju<math>\% = 0.66</math>(maxG =152(maxL(r) =218.8800feet(SupL(t) =58.3680feet(TanP.T. ROTATION DATAWidth of rotating pavement @ PT =24feet(do nDesign speed of PT transition =50<math>b(w) = 1</math>(adju<math>\% =</math>0.5(max<math>G =</math>200(max<math>L(r) =</math>288.0000feet(SupL(t) =76.8000feet(SupL(t) =76.8000feet(TanP.C. Station807+96.2472Is there a spiral for this curve?noIs the r</th><th>pe is the roadway being rotated? (i.e. 1.6% for NC, etc.)</th></tr> <tr><th>Design speed of PC transition = 30 b(w) = 1 (adju % = 0.66 (max G = 152 (max L(r) = 218.8800 feet (Sup L(t) = 58.3680 feet (Tan P.T. ROTATION DATA Width of rotating pavement @ PT = 24 feet (do n Design speed of PT transition = 50 b(w) = 1 (adju % = 0.5 (max G = 200 (max L(r) = 288.0000 feet (Sup L(t) = 76.8000 feet (Sup L(t) = 76.8000 feet (Tan</th><th>ot include curve widening, gore areas or entrance and exit lanes)</th></tr> <tr><th>b(w) = 1   (adju % = 0.66   (max G = 152   (max L(r) = 218.8800   feet   (Sup L(t) = 58.3680   feet   (Tan P.T. ROTATION DATA</th><th></th></tr> <tr><th><math display="block">\begin{tabular}{lllllllllllllllllllllllllllllllllll</math></th><th>stment factor for number of lanes rotated)</th></tr> <tr><th><math display="block">\begin{array}{cccccccccccccccccccccccccccccccccccc</math></th><th>imum relative gradient)</th></tr> <tr><th><math display="block">L(t) = \frac{1}{58.3680} feet </math>(Tan <b>P.T. ROTATION DATA</b> Width of rotating pavement @ PT = <math>\frac{3.00\%}{50}</math> To what cross slope Design speed of PT transition = <math>\frac{50}{50}</math> b(w) = 1 (adju % = 0.5 (max G = 200 (max <math>L(r) = \frac{288.0000}{76.8000}</math> feet (Sup <math>L(t) = \frac{76.8000}{76.8000}</math> feet (Tan P.C. Station <math>\frac{807+96.2472}{10}</math> Is there a spiral for this curve? no Is the r</th><th>erelevation Runoff Length to flat)</th></tr> <tr><th>P.T. ROTATION DATA Width of rotating pavement @ PT = 24 feet (do n Design speed of PT transition = 50 b(w) = 1 (adju % = 0.5 (max G = 200 (max L(r) = 288.0000 feet (Sup L(t) = 76.8000 feet (Tan P.C. Station 807+96.2472 Is there a spiral for this curve? no Is the n</th><th>gent Runout Length)</th></tr> <tr><th>P.T. ROTATION DATA       3.00%       To what cross slope         Width of rotating pavement @ PT =       24       feet       (do n         Design speed of PT transition =       50       b(w) =       1       (adju         % =       0.5       (max         G =       200       (max         L(r) =       288.0000       feet       (Sup         L(t) =       76.8000       feet       (Tan         P.C. Station       807+96.2472       Is there a spiral for this curve?       no       Is the r</th><th></th></tr> <tr><th>3.00%       To what cross slope         Width of rotating pavement @ PT =       24       feet       (do n         Design speed of PT transition =       50       b(w) =       1       (adju         b(w) =       1       (adju       % =       0.5       (max         G =       200       (max       L(r) =       288.0000       feet       (Sup         L(r) =       76.8000       feet       (Tan         P.C. Station       807+96.2472       no       Is ther no</th><th></th></tr> <tr><th>Width of rotating pavement @ P1 =24refer(do not the constraint of the constr</th><th>is the roadway being rotated? (i.e. 1.6% for NC, etc.)</th></tr> <tr><th>below in the main the intervence       b       (adju         b(w) =       1       (adju         % =       0.5       (max         G =       200       (max         L(r) =       288.0000       feet       (Sup         L(t) =       76.8000       feet       (Tan         P.C. Station       807+96.2472       Is there a spiral for this curve?       no       Is the r</th><th>or include curve widening, gore areas or entrance and exit lanes)</th></tr> <tr><th>% =       0.5       (max         G =       200       (max         L(r) =       288.0000       feet       (Sup         L(t) =       76.8000       feet       (Tan         P.C. Station       807+96.2472         Is there a spiral for this curve?       no       Is the r</th><th>stment factor for number of lanes rotated)</th></tr> <tr><th>G =         200         (max           L(r) =         288.0000         feet         (Sup           L(t) =         76.8000         feet         (Tan           P.C. Station         807+96.2472           Is there a spiral for this curve?         no         Is the r</th><th>imum relative gradient)</th></tr> <tr><th>L(r) = 288.0000 feet (Sup L(t) = 76.8000 feet (Tan P.C. Station 807+96.2472 Is there a spiral for this curve? no Is the r</th><th>imum relative slope)</th></tr> <tr><th>L(t) = 76.8000 feet (Tan P.C. Station 807+96.2472 Is there a spiral for this curve? no Is the r</th><th>erelevation Runoff Length to flat)</th></tr> <tr><th>P.C. Station 807+96.2472 Is there a spiral for this curve? no Is the r</th><th>gent Runout Length)</th></tr> <tr><td>Is there a spiral for this curve? no Is the r</td><td>Percent of super to achieve at P.C.? <b>50.00%</b></td></tr> <tr><th></th><th>oadway rotating past flat at the P.C. transition? no</th></tr> <tr><td></td><td></td></tr>		2.00%From what cross slopWidth of rotating pavement @ PC =24feet(do nDesign speed of PC transition =30 $b(w) = 1$ (adju% =0.66(maxG =152(maxL(r) =218.8800feet(SupL(t) =58.3680feet(TanP.T. ROTATION DATAWidth of rotating pavement @ PT =24feet(do nDesign speed of PT transition =50b(w) =1(adju% =0.5(maxG =200(maxL(r) =288.0000feet(SupL(t) =76.8000feet(SupL(t) =76.8000feet(SupL(t) =76.8000feet(SupP.C. Station807+96.2472Is there a spiral for this curve?noIs the r		Width of rotating pavement @ PC =24feet(do nDesign speed of PC transition =30 $b(w) = 1$ (adju $b(w) = 1$ (adju $\% = 0.66$ (maxG =152(maxL(r) =218.8800feet(SupL(t) =58.3680feet(TanP.T. ROTATION DATAWidth of rotating pavement @ PT =24feet(do nDesign speed of PT transition =50 $b(w) = 1$ (adju $\% =$ 0.5(max $G =$ 200(max $L(r) =$ 288.0000feet(SupL(t) =76.8000feet(SupL(t) =76.8000feet(TanP.C. Station807+96.2472Is there a spiral for this curve?noIs the r	pe is the roadway being rotated? (i.e. 1.6% for NC, etc.)	Design speed of PC transition = 30 b(w) = 1 (adju % = 0.66 (max G = 152 (max L(r) = 218.8800 feet (Sup L(t) = 58.3680 feet (Tan P.T. ROTATION DATA Width of rotating pavement @ PT = 24 feet (do n Design speed of PT transition = 50 b(w) = 1 (adju % = 0.5 (max G = 200 (max L(r) = 288.0000 feet (Sup L(t) = 76.8000 feet (Sup L(t) = 76.8000 feet (Tan	ot include curve widening, gore areas or entrance and exit lanes)	b(w) = 1   (adju % = 0.66   (max G = 152   (max L(r) = 218.8800   feet   (Sup L(t) = 58.3680   feet   (Tan P.T. ROTATION DATA		$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	stment factor for number of lanes rotated)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	imum relative gradient)	$L(t) = \frac{1}{58.3680} feet $ (Tan <b>P.T. ROTATION DATA</b> Width of rotating pavement @ PT = $\frac{3.00\%}{50}$ To what cross slope Design speed of PT transition = $\frac{50}{50}$ b(w) = 1 (adju % = 0.5 (max G = 200 (max $L(r) = \frac{288.0000}{76.8000}$ feet (Sup $L(t) = \frac{76.8000}{76.8000}$ feet (Tan P.C. Station $\frac{807+96.2472}{10}$ Is there a spiral for this curve? no Is the r	erelevation Runoff Length to flat)	P.T. ROTATION DATA Width of rotating pavement @ PT = 24 feet (do n Design speed of PT transition = 50 b(w) = 1 (adju % = 0.5 (max G = 200 (max L(r) = 288.0000 feet (Sup L(t) = 76.8000 feet (Tan P.C. Station 807+96.2472 Is there a spiral for this curve? no Is the n	gent Runout Length)	P.T. ROTATION DATA       3.00%       To what cross slope         Width of rotating pavement @ PT =       24       feet       (do n         Design speed of PT transition =       50       b(w) =       1       (adju         % =       0.5       (max         G =       200       (max         L(r) =       288.0000       feet       (Sup         L(t) =       76.8000       feet       (Tan         P.C. Station       807+96.2472       Is there a spiral for this curve?       no       Is the r		3.00%       To what cross slope         Width of rotating pavement @ PT =       24       feet       (do n         Design speed of PT transition =       50       b(w) =       1       (adju         b(w) =       1       (adju       % =       0.5       (max         G =       200       (max       L(r) =       288.0000       feet       (Sup         L(r) =       76.8000       feet       (Tan         P.C. Station       807+96.2472       no       Is ther no		Width of rotating pavement @ P1 =24refer(do not the constraint of the constr	is the roadway being rotated? (i.e. 1.6% for NC, etc.)	below in the main the intervence       b       (adju         b(w) =       1       (adju         % =       0.5       (max         G =       200       (max         L(r) =       288.0000       feet       (Sup         L(t) =       76.8000       feet       (Tan         P.C. Station       807+96.2472       Is there a spiral for this curve?       no       Is the r	or include curve widening, gore areas or entrance and exit lanes)	% =       0.5       (max         G =       200       (max         L(r) =       288.0000       feet       (Sup         L(t) =       76.8000       feet       (Tan         P.C. Station       807+96.2472         Is there a spiral for this curve?       no       Is the r	stment factor for number of lanes rotated)	G =         200         (max           L(r) =         288.0000         feet         (Sup           L(t) =         76.8000         feet         (Tan           P.C. Station         807+96.2472           Is there a spiral for this curve?         no         Is the r	imum relative gradient)	L(r) = 288.0000 feet (Sup L(t) = 76.8000 feet (Tan P.C. Station 807+96.2472 Is there a spiral for this curve? no Is the r	imum relative slope)	L(t) = 76.8000 feet (Tan P.C. Station 807+96.2472 Is there a spiral for this curve? no Is the r	erelevation Runoff Length to flat)	P.C. Station 807+96.2472 Is there a spiral for this curve? no Is the r	gent Runout Length)	Is there a spiral for this curve? no Is the r	Percent of super to achieve at P.C.? <b>50.00%</b>		oadway rotating past flat at the P.C. transition? no		
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Width of rotating pavement @ PC =24feet(do nDesign speed of PC transition =30 $b(w) = 1$ (adju $b(w) = 1$ (adju $\% = 0.66$ (maxG =152(maxL(r) =218.8800feet(SupL(t) =58.3680feet(TanP.T. ROTATION DATAWidth of rotating pavement @ PT =24feet(do nDesign speed of PT transition =50 $b(w) = 1$ (adju $\% =$ 0.5(max $G =$ 200(max $L(r) =$ 288.0000feet(SupL(t) =76.8000feet(SupL(t) =76.8000feet(TanP.C. Station807+96.2472Is there a spiral for this curve?noIs the r	pe is the roadway being rotated? (i.e. 1.6% for NC, etc.)																																								
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b(w) = 1   (adju % = 0.66   (max G = 152   (max L(r) = 218.8800   feet   (Sup L(t) = 58.3680   feet   (Tan P.T. ROTATION DATA																																									
$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	stment factor for number of lanes rotated)																																								
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	imum relative gradient)																																								
$L(t) = \frac{1}{58.3680} feet $ (Tan <b>P.T. ROTATION DATA</b> Width of rotating pavement @ PT = $\frac{3.00\%}{50}$ To what cross slope Design speed of PT transition = $\frac{50}{50}$ b(w) = 1 (adju % = 0.5 (max G = 200 (max $L(r) = \frac{288.0000}{76.8000}$ feet (Sup $L(t) = \frac{76.8000}{76.8000}$ feet (Tan P.C. Station $\frac{807+96.2472}{10}$ Is there a spiral for this curve? no Is the r	erelevation Runoff Length to flat)																																								
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P.T. ROTATION DATA       3.00%       To what cross slope         Width of rotating pavement @ PT =       24       feet       (do n         Design speed of PT transition =       50       b(w) =       1       (adju         % =       0.5       (max         G =       200       (max         L(r) =       288.0000       feet       (Sup         L(t) =       76.8000       feet       (Tan         P.C. Station       807+96.2472       Is there a spiral for this curve?       no       Is the r																																									
3.00%       To what cross slope         Width of rotating pavement @ PT =       24       feet       (do n         Design speed of PT transition =       50       b(w) =       1       (adju         b(w) =       1       (adju       % =       0.5       (max         G =       200       (max       L(r) =       288.0000       feet       (Sup         L(r) =       76.8000       feet       (Tan         P.C. Station       807+96.2472       no       Is ther no																																									
Width of rotating pavement @ P1 =24refer(do not the constraint of the constr	is the roadway being rotated? (i.e. 1.6% for NC, etc.)																																								
below in the main the intervence       b       (adju         b(w) =       1       (adju         % =       0.5       (max         G =       200       (max         L(r) =       288.0000       feet       (Sup         L(t) =       76.8000       feet       (Tan         P.C. Station       807+96.2472       Is there a spiral for this curve?       no       Is the r	or include curve widening, gore areas or entrance and exit lanes)																																								
% =       0.5       (max         G =       200       (max         L(r) =       288.0000       feet       (Sup         L(t) =       76.8000       feet       (Tan         P.C. Station       807+96.2472         Is there a spiral for this curve?       no       Is the r	stment factor for number of lanes rotated)																																								
G =         200         (max           L(r) =         288.0000         feet         (Sup           L(t) =         76.8000         feet         (Tan           P.C. Station         807+96.2472           Is there a spiral for this curve?         no         Is the r	imum relative gradient)																																								
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P.C. Station 807+96.2472 Is there a spiral for this curve? no Is the r	gent Runout Length)																																								
Is there a spiral for this curve? no Is the r	Percent of super to achieve at P.C.? <b>50.00%</b>																																								
	oadway rotating past flat at the P.C. transition? no																																								

)	no	Is the roadway rotating past flat at the P.T. transition?	yes	Is there a spiral for this curve?
208; 50-mph		Spiral G-value and corresponding design speed:	150.00'	What is the length of the spiral?

P.C. SUPER INFORMATION				Curve Informat	tion		
	Station	Super Rate			Dc =	24°45'0''	
cross slope rotating from =	807+59.7672	0.020		I	Full super length =	126.97 ft.	
					Slope at PC =	0.0300	
					P.C. L(r) =	145.92	
				G-v	alue of P.C. L(r) =	152	
full super =	809+05.6872	0.060					
					Slope at PT -	0.0600	
	Station	Super Rate		Р	T Spiral Length =	150.00	
full supor –	810+32 6506	0.060		Gava		208	
Tuli Super –	010+32.0350	0.000		G-Vai	ide of F.T. Opilal –	200	
					Curve length is	7.88	times design speed
cross slope rotating to =	811+82.6596	0.030		1	time at full super =	2.89	seconds
SHOULDER INFORMATION FOR CURVE							
		Mainline	Left Shoulder			Mainline	Right Shoulder
	Station	Super Rate	Super Rate		Station	Super Rate	Super Rate
P.C. part of curve	807+96.2472	0.0300	-0.0400		808+32.7272	0.0400	-0.0400
	809+05.6872	0.0600	-0.0100		809+05.6872	0.0600	-0.0600
P.T. part of curvo	810+32 6506	0.0600	-0.0100		810+32 6506	0.0600	-0.0600
	811+07 6506	0.0000	-0.0100		810+82 6506	0.0000	-0.0000
	011+07.0390	0.0300	-0.0400		010+02.0390	0.0400	-0.0400
STATION INFORMATION							
			% of e(d)	Left Shoulder	Right Shoulder		
	Station	Super Rate	Achieved	Super Rate	Super Rate		

SUPERELEVATION TRANSITION	LENGTH 2-8E 202-9E F	FIGURE 202-1	IDE FIGURE 301-5B AND FIGURE 301-5C	
SIMPLE CURVE CONFIGURATION	2 02, 202 02, 1	ICONE 202		
Designer name:	DCL			
Curve name:	trchew90-3			HEET
What emax table would you like to use?	0.060 MAX		ULLAR O	
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 <sub>d</sub> =	• 0.030		(design superelevation rate)	
normal crown (e <sub>NC</sub> ) =	0.016			
	right	Is the curve	to the left or right (in the direction of stationing)?	
	left	Will the dep	endent geopak shapes be to the left or right of the baselin	ne?
Curve widening NOT required for WB-50.	0.250	feet of pave	ment widening per lane (for 12' lane and WB-50 design v	ehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.500	Divided read	ment widening per lane (for 12 lane and WB-62 design v	enicle; L&D Fig. 301-5C)
	yes	Divided Ioad	iway !	
P.C. ROTATION DATA				
	3.00%	From what o	cross slope is the roadway being rotated? (i.e. 1.6% for N	C, etc.)
Width of rotating pavement @ PC =	24	feet	(do not include curve widening, gore areas or entranc	e 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 =	144 0000	foot	(Maximum relative slope) (Superclovation Pupoff Longth to flat)	
L(I) =	76 8000	foot	(Superelevation (Union Length to hat)	
L(i) =	70.0000	ieei		
P.T. ROTATION DATA				
	3.00%	To what cro	ss 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 entranc	e and exit lanes)
Design speed of PT transition =	50		(adjustment factor for number of lange rotated)	
D(W) =	0.5		(adjustiment lactor for humber of lanes fotated)	
70 - C -	200		(maximum relative gladient)	
G =	144 0000	foot	(Maximum relative slope) (Superelevation Runoff Length to flat)	
L(t) = L(t)	76.8000	feet	(Tangent Runout Length)	
P.C. Station	944 - 92 6506		Bereast of super to achieve at B.C.2	100.00%
Is there a spiral for this curve?	011+02.0390		Is the roadway rotating past flat at the P.C. transition?	100.00 %
	10		is the roadway rotating past hat at the P.O. transition:	10
P.T. Station	815+75.0704		Percent of super to achieve at P.T.?	100.00%

Is there a spiral for this curve? no

Percent of super to achieve at P.T.? 100.00 Is the roadway rotating past flat at the P.T. transition? no

P.C. SUPER INFORMATION				<b>Curve Informat</b>	ion		
	Station	Super Rate			Dc =	20'0''	
cross slope rotating from =	811+82.6596	0.030		F	Full super length =	392.41 ft.	
					Slope at PC =	0.0300	
					P.C. L(r) =	0.00	
6.11	044.00.0500	0.000		G-v	alue of P.C. L(r) =	#DIV/0!	
full super =	811+82.6596	0.030					
P.T. SUPER INFORMATION					Slope at PT =	0.0300	
	Station	Super Rate			P.T. L(r) =	0.00	
full super =	815+75.0704	0.030		G-v	alue of P.T. L(r) =	#DIV/0!	
					Curve length is	8.72	times design speed
cross slope rotating to =	815+75.0704	0.030		t	ime at full super =	5.95	seconds
SHOULDER INFORMATION FOR CURVE							
SHOULDER INFORMATION FOR CORVE	-	Mainline	l eft Shoulder			Mainline	Right Shoulder
	Station	Super Rate	Super Rate		Station	Super Rate	Super Rate
P.C. part of curve	811+82.6596	0.0300	-0.0400				
P.T. part of curve							
P.T. part of curve	815+75.0704	0.0300	-0.0400				
P.T. part of curve	815+75.0704	0.0300	-0.0400				
P.T. part of curve	815+75.0704	0.0300	-0.0400				
P.T. part of curve	815+75.0704	0.0300	-0.0400 % of e(d)	Left Shoulder	Right Shoulder		
P.T. part of curve	815+75.0704 Station	0.0300 Super Rate	-0.0400 % of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate		
P.T. part of curve	815+75.0704 Station	0.0300 Super Rate	-0.0400 % of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate		
P.T. part of curve	815+75.0704 Station	0.0300 Super Rate	-0.0400 % of e(d) Achieved	Left Shoulder Super Rate	Right Shoulder Super Rate		

SUPERELEVATION TRANSITION				
SIMPLE CUPVE CONFIGURATION	2-6E, 202-9E,	FIGURE 202-	TUE, FIGURE 301-36 AND FIGURE 301-3C	
Designer name:	DCL			
Curve name:	trsmid-1			UEET
What emax table would you like to use?	0.040 max		CLEAR S	
V =	25	mph	(design speed, mph)	
Dc =	30.00		(degree of curve of alignment)	
Radius =	190.99	feet	(radius of curve of alingment)	
e <sub>d</sub> =	0.016		(design superelevation rate)	
normal crown (e <sub>NC</sub> ) =	0.016			
	left	Is the curve	to the left or right (in the direction of stationing)?	
	right	Will the dep	endent geopak shapes be to the left or right of the baseli	ne?
Curve widening NOT required for WB-50.	0.000	feet of pave	ment widening per lane (for 12' lane and WB-50 design v	ehicle; L&D Fig. 301-5b)
Curve widening NOT required for WB-62.	0.000	feet of pave	ment widening per lane (for 12' lane and WB-62 design v	vehicle; L&D Fig. 301-5c)
	yes	Divided roa	dway?	
P.C. ROTATION DATA				
	1.60%	From what	cross slope is the roadway being rotated? (i.e. 1.6% for N	IC, etc.)
Width of rotating pavement @ PC =	13	feet	(do not include curve widening, gore areas or entrance	e and exit lanes)
Design speed of PC transition =	25			
b(w) =	1		(adjustment factor for number of lanes rotated)	
% =	0.7		(maximum relative gradient)	
G =	143	6	(maximum relative slope)	
L(r) =	29.7440	reet	(Superelevation Runoff Length to flat)	
L(t) =	29.7440	teet	(Tangent Runout Length)	
P.T. ROTATION DATA				
	1.60%	To what cro	ss slope is the roadway being rotated? (i.e. 1.6% for NC,	etc.)
Width of rotating pavement @ PT =	13	feet	(do not include curve widening, gore areas or entranc	e and exit lanes)
Design speed of PT transition =	25			
D(W) =	1		(adjustment factor for number of lanes rotated)	
% =	0.7		(maximum relative gradient)	
G =	143	6	(maximum relative slope)	
L(r) =	29.7440	feet	(Superelevation Runoff Length to flat)	
L(t) =	29.7440	leel		
P.C. Station	50+74 9841		Percent of super to achieve at $P \cap 2$	66 67%
Is there a spiral for this curve?	no		Is the roadway rotating past flat at the P.C. transition?	VOS
	10		is the readway rotating past hat at the rise. transition:	yes
P.T. Station	52+24.9883		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

Is the roadway rotating past flat at the P.T. transition? no

P.C. SUPER INFORMATION				<b>Curve Informat</b>	ion		
	Station	Super Rate		F	ull super length =	140.09 ft.	
normal crown =	50+25.4108	-0.016			Slope at PC =	0.0160	
					P.C. L(r) =	29.74	
flat =	50+55.1548	0.000		G-v	alue of P.C. L(r) =	143	
reverse crown =	50+84.8988	0.016			P.C. L(t) =	29.74	
full super =	50+84.8988	0.016		G-v	alue of P.C. L(t) =	143	
					Slope at PT =	0.0160	
P.T. SUPER INFORMATION					P.T. L(r) =	0.00	
	Station	Super Rate		G-v	alue of P.T. L(r) =	#DIV/0!	
full super =	52+24.9883	0.016					
					Curve length is	6.00	times design speed
				t	ime at full super =	3.82	seconds
normal crown =	52+24.9883	0.016					
SHOULDER INFORMATION FOR CURVE	Ξ						
SHOULDER INFORMATION FOR CURVE	E	Mainline	Left Shoulder			Mainline	Right Shoulder
SHOULDER INFORMATION FOR CURVE	E Station	Mainline Super Rate	Left Shoulder Super Rate		Station	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE P.C. part of curve	E Station	Mainline Super Rate	Left Shoulder Super Rate		Station	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE	E Station	Mainline Super Rate	Left Shoulder Super Rate		Station	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE	E Station	Mainline Super Rate	Left Shoulder Super Rate		Station	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE P.C. part of curve P.T. part of curve	E Station	Mainline Super Rate	Left Shoulder Super Rate		Station	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE P.C. part of curve P.T. part of curve	E Station	Mainline Super Rate	Left Shoulder Super Rate		Station	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE P.C. part of curve P.T. part of curve	E Station	Mainline Super Rate	Left Shoulder Super Rate		Station	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE P.C. part of curve P.T. part of curve	E Station	Mainline Super Rate	Left Shoulder Super Rate		Station	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE P.C. part of curve P.T. part of curve STATION INFORMATION	E Station	Mainline Super Rate	Left Shoulder Super Rate		Station	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE P.C. part of curve P.T. part of curve STATION INFORMATION	E Station	Mainline Super Rate	Left Shoulder Super Rate % of e(d)	Left Shoulder	Station Right Shoulder	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE P.C. part of curve P.T. part of curve STATION INFORMATION	E Station	Mainline Super Rate Super Rate	Left Shoulder Super Rate % of e(d) Achieved	Left Shoulder Super Rate	Station Right Shoulder Super Rate	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE P.C. part of curve P.T. part of curve STATION INFORMATION	E Station Station	Mainline Super Rate Super Rate	Left Shoulder Super Rate % of e(d) Achieved	Left Shoulder Super Rate	Station Right Shoulder Super Rate	Mainline Super Rate	Right Shoulder Super Rate
SHOULDER INFORMATION FOR CURVE P.C. part of curve P.T. part of curve STATION INFORMATION	E Station Station	Mainline Super Rate Super Rate	Left Shoulder Super Rate % of e(d) Achieved	Left Shoulder Super Rate	Station Right Shoulder Super Rate	Mainline Super Rate	Right Shoulder Super Rate

IMPLE CURVE CONFIGURATION				
Designer name: Curve name: What e <sub>max</sub> table would you like to use?	DCL trsmid-2 0.040 max		CLEAR SHEE	Т
V = <mark>Radius =</mark> Dc =	<b>25</b> <b>190.99</b> 30.00	mph feet	(design speed, mph) (radius of curve of alingment) (degree of curve of alignment)	
e <sub>d</sub> =	0.016		(design superelevation rate)	
normal crown ( $e_{NC}$ ) = Curve widening NOT required for WB-50. Curve widening NOT required for WB-62.	0.016 right 0.000 0.000 yes	Is the curve t Will the deper feet of paven feet of paven Divided road	to the left or right (in the direction of stationing)? endent geopak shapes be to the left or right of the baseline? nent widening per lane (for 12' lane and WB-50 design vehic nent widening per lane (for 12' lane and WB-62 design vehic way?	le; L&D Fig. 301-5b) le; L&D Fig. 301-5c)
.C. ROTATION DATA				
Width of rotating pavement @ PC = Design speed of PC transition = b(w) = % = G =	1.60% 13 25 1 0.7 143	From what c	ross slope is the roadway being rotated? (i.e. 1.6% for NC, e (do not include curve widening, gore areas or entrance an (adjustment factor for number of lanes rotated) (maximum relative gradient) (maximum relative slope)	rtc.) Id exit lanes)
L(r) = L(t) =	29.7440 29.7440	feet feet	(Superelevation Runoff Length to flat) (Tangent Runout Length)	
.T. ROTATION DATA				
Width of rotating pavement @ PT = Design speed of PT transition = b(w) = % = G = L(r) = L(t) =	1.60% 13 25 1 0.7 143 29.7440 29.7440	To what cros feet feet feet	is slope is the roadway being rotated? (i.e. 1.6% for NC, etc. (do not include curve widening, gore areas or entrance an (adjustment factor for number of lanes rotated) (maximum relative gradient) (maximum relative slope) (Superelevation Runoff Length to flat) (Tangent Runout Length)	) d exit lanes)
P.C. Station Is there a spiral for this curve?	53+24.6507 no		Percent of super to achieve at P.C.? <b>10</b> Is the roadway rotating past flat at the P.C. transition?	10.00% no
P.T. Station Is there a spiral for this curve?	54+65.3401 no		Percent of super to achieve at P.T.? 60 Is the roadway rotating past flat at the P.T. transition?	6.67% yes

P.C. SUPER INFORMATION				<b>Curve Informat</b>	tion		
	Station	Super Rate			Full super length =	130.77 ft.	
normal crown =	53+24.6507	-0.016			Slope at PC =	-0.0160	
					P.C. L(r) =	0.00	
				G-v	alue of P.C. L(r) =	#DIV/0!	
full super =	53+24.6507	-0.016					
					Slope at PT =	#DIV/0!	
P.T. SUPER INFORMATION					P.T. L(r) =	29.74	
	Station	Super Rate		G-\	alue of P.T. L(r) =	143	
full super =	54+55.4254	-0.016			P.T. L(t) =	29.74	
reverse crown =	54+55.4254	-0.016		G-1	alue of P.T. L(t) =	143	
flat =	54+85.1694	0.000			Curve length is	5.63	times design speed
				1	time at full super =	3.57	seconds
normal crown =	55+14.9134	0.016					
SHOULDER INFORMATION FOR CURVE							
		Mainline	Left Shoulder			Mainline	Right Shoulder
	Station	Super Rate	Super Rate		Station	Super Rate	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		