

DRAFT

**ATTACHMENT A5
GEOMETRIC DATA**

Sub Area (Focus Area)	Analysis Segment/Intersection	Posted Speed Limit (mph)	Design Speed (mph)	Functional Classification	Alignment																				Stopping Sight Distance			Intersection Sight Distance			Notes	
					Horizontal						Vertical				Grade										Required	Actual	OK	Required	Actual	OK		
					Deflection		Degree of Curve		Superelevation Rate		Grade		Grade Break		Crest K		Sag K															
Ancor / SR 32 Hill	Little Dry Run / SR 32 Intersection	50	55	UM Arterial	1'00'	n/a	n/a	5'30'	n/a	0'39'	0.06	n/a	5%	1.58%	OK	0.40%	n/a	114	n/a	115	1220	OK	495	>495	OK	610	Left-620, Right-790	Signalized	Field investigation revealed poor stopping sight distance on Little Dry Run approaching SR 32 due to a combination horizontal/vertical curve.			
	Little Dry Run to 8-Mile	50/55	55/60	UM Arterial	0'55'	n/a	n/a	4'15'	3'00'	OK	0'33'	0.06	0.062	OK	8%	6.42%	OK	0.30%	n/a	151	64, 102	OK	136	74, 86, 127, 130	OK				Six deficient vertical curves.			
	8-Mile / SR 32 Intersection	55	55	UM Arterial	1'00'	n/a	n/a	5'30'	2'00'	OK	0'39'	0.06	0.062	OK	8%	6.42%	OK	0.40%	n/a	114	n/a	115	n/a	495	EB-350, WB-415	Deficient	610	Left-300, Right-310	Deficient	Vertical Grade deficiency. Maximum vertical grade for 35 mph arterial street is 10%. Grade for right turn lane from S.R. 32 to Eight Mile Rd. is close to 15% as measured in the field.		
	8-Mile to Beechwood	55	55	UM Arterial	1'00'	n/a	n/a	05'30'00"	12'08'49", 7'50'06", 7'24'10", 6'00'00"	Deficient	0'39'	0.06	0.135	Deficient	8%	8.00%	Deficient	0.40%	n/a	114	66	Deficient	115	190	OK				Four deficient horizontal curves. One deficient vertical curve. The vertical grade is deficient because the length of 8% grade is 1750' which exceeds the standard critical length of 600'			
	Beechwood / SR 32 Intersection	55	55	UP Arterial	1'00'	n/a	n/a	5'30'	n/a	0'39'	0.06	n/a	5%	0.00%	OK	0.40%	n/a	114	313	OK	115	n/a	495	EB-160, WB->495	Signalized	610	SB Beechwood: Left->610, Right->610 NB Old SR 74: Left-130, Right->610	Signalized	At Old S.R. 74 approach the sight distance is very poor. Signal controller, signal pole, regulatory signs, and parked cars obstruct sight distance.			
	Beechwood to Bells	55	55	UP Arterial	1'00'	n/a	n/a	5'30'	3'00'	OK	0'39'	0.06	0.063	OK	5%	0.80%	OK	0.40%	n/a	114	n/a	115	115	OK								
	Bells / SR 32 Intersection	55	55	UP Arterial	1'00'	n/a	n/a	5'30'	3'00'	OK	0'39'	0.06	0.063	OK	5%	0.70%	OK	0.40%	n/a	114	n/a	115	n/a	495	EB->495, WB->495	Signalized	610	NB Bells: Left->610, Right->610. SB Bells: Left->610, Right->610	Signalized			
Broadwell / Roundbottom Intersection	45	45	U Collector	1'40'	n/a	n/a	8'00'	n/a	5'40'	0.04	n/a	7%	n/a				0.55%		61	40	Deficient	79	n/a	360	NB-800, SB-540	OK	500	Left-800, Right-540	OK			
SR 32: West Corp Line to Church	25/35	30/40	UM Arterial	2'05'	2'	OK	10'45'	n/a	7'42'	0.04	n/a	7%	1.50%	OK	0.75%		n/a	44	180.46	OK	64	175.81	OK									
Newtown Village	Church / Main (SR 32) Intersection	25	30	UM Arterial	3'45'	n/a	n/a	22'45'	n/a	17'30'	0.04	n/a	8%	1.42%	OK	1.30%	n/a	19	n/a	37	n/a	200	EB-110, WB->200	Signalized	335	NB Church Street: Left-110, Right-180. SB Church Street: Left->335, Right-150. WB SR 32: Left-80, Right-150. WB SR 32: Left-90, Right-90	Signalized	Buildings on two corners of the intersection obstruct sight distance.				
	SR 32: Church to Round Bottom	25	30	UM Arterial	3'45'	1"	OK	22'45'	n/a	17'30'	0.04	n/a	8%	0.65%	OK	1.30%	n/a	19	n/a	37	n/a											
	Round Bottom / SR 32 Intersection	25	30	UM Arterial	3'45'	n/a	n/a	22'45'	n/a	17'30'	0.04	n/a	8%	0.54%	OK	1.30%	n/a	19	3750	OK	37	n/a	200	EB-Roundbottom-100, EB-Riverhills-100, WB-Roundbottom->335, WB-Riverhills->200	Partially Signalized/OK	335	SB Roundbottom: Stop condition Right Turn Left-290, Left->335, Right-100 NB Riverhills Dr: Left-130, Right->335	Partially Signalized/Deficient	Round Bottom Road right turn movement is unsignalized and has deficient intersection sight distance.			
	SR 32: Round Bottom to Little Dry Run	35/50	40/55	UM Arterial	1'00'	n/a	n/a	5'30'	0'30'	OK	0'39'	0.06	0.026	OK	8%	1.46%	OK	0.40%	n/a	114	n/a	115	200	OK								
	Round Bottom: SR 32 to Valley	25/35	25/35	U Collector	2'45'	n/a	n/a	15'30'	09'10"	OK	11'28'	0.04	0.032	OK	9%	1.98%	OK	0.95%	n/a	29			49									
	Round Bottom / Valley Intersection	35	35	U Collector	2'45'	n/a	n/a	15'30'	0'35'	OK	11'28'	0.04	n/a	9%	0.44%	OK	0.95%	n/a	29	n/a	49	n/a	250	EB->250, WB-230	Signalized	390	Left-230, Right->335	Signalized				
	Round Bottom: Valley to Broadwell	35/45	35/45	U Collector	1'40'	n/a	n/a	8'00'	8'50'	Deficient	5'40'	0.04	0.038	OK	8%	2.86%	OK	0.55%	n/a	61	88	OK	79	221	OK							
	Valley (entire length)	25	25	U Collector	5'30'	n/a	n/a	37'00'	n/a	29'20'	0.04	n/a	9%	2.00%	OK	1.85%	n/a	12	76	OK	26	99	OK									
Church (Newtown) / Valley Intersection	25	25	U Collector	5'30'	n/a	n/a	37'00'	n/a	29'20'	0.04	n/a	9%	1.76%	OK	1.85%	n/a	12	n/a	26	40	OK	155	EB->155, WB->155	Signalized	280	Valley: Left-240, Right-180. Park Entrance: Left->280, Right->280	Signalized					
Church (Newtown): SR 32 to Valley	25	25	U Collector	5'30'	n/a	n/a	37'00'	n/a	29'20'	0.04	n/a	9%	1.90%	OK	1.85%	n/a	12	10	Deficient	26	n/a											
Church (Newtown): Valley to US 50	35	35	U Collector	2'45'	n/a	n/a	15'30'	n/a	11'28'	0.04	n/a	9%	2.56%	OK	0.95%	n/a	29	n/a	49	n/a												
SR 125 / SR 32	SR 125: Beechmont Circle to SR 32	45	45	Expressway	1'40'	n/a	n/a	8"	1"	OK	5'40'	0.04	n/a	4%	0.75%	OK	0.55%	n/a	61	200	OK	79	200	OK								
	SR 125 / SR 32 Interchange	45	45	Expressway	1'40'	n/a	n/a	8"	3'30'	OK	5'40'	0.04	0.083	OK	4%	0.92%	OK	0.55%	n/a	61	143	OK	79	43	Deficient	360	No blatant sight distance issues.	OK	500	WB 125 to EB 32-vehicles must come to a stop. Sight distance is >500	Ok	The sag vertical curve on S.R. 32 underneath S.R. 125 is deficient. The adjacent crest vertical curve has a k-value of 57. The crest is not deficient however due to the lowered ramp design speed.
	SR 125: SR 32 to Elstun	45	45	UP Arterial	1'40'	n/a	n/a	8'00'	2'30'	OK	5'40'	0.04	0.0485	OK	6%	2.73%	OK	0.55%	1.00%	Deficient	61	n/a	79	n/a								
	SR 125 / Elstun Intersection	45	45	UP Arterial	1'40'	n/a	n/a	8'00'	2'30'	OK	5'40'	0.04	n/a	6%	2.73%	OK	0.55%	n/a	61	n/a	79	38	Deficient	360	EB/WB->360	Signalized	500	SB Driveway: Left-525, Right-750 NB Elstun: Left-500, Right-550	Signalized			
	SR 32: SR 125 to Clough	45	50	UM Arterial	1'05'	n/a	n/a	6'45'	4'20'	OK	0'47'	0.06	n/a	6%	4.00%	OK	0.45%	n/a	84	n/a	96	n/a										
Clough / SR 32 Intersection	45	50	UM Arterial	1'05'	n/a	n/a	6'45'	2'19'	OK	0'47'	0.06	n/a	6%	2.00%	OK	0.45%	n/a	84	139	OK	96	n/a	425	EB-380, WB-120	Signalized	555	Left-220, Right-120	Signalized				
SR 32: Clough to West Newtown Corp Limit	55	60	UM Arterial	0'55'	0'46'	OK	4'15'	9'45'00", 5'00'00", 10'45'00"	Deficient	0'33'	0.06	0.08	OK	5%	3.52%	OK	0.30%	n/a	151	108	Deficient	136	216	OK								
Linwood / Herschel Intersection	Linwood / Herschel Intersection	30	30	UM Arterial	3'45'	n/a	n/a	22'45'	n/a	17'30'	0.04	n/a	8%	3.16%	OK	1.30%	n/a	19	n/a	37	n/a	200	WB->200, EB->200	Signalized	335	Left-340, Right-220	Signalized					
	SR 125 / US 50 Interchange	35/50	40/50	Expressway	1'05'	n/a	n/a	06'45'	14'19'22"	Deficient	0'47'	0.06	0.0778	OK	4%	2.69%	OK	0.45%	n/a	84	40	Deficient	96	35, 31, 45	OK	250	Viewing EB Columbia to Eastern Stop condition: WB 125-250, EB 125-100	Deficient	390	EB Columbia to S.R. 125: Left-90, Right-240	Deficient	Ramp Deficiencies: Ramp from Eastern Ave to U.S. 50/S.R. 125 has two 76'00' horizontal curves. Ramp from S.R. 125 to U.S. 50 has horizontal curve with degree of 44°. None of these curves meet a 25 mph design speed. Merging taper length on ramp from Eastern Ave to S.R. 125 is 115' compared to the minimum of 420'. Total length of U.S. 50 exit ramp to S.R. 125 is deficient. Does not meet minimum length of 800'.
	SR 125: US 50 to Beechmont Circle	35	40	Expressway	2'05'	n/a	n/a	10'45'	n/a	7'42'	0.04	n/a	6%	6.00%	OK	0.75%	n/a	44	133.33	OK	64	30	Deficient									

Linwood / Eastern Interchange	Beechmont Circle (intersections + entire length)	30	30	U Collector	3*45'	n/a	22'45"	30°09'22", 28°38'52", 28°38'52", 28°38'52"	Deficient	17°30'	0.04	0.0625	OK	9%	3.74%	OK	1.30%	0.19%	OK	19	19	OK	37	30	Deficient	200	Beechmont Ct: NB SR125-460, SB125-180. Bloor Ave: EB125-100, WB125-300. Wilmer Ct: WB125-220, EB125-150	Deficient	335	Beechmont Ct: Left-460, Right-180. Bloor Ave: Left-100, Right-300. Wilmer Ct: Left-220, Right-150	Deficient		
	Eastern: SR 125 to US 50	35	35	UM Arterial	2*45'	n/a	15'30'	1'21'	OK	11°28'	0.04		n/a	7%	2.99%	OK	0.95%		n/a	29	231.8	OK	49	236	OK								
	Wooster: Beechmont Circle to Red Bank	35	35	U Collector	2*45'	n/a	15'30'	10°32'	OK	11°28'	0.04	0.038	OK	9%	4.73%	OK	0.95%		n/a	29	161	OK	49	214	OK								
	US 50: SR 125 to Eastern	50	50	UP Arterial	1*05'	n/a	6'45'	2"	OK	0°47'	0.038	0.04	OK	6%	2.93%	OK	0.45%		n/a	84	180	OK	96		n/a								
	US 50: Eastern to Red Bank	50	50	UP Arterial	1*05'	n/a	6'45'	2°15'	OK	0°47'	0.038	0.04	OK	6%	3.20%	OK	0.45%		n/a	84	162	OK	96	200	OK								
US 50 / Red Bank Interchange	US 50 / Red Bank Interchange	50	50	UP Arterial	1*05'	n/a	6'45'	2"	OK	0°47'	0.06	0.06	OK	6%	1.30%	OK	0.45%		n/a	84		n/a	96	267	OK	250	1 intersection in interchange sight distance >250	Signalized	390	1 intersection in interchange sight distance >390	Signalized		
	US 50: Red Bank to Meadowlark	50	55	UM Arterial	1*00'	n/a	5'30'	2"	OK	0°39'	0.06	0.041	OK	5%	1.51%	OK	0.40%		n/a	114		n/a	115		n/a								
	Meadowlark / US 50 Intersection	35	40	UM Arterial	2*05'	n/a	10'45'		n/a	7°42'	0.04		n/a	7%	1.42%	OK	0.75%		n/a	44		n/a	64		n/a	305	EB->1000, WB-240	Signalized	445	NB Wooster: Left->1000, Right-660 SB Meadowlark: Left-230, Right->445	Signalized		
	Wooster: Red Bank to US 50	35	35	U Collector	2*45'	n/a	15'30'	15'30'	OK	11°28'	0.04	0.05	OK	9%	4.29%	OK	0.95%		n/a	29	32	OK	49	24	Deficient								
	Wooster / Red Bank Intersection	35	35	U Collector	2*45'	n/a	15'30'		n/a	11°28'	0.04		n/a	9%	4.24%	OK	0.95%		n/a	29	10	Deficient	49		n/a	250	NB Wooster: >250. WB Wooster: 250?. EB Redbank: 250?	Signalized	390	NB Wooster: Left-190, Right-220. WB Wooster: Left-380, EB Redbank: Right-80	Signalized		Lane configuration between Red Bank Rd and Wooster Pike does not match. Vehicles traveling East on Red Bank continuing onto Wooster Pike must weave through the intersection to avoid collisions with vehicles waiting to turn left onto Wooster Rd.
	Red Bank / US 50 Ramps Intersection	35	35	U Collector	2*45'	n/a	15'30'		n/a	11°28'	0.04		n/a	9%	0.75%	OK	0.95%		n/a	29		n/a	49		n/a	250	NB Red Bank: >250 SB Red Bank: >250	Signalized	390	Left-275, Right->390	Signalized		
	Red Bank: Wooster to US 50 Ramps	35	35	U Collector	2*45'	n/a	15'30'	14°10'27"	OK	11°28'	0.04	0.0395	OK	9%	4.29%	OK	0.95%		n/a	29	223	OK	49	45	Deficient								
	Red Bank: US 50 Ramps to Brotherton	35	35	UP Arterial	2*45'	n/a	15'30'	14°25'	OK	11°28'	0.04	0.032	OK	7%	3.65%	OK	0.95%		n/a	29	153.36	OK	49	160	OK								
	Red Bank / Brotherton Intersection	35	35	UP Arterial	2*45'	n/a	15'30'	06°	OK	11°28'	0.04	0.032	OK	7%	3.94%	OK	0.95%		n/a	29	33	OK	49		n/a	250	Redbank: >250	Signalized	390	EB Brotherton: Left-140, Right->390 WB Brotherton: Left->390, Right->390	Signalized		
	Erie / Brotherton Intersection	35	35	U Collector	2*45'	n/a	15'30'		n/a	11°28'	0.04		n/a	7%	6.21%	OK	0.95%		n/a	29		n/a	49	104	OK	250	Erie: >250	Signalized	390	Brotherton: Left->390, Right-400	Signalized		
	Bramble / Erie Intersection	35	35	U Collector	2*45'	n/a	15'30'		n/a	11°28'	0.04		n/a	9%	2.43%	OK	0.95%		n/a	29		n/a	49		n/a	250	Erie: >250	OK	390	Left-180, Right->390	Deficient		
	Erie / Murray Intersection	25/35	25/35	U Collector	2*45'	n/a	15'30'	12"	OK	11°28'	0.04		n/a	9%	1.35%	OK	0.95%		n/a	29		n/a	49		n/a	250	EB->250, WB-260	Signalized	390	Left-260, Right->390	Signalized		
US 50 Corridor	US 50: Meadowlark to Watterson	25/35	30/40	UM Arterial	2*05'	0°13'37"	OK	10°45'		n/a	7°42'	0.04	n/a	7%	0.65%	OK	0.75%		n/a	44		n/a	64	89	OK								
	Watterson / US 50 Intersection	25	30	UM Arterial	3*45'	n/a	22'45"		n/a	17°30'	0.04		n/a	8%	1.22%	OK	1.30%		n/a	19		n/a	37		n/a	200	EB->200, WB->200	Signalized	335	Left->335, Right->335	Signalized		
	US 50: Watterson to Plainville	25/35	30/40	UM Arterial	2*05'	n/a	10'45'	06°44'24"	OK	7°42'	0.04		n/a	7%	3.81%	OK	0.75%		n/a	44	103	OK	64	54	Deficient								
	Plainville / US 50 Intersection	35	40	UM Arterial	2*05'	n/a	10'45'		n/a	7°42'	0.04		n/a	7%	1.45%	OK	0.75%		n/a	44		n/a	64		n/a	305	EB-200, WB->305	Deficient	445	Left->445, Right-100	Deficient		Vegetation is the primary sight distance obstruction.
	US 50: Plainville to Mariemont Square	25/35	30/40	UM Arterial	2*05'	n/a	10'45'		n/a	7°42'	0.04		n/a	7%	0.31%	OK	0.75%		n/a	44		n/a	64		n/a								
	Mariemont Square	25	30	UM Arterial	3*45'	n/a	22'45"		n/a	17°30'	0.04		n/a	8%	0.00%	OK	1.30%		n/a	19		n/a	37		n/a	200	At unsignalized intersection of EB 50 and Madisonville Rd SSD Left-120	Deficient	335	WB 50 and Miami: Signalized, from turnaround in square looking right-150, no other issues. WB 50 and Madisonville: Signalized, From Madisonville looking left-160. EB 50 and Miami: Signalized, From Miami looking Left-80. EB 50 and Madisonville: Unsignalized, From Madisonville Looking Left-120.	Signalized/Partially Deficient		The intersection of Crystal Springs Rd with eastbound Wooster Pike has deficient sight distance as indicated in the table.
	US 50: Mariemont Square to Walton Creek	35/40	40/45	UM Arterial	1*40'	n/a	8'00'	5'	OK	5°40'	0.04	0.0648	OK	6%	5.00%	OK	0.55%		n/a	61	54	Deficient	79		n/a								
	Walton Creek / US 50 Intersection	40	45	UM Arterial	1*40'	n/a	8'00'	1°09'	OK	5°40'	0.04		n/a	6%	0.24%	OK	0.55%		n/a	61		n/a	79		n/a	360	EB-360, WB-200	Signalized	500	Walton Creek SB: Left-80, Right-200 Drive NB: Left-170, Right->500	Signalized		
	US 50: Walton Creek to Newtown	40	45	UM Arterial	1*40'	n/a	8'00'	1°52'	OK	5°40'	0.04	0.035	OK	6%	2.91%	OK	0.55%		n/a	61		n/a	79		n/a								
	Newtown / US 50 Intersection	35/40	40/45	UM Arterial	1*40'	n/a	8'00'	1°52'	OK	5°40'	0.04	0.022	OK	6%	1.69%	OK	0.55%		n/a	61		n/a	79		n/a	360	EB->360, EB->360	Signalized	500	Left->500, Right->500	Signalized		
	Plainville / Bramble Intersection	35	35	UM Arterial	2*45'	n/a	15'30'		n/a	11°28'	0.04		n/a	7%	1.83%	OK	0.95%		n/a	29		n/a	49	76	OK	250	NB Plainfield-230, SB Plainfield-100	Signalized	390	EB Bramble: Left-80, Right-350. WB Bramble: Left-230, 360.	Signalized		