

RESIDENTIAL

Plot Location Relative to Critical Junction	Plot	Dwellings	Percentage	Dwellings	Trip Generation					
					AM Peak			PM Peak		
					Arr	Dep	Tot	Arr	Dep	Tot
RESIDENTIAL TRIP RATES					0.169	0.405	0.574	0.396	0.247	0.643
North	A1	62	100%	62	10	25	36	25	15	40
	A2	135	100%	135	23	55	77	53	33	87
	A3	115	100%	115	19	47	66	46	28	74
	A4	-	100%	0	0	0	0	0	0	0
	A5	69	100%	69	12	28	40	27	17	44
	A6	26	100%	26	4	11	15	10	6	17
	A7	162	25%	41	7	16	23	16	10	26
			100%	0	0	0	0	0	0	0
	A16	26	100%	26	4	11	15	10	6	17
Other	82	100%	82	14	33	47	32	20	53	
Sub-Total	677		556	94	225	319	220	137	357	
South	A8	141	75%	106	18	43	61	42	26	68
	Other	82	100%	82	14	33	47	32	20	53
	Sub-Total	141		188	32	76	108	74	46	121
East	A7	162	75%	122	21	49	70	48	30	78
	A8	141	25%	35	6	14	20	14	9	23
	Persimmon Site	1,600	100%	1,600	270	648	918	634	395	1029
	Sub-Total	1,903		1,757	297	711	1,008	696	434	1,130
TOTAL				2,500	423	1,013	1,435	990	618	1,608

Does no. dwellings total 2,500?

TRUE

0

EDUCATION

School Location Relative to Critical Junction	Plot	External School Places	Trip Generation						
			AM Peak			PM Peak			
			Arr	Dep	Tot	Arr	Dep	Tot	
PRIMARY SCHOOL TRIP RATES			0.351	0.237	0.588	0.006	0.027	0.033	
North	2 Form Entry School	91	32	22	54	1	2	3	
	Sub-Total	91	32	22	54	1	2	3	
South	Sub-Total	0	0	0	0	0	0	0	
East	1 Form Entry School	46	16	11	27	0	1	2	
	Sub-Total	46	16	11	27	0	1	2	
TOTAL			137	48	32	81	1	4	5

Total No. School Places
No. Internal School Places
No. External School Places

630
493
137

To/From North (no. external school places)
To/From East (no. external school places)

91
46

EMPLOYMENT

Employment Location Relative to Critical Junction	Plot	SQM	Trip Generation						
			AM Peak			PM Peak			
			Arr	Dep	Tot	Arr	Dep	Tot	
EMPLOYMENT TRIP RATES			1.225	0.198	1.423	0.212	1.151	1.363	
North	D1 Healthcare	3,000	37	6	43	6	35	41	
	Sub-Total	3,000	37	6	43	6	35	41	
South	Sub-Total	0	0	0	0	0	0	0	
East	Sub-Total	0	0	0	0	0	0	0	
TOTAL			3,000	37	6	43	6	35	41

RESI + EDUCATION

Trip Origin /Destination Relative to Critical Junction	Plot	Trip Generation					
		AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot
NORTH		126	247	373	221	140	360
SOUTH		32	76	108	74	46	121
EAST		313	722	1,035	696	435	1,131
TOTAL		471	1,045	1,516	991	621	1,612

TOTAL SUMMARY

Trip Origin /Destination Relative to Critical Junction	Plot	Trip Generation					
		AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot
NORTH		163	253	415	227	174	401
SOUTH		32	76	108	74	46	121
EAST		313	722	1,035	696	435	1,131
TOTAL		507	1,051	1,558	997	656	1,653

GEOGRAPHIC DISTRIBUTION

	Resi Traffic	Employment Traffic
North	13.60%	18.00%
West	41%	25%
South	24%	19%
East	22%	37%
	99.90%	99.90%

ACCESS DISTRIBUTION

	North	West	South	East
Northern Access	100%	90%	50%	10%
Southern Access	0%	10%	50%	90%

NORTH / SOUTH ACCESS SPLIT

Resi / Education	North	West	South	East

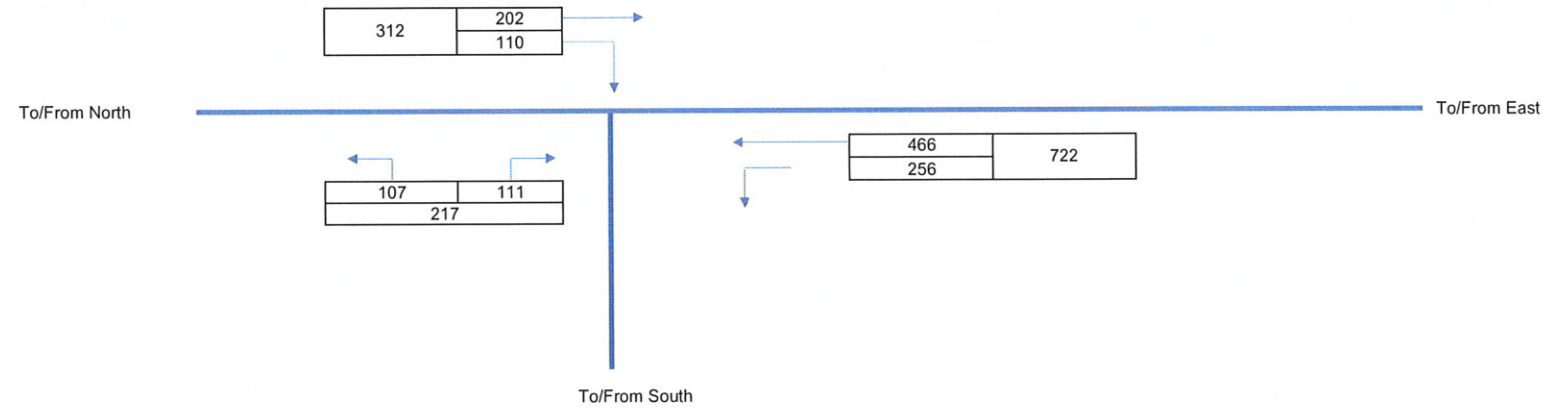
Employment	North	West	South	East

Northern Access	14%	37%	12%	2%	65%
Southern Access	0%	4%	12%	19%	35%

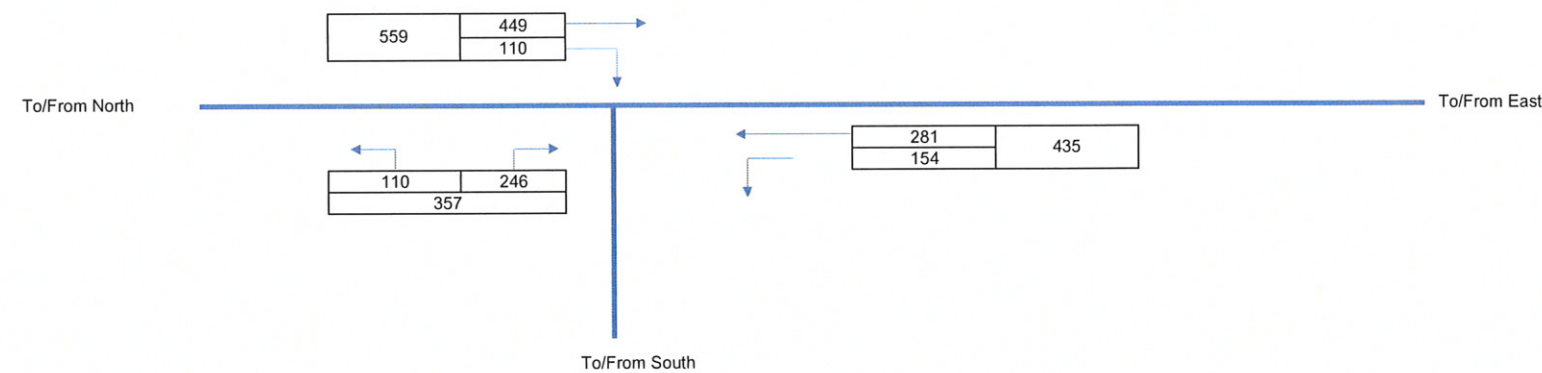
	18%	23%	10%	4%	54%
	0%	3%	10%	33%	46%

PLOT	via Northern Access						via Southern Access						
	AM Peak			PM Peak			AM Peak			PM Peak			
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	
Resi / Education	NORTH	81	159	240	142	90	232	45	87	132	78	49	127
	SOUTH	20	49	70	48	30	78	11	27	38	26	16	43
	EAST	202	466	668	449	281	730	111	256	366	246	154	400
Employment	NORTH	24	4	28	4	22	26	13	2	15	2	12	14
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	105	163	268	146	112	259	58	89	147	80	62	142
	SOUTH	20	49	70	48	30	78	11	27	38	26	16	43
	EAST	202	466	668	449	281	730	111	256	366	246	154	400

AM PEAK HOUR



PM PEAK HOUR



Existing Layout without flare i.e west-east priority

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	1	15.85	0.5	C	4.4	42.67	0.82	E
Stream C-AB	0.6	7.94	0.28	A	0.7	5.77	0.29	A

Existing Layout with flare

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.2	7.23	0.18	A	0.3	9.56	0.23	A
Stream B-A	0.4	13.3	0.3	B	1.8	24.02	0.63	C
Stream C-AB	0.6	7.96	0.28	A	0.7	5.77	0.29	A

Roundabout

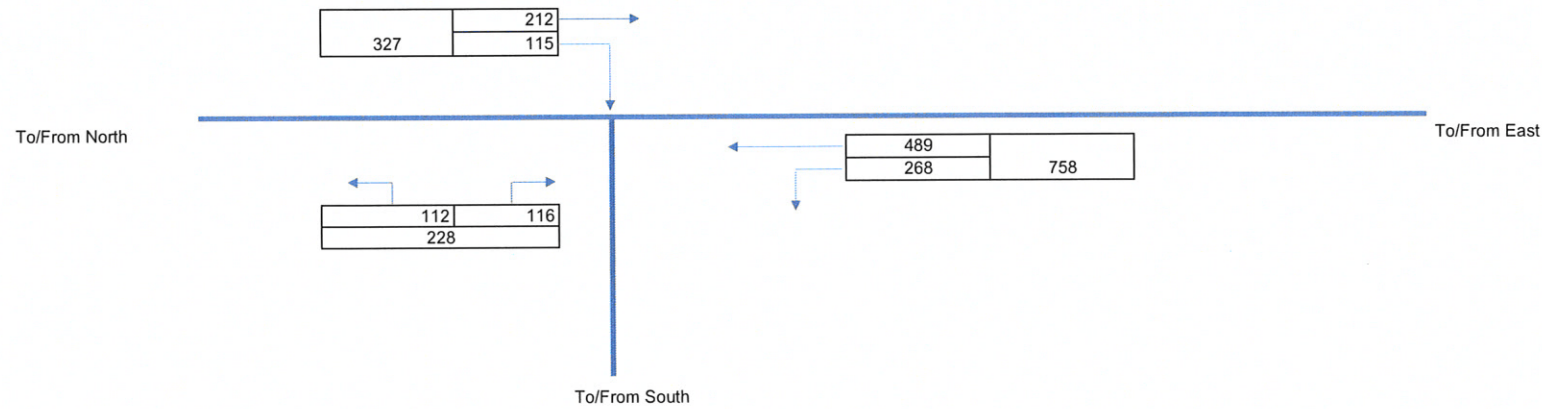
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2019								
Arm 1	4	18.73	0.8	C	1	7.33	0.48	A
Arm 2	0.5	8.09	0.34	A	1	9.05	0.48	A
Arm 3	0.6	6.08	0.36	A	2.3	13.75	0.69	B

5% Sensitivity Test

PLOT	via Northern Access						via Southern Access						
	AM Peak			PM Peak			AM Peak			PM Peak			
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	
Resi / Education	NORTH	4	8	12	7	5	12	2	4	7	4	2	6
	SOUTH	1	2	3	2	1	4	1	1	2	1	1	2
	EAST	10	23	33	22	14	36	6	13	18	12	8	20
Employment	NORTH	1	0	1	0	1	1	1	0	1	0	1	1
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	5	8	13	7	6	13	3	4	7	4	3	7
	SOUTH	1	2	3	2	1	4	1	1	2	1	1	2
	EAST	10	23	33	22	14	36	6	13	18	12	8	20

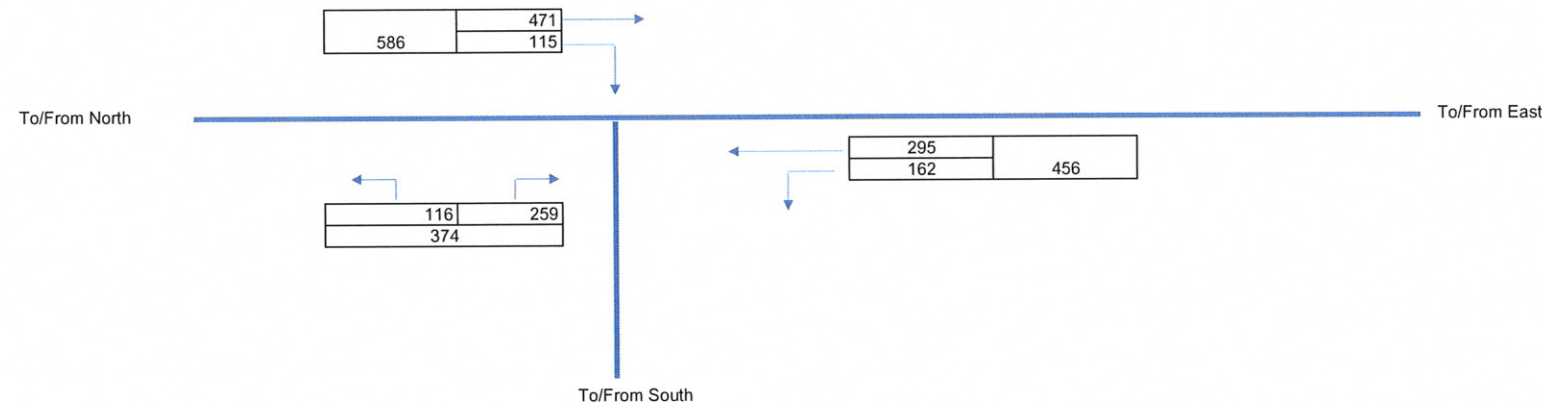
PLOT	via Northern Access						via Southern Access						
	AM Peak			PM Peak			AM Peak			PM Peak			
	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	
Resi / Education	NORTH	85	167	252	149	95	244	47	92	138	82	52	134
	SOUTH	21	52	73	50	31	82	12	28	40	28	17	45
	EAST	212	489	701	471	295	766	116	268	385	259	162	420

Employment	NORTH	25	4	29	4	23	28	14	2	16	2	13	15
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	110	171	281	154	118	272	60	94	154	84	65	149
	SOUTH	21	52	73	50	31	82	12	28	40	28	17	45
	EAST	212	489	701	471	295	766	116	268	385	259	162	420



Existing Layout with flare

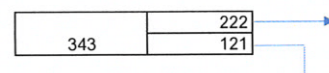
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.3	7.58	0.2	A	0.4	11.47	0.28	B
Stream B-A	0.5	14.35	0.33	B	2.3	29.61	0.69	D
Stream C-AB	0.6	8.2	0.3	A	0.8	5.88	0.31	A

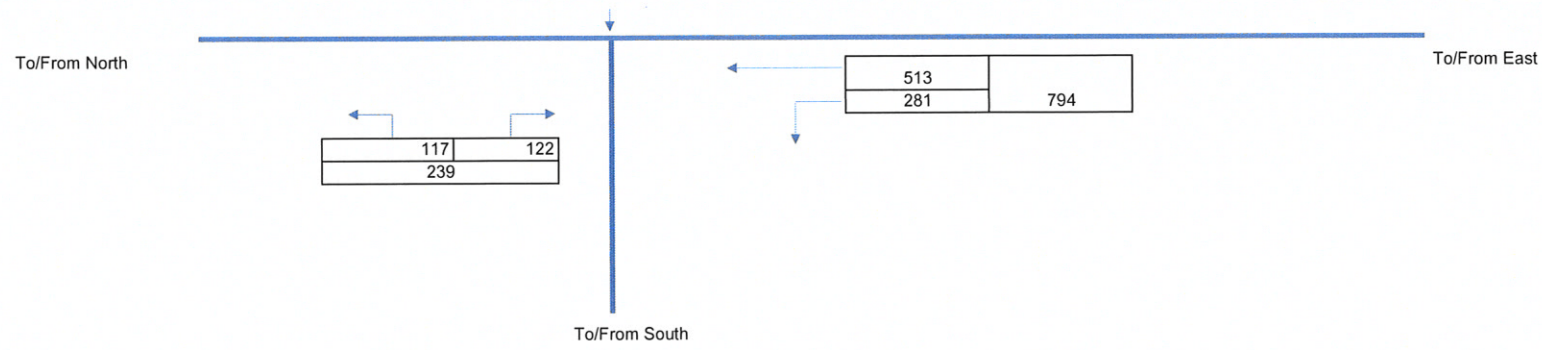


10% Sensitivity Test

PLOT		via Northern Access						via Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	8	16	24	14	9	23	4	9	13	8	5	13
	SOUTH	2	5	7	5	3	8	1	3	4	3	2	4
	EAST	20	47	67	45	28	73	11	26	37	25	15	40
Employment	NORTH	2	0	3	0	2	3	1	0	2	0	1	1
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	10	16	27	15	11	26	6	9	15	8	6	14
	SOUTH	2	5	7	5	3	8	1	3	4	3	2	4
	EAST	20	47	67	45	28	73	11	26	37	25	15	40

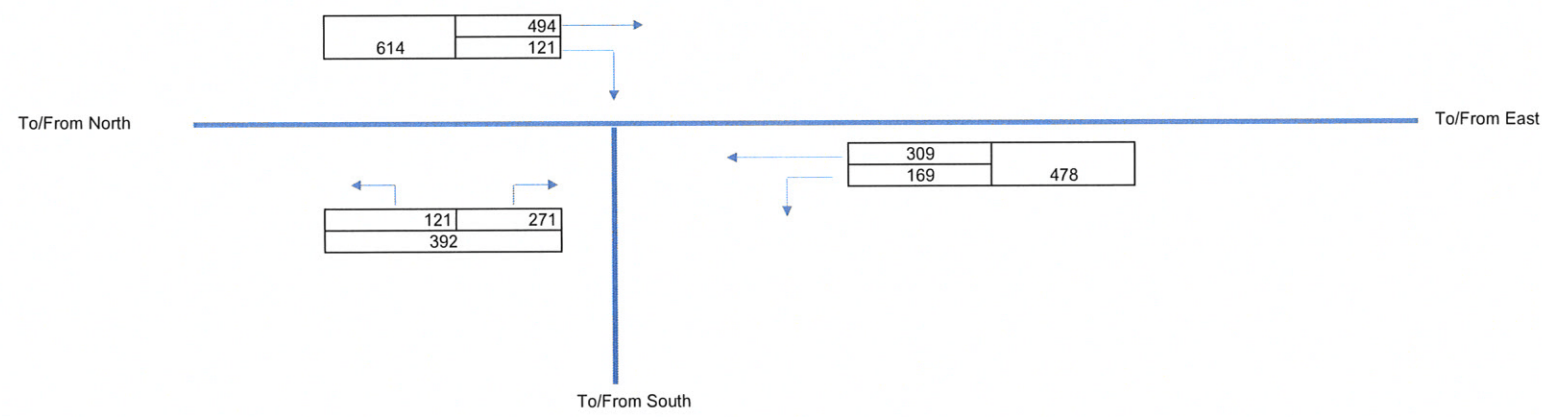
PLOT		via Northern Access						via Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	89	175	264	156	99	256	49	96	145	86	54	140
	SOUTH	23	54	76	53	33	86	12	30	42	29	18	47
	EAST	222	513	735	494	309	803	122	281	403	271	169	440
Employment	NORTH	26	4	30	5	25	29	14	2	17	2	13	16
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	115	179	295	161	124	285	63	98	162	88	68	156
	SOUTH	23	54	76	53	33	86	12	30	42	29	18	47
	EAST	222	513	735	494	309	803	122	281	403	271	169	440





Existing Layout with flare

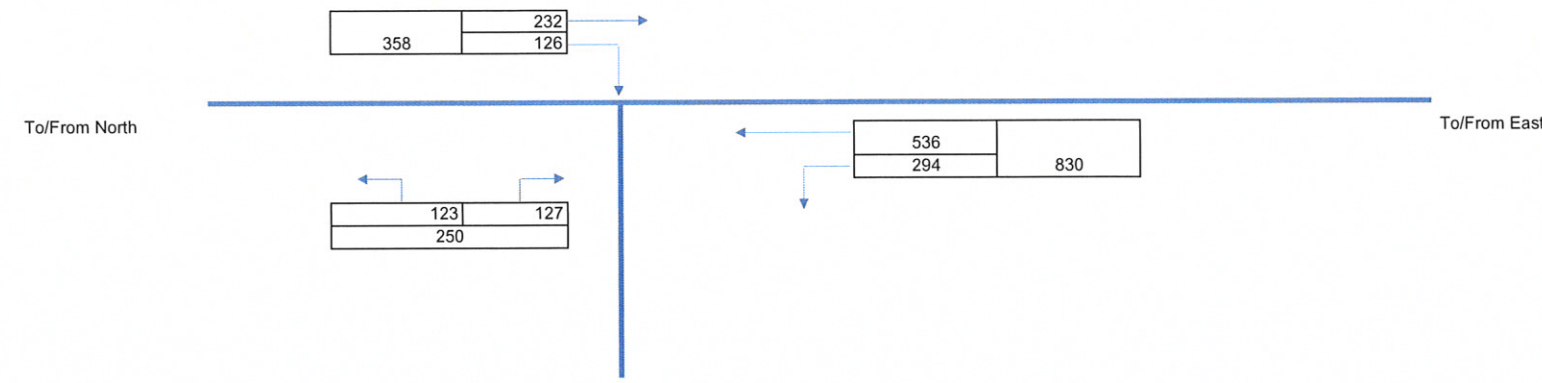
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.3	8.04	0.21	A	0.5	14.86	0.34	B
Stream B-A	0.6	15.76	0.36	C	3	38.24	0.76	E
Stream C-AB	0.7	8.53	0.32	A	0.9	6.04	0.33	A



15% Sensitivity Test

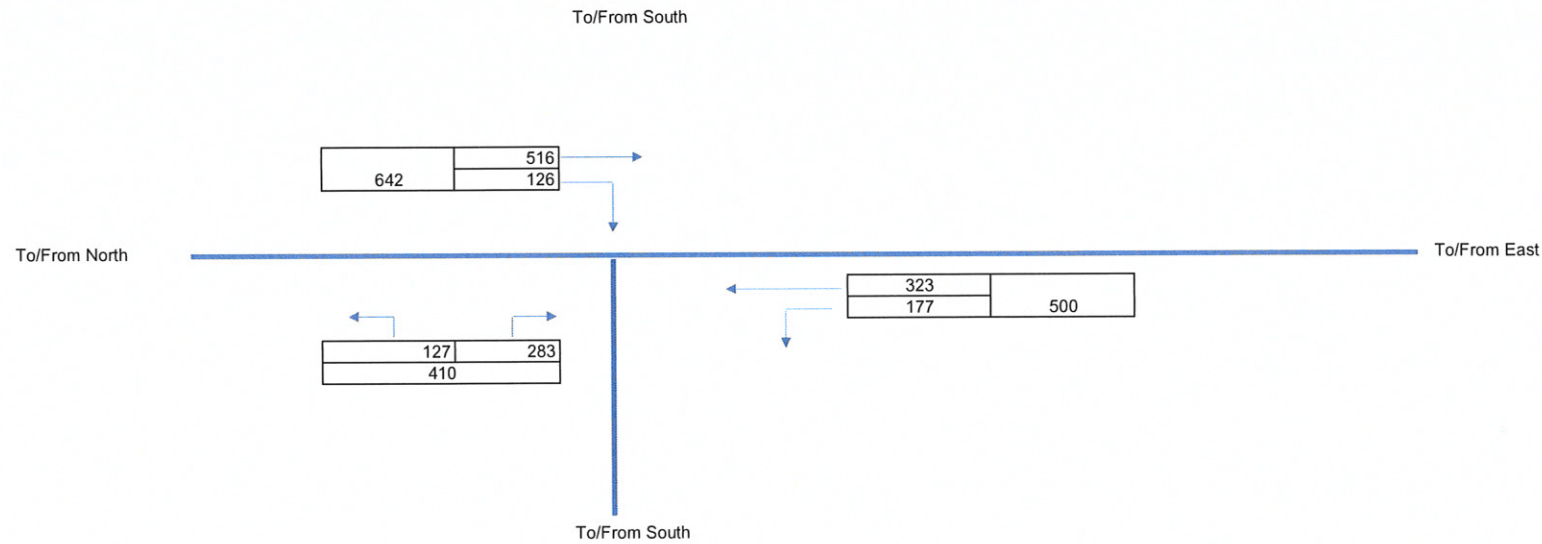
PLOT		via Northern Access						via Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	12	24	36	21	14	35	7	13	20	12	7	19
	SOUTH	3	7	10	7	4	12	2	4	6	4	2	6
	EAST	30	70	100	67	42	109	17	38	55	37	23	60
Employment	NORTH	4	1	4	1	3	4	2	0	2	0	2	2
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	16	24	40	22	17	39	9	13	22	12	9	21
	SOUTH	3	7	10	7	4	12	2	4	6	4	2	6
	EAST	30	70	100	67	42	109	17	38	55	37	23	60

PLOT		via Northern Access						via Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	93	183	276	164	104	267	51	100	152	90	57	147
	SOUTH	24	56	80	55	34	90	13	31	44	30	19	49
	EAST	232	536	768	516	323	839	127	294	421	283	177	460
Employment	NORTH	27	4	32	5	26	30	15	2	17	3	14	17
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	121	187	308	168	129	298	66	103	169	92	71	163
	SOUTH	24	56	80	55	34	90	13	31	44	30	19	49
	EAST	232	536	768	516	323	839	127	294	421	283	177	460



Existing Layout with flare

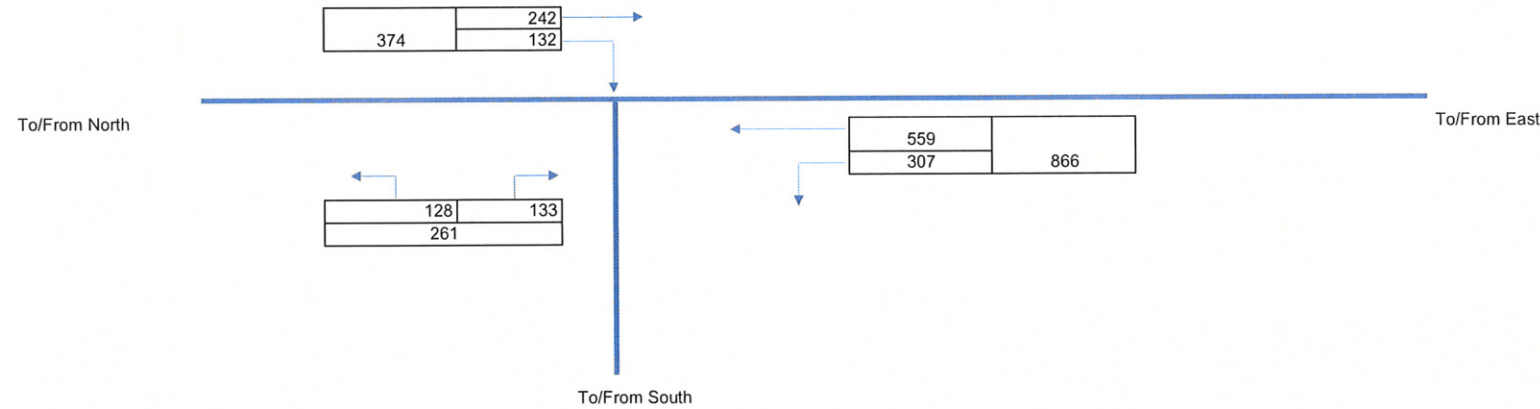
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.3	8.56	0.23	A	0.9	23.12	0.46	C
Stream B-A	0.7	17.34	0.39	C	4.3	52.93	0.83	F
Stream C-AB	0.8	8.87	0.35	A	1.1	6.2	0.36	A



20% Sensitivity Test

PLOT		via Northern Access						via Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	16	32	48	28	18	46	9	17	26	16	10	25
	SOUTH	4	10	14	10	6	16	2	5	8	5	3	9
	EAST	40	93	134	90	56	146	22	51	73	49	31	80
Employment	NORTH	5	1	6	1	4	5	3	0	3	0	2	3
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	21	33	54	29	22	52	12	18	29	16	12	28
	SOUTH	4	10	14	10	6	16	2	5	8	5	3	9
	EAST	40	93	134	90	56	146	22	51	73	49	31	80

PLOT		via Northern Access						via Southern Access					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot	Arr	Dep	Tot
Resi / Education	NORTH	97	191	288	171	108	279	53	105	158	94	59	153
	SOUTH	25	59	83	58	36	93	13	32	46	32	20	51
	EAST	242	559	801	539	337	876	133	307	440	296	185	480
Employment	NORTH	28	5	33	5	27	32	16	3	18	3	15	17
	SOUTH	0	0	0	0	0	0	0	0	0	0	0	0
	EAST	0	0	0	0	0	0	0	0	0	0	0	0
Total	NORTH	126	196	321	176	135	310	69	107	176	96	74	170
	SOUTH	25	59	83	58	36	93	13	32	46	32	20	51
	EAST	242	559	801	539	337	876	133	307	440	296	185	480



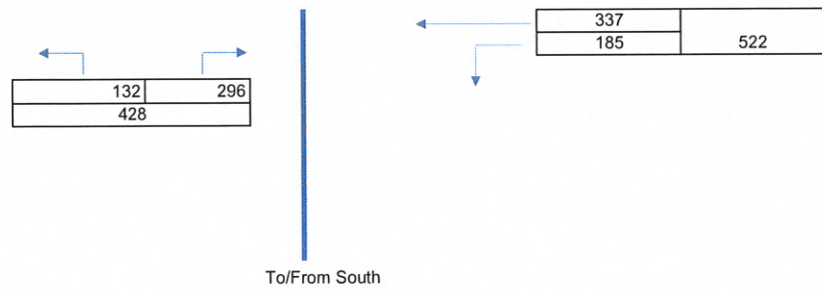
Existing Layout with flare

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2018								
Stream B-C	0.4	9.23	0.26	A	2.9	76.62	0.79	F
Stream B-A	0.8	19.45	0.43	C	7	83.75	0.91	F
Stream C-AB	0.9	9.29	0.38	A	1.2	6.42	0.39	A

Roundabout

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2500 Dwellings + 5%								
Arm 1	5.1	23.28	0.84	C	1.1	7.73	0.51	A
Arm 2	0.6	8.52	0.36	A	1.1	9.72	0.52	A
Arm 3	0.6	6.27	0.37	A	2.8	15.86	0.73	C
2500 Dwellings + 10%								
Arm 1	7.1	30.92	0.88	D	1.2	8.18	0.53	A
Arm 2	0.7	9.03	0.39	A	1.2	10.43	0.54	B
Arm 3	0.7	6.5	0.39	A	3.4	18.86	0.77	C
2500 Dwellings + 15%								
Arm 1	10.2	43.16	0.93	E	1.3	8.68	0.56	A





Arm 2	0.7	9.58	0.41	A	1.4	11.28	0.57	B
Arm 3	0.7	6.72	0.41	A	4.3	22.88	0.81	C
2500 Dwellings + 20%								
Arm 1	16.1	63.68	0.97	F	1.5	9.26	0.58	A
Arm 2	0.8	10.14	0.44	B	1.6	12.29	0.61	B
Arm 3	0.8	6.98	0.43	A	5.7	29.39	0.86	D