

VIEW 3 - BOULEVARD & FAST FOOD 2

DEVELOPMENT APPLICATION UPDATE



**NORTH SHORE MIXED USE PRECINCT**

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**RENDERED VIEW 3**

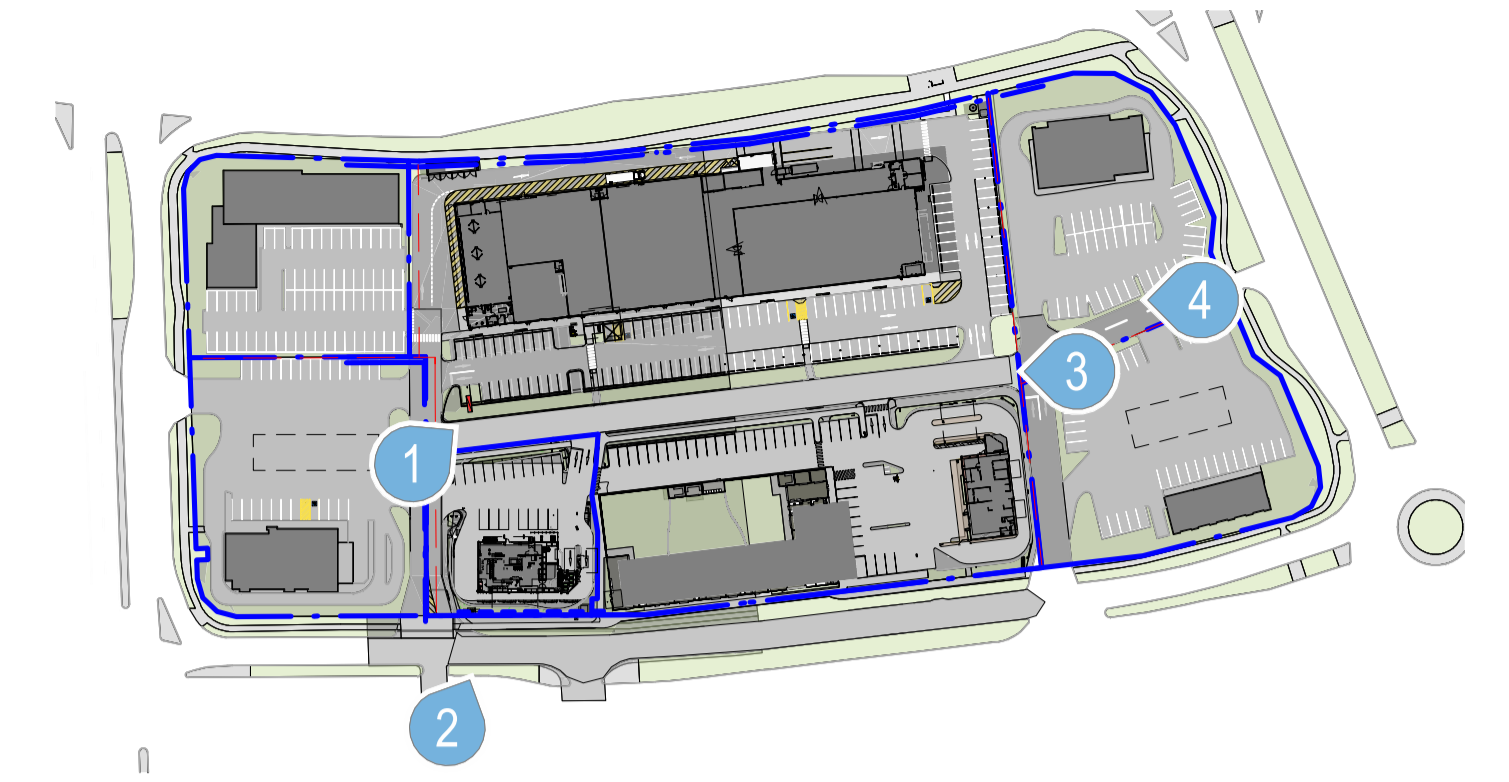
As indicated @ A1

2023-02-21

TA # 21.0271.17

A-4.03

rev. 7



VIEW 4 - BOULEVARD APPROACH BETWEEN EXISTING ADJACENT DEVELOPMENT

DEVELOPMENT APPLICATION UPDATE



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**RENDERED VIEW 4**

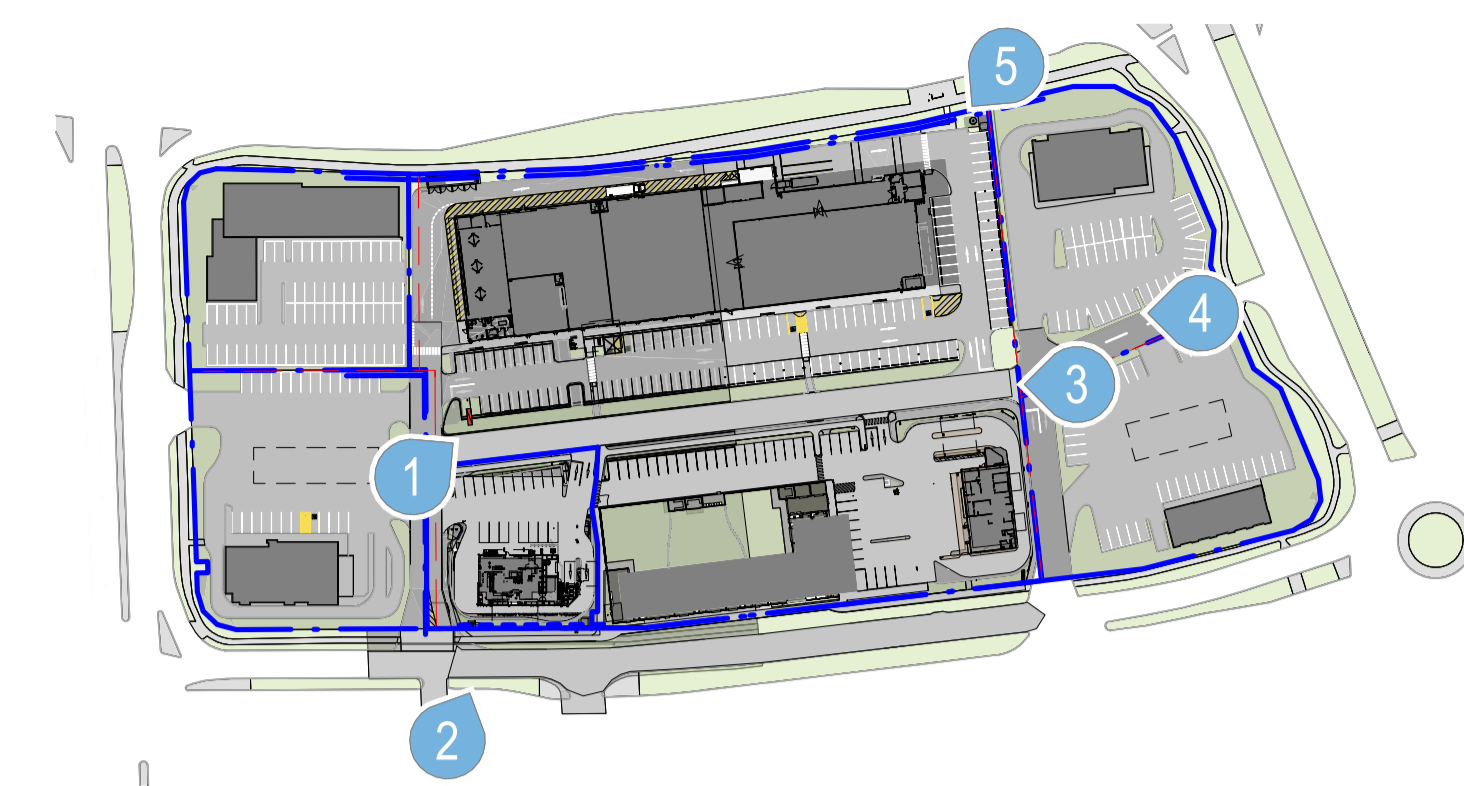
As indicated @ A1

2023-02-21

TA # 21.0271.17

A-4.04

rev. 7



VIEW 5 - VIEW FROM NORTH SHORE BOULEVARDE

DEVELOPMENT APPLICATION UPDATE



NORTH SHORE MIXED USE PRECINCT

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RENDERED VIEW 5

As indicated @ A1

2023-02-21

TA # 21.0271.17

A-4.05

rev. 5



1 3D PERSPECTIVE VIEW 1 - ALDI SUPERMARKET



2 3D PERSPECTIVE VIEW 2 - ALDI SUPERMARKET



3 3D PERSPECTIVE VIEW 3 - ALDI SUPERMARKET



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LFR - PERSPECTIVE/ 3D VIEWS

@ A1

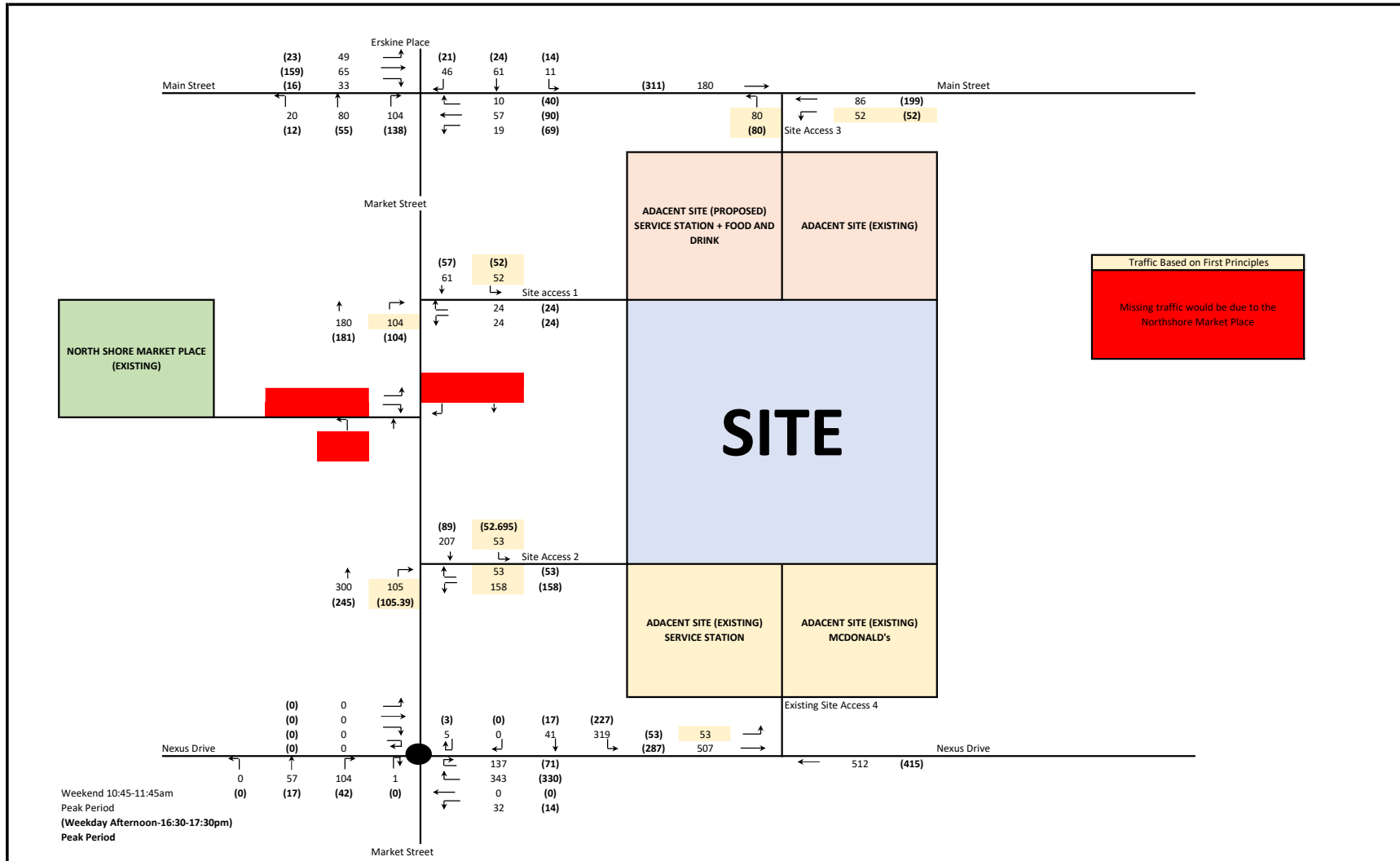
2024-04-15

TA # 21.0271.17

A-5.01

rev. 3

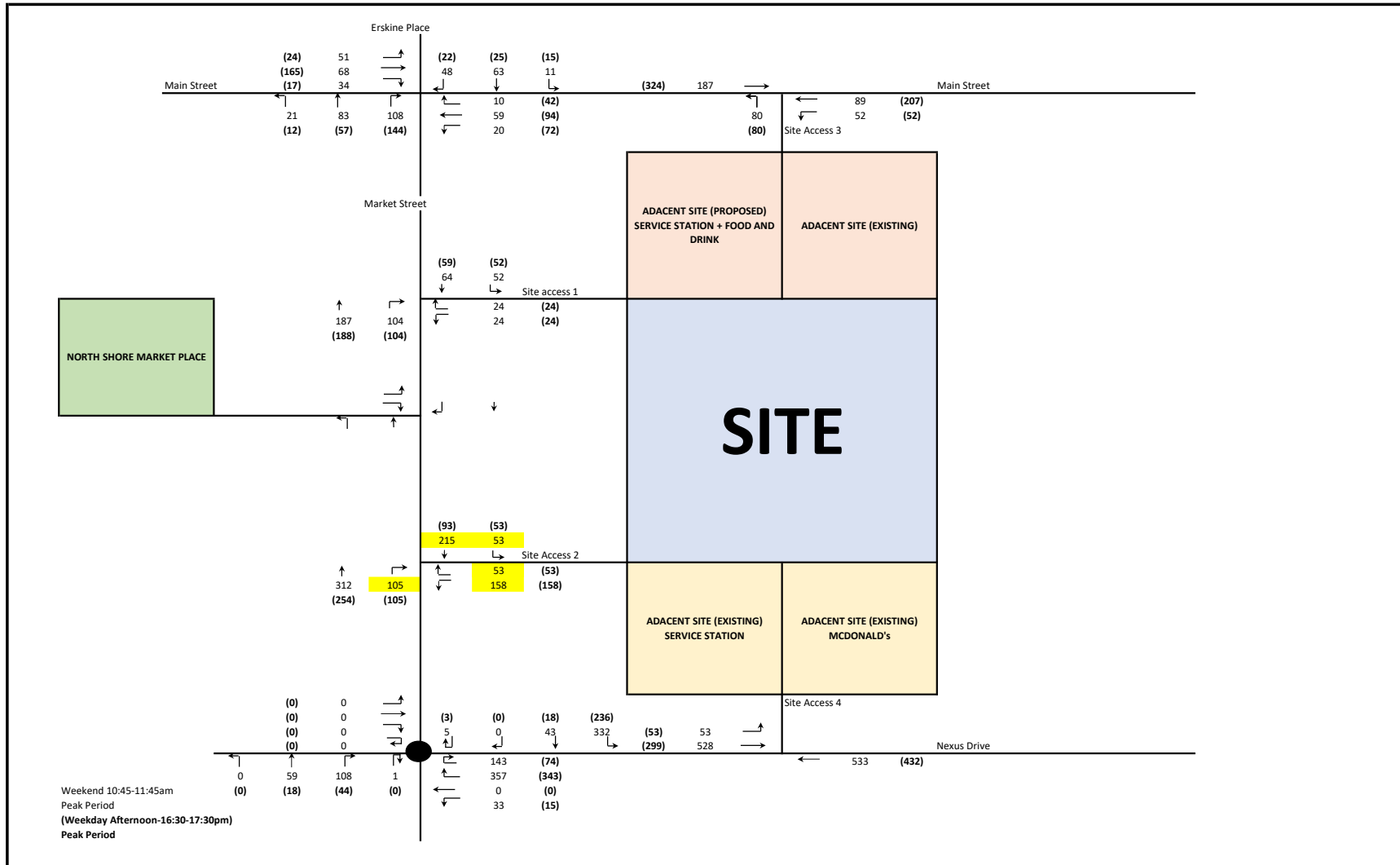
## APPENDIX B – TRAFFIC DIAGRAMS



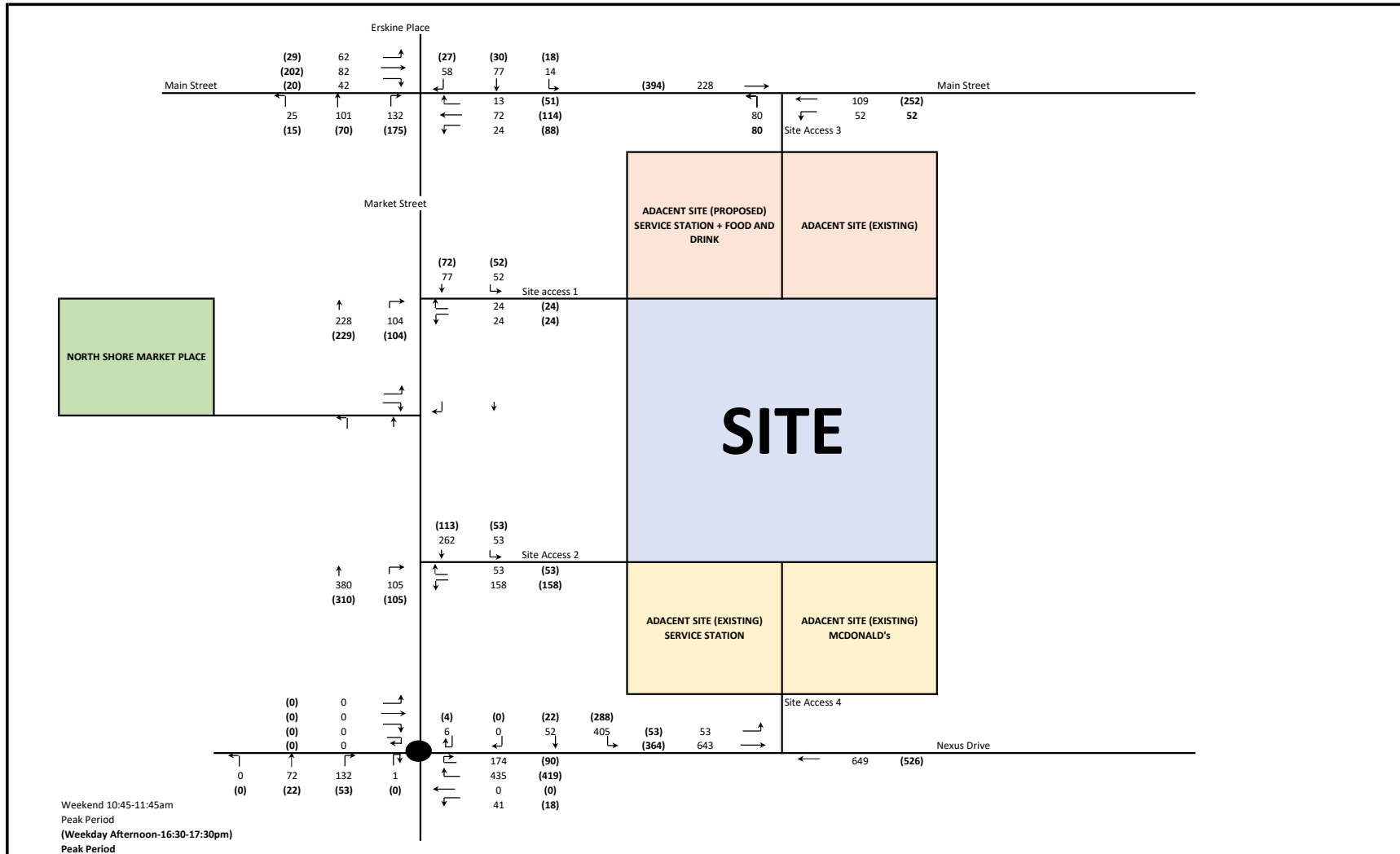
Traffic Based on First Principles

Missing traffic would be due to the Northshore Market Place

Project Number:	B21564	Title:	Background Volumes	Figure Number:	A 1
Project Name:	Townsville Northshore Service Centre		2022	Prepared:	II
Address:	30-42 Northshore Boulevard & 10 Market Street, Burdell			Approved:	MB
Client:	OneFin Ops Pty Ltd			Rev:	Date:

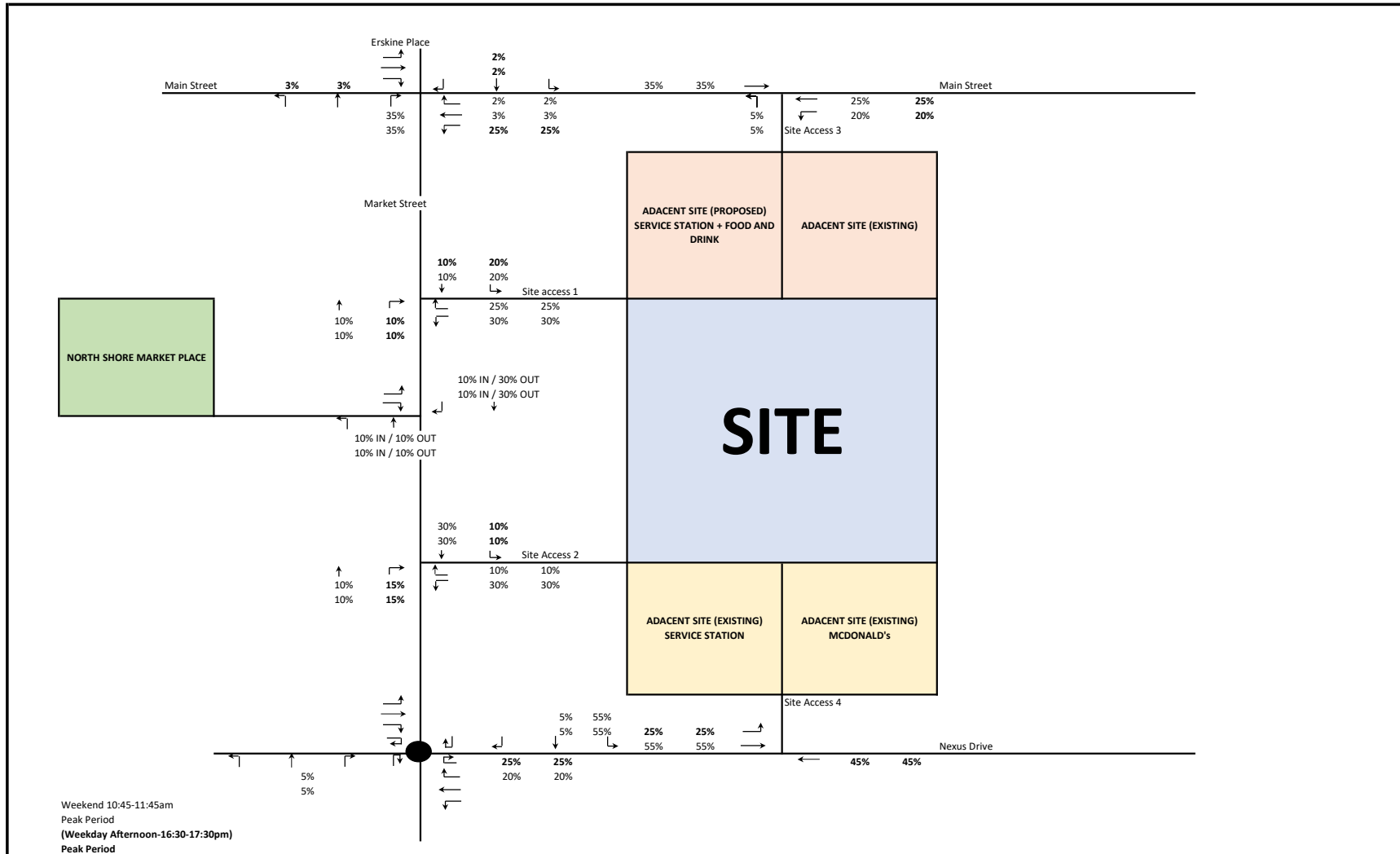


Project Number:	B21564	Title:	Background Volumes	Figure Number:	
Project Name:	Townsville Northshore Service Centre		2024	B	26/04/2024
Address:	30-42 Northshore Boulevard & 10 Market Street, Burdell			A	7/06/2022
Client:	OneFin Ops Pty Ltd			Rev:	Date:
				Prepared:	II
				Approved:	MB
				Rev:	Date:
					A 2

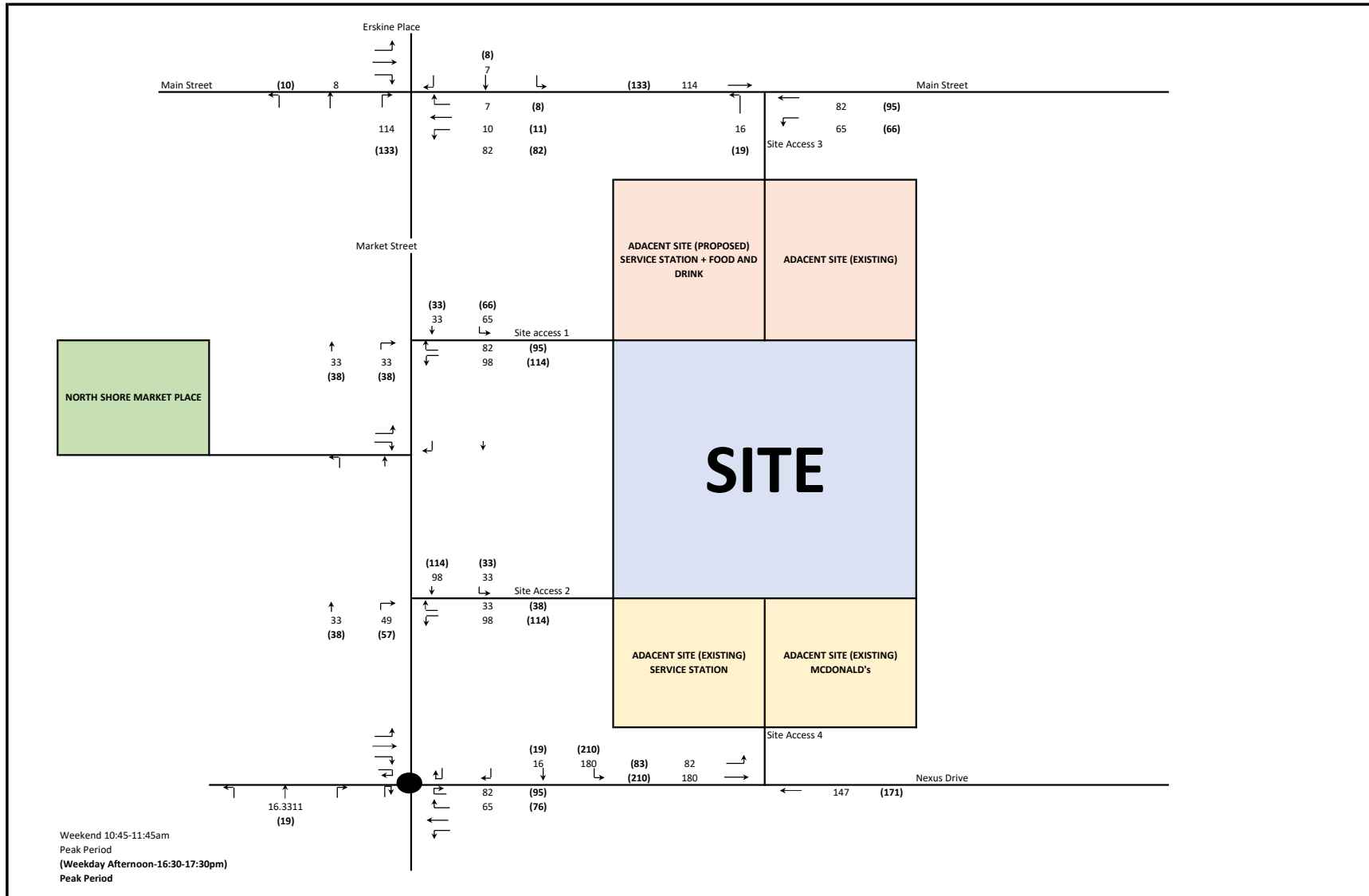


Project Number:	B21564	Title:	Background Volumes	Figure Number:	
Project Name:	Townsville Northshore Service Centre		2034	B	26/04/2024
Address:	30-42 Northshore Boulevard & 10 Market Street, Burdell			A	7/06/2022
Client:	OneFin Ops Pty Ltd			Rev:	Date:
				Prepared:	II
				Approved:	MB
				Rev:	Date:
					A 3

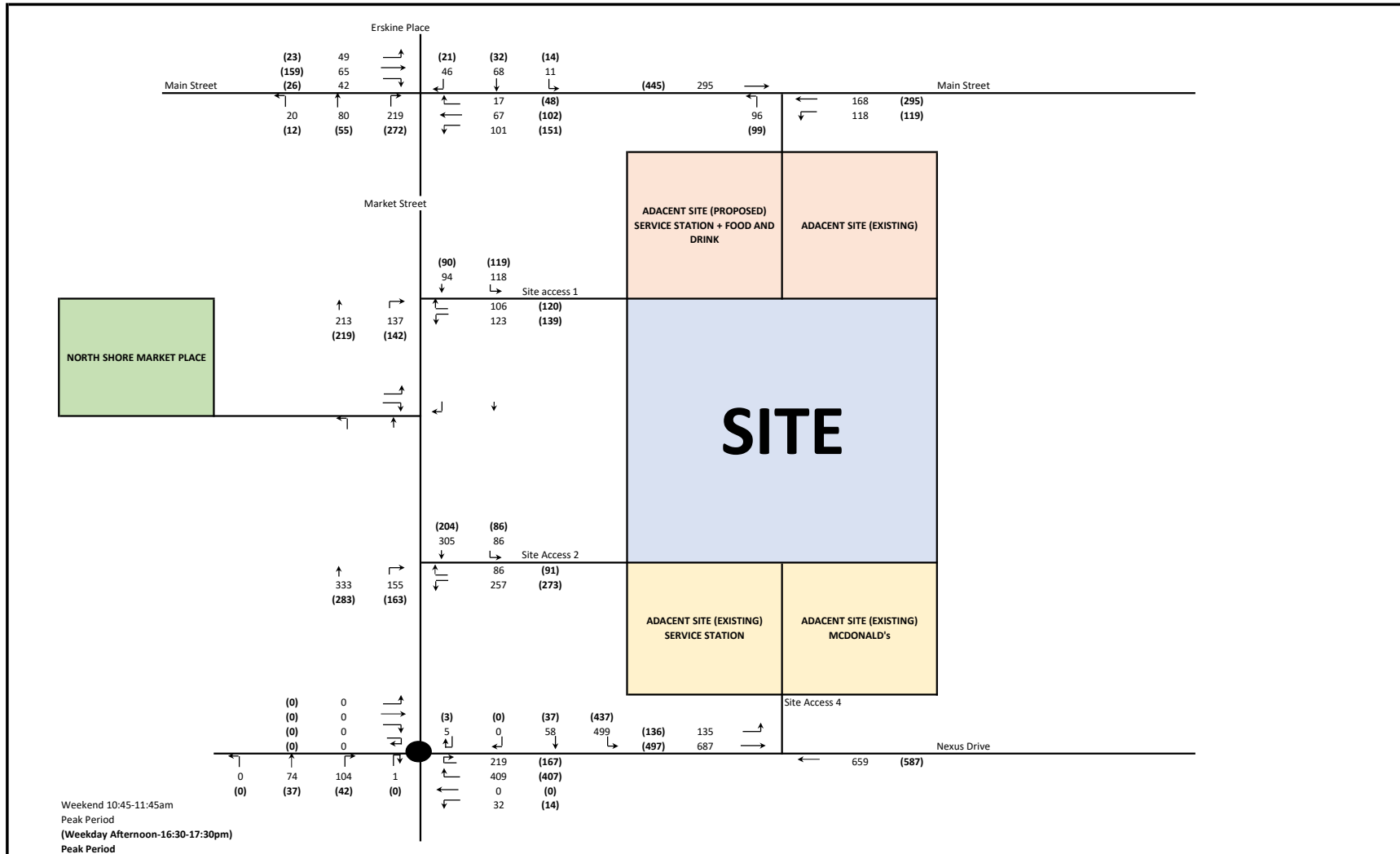




Project Number:	B21564	Title:	Trip Distribution		Figure Number:
Project Name:	Townsville Northshore Service Centre				B 26/04/2024
Address:	30-42 Northshore Boulevard & 10 Market Street, Burdell				A 7/06/2022
Client:	OneFin Ops Pty Ltd	Prepared:	II	Approved:	MB
		Rev:		Date:	

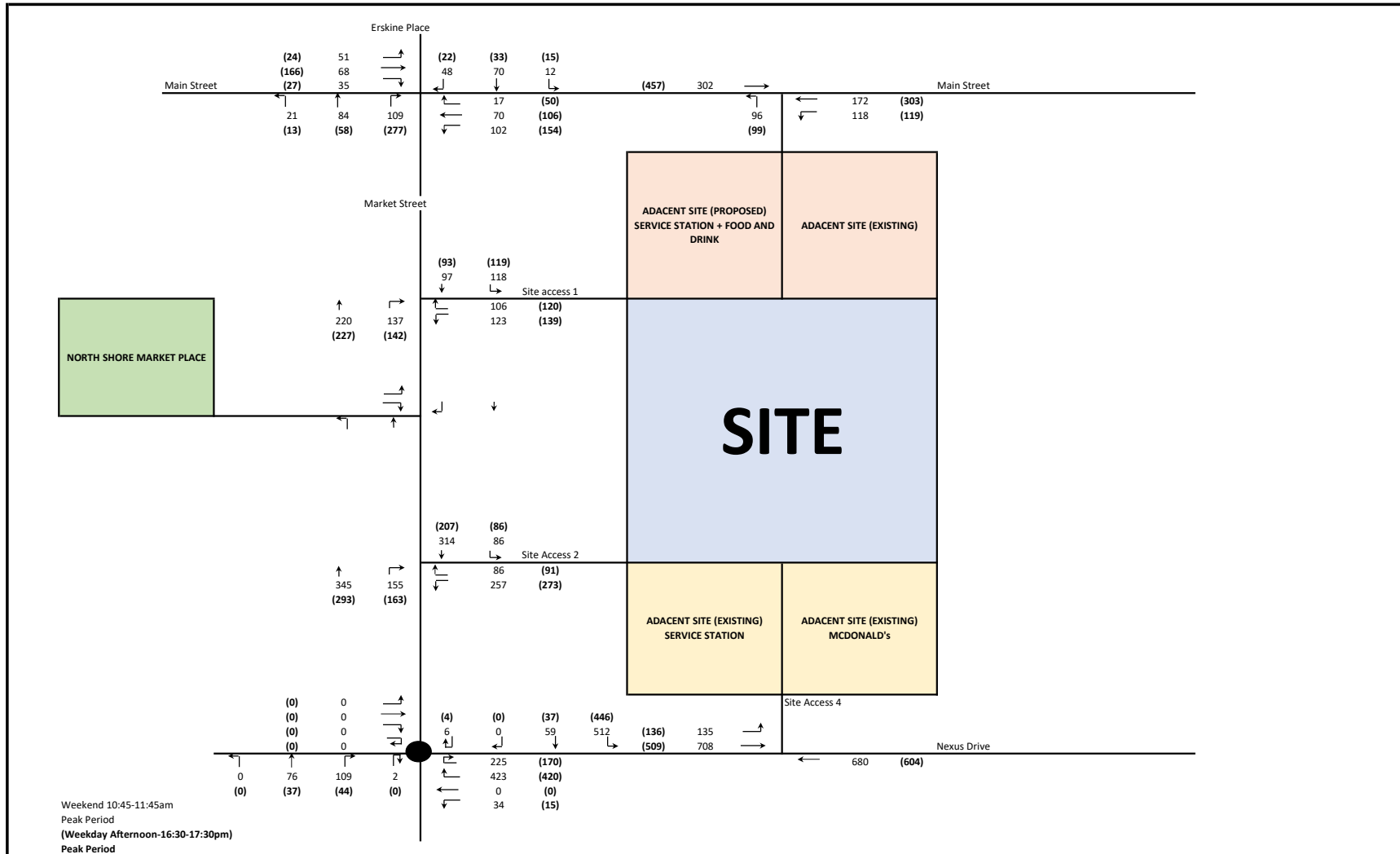


Project Number:	B21564	Title:	Development Traffic		Figure Number:
Project Name:	Townsville Northshore Service Centre				A 5
Address:	30-42 Northshore Boulevard & 10 Market Street, Burdell				
Client:	OneFin Ops Pty Ltd	Prepared:	II	Approved:	MB
		Rev:	Date:		



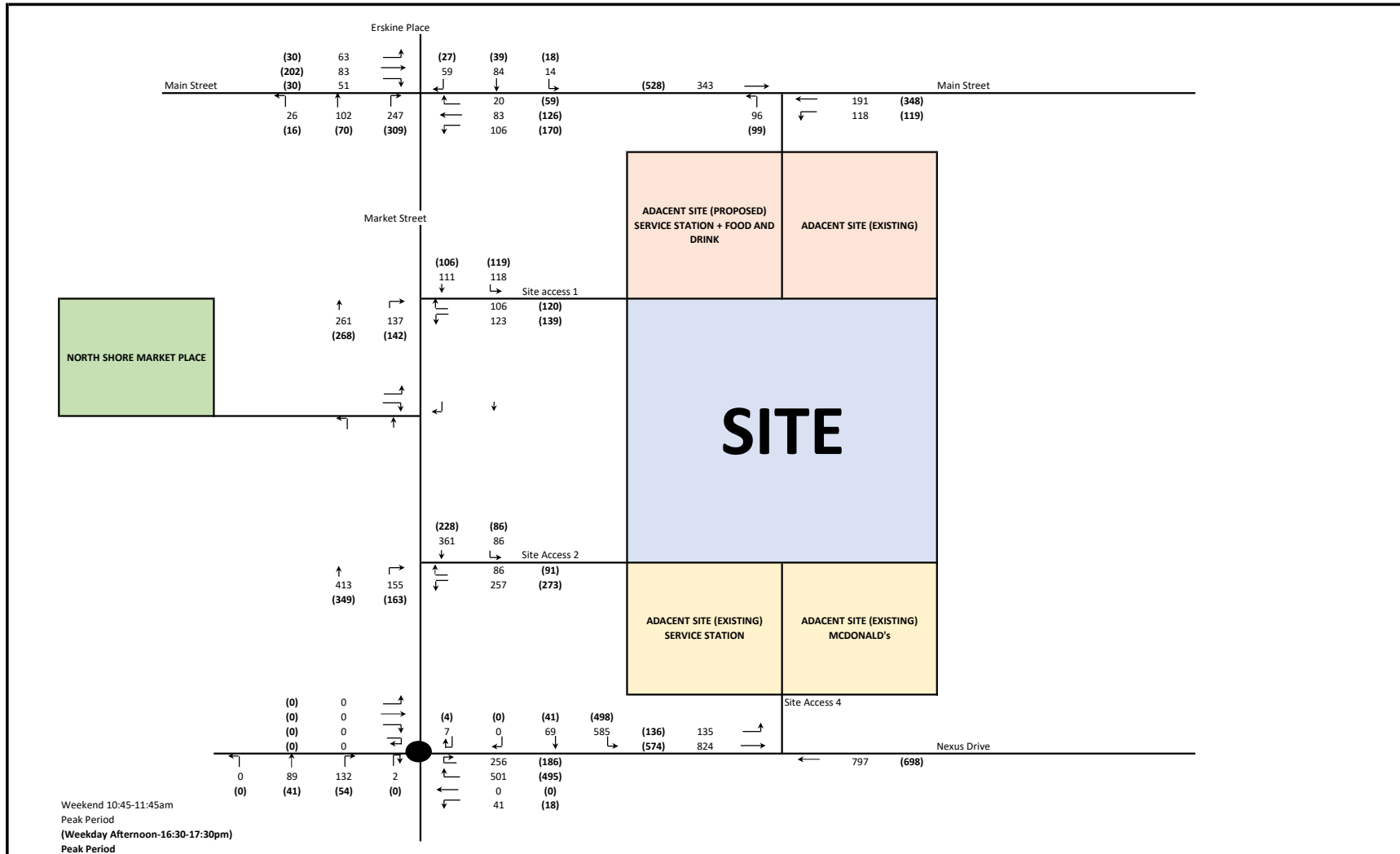
Project Number:	B21564	Title:	Design Traffic		Figure Number:
Project Name:	Townsville Northshore Service Centre				B 26/04/2024
Address:	30-42 Northshore Boulevard & 10 Market Street, Burdell		2022		A 7/06/2022
Client:	OneFin Ops Pty Ltd	Prepared:	II	Approved:	MB Rev: Date:

A 6



Project Number:	B21564	Title:	Design Traffic		Figure Number:	
Project Name:	Townsville Northshore Service Centre		2024		B	26/04/2024
Address:	30-42 Northshore Boulevard & 10 Market Street, Burdell				A	7/06/2022
Client:	OneFin Ops Pty Ltd	Prepared:	II	Approved:	MB	Rev: Date:

A 7



Project Number:	B21564	Title:	Design Traffic		Figure Number:
Project Name:	Townsville Northshore Service Centre		2034		B 26/04/2024
Address:	30-42 Northshore Boulevard & 10 Market Street, Burdell				A 7/06/2022
Client:	OneFin Ops Pty Ltd	Prepared:	II	Approved:	MB
		Rev:	Date:		

A 8

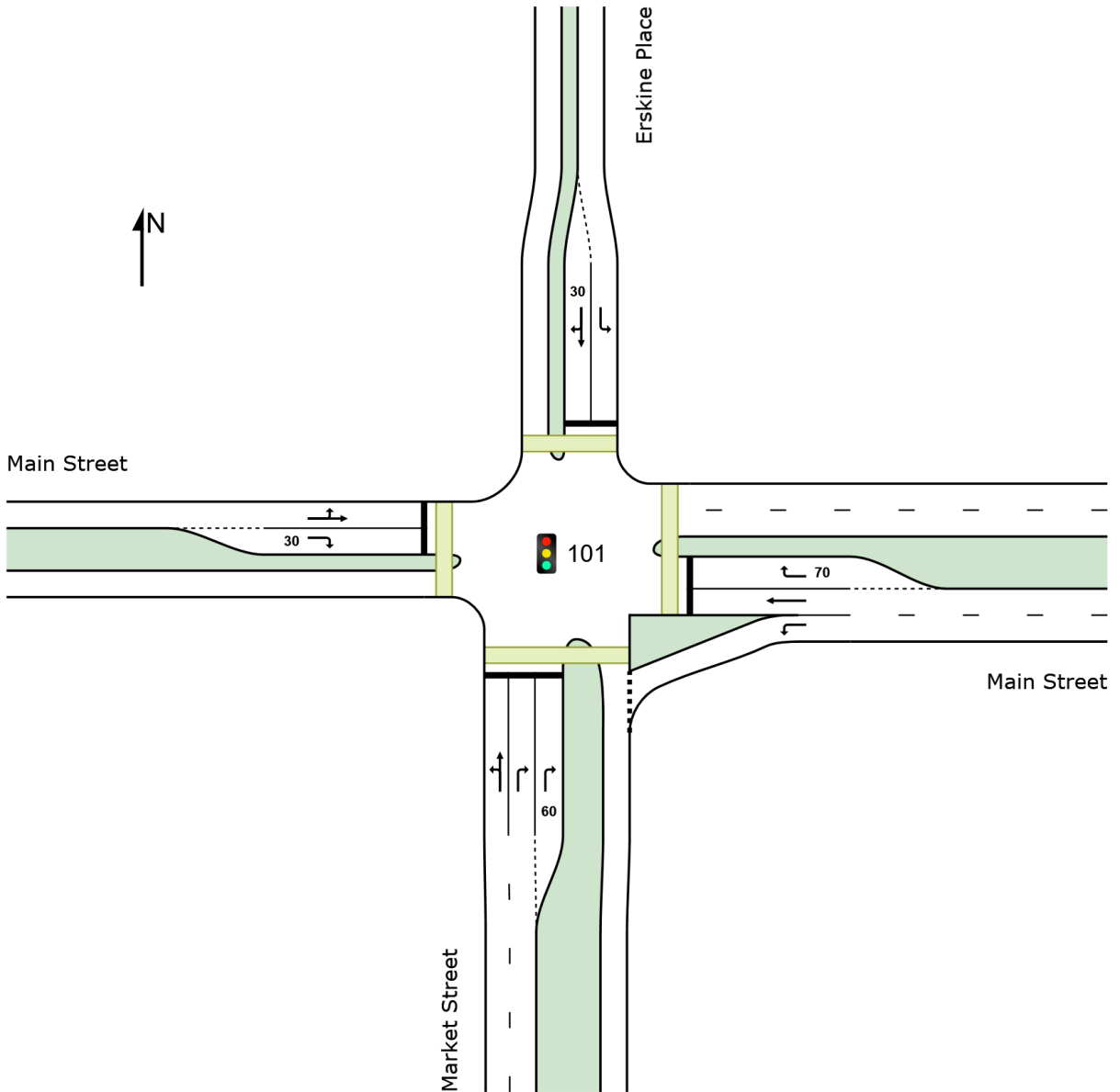
## APPENDIX C – SIDRA OUTPUTS

# SITE LAYOUT

Site: 101 [2024 W/E BG Main Street / Market Street Signals  
(Site Folder: 2024 BG)]

New Site  
Site Category: (None)  
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

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Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# PHASING SUMMARY

**Site: 101 [2024 W/E BG Main Street / Market Street Signals (Site Folder: 2024 BG)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Leading Right Turn

Input Phase Sequence: A, B, C, D

Output Phase Sequence: A, B, C, D

Reference Phase: Phase B

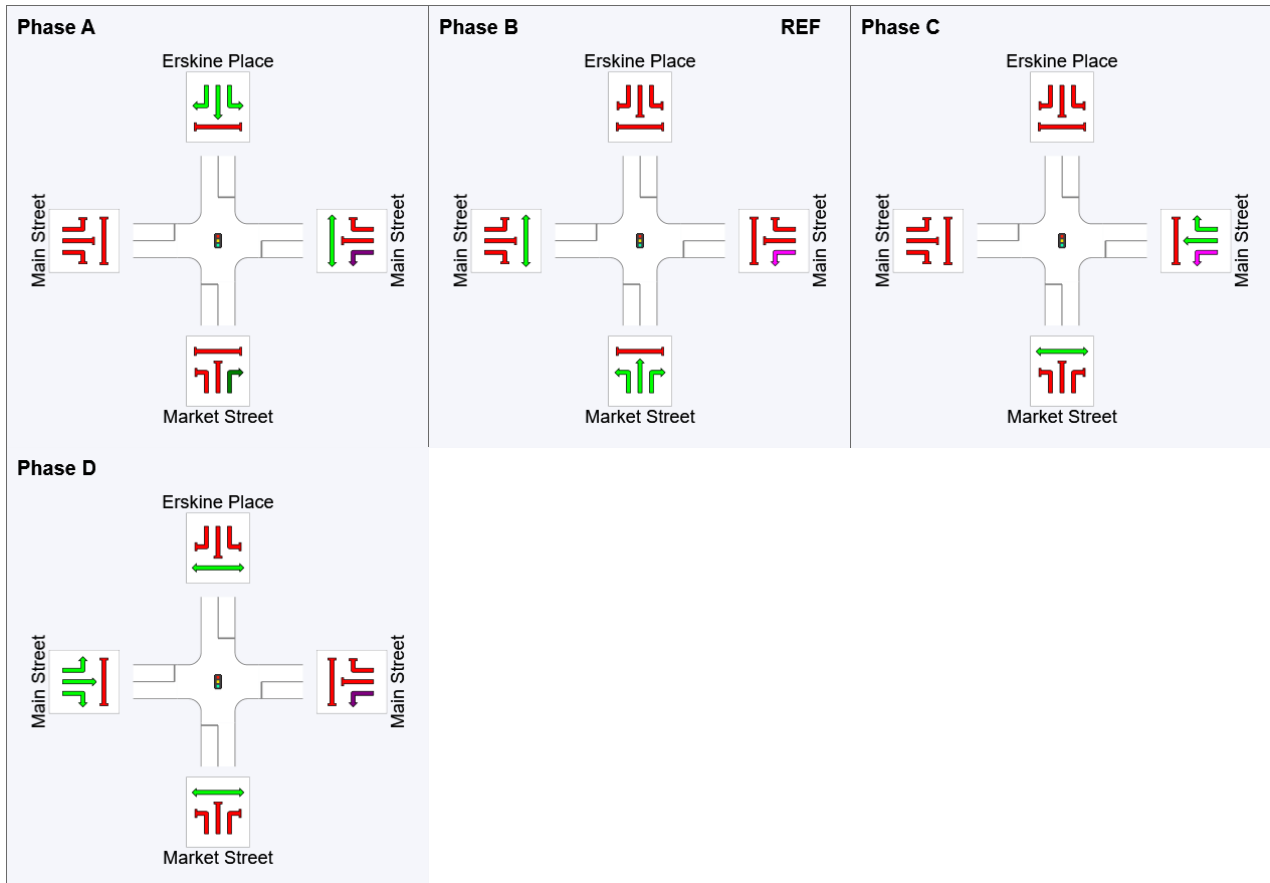
## Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	58	0	21	35
Green Time (sec)	16	15	8	17
Phase Time (sec)	22	21	14	23
Phase Split	28%	26%	18%	29%
Phase Frequency (%)	100.0 <sup>4</sup>	100.0 <sup>4</sup>	100.0 <sup>4</sup>	100.0 <sup>4</sup>

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

<sup>4</sup> Phase Frequency specified by the user (phase times not specified).

## Output Phase Sequence





REF: Reference Phase  
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

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Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# MOVEMENT SUMMARY

**Site: 101 [2024 W/E BG Main Street / Market Street Signals (Site Folder: 2024 BG)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [ Total HV ]		Arrival Flows [ Total HV ]		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [ Veh. Dist ]		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Market Street															
1	L2	All MCs	22	5.0	22	5.0	0.317	35.7	LOS D	3.8	27.8	0.91	0.73	0.91	26.7
2	T1	All MCs	87	5.0	87	5.0	*0.317	31.1	LOS C	3.8	27.8	0.91	0.73	0.91	28.0
3	R2	All MCs	114	5.0	114	5.0	0.095	19.6	LOS B	1.4	9.9	0.69	0.70	0.69	21.8
Approach			223	5.0	223	5.0	0.317	25.7	LOS C	3.8	27.8	0.80	0.71	0.80	25.5
East: Main Street															
4	L2	All MCs	21	5.0	21	5.0	0.017	6.5	LOS A	0.1	0.7	0.20	0.58	0.20	35.6
5	T1	All MCs	62	5.0	62	5.0	*0.329	38.2	LOS D	2.4	17.4	0.97	0.73	0.97	27.2
6	R2	All MCs	11	5.0	11	5.0	0.057	42.0	LOS D	0.4	2.8	0.93	0.67	0.93	24.8
Approach			94	5.0	94	5.0	0.329	31.5	LOS C	2.4	17.4	0.79	0.69	0.79	27.5
North: Erskine Place															
7	L2	All MCs	12	5.0	12	5.0	0.032	33.6	LOS C	0.4	2.7	0.83	0.67	0.83	27.7
8	T1	All MCs	66	5.0	66	5.0	*0.316	30.2	LOS C	4.0	29.2	0.90	0.74	0.90	27.7
9	R2	All MCs	51	5.0	51	5.0	0.316	35.8	LOS D	4.0	29.2	0.90	0.74	0.90	34.1
Approach			128	5.0	128	5.0	0.316	32.7	LOS C	4.0	29.2	0.89	0.73	0.89	30.7
West: Main Street															
10	L2	All MCs	54	5.0	54	5.0	0.319	35.0	LOS C	4.2	30.9	0.89	0.74	0.89	34.5
11	T1	All MCs	72	5.0	72	5.0	*0.319	29.4	LOS C	4.2	30.9	0.89	0.74	0.89	29.9
12	R2	All MCs	36	5.0	36	5.0	0.094	33.3	LOS C	1.1	8.3	0.84	0.71	0.84	26.4
Approach			161	5.0	161	5.0	0.319	32.1	LOS C	4.2	30.9	0.88	0.73	0.88	31.0
All Vehicles			606	5.0	606	5.0	0.329	29.8	LOS C	4.2	30.9	0.84	0.72	0.84	28.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Input Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [ Ped Dist ]		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed	
	ped/h	ped/h	sec		ped	m			sec	m	m/sec	
South: Market Street												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
East: Main Street												

P2 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
North: Erskine Place											
P3 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
West: Main Street											
P4 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians	200	211	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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# MOVEMENT SUMMARY

**Site: 101 [2024 PM BG Main Street / Market Street Signals (Site Folder: 2024 BG)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [ Total HV ]		Arrival Flows [ Total HV ]		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [ Veh. Dist ]		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Market Street															
1	L2	All MCs	13	5.0	13	5.0	0.263	38.1	LOS D	2.6	19.0	0.92	0.72	0.92	25.7
2	T1	All MCs	60	5.0	60	5.0	0.263	33.6	LOS C	2.6	19.0	0.92	0.72	0.92	26.9
3	R2	All MCs	152	5.0	152	5.0	*0.137	21.1	LOS C	1.9	13.9	0.73	0.71	0.73	20.9
Approach			224	5.0	224	5.0	0.263	25.4	LOS C	2.6	19.0	0.79	0.72	0.79	23.5
East: Main Street															
4	L2	All MCs	76	5.0	76	5.0	0.057	6.2	LOS A	0.2	1.8	0.16	0.59	0.16	35.8
5	T1	All MCs	99	5.0	99	5.0	*0.419	36.5	LOS D	3.7	27.3	0.97	0.75	0.97	27.8
6	R2	All MCs	44	5.0	44	5.0	0.190	40.8	LOS D	1.6	11.8	0.93	0.73	0.93	25.2
Approach			219	5.0	219	5.0	0.419	26.9	LOS C	3.7	27.3	0.68	0.69	0.68	28.2
North: Erskine Place															
7	L2	All MCs	16	5.0	16	5.0	0.047	34.7	LOS C	0.5	3.7	0.85	0.69	0.85	27.2
8	T1	All MCs	26	5.0	26	5.0	*0.143	29.9	LOS C	1.6	12.0	0.87	0.69	0.87	27.7
9	R2	All MCs	23	5.0	23	5.0	0.143	35.5	LOS D	1.6	12.0	0.87	0.69	0.87	34.2
Approach			65	5.0	65	5.0	0.143	33.0	LOS C	1.6	12.0	0.86	0.69	0.86	30.3
West: Main Street															
10	L2	All MCs	25	5.0	25	5.0	0.447	34.3	LOS C	6.8	49.5	0.90	0.75	0.90	35.5
11	T1	All MCs	174	5.0	174	5.0	*0.447	28.7	LOS C	6.8	49.5	0.90	0.75	0.90	31.1
12	R2	All MCs	18	5.0	18	5.0	0.042	31.1	LOS C	0.5	3.9	0.80	0.68	0.80	27.4
Approach			217	5.0	217	5.0	0.447	29.5	LOS C	6.8	49.5	0.89	0.74	0.89	31.4
All Vehicles			725	5.0	725	5.0	0.447	27.8	LOS C	6.8	49.5	0.80	0.71	0.80	28.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Input Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [ Ped Dist ]		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed	
	ped/h	ped/h	sec		ped	m			sec	m	m/sec	
South: Market Street												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
East: Main Street												

P2 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
North: Erskine Place											
P3 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
West: Main Street											
P4 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians	200	211	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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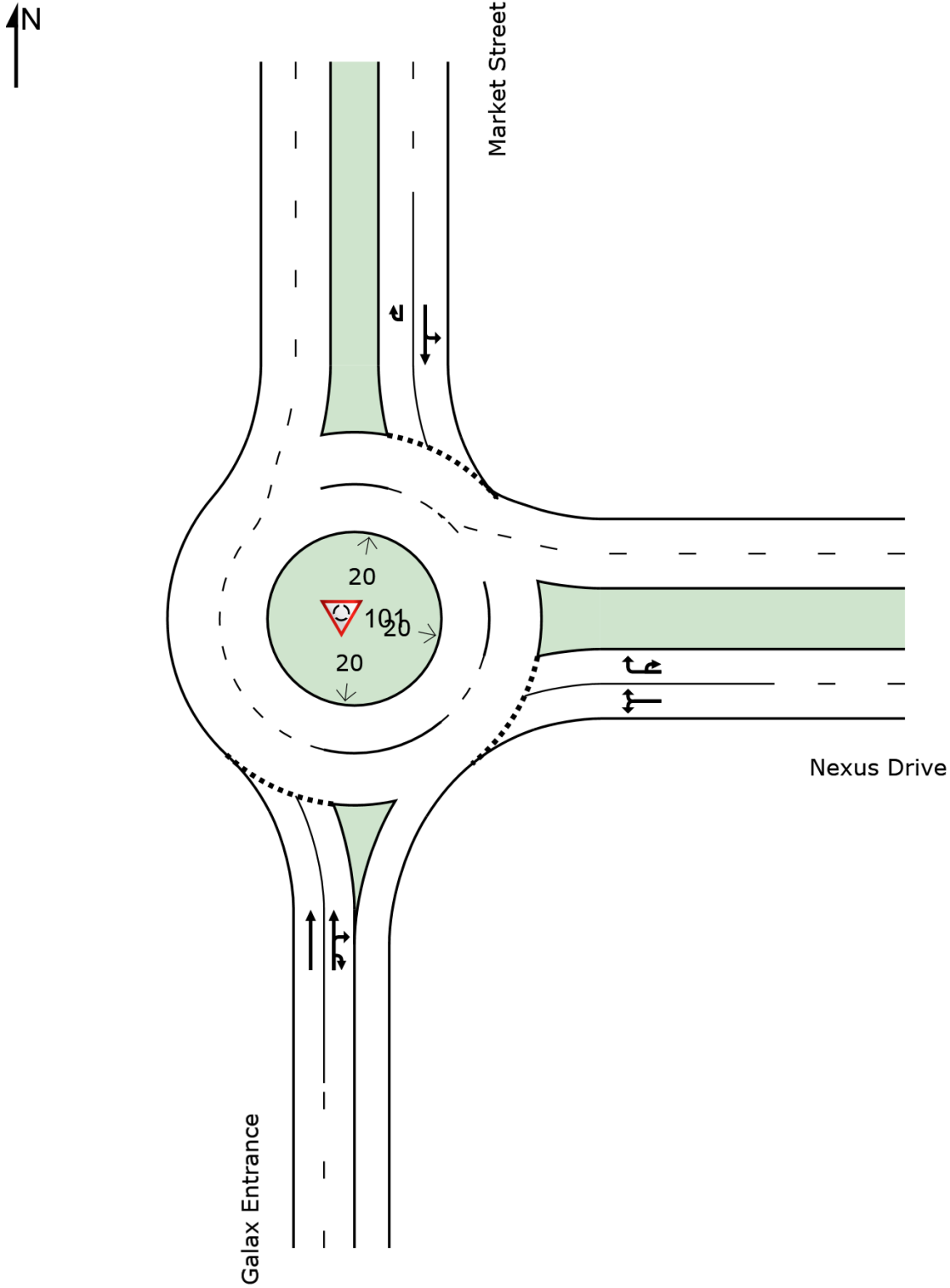
Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# SITE LAYOUT

Site: 101 [2024 W/E BG Nexus Dr / Market St Roundabout  
(Site Folder: 2024 BG)]

New Site  
Site Category: (None)  
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.





# MOVEMENT SUMMARY

**Site: 101 [2024 W/E BG Nexus Dr / Market St Roundabout  
(Site Folder: 2024 BG)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.1.200**

New Site  
Site Category: (None)  
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Galax Entrance															
2	T1	All MCs	62	5.0	62	5.0	0.077	6.6	LOS A	0.3	2.2	0.50	0.60	0.50	36.4
3	R2	All MCs	114	5.0	114	5.0	0.111	10.6	LOS B	0.5	3.4	0.48	0.70	0.48	34.3
3u	U	All MCs	1	5.0	1	5.0	0.111	12.8	LOS B	0.5	3.4	0.48	0.70	0.48	33.2
Approach			177	5.0	177	5.0	0.111	9.2	LOS A	0.5	3.4	0.49	0.67	0.49	34.9
East: Nexus Drive															
4	L2	All MCs	35	5.0	35	5.0	0.198	4.4	LOS A	1.0	7.2	0.17	0.59	0.17	36.8
6	R2	All MCs	376	5.0	376	5.0	0.198	9.1	LOS A	1.0	7.2	0.17	0.60	0.17	32.5
6u	U	All MCs	151	5.0	151	5.0	0.198	11.3	LOS B	1.0	7.2	0.17	0.63	0.17	36.1
Approach			561	5.0	561	5.0	0.198	9.4	LOS A	1.0	7.2	0.17	0.61	0.17	33.8
North: Market Street															
7	L2	All MCs	349	5.0	349	5.0	0.327	4.6	LOS A	1.8	12.9	0.43	0.53	0.43	38.8
8	T1	All MCs	45	5.0	45	5.0	0.327	4.7	LOS A	1.8	12.9	0.43	0.53	0.43	39.4
9u	U	All MCs	5	5.0	5	5.0	0.007	11.8	LOS B	0.0	0.2	0.39	0.65	0.39	28.8
Approach			400	5.0	400	5.0	0.327	4.7	LOS A	1.8	12.9	0.43	0.53	0.43	38.6
All Vehicles			1138	5.0	1138	5.0	0.327	7.7	LOS A	1.8	12.9	0.31	0.59	0.31	35.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

**Site: 101 [2024 PM BG Nexus Dr / Market St Roundabout (Site Folder: 2024 BG)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.1.200**

New Site  
 Site Category: (None)  
 Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Galax Entrance															
2	T1	All MCs	19	5.0	19	5.0	0.024	6.4	LOS A	0.1	0.7	0.47	0.55	0.47	36.8
3	R2	All MCs	46	5.0	46	5.0	0.044	10.3	LOS B	0.2	1.3	0.43	0.67	0.43	34.6
3u	U	All MCs	1	5.0	1	5.0	0.044	12.4	LOS B	0.2	1.3	0.43	0.67	0.43	33.4
Approach			66	5.0	66	5.0	0.044	9.2	LOS A	0.2	1.3	0.44	0.64	0.44	35.1
East: Nexus Drive															
4	L2	All MCs	16	5.0	16	5.0	0.154	4.3	LOS A	0.7	5.1	0.09	0.61	0.09	37.0
6	R2	All MCs	361	5.0	361	5.0	0.154	9.0	LOS A	0.7	5.1	0.10	0.62	0.10	32.9
6u	U	All MCs	78	5.0	78	5.0	0.154	11.1	LOS B	0.7	5.0	0.10	0.63	0.10	36.8
Approach			455	5.0	455	5.0	0.154	9.2	LOS A	0.7	5.1	0.10	0.62	0.10	33.7
North: Market Street															
7	L2	All MCs	248	5.0	248	5.0	0.199	3.9	LOS A	0.9	6.7	0.26	0.47	0.26	40.1
8	T1	All MCs	19	5.0	19	5.0	0.199	4.0	LOS A	0.9	6.7	0.26	0.47	0.26	40.9
9u	U	All MCs	3	5.0	3	5.0	0.004	11.0	LOS B	0.0	0.1	0.27	0.63	0.27	29.5
Approach			271	5.0	271	5.0	0.199	3.9	LOS A	0.9	6.7	0.26	0.47	0.26	40.0
All Vehicles			792	5.0	792	5.0	0.199	7.4	LOS A	0.9	6.7	0.18	0.57	0.18	35.5

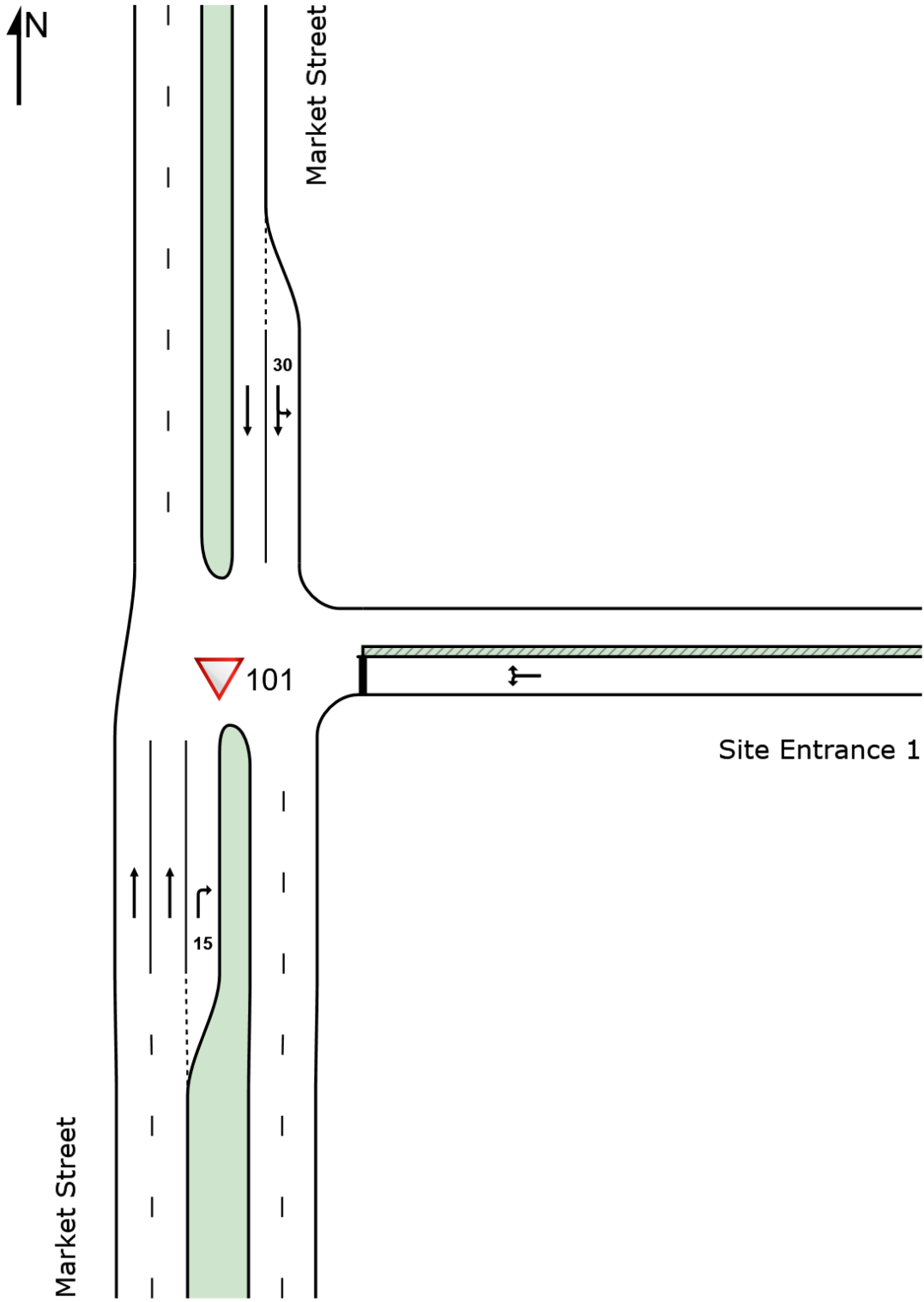
Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
 Roundabout LOS Method: SIDRA Roundabout LOS.  
 Vehicle movement LOS values are based on average delay per movement.  
 Intersection and Approach LOS values are based on average delay for all vehicle movements.  
 Roundabout Capacity Model: SIDRA Standard.  
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

# SITE LAYOUT

▽ Site: 101 [2024 W/E BG Market Street / Site Access- 1 (Site Folder: 2024 BG)]

New Site  
Site Category: (None)  
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.





# MOVEMENT SUMMARY

Site: 101 [2024 W/E BG Market Street / Site Access- 1 (Site Folder: 2024 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site  
 Site Category: (None)  
 Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Market Street															
2	T1	All MCs	197	5.0	197	5.0	0.052	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	109	5.0	109	5.0	0.088	6.1	LOS A	0.4	2.6	0.24	0.55	0.24	37.8
Approach			306	5.0	306	5.0	0.088	2.2	NA	0.4	2.6	0.09	0.20	0.09	48.9
East: Site Entrance 1															
4	L2	All MCs	25	5.0	25	5.0	0.077	8.0	LOS A	0.3	2.0	0.08	0.94	0.08	32.9
6	R2	All MCs	25	5.0	25	5.0	0.077	12.3	LOS B	0.3	2.0	0.08	0.94	0.08	22.1
Approach			51	5.0	51	5.0	0.077	10.2	LOS B	0.3	2.0	0.08	0.94	0.08	27.7
North: Market Street															
7	L2	All MCs	55	5.0	55	5.0	0.033	4.3	LOS A	0.0	0.0	0.00	0.51	0.00	22.2
8	T1	All MCs	67	5.0	67	5.0	0.033	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	58.8
Approach			122	5.0	122	5.0	0.033	1.9	NA	0.0	0.0	0.00	0.25	0.00	36.9
All Vehicles			479	5.0	479	5.0	0.088	3.0	NA	0.4	2.6	0.06	0.29	0.06	42.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
 Vehicle movement LOS values are based on average delay per movement.  
 Minor Road Approach LOS values are based on average delay for all vehicle movements.  
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
 Two-Way Sign Control Capacity Model: SIDRA Standard.  
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: 101 [2024 PM BG Market Street / Site Access - 1 (Site Folder: 2024 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site  
 Site Category: (None)  
 Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Market Street															
2	T1	All MCs	198	5.0	198	5.0	0.052	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	109	5.0	109	5.0	0.087	6.1	LOS A	0.4	2.6	0.23	0.55	0.23	37.8
Approach			307	5.0	307	5.0	0.087	2.2	NA	0.4	2.6	0.08	0.20	0.08	48.9
East: Site Entrance															
4	L2	All MCs	25	5.0	25	5.0	0.076	8.0	LOS A	0.3	2.0	0.05	0.96	0.05	34.2
6	R2	All MCs	25	5.0	25	5.0	0.076	10.0	LOS B	0.3	2.0	0.05	0.96	0.05	23.0
Approach			51	5.0	51	5.0	0.076	9.0	LOS A	0.3	2.0	0.05	0.96	0.05	28.8
North: Market Street															
7	L2	All MCs	55	5.0	55	5.0	0.032	4.3	LOS A	0.0	0.0	0.00	0.54	0.00	22.1
8	T1	All MCs	62	5.0	62	5.0	0.032	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.4
Approach			117	5.0	117	5.0	0.032	2.0	NA	0.0	0.0	0.00	0.26	0.00	36.2
All Vehicles			475	5.0	475	5.0	0.087	2.9	NA	0.4	2.6	0.06	0.29	0.06	42.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
 Vehicle movement LOS values are based on average delay per movement.  
 Minor Road Approach LOS values are based on average delay for all vehicle movements.  
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).  
 Two-Way Sign Control Capacity Model: SIDRA Standard.  
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).  
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.  
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).  
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.  
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

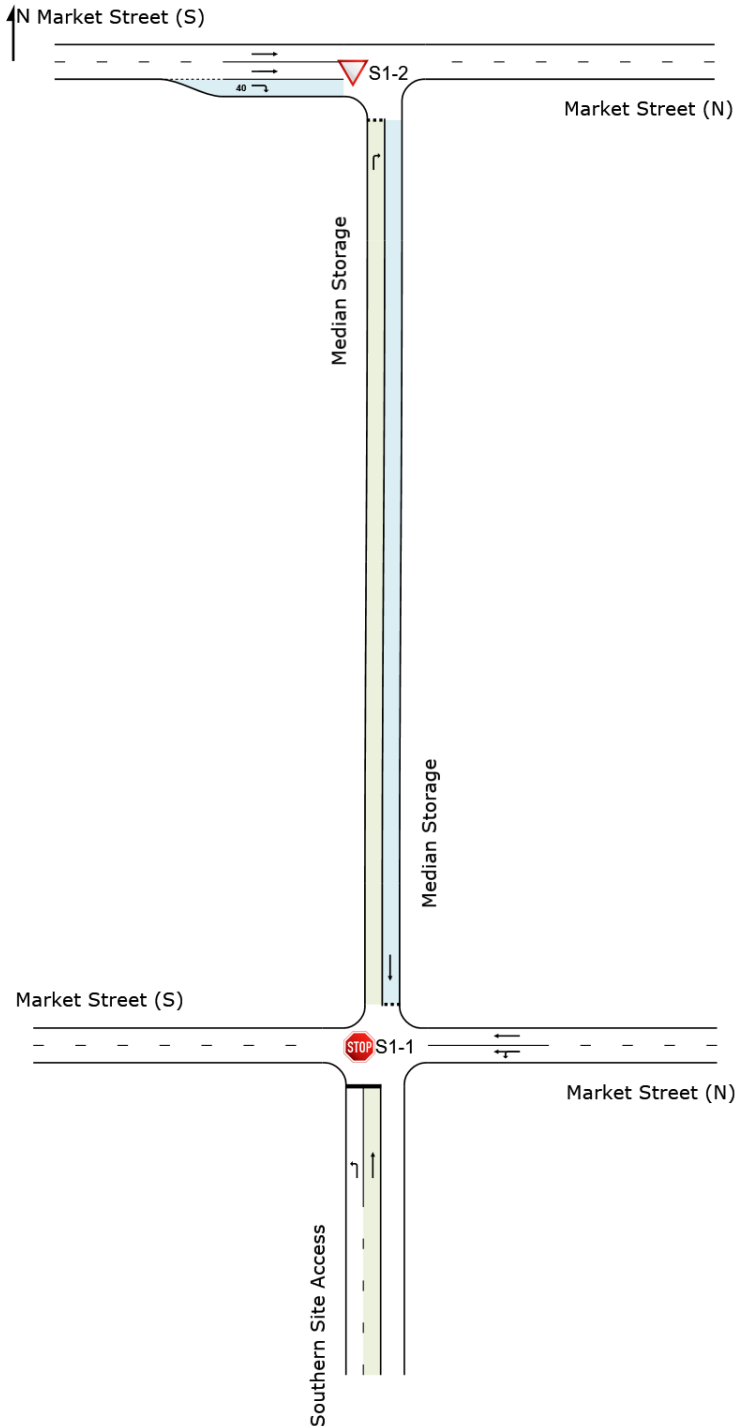
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# NETWORK LAYOUT

■ ■ Network: SCTI-A [2024 W/E Background (Network Folder: General)]

Staged Crossing at T Intersection Type A  
 Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.




SITES IN NETWORK		
Site ID	CCG ID	Site Name
▽S1-2	NA	2024 W/E BG Market Street / Median Storage-2A
STOP S1-1	NA	2024 W/E BG Market Street / Site Access - 2B



# MOVEMENT SUMMARY

 Site: S1-1 [2024 W/E BG Market Street / Site Access - 2B (Site Folder: 2024 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

 Network: SCTI-A [2024 W/E Background (Network Folder: General)]

Staged Crossing at T Intersection Type A  
 Site Category: (None)  
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Southern Site Access															
1	L2	All MCs	166	5.0	166	5.0	0.129	8.6	LOS A	0.6	4.0	0.20	0.89	0.20	50.9
2	T1	All MCs	56	5.0	56	5.0	0.055	9.0	LOS A	0.2	1.4	0.34	0.95	0.34	47.6
Approach			222	5.0	222	5.0	0.129	8.7	LOS A	0.6	4.0	0.23	0.91	0.23	50.4
East: Market Street (N)															
3	L2	All MCs	56	5.0	56	5.0	0.075	5.6	LOS A	0.0	0.0	0.00	0.24	0.00	55.3
4	T1	All MCs	226	5.0	226	5.0	0.075	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	59.2
Approach			282	5.0	282	5.0	0.075	1.1	NA	0.0	0.0	0.00	0.12	0.00	58.4
North: Median Storage															
5	T1	All MCs	111	5.0	111	5.0	0.097	1.0	LOS A	0.4	2.6	0.34	0.23	0.34	50.3
Approach			111	5.0	111	5.0	0.097	1.0	LOS A	0.4	2.6	0.34	0.23	0.34	50.3
All Vehicles			615	5.0	615	5.0	0.129	3.8	NA	0.6	4.0	0.15	0.42	0.15	54.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: S1-2 [2024 W/E BG Market Street / Median Storage-2A  
(Site Folder: 2024 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Network: SCTI-A [2024 W/E  
Background (Network Folder:  
General)]

Staged Crossing at T Intersection Type A  
Site Category: (None)  
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Median Storage															
1	R2	All MCs	56	5.0	56	5.0	0.070	3.2	LOS A	0.3	1.9	0.48	0.49	0.48	46.8
Approach			56	5.0	56	5.0	0.070	3.2	LOS A	0.3	1.9	0.48	0.49	0.48	46.8
West: Market Street (S)															
2	T1	All MCs	328	5.0	328	5.0	0.087	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	111	5.0	111	5.0	0.062	5.8	LOS A	0.0	0.0	0.00	0.63	0.00	50.5
Approach			439	5.0	439	5.0	0.087	1.5	NA	0.0	0.0	0.00	0.16	0.00	58.4
All Vehicles			495	5.0	495	5.0	0.087	1.7	NA	0.3	1.9	0.05	0.20	0.05	57.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

 Site: S1-1 [2024 PM BG Market Street / Site Access - 2B (Site Folder: 2024 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

■ ■ Network: SCTI-A [2024 PM Background (Network Folder: General)]

Staged Crossing at T Intersection Type A  
 Site Category: (None)  
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	Aver. Back Of Queue	Prop. Que		Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%					[ Veh. veh	Dist ] m			
South: Southern Site Access															
1	L2	All MCs	166	5.0	166	5.0	0.121	8.3	LOS A	0.2	1.5	0.08	0.94	0.08	50.9
2	T1	All MCs	56	5.0	56	5.0	0.048	8.4	LOS A	0.1	0.5	0.22	0.97	0.22	48.0
Approach			222	5.0	222	5.0	0.121	8.3	LOS A	0.2	1.5	0.12	0.95	0.12	50.4
East: Market Street (N)															
3	L2	All MCs	56	5.0	56	5.0	0.041	5.6	LOS A	0.0	0.0	0.00	0.43	0.00	53.8
4	T1	All MCs	98	5.0	98	5.0	0.041	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	59.2
Approach			154	5.0	154	5.0	0.041	2.0	NA	0.0	0.0	0.00	0.21	0.00	57.1
North: Median Storage															
5	T1	All MCs	111	5.0	111	5.0	0.086	0.5	LOS A	0.1	0.9	0.24	0.13	0.24	50.7
Approach			111	5.0	111	5.0	0.086	0.5	LOS A	0.1	0.9	0.24	0.13	0.24	50.7
All Vehicles			486	5.0	486	5.0	0.121	4.6	NA	0.2	1.5	0.11	0.53	0.11	52.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: S1-2 [2024 PM BG Market Street / Median Storage-2A  
(Site Folder: 2024 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Network: SCTI-A [2024 PM  
Background (Network Folder:  
General)]

Staged Crossing at T Intersection Type A  
Site Category: (None)  
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	Aver. Back Of Queue	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed	
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%									v/c
South: Median Storage															
1	R2	All MCs	56	5.0	56	5.0	0.065	2.8	LOS A	0.1	0.7	0.44	0.45	0.44	47.3
Approach			56	5.0	56	5.0	0.065	2.8	LOS A	0.1	0.7	0.44	0.45	0.44	47.3
West: Market Street (S)															
2	T1	All MCs	267	5.0	267	5.0	0.071	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	111	5.0	111	5.0	0.062	5.8	LOS A	0.0	0.0	0.00	0.63	0.00	50.5
Approach			378	5.0	378	5.0	0.071	1.7	NA	0.0	0.0	0.00	0.19	0.00	58.1
All Vehicles			434	5.0	434	5.0	0.071	1.8	NA	0.1	0.7	0.06	0.22	0.06	57.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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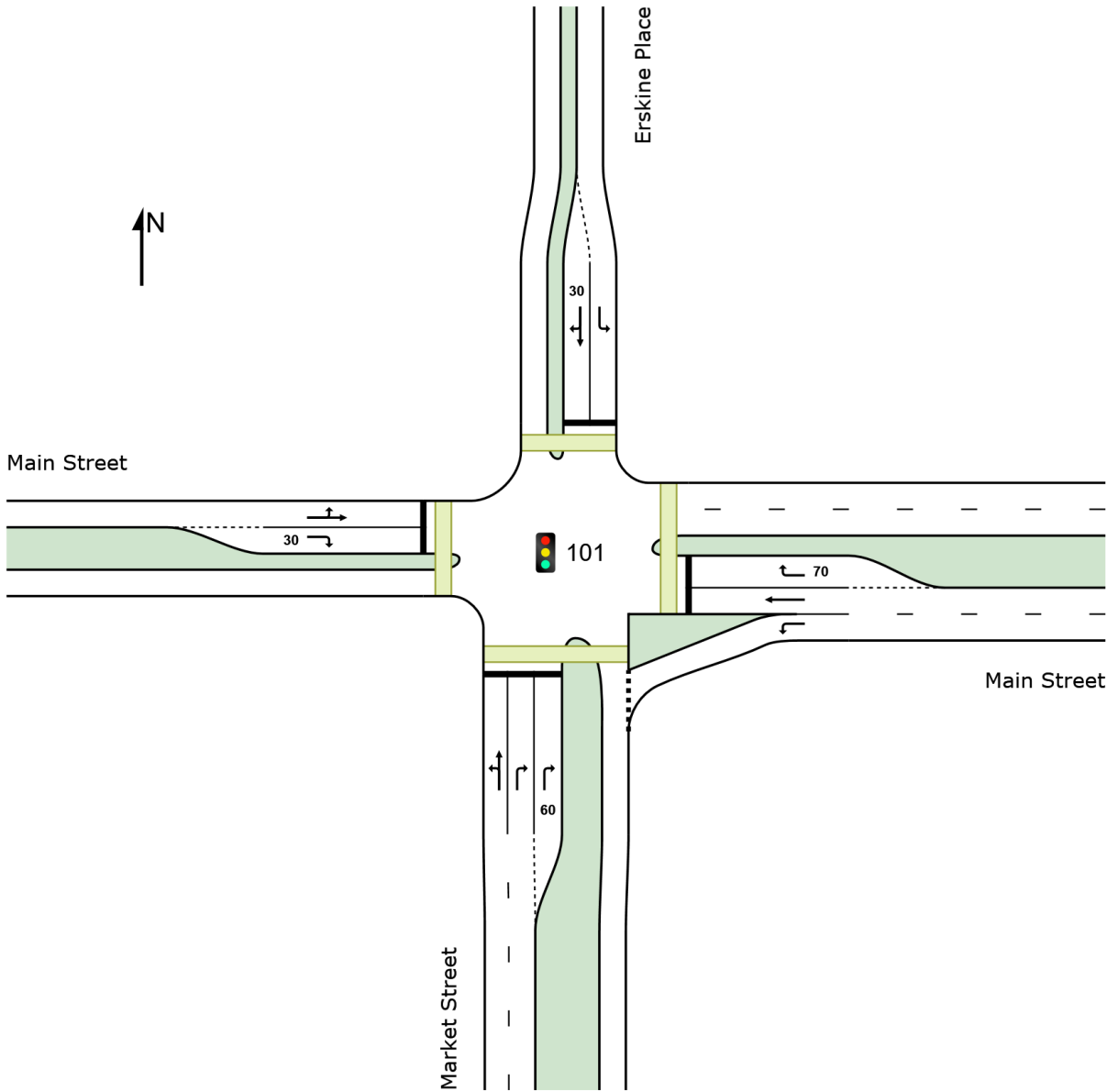
Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# SITE LAYOUT

Site: 101 [2024 W/E WD Main Street / Market Street Signals  
(Site Folder: 2024 WD)]

New Site  
Site Category: (None)  
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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# PHASING SUMMARY

**Site: 101 [2024 W/E WD Main Street / Market Street Signals (Site Folder: 2024 WD)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Leading Right Turn

Input Phase Sequence: A, B, C, D

Output Phase Sequence: A, B, C, D

Reference Phase: Phase B

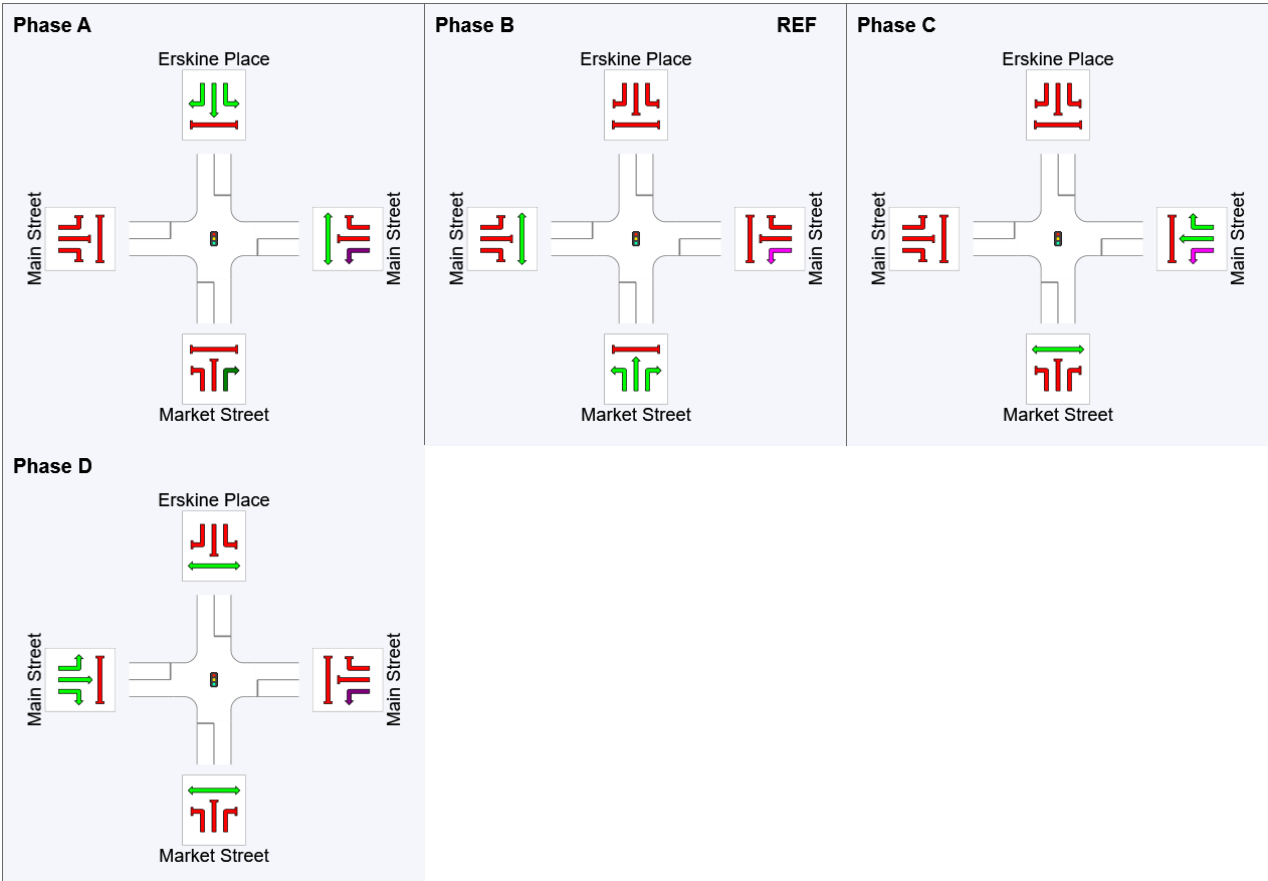
## Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	57	0	20	35
Green Time (sec)	17	14	9	16
Phase Time (sec)	23	20	15	22
Phase Split	29%	25%	19%	28%
Phase Frequency (%)	100.0 <sup>4</sup>	100.0 <sup>4</sup>	100.0 <sup>4</sup>	100.0 <sup>4</sup>



See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

<sup>4</sup> Phase Frequency specified by the user (phase times not specified).

## Output Phase Sequence



REF: Reference Phase  
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

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# MOVEMENT SUMMARY

**Site: 101 [2024 W/E WD Main Street / Market Street Signals (Site Folder: 2024 WD)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [ Total HV ]		Arrival Flows [ Total HV ]		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [ Veh. Dist ]		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Market Street															
1	L2	All MCs	22	5.0	22	5.0	0.343	36.8	LOS D	3.9	28.6	0.92	0.74	0.92	26.2
2	T1	All MCs	88	5.0	88	5.0	*0.343	32.2	LOS C	3.9	28.6	0.92	0.74	0.92	27.5
3	R2	All MCs	115	5.0	115	5.0	0.097	19.6	LOS B	1.4	10.0	0.69	0.70	0.69	21.8
Approach			225	5.0	225	5.0	0.343	26.2	LOS C	3.9	28.6	0.80	0.72	0.80	25.2
East: Main Street															
4	L2	All MCs	107	5.0	107	5.0	0.086	6.5	LOS A	0.5	3.7	0.21	0.60	0.21	35.5
5	T1	All MCs	74	5.0	74	5.0	*0.347	37.1	LOS D	2.8	20.4	0.96	0.74	0.96	27.6
6	R2	All MCs	18	5.0	18	5.0	0.086	41.2	LOS D	0.6	4.7	0.93	0.69	0.93	25.1
Approach			199	5.0	199	5.0	0.347	21.0	LOS C	2.8	20.4	0.55	0.66	0.55	29.3
North: Erskine Place															
7	L2	All MCs	13	5.0	13	5.0	0.033	32.7	LOS C	0.4	2.9	0.82	0.68	0.82	28.1
8	T1	All MCs	74	5.0	74	5.0	*0.316	29.3	LOS C	4.2	30.6	0.89	0.74	0.89	28.1
9	R2	All MCs	51	5.0	51	5.0	0.316	34.9	LOS C	4.2	30.6	0.89	0.74	0.89	34.6
Approach			137	5.0	137	5.0	0.316	31.7	LOS C	4.2	30.6	0.88	0.73	0.88	31.0
West: Main Street															
10	L2	All MCs	54	5.0	54	5.0	0.339	36.0	LOS D	4.3	31.5	0.90	0.75	0.90	34.0
11	T1	All MCs	72	5.0	72	5.0	*0.339	30.4	LOS C	4.3	31.5	0.90	0.75	0.90	29.4
12	R2	All MCs	37	5.0	37	5.0	0.103	34.3	LOS C	1.2	8.7	0.85	0.71	0.85	26.0
Approach			162	5.0	162	5.0	0.339	33.1	LOS C	4.3	31.5	0.89	0.74	0.89	30.5
All Vehicles			723	5.0	723	5.0	0.347	27.4	LOS C	4.3	31.5	0.77	0.71	0.77	28.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Input Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [ Ped Dist ]		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed	
	ped/h	ped/h	sec		ped	m			sec	m	m/sec	
South: Market Street												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
East: Main Street												

P2 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
North: Erskine Place											
P3 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
West: Main Street											
P4 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians	200	211	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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# MOVEMENT SUMMARY

**Site: 101 [2024 PM WD Main Street / Market Street Signals (Site Folder: 2024 WD)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [ Total HV ]		Arrival Flows [ Total HV ]		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [ Veh. ]	Dist [ m ]	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Market Street															
1	L2	All MCs	14	5.0	14	5.0	0.271	38.2	LOS D	2.7	19.6	0.93	0.72	0.93	25.7
2	T1	All MCs	61	5.0	61	5.0	0.271	33.7	LOS C	2.7	19.6	0.93	0.72	0.93	26.9
3	R2	All MCs	292	5.0	292	5.0	*0.269	22.8	LOS C	4.0	28.9	0.78	0.75	0.78	20.0
Approach			366	5.0	366	5.0	0.271	25.2	LOS C	4.0	28.9	0.81	0.74	0.81	22.0
East: Main Street															
4	L2	All MCs	162	5.0	162	5.0	0.123	6.3	LOS A	0.6	4.5	0.19	0.60	0.19	35.6
5	T1	All MCs	112	5.0	112	5.0	*0.473	36.8	LOS D	4.3	31.1	0.97	0.76	0.97	27.7
6	R2	All MCs	53	5.0	53	5.0	0.227	41.0	LOS D	1.9	14.1	0.94	0.74	0.94	25.1
Approach			326	5.0	326	5.0	0.473	22.3	LOS C	4.3	31.1	0.58	0.68	0.58	28.9
North: Erskine Place															
7	L2	All MCs	16	5.0	16	5.0	0.047	34.7	LOS C	0.5	3.7	0.85	0.69	0.85	27.2
8	T1	All MCs	35	5.0	35	5.0	*0.167	30.0	LOS C	1.9	14.2	0.87	0.70	0.87	27.8
9	R2	All MCs	23	5.0	23	5.0	0.167	35.6	LOS D	1.9	14.2	0.87	0.70	0.87	34.3
Approach			74	5.0	74	5.0	0.167	32.8	LOS C	1.9	14.2	0.87	0.69	0.87	30.1
West: Main Street															
10	L2	All MCs	25	5.0	25	5.0	0.449	34.3	LOS C	6.8	49.8	0.90	0.75	0.90	35.5
11	T1	All MCs	175	5.0	175	5.0	*0.449	28.7	LOS C	6.8	49.8	0.90	0.75	0.90	31.1
12	R2	All MCs	28	5.0	28	5.0	0.067	31.3	LOS C	0.9	6.3	0.80	0.70	0.80	27.3
Approach			228	5.0	228	5.0	0.449	29.6	LOS C	6.8	49.8	0.89	0.74	0.89	31.2
All Vehicles			995	5.0	995	5.0	0.473	25.8	LOS C	6.8	49.8	0.76	0.72	0.76	27.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Input Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [ Ped Dist ]		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Market Street											
P1	Full	50	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
East: Main Street											

P2 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
North: Erskine Place											
P3 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
West: Main Street											
P4 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians	200	211	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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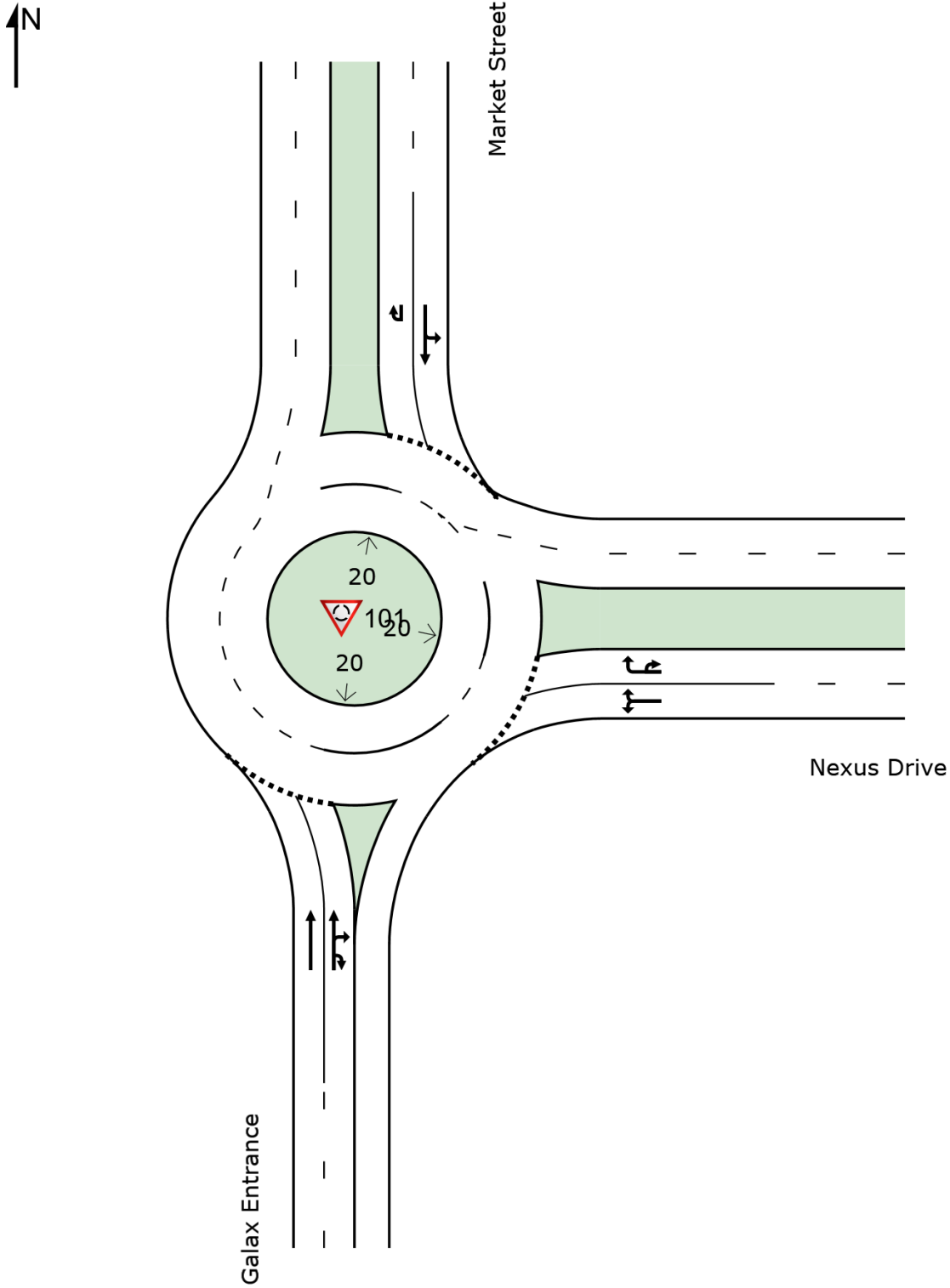
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# SITE LAYOUT

Site: 101 [2024 W/E WD Nexus Dr / Market St Roundabout  
(Site Folder: 2024 WD)]

New Site  
Site Category: (None)  
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.





# MOVEMENT SUMMARY

**Site: 101 [2024 W/E WD Nexus Dr / Market St Roundabout  
(Site Folder: 2024 WD)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site  
Site Category: (None)  
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Galax Entrance															
2	T1	All MCs	80	5.0	80	5.0	0.103	7.0	LOS A	0.4	3.1	0.56	0.65	0.56	35.9
3	R2	All MCs	115	5.0	115	5.0	0.123	11.0	LOS B	0.5	3.8	0.54	0.74	0.54	34.0
3u	U	All MCs	2	5.0	2	5.0	0.123	13.2	LOS B	0.5	3.8	0.54	0.74	0.54	32.9
Approach			197	5.0	197	5.0	0.123	9.4	LOS A	0.5	3.8	0.55	0.70	0.55	34.6
East: Nexus Drive															
4	L2	All MCs	36	5.0	36	5.0	0.260	4.5	LOS A	1.5	10.6	0.22	0.59	0.22	36.4
6	R2	All MCs	445	5.0	445	5.0	0.260	9.2	LOS A	1.5	10.6	0.22	0.60	0.22	32.0
6u	U	All MCs	237	5.0	237	5.0	0.260	11.4	LOS B	1.4	10.4	0.23	0.62	0.23	35.6
Approach			718	5.0	718	5.0	0.260	9.7	LOS A	1.5	10.6	0.23	0.60	0.23	33.5
North: Market Street															
7	L2	All MCs	539	5.0	539	5.0	0.525	5.5	LOS A	3.5	25.6	0.59	0.60	0.60	37.6
8	T1	All MCs	62	5.0	62	5.0	0.525	5.6	LOS A	3.5	25.6	0.59	0.60	0.60	38.0
9u	U	All MCs	6	5.0	6	5.0	0.009	12.4	LOS B	0.0	0.3	0.44	0.67	0.44	28.2
Approach			607	5.0	607	5.0	0.525	5.6	LOS A	3.5	25.6	0.59	0.60	0.60	37.5
All Vehicles			1522	5.0	1522	5.0	0.525	8.0	LOS A	3.5	25.6	0.41	0.62	0.42	34.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

**Site: 101 [2024 PM WD Nexus Dr / Market St Roundabout  
(Site Folder: 2024 WD)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site  
Site Category: (None)  
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Galax Entrance															
2	T1	All MCs	39	5.0	39	5.0	0.046	6.5	LOS A	0.2	1.3	0.51	0.61	0.51	36.4
3	R2	All MCs	46	5.0	46	5.0	0.048	10.7	LOS B	0.2	1.4	0.50	0.71	0.50	34.3
3u	U	All MCs	1	5.0	1	5.0	0.048	12.9	LOS B	0.2	1.4	0.50	0.71	0.50	33.1
Approach			86	5.0	86	5.0	0.048	8.9	LOS A	0.2	1.4	0.50	0.67	0.50	35.0
East: Nexus Drive															
4	L2	All MCs	16	5.0	16	5.0	0.222	4.4	LOS A	1.1	8.3	0.16	0.60	0.16	36.6
6	R2	All MCs	442	5.0	442	5.0	0.222	9.1	LOS A	1.1	8.3	0.16	0.61	0.16	32.3
6u	U	All MCs	179	5.0	179	5.0	0.222	11.2	LOS B	1.1	8.2	0.16	0.63	0.16	36.1
Approach			637	5.0	637	5.0	0.222	9.5	LOS A	1.1	8.3	0.16	0.61	0.16	33.6
North: Market Street															
7	L2	All MCs	469	5.0	469	5.0	0.403	4.5	LOS A	2.3	16.7	0.42	0.52	0.42	38.8
8	T1	All MCs	39	5.0	39	5.0	0.403	4.6	LOS A	2.3	16.7	0.42	0.52	0.42	39.5
9u	U	All MCs	4	5.0	4	5.0	0.005	11.6	LOS B	0.0	0.2	0.35	0.64	0.35	29.1
Approach			513	5.0	513	5.0	0.403	4.6	LOS A	2.3	16.7	0.42	0.52	0.42	38.8
All Vehicles			1236	5.0	1236	5.0	0.403	7.4	LOS A	2.3	16.7	0.29	0.58	0.29	35.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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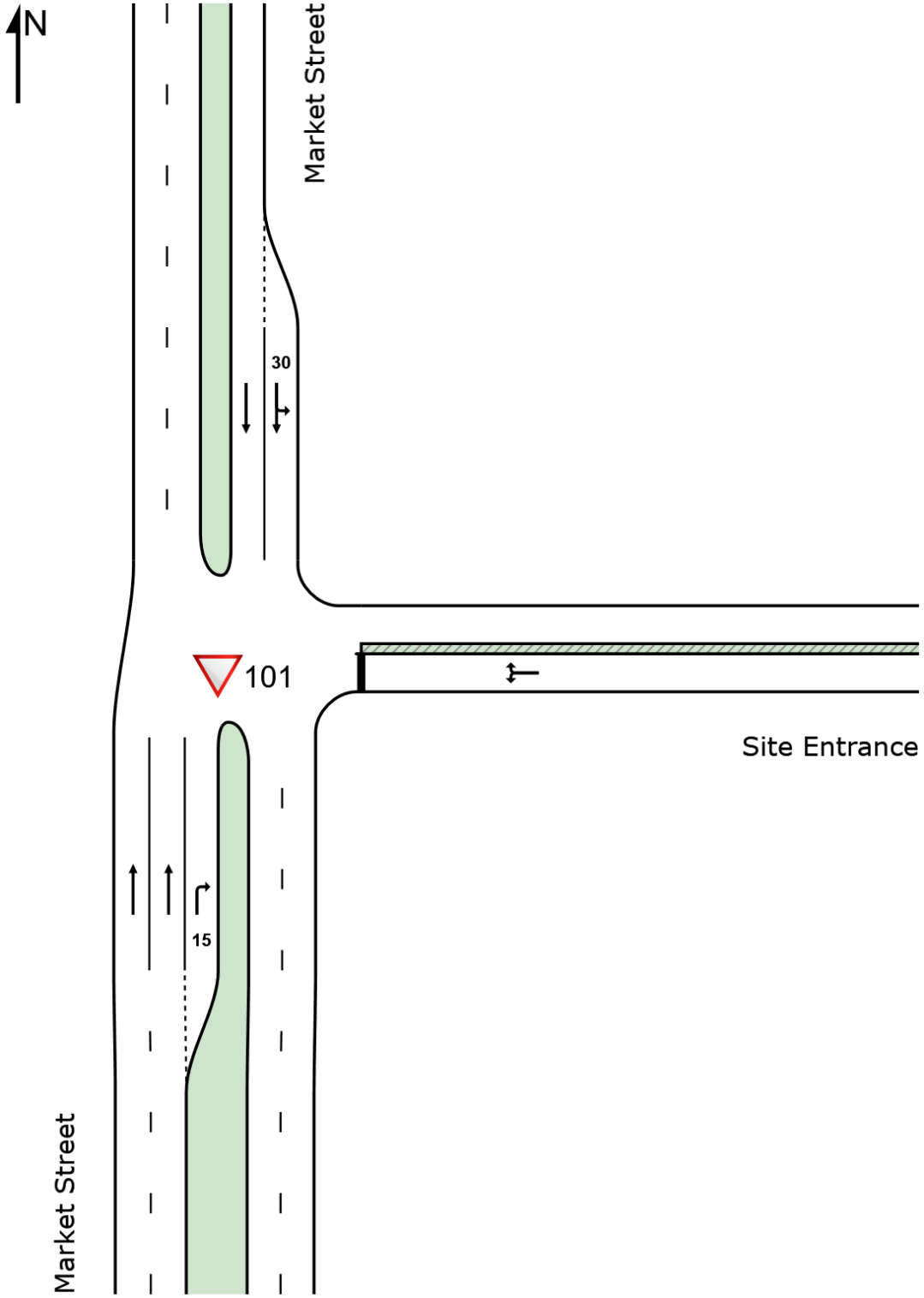
Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# SITE LAYOUT

▽ Site: 101 [2024 W/E WD Market Street / Site Access - North  
(Site Folder: 2024 WD)]

New Site  
Site Category: (None)  
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.







# MOVEMENT SUMMARY

Site: 101 [2024 W/E WD Market Street / Site Access - North  
(Site Folder: 2024 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site  
Site Category: (None)  
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Market Street															
2	T1	All MCs	232	5.0	232	5.0	0.061	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	144	5.0	144	5.0	0.129	6.7	LOS A	0.5	3.9	0.35	0.60	0.35	37.1
Approach			376	5.0	376	5.0	0.129	2.6	NA	0.5	3.9	0.13	0.23	0.13	47.8
East: Site Entrance															
4	L2	All MCs	129	5.0	129	5.0	0.422	8.0	LOS A	1.7	12.5	0.01	1.00	0.01	35.2
6	R2	All MCs	112	5.0	112	5.0	0.422	8.3	LOS A	1.7	12.5	0.01	1.00	0.01	23.8
Approach			241	5.0	241	5.0	0.422	8.1	LOS A	1.7	12.5	0.01	1.00	0.01	30.1
North: Market Street															
7	L2	All MCs	124	5.0	124	5.0	0.069	4.3	LOS A	0.0	0.0	0.00	0.56	0.00	34.5
8	T1	All MCs	102	5.0	102	5.0	0.054	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			226	5.0	226	5.0	0.069	2.4	NA	0.0	0.0	0.00	0.31	0.00	44.8
All Vehicles			843	5.0	843	5.0	0.422	4.1	NA	1.7	12.5	0.06	0.47	0.06	40.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: 101 [2024 PM WD Market Street / Site Access - North  
(Site Folder: 2024 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site  
Site Category: (None)  
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Market Street															
2	T1	All MCs	239	5.0	239	5.0	0.063	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	149	5.0	149	5.0	0.134	6.7	LOS A	0.6	4.1	0.35	0.60	0.35	37.1
Approach			388	5.0	388	5.0	0.134	2.6	NA	0.6	4.1	0.13	0.23	0.13	47.8
East: Site Entrance															
4	L2	All MCs	146	5.0	146	5.0	0.483	8.0	LOS A	2.2	16.0	0.01	1.00	0.01	35.2
6	R2	All MCs	126	5.0	126	5.0	0.483	8.3	LOS A	2.2	16.0	0.01	1.00	0.01	23.7
Approach			273	5.0	273	5.0	0.483	8.1	LOS A	2.2	16.0	0.01	1.00	0.01	30.1
North: Market Street															
7	L2	All MCs	125	5.0	125	5.0	0.070	4.3	LOS A	0.0	0.0	0.00	0.56	0.00	34.5
8	T1	All MCs	98	5.0	98	5.0	0.052	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			223	5.0	223	5.0	0.070	2.4	NA	0.0	0.0	0.00	0.31	0.00	44.5
All Vehicles			884	5.0	884	5.0	0.483	4.3	NA	2.2	16.0	0.06	0.49	0.06	40.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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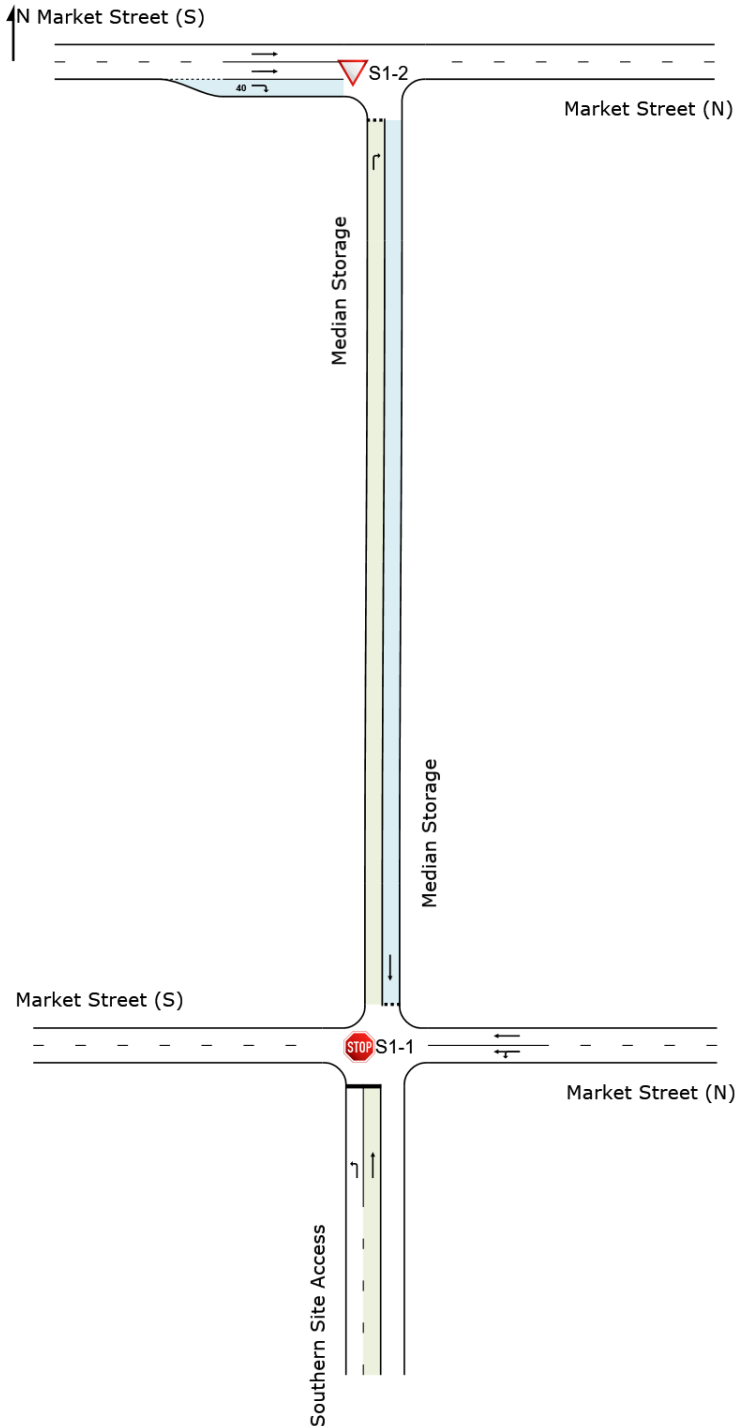
Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# NETWORK LAYOUT

Network: SCTI-A [2024 W/E Design (Network Folder: General)]

Staged Crossing at T Intersection Type A  
 Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	CCG ID	Site Name
▽S1-2	NA	2024 W/E S2 L - Import
STOP S1-1	NA	2024 W/E S1 L - Import

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# MOVEMENT SUMMARY

 Site: S1-1 [2024 W/E S1 L - Import (Site Folder: 2024 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: SCTI-A [2024 W/E Design (Network Folder: General)]

Staged Crossing at T Intersection Type A

Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Southern Site Access															
1	L2	All MCs	271	5.0	271	5.0	0.217	8.8	LOSA	1.0	7.3	0.27	0.88	0.27	50.8
2	T1	All MCs	91	5.0	91	5.0	0.103	9.8	LOSA	0.4	2.7	0.43	0.97	0.43	46.9
Approach			361	5.0	361	5.0	0.217	9.1	LOSA	1.0	7.3	0.31	0.90	0.31	50.2
East: Market Street (N)															
3	L2	All MCs	91	5.0	91	5.0	0.113	5.6	LOSA	0.0	0.0	0.00	0.26	0.00	55.1
4	T1	All MCs	331	5.0	331	5.0	0.113	0.0	LOSA	0.0	0.0	0.00	0.09	0.00	59.1
Approach			421	5.0	421	5.0	0.113	1.2	NA	0.0	0.0	0.00	0.13	0.00	58.2
North: Median Storage															
5	T1	All MCs	163	5.0	163	5.0	0.165	1.8	LOSA	0.6	4.5	0.44	0.36	0.44	49.3
Approach			163	5.0	163	5.0	0.165	1.8	LOSA	0.6	4.5	0.44	0.36	0.44	49.3
All Vehicles			945	5.0	945	5.0	0.217	4.3	NA	1.0	7.3	0.19	0.46	0.19	53.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: S1-2 [2024 W/E S2 L - Import (Site Folder: 2024 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: SCTI-A [2024 W/E Design (Network Folder: General)]

Staged Crossing at T Intersection Type A

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Median Storage															
1	R2	All MCs	91	5.0	91	5.0	0.126	4.0	LOS A	0.5	3.6	0.53	0.58	0.53	45.8
Approach			91	5.0	91	5.0	0.126	4.0	LOS A	0.5	3.6	0.53	0.58	0.53	45.8
West: Market Street (S)															
2	T1	All MCs	363	5.0	363	5.0	0.096	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	163	5.0	163	5.0	0.091	5.8	LOS A	0.0	0.0	0.00	0.63	0.00	50.5
Approach			526	5.0	526	5.0	0.096	1.8	NA	0.0	0.0	0.00	0.20	0.00	58.0
All Vehicles			617	5.0	617	5.0	0.126	2.1	NA	0.5	3.6	0.08	0.25	0.08	56.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

 Site: S1-1 [2024 PM S1 L - Import (Site Folder: 2024 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 Network: N101 [2024 PM Design (Network Folder: General)]

Staged Crossing at T Intersection Type A

Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Southern Site Access															
1	L2	All MCs	287	5.0	287	5.0	0.217	8.5	LOS A	1.0	7.5	0.18	0.90	0.18	50.9
2	T1	All MCs	96	5.0	96	5.0	0.096	9.1	LOS A	0.4	2.6	0.35	0.96	0.35	47.5
Approach			383	5.0	383	5.0	0.217	8.7	LOS A	1.0	7.5	0.22	0.91	0.22	50.4
East: Market Street (N)															
3	L2	All MCs	91	5.0	91	5.0	0.083	5.6	LOS A	0.0	0.0	0.00	0.35	0.00	54.4
4	T1	All MCs	218	5.0	218	5.0	0.083	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	59.1
Approach			308	5.0	308	5.0	0.083	1.7	NA	0.0	0.0	0.00	0.17	0.00	57.6
North: Median Storage															
5	T1	All MCs	172	5.0	172	5.0	0.155	1.2	LOS A	0.6	4.3	0.37	0.27	0.37	50.0
Approach			172	5.0	172	5.0	0.155	1.2	LOS A	0.6	4.3	0.37	0.27	0.37	50.0
All Vehicles			863	5.0	863	5.0	0.217	4.7	NA	1.0	7.5	0.17	0.52	0.17	53.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: S1-2 [2024 PM S2 L - Import (Site Folder: 2024 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2024 PM Design (Network Folder: General)]

Staged Crossing at T Intersection Type A

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	[ Dist ] m				
South: Median Storage															
1	R2	All MCs	96	5.0	96	5.0	0.126	3.7	LOS A	0.5	3.6	0.51	0.55	0.51	46.3
Approach			96	5.0	96	5.0	0.126	3.7	LOS A	0.5	3.6	0.51	0.55	0.51	46.3
West: Market Street (S)															
2	T1	All MCs	308	5.0	308	5.0	0.082	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	172	5.0	172	5.0	0.096	5.8	LOS A	0.0	0.0	0.00	0.63	0.00	50.5
Approach			480	5.0	480	5.0	0.096	2.1	NA	0.0	0.0	0.00	0.23	0.00	57.6
All Vehicles			576	5.0	576	5.0	0.126	2.4	NA	0.5	3.6	0.09	0.28	0.09	56.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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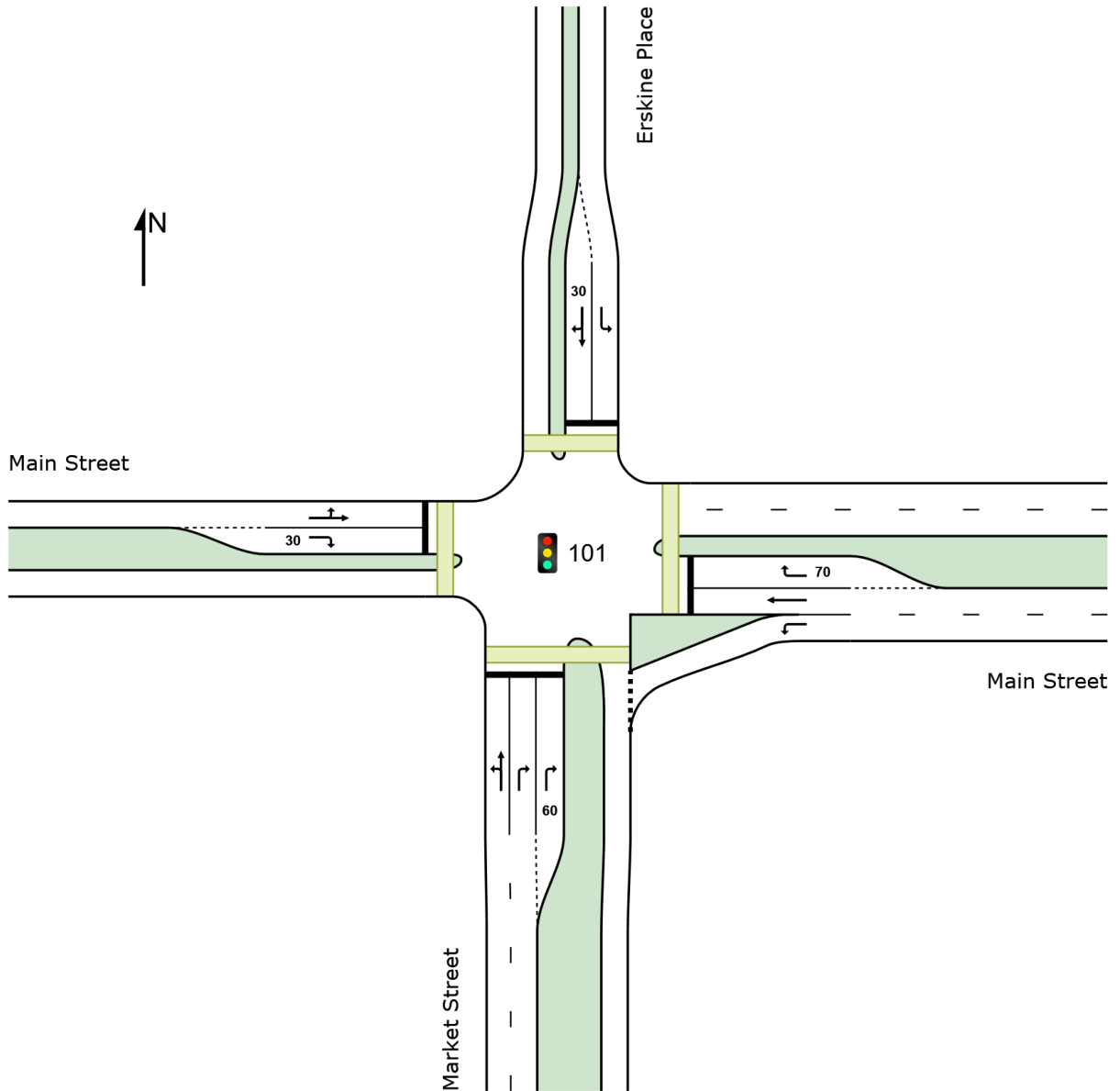


# SITE LAYOUT

Site: 101 [2034 W/E BG Main Street / Market Street Signals  
(Site Folder: 2034 BG)]

New Site  
Site Category: (None)  
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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# PHASING SUMMARY

**Site: 101 [2034 W/E BG Main Street / Market Street Signals (Site Folder: 2034 BG)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Leading Right Turn

Input Phase Sequence: A, B, C, D

Output Phase Sequence: A, B, C, D

Reference Phase: Phase B

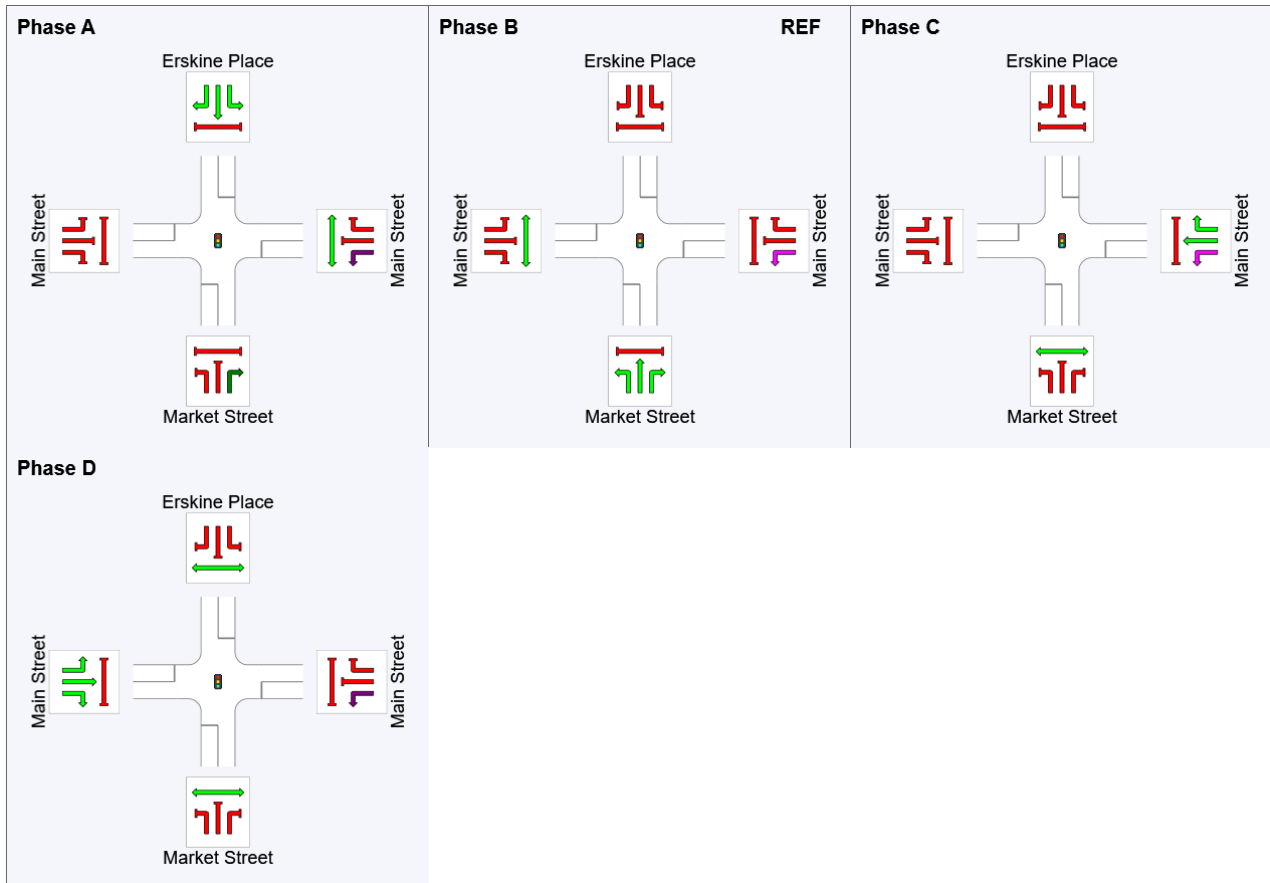
## Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	58	0	21	35
Green Time (sec)	16	15	8	17
Phase Time (sec)	22	21	14	23
Phase Split	28%	26%	18%	29%
Phase Frequency (%)	100.0 <sup>4</sup>	100.0 <sup>4</sup>	100.0 <sup>4</sup>	100.0 <sup>4</sup>













See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

<sup>4</sup> Phase Frequency specified by the user (phase times not specified).

## Output Phase Sequence



REF: Reference Phase  
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

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# MOVEMENT SUMMARY

**Site: 101 [2034 W/E BG Main Street / Market Street Signals (Site Folder: 2034 BG)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [ Total HV ]		Arrival Flows [ Total HV ]		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [ Veh. Dist ]		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Market Street															
1	L2	All MCs	26	5.0	26	5.0	0.384	36.1	LOS D	4.7	34.2	0.92	0.75	0.92	26.5
2	T1	All MCs	106	5.0	106	5.0	*0.384	31.6	LOS C	4.7	34.2	0.92	0.75	0.92	27.8
3	R2	All MCs	139	5.0	139	5.0	0.118	19.8	LOS B	1.7	12.3	0.70	0.70	0.70	21.7
Approach			272	5.0	272	5.0	0.384	26.0	LOS C	4.7	34.2	0.81	0.72	0.81	25.3
East: Main Street															
4	L2	All MCs	25	5.0	25	5.0	0.021	6.6	LOS A	0.1	0.9	0.21	0.59	0.21	35.4
5	T1	All MCs	76	5.0	76	5.0	*0.401	38.5	LOS D	2.9	21.5	0.98	0.75	0.98	27.0
6	R2	All MCs	14	5.0	14	5.0	0.074	42.2	LOS D	0.5	3.7	0.93	0.68	0.93	24.7
Approach			115	5.0	115	5.0	0.401	31.9	LOS C	2.9	21.5	0.80	0.70	0.80	27.3
North: Erskine Place															
7	L2	All MCs	15	5.0	15	5.0	0.041	33.7	LOS C	0.5	3.4	0.83	0.68	0.83	27.6
8	T1	All MCs	81	5.0	81	5.0	*0.385	30.7	LOS C	4.9	36.1	0.91	0.76	0.91	27.4
9	R2	All MCs	61	5.0	61	5.0	0.385	36.3	LOS D	4.9	36.1	0.91	0.76	0.91	33.9
Approach			157	5.0	157	5.0	0.385	33.2	LOS C	4.9	36.1	0.90	0.75	0.90	30.4
West: Main Street															
10	L2	All MCs	65	5.0	65	5.0	0.386	35.5	LOS D	5.2	38.1	0.90	0.76	0.90	34.2
11	T1	All MCs	86	5.0	86	5.0	*0.386	29.9	LOS C	5.2	38.1	0.90	0.76	0.90	29.6
12	R2	All MCs	44	5.0	44	5.0	0.116	33.5	LOS C	1.4	10.3	0.84	0.72	0.84	26.4
Approach			196	5.0	196	5.0	0.386	32.6	LOS C	5.2	38.1	0.89	0.75	0.89	30.7
All Vehicles			739	5.0	739	5.0	0.401	30.2	LOS C	5.2	38.1	0.85	0.73	0.85	28.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Input Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [ Ped Dist ]		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed	
	ped/h	ped/h	sec		ped	m			sec	m	m/sec	
South: Market Street												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
East: Main Street												

P2 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
North: Erskine Place											
P3 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
West: Main Street											
P4 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians	200	211	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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# MOVEMENT SUMMARY

**Site: 101 [2034 PM BG Main Street / Market Street Signals (Site Folder: 2034 BG)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [ Total HV ]		Arrival Flows [ Total HV ]		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [ Veh. Dist ]		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec							km/h
South: Market Street															
1	L2	All MCs	16	5.0	16	5.0	0.324	38.5	LOS D	3.2	23.7	0.93	0.73	0.93	25.6
2	T1	All MCs	74	5.0	74	5.0	0.324	34.0	LOS C	3.2	23.7	0.93	0.73	0.93	26.8
3	R2	All MCs	184	5.0	184	5.0	*0.170	22.0	LOS C	2.4	17.5	0.75	0.73	0.75	20.4
Approach			274	5.0	274	5.0	0.324	26.2	LOS C	3.2	23.7	0.81	0.73	0.81	23.2
East: Main Street															
4	L2	All MCs	93	5.0	93	5.0	0.070	6.3	LOS A	0.3	2.4	0.18	0.59	0.18	35.7
5	T1	All MCs	120	5.0	120	5.0	*0.508	37.0	LOS D	4.6	33.6	0.98	0.77	0.98	27.6
6	R2	All MCs	54	5.0	54	5.0	0.231	41.1	LOS D	2.0	14.4	0.94	0.74	0.94	25.1
Approach			266	5.0	266	5.0	0.508	27.1	LOS C	4.6	33.6	0.69	0.70	0.69	28.0
North: Erskine Place															
7	L2	All MCs	19	5.0	19	5.0	0.056	34.8	LOS C	0.6	4.5	0.85	0.69	0.85	27.2
8	T1	All MCs	32	5.0	32	5.0	*0.174	30.1	LOS C	2.0	14.7	0.88	0.70	0.88	27.6
9	R2	All MCs	28	5.0	28	5.0	0.174	35.7	LOS D	2.0	14.7	0.88	0.70	0.88	34.1
Approach			79	5.0	79	5.0	0.174	33.2	LOS C	2.0	14.7	0.87	0.70	0.87	30.2
West: Main Street															
10	L2	All MCs	31	5.0	31	5.0	0.552	38.7	LOS D	8.5	62.4	0.93	0.78	0.93	35.1
11	T1	All MCs	213	5.0	213	5.0	*0.552	33.1	LOS C	8.5	62.4	0.93	0.78	0.93	30.6
12	R2	All MCs	21	5.0	21	5.0	0.049	34.7	LOS C	0.6	4.7	0.80	0.69	0.80	27.4
Approach			264	5.0	264	5.0	0.552	33.8	LOS C	8.5	62.4	0.92	0.77	0.92	29.4
All Vehicles			883	5.0	883	5.0	0.552	29.4	LOS C	8.5	62.4	0.81	0.73	0.81	27.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Input Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [ Ped Dist ]		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed	
	ped/h	ped/h	sec		ped	m			sec	m	m/sec	
South: Market Street												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
East: Main Street												

P2 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
North: Erskine Place											
P3 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
West: Main Street											
P4 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians	200	211	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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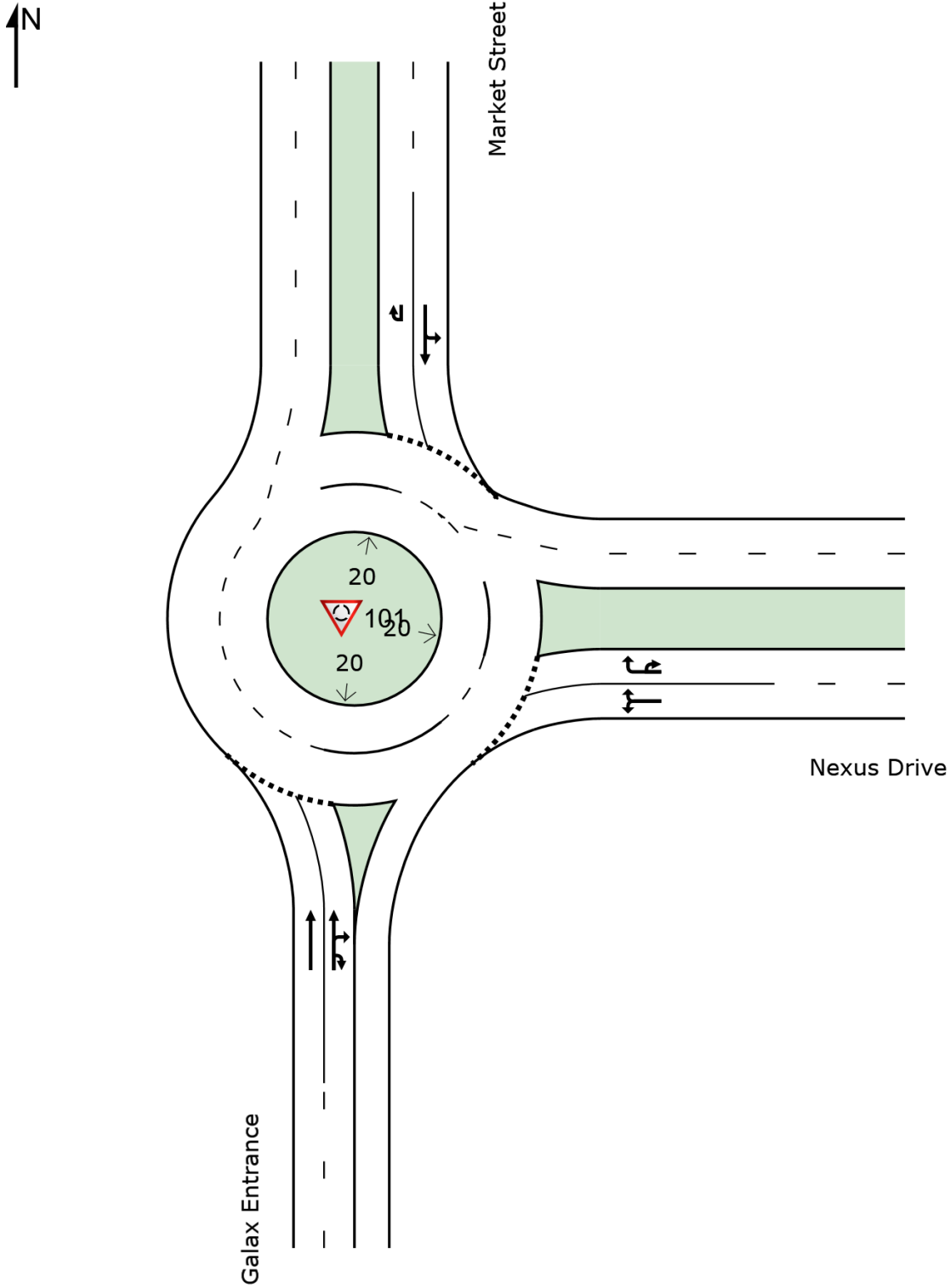
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# SITE LAYOUT

Site: 101 [2034 W/E BG Nexus Dr / Market St Roundabout  
(Site Folder: 2034 BG)]

New Site  
Site Category: (None)  
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.







# MOVEMENT SUMMARY

**Site: 101 [2034 W/E BG Nexus Dr / Market St Roundabout  
(Site Folder: 2034 BG)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.1.200**

New Site  
Site Category: (None)  
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue	Dist	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. veh	m				km/h
South: Galax Entrance															
2	T1	All MCs	77	5.0	77	5.0	0.102	7.1	LOS A	0.4	3.0	0.55	0.64	0.55	36.0
3	R2	All MCs	139	5.0	139	5.0	0.144	11.0	LOS B	0.6	4.5	0.53	0.73	0.53	34.1
3u	U	All MCs	1	5.0	1	5.0	0.144	13.2	LOS B	0.6	4.5	0.53	0.73	0.53	32.9
Approach			217	5.0	217	5.0	0.144	9.6	LOS A	0.6	4.5	0.54	0.70	0.54	34.6
East: Nexus Drive															
4	L2	All MCs	43	5.0	43	5.0	0.245	4.4	LOS A	1.3	9.7	0.20	0.59	0.20	36.6
6	R2	All MCs	458	5.0	458	5.0	0.245	9.1	LOS A	1.3	9.7	0.20	0.60	0.20	32.3
6u	U	All MCs	183	5.0	183	5.0	0.245	11.3	LOS B	1.3	9.5	0.21	0.62	0.21	35.9
Approach			684	5.0	684	5.0	0.245	9.4	LOS A	1.3	9.7	0.20	0.60	0.20	33.6
North: Market Street															
7	L2	All MCs	426	5.0	426	5.0	0.415	5.0	LOS A	2.5	18.0	0.52	0.57	0.52	38.1
8	T1	All MCs	55	5.0	55	5.0	0.415	5.2	LOS A	2.5	18.0	0.52	0.57	0.52	38.6
9u	U	All MCs	6	5.0	6	5.0	0.009	12.2	LOS B	0.0	0.3	0.43	0.67	0.43	28.4
Approach			487	5.0	487	5.0	0.415	5.1	LOS A	2.5	18.0	0.52	0.57	0.52	38.0
All Vehicles			1388	5.0	1388	5.0	0.415	7.9	LOS A	2.5	18.0	0.37	0.61	0.37	35.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

**Site: 101 [2034 PM BG Nexus Dr / Market St Roundabout (Site Folder: 2034 BG)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.1.200**

New Site  
 Site Category: (None)  
 Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Galax Entrance															
2	T1	All MCs	23	5.0	23	5.0	0.031	6.8	LOS A	0.1	0.9	0.50	0.59	0.50	36.5
3	R2	All MCs	56	5.0	56	5.0	0.055	10.5	LOS B	0.2	1.6	0.47	0.70	0.47	34.4
3u	U	All MCs	1	5.0	1	5.0	0.055	12.7	LOS B	0.2	1.6	0.47	0.70	0.47	33.2
Approach			80	5.0	80	5.0	0.055	9.5	LOS A	0.2	1.6	0.48	0.67	0.48	34.8
East: Nexus Drive															
4	L2	All MCs	19	5.0	19	5.0	0.189	4.3	LOS A	0.9	6.5	0.11	0.61	0.11	36.9
6	R2	All MCs	441	5.0	441	5.0	0.189	9.0	LOS A	0.9	6.5	0.11	0.61	0.11	32.8
6u	U	All MCs	95	5.0	95	5.0	0.189	11.2	LOS B	0.9	6.5	0.12	0.63	0.12	36.7
Approach			555	5.0	555	5.0	0.189	9.2	LOS A	0.9	6.5	0.11	0.62	0.11	33.7
North: Market Street															
7	L2	All MCs	303	5.0	303	5.0	0.247	4.0	LOS A	1.2	8.8	0.30	0.48	0.30	39.8
8	T1	All MCs	23	5.0	23	5.0	0.247	4.1	LOS A	1.2	8.8	0.30	0.48	0.30	40.6
9u	U	All MCs	4	5.0	4	5.0	0.005	11.1	LOS B	0.0	0.1	0.29	0.64	0.29	29.4
Approach			331	5.0	331	5.0	0.247	4.1	LOS A	1.2	8.8	0.30	0.48	0.30	39.7
All Vehicles			965	5.0	965	5.0	0.247	7.5	LOS A	1.2	8.8	0.21	0.57	0.21	35.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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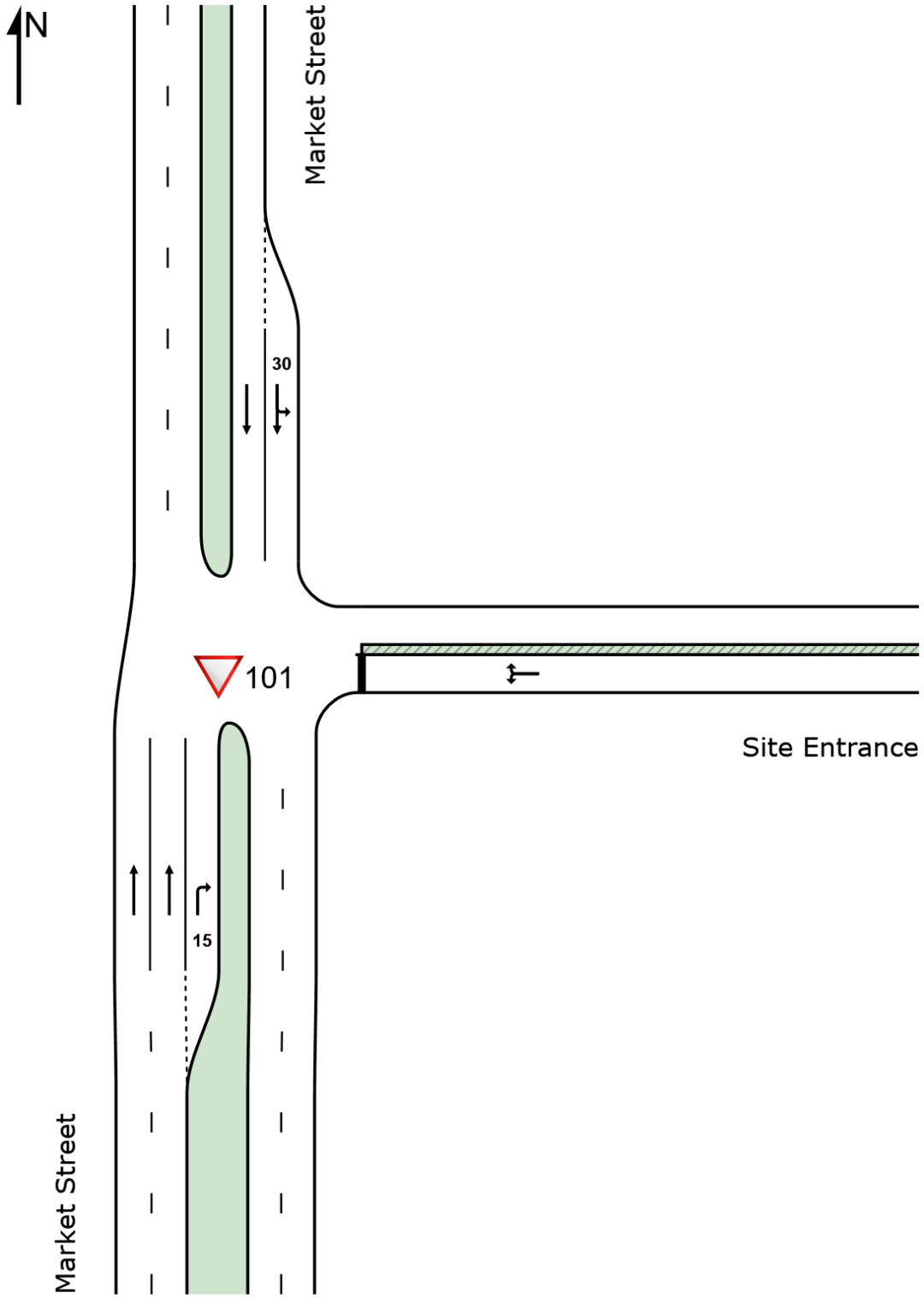
Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# SITE LAYOUT

▽ Site: 101 [2034 W/E BG Market Street / Site Access - North  
(Site Folder: 2034 BG)]

New Site  
Site Category: (None)  
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.





# MOVEMENT SUMMARY

Site: 101 [2034 W/E BG Market Street / Site Access - North  
(Site Folder: 2034 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site  
Site Category: (None)  
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Market Street															
2	T1	All MCs	240	5.0	240	5.0	0.063	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	109	5.0	109	5.0	0.089	6.2	LOS A	0.4	2.7	0.26	0.55	0.26	37.7
Approach			349	5.0	349	5.0	0.089	1.9	NA	0.4	2.7	0.08	0.17	0.08	49.9
East: Site Entrance															
4	L2	All MCs	25	5.0	25	5.0	0.082	8.0	LOS A	0.3	2.2	0.15	0.90	0.15	31.9
6	R2	All MCs	25	5.0	25	5.0	0.082	14.3	LOS B	0.3	2.2	0.15	0.90	0.15	21.4
Approach			51	5.0	51	5.0	0.082	11.1	LOS B	0.3	2.2	0.15	0.90	0.15	26.9
North: Market Street															
7	L2	All MCs	55	5.0	55	5.0	0.037	4.3	LOS A	0.0	0.0	0.00	0.47	0.00	22.5
8	T1	All MCs	81	5.0	81	5.0	0.037	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	57.8
Approach			136	5.0	136	5.0	0.037	1.7	NA	0.0	0.0	0.00	0.23	0.00	38.6
All Vehicles			536	5.0	536	5.0	0.089	2.8	NA	0.4	2.7	0.07	0.26	0.07	43.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: 101 [2034 PM BG Market Street / Site Access - North  
(Site Folder: 2034 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site  
Site Category: (None)  
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Market Street															
2	T1	All MCs	241	5.0	241	5.0	0.063	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	109	5.0	109	5.0	0.089	6.2	LOS A	0.4	2.7	0.25	0.55	0.25	37.7
Approach			351	5.0	351	5.0	0.089	1.9	NA	0.4	2.7	0.08	0.17	0.08	50.0
East: Site Entrance															
4	L2	All MCs	25	5.0	25	5.0	0.082	8.0	LOS A	0.3	2.2	0.13	0.91	0.13	31.9
6	R2	All MCs	25	5.0	25	5.0	0.082	14.2	LOS B	0.3	2.2	0.13	0.91	0.13	21.4
Approach			51	5.0	51	5.0	0.082	11.1	LOS B	0.3	2.2	0.13	0.91	0.13	26.9
North: Market Street															
7	L2	All MCs	55	5.0	55	5.0	0.035	4.3	LOS A	0.0	0.0	0.00	0.48	0.00	22.4
8	T1	All MCs	76	5.0	76	5.0	0.035	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	58.1
Approach			131	5.0	131	5.0	0.035	1.8	NA	0.0	0.0	0.00	0.24	0.00	38.0
All Vehicles			532	5.0	532	5.0	0.089	2.8	NA	0.4	2.7	0.06	0.26	0.06	43.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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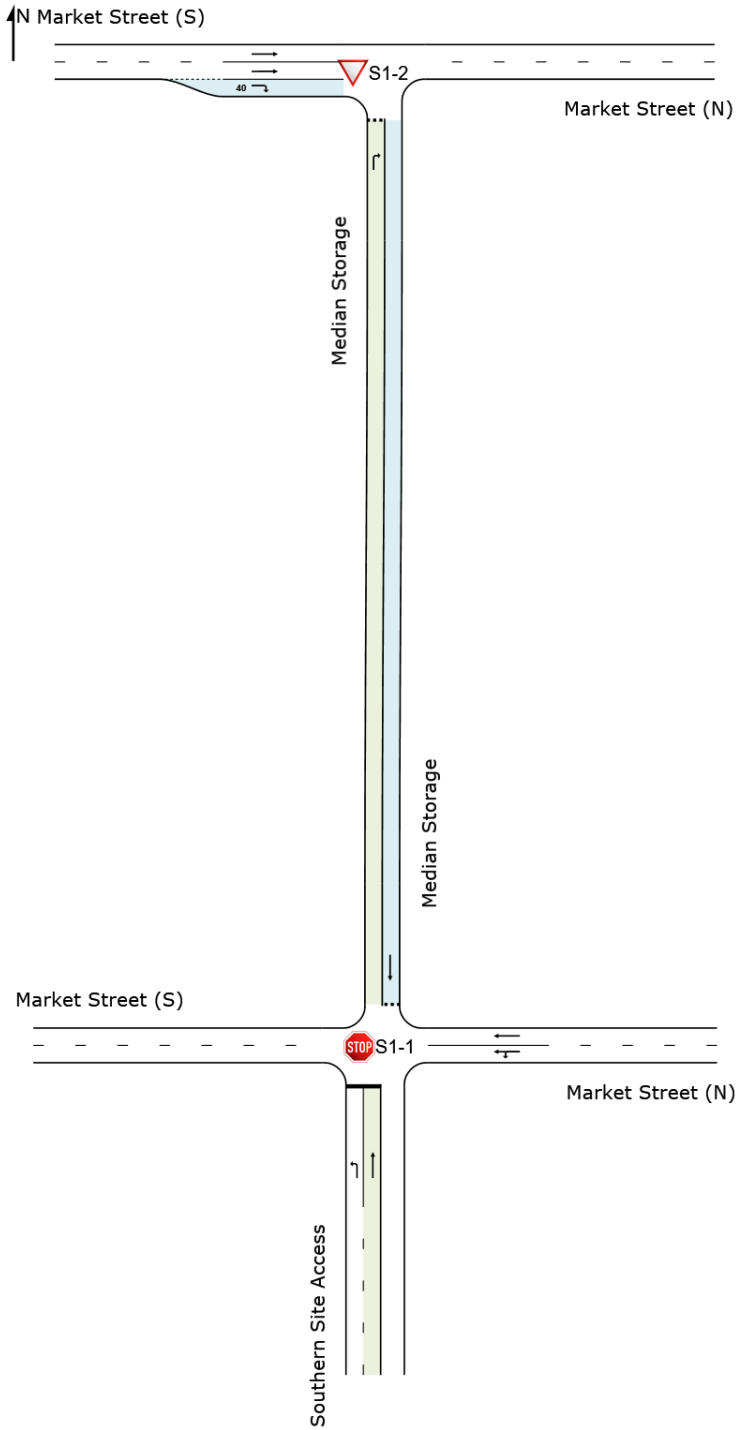
Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# NETWORK LAYOUT

■ ■ Network: SCTI-A [2034 W/E Background (Network Folder: General)]

Staged Crossing at T Intersection Type A  
 Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	CCG ID	Site Name
▽ S1-2	NA	2034 W/E Background
● S1-1	NA	2034 W/E Background



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# MOVEMENT SUMMARY

 Site: S1-1 [2034 W/E Background (Site Folder: 2034 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

■ ■ Network: SCTI-A [2034 W/E Background (Network Folder: General)]

Staged Crossing at T Intersection Type A

Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Southern Site Access															
1	L2	All MCs	166	5.0	166	5.0	0.132	8.7	LOS A	0.6	4.1	0.23	0.89	0.23	50.9
2	T1	All MCs	56	5.0	56	5.0	0.058	9.3	LOS A	0.2	1.5	0.37	0.95	0.37	47.4
Approach			222	5.0	222	5.0	0.132	8.9	LOS A	0.6	4.1	0.27	0.90	0.27	50.3
East: Market Street (N)															
3	L2	All MCs	56	5.0	56	5.0	0.089	5.6	LOS A	0.0	0.0	0.00	0.20	0.00	55.6
4	T1	All MCs	276	5.0	276	5.0	0.089	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	59.2
Approach			332	5.0	332	5.0	0.089	1.0	NA	0.0	0.0	0.00	0.10	0.00	58.6
North: Median Storage															
5	T1	All MCs	111	5.0	111	5.0	0.102	1.3	LOS A	0.4	2.7	0.38	0.27	0.38	50.0
Approach			111	5.0	111	5.0	0.102	1.3	LOS A	0.4	2.7	0.38	0.27	0.38	50.0
All Vehicles			664	5.0	664	5.0	0.132	3.7	NA	0.6	4.1	0.15	0.40	0.15	54.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: S1-2 [2034 W/E Background (Site Folder: 2034 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Network: SCTI-A [2034 W/E Background (Network Folder: General)]

Staged Crossing at T Intersection Type A

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Median Storage															
1	R2	All MCs	56	5.0	56	5.0	0.077	3.8	LOS A	0.3	2.1	0.51	0.54	0.51	46.1
Approach			56	5.0	56	5.0	0.077	3.8	LOS A	0.3	2.1	0.51	0.54	0.51	46.1
West: Market Street (S)															
2	T1	All MCs	400	5.0	400	5.0	0.106	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	111	5.0	111	5.0	0.062	5.8	LOS A	0.0	0.0	0.00	0.63	0.00	50.5
Approach			511	5.0	511	5.0	0.106	1.3	NA	0.0	0.0	0.00	0.14	0.00	58.6
All Vehicles			566	5.0	566	5.0	0.106	1.5	NA	0.3	2.1	0.05	0.18	0.05	57.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

 Site: S1-1 [2034 PM Background (Site Folder: 2034 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

■ ■ Network: SCTI-A [2034 PM Background (Network Folder: General)]

Staged Crossing at T Intersection Type A

Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. veh	Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Southern Site Access															
1	L2	All MCs	166	5.0	166	5.0	0.122	8.4	LOS A	0.5	3.8	0.11	0.93	0.11	50.9
2	T1	All MCs	56	5.0	56	5.0	0.049	8.5	LOS A	0.2	1.3	0.25	0.96	0.25	48.0
Approach			222	5.0	222	5.0	0.122	8.4	LOS A	0.5	3.8	0.14	0.94	0.14	50.4
East: Market Street (N)															
3	L2	All MCs	56	5.0	56	5.0	0.047	5.6	LOS A	0.0	0.0	0.00	0.38	0.00	54.2
4	T1	All MCs	119	5.0	119	5.0	0.047	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	59.1
Approach			175	5.0	175	5.0	0.047	1.8	NA	0.0	0.0	0.00	0.19	0.00	57.4
North: Median Storage															
5	T1	All MCs	111	5.0	111	5.0	0.088	0.6	LOS A	0.3	2.4	0.26	0.14	0.26	50.6
Approach			111	5.0	111	5.0	0.088	0.6	LOS A	0.3	2.4	0.26	0.14	0.26	50.6
All Vehicles			507	5.0	507	5.0	0.122	4.4	NA	0.5	3.8	0.12	0.51	0.12	53.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: S1-2 [2034 PM Background (Site Folder: 2034 BG)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

Network: SCTI-A [2034 PM Background (Network Folder: General)]

Staged Crossing at T Intersection Type A

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	[ Dist ] m				
South: Median Storage															
1	R2	All MCs	56	5.0	56	5.0	0.070	3.2	LOS A	0.3	1.9	0.48	0.49	0.48	46.8
Approach			56	5.0	56	5.0	0.070	3.2	LOS A	0.3	1.9	0.48	0.49	0.48	46.8
West: Market Street (S)															
2	T1	All MCs	326	5.0	326	5.0	0.086	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	111	5.0	111	5.0	0.062	5.8	LOS A	0.0	0.0	0.00	0.63	0.00	50.5
Approach			437	5.0	437	5.0	0.086	1.5	NA	0.0	0.0	0.00	0.16	0.00	58.4
All Vehicles			493	5.0	493	5.0	0.086	1.7	NA	0.3	1.9	0.05	0.20	0.05	57.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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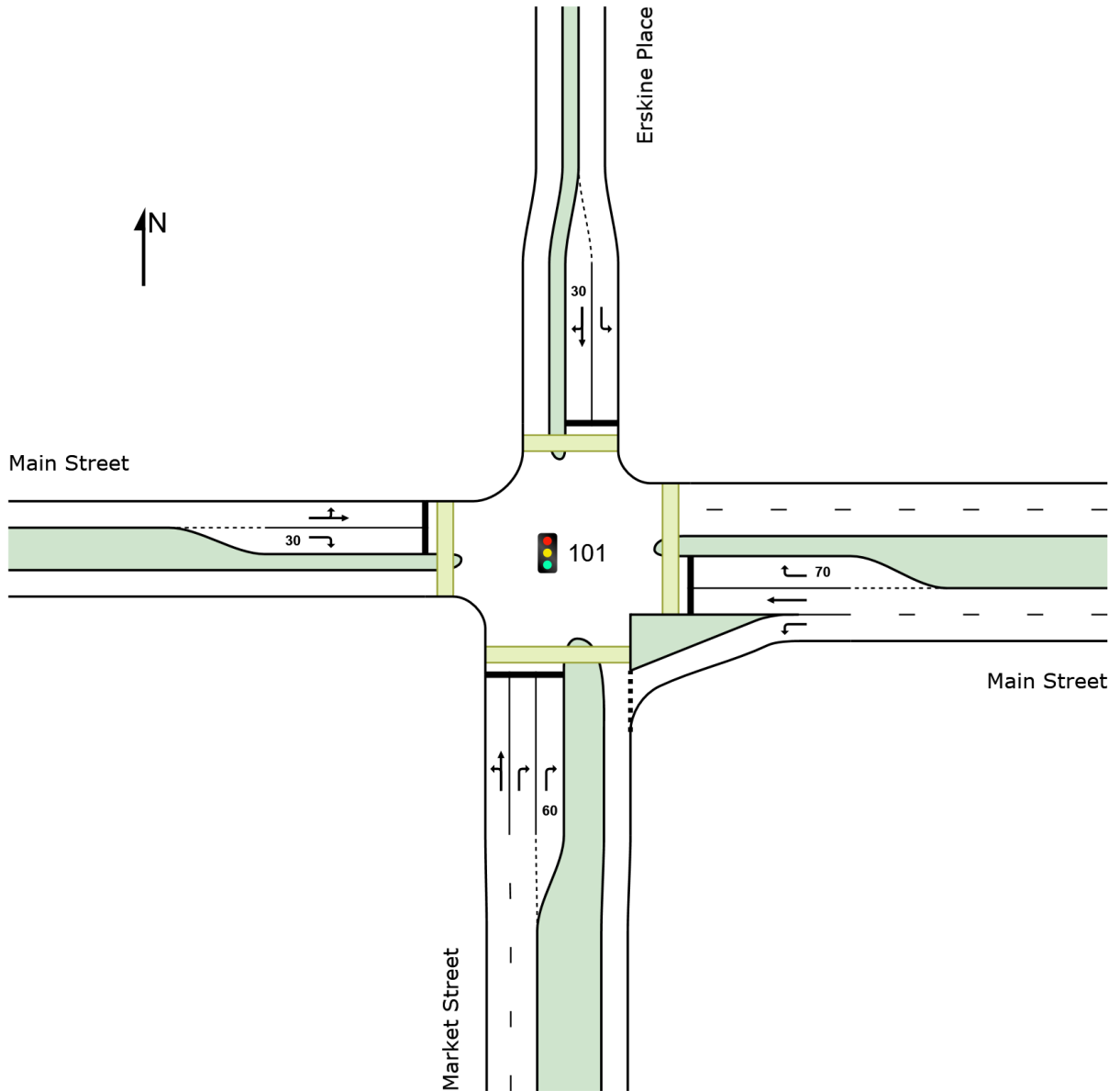
Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# SITE LAYOUT

Site: 101 [2034 W/E WD Main Street / Market Street Signals  
(Site Folder: 2034 WD)]

New Site  
Site Category: (None)  
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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# PHASING SUMMARY

**Site: 101 [2034 W/E WD Main Street / Market Street Signals (Site Folder: 2034 WD)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site  
 Site Category: (None)  
 Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog  
 Phase Times determined by the program  
 Phase Sequence: Leading Right Turn  
 Input Phase Sequence: A, B, C, D  
 Output Phase Sequence: A, B, C, D  
 Reference Phase: Phase B

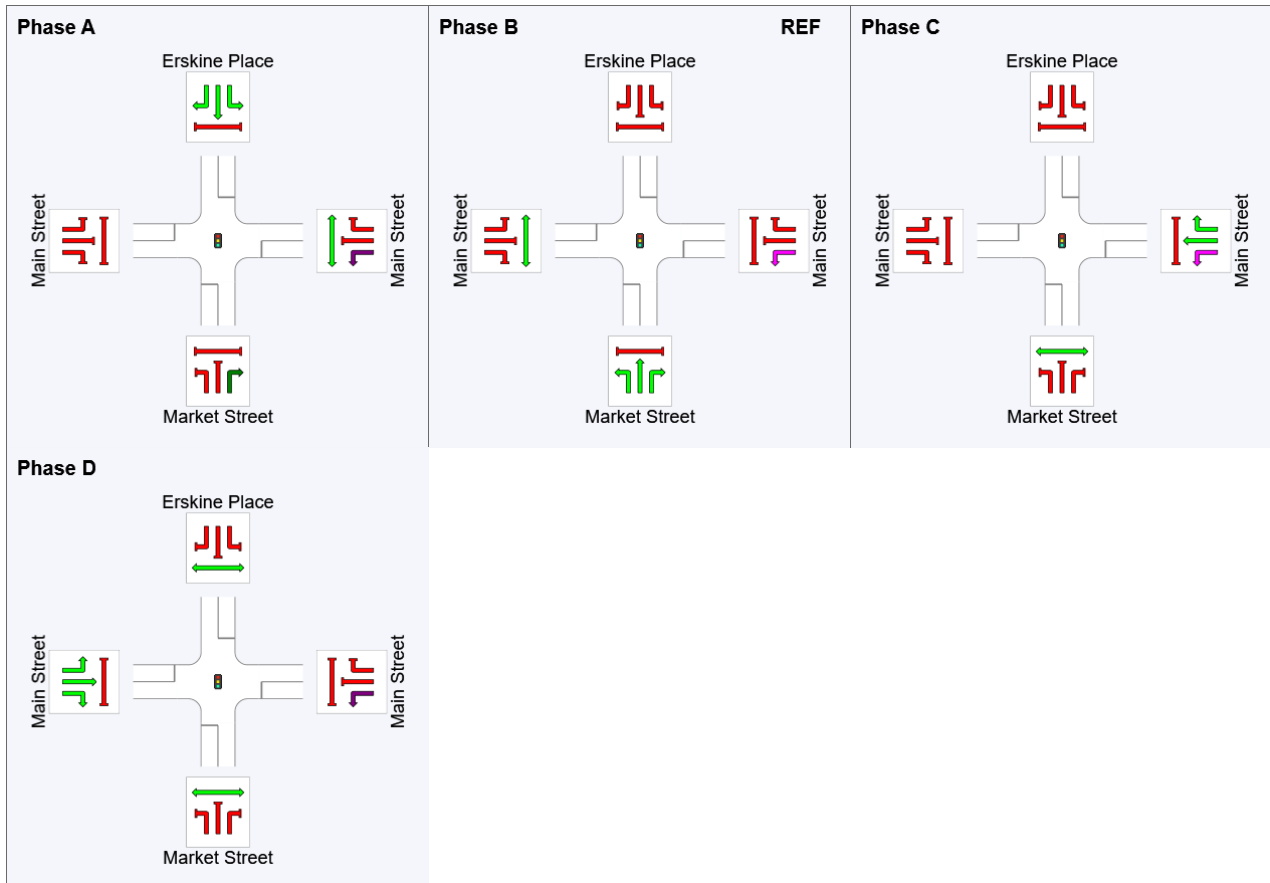
## Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	58	0	21	36
Green Time (sec)	16	15	9	16
Phase Time (sec)	22	21	15	22
Phase Split	28%	26%	19%	28%
Phase Frequency (%)	100.0 <sup>4</sup>	100.0 <sup>4</sup>	100.0 <sup>4</sup>	100.0 <sup>4</sup>


See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

<sup>4</sup> Phase Frequency specified by the user (phase times not specified).

## Output Phase Sequence



REF: Reference Phase  
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

---

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# MOVEMENT SUMMARY

**Site: 101 [2034 W/E WD Main Street / Market Street Signals  
(Site Folder: 2034 WD)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [ Total HV ]		Arrival Flows [ Total HV ]		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [ Veh. ]	Dist [ m ]	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Market Street															
1	L2	All MCs	27	5.0	27	5.0	0.391	36.2	LOS D	4.8	34.8	0.92	0.75	0.92	26.5
2	T1	All MCs	107	5.0	107	5.0	*0.391	31.7	LOS C	4.8	34.8	0.92	0.75	0.92	27.7
3	R2	All MCs	260	5.0	260	5.0	0.223	21.3	LOS C	3.4	24.6	0.75	0.74	0.75	20.8
Approach			395	5.0	395	5.0	0.391	25.1	LOS C	4.8	34.8	0.81	0.74	0.81	23.9
East: Main Street															
4	L2	All MCs	112	5.0	112	5.0	0.091	6.8	LOS A	0.6	4.7	0.24	0.61	0.24	35.0
5	T1	All MCs	87	5.0	87	5.0	*0.411	37.5	LOS D	3.3	24.4	0.97	0.75	0.97	27.4
6	R2	All MCs	21	5.0	21	5.0	0.101	41.3	LOS D	0.8	5.6	0.93	0.70	0.93	25.0
Approach			220	5.0	220	5.0	0.411	22.3	LOS C	3.3	24.4	0.60	0.67	0.60	28.9
North: Erskine Place															
7	L2	All MCs	15	5.0	15	5.0	0.041	33.7	LOS C	0.5	3.4	0.83	0.68	0.83	27.6
8	T1	All MCs	88	5.0	88	5.0	*0.407	30.9	LOS C	5.3	38.5	0.92	0.76	0.92	27.4
9	R2	All MCs	62	5.0	62	5.0	0.407	36.5	LOS D	5.3	38.5	0.92	0.76	0.92	33.9
Approach			165	5.0	165	5.0	0.407	33.3	LOS C	5.3	38.5	0.91	0.75	0.91	30.3
West: Main Street															
10	L2	All MCs	66	5.0	66	5.0	0.416	36.6	LOS D	5.4	39.4	0.92	0.76	0.92	33.8
11	T1	All MCs	87	5.0	87	5.0	*0.416	31.0	LOS C	5.4	39.4	0.92	0.76	0.92	29.1
12	R2	All MCs	54	5.0	54	5.0	0.150	34.7	LOS C	1.8	12.9	0.86	0.73	0.86	25.9
Approach			207	5.0	207	5.0	0.416	33.7	LOS C	5.4	39.4	0.90	0.76	0.90	30.1
All Vehicles			987	5.0	987	5.0	0.416	27.7	LOS C	5.4	39.4	0.80	0.73	0.80	27.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Input Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [ Ped Dist ]		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		ped	m			sec	m	m/sec
South: Market Street											
P1	Full	50	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
East: Main Street											

P2 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
North: Erskine Place											
P3 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
West: Main Street											
P4 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians	200	211	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# MOVEMENT SUMMARY

**Site: 101 [2034 PM WD Main Street / Market Street Signals (Site Folder: 2034 WD)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [ Total HV ]		Arrival Flows [ Total HV ]		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue [ Veh. Dist ]		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			veh/h	%	veh/h	%	v/c	sec			m				km/h
South: Market Street															
1	L2	All MCs	17	5.0	17	5.0	0.303	37.4	LOS D	3.2	23.5	0.92	0.73	0.92	26.0
2	T1	All MCs	74	5.0	74	5.0	0.303	32.9	LOS C	3.2	23.5	0.92	0.73	0.92	27.2
3	R2	All MCs	325	5.0	325	5.0	*0.300	23.2	LOS C	4.5	32.9	0.79	0.76	0.79	19.8
Approach			416	5.0	416	5.0	0.303	25.5	LOS C	4.5	32.9	0.82	0.75	0.82	22.0
East: Main Street															
4	L2	All MCs	179	5.0	179	5.0	0.138	6.4	LOS A	0.8	5.7	0.21	0.61	0.21	35.5
5	T1	All MCs	133	5.0	133	5.0	*0.562	37.4	LOS D	5.1	37.5	0.99	0.78	0.99	27.5
6	R2	All MCs	62	5.0	62	5.0	0.267	41.3	LOS D	2.3	16.7	0.94	0.75	0.94	25.0
Approach			374	5.0	374	5.0	0.562	23.2	LOS C	5.1	37.5	0.61	0.69	0.61	28.6
North: Erskine Place															
7	L2	All MCs	19	5.0	19	5.0	0.060	35.8	LOS D	0.6	4.6	0.86	0.69	0.86	26.8
8	T1	All MCs	41	5.0	41	5.0	*0.215	31.3	LOS C	2.4	17.5	0.90	0.71	0.90	27.2
9	R2	All MCs	28	5.0	28	5.0	0.215	36.9	LOS D	2.4	17.5	0.90	0.71	0.90	33.7
Approach			88	5.0	88	5.0	0.215	34.1	LOS C	2.4	17.5	0.89	0.71	0.89	29.6
West: Main Street															
10	L2	All MCs	32	5.0	32	5.0	0.558	38.8	LOS D	8.6	62.7	0.93	0.78	0.93	35.1
11	T1	All MCs	213	5.0	213	5.0	*0.558	33.2	LOS C	8.6	62.7	0.93	0.78	0.93	30.6
12	R2	All MCs	32	5.0	32	5.0	0.074	35.0	LOS D	1.0	7.1	0.81	0.70	0.81	27.3
Approach			276	5.0	276	5.0	0.558	34.1	LOS C	8.6	62.7	0.92	0.77	0.92	29.2
All Vehicles			1154	5.0	1154	5.0	0.562	27.5	LOS C	8.6	62.7	0.78	0.73	0.78	26.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Input Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [ Ped Dist ]		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed	
	ped/h	ped/h	sec		ped	m			sec	m	m/sec	
South: Market Street												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
East: Main Street												

P2 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
North: Erskine Place											
P3 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
West: Main Street											
P4 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians	200	211	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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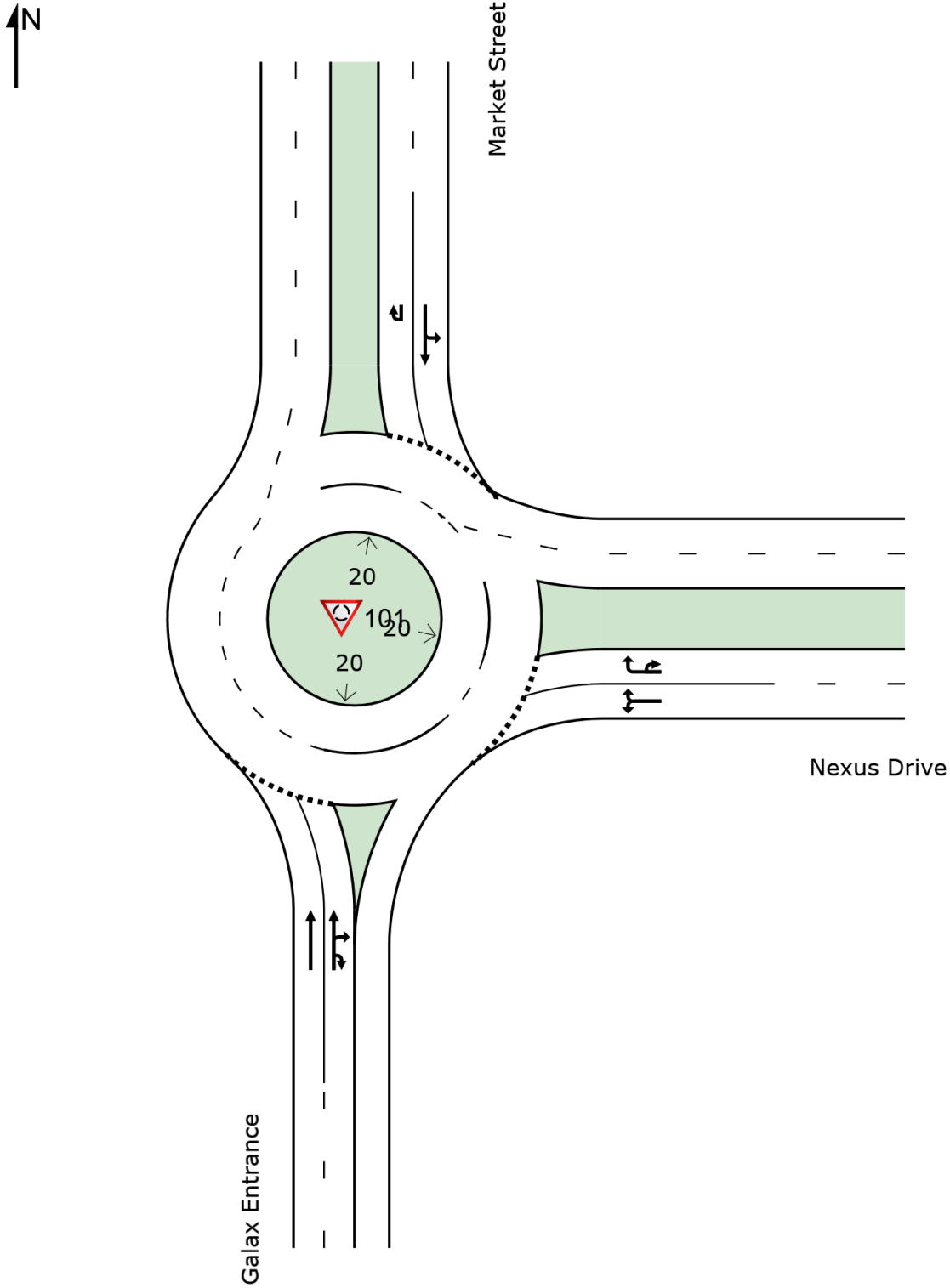
Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# SITE LAYOUT

Site: 101 [2034 W/E WD Nexus Dr / Market St Roundabout  
(Site Folder: 2034 WD)]

New Site  
Site Category: (None)  
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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# MOVEMENT SUMMARY

**Site: 101 [2034 W/E WD Nexus Dr / Market St Roundabout  
(Site Folder: 2034 WD)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site  
Site Category: (None)  
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Galax Entrance															
2	T1	All MCs	94	5.0	94	5.0	0.130	7.5	LOS A	0.5	3.9	0.60	0.69	0.60	35.5
3	R2	All MCs	139	5.0	139	5.0	0.157	11.4	LOS B	0.7	5.0	0.59	0.76	0.59	33.8
3u	U	All MCs	2	5.0	2	5.0	0.157	13.6	LOS B	0.7	5.0	0.59	0.76	0.59	32.6
Approach			235	5.0	235	5.0	0.157	9.9	LOS A	0.7	5.0	0.59	0.73	0.59	34.3
East: Nexus Drive															
4	L2	All MCs	43	5.0	43	5.0	0.308	4.5	LOS A	1.9	13.6	0.26	0.58	0.26	36.2
6	R2	All MCs	527	5.0	527	5.0	0.308	9.2	LOS A	1.9	13.6	0.26	0.59	0.26	31.8
6u	U	All MCs	269	5.0	269	5.0	0.308	11.4	LOS B	1.8	13.3	0.27	0.62	0.27	35.5
Approach			840	5.0	840	5.0	0.308	9.7	LOS A	1.9	13.6	0.27	0.60	0.27	33.3
North: Market Street															
7	L2	All MCs	616	5.0	616	5.0	0.625	7.1	LOS A	5.5	40.0	0.70	0.70	0.80	35.3
8	T1	All MCs	73	5.0	73	5.0	0.625	7.2	LOS A	5.5	40.0	0.70	0.70	0.80	35.5
9u	U	All MCs	7	5.0	7	5.0	0.011	12.8	LOS B	0.0	0.3	0.48	0.69	0.48	27.9
Approach			696	5.0	696	5.0	0.625	7.2	LOS A	5.5	40.0	0.70	0.70	0.80	35.2
All Vehicles			1771	5.0	1771	5.0	0.625	8.7	LOS A	5.5	40.0	0.48	0.66	0.52	34.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

**Site: 101 [2034 PM WD Nexus Dr / Market St Roundabout  
(Site Folder: 2034 WD)]**

**Output produced by SIDRA INTERSECTION Version: 9.1.6.228**

New Site  
Site Category: (None)  
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Galax Entrance															
2	T1	All MCs	43	5.0	43	5.0	0.055	6.9	LOS A	0.2	1.6	0.54	0.64	0.54	36.0
3	R2	All MCs	57	5.0	57	5.0	0.061	11.0	LOS B	0.2	1.8	0.53	0.74	0.53	34.1
3u	U	All MCs	1	5.0	1	5.0	0.061	13.2	LOS B	0.2	1.8	0.53	0.74	0.53	32.9
Approach			101	5.0	101	5.0	0.061	9.3	LOS A	0.2	1.8	0.53	0.70	0.53	34.8
East: Nexus Drive															
4	L2	All MCs	19	5.0	19	5.0	0.257	4.4	LOS A	1.4	10.2	0.17	0.60	0.17	36.5
6	R2	All MCs	521	5.0	521	5.0	0.257	9.1	LOS A	1.4	10.2	0.18	0.60	0.18	32.2
6u	U	All MCs	196	5.0	196	5.0	0.257	11.3	LOS B	1.4	10.1	0.18	0.62	0.18	36.0
Approach			736	5.0	736	5.0	0.257	9.5	LOS A	1.4	10.2	0.18	0.61	0.18	33.5
North: Market Street															
7	L2	All MCs	524	5.0	524	5.0	0.458	4.7	LOS A	2.8	20.2	0.47	0.54	0.47	38.5
8	T1	All MCs	43	5.0	43	5.0	0.458	4.8	LOS A	2.8	20.2	0.47	0.54	0.47	39.0
9u	U	All MCs	4	5.0	4	5.0	0.006	11.8	LOS B	0.0	0.2	0.37	0.65	0.37	28.9
Approach			572	5.0	572	5.0	0.458	4.8	LOS A	2.8	20.2	0.47	0.54	0.47	38.4
All Vehicles			1408	5.0	1408	5.0	0.458	7.6	LOS A	2.8	20.2	0.32	0.59	0.32	35.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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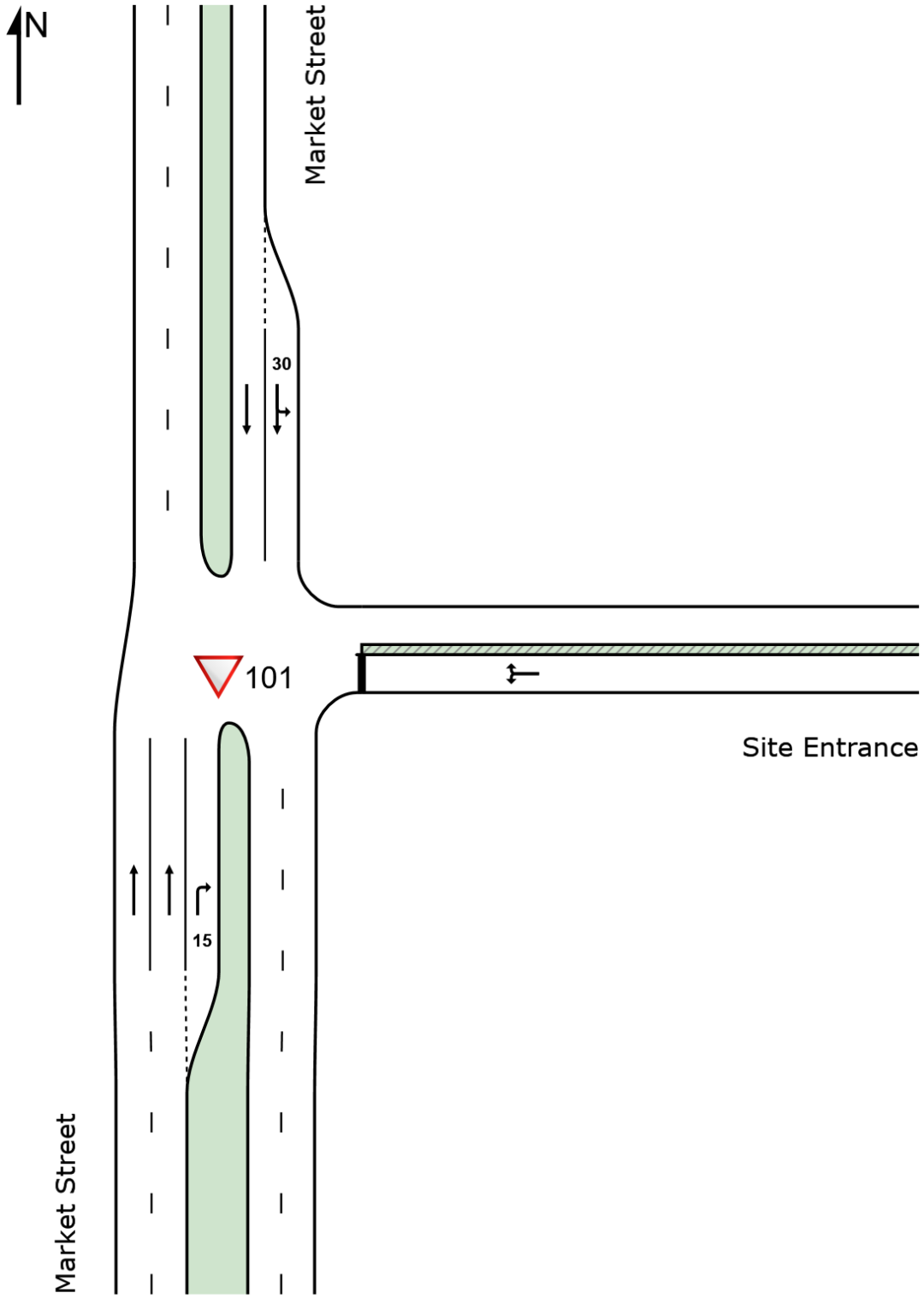


# SITE LAYOUT

▽ Site: 101 [2034 W/E WD Market Street / Site Access - North  
(Site Folder: 2034 WD)]

New Site  
Site Category: (None)  
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.





# MOVEMENT SUMMARY

Site: 101 [2034 W/E WD Market Street / Site Access - North  
(Site Folder: 2034 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site  
Site Category: (None)  
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Market Street															
2	T1	All MCs	275	5.0	275	5.0	0.072	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	144	5.0	144	5.0	0.131	6.8	LOS A	0.5	4.0	0.36	0.60	0.36	37.0
Approach			419	5.0	419	5.0	0.131	2.3	NA	0.5	4.0	0.12	0.21	0.12	48.7
East: Site Entrance															
4	L2	All MCs	129	5.0	129	5.0	0.455	8.0	LOS A	2.0	14.5	0.01	1.00	0.01	35.1
6	R2	All MCs	112	5.0	112	5.0	0.455	8.3	LOS A	2.0	14.5	0.01	1.00	0.01	23.7
Approach			241	5.0	241	5.0	0.455	8.2	LOS A	2.0	14.5	0.01	1.00	0.01	30.1
North: Market Street															
7	L2	All MCs	124	5.0	124	5.0	0.069	4.3	LOS A	0.0	0.0	0.00	0.56	0.00	34.5
8	T1	All MCs	117	5.0	117	5.0	0.062	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			241	5.0	241	5.0	0.069	2.2	NA	0.0	0.0	0.00	0.29	0.00	45.7
All Vehicles			901	5.0	901	5.0	0.455	3.9	NA	2.0	14.5	0.06	0.44	0.06	41.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: 101 [2034 PM WD Market Street / Site Access - North  
(Site Folder: 2034 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site  
Site Category: (None)  
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. ]	[ Dist ]				km/h
			veh/h		veh/h					veh	m				
South: Market Street															
2	T1	All MCs	282	5.0	282	5.0	0.074	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	149	5.0	149	5.0	0.136	6.8	LOS A	0.6	4.1	0.36	0.60	0.36	37.0
Approach			432	5.0	432	5.0	0.136	2.3	NA	0.6	4.1	0.12	0.21	0.12	48.7
East: Site Entrance															
4	L2	All MCs	146	5.0	146	5.0	0.521	8.0	LOS A	2.6	18.9	0.01	1.00	0.01	35.1
6	R2	All MCs	126	5.0	126	5.0	0.521	8.4	LOS A	2.6	18.9	0.01	1.00	0.01	23.7
Approach			273	5.0	273	5.0	0.521	8.2	LOS A	2.6	18.9	0.01	1.00	0.01	30.1
North: Market Street															
7	L2	All MCs	125	5.0	125	5.0	0.070	4.3	LOS A	0.0	0.0	0.00	0.56	0.00	34.5
8	T1	All MCs	112	5.0	112	5.0	0.059	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			237	5.0	237	5.0	0.070	2.3	NA	0.0	0.0	0.00	0.29	0.00	45.3
All Vehicles			941	5.0	941	5.0	0.521	4.0	NA	2.6	18.9	0.06	0.46	0.06	40.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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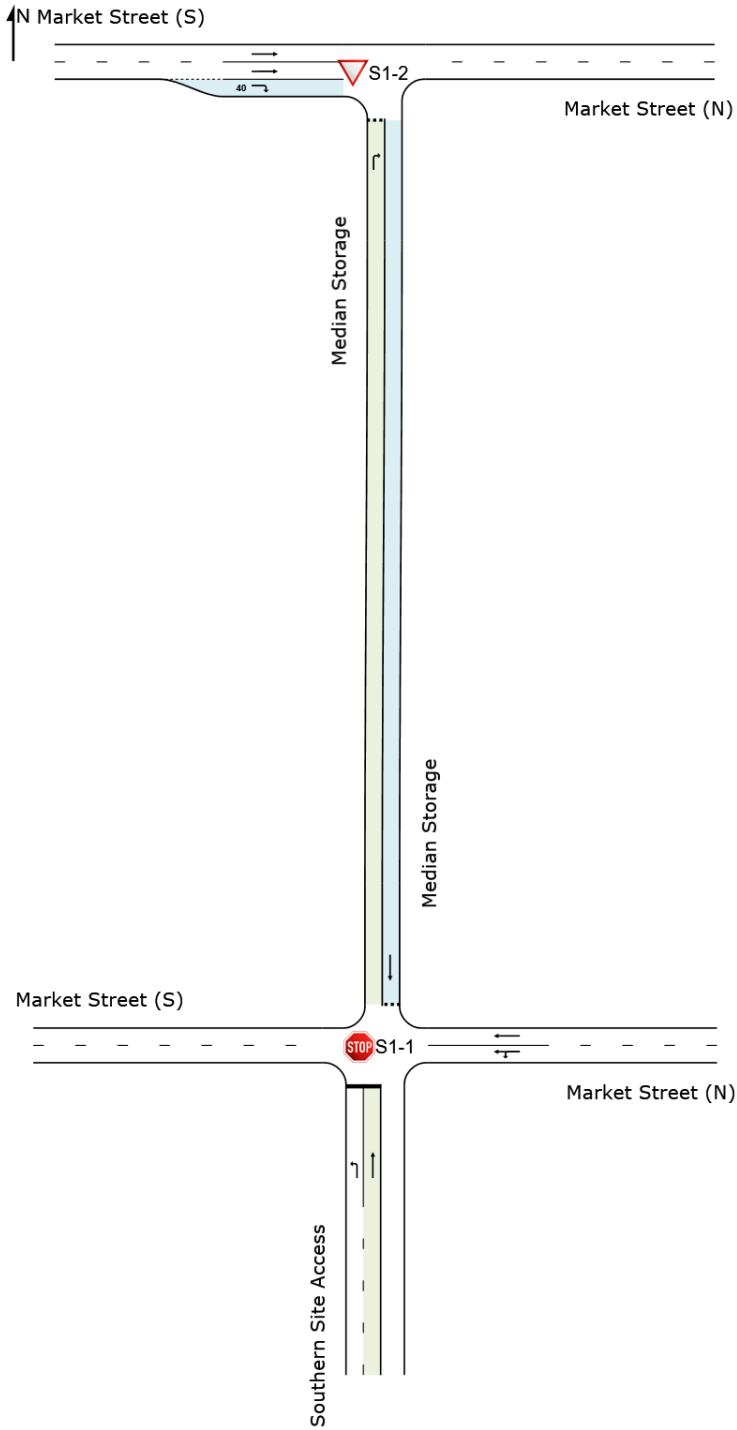
Project: F:\Jobs\B21500\B21564\Design\Traffic\B21564 TR003 SIDRA.sip9

# NETWORK LAYOUT

■ ■ Network: SCTI-A [2034 W/E Design (Network Folder: General)]

Staged Crossing at T Intersection Type A  
 Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	CCG ID	Site Name
▽S1-2	NA	2034 W/E S2 L - Import
STOP S1-1	NA	2034 W/E S1 L - Import



# MOVEMENT SUMMARY

 Site: S1-1 [2034 W/E S1 L - Import (Site Folder: 2034 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: SCTI-A [2034 W/E Design (Network Folder: General)]

Staged Crossing at T Intersection Type A

Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Southern Site Access															
1	L2	All MCs	271	5.0	271	5.0	0.222	9.0	LOS A	1.0	7.5	0.30	0.87	0.30	50.8
2	T1	All MCs	91	5.0	91	5.0	0.109	10.1	LOS B	0.4	2.9	0.45	0.98	0.45	46.6
Approach			361	5.0	361	5.0	0.222	9.3	LOS A	1.0	7.5	0.34	0.90	0.34	50.1
East: Market Street (N)															
3	L2	All MCs	91	5.0	91	5.0	0.126	5.6	LOS A	0.0	0.0	0.00	0.23	0.00	55.3
4	T1	All MCs	380	5.0	380	5.0	0.126	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	59.2
Approach			471	5.0	471	5.0	0.126	1.1	NA	0.0	0.0	0.00	0.11	0.00	58.4
North: Median Storage															
5	T1	All MCs	163	5.0	163	5.0	0.174	2.1	LOS A	0.7	4.8	0.47	0.40	0.47	48.9
Approach			163	5.0	163	5.0	0.174	2.1	LOS A	0.7	4.8	0.47	0.40	0.47	48.9
All Vehicles			995	5.0	995	5.0	0.222	4.2	NA	1.0	7.5	0.20	0.45	0.20	54.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: S1-2 [2034 W/E S2 L - Import (Site Folder: 2034 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: SCTI-A [2034 W/E Design (Network Folder: General)]

Staged Crossing at T Intersection Type A

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Median Storage															
1	R2	All MCs	91	5.0	91	5.0	0.139	4.7	LOS A	0.5	3.9	0.56	0.63	0.56	45.1
Approach			91	5.0	91	5.0	0.139	4.7	LOS A	0.5	3.9	0.56	0.63	0.56	45.1
West: Market Street (S)															
2	T1	All MCs	435	5.0	435	5.0	0.115	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	163	5.0	163	5.0	0.091	5.8	LOS A	0.0	0.0	0.00	0.63	0.00	50.5
Approach			598	5.0	598	5.0	0.115	1.6	NA	0.0	0.0	0.00	0.17	0.00	58.2
All Vehicles			688	5.0	688	5.0	0.139	2.0	NA	0.5	3.9	0.07	0.23	0.07	56.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

 Site: S1-1 [2034 PM S1 L - Import (Site Folder: 2034 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 Network: N101 [2034 PM Design (Network Folder: General)]

Staged Crossing at T Intersection Type A  
 Site Category: (None)  
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	Dist ] m				
South: Southern Site Access															
1	L2	All MCs	287	5.0	287	5.0	0.220	8.6	LOS A	1.0	7.6	0.20	0.89	0.20	50.9
2	T1	All MCs	96	5.0	96	5.0	0.098	9.3	LOS A	0.4	2.6	0.37	0.96	0.37	47.4
Approach			383	5.0	383	5.0	0.220	8.8	LOS A	1.0	7.6	0.24	0.91	0.24	50.3
East: Market Street (N)															
3	L2	All MCs	91	5.0	91	5.0	0.089	5.6	LOS A	0.0	0.0	0.00	0.33	0.00	54.6
4	T1	All MCs	240	5.0	240	5.0	0.089	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	59.1
Approach			331	5.0	331	5.0	0.089	1.6	NA	0.0	0.0	0.00	0.16	0.00	57.8
North: Median Storage															
5	T1	All MCs	172	5.0	172	5.0	0.158	1.3	LOS A	0.6	4.4	0.39	0.29	0.39	49.9
Approach			172	5.0	172	5.0	0.158	1.3	LOS A	0.6	4.4	0.39	0.29	0.39	49.9
All Vehicles			885	5.0	885	5.0	0.220	4.6	NA	1.0	7.6	0.18	0.51	0.18	53.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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# MOVEMENT SUMMARY

Site: S1-2 [2034 PM S2 L - Import (Site Folder: 2034 WD)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2034 PM Design (Network Folder: General)]

Staged Crossing at T Intersection Type A

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	[ Dist ] m				
South: Median Storage															
1	R2	All MCs	96	5.0	96	5.0	0.136	4.2	LOS A	0.5	3.8	0.54	0.59	0.54	45.7
Approach			96	5.0	96	5.0	0.136	4.2	LOS A	0.5	3.8	0.54	0.59	0.54	45.7
West: Market Street (S)															
2	T1	All MCs	367	5.0	367	5.0	0.097	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	172	5.0	172	5.0	0.096	5.8	LOS A	0.0	0.0	0.00	0.63	0.00	50.5
Approach			539	5.0	539	5.0	0.097	1.9	NA	0.0	0.0	0.00	0.20	0.00	57.9
All Vehicles			635	5.0	635	5.0	0.136	2.2	NA	0.5	3.8	0.08	0.26	0.08	56.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

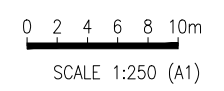
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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## **APPENDIX D – SWEEP PATH ASSESSMENTS**



Project:  
TOWNSVILLE NORTH SHORE

Client:  
**ONEFIN**

Title:  
SWEEP PATH ASSESSMENT  
ARTICULATED VEHICLE - OUT VIA BOULEVARD

**LAMBERT & REHBEIN**  
ENGINEERS • MANAGERS • SCIENTISTS

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Approved: MB

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