

**ANNEXURE E**

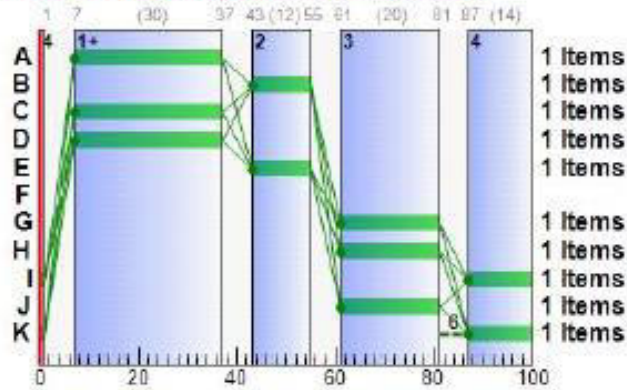
**TRAFFIC SIGNAL TIMINGS AND**

**PHASINGS**

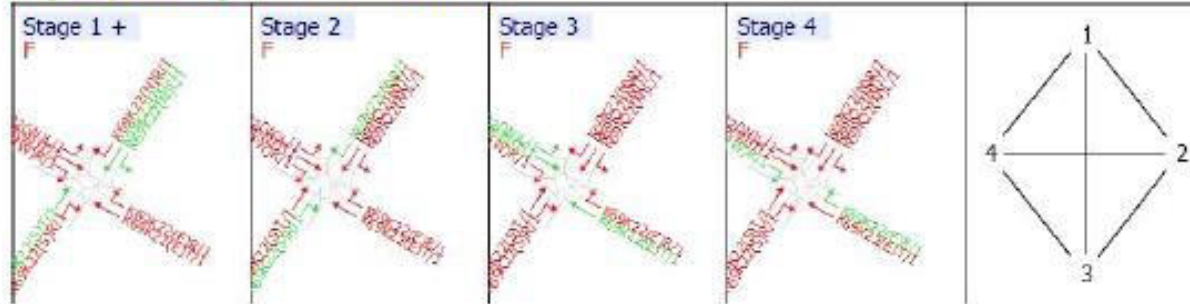
# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1

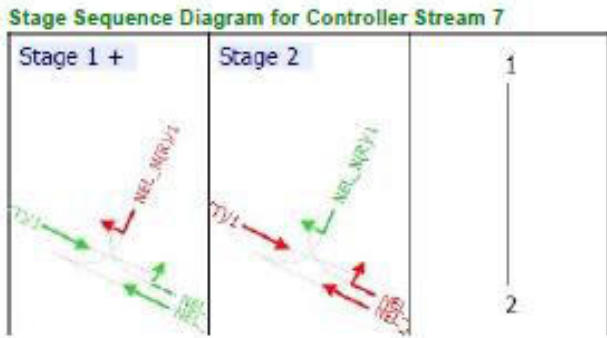
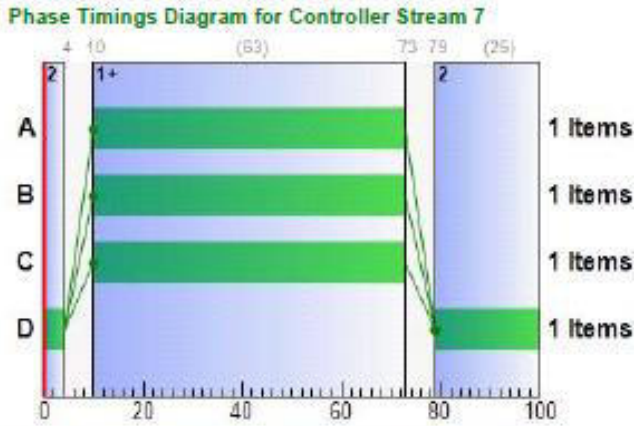


Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	7	37	30	20	20
1	2	✓	2	B,E	43	55	12	7	7
1	3	✓	3	G,H,J	61	81	20	20	20
1	4	✓	4	I,K	87	101	14	7	7

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 2. Bronkhorstspruit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)



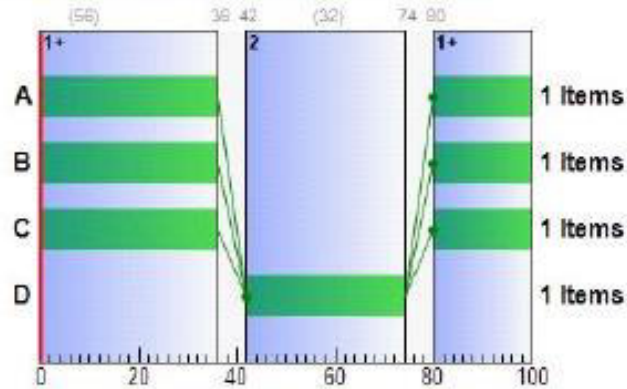
### Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
7	1	✓	1	A,B,C	10	73	63	14	14
7	2	✓	2	D	79	100	25	14	14

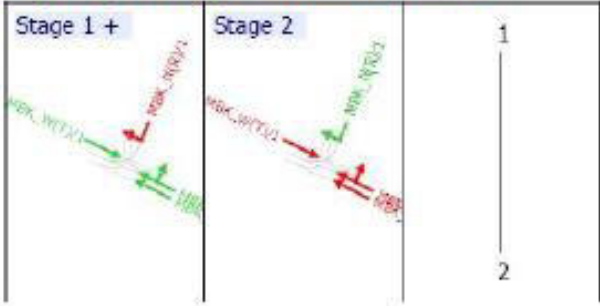
**A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\***

**3. Bronkhorstspuit Road (R104) / Mbeki Street  
(BACKGROUND TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



Resultant Stages

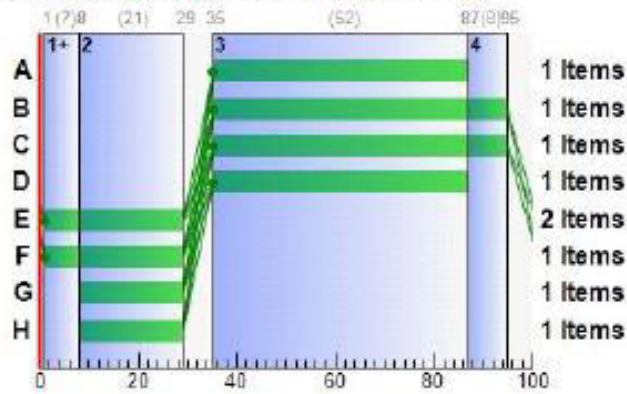
Controller Stream	Stage	Is Base Stage	Library Stage (ID)	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
6	1	✓	1	A,B,C	0	36	36	14	14
6	2	✓	2	D	36	74	38	14	14

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

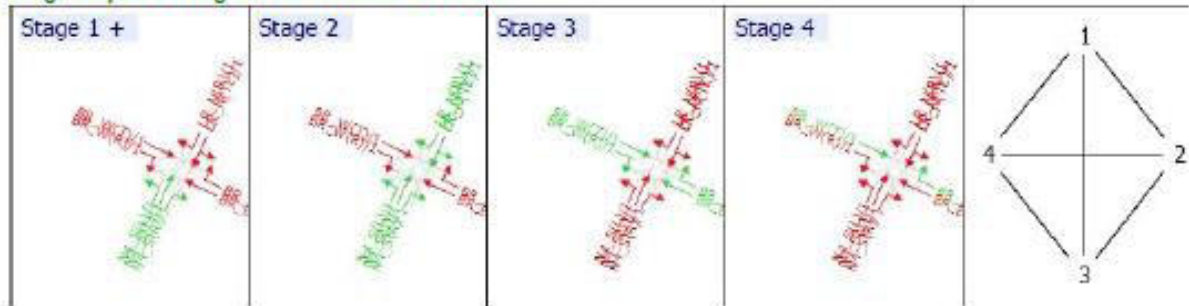
## 4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street

(BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

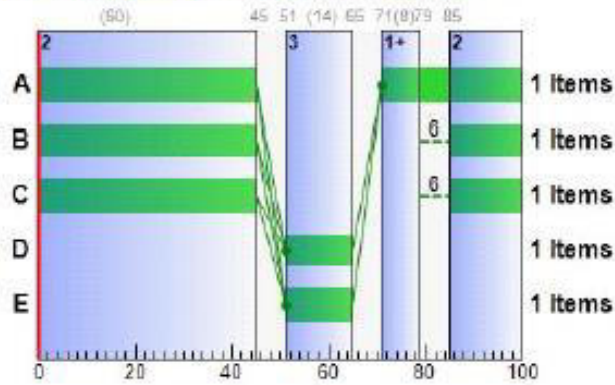
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	EF	1	8	7	7	7
5	2	✓	2	E,F,G,H	8	29	21	21	21
5	3	✓	3	A,B,C,D	35	87	52	21	21
5	4	✓	4	B,C	87	95	8	7	7

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

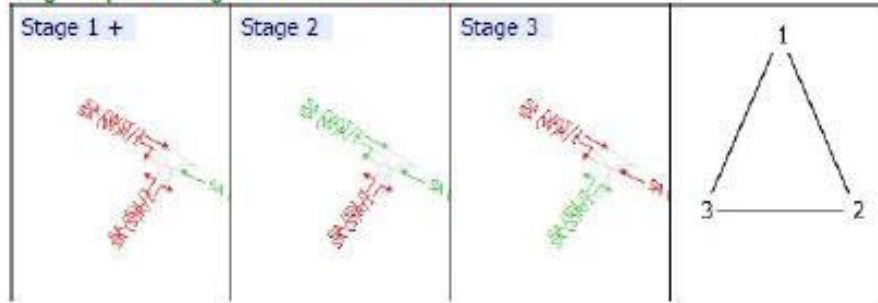
## 5. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

### (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant Stages

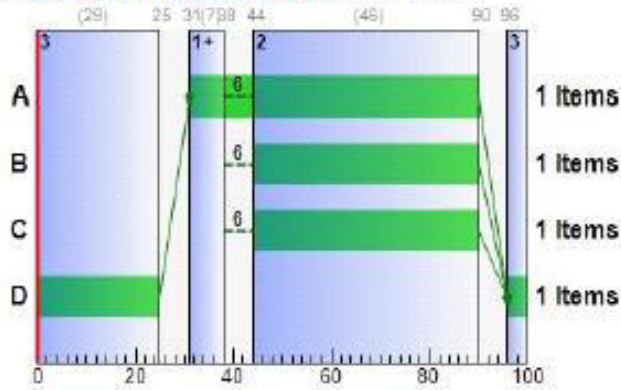
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
2	1	✓	1	A	71	79	8	7	7
2	2	✓	2	A,B,C	85	45	60	14	14
2	3	✓	3	DE	51	65	14	14	14

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

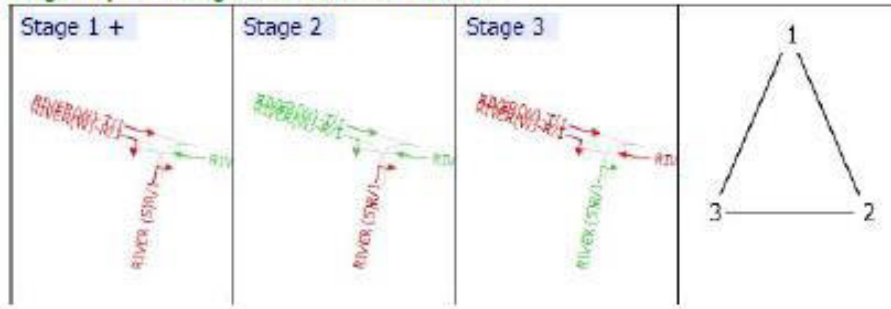
## 6. Bronkhorstspuit Road (R104) / Access to River Walk Development

(BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



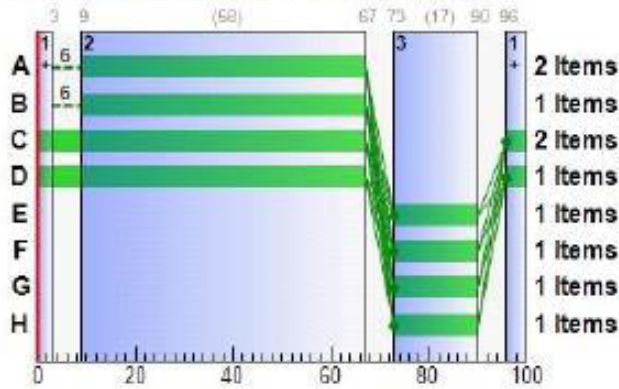
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					31	38			
3	1	✓	1	A	44	90	46	25	25
3	2	✓	2	A,B,C	96	25	29	25	25

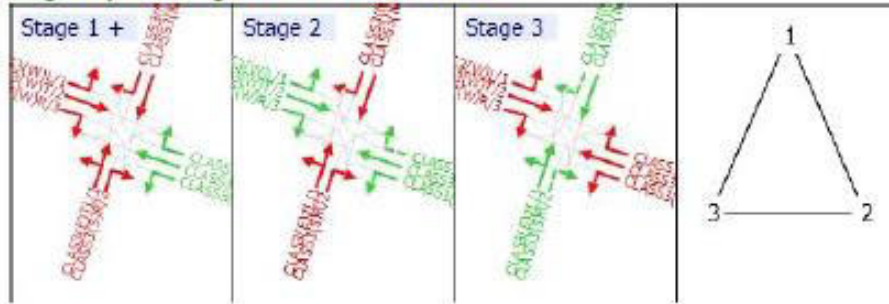
# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development) (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 4



Stage Sequence Diagram for Controller Stream 4



Resultant Stages

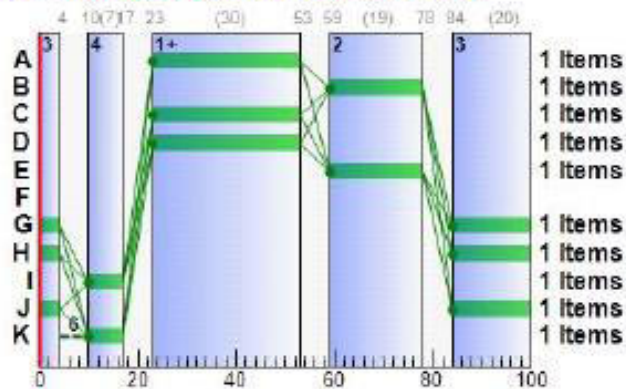
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
4	1	✓	1	C,D	96	3	7	7	7
4	2	✓	2	A,B,C,D	9	67	58	17	17
4	3	✓	3	E,F,G,H	73	90	17	17	17



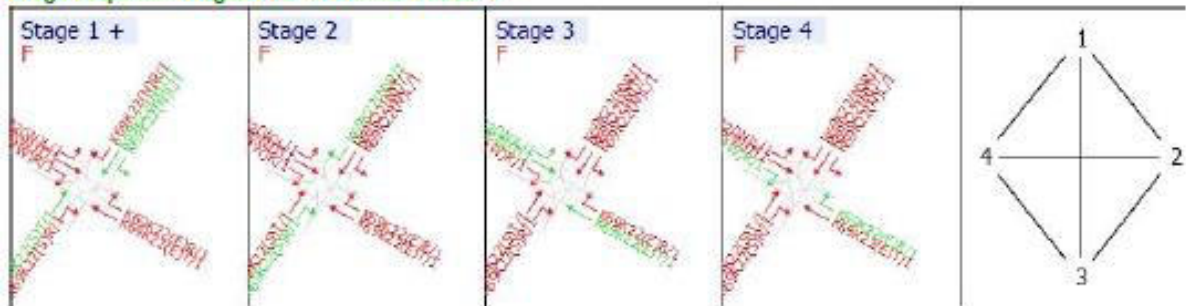
# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



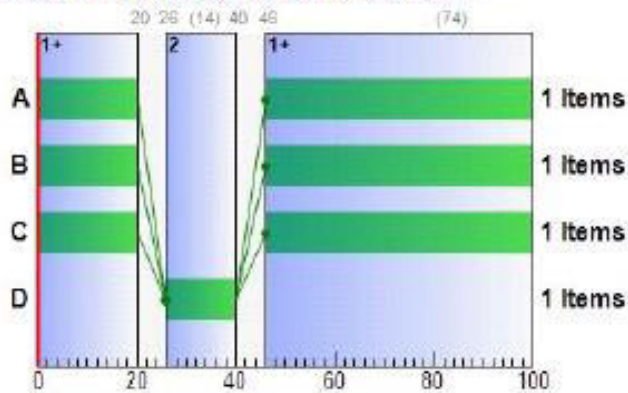
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	23	53	30	20	20
1	2	✓	2	B,E	59	78	19	7	7
1	3	✓	3	G,H,I	84	4	20	20	20
1	4	✓	4	LK	10	17	7	7	7

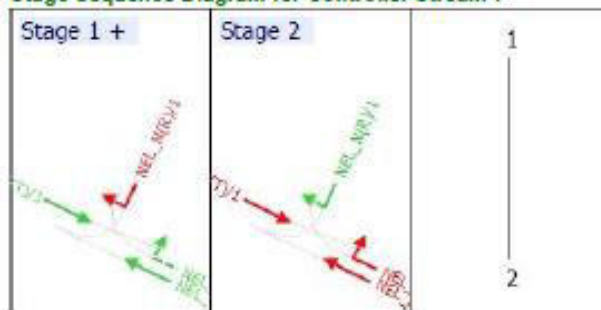
# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 2. Bronkhorstspuit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 7



Stage Sequence Diagram for Controller Stream 7



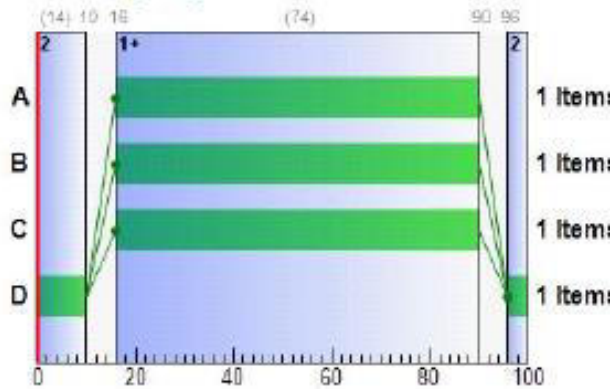
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					45	20			
7	1	✓	1	A,B,C	45	20	74	14	14
7	2	✓	2	D	26	40	14	14	14

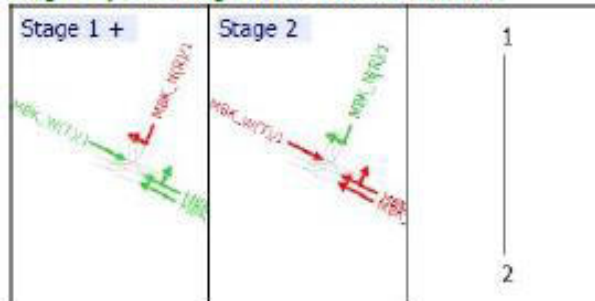
# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 3. Bronkhorstspuit Road (R104) / Mbeki Street (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



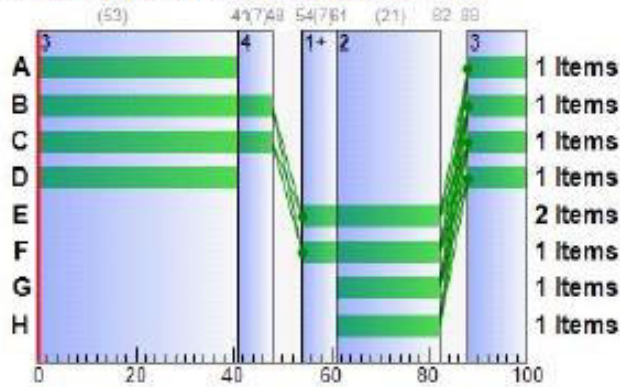
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
6	1	✓	1	A,B,C	15	90	74	14	14
6	2	✓	2	D	95	100	14	14	14

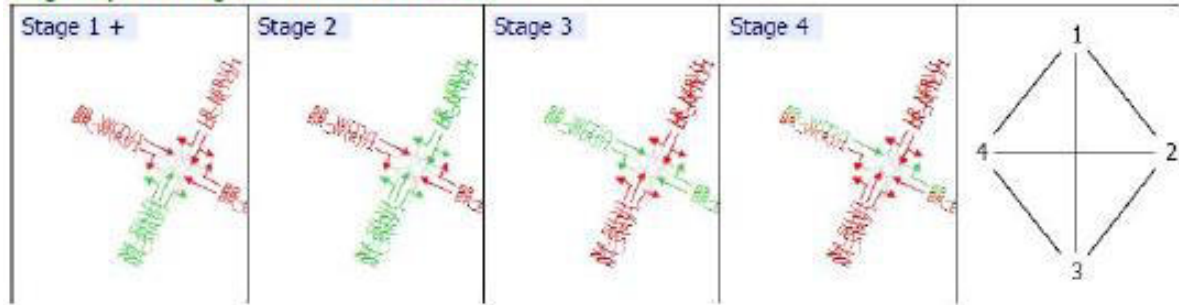
# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

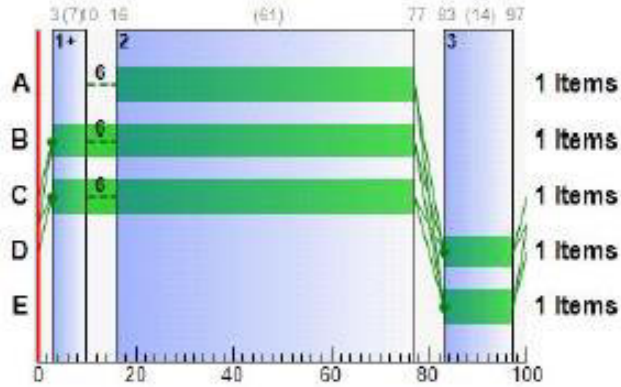
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	E, F	54	61	7	7	7
5	2	✓	2	E, F, G, H	61	82	21	21	21
5	3	✓	3	A, B, C, D	88	41	53	21	21
5	4	✓	4	B, C	41	48	7	7	7

# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

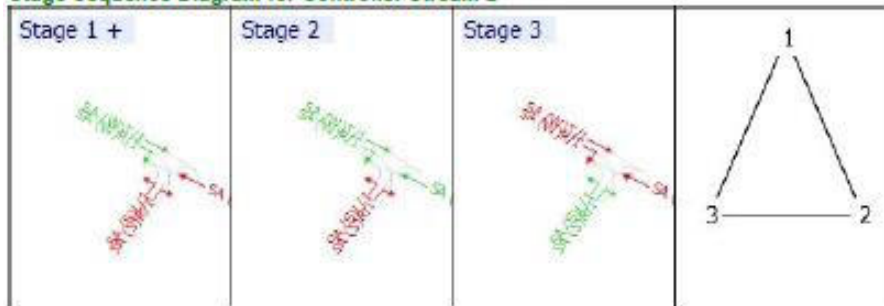
## 5. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

### (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



### Resultant Stages

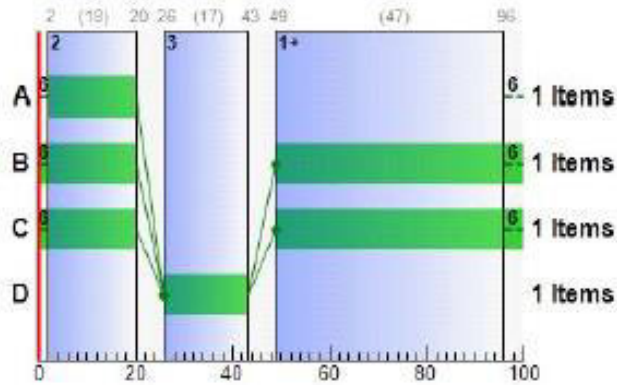
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Timing (s)		Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					Start	End			
2	1	✓	1	B,C	3	10	7	7	7
2	2	✓	2	A,B,C	16	77	61	14	14
2	3	✓	3	D,E	63	97	14	14	14

**A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\***

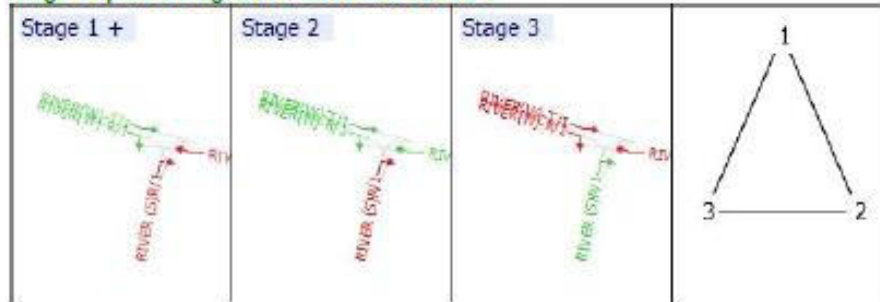
6. Bronkhorstspuit Road (R104) / Access to River Walk Development

**(BACKGROUND TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



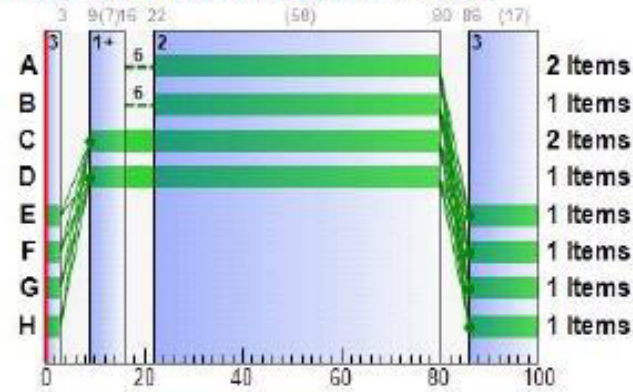
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					49	96			
3	1	✓	1	C,B	49	96	47	30	30
3	2	✓	2	A,B,C	2	20	18	17	17
3	3	✓	3	D	26	43	17	17	17

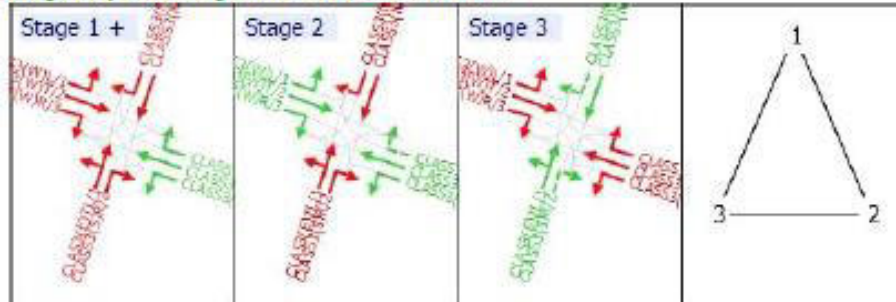
# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development) (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 4



Stage Sequence Diagram for Controller Stream 4

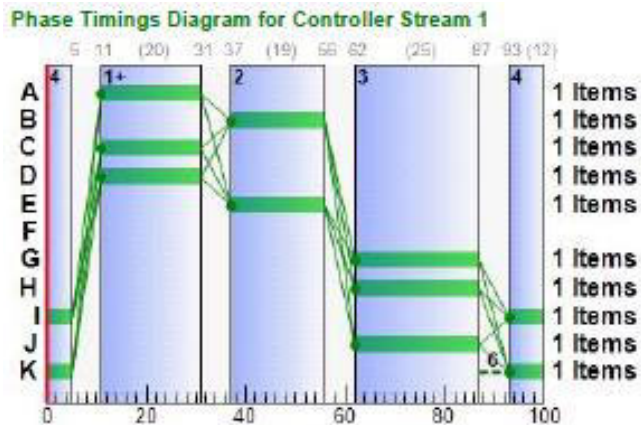


Resultant Stages

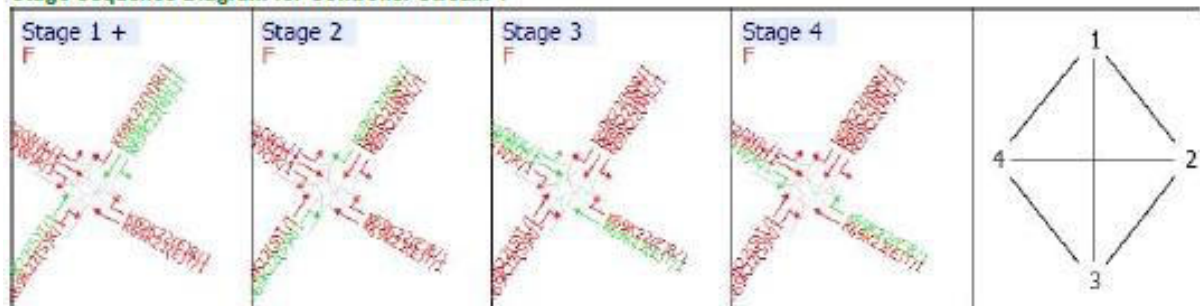
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
4	1	✓	1	C,D	9	16	7	7	7
4	2	✓	2	A,B,C,D	22	80	58	17	17
4	3	✓	3	E,F,G,H	86	3	17	17	17

# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)



**Stage Sequence Diagram for Controller Stream 1**



**Resultant Stages**

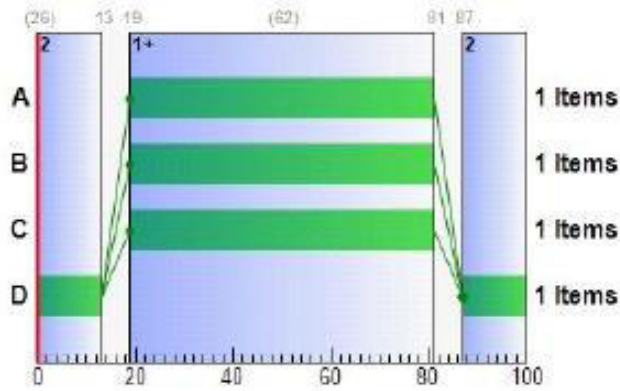
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	11	31	20	20	20
1	2	✓	2	B,E	37	56	19	7	7
1	3	✓	3	G,H,J	62	87	25	20	20
1	4	✓	4	I,K	93	5	12	7	7



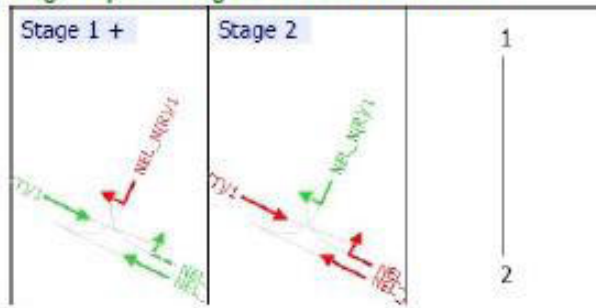
# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 2. Bronkhorstspuit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 7



Stage Sequence Diagram for Controller Stream 7



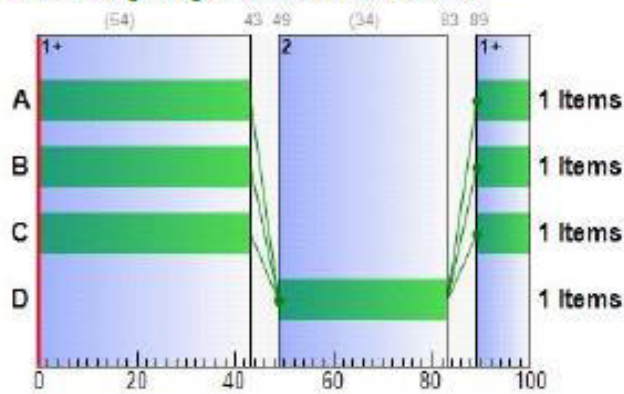
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					19	61			
7	1	✓	1	A,B,C	19	61	62	14	14
7	2	✓	2	D	67	13	26	14	14

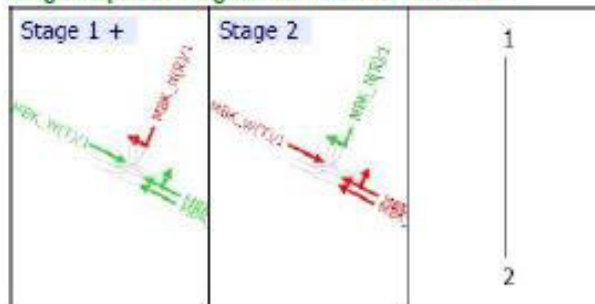
# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 3. Bronkhorstspuit Road (R104) / Mbeki Street (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



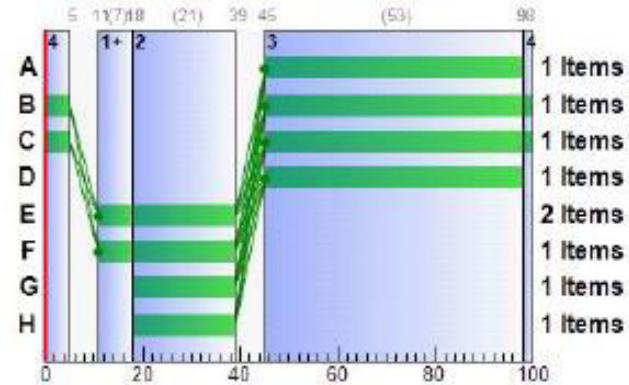
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					89	43			
6	1	✓	1	A,B,C	89	43	54	14	14
6	2	✓	2	D	49	83	34	14	14

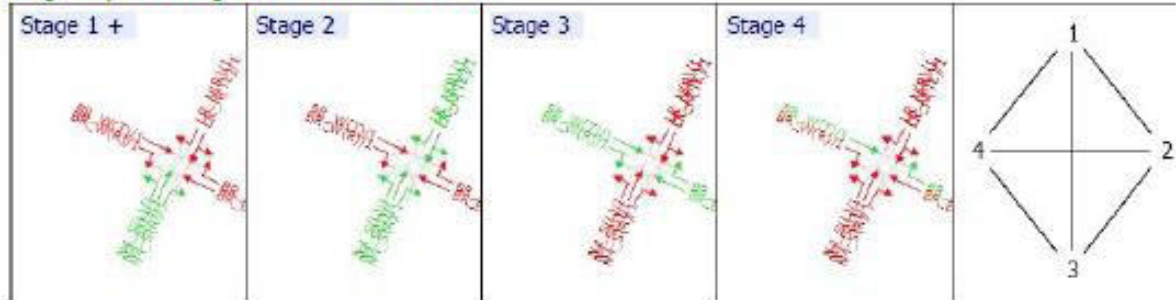
# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

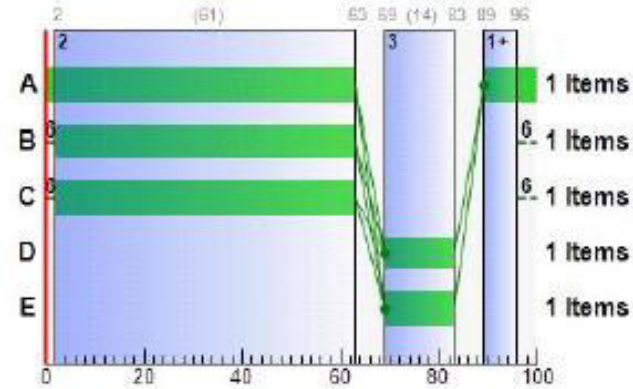
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	EF	11	18	7	7	7
5	2	✓	2	E,F,G,H	18	39	21	21	21
5	3	✓	3	A,B,C,D	45	98	53	21	21
5	4	✓	4	B,C	98	5	7	7	7

# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

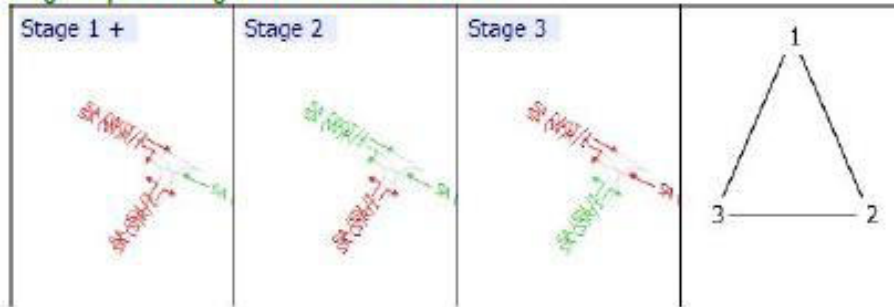
## 5. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

### (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant Stages

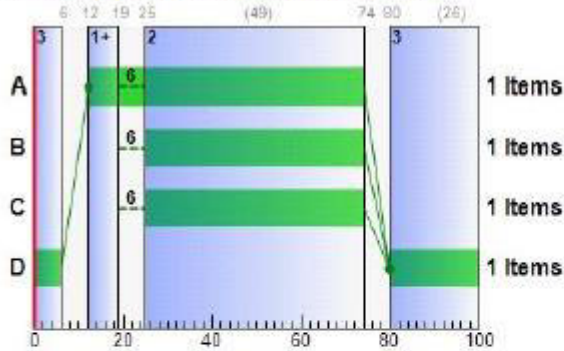
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
2	1	✓	1	A	89	96	7	7	7
2	2	✓	2	A,B,C	2	63	61	14	14
2	3	✓	3	D,E	69	83	14	14	14

**A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\***

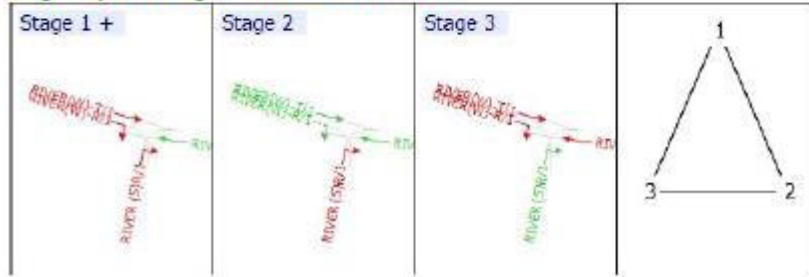
6. Bronkhorstspuit Road (R104) / Access to River Walk Development

**(BACKGROUND TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



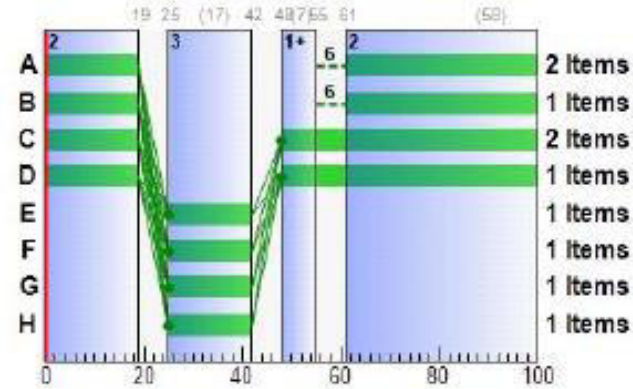
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
3	1	✓	1	A	12	19	7	7	7
3	2	✓	2	A,B,C	25	74	49	25	25
3	3	✓	3	D	80	6	26	25	25

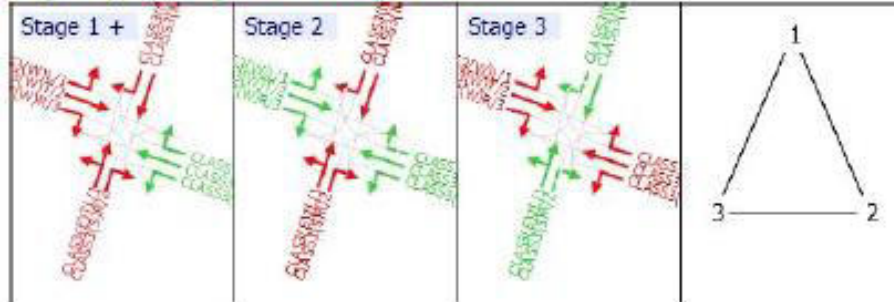
# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development) (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 4



Stage Sequence Diagram for Controller Stream 4



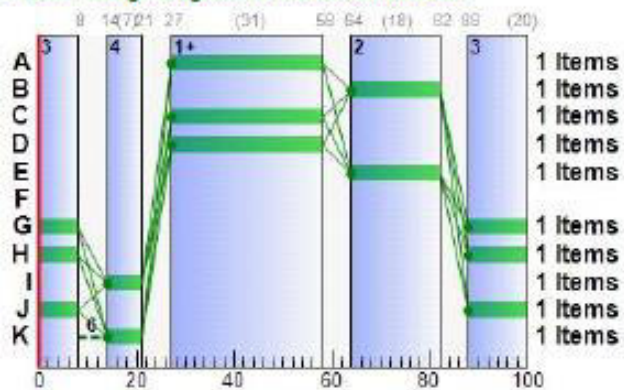
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					48	55			
4	1	✓	1	C,D	48	55	7	7	7
4	2	✓	2	A,B,C,D	61	19	58	17	17
4	3	✓	3	E,F,G,H	25	42	17	17	17

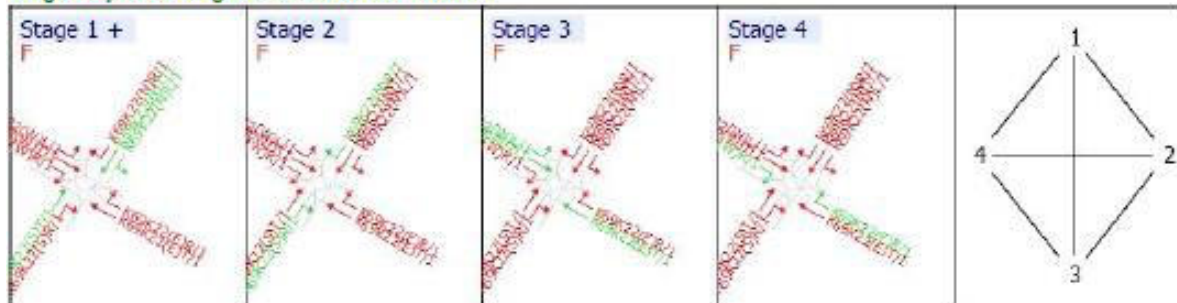
# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



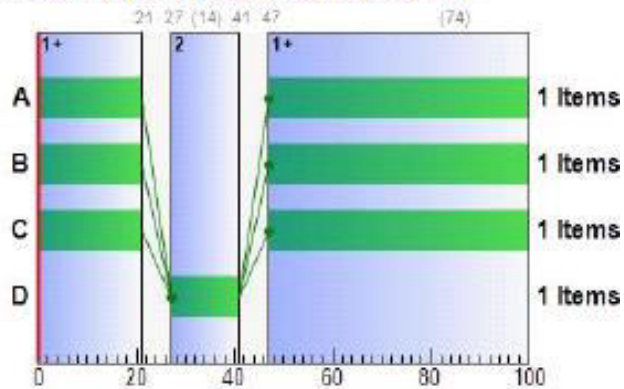
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	27	58	31	20	20
1	2	✓	2	B,E	64	82	18	7	7
1	3	✓	3	G,H,J	88	8	20	20	20
1	4	✓	4	I,K	14	21	7	7	7

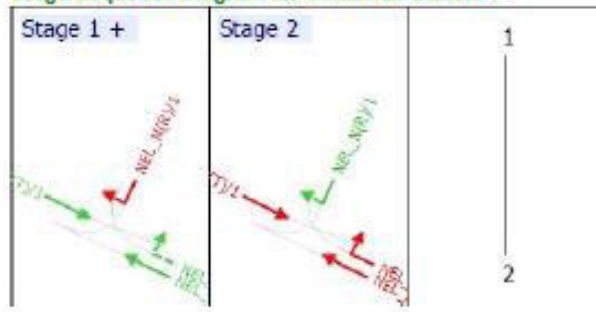
# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 2. Bronkhorstspuit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 7



Stage Sequence Diagram for Controller Stream 7



Resultant Stages

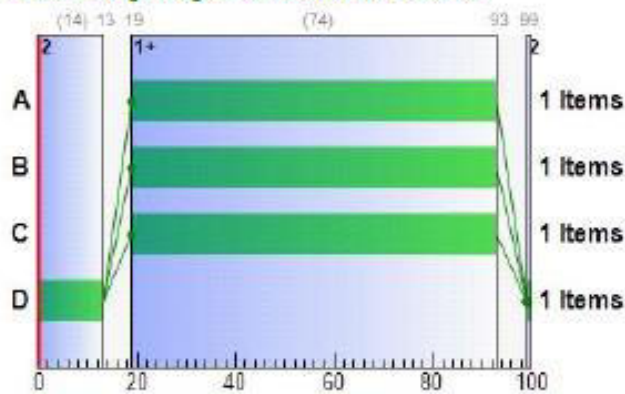
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					47	21			
7	1	✓	1	A,B,C	47	21	74	14	14
7	2	✓	2	D	27	41	14	14	14



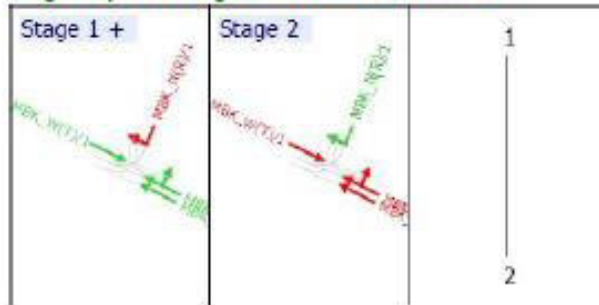
# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 3. Bronkhorstspuit Road (R104) / Mbeki Street (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



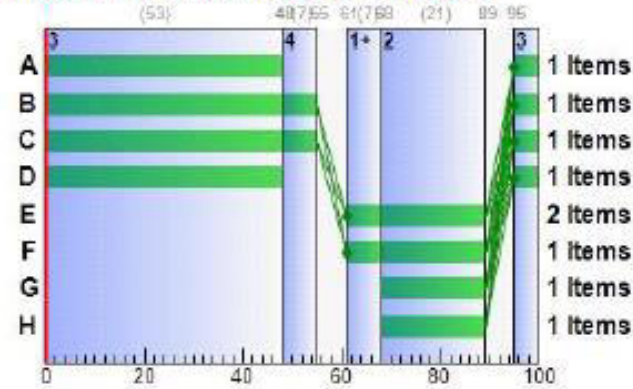
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
6	1	✓	1	A,B,C	19	93	74	14	14
6	2	✓	2	D	99	13	14	14	14

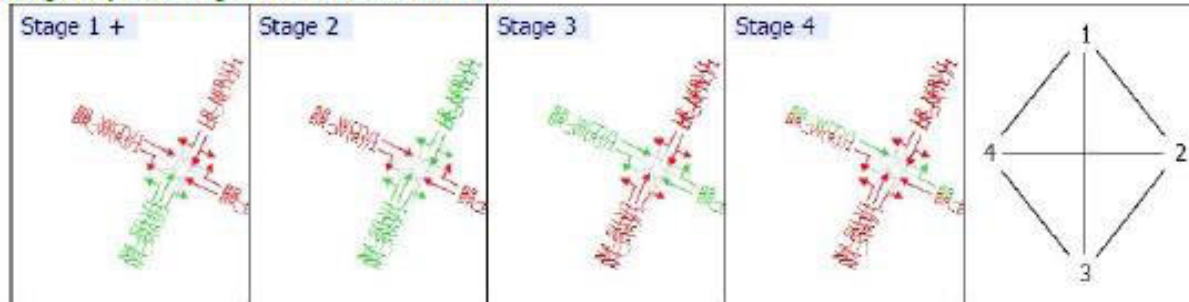
# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

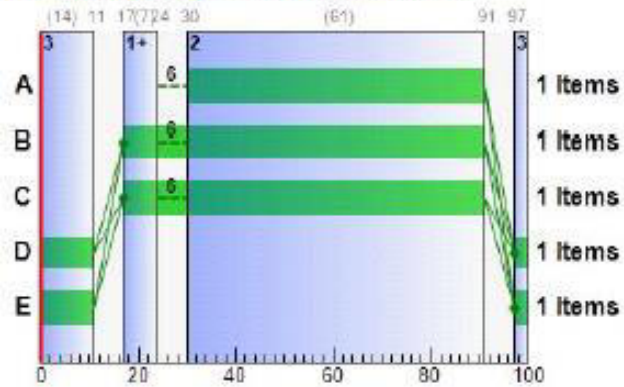
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	EF	61	68	7	7	7
5	2	✓	2	E,F,G,H	68	89	21	21	21
5	3	✓	3	A,B,C,D	95	48	53	21	21
5	4	✓	4	B,C	48	55	7	7	7

# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

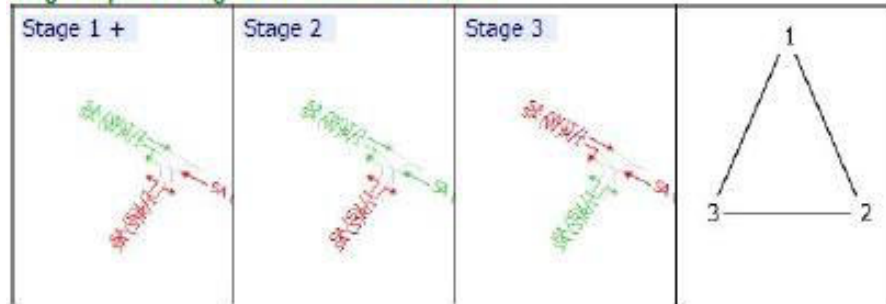
## 5. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

### (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant Stages

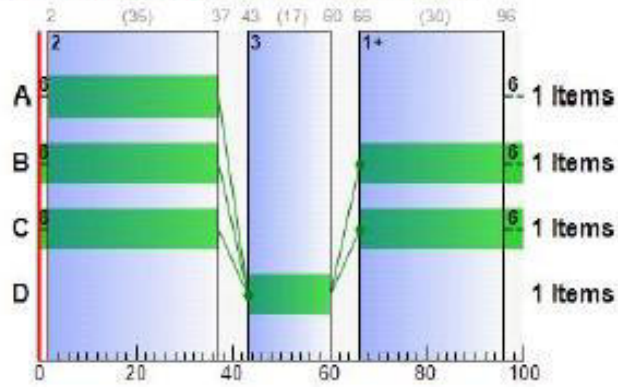
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
2	1	✓	1	B,C	17	24	7	7	7
2	2	✓	2	A,B,C	30	91	61	14	14
2	3	✓	3	D,E	97	11	14	14	14

# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

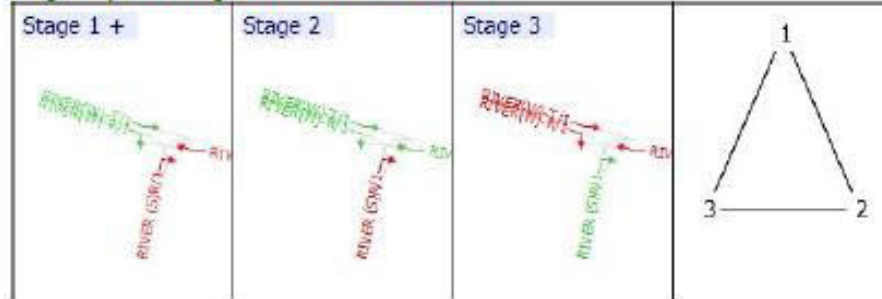
## 6. Bronkhorstspuit Road (R104) / Access to River Walk Development

### (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



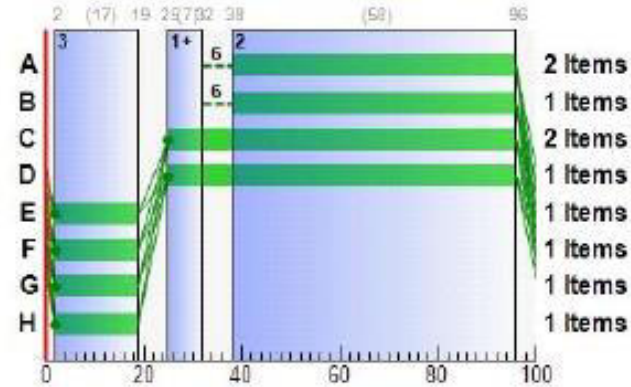
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
3	1	✓	1	C,B	66	96	30	30	30
3	2	✓	2	A,B,C	2	37	35	17	17
3	3	✓	3	D	43	60	17	17	17

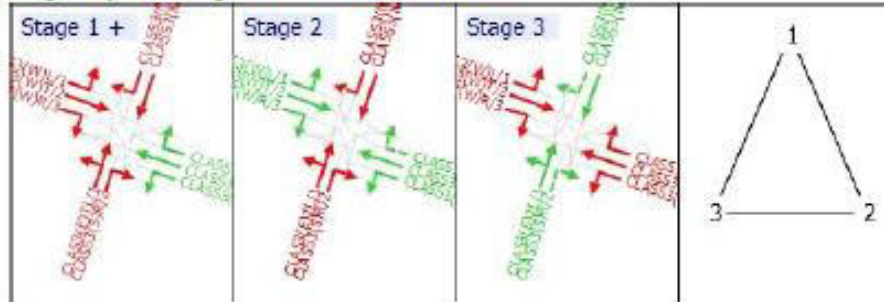
# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development) (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 4



Stage Sequence Diagram for Controller Stream 4



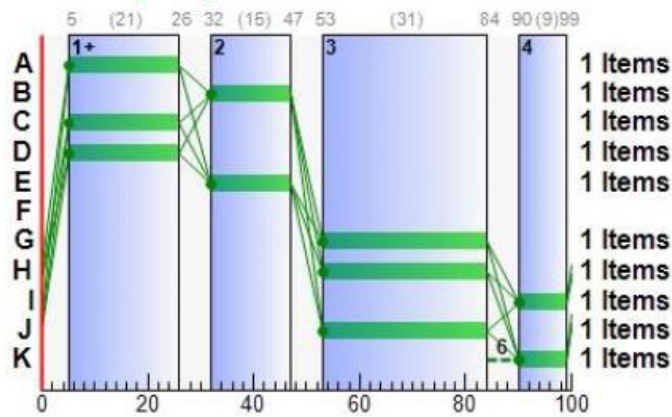
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
4	1	✓	1	C,D	25	32	7	7	7
4	2	✓	2	A,B,C,D	38	96	58	17	17
4	3	✓	3	E,F,G,H	2	19	17	17	17

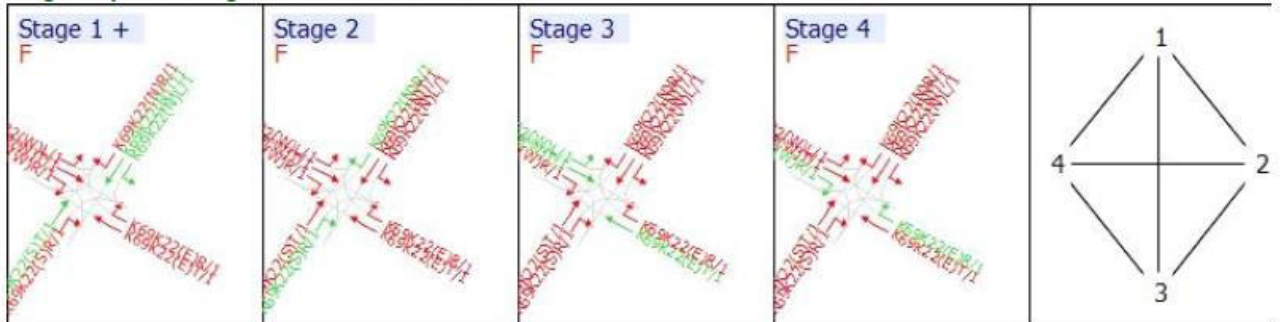
# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



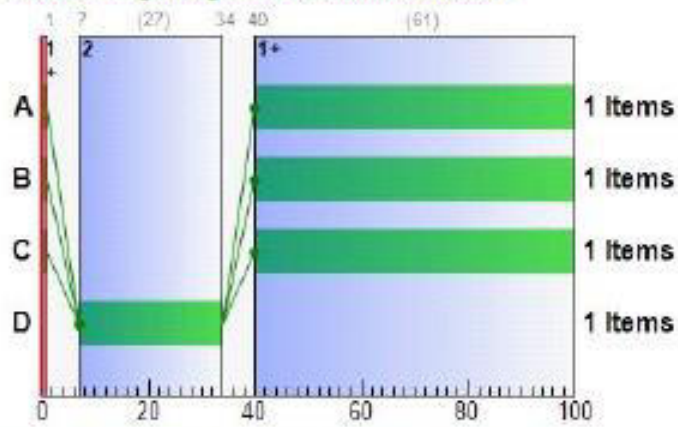
Resultant Stages

Controller Stream	Stage	ic Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	5	26	21	20	20
1	2	✓	2	B,E	32	47	15	7	7
1	3	✓	3	G,H,J	53	84	31	20	20
1	4	✓	4	I,K	90	99	9	7	7

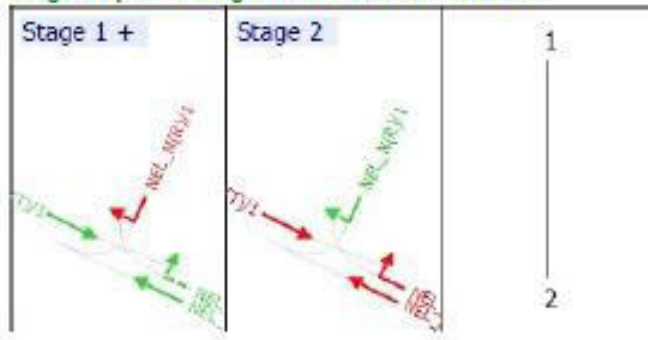
# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 2. Bronkhorstspuit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 7



Stage Sequence Diagram for Controller Stream 7



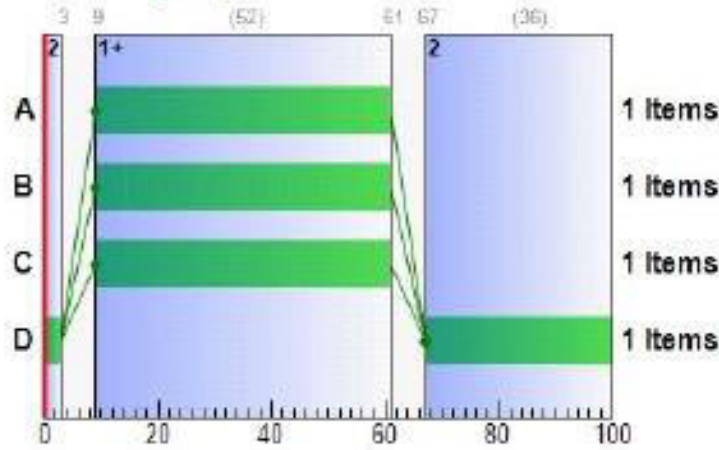
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					40	1	61	14	14
7	1	✓	1	A,B,C	40	1	61	14	14
7	2	✓	2	D	7	34	27	14	14

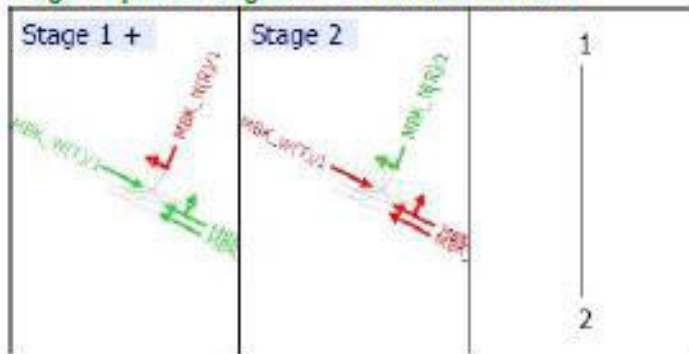
# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 3. Bronkhorstspuit Road (R104) / Mbeki Street (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



Resultant Stages

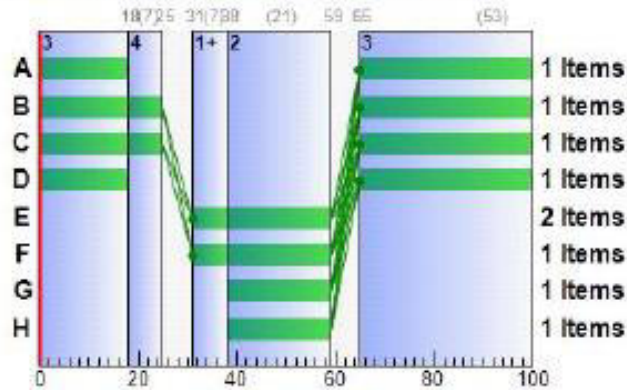
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
6	1	✓	1	A,B,C	9	61	52	14	14
6	2	✓	2	D	67	100	36	14	14



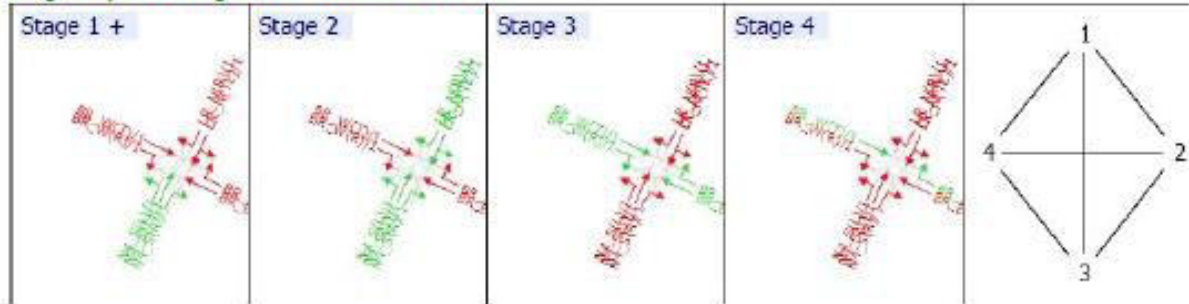
# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

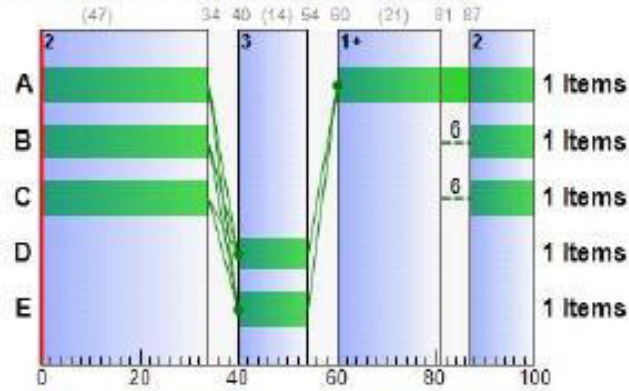
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	EF	31	38	7	7	7
5	2	✓	2	E,F,G,H	38	59	21	21	21
5	3	✓	3	A,B,C,D	65	18	53	21	21
5	4	✓	4	B,C	18	25	7	7	7

# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

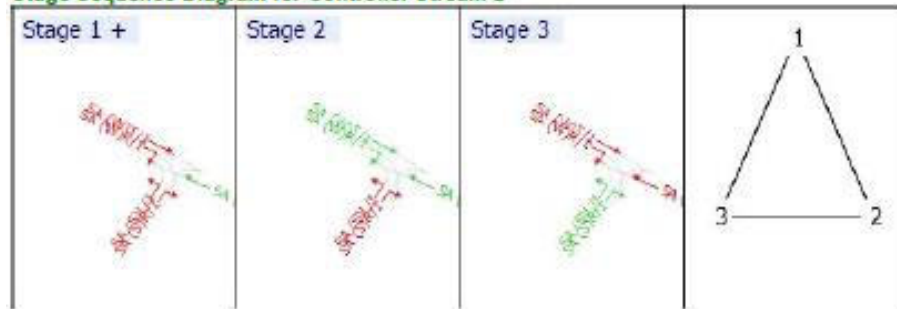
## 5. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

### (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant Stages

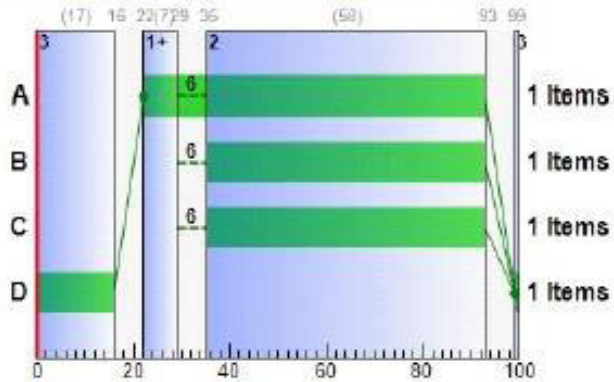
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
2	1	✓	1	A	60	81	21	7	7
2	2	✓	2	A,B,C	87	34	47	14	14
2	3	✓	3	D,E	40	54	14	14	14

# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

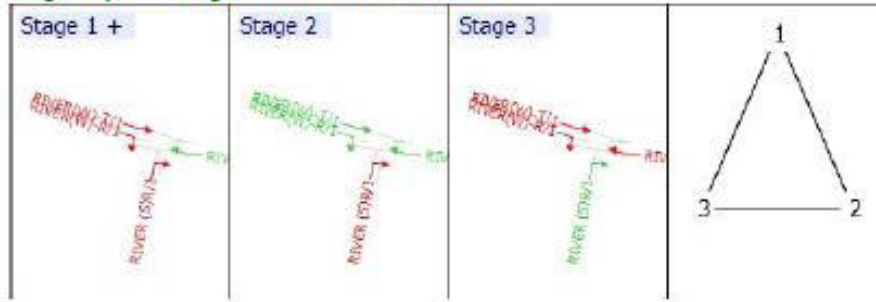
## 6. Bronkhorstspuit Road (R104) / Access to River Walk Development

### (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



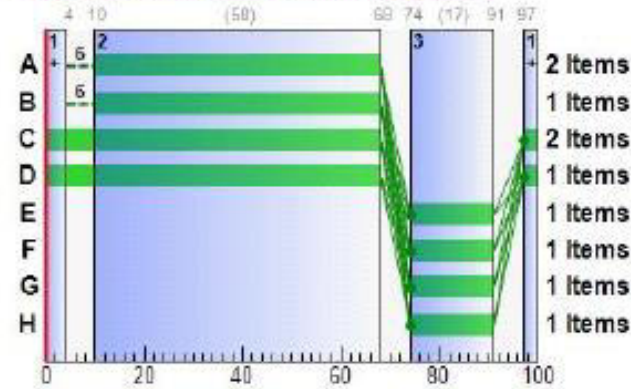
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
3	1	✓	1	A	22	29	7	7	7
3	2	✓	2	A,B,C	35	93	58	55	55
3	3	✓	3	D	99	16	17	17	17

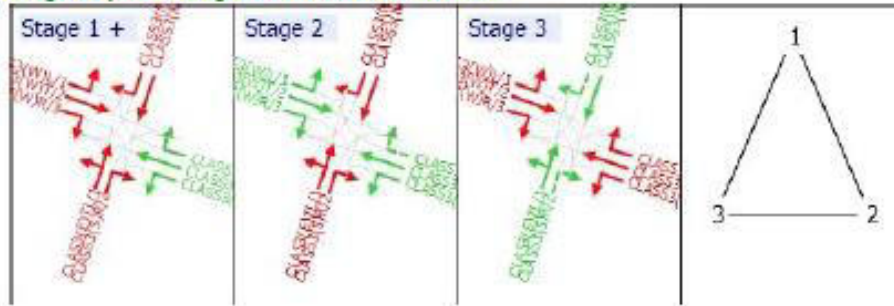
# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development) (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 4



Stage Sequence Diagram for Controller Stream 4



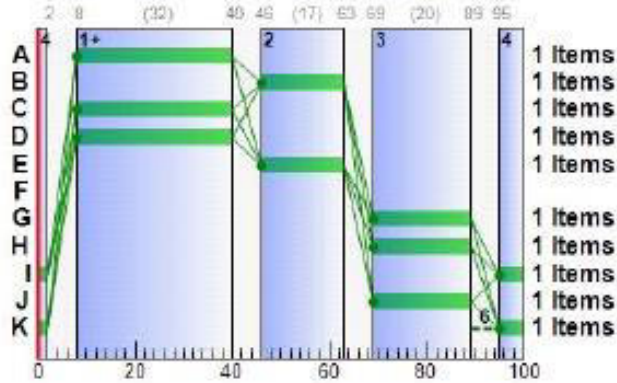
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
4	1	✓	1	C,D	97	4	7	7	7
4	2	✓	2	A,B,C,D	10	68	58	17	17
4	3	✓	3	E,F,G,H	74	91	17	17	17

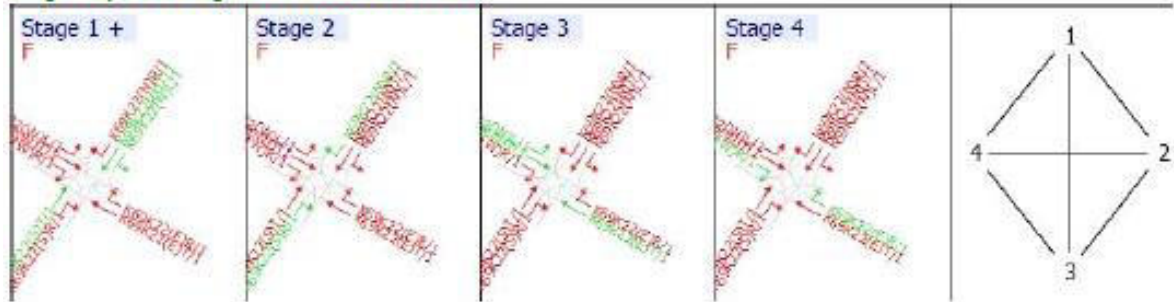
# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



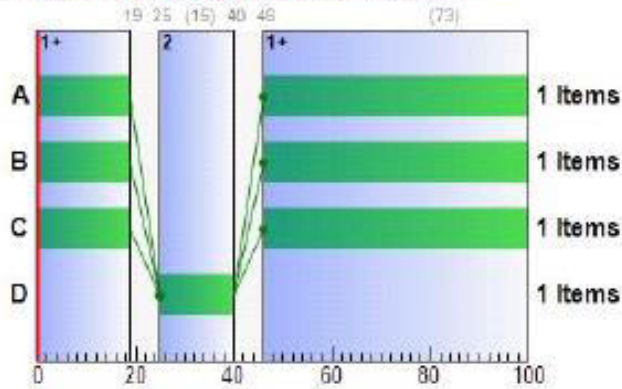
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	8	40	32	20	20
1	2	✓	2	B,E	46	63	17	7	7
1	3	✓	3	G,H,I	69	89	20	20	20
1	4	✓	4	J,K	95	2	7	7	7

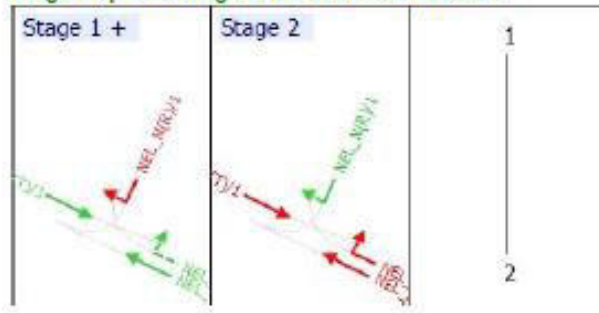
# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

## 2. Bronkhorstspruit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 7



Stage Sequence Diagram for Controller Stream 7



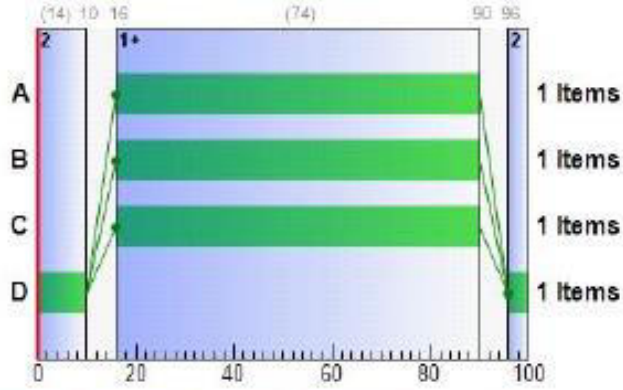
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					45	19			
7	1	✓	1	A,B,C	45	19	73	14	14
7	2	✓	2	D	25	40	15	14	14

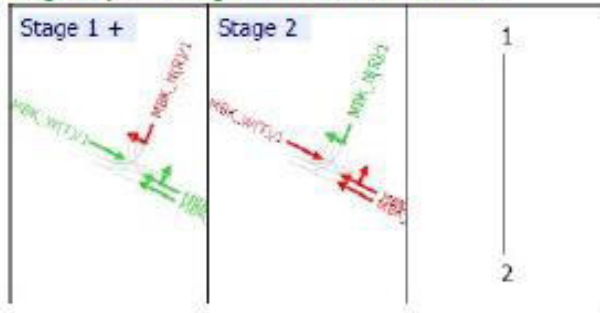
# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

## 3. Bronkhorstspuit Road (R104) / Mbeki Street (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



Resultant Stages

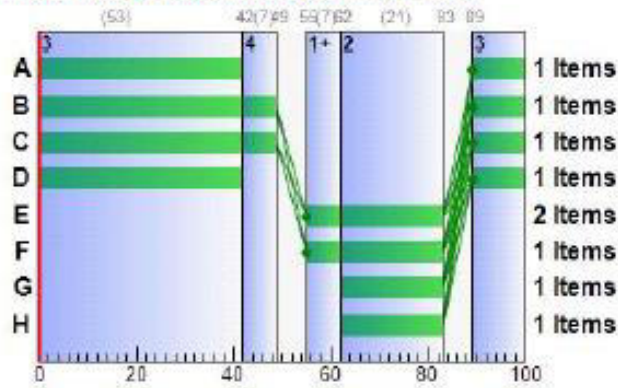
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)		Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
6	1	✓	1	A,B,C	15	90	74	14	14
					96	10	14		
6	2	✓	2	D			14	14	14

# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

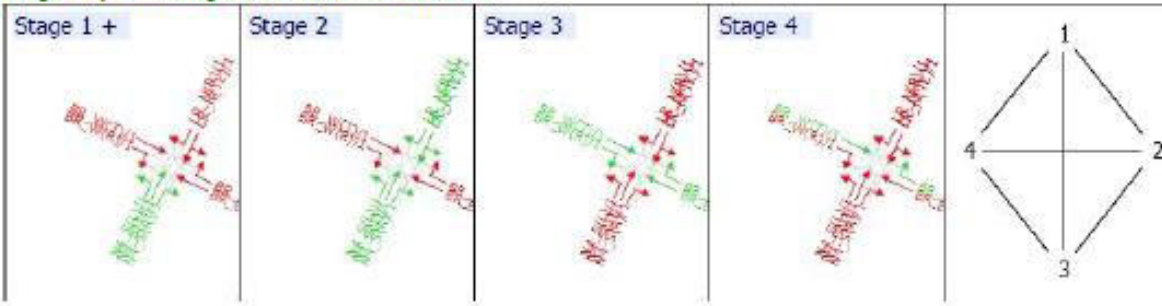
## 4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street

### (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	E,F	55	62	7	7	7
5	2	✓	2	E,F,G,H	62	83	21	21	21
5	3	✓	3	A,B,C,D	89	42	53	21	21
5	4	✓	4	B,C	42	49	7	7	7

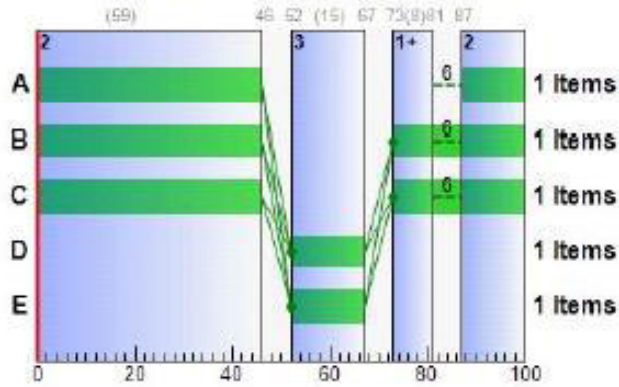


# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

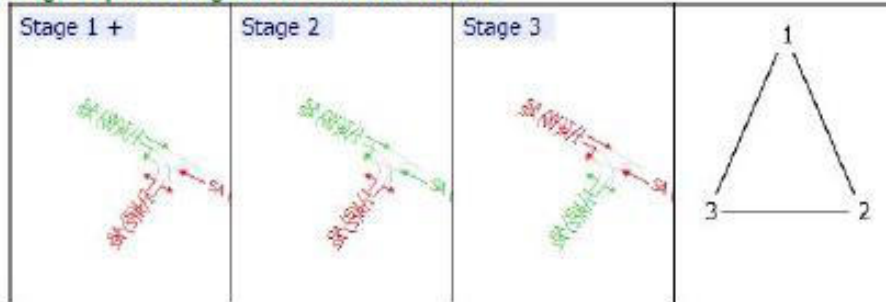
## 5. Bronkhorstspruit Road (R104) / Access to Savannah Estate Development

### (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant Stages

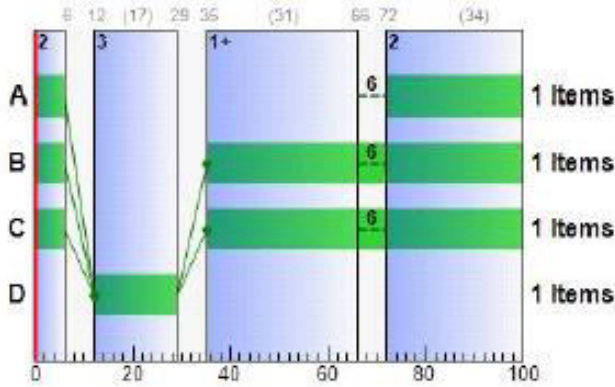
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
2	1	✓	1	B,C	73	81	8	7	7
2	2	✓	2	A,B,C	87	46	59	14	14
2	3	✓	3	D,E	52	67	15	14	14

# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

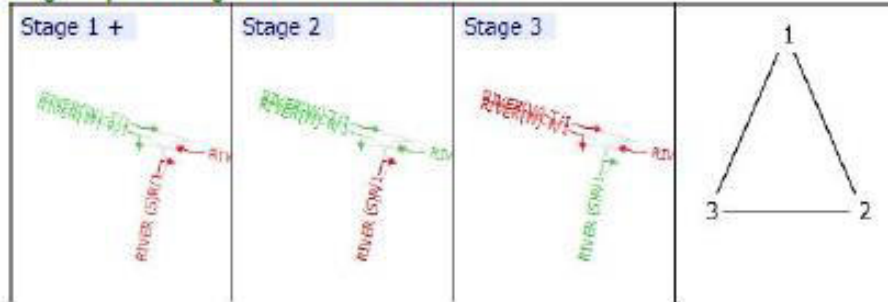
## 6. Bronkhorstspruit Road (R104) / Access to River Walk Development

### (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



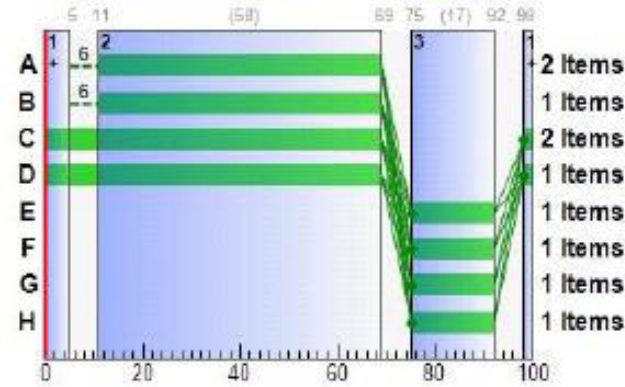
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
3	1	✓	1	C,B	35	66	31	30	30
3	2	✓	2	A,B,C	72	6	34	17	17
3	3	✓	3	D	12	29	17	17	17

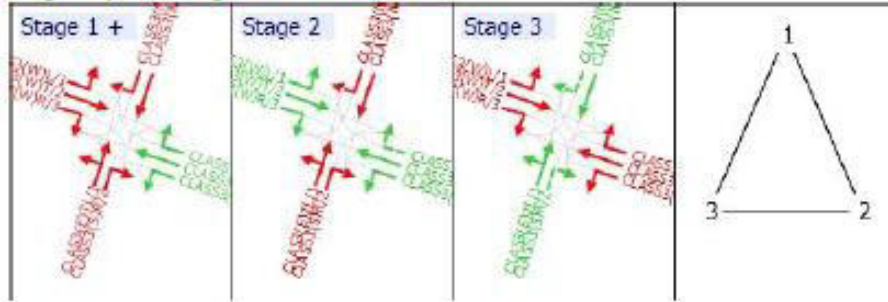
# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development) (BACKGROUND TRAFFIC VOLUMES)

Phase Timings Diagram for Controller Stream 4



Stage Sequence Diagram for Controller Stream 4



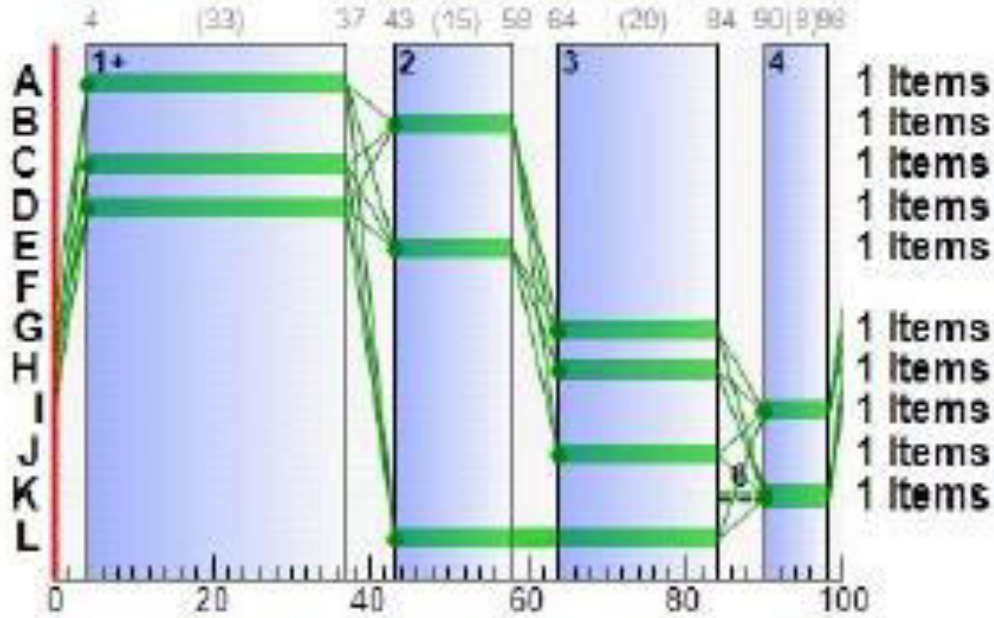
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					98	5			
4	1	✓	1	C,D	98	5	7	7	7
4	2	✓	2	A,B,C,D	11	69	58	17	17
4	3	✓	3	E,F,G,H	75	92	17	17	17

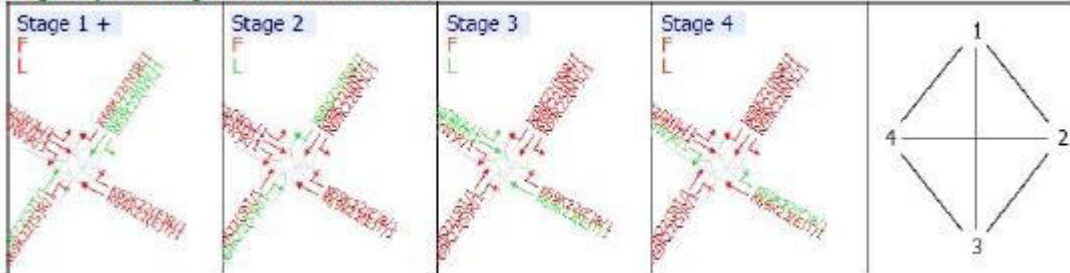
**A1 - 2016 AM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2016 AM BG+DEV (Proposed Configuration)\***

1. Solomon Mahlangu Drive / Bronkhorstspuit Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

**Phase Timings Diagram for Controller Stream 1**



**Stage Sequence Diagram for Controller Stream 1**



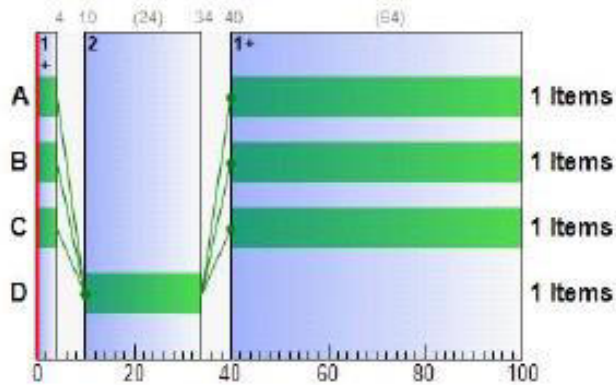
**Resultant Stages**

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	4	37	33	20	20
1	2	✓	2	B,E,L	43	58	15	7	7
1	3	✓	3	G,H,J,L	64	84	20	20	20
1	4	✓	4	L	90	98	8	7	7

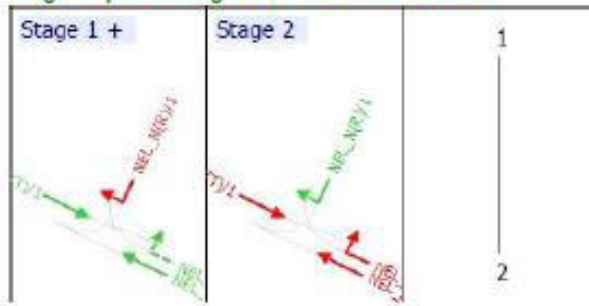
**A1 - 2016 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2016 AM BG+DEV (Proposed Configuration)\***

2. Bronkhorstspuit Road (R104) / Nellmapius Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 7



Stage Sequence Diagram for Controller Stream 7



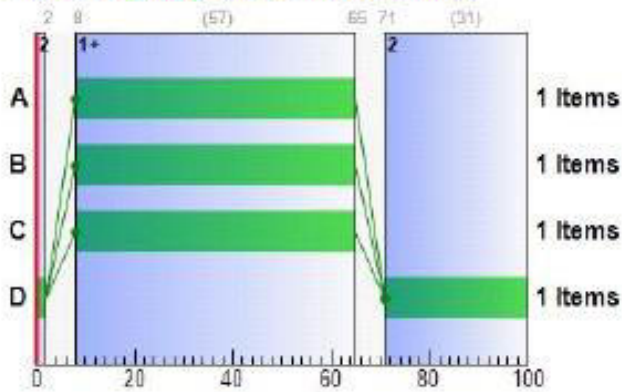
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					40	4			
7	1	✓	1	A,B,C	40	4	64	14	14
7	2	✓	2	D	10	34	24	14	14

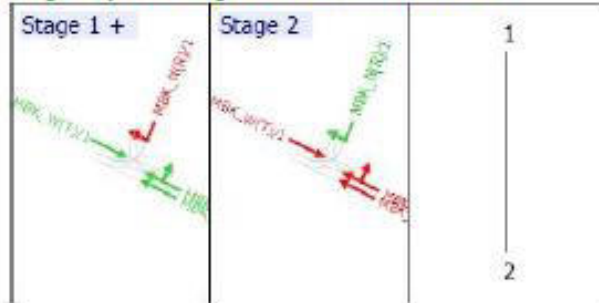
**A1 - 2016 AM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2016 AM BG+DEV (Proposed Configuration)\***

3. Bronkhorstspuit Road (R104) / Mbeki Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



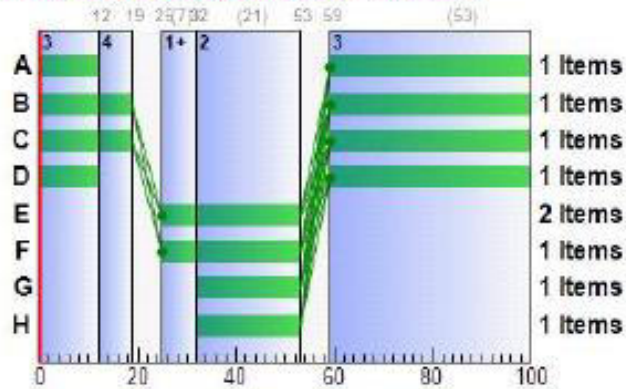
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					8	65			
6	1	✓	1	A,B,C	8	65	57	14	14
6	2	✓	2	D	71	2	31	14	14

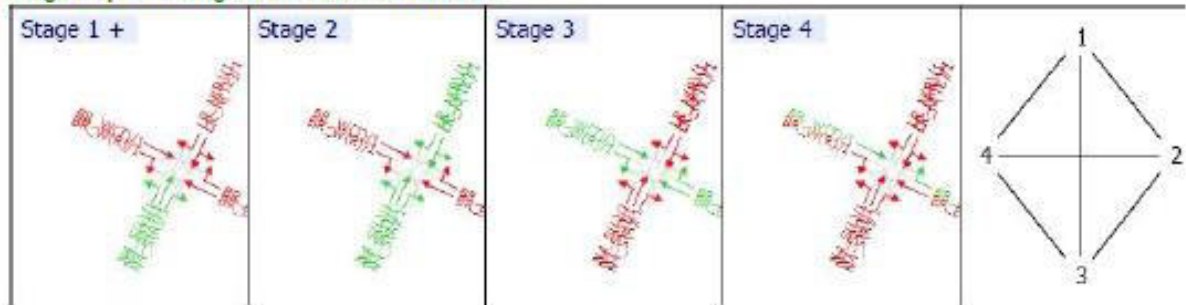
**A1 - 2016 AM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2016 AM BG+DEV (Proposed Configuration)\***

4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

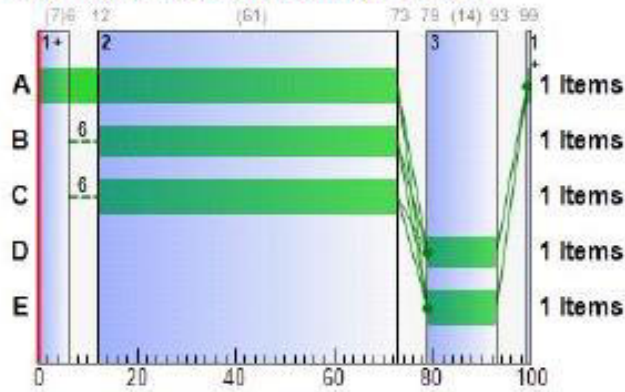
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	EF	25	32	7	7	7
5	2	✓	2	E,F,G,H	32	53	21	21	21
5	3	✓	3	A,B,C,D	59	12	53	21	21
5	4	✓	4	B,C	12	19	7	7	7

**A1 - 2016 AM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2016 AM BG+DEV (Proposed Configuration)\***

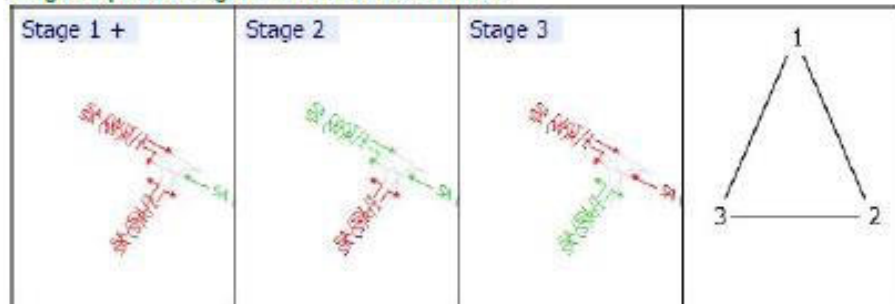
5. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant Stages

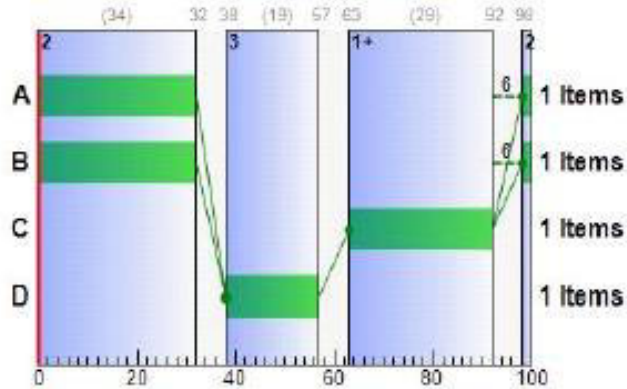
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					99	6			
2	1	✓	1	A	99	6	7	7	7
2	2	✓	2	A,B,C	12	73	61	14	14
2	3	✓	3	DE	79	93	14	14	14



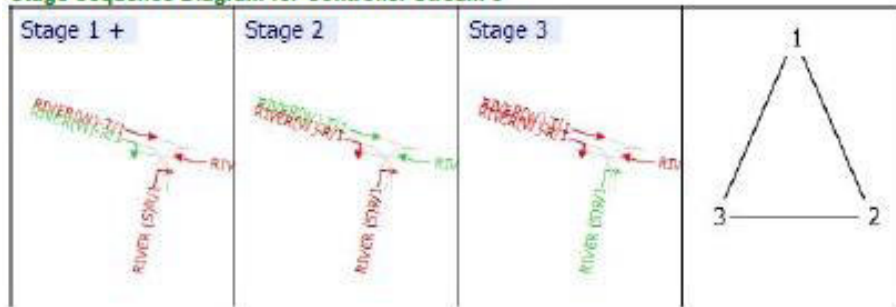
**A1 - 2016 AM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2016 AM BG+DEV (Proposed Configuration)\***

6. Bronkhorstspuit Road (R104) / Access to River Walk Development  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



Resultant Stages

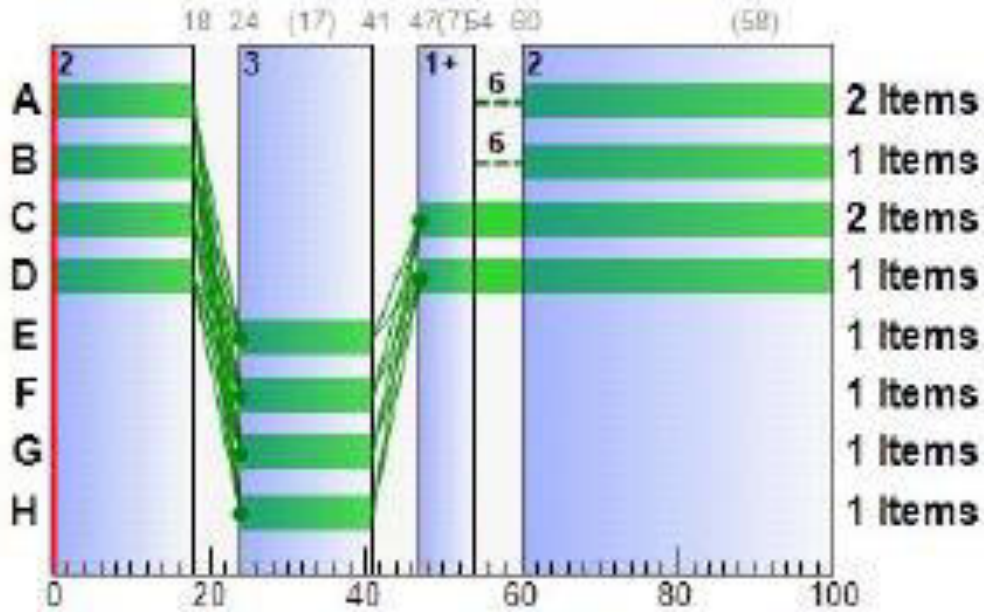
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
3	1	✓	1	C	63	92	29	7	7
3	2	✓	2	A,B	98	32	34	17	17
3	3	✓	3	D	38	63	19	17	17

**A1 - 2016 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2016 AM BG+DEV (Proposed Configuration)\***

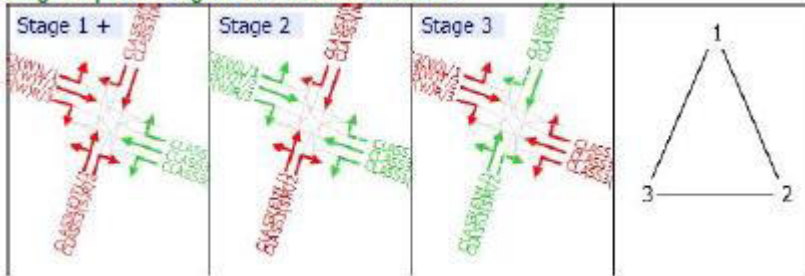
7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development)

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

**Phase Timings Diagram for Controller Stream 4**



**Stage Sequence Diagram for Controller Stream 4**



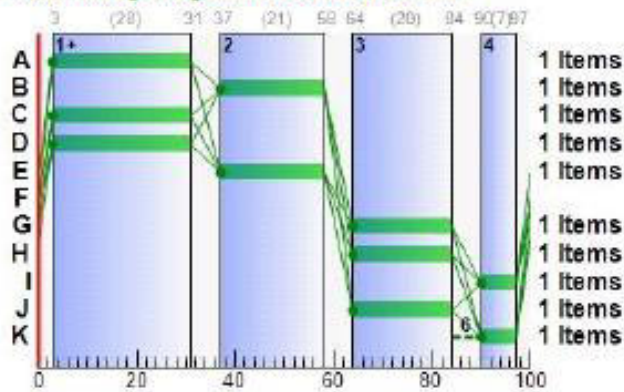
**Resultant Stages**

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
4	1	✓	1	C,D	47	54	7	7	7
4	2	✓	2	A,B,C,D	60	18	58	17	17
4	3	✓	3	E,F,G,H	24	41	17	17	17

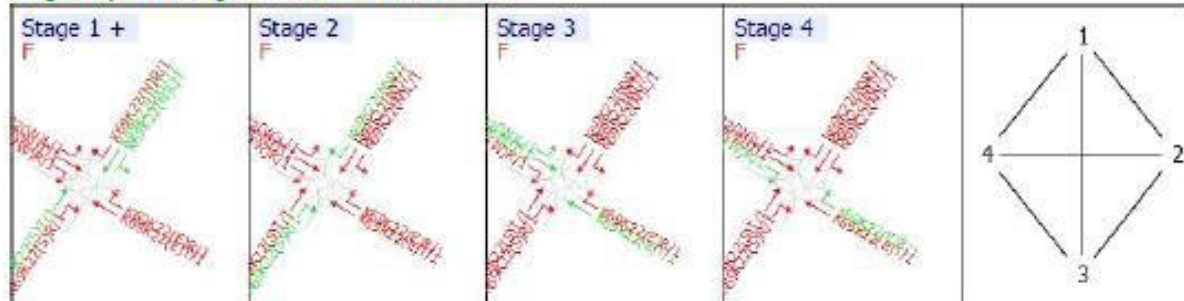
**A1 - 2016 PM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2016 PM BG+DEV (Proposed Configuration)\***

1. Solomon Mahlangu Drive / Bronkhorstspuit Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



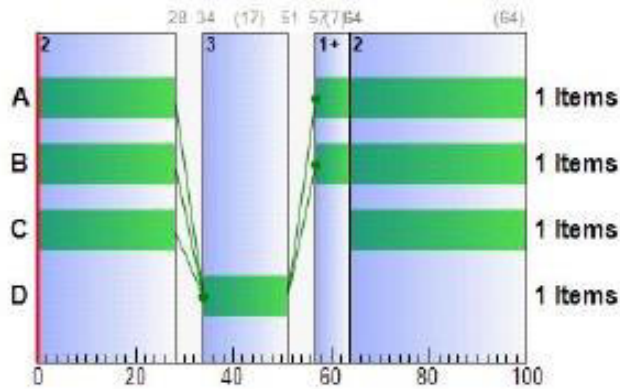
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	3	31	28	20	20
1	2	✓	2	B,E	37	58	21	7	7
1	3	✓	3	G,H,J	64	84	20	20	20
1	4	✓	4	I,K	90	97	7	7	7

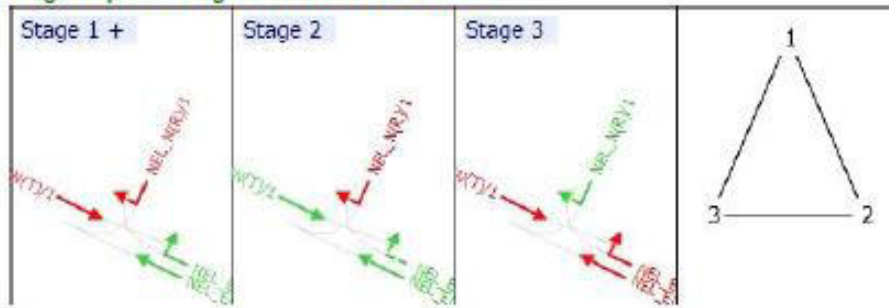
**A1 - 2016 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2016 PM BG+DEV (Proposed Configuration)\***

2. Bronkhorstspuit Road (R104) / Nellmapius Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 7



Stage Sequence Diagram for Controller Stream 7



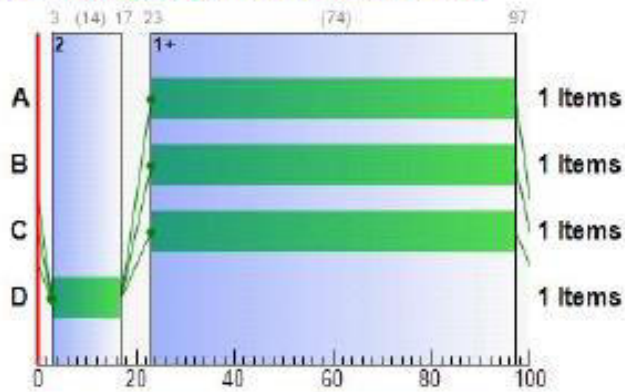
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
7	1	✓	1	A,B	57	64	7	7	7
7	2	✓	2	A,B,C	64	28	64	14	14
7	3	✓	3	D	34	51	17	17	17

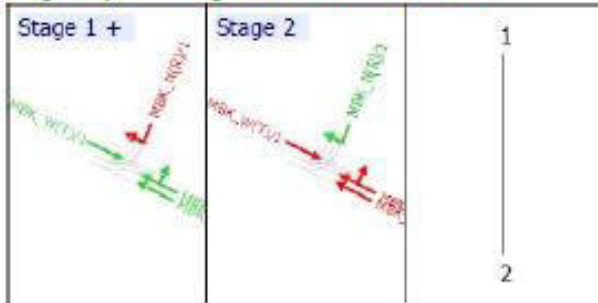
**A1 - 2016 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2016 PM BG+DEV (Proposed Configuration)\***

3. Bronkhorstspuit Road (R104) / Mbeki Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



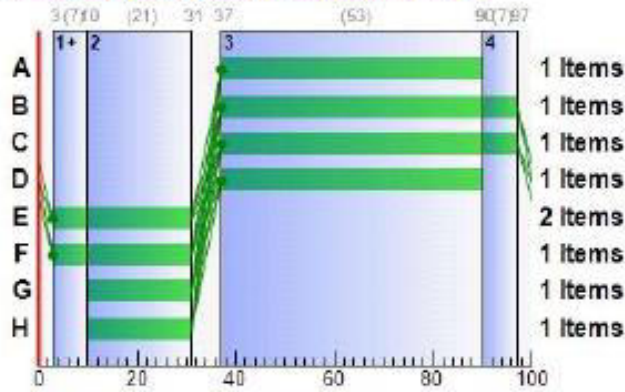
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					23	97			
6	1	✓	1	A,B,C	23	97	74	14	14
6	2	✓	2	D	3	17	14	14	14

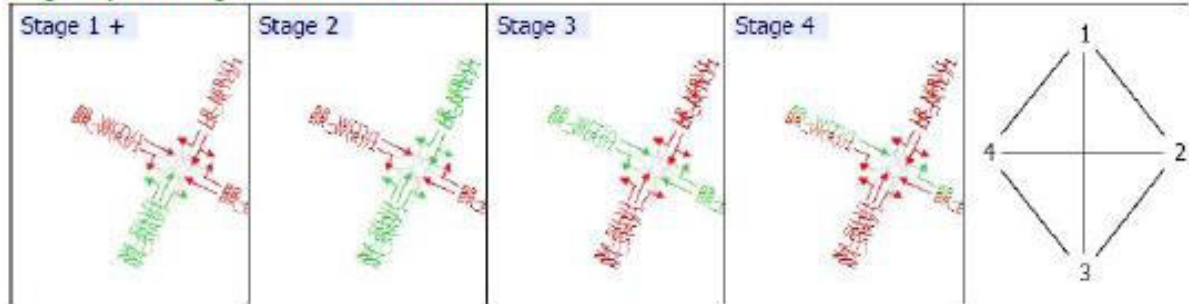
**A1 - 2016 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2016 PM BG+DEV (Proposed Configuration)\***

4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

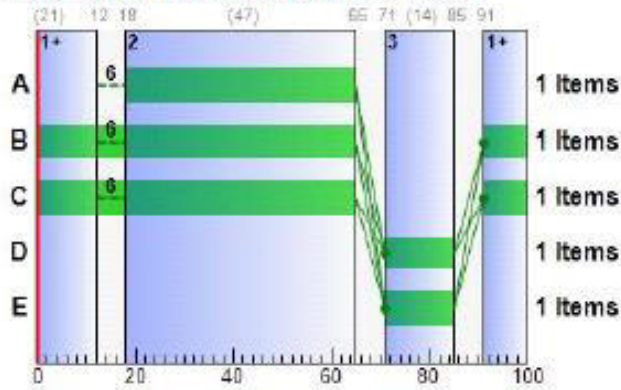
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	E,F	3	10	7	7	7
5	2	✓	2	E,F,G,H	10	31	21	21	21
5	3	✓	3	A,B,C,D	37	90	53	21	21
5	4	✓	4	B,C	90	97	7	7	7

**A1 - 2016 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2016 PM BG+DEV (Proposed Configuration)\***

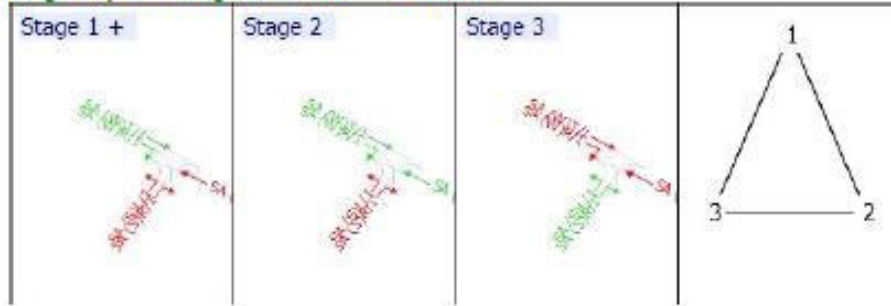
5. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant Stages

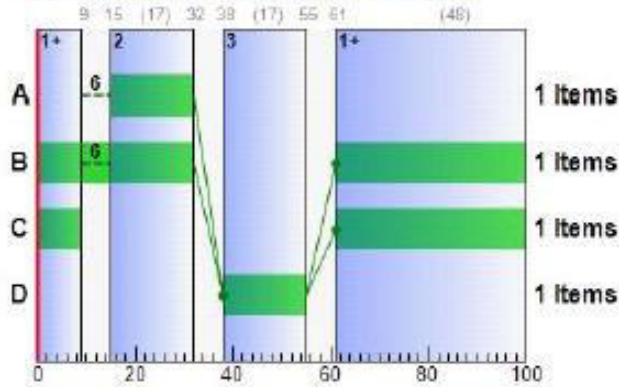
Controller Stream	Stage	Is Base Stage	Library Stage (ID)	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
2	1	✓	1	B,C	91	12	21	7	7
2	2	✓	2	A,B,C	18	65	47	14	14
2	3	✓	3	D,E	71	85	14	14	14

**A1 - 2016 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2016 PM BG+DEV (Proposed Configuration)\***

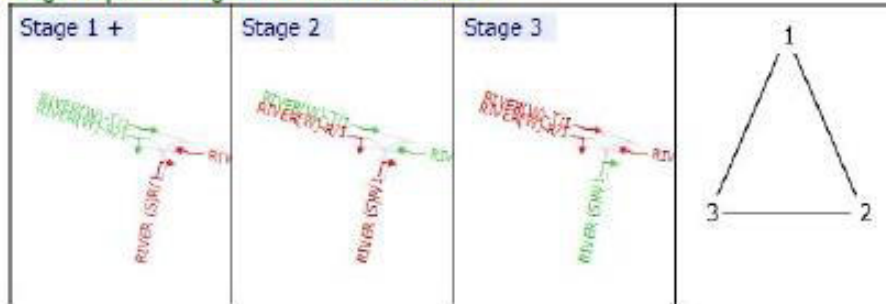
6. Bronkhorstspuit Road (R104) / Access to River Walk Development

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Timing (s)		Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					Stage Start (s)	Stage End (s)			
3	1	✓	1	C,B	61	9	48	30	30
3	2	✓	2	A,B	15	32	17	17	17
3	3	✓	3	D	38	55	17	17	17

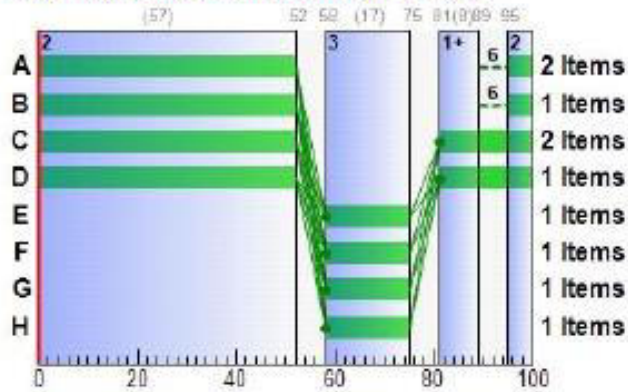


**A1 - 2016 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2016 PM BG+DEV (Proposed Configuration)\***

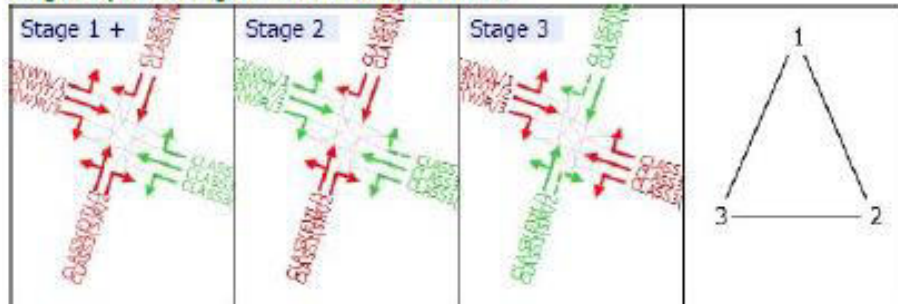
7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development)

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 4



Stage Sequence Diagram for Controller Stream 4



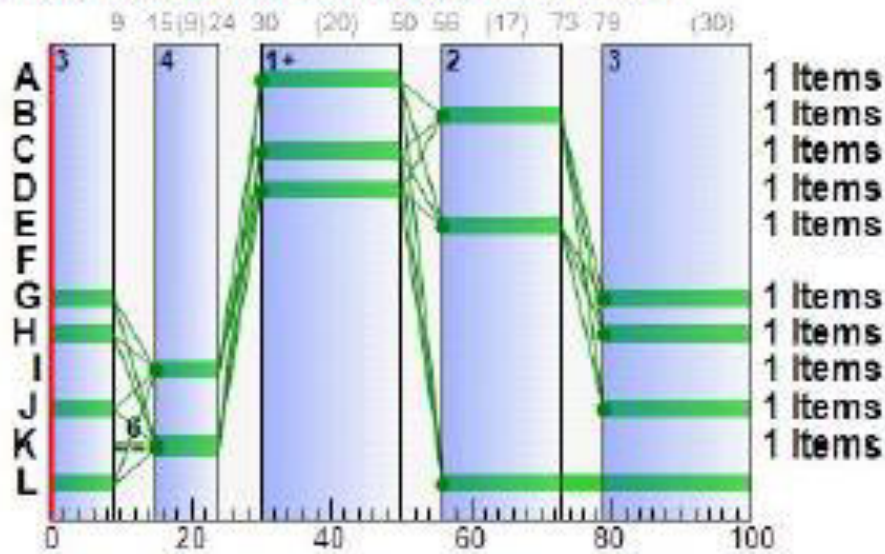
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
4	1	✓	1	C,D	81	89	8	7	7
4	2	✓	2	A,B,C,D	95	52	57	17	17
4	3	✓	3	E,F,G,H	58	75	17	17	17

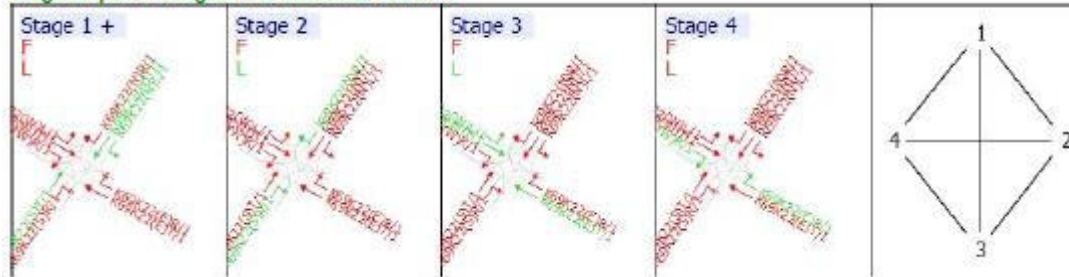
**A1 - 2021 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2021 AM BG+DEV (Proposed Configuration)\***

1. Solomon Mahlangu Drive / Bronkhorstspuit Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

**Phase Timings Diagram for Controller Stream 1**



**Stage Sequence Diagram for Controller Stream 1**



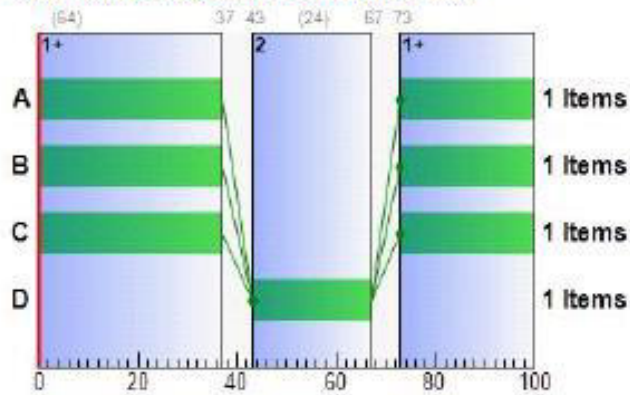
**Resultant Stages**

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	30	50	20	20	20
1	2	✓	2	B,E,L	56	73	17	7	7
1	3	✓	3	G,H,J,L	79	9	30	20	20
1	4	✓	4	I,K	15	24	9	7	7

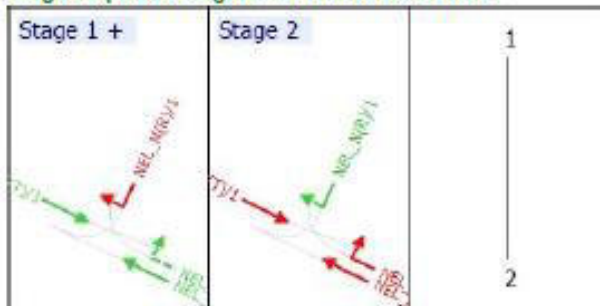
**A1 - 2021 AM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2021 AM BG+DEV (Proposed Configuration)\***

2. Bronkhorstspuit Road (R104) / Nellmapius Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 7



Stage Sequence Diagram for Controller Stream 7



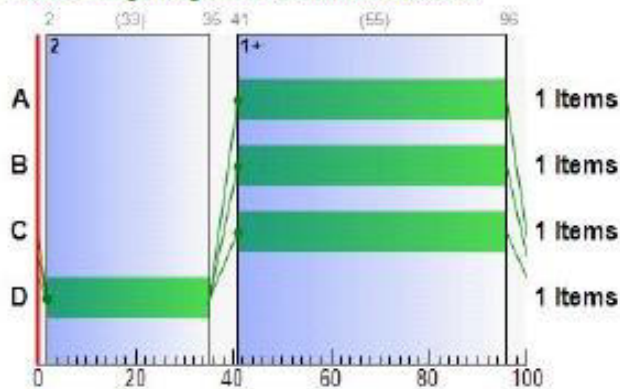
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					73	37			
7	1	✓	1	A,B,C	73	37	64	14	14
7	2	✓	2	D	43	67	24	14	14

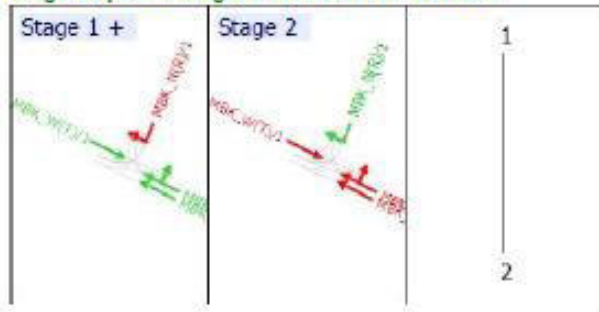
**A1 - 2021 AM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2021 AM BG+DEV (Proposed Configuration)\***

3. Bronkhorstspuit Road (R104) / Mbeki Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



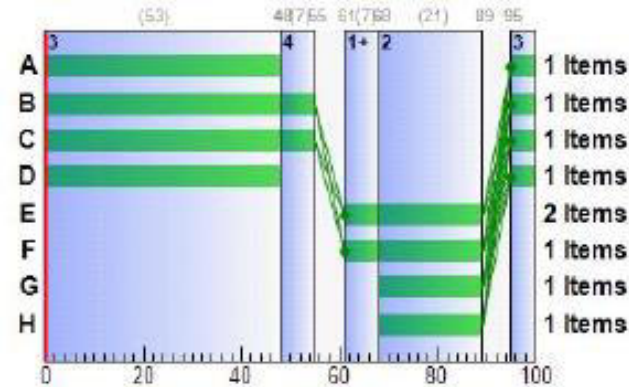
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					41	95			
6	1	✓	1	A,B,C	41	95	55	14	14
6	2	✓	2	D	2	35	33	14	14

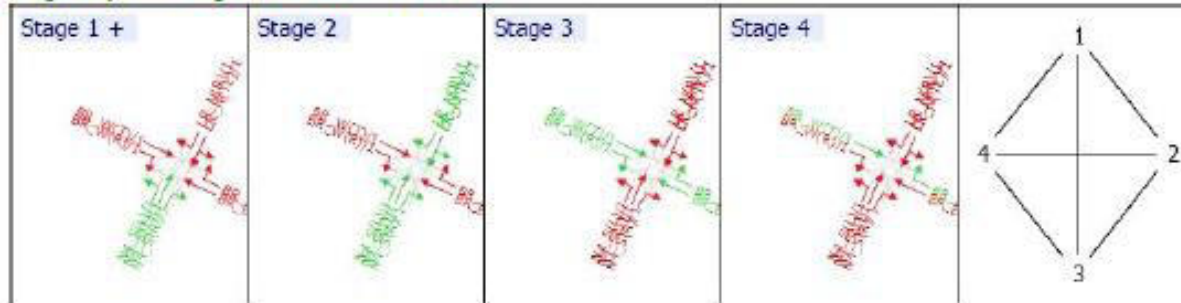
**A1 - 2021 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2021 AM BG+DEV (Proposed Configuration)\***

4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

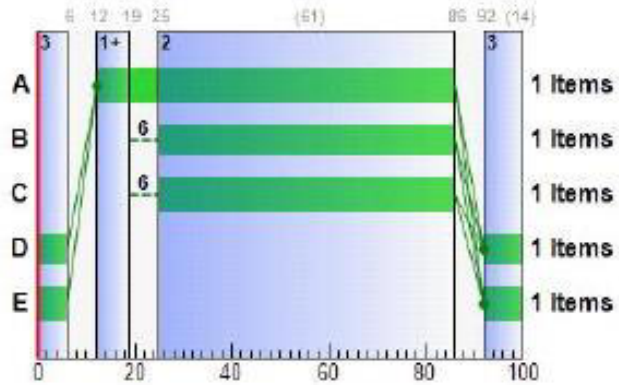
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	EF	61	68	7	7	7
	2	✓	2	E,F,G,H	68	89	21	21	21
5	3	✓	3	A,B,C,D	95	48	53	21	21
5	4	✓	4	B,C	48	55	7	7	7

**A1 - 2021 AM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2021 AM BG+DEV (Proposed Configuration)\***

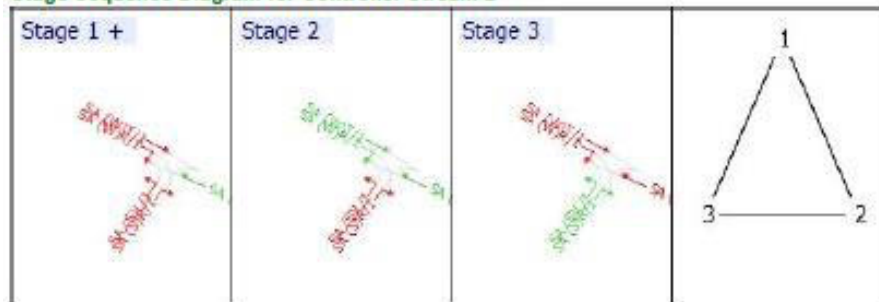
5. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant Stages

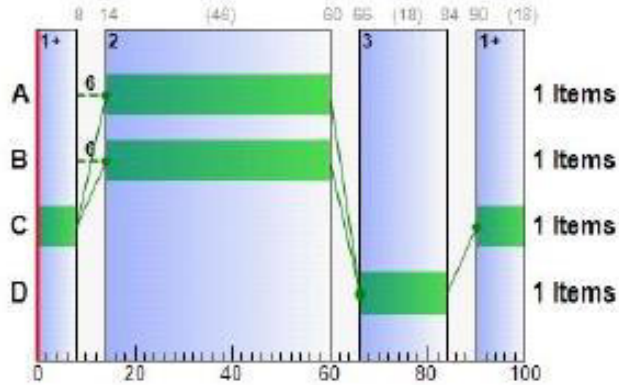
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					12	19			
2	1	✓	1	A	12	19	7	7	7
2	2	✓	2	A,B,C	25	86	61	14	14
2	3	✓	3	DE	92	6	14	14	14

**A1 - 2021 AM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2021 AM BG+DEV (Proposed Configuration)\***

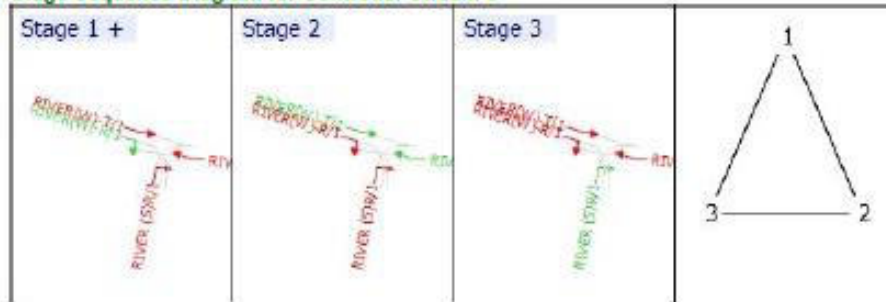
6. Bronkhorstspuit Road (R104) / Access to River Walk Development

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



Resultant Stages

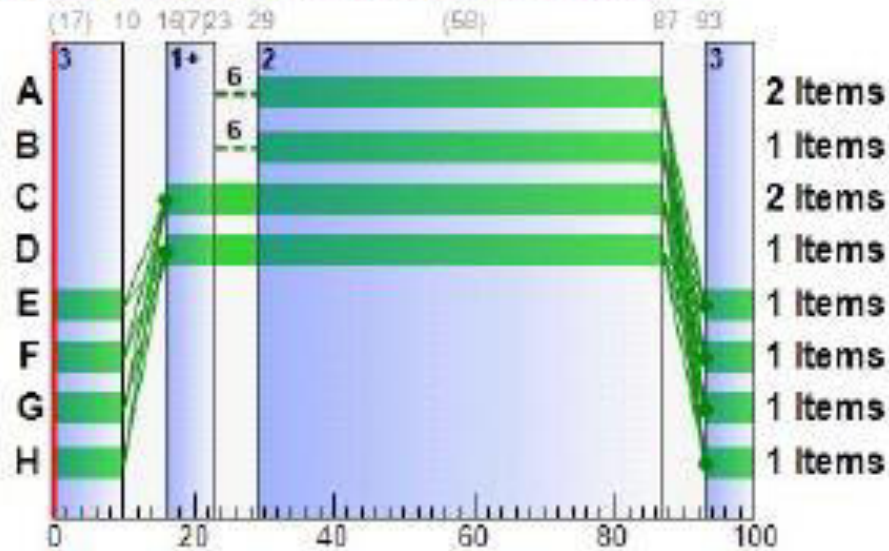
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
3	1	✓	1	C	90	8	18	7	7
3	2	✓	2	A,B	14	60	46	17	17
3	3	✓	3	D	66	84	18	17	17

**A1 - 2021 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2021 AM BG+DEV (Proposed Configuration)\***

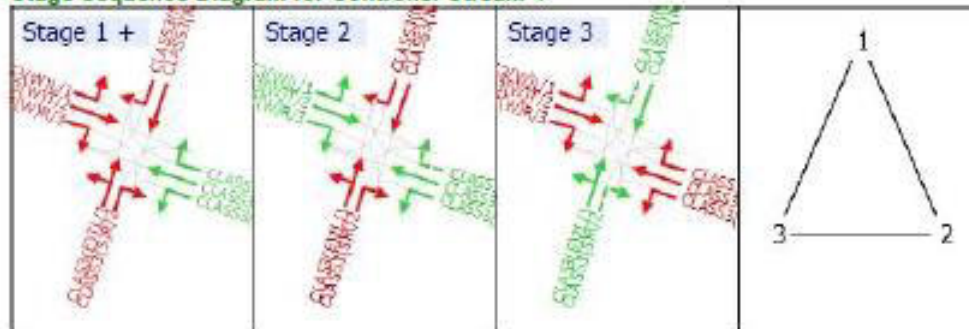
7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development)

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

**Phase Timings Diagram for Controller Stream 4**



**Stage Sequence Diagram for Controller Stream 4**



**Resultant Stages**

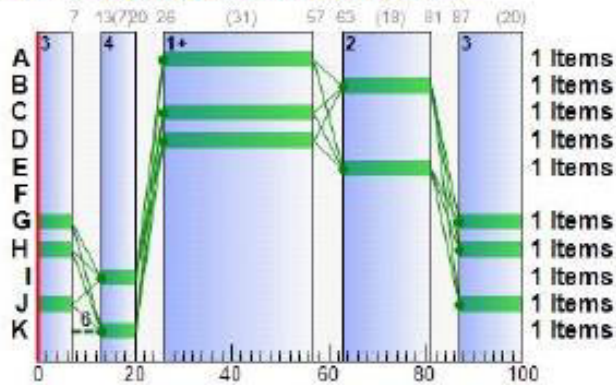
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
4	1	✓	1	C,D	16	23	7	7	7
4	2	✓	2	A,B,C,D	29	87	58	17	17
4	3	✓	3	E,F,G,H	93	10	17	17	17



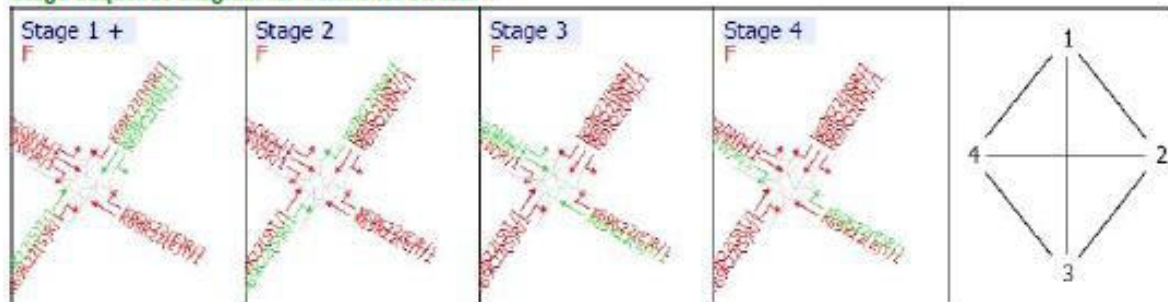
**A1 - 2021 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2021 PM BG+DEV (Proposed Configuration)\***

1. Solomon Mahlangu Drive / Bronkhorstspuit Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



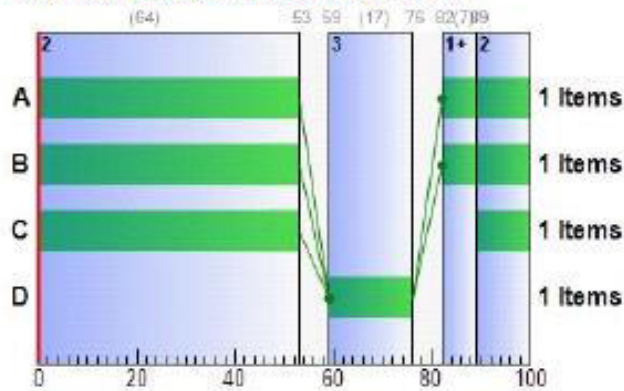
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	26	57	31	20	20
1	2	✓	2	B,E	63	81	18	7	7
1	3	✓	3	G,H,J	87	7	20	20	20
1	4	✓	4	I,K	13	20	7	7	7

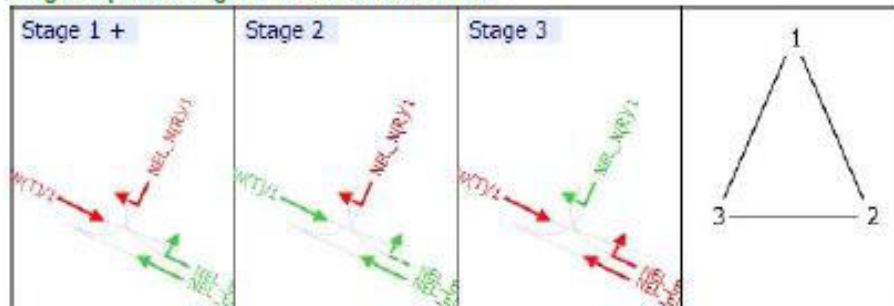
**A1 - 2021 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2021 PM BG+DEV (Proposed Configuration)\***

2. Bronkhorstspuit Road (R104) / Nellmapius Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 7



Stage Sequence Diagram for Controller Stream 7



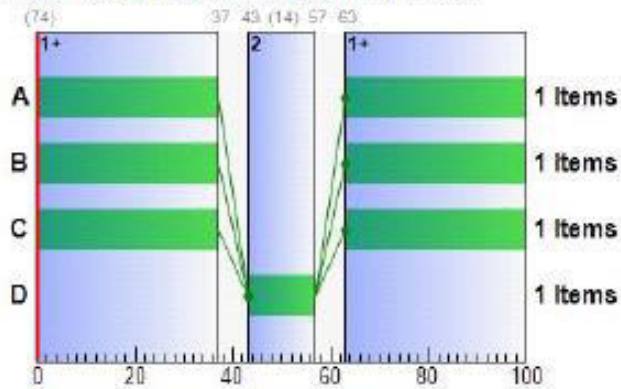
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
7	1	✓	1	A,B	82	89	7	7	7
7	2	✓	2	A,B,C	89	53	64	14	14
7	3	✓	3	D	59	75	17	17	17

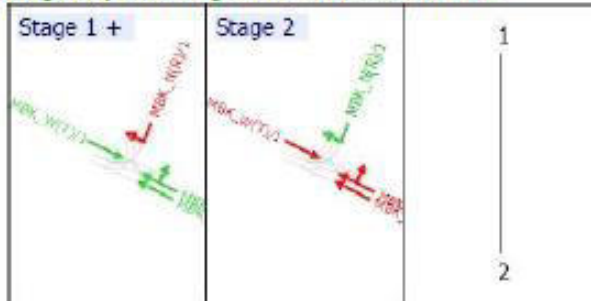
**A1 - 2021 PM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2021 PM BG+DEV (Proposed Configuration)\***

3. Bronkhorstspuit Road (R104) / Mbeki Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



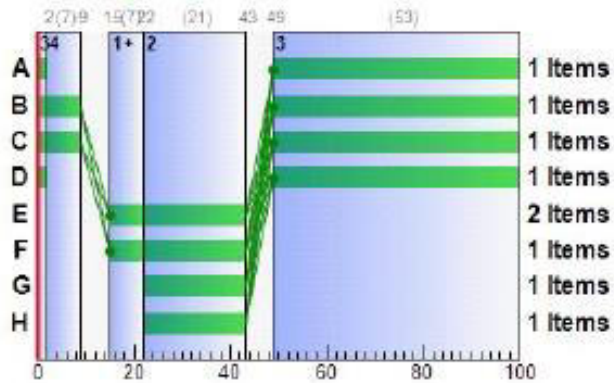
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)		Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					63	37			
6	1	✓	1	A,B,C	63	37	74	14	14
6	2	✓	2	D	43	57	14	14	14

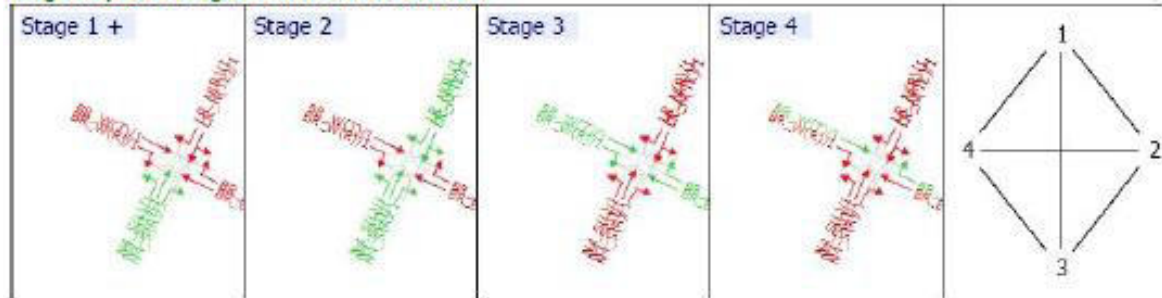
**A1 - 2021 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2021 PM BG+DEV (Proposed Configuration)\***

4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

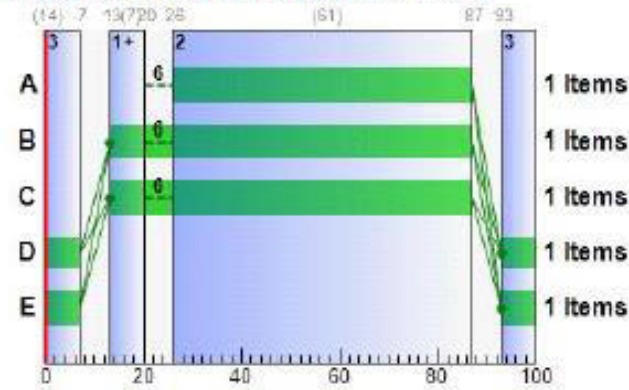
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	EF	15	22	7	7	7
5	2	✓	2	E,F,G,H	22	43	21	21	21
5	3	✓	3	A,B,C,D	49	2	53	21	21
5	4	✓	4	B,C	2	9	7	7	7

**A1 - 2021 PM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2021 PM BG+DEV (Proposed Configuration)\***

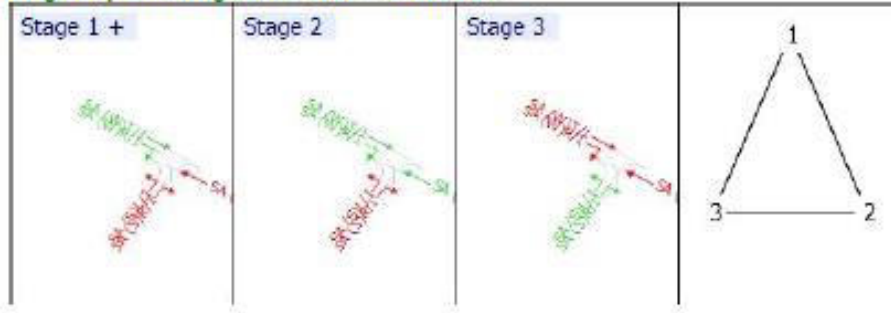
5. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant Stages

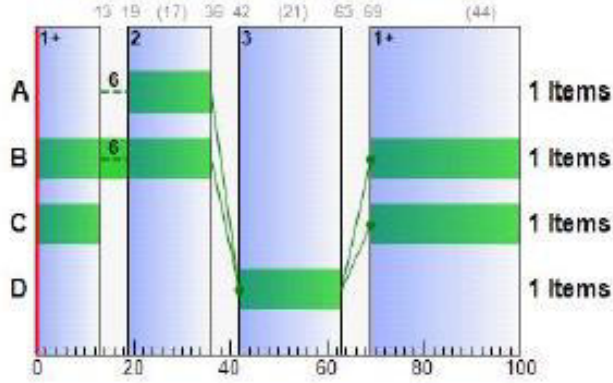
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
2	1	✓	1	B,C	13	20	7	7	7
2	2	✓	2	A,B,C	26	87	61	14	14
2	3	✓	3	D,E	93	7	14	14	14

**A1 - 2021 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2021 PM BG+DEV (Proposed Configuration)\***

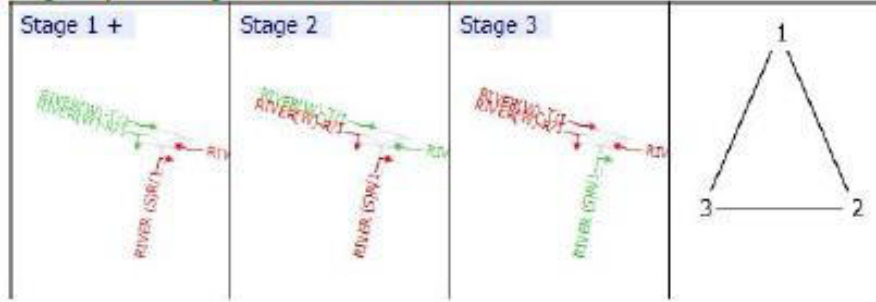
6. Bronkhorstspuit Road (R104) / Access to River Walk Development

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



Resultant Stages

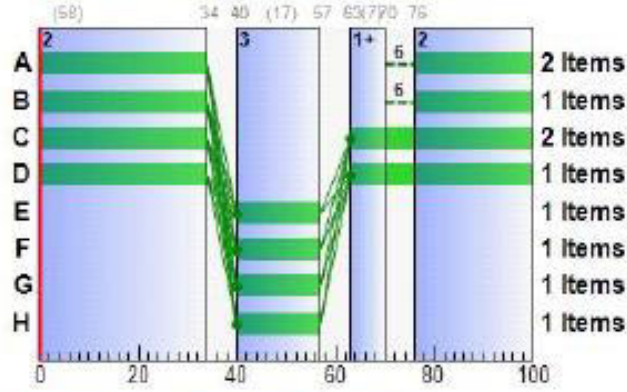
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					69	13			
3	1	✓	1	C,B	69	13	44	30	30
3	2	✓	2	A,B	19	36	17	17	17
3	3	✓	3	D	42	63	21	17	17

**A1 - 2021 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2021 PM BG+DEV (Proposed Configuration)\***

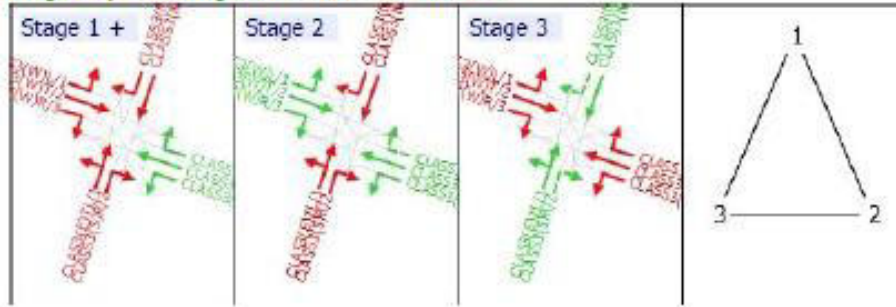
7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development)

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 4



Stage Sequence Diagram for Controller Stream 4



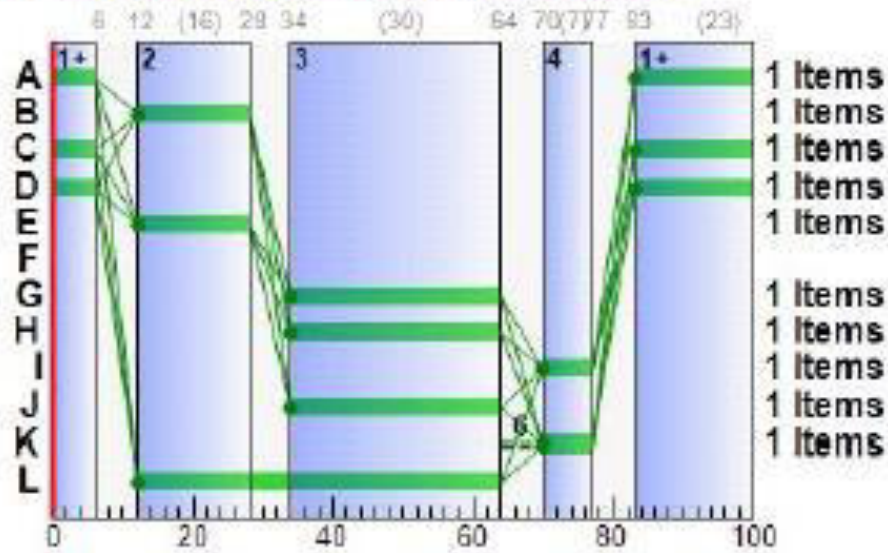
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
4	1	✓	1	C,D	63	70	7	7	7
4	2	✓	2	A,B,C,D	76	34	58	17	17
4	3	✓	3	E,F,G,H	40	57	17	17	17

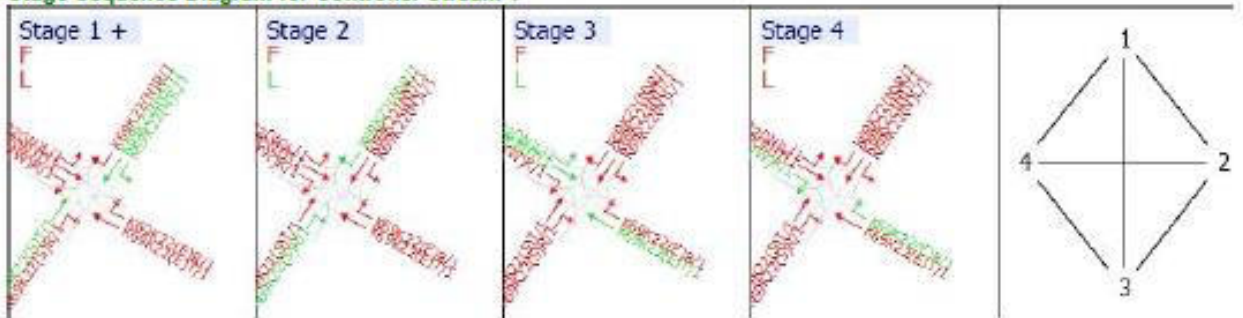
**A1 - 2026 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 AM BG+DEV (Proposed Configuration)\***

1. Solomon Mahlangu Drive / Bronkhorstspuit Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

**Phase Timings Diagram for Controller Stream 1**



**Stage Sequence Diagram for Controller Stream 1**



**Resultant Stages**

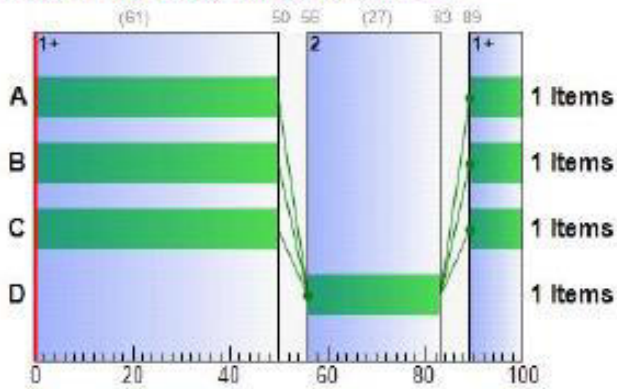
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	83	6	23	20	20
1	2	✓	2	B,E,L	12	28	16	7	7
1	3	✓	3	G,H,J,L	34	64	30	20	20
1	4	✓	4	I,K	70	77	7	7	7



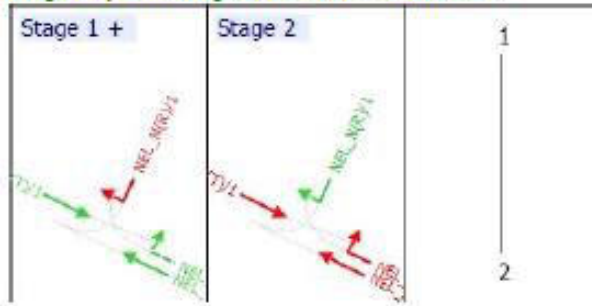
**A1 - 2026 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 AM BG+DEV (Proposed Configuration)\***

2. Bronkhorstspuit Road (R104) / Nellmapius Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 7



Stage Sequence Diagram for Controller Stream 7



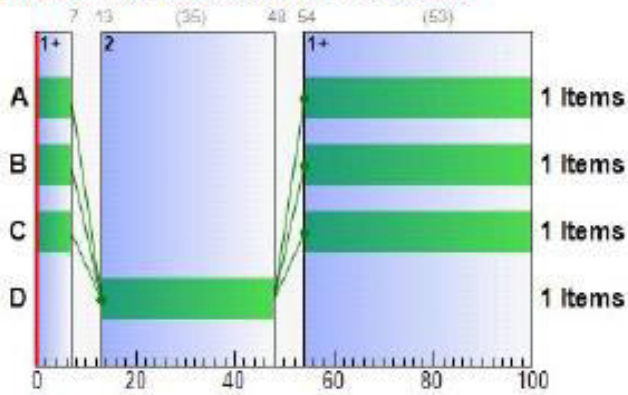
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					89	50			
7	1	✓	1	A,B,C	89	50	61	14	14
7	2	✓	2	D	56	83	27	14	14

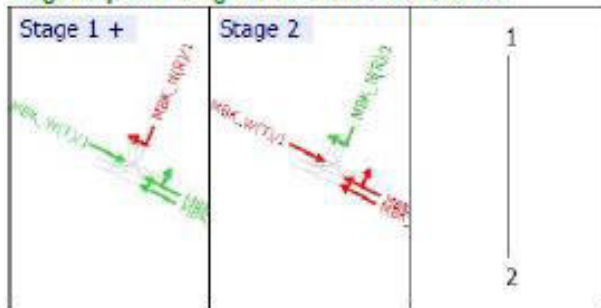
**A1 - 2026 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 AM BG+DEV (Proposed Configuration)\***

3. Bronkhorstspuit Road (R104) / Mbeki Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



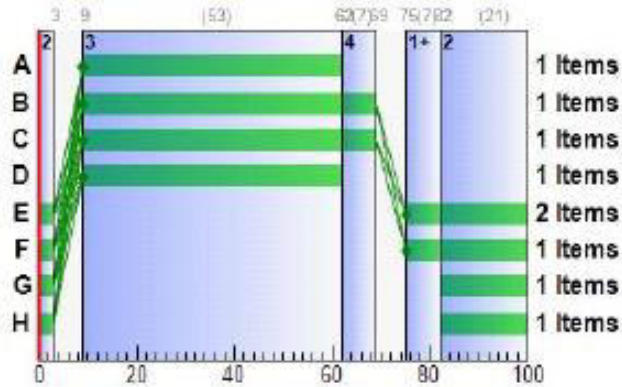
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					54	7			
6	1	✓	1	A,B,C	54	7	53	14	14
6	2	✓	2	D	13	48	35	14	14

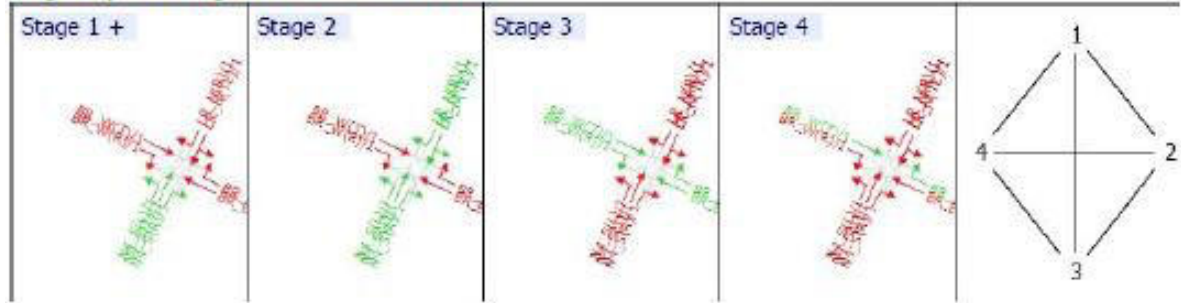
**A1 - 2026 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 AM BG+DEV (Proposed Configuration)\***

4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

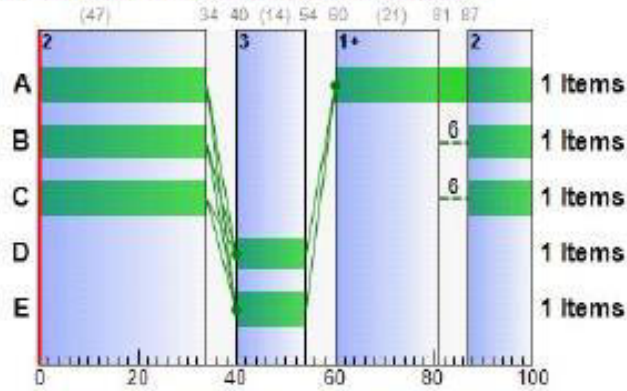
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	EF	75	82	7	7	7
5	2	✓	2	E,F,G,H	82	3	21	21	21
5	3	✓	3	A,B,C,D	9	62	53	21	21
5	4	✓	4	B,C	62	69	7	7	7

**A1 - 2026 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 AM BG+DEV (Proposed Configuration)\***

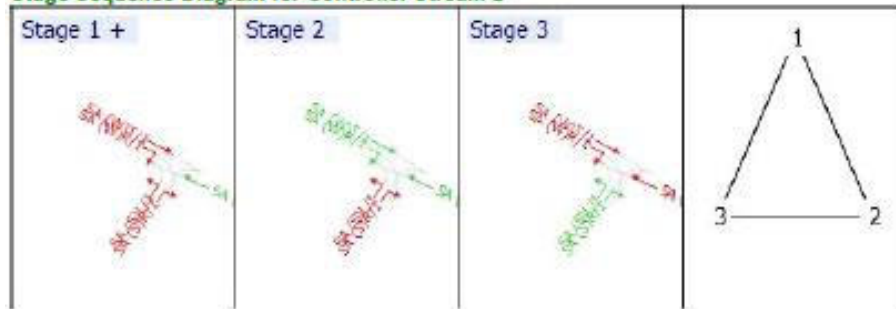
5. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES**

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant Stages

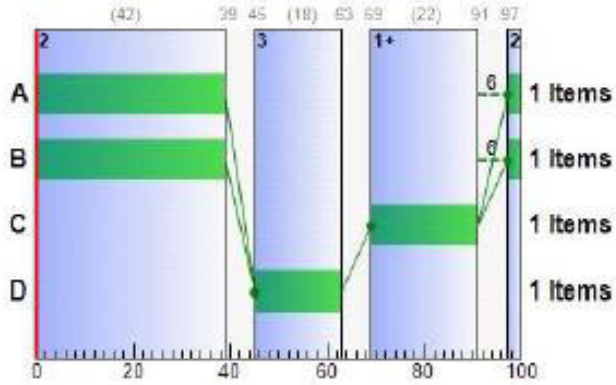
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
2	1	✓	1	A	60	81	21	7	7
2	2	✓	2	A,B,C	87	34	47	14	14
2	3	✓	3	D,E	40	54	14	14	14

**A1 - 2026 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 AM BG+DEV (Proposed Configuration)\***

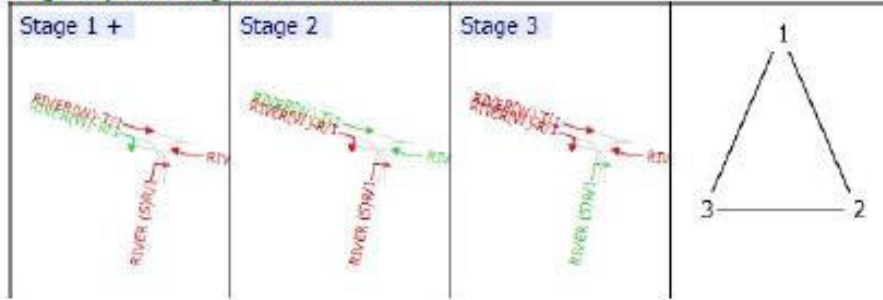
6. Bronkhorstspuit Road (R104) / Access to River Walk Development

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



Resultant Stages

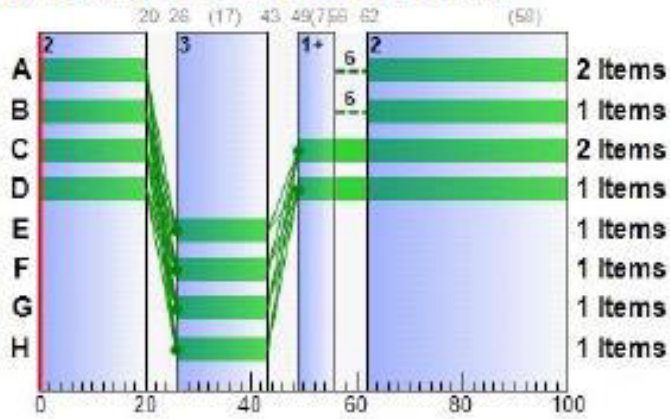
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
3	1	✓	1	C	69	91	22	7	7
3	2	✓	2	A,B	97	39	42	17	17
3	3	✓	3	D	45	63	18	17	17

**A1 - 2026 AM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 AM BG+DEV (Proposed Configuration)\***

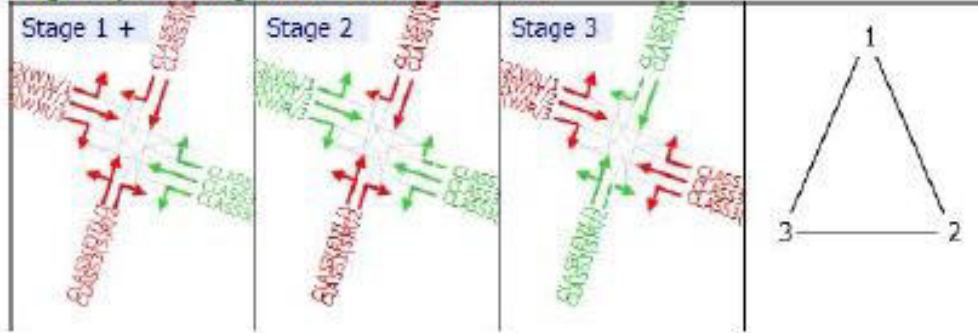
7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development)

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 4



Stage Sequence Diagram for Controller Stream 4



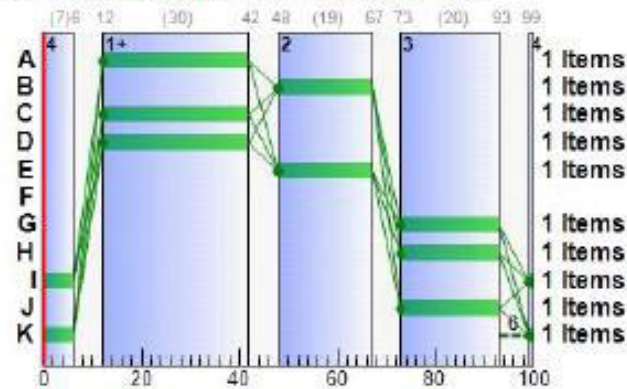
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
4	1	✓	1	C,D	49	56	7	7	7
4	2	✓	2	A,B,C,D	62	20	58	17	17
4	3	✓	3	E,F,G,H	26	43	17	17	17

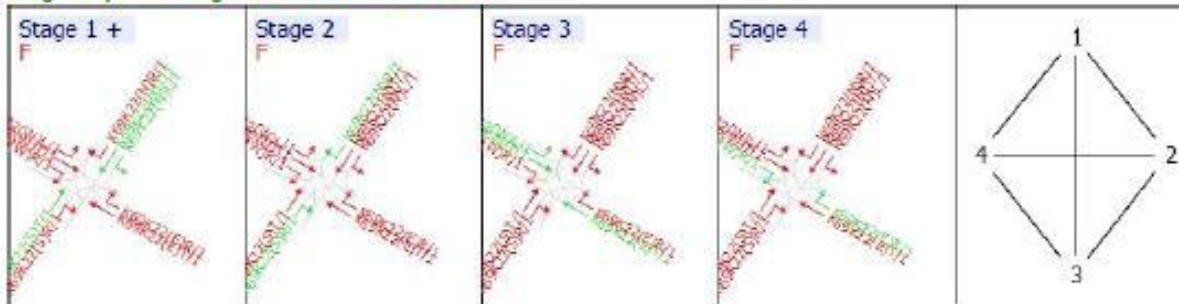
**A1 - 2026 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 PM BG+DEV (Proposed Configuration)\***

1. Solomon Mahlangu Drive / Bronkhorstspuit Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



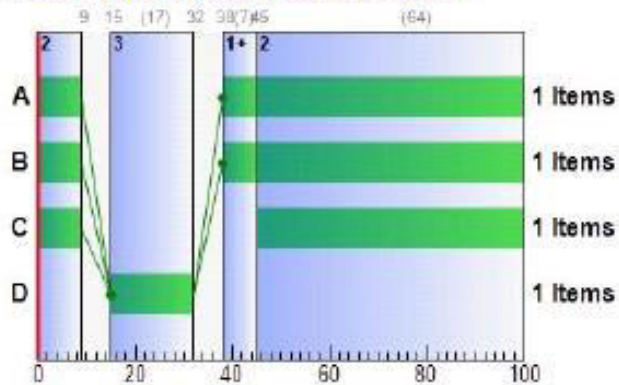
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
1	1	✓	1	A,C,D	12	42	30	20	20
1	2	✓	2	B,E	48	67	19	7	7
1	3	✓	3	G,H,J	73	93	20	20	20
1	4	✓	4	I,K	99	106	7	7	7

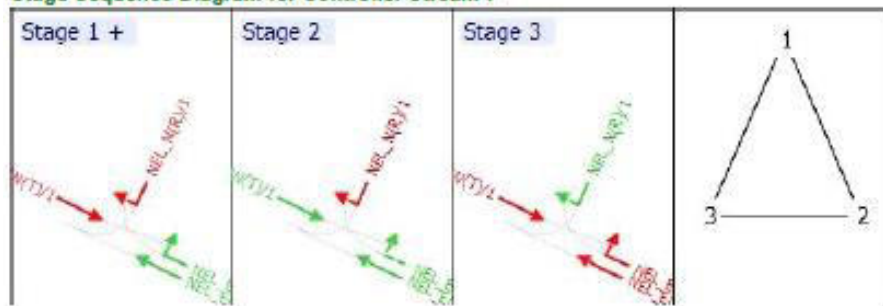
**A1 - 2026 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 PM BG+DEV (Proposed Configuration)\***

2. Bronkhorstspuit Road (R104) / Nellmapius Road  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 7



Stage Sequence Diagram for Controller Stream 7



Resultant Stages

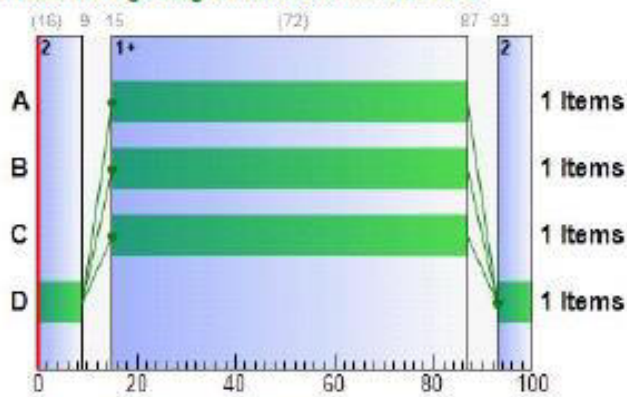
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
7	1	✓	1	A,B	38	45	7	7	7
7	2	✓	2	A,B,C	45	9	64	14	14
7	3	✓	3	D	15	32	17	17	17



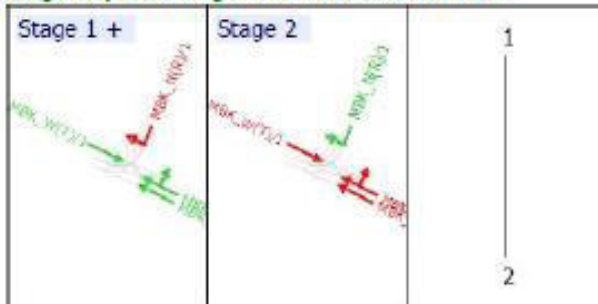
**A1 - 2026 PM BG+DEV (Proposed Configuration) \*:**  
**D1 - 2026 PM BG+DEV (Proposed Configuration)\***

3. Bronkhorstspuit Road (R104) / Mbeki Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 6



Stage Sequence Diagram for Controller Stream 6



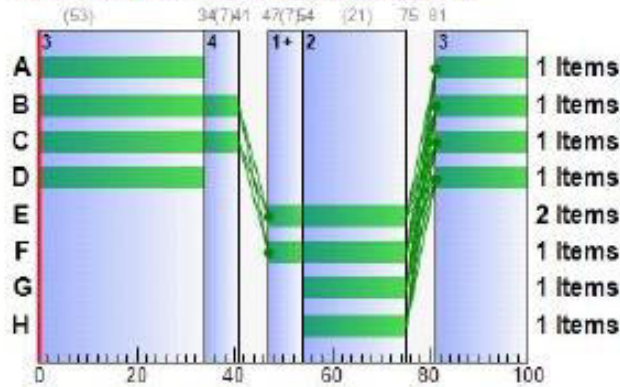
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
6	1	✓	1	A,B,C	15	87	72	14	14
6	2	✓	2	D	93	9	15	14	14

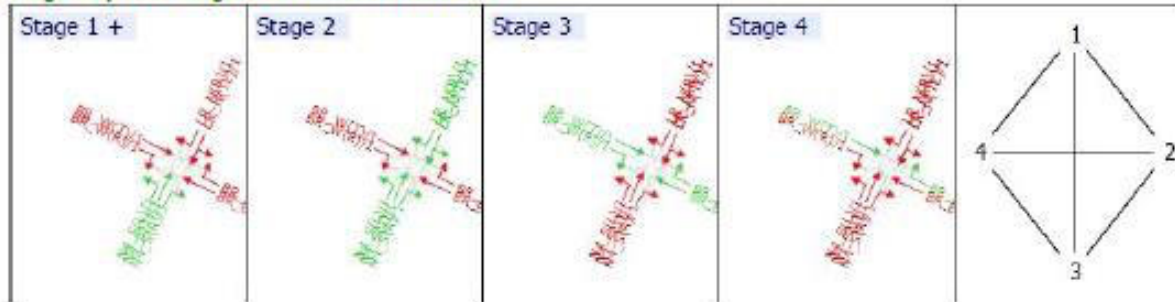
**A1 - 2026 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 PM BG+DEV (Proposed Configuration)\***

4. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 5



Stage Sequence Diagram for Controller Stream 5



Resultant Stages

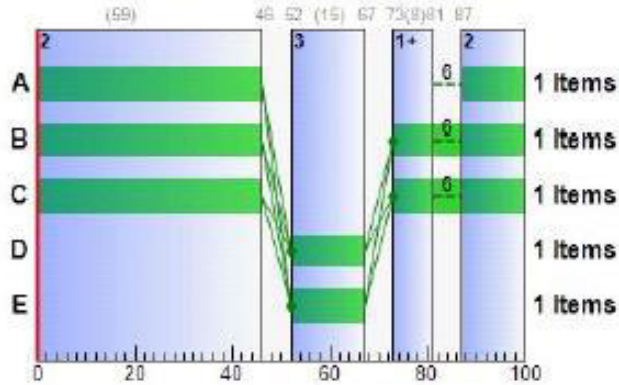
Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
5	1	✓	1	EF	47	54	7	7	7
5	2	✓	2	E,F,G,H	54	75	21	21	21
5	3	✓	3	A,B,C,D	81	34	53	21	21
5	4	✓	4	B,C	34	41	7	7	7

**A1 - 2026 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 PM BG+DEV (Proposed Configuration)\***

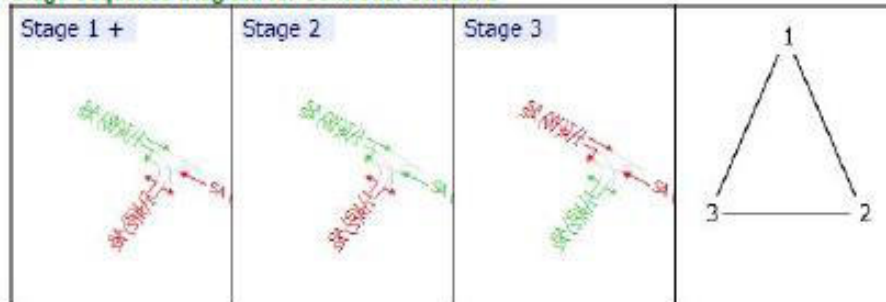
5. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



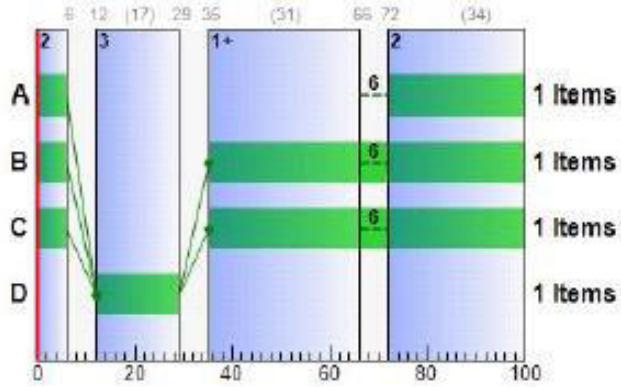
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases In This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
2	1	✓	1	B,C	73	81	8	7	7
2	2	✓	2	A,B,C	87	46	59	14	14
2	3	✓	3	D,E	52	67	15	14	14

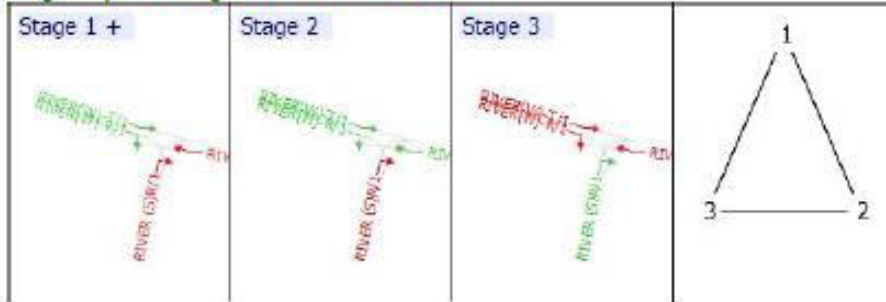
**A1 - 2026 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 PM BG+DEV (Proposed Configuration)\***

6. Bronkhorstspuit Road (R104) / Access to River Walk Development  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 3



Stage Sequence Diagram for Controller Stream 3



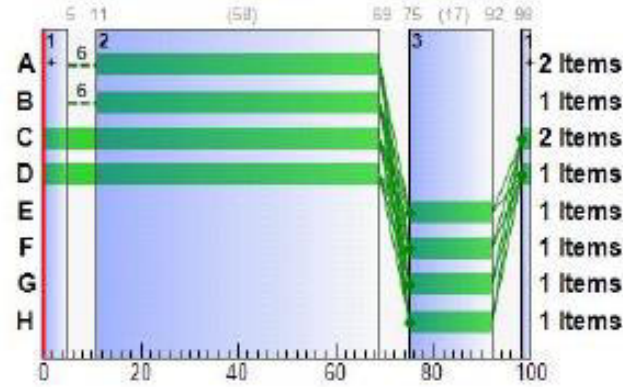
Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					35	66			
3	1	✓	1	C,B	35	66	31	30	30
3	2	✓	2	A,B,C	72	6	34	17	17
3	3	✓	3	D	12	29	17	17	17

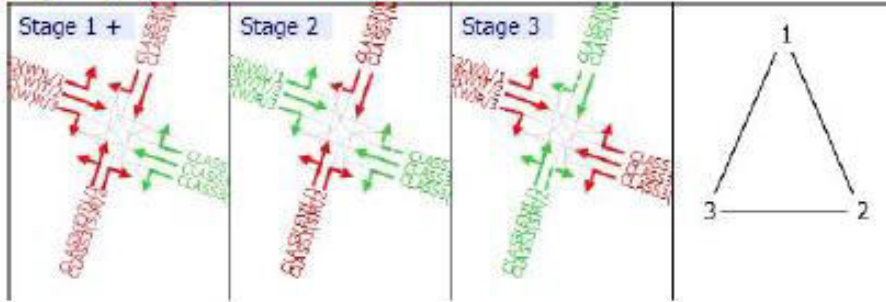
**A1 - 2026 PM BG+DEV (Proposed Configuration) \*:  
D1 - 2026 PM BG+DEV (Proposed Configuration)\***

7. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development)  
**(BACKGROUND AND DEVELOPMENT TRAFFIC VOLUMES)**

Phase Timings Diagram for Controller Stream 4



Stage Sequence Diagram for Controller Stream 4



Resultant Stages

Controller Stream	Stage	Is Base Stage	Library Stage ID	Phases in This Stage	Stage Start (s)	Stage End (s)	Stage Duration (s)	User Stage Minimum (s)	Stage Minimum (s)
					98	5			
4	1	✓	1	C,D	98	5	7	7	7
4	2	✓	2	A,B,C,D	11	69	58	17	17
4	3	✓	3	E,F,G,H	75	92	17	17	17

## **ANNEXURE F**

# **CAPACITY CALCULATION RESULTS**

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Am	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	K6SK22 (E)L	1	75	20	1533	2050	100	3.22	23.94	54.44	19.46	5.60	25.05
06:00-07:00	K6SK22 (E)R	1	21	326	65	2050	14	36.79	1.66	4.78	9.43	0.74	10.17
06:00-07:00	K6SK22 (E)T	1	62	45	533	4100	20	33.41	13.78	19.73	70.24	6.12	76.36
06:00-07:00	K6SK22 (N)L	1	3	3475	16	2050	30	24.22	0.31	1.47	1.53	0.14	1.66
06:00-07:00	K6SK22 (N)R	1	50	80	266	4100	12	43.82	7.12	12.23	45.98	3.15	49.12
06:00-07:00	K6SK22 (N)T	1	80	12	1021	4100	30	37.37	27.42	35.69	150.52	12.18	162.70
06:00-07:00	K6SK22 (S)L	1	11	708	206	1853	100	0.12	0.01	0.02	0.10	0.00	0.10
06:00-07:00	K6SK22 (S)R	1	82	10	437	4100	12	57.02	13.56	20.88	98.38	6.02	104.40
06:00-07:00	K6SK22 (S)T	1	49	85	619	4100	30	29.39	14.17	22.42	71.81	6.27	78.09
06:00-07:00	K6SK22 (W)L	1	56	59	243	2050	20	37.62	6.43	19.67	36.06	2.86	38.91
06:00-07:00	K6SK22 (W)R	1	110	-18	678	4100	14	228.36	52.66	83.51	610.71	18.12	628.83
06:00-07:00	K6SK22 (W)T	1	30	199	259	4100	20	31.17	6.16	9.75	31.85	2.73	34.58

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 2. Solomon Mahlangu Drive / N4 (Northern Terminal)

(**BACKGROUND TRAFFIC VOLUMES**)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C1-N	1	102%	-11	3169	3119	100	55.11	127.82	147.41	688.67	52.05	740.92
06:00-07:00	C1-N (EXT)	1	31	192	1263	4100	100	0.20	0.07	0.07	0.97	0.00	0.97
06:00-07:00	C1-S	1	39	128	1527	3870	100	0.30	0.13	0.06	1.83	0.00	1.83
06:00-07:00	C2-N	1	110%	-18	4505	4100	100	170.24	214.33	103.41	3025.21	160.26	3185.47
06:00-07:00	C2-N (EXT)	1	46	94	1903	4100	100	0.38	0.20	0.21	2.85	0.00	2.85
06:00-07:00	C2-S	1	86	5	1751	2043	100	5.17	2.51	4.04	35.68	0.00	35.68
06:00-07:00	Ramp A	1	15	493	311	2050	100	0.16	0.01	0.01	0.19	0.00	0.19
06:00-07:00	Ramp B	1	3	2745	65	2050	100	0.03	0.00	0.00	0.01	0.00	0.01



# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 3. Solomon Mahlangu Drive / N4 (Southern Terminal) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C2-N	1	110%	-18	4505	4100	100	170.24	214.33	103.41	3025.21	160.26	3185.47
06:00-07:00	C2-N (EXT)	1	46	94	1903	4100	100	0.38	0.20	0.21	2.85	0.00	2.85
06:00-07:00	C2-S	1	86	5	1751	2043	100	5.17	2.51	4.04	35.68	0.00	35.68
06:00-07:00	C3-1	1	1	8286	22	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	Ramp-C	1	90%	-2	138	150	100	82.95	3.18	1.88	45.15	0.00	45.15
06:00-07:00	Ramp-D	1	72	24	1304	1800	100	2.61	0.95	0.71	13.42	0.00	13.42

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 4. Bronkhorstspruit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	NEL_E (EXT)	1	2	4513	40	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	NEL_E (EXT)	2	36	151	735	2050	100	0.49	0.10	0.23	1.42	0.00	1.42
06:00-07:00	NEL_E (R)	1	4	2160	10	395	63	14.59	0.15	0.50	0.57	0.07	0.64
06:00-07:00	NEL_E (T)	1	50	78	1323	4100	63	7.93	16.38	28.26	41.38	7.04	48.42
06:00-07:00	NEL_N (EXT)	1	10	787	208	2050	100	0.10	0.01	0.02	0.08	0.00	0.08
06:00-07:00	NEL_N (L)	1	2	4513	40	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	NEL_N (R)	1	63	42	675	4100	25	35.68	17.04	39.55	95.00	7.57	102.57
06:00-07:00	NEL_W (EXT)	1	49	85	1998	4100	100	0.42	0.23	0.27	3.29	0.00	3.29
06:00-07:00	NEL_W (L)	1	10	832	198	2050	100	0.09	0.01	0.03	0.07	0.00	0.07
06:00-07:00	NEL_W (T)	1	56	61	735	2050	63	11.84	11.79	59.94	34.34	5.09	39.43

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 5. Bronkhorstspruit Road (R104) / Mbeki Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	MBK_E (EXT)	1	10	787	208	2050	100	0.10	0.01	0.07	0.08	0.00	0.08
06:00-07:00	MBK_E (EXT)	2	35	158	715	2050	100	0.47	0.09	0.24	1.33	0.00	1.33
06:00-07:00	MBK_E (R)	1	47	91	482	1800	56	5.42	3.24	31.07	10.31	1.25	11.56
06:00-07:00	MBK_E (T)	1	36	151	420	2050	56	4.50	2.49	28.59	7.45	0.99	8.44
06:00-07:00	MBK_N (EXT)	1	3	2905	61	2050	100	0.03	0.00	0.01	0.01	0.00	0.01
06:00-07:00	MBK_N (EXT)	2	3	2905	61	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	MBK_N (L)	1	10	787	208	2050	100	0.10	0.01	0.03	0.08	0.00	0.08
06:00-07:00	MBK_N (R)	1	73	23	494	2050	32	36.64	13.05	71.44	71.40	5.77	77.17
06:00-07:00	MBK_W (EXT)	1	33	177	667	2050	100	0.42	0.08	0.64	1.11	0.00	1.11
06:00-07:00	MBK_W (EXT)	2	33	177	667	2050	100	0.42	0.08	0.22	1.11	0.00	1.11
06:00-07:00	MBK_W (L)	1	3	2975	60	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	MBK_W (T)	1	61	47	715	2050	56	8.38	10.89	32.67	23.63	4.29	27.92

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 6. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	BR-1	1	44	105	902	2050	100	0.75	7.63	32.09	2.68	0.48	3.16
06:00-07:00	BR2	1	45	100	923	2050	100	0.72	0.18	0.68	2.62	0.00	2.62
06:00-07:00	BR3	1	65	38	1333	2050	100	1.63	0.60	2.22	8.56	0.00	8.56
06:00-07:00	BR4	1	38	138	775	2050	100	0.53	0.11	0.53	1.63	0.00	1.63
06:00-07:00	BR_E (EXT)	1	27	234	1106	4100	100	0.16	0.05	0.05	0.71	0.00	0.71
06:00-07:00	BR_E(L)	1	7	1271	135	2050	100	0.06	0.00	0.02	0.03	0.00	0.03
06:00-07:00	BR_E(R)	1	6	1426	65	1800	60	13.94	1.26	12.09	3.56	0.56	4.12
06:00-07:00	BR_E(T)	1	37	144	802	4100	52	6.80	9.84	8.79	21.50	4.10	25.60
06:00-07:00	BR_W (EXT)	1	22	309	902	4100	100	0.12	0.03	0.04	0.44	0.00	0.44
06:00-07:00	BR_W (L)	1	1	10753	17	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	BR_W (R)	1	3	3080	27	1800	52	5.76	0.16	1.17	0.61	0.07	0.68
06:00-07:00	BR_W (T)	1	35	156	879	4100	60	5.92	5.44	8.61	20.54	2.41	22.95
06:00-07:00	LR_N (EXT)	1	4	2002	88	2050	100	0.04	0.00	0.00	0.01	0.00	0.01
06:00-07:00	LR_N(R)	1	15	494	60	1800	21	32.31	1.35	12.91	7.66	0.60	8.25
06:00-07:00	LR_N (TL)	1	41	122	183	2050	21	36.13	4.46	34.72	26.08	1.98	28.06
06:00-07:00	N4_S (EXT)	1	7	1271	135	2050	100	0.06	0.00	0.01	0.03	0.00	0.03
06:00-07:00	N4_S (EXT)	2	1	6262	29	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	N4_S(L)	1	7	1238	40	2050	28	25.99	0.80	7.69	4.10	0.36	4.46
06:00-07:00	N4_S(R)	1	9	921	46	1800	28	26.22	0.92	4.82	4.76	0.41	5.17
06:00-07:00	N4_S(T)	1	1	8618	6	2050	28	25.89	0.12	0.63	0.61	0.05	0.66

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

(BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	S EXT (W)2	1	25	267	1005	4100	100	0.14	0.04	0.03	0.57	0.00	0.57
06:00-07:00	SA (E)L	1	0	30650	6	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA (E)T	1	66	36	2034	4100	74	5.02	27.10	38.71	40.28	10.78	51.06
06:00-07:00	SA (S)L	1	32	185	97	2050	14	40.62	2.47	10.86	15.54	1.10	16.64
06:00-07:00	SA (S)R	1	5	1745	15	2050	14	36.85	0.36	1.62	2.18	0.16	2.34
06:00-07:00	SA (W)R	1	35	157	58	272	60	7.84	0.41	0.98	1.80	0.14	1.94
06:00-07:00	SA (W)T	1	26	244	654	4100	60	1.54	1.01	1.20	4.22	0.45	4.67
06:00-07:00	SA EXT (E)	1	16	451	659	4100	100	0.09	0.02	0.02	0.23	0.00	0.23
06:00-07:00	SA EXT (S)2	1	0	30650	6	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA EXT (S)2	2	3	3070	58	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	SA EXT (W)	1	52	73	2131	4100	100	0.47	0.28	0.32	3.99	0.00	3.99

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 8. Bronkhorstspruit Road (R104) / Access to River Walk Development

(BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	R-SLNK (E)	1	20	343	633	4100	100	0.11	0.03	0.03	0.37	0.00	0.37
06:00-07:00	R-SLNK (W)	1	8	1044	323	4100	100	0.04	0.00	0.00	0.05	0.00	0.05
06:00-07:00	RI EXT (E)	1	8	1044	323	4100	100	0.04	0.00	0.00	0.05	0.00	0.05
06:00-07:00	RI EXT (S)2	1	1	8266	22	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	RI EXT (S)2	2	20	348	412	2050	100	0.22	0.03	0.07	0.36	0.00	0.36
06:00-07:00	RI EXT (W)2	1	50	81	2040	4100	100	0.43	0.25	0.38	3.50	0.00	3.50
06:00-07:00	RIVER (S)L	1	60	50	1229	2050	100	1.31	0.45	1.92	6.36	0.00	6.36
06:00-07:00	RIVER (S)R	1	11	752	65	2050	29	25.68	1.31	6.25	6.58	0.58	7.16
06:00-07:00	RIVER (E)-L	1	1	8266	22	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	RIVER (E)-T	1	33	173	811	4100	59	9.32	9.69	16.62	29.60	4.25	34.04
06:00-07:00	RIVER (W)-R	1	89	1	412	980	46	36.77	13.45	41.65	59.70	5.29	64.99
06:00-07:00	RIVER (W)-T	1	13	573	258	4100	46	5.70	1.50	2.36	5.79	0.64	6.44

# A1 - 2016 AM BG (Existing Configuration) \*: D1 - 2016 AM BG (Existing Configuration)\*

## 9. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development)

### (BACKGROUND TRAFFIC VOLUMES)

## Traffic Stream Results

### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C3-EXT (E)	1	35	157	719	2050	100	0.47	0.09	0.58	1.34	0.00	1.34
06:00-07:00	C3-EXT (E)	2	7	1208	282	4100	100	0.03	0.00	0.00	0.04	0.00	0.04
06:00-07:00	C3-EXT (N)	1	15	510	303	2050	100	0.15	0.01	0.04	0.18	0.00	0.18
06:00-07:00	C3-EXT (S)	1	3	2738	65	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	C3-EXT (W)	1	20	343	833	4100	100	0.11	0.03	0.03	0.37	0.00	0.37
06:00-07:00	CLASS3 (E)TL	1	6	1410	22	2050	17	34.34	0.50	0.79	2.98	0.22	3.20
06:00-07:00	CLASS3 (E)L	1	0	Unrestricted	0	2050	71	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (E)R	3	23	297	240	1469	71	5.07	2.17	18.72	4.79	1.00	5.79
06:00-07:00	CLASS3 (E)T	2	24	272	714	4100	71	4.94	6.58	20.89	13.92	2.86	16.78
06:00-07:00	CLASS3 (N)L	1	35	157	719	2050	100	0.47	0.09	0.66	1.34	0.00	1.34
06:00-07:00	CLASS3 (N)R	2	44	103	119	1488	17	42.89	3.12	27.90	19.99	1.39	21.38
06:00-07:00	CLASS3 (N)T	1	18	411	65	2050	17	35.80	1.54	13.74	9.18	0.68	9.86
06:00-07:00	CLASS3 (S)R	2	0	-100	0	0	17	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (W)L	1	3	2584	41	2050	58	5.69	0.35	0.60	0.91	0.15	1.06
06:00-07:00	CLASS3 (W)R	3	0	-100	0	0	58	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (W)T	2	12	672	282	4100	58	5.95	2.60	2.24	6.62	1.12	7.74

# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	K69K22	1	24	273	495	2050	100	0.28	0.04	0.09	0.55	0.00	0.55
06:00-07:00	K69K22	1	17	427	28	2050	7	38.24	0.72	2.07	4.22	0.32	4.54
06:00-07:00	K69K22	1	32	185	272	4100	20	33.49	6.02	8.62	35.93	2.67	38.60
06:00-07:00	K69K22	1	5	1582	34	2050	30	24.41	0.66	3.18	3.27	0.29	3.57
06:00-07:00	K69K22	1	28	227	226	4100	19	34.72	5.33	9.15	30.95	2.37	33.32
06:00-07:00	K69K22	1	62	46	784	4100	30	31.71	19.01	24.74	98.05	8.42	106.47
06:00-07:00	K69K22	1	13	571	248	1853	100	0.15	0.01	0.03	0.15	0.00	0.15
06:00-07:00	K69K22	1	129%	-30	1059	4100	19	443.31	143.77	221.26	1851.93	33.46	1885.38
06:00-07:00	K69K22	1	119%	-25	1517	4100	30	327.10	160.56	254.05	1957.49	45.41	2002.90
06:00-07:00	K69K22	1	128%	-30	552	2050	20	436.33	74.25	227.23	950.05	17.43	967.48
06:00-07:00	K69K22	1	111%	-19	363	4100	7	246.73	30.20	47.90	353.27	10.03	363.30
06:00-07:00	K69K22	1	62	45	534	4100	20	36.84	13.38	21.19	77.59	5.90	83.49





# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 3. Solomon Mahlangu Drive / N4 (Southern Terminal) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C2-N	1	83	8	3410	4100	100	2.35	38.58	18.62	31.55	5.44	37.00
06:00-07:00	C2-N (EXT)	1	45	100	1848	4100	100	0.36	0.18	0.19	2.62	0.00	2.62
06:00-07:00	C2-S	1	110!	-19	2265	2050	100	179.73	166.15	267.31	1605.74	70.09	1675.83
06:00-07:00	Ramp-C	1	141!	-36	269	191	100	549.02	45.57	26.96	582.54	8.60	591.14
06:00-07:00	Ramp-D	1	37	140	675	1800	100	0.60	0.11	0.08	1.59	0.00	1.59

# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 4. Bronkhorstspuit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	NEL_E (EXT)	1	2	5491	33	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	NEL_E (EXT)	2	67	35	1367	2050	100	1.75	0.66	1.52	9.44	0.00	9.44
06:00-07:00	NEL_E (R)	1	60	50	23	51	74	91.89	0.95	3.18	8.25	0.39	8.64
06:00-07:00	NEL_E (T)	1	22	301	690	4100	74	2.77	4.08	7.04	7.55	1.73	9.28
06:00-07:00	NEL_N (EXT)	1	28	221	575	2050	100	0.34	0.05	0.16	0.78	0.00	0.78
06:00-07:00	NEL_N (L)	1	2	5491	33	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	NEL_N (R)	1	82	10	504	4100	14	53.89	15.22	35.32	107.13	6.77	113.89
06:00-07:00	NEL_W (EXT)	1	29	209	1194	4100	100	0.18	0.06	0.07	0.85	0.00	0.85
06:00-07:00	NEL_W (L)	1	27	234	552	2050	100	0.32	0.05	0.26	0.70	0.00	0.70
06:00-07:00	NEL_W (T)	1	89	1	1367	2050	74	18.32	31.49	160.12	98.77	13.49	112.26

# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 5. Bronkhorstspuit Road (R104) / Mbeki Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	MBK_E (EXT)	1	5	1608	108	2050	100	0.05	0.00	0.02	0.02	0.00	0.02
06:00-07:00	MBK_E (EXT)	2	60	50	1230	2050	100	1.31	0.45	1.13	6.37	0.00	6.37
06:00-07:00	MBK_E (R)	1	30	202	402	1800	74	2.69	2.09	20.00	4.27	0.89	5.15
06:00-07:00	MBK_E (T)	1	17	420	266	2050	74	2.25	1.27	14.63	2.37	0.55	2.91
06:00-07:00	MBK_N (EXT)	1	7	1105	153	2050	100	0.07	0.00	0.04	0.04	0.00	0.04
06:00-07:00	MBK_N (EXT)	2	7	1105	153	2050	100	0.07	0.00	0.02	0.04	0.00	0.04
06:00-07:00	MBK_N (L)	1	5	1608	108	2050	100	0.05	0.00	0.01	0.02	0.00	0.02
06:00-07:00	MBK_N (R)	1	59	54	180	2050	14	47.75	5.06	27.69	33.90	2.25	36.15
06:00-07:00	MBK_W (EXT)	1	17	418	356	2050	100	0.18	0.02	0.15	0.26	0.00	0.26
06:00-07:00	MBK_W (EXT)	2	17	418	356	2050	100	0.18	0.02	0.05	0.26	0.00	0.26
06:00-07:00	MBK_W (L)	1	8	965	170	2050	100	0.08	0.00	0.03	0.05	0.00	0.05
06:00-07:00	MBK_W (T)	1	80	13	1230	2050	74	6.74	13.00	39.00	32.69	4.62	37.32

# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 6. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	BR_E(L)	1	2	3508	51	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	BR_E(R)	1	12	634	135	1800	60	6.40	0.96	9.20	3.40	0.43	3.83
06:00-07:00	BR_E(T)	1	25	266	545	4100	53	17.54	10.68	9.55	37.68	4.75	42.43
06:00-07:00	BR_W (EXT)	1	16	452	669	4100	100	0.09	0.02	0.02	0.23	0.00	0.23
06:00-07:00	BR_W (L)	1	3	2925	61	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	BR_W (R)	1	4	2330	36	1800	53	5.77	0.31	2.24	0.82	0.13	0.95
06:00-07:00	BR_W (T)	1	50	81	1241	4100	60	6.38	11.86	18.78	31.24	4.91	36.15
06:00-07:00	LR_N (EXT)	1	10	806	204	2050	100	0.10	0.01	0.02	0.08	0.00	0.08
06:00-07:00	LR_N(R)	1	10	838	38	1800	21	31.61	0.84	8.04	4.74	0.37	5.11
06:00-07:00	LR_N (TL)	1	12	666	53	2050	21	31.77	1.19	9.23	6.64	0.53	7.17
06:00-07:00	N4_S (EXT)	1	2	3508	51	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	N4_S (EXT)	2	2	4755	38	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	N4_S(L)	1	14	522	86	2050	28	26.83	1.78	17.06	9.10	0.79	9.89
06:00-07:00	N4_S(R)	1	19	370	100	1800	28	27.52	2.11	10.98	10.85	0.93	11.79
06:00-07:00	N4_S(T)	1	1	6588	8	2050	28	25.60	0.16	0.84	0.81	0.07	0.88

# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

### (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	S EXT (W)2	1	18	394	746	4100	100	0.10	0.02	0.02	0.29	0.00	0.29
06:00-07:00	SA (E)L	1	0	46025	4	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA (E)T	1	29	210	739	4100	61	6.19	6.18	8.83	18.06	2.70	20.76
06:00-07:00	SA (S)L	1	18	394	56	2050	14	38.48	1.37	6.04	8.50	0.61	9.11
06:00-07:00	SA (S)R	1	1	9125	3	2050	14	36.61	0.07	0.32	0.43	0.03	0.46
06:00-07:00	SA (W)R	1	8	959	68	1053	74	1.05	0.19	0.46	0.28	0.10	0.38
06:00-07:00	SA (W)T	1	43	110	1320	4100	74	0.95	1.32	1.56	4.97	0.58	5.55
06:00-07:00	SA EXT (E)	1	32	179	1323	4100	100	0.21	0.08	0.09	1.09	0.00	1.09
06:00-07:00	SA EXT (S)2	1	0	46025	4	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA EXT (S)2	2	3	2623	68	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	SA EXT (W)	1	19	364	795	4100	100	0.11	0.02	0.03	0.33	0.00	0.33

# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 8. Bronkhorstspuit Road (R104) / Access to River Walk Development

### (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	RI EXT (W)2	1	18	397	743	4100	100	0.10	0.02	0.03	0.28	0.00	0.28
06:00-07:00	RIVER (S)L	1	24	275	492	2050	100	0.28	0.04	0.16	0.54	0.00	0.54
06:00-07:00	RIVER (S)R	1	7	1177	26	2050	17	34.44	0.60	2.88	3.53	0.27	3.80
06:00-07:00	RIVER (E)-L	1	3	2975	60	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	RIVER (E)-T	1	32	179	251	4100	18	34.77	6.15	10.54	34.42	2.74	37.16
06:00-07:00	RIVER (W)-R	1	82	10	948	1606	71	9.75	8.34	25.83	36.43	5.12	41.54
06:00-07:00	RIVER (W)-T	1	13	607	376	4100	71	1.60	0.86	1.35	2.37	0.38	2.74

# A1 - 2016 PM BG (Existing Configuration) \*: D1 - 2016 PM BG (Existing Configuration)\*

## 9. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	CLASS3 (E)TL	1	17	444	81	2050	17	35.66	1.44	2.25	8.58	0.64	9.22
06:00-07:00	CLASS3 (E)L	1	0	Unrestricted	0	2050	71	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (E)R	3	64	40	671	1446	71	9.79	10.09	87.13	25.90	4.30	30.21
06:00-07:00	CLASS3 (E)T	2	9	906	284	4100	71	4.25	2.13	6.76	4.43	0.92	5.35
06:00-07:00	CLASS3 (N)L	1	11	709	228	2050	100	0.11	0.01	0.05	0.10	0.00	0.10
06:00-07:00	CLASS3 (N)R	2	20	353	47	1315	17	38.98	1.16	10.38	7.23	0.52	7.74
06:00-07:00	CLASS3 (N)T	1	7	1177	26	2050	17	34.44	0.60	5.39	3.53	0.27	3.80
06:00-07:00	CLASS3 (S)R	2	0	-100	0	0	17	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (W)L	1	8	1076	93	2050	58	6.53	0.80	1.37	2.38	0.35	2.73
06:00-07:00	CLASS3 (W)R	3	0	-100	0	0	58	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (W)T	2	13	604	309	4100	58	6.68	2.75	2.37	8.15	1.20	9.35



# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)	
06:00-07:00	K69K22	(E)L	1	78	15	1603	2050	100	4.74	27.79	63.21	29.99	8.73	38.72
06:00-07:00	K69K22	(E)R	1	28	220	75	2050	12	38.63	1.97	5.66	11.43	0.88	12.31
06:00-07:00	K69K22	(E)T	1	54	66	578	4100	25	27.12	13.57	19.43	61.83	5.96	67.79
06:00-07:00	K69K22	(N)L	1	4	1939	19	2050	20	31.79	0.42	2.00	2.38	0.19	2.57
06:00-07:00	K69K22	(N)R	1	35	154	290	4100	19	35.64	7.02	12.06	40.77	3.11	43.88
06:00-07:00	K69K22	(N)T	1	134	-33	1152	4100	20	488.76	170.63	222.09	2220.91	36.78	2257.68
06:00-07:00	K69K22	(S)L	1	12	630	230	1865	100	0.14	0.01	0.02	0.12	0.00	0.12
06:00-07:00	K69K22	(S)R	1	55	63	452	4100	19	38.66	11.52	17.72	68.94	5.13	74.07
06:00-07:00	K69K22	(S)T	1	82	9	710	4100	20	47.20	20.59	32.58	132.12	9.15	141.26
06:00-07:00	K69K22	(W)L	1	52	74	275	2050	25	31.43	6.68	20.44	34.10	2.95	37.04
06:00-07:00	K69K22	(W)R	1	146	-38	777	4100	12	599.10	137.75	218.47	1836.15	25.04	1861.19
06:00-07:00	K69K22	(W)T	1	26	241	281	4100	25	26.40	6.05	9.57	29.26	2.67	31.93

# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 2. Solomon Mahlangu Drive / N4 (Northern Terminal) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C1-N	1	102	-12	2997	2941	100	60.21	123.58	142.51	711.74	50.40	762.14
06:00-07:00	C1-N (EXT)	1	34	165	1392	4100	100	0.23	0.09	0.09	1.24	0.00	1.24
06:00-07:00	C1-S	1	44	103	1716	3870	100	0.37	0.18	0.08	2.51	0.00	2.51
06:00-07:00	Ramp A	1	16	456	332	2050	100	0.17	0.02	0.01	0.22	0.00	0.22
06:00-07:00	Ramp B	1	3	2499	71	2050	100	0.03	0.00	0.00	0.01	0.00	0.01

# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 3. Solomon Mahlangu Drive / N4 (Southern Terminal) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C2-N	1	110%	-18	4507	4100	100	170.25	213.93	103.22	3026.42	159.86	3186.28
06:00-07:00	C2-N (EXT)	1	47	90	1940	4100	100	0.39	0.21	0.22	3.02	0.00	3.02
06:00-07:00	C2-S	1	94%	-5	1993	2110	100	12.81	7.09	11.41	100.68	0.00	100.68
06:00-07:00	Ramp-C	1	105%	-14	159	152	100	177.66	11.00	6.51	111.42	4.60	116.03
06:00-07:00	Ramp-D	1	73	23	1322	1800	100	2.75	1.01	0.76	14.33	0.00	14.33

# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 4. Bronkhorstspuit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	NEL_E (EXT)	1	2	3911	46	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	NEL_E (EXT)	2	40	124	825	2050	100	0.59	0.14	0.31	1.92	0.00	1.92
06:00-07:00	NEL_E (R)	1	7	1281	12	292	62	19.43	0.21	0.72	0.92	0.10	1.01
06:00-07:00	NEL_E (T)	1	57	58	1469	4100	62	9.32	20.20	34.84	54.02	8.76	62.78
06:00-07:00	NEL_N (EXT)	1	11	689	234	2050	100	0.11	0.01	0.02	0.10	0.00	0.10
06:00-07:00	NEL_N (L)	1	2	3911	46	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	NEL_N (R)	1	69	30	769	4100	26	36.47	19.79	45.94	110.61	8.80	119.42
06:00-07:00	NEL_W (EXT)	1	55	65	2238	4100	100	0.53	0.33	0.38	4.65	0.00	4.65
06:00-07:00	NEL_W (L)	1	11	731	222	2050	100	0.11	0.01	0.03	0.09	0.00	0.09
06:00-07:00	NEL_W (T)	1	64	41	825	2050	62	13.91	14.54	73.93	45.26	6.36	51.62

# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 5. Bronkhorstspuit Road (R104) / Mbeki Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	M EXIT (E)	1	9	936	356	4100	100	0.04	0.00	0.00	0.06	0.00	0.06
06:00-07:00	M EXIT (N)	1	0	Unrestricted	0	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	M EXIT (W)	1	23	293	940	4100	100	0.13	0.03	0.04	0.48	0.00	0.48
06:00-07:00	MBK_E (EXT)	1	11	695	232	2050	100	0.11	0.01	0.08	0.10	0.00	0.10
06:00-07:00	MBK_E (EXT)	2	39	129	805	2050	100	0.57	0.13	0.32	1.80	0.00	1.80
06:00-07:00	MBK_E (R)	1	53	70	523	1800	54	6.15	3.43	32.90	12.69	1.41	14.09
06:00-07:00	MBK_E (T)	1	40	124	454	2050	54	4.93	2.60	29.86	8.82	1.08	9.90
06:00-07:00	MBK_N (EXT)	1	3	2618	68	2050	100	0.03	0.00	0.01	0.01	0.00	0.01
06:00-07:00	MBK_N (EXT)	2	3	2618	68	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	MBK_N (L)	1	11	695	232	2050	100	0.11	0.01	0.04	0.10	0.00	0.10
06:00-07:00	MBK_N (R)	1	80	13	574	2050	34	39.06	15.90	87.07	88.44	7.02	95.45
06:00-07:00	MBK_W (EXT)	1	36	149	741	2050	100	0.50	0.10	0.84	1.45	0.00	1.45
06:00-07:00	MBK_W (EXT)	2	36	149	741	2050	100	0.50	0.10	0.28	1.45	0.00	1.45
06:00-07:00	MBK_W (L)	1	3	2695	66	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	MBK_W (T)	1	71	26	805	2050	54	11.01	14.74	44.25	34.95	5.86	40.80

# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 6. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	BR_E(L)	1	8	1079	156	2050	100	0.07	0.00	0.03	0.04	0.00	0.04
06:00-07:00	BR_E(R)	1	7	1222	75	1800	60	14.37	1.29	12.35	4.24	0.57	4.81
06:00-07:00	BR_E(T)	1	39	131	861	4100	53	11.34	16.40	14.66	38.50	7.03	45.54
06:00-07:00	BR_W (EXT)	1	24	278	977	4100	100	0.14	0.04	0.05	0.53	0.00	0.53
06:00-07:00	BR_W (L)	1	1	9611	19	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	BR_W (R)	1	3	2722	31	1800	53	4.89	0.17	1.23	0.60	0.07	0.67
06:00-07:00	BR_W (T)	1	39	128	987	4100	60	5.61	5.86	9.29	21.83	2.55	24.38
06:00-07:00	LR_N (EXT)	1	5	1732	101	2050	100	0.05	0.00	0.00	0.02	0.00	0.02
06:00-07:00	LR_N(R)	1	18	409	70	1800	21	32.64	1.59	15.28	9.01	0.71	9.72
06:00-07:00	LR_N (TL)	1	47	91	213	2050	21	37.50	5.36	41.72	31.51	2.36	33.87
06:00-07:00	N4_S (EXT)	2	2	5326	34	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	N4_S(L)	1	8	1063	46	2050	28	26.09	0.92	8.85	4.73	0.41	5.14
06:00-07:00	N4_S(R)	1	10	786	53	1800	28	26.38	1.08	5.63	5.52	0.48	5.99
06:00-07:00	N4_S(T)	1	1	7544	7	2050	28	25.60	0.14	0.74	0.71	0.06	0.77

# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	S EXIT (W)2	1	27	236	1098	4100	100	0.16	0.05	0.04	0.70	0.00	0.70
06:00-07:00	SA (E)L	1	0	30650	6	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA (E)T	1	70	29	2143	4100	74	11.72	39.93	57.04	99.08	17.52	116.60
06:00-07:00	SA (S)L	1	37	145	113	2050	14	41.62	2.90	12.75	16.55	1.29	19.84
06:00-07:00	SA (S)R	1	5	1630	16	2050	14	36.87	0.38	1.73	2.33	0.17	2.50
06:00-07:00	SA (W)R	1	34	164	68	322	61	23.77	1.75	4.17	6.36	0.78	7.16
06:00-07:00	SA (W)T	1	27	234	684	4100	61	4.64	8.84	10.47	12.51	3.77	16.28
06:00-07:00	SA EXT (E)	1	17	427	700	4100	100	0.09	0.02	0.02	0.25	0.00	0.25
06:00-07:00	SA EXT (S)2	1	0	30650	6	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA EXT (S)2	2	3	2609	68	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	SA EXT (W)	1	55	64	2256	4100	100	0.54	0.34	0.36	4.76	0.00	4.78

# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 8. Bronkhorstspuit Road (R104) / Access to River Walk Development (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	R1 EXT (W)2	1	52	72	2149	4100	100	0.50	7.16	11.07	4.21	0.33	4.54
06:00-07:00	RIVER (S)L	1	60	50	1231	2050	100	1.32	0.45	1.93	6.39	0.00	6.39
06:00-07:00	RIVER (S)R	1	12	666	65	2050	26	27.99	1.36	6.51	7.18	0.61	7.78
06:00-07:00	RIVER (E)-L	1	1	8266	22	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	RIVER (E)-T	1	36	153	918	4100	62	8.25	12.11	20.76	29.86	5.25	35.11
06:00-07:00	RIVER (W)-R	1	83	8	409	981	49	32.96	6.23	19.30	53.14	3.55	56.69
06:00-07:00	RIVER (W)-T	1	14	533	291	4100	49	13.09	2.96	4.66	15.03	1.33	16.36



# A1 - 2021 AM BG (Existing Configuration) \*: D1 - 2021 AM BG (Existing Configuration)\*

## 9. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C3-EXT (W)	1	23	293	940	4100	100	0.13	0.03	0.04	0.48	0.00	0.48
06:00-07:00	CLASS3 (E)TL	1	6	1410	22	2050	17	34.34	0.50	0.79	2.98	0.22	3.20
06:00-07:00	CLASS3 (E)L	1	0	Unrestricted	0	2050	71	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (E)R	3	23	293	240	1454	71	5.13	2.17	18.72	4.86	1.04	5.89
06:00-07:00	CLASS3 (E)T	2	28	223	823	4100	71	5.14	8.06	25.56	16.69	3.41	20.09
06:00-07:00	CLASS3 (N)L	1	35	157	719	2050	100	0.47	0.09	0.66	1.34	0.00	1.34
06:00-07:00	CLASS3 (N)R	2	44	106	117	1488	17	42.38	3.06	27.38	19.56	1.36	20.92
06:00-07:00	CLASS3 (N)T	1	18	411	65	2050	17	35.80	1.54	13.74	9.18	0.68	9.86
06:00-07:00	CLASS3 (S)R	2	0	-100	0	0	17	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (W)L	1	3	2584	41	2050	58	10.21	0.48	0.82	1.63	0.21	1.85
06:00-07:00	CLASS3 (W)R	3	0	-100	0	0	58	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (W)T	2	13	590	316	4100	58	10.89	3.97	3.42	13.57	1.76	15.32

# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	K6SK22 (E)L	1	25	262	510	2050	100	0.29	0.04	0.09	0.58	0.00	0.58
06:00-07:00	K6SK22 (E)R	1	21	334	34	2050	7	39.33	0.88	2.54	5.27	0.39	5.67
06:00-07:00	K6SK22 (E)T	1	34	165	292	4100	20	33.38	6.19	8.87	38.45	2.73	41.17
06:00-07:00	K6SK22 (N)L	1	6	1414	39	2050	31	23.80	0.75	3.59	3.66	0.33	3.99
06:00-07:00	K6SK22 (N)R	1	33	175	255	4100	18	36.12	6.17	10.60	36.33	2.75	39.08
06:00-07:00	K6SK22 (N)T	1	68	31	898	4100	31	32.56	22.44	29.21	115.33	9.88	125.21
06:00-07:00	K6SK22 (S)L	1	14	551	256	1853	100	0.16	0.01	0.03	0.16	0.00	0.16
06:00-07:00	K6SK22 (S)R	1	129!	-30	999	4100	18	433.86	132.92	204.56	1708.82	31.45	1740.27
06:00-07:00	K6SK22 (S)T	1	121!	-26	1588	4100	31	346.55	176.55	279.35	2171.13	48.17	2219.30
06:00-07:00	K6SK22 (W)L	1	145!	-38	623	2050	20	588.76	109.15	334.02	1446.81	20.08	1466.89
06:00-07:00	K6SK22 (W)R	1	125!	-28	411	4100	7	412.30	52.35	83.02	668.41	12.88	681.29
06:00-07:00	K6SK22 (W)T	1	65	38	563	4100	20	38.33	14.37	22.75	85.12	6.28	91.40



# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 3. Solomon Mahlangu Drive / N4 (Southern Terminal) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C2-N	1	89	1	3656	4100	100	4.53	64.07	30.91	65.30	17.05	82.35
06:00-07:00	C2-N (EXT)	1	49	85	1991	4100	100	0.41	0.23	0.24	3.25	0.00	3.25
06:00-07:00	C2-S	1	132!	-32	2583	1950	100	444.20	368.96	593.63	4525.72	86.94	4612.66
06:00-07:00	Ramp-C	1	223!	-60	310	139	100	1002.61	89.62	53.02	1226.22	9.42	1235.64
06:00-07:00	Ramp-D	1	37	141	672	1800	100	0.60	0.11	0.08	1.58	0.00	1.58

# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 4. Bronkhorstspuit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	NEL_E (EXT)	1	2	4513	40	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	NEL_E (EXT)	2	73	23	1506	2050	100	2.42	1.01	2.32	14.35	0.00	14.35
06:00-07:00	NEL_E (R)	1	461!	-80	28	8	74	1435.46	11.37	38.20	160.07	0.79	160.86
06:00-07:00	NEL_E (T)	1	25	266	757	4100	74	3.16	4.94	8.52	9.44	2.09	11.53
06:00-07:00	NEL_N (EXT)	1	31	191	633	2050	100	0.39	0.07	0.20	0.98	0.00	0.98
06:00-07:00	NEL_N (L)	1	2	4513	40	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	NEL_N (R)	1	94!	-4	577	4100	14	75.44	21.06	48.88	171.70	9.23	180.93
06:00-07:00	NEL_W (EXT)	1	33	177	1334	4100	100	0.21	0.08	0.09	1.11	0.00	1.11
06:00-07:00	NEL_W (L)	1	31	194	627	2050	100	0.39	0.07	0.35	0.96	0.00	0.96
06:00-07:00	NEL_W (T)	1	98!	-8	1506	2050	74	41.86	51.49	261.78	248.65	21.87	270.52

# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 5. Bronkhorstspuit Road (R104) / Mbeki Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	MBK_E (EXT)	1	6	1438	120	2050	100	0.05	0.00	0.02	0.03	0.00	0.03
06:00-07:00	MBK_E (EXT)	2	66	37	1348	2050	100	1.68	0.63	1.58	8.93	0.00	8.93
06:00-07:00	MBK_E (R)	1	32	179	435	1800	74	2.89	2.44	23.43	4.96	1.05	6.01
06:00-07:00	MBK_E (T)	1	19	379	289	2050	74	2.35	1.49	17.11	2.67	0.64	3.31
06:00-07:00	MBK_N (EXT)	1	8	970	172	2050	100	0.08	0.00	0.05	0.05	0.00	0.05
06:00-07:00	MBK_N (EXT)	2	8	970	172	2050	100	0.08	0.00	0.03	0.05	0.00	0.05
06:00-07:00	MBK_N (L)	1	6	1438	120	2050	100	0.05	0.00	0.01	0.03	0.00	0.03
06:00-07:00	MBK_N (R)	1	68	33	208	2050	14	52.13	6.12	33.51	42.77	2.72	45.49
06:00-07:00	MBK_W (EXT)	1	19	370	393	2050	100	0.21	0.02	0.19	0.32	0.00	0.32
06:00-07:00	MBK_W (EXT)	2	19	370	393	2050	100	0.21	0.02	0.06	0.32	0.00	0.32
06:00-07:00	MBK_W (L)	1	10	832	198	2050	100	0.09	0.01	0.04	0.07	0.00	0.07
06:00-07:00	MBK_W (T)	1	88	3	1348	2050	74	10.80	21.30	63.91	57.44	7.67	65.11

# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 6. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	BR_E(L)	1	3	3113	57	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	BR_E(R)	1	14	549	152	1800	60	5.70	0.97	9.30	3.42	0.43	3.85
06:00-07:00	BR_E(T)	1	26	246	576	4100	53	18.23	11.20	10.01	41.44	5.00	46.43
06:00-07:00	BR_W (EXT)	1	18	410	724	4100	100	0.09	0.02	0.02	0.27	0.00	0.27
06:00-07:00	BR_W (L)	1	3	2499	71	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	BR_W (R)	1	4	2034	41	1800	53	5.63	0.37	2.65	0.91	0.16	1.07
06:00-07:00	BR_W (T)	1	54	66	1356	4100	60	6.40	14.29	22.64	34.25	5.93	40.18
06:00-07:00	LR_N (EXT)	1	11	695	232	2050	100	0.11	0.01	0.03	0.10	0.00	0.10
06:00-07:00	LR_N(R)	1	12	675	46	1800	21	31.82	1.03	9.67	5.77	0.46	6.23
06:00-07:00	LR_N (TL)	1	14	555	62	2050	21	32.04	1.39	10.62	7.84	0.62	8.45

# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

(BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	S EXIT (W)2	1	20	360	803	4100	100	0.11	0.02	0.02	0.34	0.00	0.34
06:00-07:00	SA (E)L	1	0	30650	6	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA (E)T	1	30	198	769	4100	61	5.84	6.10	8.71	17.73	2.66	20.39
06:00-07:00	SA (S)L	1	22	313	67	2050	14	38.99	1.65	7.25	10.30	0.73	11.04
06:00-07:00	SA (S)R	1	1	6819	4	2050	14	36.63	0.09	0.43	0.58	0.04	0.62
06:00-07:00	SA (W)R	1	10	839	73	1021	74	0.97	0.24	0.58	0.28	0.12	0.40
06:00-07:00	SA (W)T	1	43	112	1308	4100	74	0.84	2.63	3.12	4.34	0.90	5.24
06:00-07:00	SA EXT (E)	1	32	181	1312	4100	100	0.21	0.08	0.09	1.07	0.00	1.07
06:00-07:00	SA EXT (S)2	1	0	30650	6	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA EXT (S)2	2	4	2413	73	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	SA EXT (W)	1	20	341	836	4100	100	0.11	0.03	0.03	0.37	0.00	0.37



# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 8. Bronkhorstspuit Road (R104) / Access to River Walk Development (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	RI EXT (W)2	1	19	376	775	4100	100	0.10	0.02	0.03	0.31	0.00	0.31
06:00-07:00	RIVER (S)L	1	24	275	492	2050	100	0.28	0.04	0.16	0.54	0.00	0.54
06:00-07:00	RIVER (S)R	1	7	1177	26	2050	17	34.44	0.60	2.88	3.53	0.27	3.80
06:00-07:00	RIVER (E)-L	1	3	2975	60	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	RIVER (E)-T	1	19	369	263	4100	35	20.79	5.41	9.27	23.21	2.39	25.60
06:00-07:00	RIVER (W)-R	1	82	10	908	1544	71	9.33	9.34	28.91	33.41	5.55	38.96
06:00-07:00	RIVER (W)-T	1	14	558	403	4100	71	0.89	0.72	1.13	1.42	0.29	1.71

# A1 - 2021 PM BG (Existing Configuration) \*: D1 - 2021 PM BG (Existing Configuration)\*

## 9. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C3-EXT (N)	1	40	125	820	2050	100	0.58	0.13	0.44	1.89	0.00	1.89
06:00-07:00	C3-EXT (S)	1	1	6996	26	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	C3-EXT (W)	1	8	976	343	4100	100	0.04	0.00	0.00	0.05	0.00	0.05
06:00-07:00	CLASS3 (E)TL	1	17	444	61	2050	17	35.66	1.44	2.25	8.58	0.64	9.22
06:00-07:00	CLASS3 (E)L	1	0	Unrestricted	0	2050	71	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (E)R	3	65	38	671	1426	71	10.04	10.30	89.02	26.57	4.41	30.98
06:00-07:00	CLASS3 (E)T	2	10	801	295	4100	71	4.30	2.46	7.82	5.00	1.06	6.06
06:00-07:00	CLASS3 (N)L	1	11	709	228	2050	100	0.11	0.01	0.05	0.10	0.00	0.10
06:00-07:00	CLASS3 (N)R	2	20	344	48	1315	17	39.06	1.19	10.61	7.39	0.53	7.92
06:00-07:00	CLASS3 (N)T	1	7	1177	26	2050	17	34.44	0.60	5.39	3.53	0.27	3.80
06:00-07:00	CLASS3 (S)R	2	0	-100	0	0	17	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (W)L	1	7	1138	88	2050	58	6.03	0.79	1.35	2.09	0.34	2.43
06:00-07:00	CLASS3 (W)R	3	0	-100	0	0	58	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (W)T	2	14	537	342	4100	58	6.32	3.21	2.77	8.52	1.39	9.91

# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)	
06:00-07:00	KSK22	(E)L	1	82	9	1686	2050	100	5.18	32.70	74.37	34.45	9.18	43.63
06:00-07:00	KSK22	(E)R	1	42	112	87	2050	9	50.00	2.50	7.17	17.16	1.12	18.27
06:00-07:00	KSK22	(E)T	1	48	88	628	4100	31	24.43	14.25	20.40	60.52	6.31	66.83
06:00-07:00	KSK22	(N)L	1	5	1745	22	2050	21	31.01	0.48	2.29	2.69	0.21	2.90
06:00-07:00	KSK22	(N)R	1	48	86	317	4100	15	40.79	8.24	14.15	51.01	3.64	54.65
06:00-07:00	KSK22	(N)T	1	149	-38	1304	4100	21	584.95	226.92	295.35	3008.72	42.00	3050.72
06:00-07:00	KSK22	(S)L	1	13	581	249	1880	100	0.15	0.01	0.03	0.14	0.00	0.14
06:00-07:00	KSK22	(S)R	1	70	28	460	4100	15	46.12	12.82	19.73	83.69	5.71	89.40
06:00-07:00	KSK22	(S)T	1	87	3	787	4100	21	50.54	23.80	37.66	156.91	10.56	167.47
06:00-07:00	KSK22	(W)L	1	48	89	313	2050	31	30.43	6.85	20.95	37.56	3.04	40.60
06:00-07:00	KSK22	(W)R	1	217	-59	891	4100	9	992.58	252.18	399.94	3488.41	27.31	3515.73
06:00-07:00	KSK22	(W)T	1	23	286	306	4100	31	26.00	5.98	9.47	31.39	2.65	34.04

# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 2. Solomon Mahlangu Drive / N4 (Northern Terminal) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C1-N	1	107!	-16	2998	2811	100	130.08	177.26	204.42	1536.20	68.71	1606.91
06:00-07:00	C1-N (EXT)	1	36	147	1496	4100	100	0.25	0.10	0.11	1.49	0.00	1.49
06:00-07:00	C1-S	1	48	88	1853	3870	100	0.43	0.22	0.10	3.12	0.00	3.12
06:00-07:00	Ramp A	1	17	415	358	2050	100	0.19	0.02	0.01	0.26	0.00	0.26
06:00-07:00	Ramp B	1	4	2345	75	2050	100	0.03	0.00	0.00	0.01	0.00	0.01

# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 3. Solomon Mahlangu Drive / N4 (Southern Terminal) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C2-N	1	111!	-19	4554	4100	100	187.08	255.59	123.32	3360.83	161.15	3521.96
06:00-07:00	C2-N (EXT)	1	48	87	1970	4100	100	0.41	0.22	0.23	3.15	0.00	3.15
06:00-07:00	C2-S	1	105!	-15	2272	2154	100	106.03	115.28	165.47	950.21	64.59	1014.80
06:00-07:00	Ramp-C	1	124!	-28	187	150	100	367.73	23.43	13.86	285.99	6.32	292.31
06:00-07:00	Ramp-D	1	74	22	1324	1800	100	2.76	1.02	0.76	14.44	0.00	14.44

# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 4. Bronkhorstspuit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Am	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	NEL_E (R)	1	11	723	13	191	61	25.46	0.26	0.87	1.30	0.12	1.41
06:00-07:00	NEL_E (T)	1	64	40	1631	4100	61	10.62	25.07	43.25	68.34	10.85	79.19
06:00-07:00	NEL_N (EXT)	1	13	599	264	2050	100	0.13	0.01	0.03	0.14	0.00	0.14
06:00-07:00	NEL_N (L)	1	3	3381	53	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	NEL_N (R)	1	77	18	879	4100	27	38.05	23.45	54.43	131.91	10.42	142.33
06:00-07:00	NEL_W (EXT)	1	61	47	2510	4100	100	0.69	0.48	0.57	6.65	0.00	6.65
06:00-07:00	NEL_W (L)	1	12	635	251	2050	100	0.12	0.01	0.04	0.12	0.00	0.12
06:00-07:00	NEL_W (T)	1	73	23	930	2050	61	17.04	18.81	95.65	62.51	8.20	70.71

# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 5. Bronkhorstspuit Road (R104) / Mbeki Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Am	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	M EXIT (N)	1	0	Unrestricted	0	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	M EXIT (W)	1	26	245	1070	4100	100	0.16	0.05	0.05	0.65	0.00	0.65
06:00-07:00	MBK_E (EXT)	1	13	607	261	2050	100	0.13	0.01	0.11	0.13	0.00	0.13
06:00-07:00	MBK_E (EXT)	2	44	103	911	2050	100	0.70	0.18	0.45	2.52	0.00	2.52
06:00-07:00	MBK_E (R)	1	59	52	564	1800	52	9.11	5.60	53.65	20.27	2.25	22.51
06:00-07:00	MBK_E (T)	1	45	100	490	2050	52	7.24	3.87	44.54	13.99	1.62	15.61
06:00-07:00	MBK_N (EXT)	1	4	2422	73	2050	100	0.03	0.00	0.01	0.01	0.00	0.01
06:00-07:00	MBK_N (EXT)	2	4	2422	73	2050	100	0.03	0.00	0.01	0.01	0.00	0.01
06:00-07:00	MBK_N (L)	1	13	607	261	2050	100	0.13	0.01	0.05	0.13	0.00	0.13
06:00-07:00	MBK_N (R)	1	88	3	664	2050	36	44.81	20.00	109.55	117.36	8.79	126.15
06:00-07:00	MBK_W (EXT)	1	40	124	822	2050	100	0.59	0.13	1.10	1.90	0.00	1.90
06:00-07:00	MBK_W (EXT)	2	40	124	822	2050	100	0.59	0.13	0.37	1.90	0.00	1.90
06:00-07:00	MBK_W (L)	1	4	2463	72	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	MBK_W (T)	1	84	7	911	2050	52	17.07	21.08	63.26	61.33	8.41	69.73

# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 6. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	BR_E(L)	1	9	925	180	2050	100	0.08	0.00	0.03	0.06	0.00	0.06
06:00-07:00	BR_E(R)	1	8	1048	86	1800	60	5.63	0.53	5.05	1.91	0.23	2.14
06:00-07:00	BR_E(T)	1	42	116	922	4100	53	21.89	20.11	17.98	79.63	9.00	88.63
06:00-07:00	BR_W (EXT)	1	26	250	1054	4100	100	0.15	0.04	0.06	0.63	0.00	0.63
06:00-07:00	BR_W (L)	1	1	7922	23	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	LR_N (EXT)	1	6	1476	117	2050	100	0.05	0.00	0.01	0.02	0.00	0.02
06:00-07:00	LR_N(R)	1	20	346	80	1800	21	33.01	1.83	17.49	10.42	0.81	11.23
06:00-07:00	LR_N (TL)	1	55	65	246	2050	21	39.33	6.34	49.36	38.16	2.82	40.98
06:00-07:00	N4_S (EXT)	2	2	4513	40	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	N4_S(L)	1	9	929	52	2050	28	26.18	1.04	10.01	5.37	0.46	5.83
06:00-07:00	N4_S(R)	1	12	658	62	1800	28	26.60	1.27	6.60	6.51	0.56	7.07
06:00-07:00	N4_S(T)	1	1	6588	8	2050	28	25.60	0.16	0.84	0.81	0.07	0.88



# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

### (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	S EXT (W)2	1	29	209	1194	4100	100	0.18	0.05	0.05	0.85	0.00	0.85
06:00-07:00	SA (E)L	1	0	26257	7	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA (E)T	1	74	22	2271	4100	74	6.37	31.98	45.70	57.09	13.01	70.11
06:00-07:00	SA (S)L	1	42	113	130	2050	14	42.84	3.40	14.96	21.97	1.52	23.49
06:00-07:00	SA (S)R	1	6	1357	19	2050	14	36.94	0.45	2.06	2.77	0.20	2.97
06:00-07:00	SA (W)R	1	74	21	77	216	47	51.19	2.61	6.21	15.47	1.04	16.51
06:00-07:00	SA (W)T	1	36	149	711	4100	47	4.92	6.04	7.16	13.81	2.28	16.09
06:00-07:00	SA EXT (E)	1	18	405	731	4100	100	0.10	0.02	0.02	0.27	0.00	0.27
06:00-07:00	SA EXT (S)2	1	0	26257	7	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA EXT (S)2	2	4	2307	77	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	SA EXT (W)	1	59	54	2401	4100	100	0.62	0.41	0.47	5.87	0.00	5.87

# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 8. Bronkhorstspuit Road (R104) / Access to River Walk Development

(BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	RI EXT (W)2	1	56	62	2278	4100	100	0.55	0.35	0.54	4.93	0.00	4.93
06:00-07:00	RIVER (S)L	1	60	50	1230	2050	100	1.31	0.45	1.93	6.37	0.00	6.37
06:00-07:00	RIVER (S)R	1	18	411	65	2050	17	35.80	1.54	7.34	9.18	0.68	9.86
06:00-07:00	RIVER (E)-L	1	1	8286	22	2050	100	0.01	0.00	0.00	0.00	0.00	0.00
06:00-07:00	RIVER (E)-T	1	36	154	1048	4100	71	5.27	9.65	16.55	21.79	4.20	25.99
06:00-07:00	RIVER (W)-R	1	85	6	404	808	58	22.65	12.18	37.72	36.08	4.21	40.28
06:00-07:00	RIVER (W)-T	1	14	566	327	4100	58	1.63	0.84	1.32	2.11	0.33	2.44

# A1 - 2026 AM BG (Existing Configuration) \*: D1 - 2026 AM BG (Existing Configuration)\*

## 9. Bronkhorstspuit Road (R104) / Class 3 Road (Access to Sammy Marks Extensions 28 to 42 Development) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Am	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C3-EXT (W)	1	26	245	1070	4100	100	0.16	0.05	0.05	0.65	0.00	0.65
06:00-07:00	CLASS3 (ETL)	1	6	1410	22	2050	17	34.34	0.50	0.79	2.98	0.22	3.20
06:00-07:00	CLASS3 (EL)	1	0	Unrestricted	0	2050	71	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (ER)	3	23	284	240	1422	71	5.16	2.17	18.74	4.89	1.04	5.92
06:00-07:00	CLASS3 (ET)	2	32	179	951	4100	71	5.40	9.59	30.41	20.25	4.13	24.38
06:00-07:00	CLASS3 (NL)	1	35	157	719	2050	100	0.47	0.09	0.66	1.34	0.00	1.34
06:00-07:00	CLASS3 (NR)	2	44	103	119	1488	17	42.59	3.12	27.90	19.99	1.39	21.38
06:00-07:00	CLASS3 (NT)	1	18	411	65	2050	17	35.60	1.54	13.74	9.18	0.68	9.86
06:00-07:00	CLASS3 (SR)	2	0	-100	0	0	17	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (WL)	1	3	2691	39	2050	58	6.68	0.40	0.69	1.03	0.17	1.20
06:00-07:00	CLASS3 (WR)	3	0	-100	0	0	58	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	CLASS3 (WT)	2	15	517	353	4100	58	7.29	4.04	3.48	10.15	1.75	11.90
06:00-07:00	KSK22 (EL)	1	82	9	1686	2050	100	5.18	32.70	74.37	34.45	9.18	43.63

# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

## 1. Solomon Mahlangu Drive / Bronkhorstspuit Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	K69K22 (E)L	1	26	247	531	2050	100	0.31	0.05	0.10	0.64	0.00	0.64
06:00-07:00	K69K22 (E)R	1	23	286	38	2050	7	38.46	1.02	2.92	5.76	0.45	6.22
06:00-07:00	K69K22 (E)T	1	36	147	314	4100	20	28.60	7.02	10.05	35.42	3.07	38.49
06:00-07:00	K69K22 (N)L	1	7	1195	47	2050	32	23.22	0.69	4.27	4.31	0.39	4.70
06:00-07:00	K69K22 (N)R	1	39	131	288	4100	17	37.73	7.16	12.30	42.86	3.18	46.04
06:00-07:00	K69K22 (N)T	1	76	18	1028	4100	32	34.12	26.60	34.62	138.34	11.78	150.13
06:00-07:00	K69K22 (S)L	1	14	535	263	1853	100	0.16	0.01	0.03	0.17	0.00	0.17
06:00-07:00	K69K22 (S)R	1	128	-30	943	4100	17	429.74	124.37	191.41	1597.65	29.65	1627.50
06:00-07:00	K69K22 (S)T	1	123	-27	1661	4100	32	365.94	193.47	306.12	2397.65	50.96	2448.81
06:00-07:00	K69K22 (W)L	1	152	-41	654	2050	20	648.01	124.44	380.83	1671.40	21.06	1692.46
06:00-07:00	K69K22 (W)R	1	133	-32	435	4100	7	487.43	63.81	101.20	835.76	13.89	849.65
06:00-07:00	K69K22 (W)T	1	64	40	554	4100	20	42.31	13.85	21.93	92.40	6.13	98.53



# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

## 3. Solomon Mahlangu Drive / N4 (Southern Terminal) (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	C2-N	1	96!	-6	3941	4100	100	11.70	94.80	45.74	181.89	30.93	212.82
06:00-07:00	C2-N (EXT)	1	53	71	2162	4100	100	0.49	0.29	0.31	4.17	0.00	4.17
06:00-07:00	C2-S	1	161!	-44	2955	1834	100	684.78	608.88	979.59	7981.73	96.05	8077.78
06:00-07:00	Ramp-C	1	419!	-79	359	86	100	1373.91	139.14	82.32	1945.54	10.04	1955.58
06:00-07:00	Ramp-D	1	37	142	670	1800	100	0.59	0.11	0.08	1.56	0.00	1.56

# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

## 4. Bronkhorstspuit Road (R104) / Nellmapius Road (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	NEL_E (R)	1	99999900!	-100	34	0	73	1800.00	16.82	56.54	238.88	0.00	238.88
06:00-07:00	NEL_E (T)	1	27	229	831	4100	73	3.23	5.77	9.95	10.58	2.36	12.94
06:00-07:00	NEL_N (EXT)	1	35	158	714	2050	100	0.47	0.09	0.27	1.32	0.00	1.32
06:00-07:00	NEL_N (L)	1	2	4093	44	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	NEL_N (R)	1	101!	-11	662	4100	15	117.58	32.01	74.29	307.03	13.36	320.39
06:00-07:00	NEL_W (EXT)	1	36	148	1487	4100	100	0.25	0.10	0.12	1.47	0.00	1.47
06:00-07:00	NEL_W (L)	1	35	158	714	2050	100	0.47	0.09	0.49	1.32	0.00	1.32
06:00-07:00	NEL_W (T)	1	110!	-18	1668	2050	73	184.86	121.89	619.71	1216.24	43.24	1259.48

# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

## 5. Bronkhorstspuit Road (R104) / Mbeki Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	M EXIT (N)	1	0	Unrestricted	0	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	M EXIT (W)	1	9	874	379	4100	100	0.04	0.00	0.01	0.07	0.00	0.07
06:00-07:00	MBK_E (EXT)	1	7	1267	135	2050	100	0.06	0.00	0.03	0.03	0.00	0.03
06:00-07:00	MBK_E (EXT)	2	66	36	1353	2050	100	1.70	0.64	1.61	9.07	0.00	9.07
06:00-07:00	MBK_E (R)	1	35	158	471	1800	74	3.43	3.11	29.83	6.37	1.32	7.69
06:00-07:00	MBK_E (T)	1	20	344	311	2050	74	2.75	1.85	21.28	3.38	0.79	4.18
06:00-07:00	MBK_N (EXT)	1	9	904	184	2050	100	0.09	0.00	0.06	0.06	0.00	0.06
06:00-07:00	MBK_N (EXT)	2	9	904	184	2050	100	0.09	0.00	0.04	0.06	0.00	0.06
06:00-07:00	MBK_N (L)	1	7	1267	135	2050	100	0.06	0.00	0.01	0.03	0.00	0.03
06:00-07:00	MBK_N (R)	1	79	14	242	2050	14	61.27	7.62	42.81	58.48	3.46	61.94
06:00-07:00	MBK_W (EXT)	1	21	327	432	2050	100	0.23	0.03	0.23	0.40	0.00	0.40
06:00-07:00	MBK_W (EXT)	2	21	327	432	2050	100	0.23	0.03	0.08	0.40	0.00	0.40
06:00-07:00	MBK_W (L)	1	10	787	208	2050	100	0.10	0.01	0.04	0.08	0.00	0.08
06:00-07:00	MBK_W (T)	1	88	2	1353	2050	74	10.89	18.49	55.48	58.11	6.66	64.77



# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

## 6. Bronkhorstspuit Road (R104) / Lesedi Road / Access to N4 Gateway Street (BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	BR_E(L)	1	3	2738	65	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	BR_E(R)	1	16	478	171	1800	60	3.75	0.78	7.44	2.53	0.34	2.87
06:00-07:00	BR_E(T)	1	27	228	608	4100	53	18.31	10.37	9.27	43.94	4.62	48.56
06:00-07:00	BR_W (EXT)	1	19	372	782	4100	100	0.10	0.02	0.03	0.32	0.00	0.32
06:00-07:00	BR_W (L)	1	4	2347	75	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	BR_W (R)	1	5	1883	44	1800	53	6.09	0.39	2.77	1.06	0.17	1.23
06:00-07:00	BR_W (T)	1	55	64	1369	4100	60	7.27	14.47	22.92	39.24	6.10	45.35
06:00-07:00	LR_N (EXT)	1	13	617	257	2050	100	0.13	0.01	0.03	0.13	0.00	0.13
06:00-07:00	LR_N(R)	1	14	536	56	1800	21	32.18	1.26	12.04	7.11	0.56	7.67
06:00-07:00	LR_N (TL)	1	16	464	72	2050	21	32.30	1.62	12.58	9.17	0.72	9.89
06:00-07:00	N4_S (EXT)	2	2	3817	47	2050	100	0.02	0.00	0.00	0.00	0.00	0.00
06:00-07:00	N4_S(L)	1	20	353	118	2050	28	27.51	2.48	23.79	12.81	1.10	13.91
06:00-07:00	N4_S(R)	1	26	251	134	1800	28	28.43	2.87	14.98	15.03	1.28	16.31
06:00-07:00	N4_S(T)	1	2	4764	11	2050	28	25.62	0.22	1.16	1.11	0.10	1.21

# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

## 7. Bronkhorstspuit Road (R104) / Access to Savannah Estate Development

(BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

#### Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s per cycle)	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	S EXIT (W)2	1	21	327	865	4100	100	0.12	0.03	0.02	0.40	0.00	0.40
06:00-07:00	SA (E)L	1	0	30646	6	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA (E)T	1	33	175	806	4100	59	7.60	7.38	10.55	24.17	3.25	27.42
06:00-07:00	SA (S)L	1	23	263	77	2050	15	38.36	1.90	6.34	11.65	0.84	12.50
06:00-07:00	SA (S)R	1	1	7280	4	2050	15	35.77	0.09	0.43	0.56	0.04	0.61
06:00-07:00	SA (W)R	1	11	729	81	1005	73	2.04	0.24	0.57	0.65	0.11	0.76
06:00-07:00	SA (W)T	1	41	117	1258	4100	73	2.27	3.92	4.64	11.26	1.74	13.00
06:00-07:00	SA EXT (E)	1	31	192	1262	4100	100	0.20	0.07	0.08	0.97	0.00	0.97
06:00-07:00	SA EXT (S)2	1	0	30650	6	2050	100	0.00	0.00	0.00	0.00	0.00	0.00
06:00-07:00	SA EXT (S)2	2	4	2185	81	2050	100	0.04	0.00	0.00	0.01	0.00	0.01
06:00-07:00	SA EXT (W)	1	22	318	883	4100	100	0.12	0.03	0.03	0.42	0.00	0.42

# A1 - 2026 PM BG (Existing Configuration) \*: D1 - 2026 PM BG (Existing Configuration)\*

## 8. Bronkhorstspuit Road (R104) / Access to River Walk Development

(BACKGROUND TRAFFIC VOLUMES)

### Traffic Stream Results

Traffic Stream Results: Vehicle Summary

Time Segment	Arm	Traffic Stream	Degree Of Saturation (%)	Practical Reserve Capacity (%)	Calculated Flow Entering (PCU/hr)	Calculated Sat Flow (PCU/hr)	Actual Green (s (per cycle))	Mean Delay Per Veh (s)	Mean Max Queue (PCU)	Utilised Storage (%)	Weighted Cost Of Delay (£ per hr)	Weighted Cost Of Stops (£ per hr)	Performance Index (£ per hr)
06:00-07:00	R1 EXT (W)2	1	20	354	812	4100	100	0.11	0.02	0.04	0.35	0.00	0.35
06:00-07:00	RIVER (S)L	1	24	274	493	2050	100	0.26	0.04	0.16	0.54	0.00	0.54
06:00-07:00	RIVER (S)R	1	7	1177	26	2050	17	34.44	0.60	2.88	3.53	0.27	3.80
06:00-07:00	RIVER (E)-L	1	3	2975	60	2050	100	0.03	0.00	0.00	0.01	0.00	0.01
06:00-07:00	RIVER (E)-T	1	22	305	319	4100	34	21.35	6.19	10.61	26.86	2.73	29.59
06:00-07:00	RIVER (W)-R	1	77	17	842	1520	71	10.39	12.41	38.43	34.51	7.36	41.87
06:00-07:00	RIVER (W)-T	1	14	533	420	4100	71	1.76	1.49	2.35	2.94	0.65	3.59