

	ACTION	DATE
TO	1. SENIOR ENGINEER, CONTROLLER APPLICATIONS 2. GAVAN KEIGHREY, PROGRAM DELIVERY	
FROM	GERALD TAMARAY	DATE 5/05/17
SITE	STURT HWY (DEAKIN AV) / EIGHTH STREET	SITE NO. 6442
REGION	WESTERN	MUNICIPALITY MILDURA

## GENERAL

Works Program Job?	Yes	Project Number	BG418
Classification	MINOR	Works Order Number	4A005078

## EXISTING CONTROLLER DETAILS

Type	PSC 2003	Software Version & Release	V5 R82	Lanterns	LED
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## CONTROLLER APPLICATIONS

Target Date for Draft Opsheet	9 May 2017
Target Date for completion of Program	23 May 2017

## PERSONALITY CHECKSUMS

	Hex	Octal
Total	9C	234
Times	18	30
Pers	84	204

Prepare Interlocking	
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## Dispatched

Update Graphics, Site Notes	No
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Site ID Revision updated to	
-----------------------------	--

Description of changes	LED Upgrade, changes to detector 4
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## PROGRAM DELIVERY - SIGNAL INSTALLATION

<input checked="" type="checkbox"/> Changes to signal hardware	<input type="checkbox"/> Changes to interlocking
<input type="checkbox"/> Additional detectors	<input type="checkbox"/> Changes to existing detector numbering
<input type="checkbox"/> Upgrade controller software to	
<input type="checkbox"/> Other changes	
<input checked="" type="checkbox"/> Place new operation specification in controller	

## PRIOR NOTICE

A job must be entered into RAI Action database before this PROM change will be allowed.

<input checked="" type="checkbox"/> SCATS data changes - notify	DARREN VAUGHAN	Ext	1197
OR	GERALD TAMARAY	Ext	1157

before 3:00pm on the day before switch on.

## SCATS Data Changes - Checksum Update

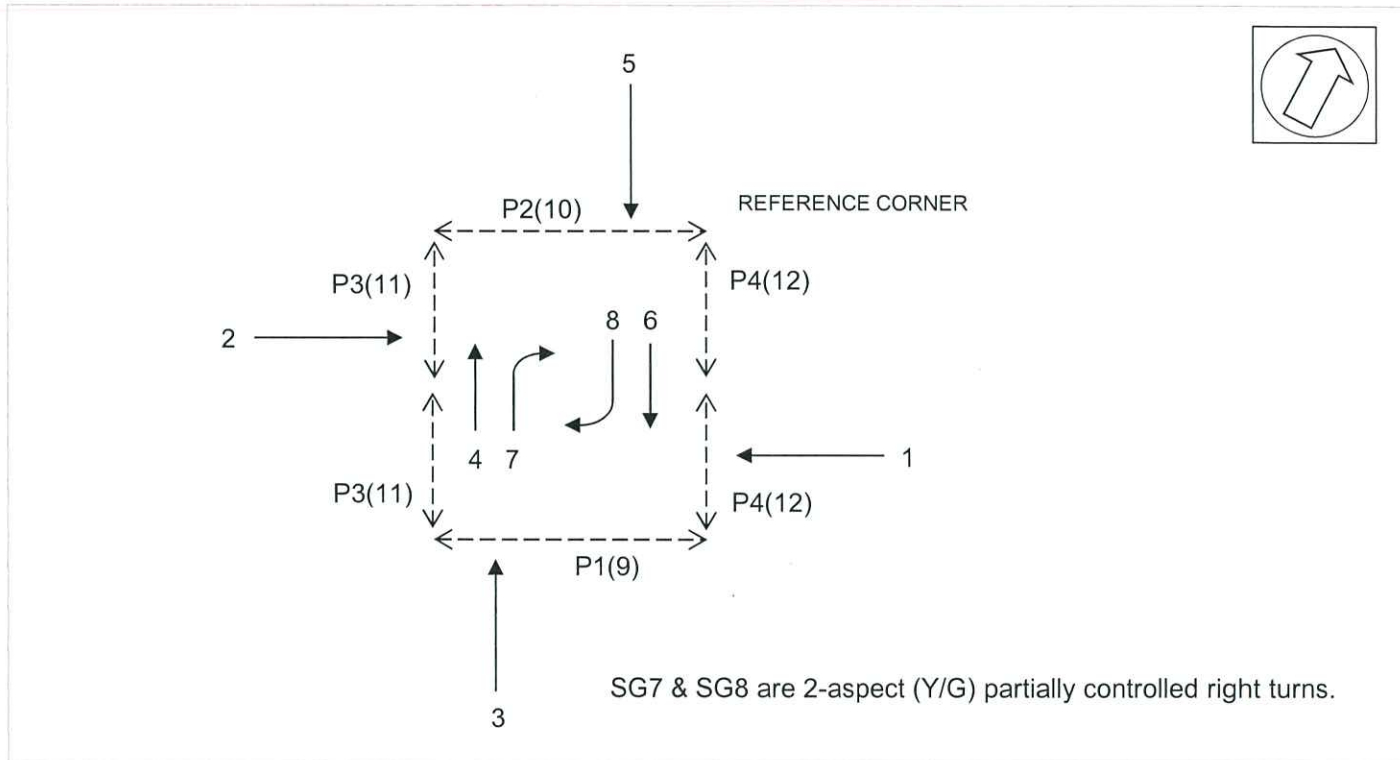
## TRAFFIC MANAGEMENT CENTRE

<input checked="" type="checkbox"/> Checksum update only
<input type="checkbox"/> Changes to trim or manual intervention features required
<input checked="" type="checkbox"/> Please notify DARREN VAUGHAN (x1197) on job completion.

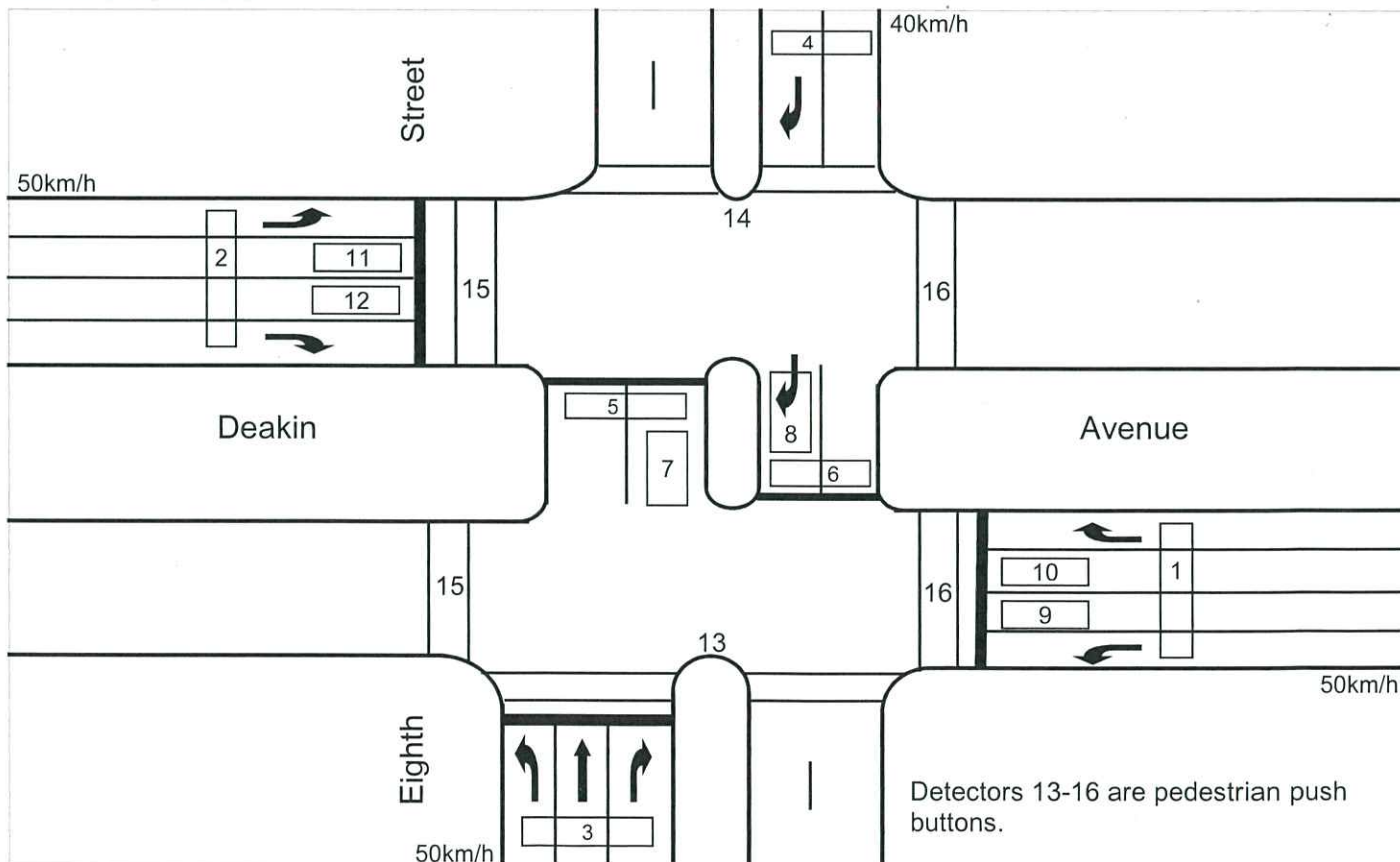
DATE PROM INSTALLED	12/2/18
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SITE NAME	<b>STURT HWY (DEAKIN AV) / EIGHTH STREET</b>			SITE NO.	<b>6442</b>
MUNICIPALITY	MILDURA	DESIGNED BY	GERALD TAMARAY	DATE	5/05/17
PLAN NO.	860278B	DESIGN CHECKED		DATE	9/5/17
CONTROLLER TYPE	PSC 2003	PROM CHECKED		DATE	1/6/17

## GROUP ALLOCATION



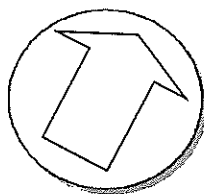
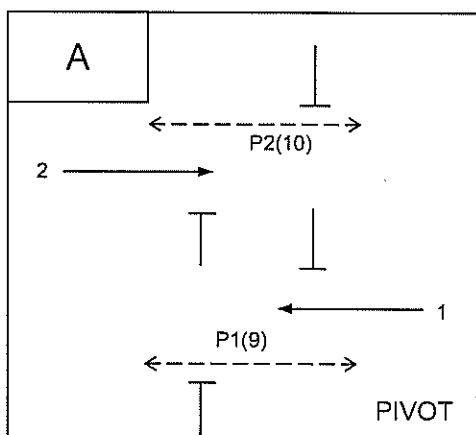
## DETECTOR MAP



SITE NAME **STURT HWY (DEAKIN AV) / EIGHTH STREET**

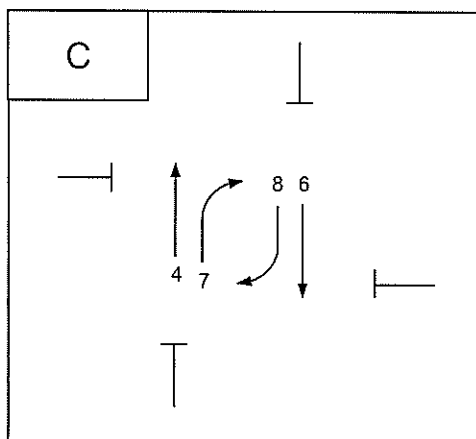
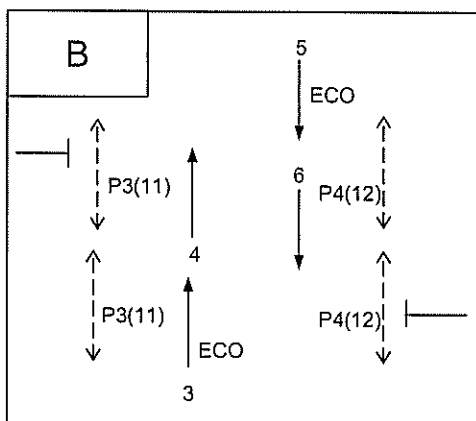
SITE NO. **6442**

# PHASING DIAGRAM



Refer General Notes

PHASE	PROHIBITED PHASE CHANGES TO	REVERSION ON MAXIMUM	MAXIMUM V.I.G ON REVERSION
A	C	✓	✓
B		✓	✓



V.A. SEQUENCE **ABC**

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DETECTOR FUNCTIONS

DETECTOR No.	Internal / External	Input Number	CALL PHASE	LOCKING CALL	NON-LOCKING CALL	SET VIG ON PHASE	EXTEND PHASE	SPECIAL FUNCTION			DETECTOR ALARMS						
								Detector Type	Description	Refer Special Notes	DA Category	Disable	DA on S/C only	Fault Simulation			
														Call & Extend	Call Only	Ignore Alarm	Refer Special Notes
1	I	1	A	✓		✓	A				0			✓			
2	I	2	A	✓		✓	A				0			✓			
3	I	3	B	✓		✓	B				0			✓			
4	I	4	B	✓			B				0			✓			
5	I	5	B	✓			-			✓	0				✓		
6	I	6	B	✓			-			✓	0				✓		
7	I	7	C		✓		C			✓	0			✓			
8	I	8	C		✓		C			✓	0			✓			
9	I	9	A	✓			-				0				✓		
10	I	10	A	✓			-				0				✓		
11	I	11	A	✓			-				0				✓		
12	I	12	A	✓			-				0				✓		
13	E	1	A		✓			P1		✓	6		✓				
14	E	2	A		✓			P2		✓	6		✓				
15	E	3	B		✓			P3		✓	6		✓				
16	E	4	B		✓			P4		✓	6		✓				
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	
29																	
30																	
31																	
32																	

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SITE NAME **STURT HWY (DEAKIN AV) / EIGHTH STREET**SITE NO. **6442****APPROACH DEFINITIONS****PHASE APPROACHES**

Approach No	EXTENDING DETECTORS	APPROACH TIMER AND TIMESETTING DEFINITION*	SIGNAL GROUP	APPROACH EXPIRY (EXPAP)	Refer Special Notes
1	1	A11	1		
2	2	A22	2		
3	3	B11	3		
4	4	B22	5		
5	7	C11	7		
6	8	C22	8		
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

\* There are 8 approach timers and 4 approach timesettings available per phase:

- Where there are 4 or fewer approaches per phase, allocate one timesetting to each timer.

For example: A11, A22, A33, B11, C11.

- Where there are more than 4 approaches per phase, two or more timers must have the same timesetting.

For example: A11, A21, A32, A43, A54, B11.

**SPECIAL APPROACHES**

Approach No	EXTENDING DETECTORS	APPROACH TIMESETTING	SIGNAL GROUP	DESCRIPTION	Refer Special Notes
1					
2					
3					
4					

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**SITE NAME: Sturt Hwy (Deakin Av) / Eighth Street**

## GENERAL NOTES

**SUMMARY OF XSF FLAGS**

(Communications Operation of XSF flags is required)

XSF1 – Allows the late introduction of P1 in AØ (Master).

XSF2 – Allows the late introduction of P2 in AØ (Master).

**GENERAL OPERATION**

1. Expire BØ ECO if going BØ→CØ.
2. If in AØ clear demands for CØ.

**SIGNAL GROUP OPERATION**
**Signal Group 3**

SG3 closes at the start of BØ ECO if going BØ→AØ.

**Signal Group 5**

SG5 closes at the start of BØ ECO if going BØ→AØ.

**PEDESTRIAN GROUP OPERATION**
**Pedestrian 1**

P1 calls AØ.

P1 can introduce at the start of AØ.

If Z- (Master & Flexi) is set, P1 will auto introduce at the start of AØ.

In Master P1 can introduce at any time in AØ while XSF1 is set.

**Pedestrian 2**

P2 calls AØ.

P2 can introduce at the start of AØ.

If Z- (Master & Flexi) is set, P2 will auto introduce at the start of AØ.

In Master P2 can introduce at any time in AØ while XSF2 is set.

**Pedestrian 3**

P3 calls BØ.

P3 can introduce at the start of BØ.

If Z+ (Master & Flexi) is set, P3 will auto introduce at the start of BØ.

**Pedestrian 4**

P4 calls BØ.

P4 can introduce at the start of BØ.

If Z+ (Master & Flexi) is set, P4 will auto introduce at the start of BØ.

**DETECTOR OPERATION****Detector 3**

Clear demands from detector 3 during SG3 green.

**Detector 4**

Clear demands from detector 4 during SG5 green and yellow.

**Detector 5**

Clear demands for BØ from detector 5 during SG4 green and yellow.

**Detector 6**

Clear demands for BØ from detector 6 during SG6 green and yellow.

**Detector 7**

Detector 7 places a non-locking call for CØ during BØ green, when its presence time has expired.

**Detector 8**

Detector 8 places a non-locking call for CØ during BØ green, when its presence time has expired.

SITE NAME **STURT HWY (DEAKIN AV) / EIGHTH STREET**SITE NO. **6442****DESIGN OF INTERGREEN AND PEDESTRIAN TIMES****INTERGREEN TIMES**

PHASE	CLEARANCE DETAILS		LEGAL SPEED	DESIGN SPEED		INTERGREEN		
	GROUP TRANSITION	DISTANCE		YELLOW	RED	YELLOW	RED	TOTAL
A	1 → P3	33.0	50	50	50	3.5	2.5	6.0
B	6 → P1	22.0	40 / 50	50	40	3.5	2.0	5.5
C	6 → P1	10.0	40 / 50	50	40	3.5	1.5	5.0
D	→							
E	→							
F	→							
G	→							

**PHASE SPECIAL ALL REDS AND SPECIAL MOVEMENT ALL REDS**

FROM PHASE	TO PHASE	CLEARANCE DETAILS		DESIGN SPEED	ALL RED	PHASE or S.M. No*
		GROUP TRANSITION	DISTANCE			
		→				
		→				
		→				
		→				
		→				
		→				

\* Specify where the timesetting is stored (the phase special all red or the special movement time setting number)

**PEDESTRIAN TIMES**

PEDESTRIAN TIMES		WALK			CLEARANCE			MINIMUM SOLID DON'T WALK
PED	PHASE(S)	DISTANCE (m)	TIME		DISTANCE (m)	TIME		
			GRAPH	ADOPTED		GRAPH	CL1	
1	A	19.0	8	8	19.0	13	13.0	6.0
2	A	13.0	8	8	13.0	9	9.0	6.0
3	B	33.0	30	19	15.0	10	10.0	5.5
4	B	33.0	30	19	15.0	10	10.0	5.5

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SITE NAME **STURT HWY (DEAKIN AV) / EIGHTH STREET**SITE NO. **6442****CONTROLLER TIMESETTINGS - 1****PHASE TIMESETTINGS**

Front Panel Command: Phase No.Timesetting No (e.g. 3.2 accesses C phase late start)

DESCRIPTION	Timesetting No	PHASE						
		A (1)	B (2)	C (3)	D (4)	E (5)	F (6)	G (7)
RED / YELLOW	1	-	-	-	-	-	-	-
LATE START	2							
MINIMUM GREEN	3	10	8	6				
INCREMENT	4	0.6	0.8					
MAXIMUM INITIAL GREEN*	5	16	16					
MAXIMUM EXTENSION GREEN	6	35	15	5				
EARLY CUT OFF	7		4.0					
YELLOW	8	3.5	3.5	3.5				
ALL RED	9	2.5	2.0	1.5				
SPECIAL ALL RED	10							
GAP 1	11	3.0	3.0	2.5				
GAP 2	12	3.0	3.0	2.5				
GAP 3	13							
GAP 4	14							
HEADWAY 1	15	0.8	1.6	1.2				
HEADWAY 2	16	0.8	1.6	1.2				
HEADWAY 3	17							
HEADWAY 4	18							
WASTE 1	19	7	7	7				
WASTE 2	20	7	7	7				
WASTE 3	21							
WASTE 4	22							

\* Maximum Initial Green = Minimum Green + V.I.G.

**PEDESTRIAN TIMESETTINGS**

Front Panel Command: Pedestrian No.Timesetting No (e.g. 18.2 accesses P2 walk)

DESCRIPTION	Timesetting No	PEDESTRIAN							
		P1 (17)	P2 (18)	P3 (19)	P4 (20)	P5 (21)	P6 (22)	P7 (23)	P8 (24)
DELAY	1	-	-	-	-	-	-	-	-
WALK*	2	8.0	8.0	19.0	19.0				
CLEARANCE 1	3	13.0	9.0	10.0	10.0				
CLEARANCE 2	4								

\* Minimum walk time - used in Isolated and Flexilink operation

For walk times in Masterlink operation, refer to slot data.

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SITE NAME **STURT HWY (DEAKIN AV) / EIGHTH STREET**SITE NO. **6442****CONTROLLER TIMESETTINGS - 2****SPECIAL MOVEMENT TIMESETTINGS**

Front Panel Command: B.Timesetting No (e.g. B.5 accesses Special Movement Timesetting No 5)

Timesetting No	Timesetting (Range: 0-5)	FUNCTION
1		
2		
3		
4		
5		
6		
7		
8		

**SPECIAL PURPOSE TIMESETTINGS**

Front Panel Command: B.Timesetting No (e.g. B.19 accesses Special Movement Timesetting No 19)

Timesetting No	Timesetting (Range: 0-200)	FUNCTION
9	8	P1 WALK TIME SUBSTITUTION
10	8	P2 WALK TIME SUBSTITUTION
11		
12		
13		
14		
15		
16		
17		
18	0	LIMIT GREEN WATCHDOG TIMER
19	0	SPECIAL FACILITY CONTROLS ALARM TIMER
20	10	ALL RED START UP INTERVAL
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		

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SITE NAME **STURT HWY (DEAKIN AV) / EIGHTH STREET**SITE NO. **6442****CONTROLLER TIMESETTINGS - 3****PRESENCE TIMESETTINGS**

Front Panel Command: D.Detector No (e.g. D.7 accesses presence time for detector 7)

DETECTOR No	TIMESETTING (Range: 0-10)
1	
2	
3	
4	
5	
6	
7	2.0
8	2.0
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	

NOTE: Set presence time to zero if the detector is not a presence detector

**DAILY EVENT TIMESETTINGS**

FUNCTION	TIMESETTING
Daily start time (Hours)	
Daily start time (Minutes)	
Daily finish time (Hours)	
Daily finish time (Minutes)	

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**FLEXILINK OPERATION****PHASE SEQUENCES**

No	PHASE SEQUENCE
1 (No Y+)	ABC
2 (Y+)	ABC

**NOTES:**

1. All phases must be specified in the phase sequence
2. Only specify phase sequence 2 if it is different from phase sequence 1.

**LOOK AHEADS & RELEASES**

PHASE SEQUENCE 1		
PHASE	LOOK AHEAD*	RELEASE
A	No	R-
B	Yes (To C, A)	R+
C	Yes (To A)	Auto
D		
E		
F		
G		

PHASE SEQUENCE 2		
PHASE	LOOK AHEAD*	RELEASE
A	No	R-
B	No	R+
C	Yes (To A)	Auto
D		
E		
F		
G		

\* Specify the phases to which look ahead is permitted, e.g. Yes (to E, F, G, A)

**INHIBIT PHASES**

The following phases can be inhibited in flexilink by setting the call pulse one step before the call pulse of the next phase in sequence

**C****PULSE STEP LENGTH**

☐ One Second ☒ Two Second

**MASTERLINK & FLEXILINK SPECIAL FLAGS**

FLAG	FUNCTION
Y- Flexi	The site will operate in flexilink mode if the signal is continuously sent (C) or is used as an offset (e.g. 25)
Y- Master	
Y+ Flexi	SELECTS ALTERNATE SEQUENCE
Z- Flexi	AUTO INTRODUCTION OF P1 & P2
Z- Master	
Z+ Flexi	AUTO INTRODUCTION OF P3 & P4
Z+ Master	
R- Flexi	AØ RELEASE PULSE
R+ Flexi	BØ RELEASE PULSE
Q- Flexi	P1 & P2 WALK TIME SUBSTITUTION (REFER SPECIAL TIMESETTINGS 9 & 10)
Q+ Flexi	

SITE NAME **STURT HWY (DEAKIN AV) / EIGHTH STREET**

SITE NO. **6442**

## SCATS INTERSECTION DATA

The data shown on this page is typical data that can be used for testing controller operations.

This data is not necessarily applicable when the site is switched on in the field.

### TYPICAL SLOT DATA

SLOT <i>n</i> =		3	,	1	,	4
		(phases)		(split plans)		(walks)
INT	=	6442				
VC	=	5				
CS	=					
COM	=	NET				
PK	=	!				
S#	=					
LM	=					
RMN	=	0				
DCL	=	0				
AT	=	6				
BT	=	8				
CT	=	5				
DT	=					
ET	=					
FT	=					
GT	=					
W1	=	0	W1 T	=	19	
W2	=	0	W2 T	=	15	
W3	=	20	W3 T	=	18	
W4	=	20	W4 T	=	18	
W5	=		W5 T	=		
W6	=		W6 T	=		
W7	=		W7 T	=		
W8	=		W8 T	=		
PP1	=	0,0A				
PP2	=	0,0A				
PP3	=	0,0A				
PP4	=	0,0A				

### TYPICAL SPLIT PLAN DATA

PHASE SEQUENCE 1		PHASE SEQUENCE 2		PHASE SEQUENCE 3	
A	= 0PD	A	=	A	=
B	= 30C	B	=	B	=
C	= 10A	C	=	C	=

### TYPICAL VARIATION PARAMETERS

VP1	=	VP22	=	VP43	=
VP2	=	VP23	=	VP44	=
VP3	=	VP24	=	VP45	=
VP4	=	VP25	=	VP46	=
VP5	=	VP26	=	VP47	=
VP6	=	VP27	=	VP48	=
VP7	=	VP28	=	VP49	=
VP8	=	VP29	=	VP50	=
VP9	=	VP30	=	VP51	=
VP10	=	VP31	=	VP52	=
VP11	=	VP32	=	VP53	=
VP12	=	VP33	=	VP54	=
VP13	=	VP34	=	VP55	=
VP14	=	VP35	=	VP56	=
VP15	=	VP36	=	VP57	=
VP16	=	VP37	=	VP58	=
VP17	=	VP38	=	VP59	=
VP18	=	VP39	=	VP60	=
VP19	=	VP40	=	VP61	=
VP20	=	VP41	=	VP62	=
VP21	=	VP42	=		

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SITE NAME **STURT HWY (DEAKIN AV) / EIGHTH STREET**

SITE NO.

**6442****GROUP CONFLICT TABLE**

PED NO	PED NO								P1 P2 P3 P4																
	GROUP NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	1			X			X		X			X	X												
	2				X	X		X				X	X												
	3	X							X	X															
	4		X								X														
	5		X					X			X														
	6	X								X															
	7		X			X																			
	8	X		X								X													
P1	9			X			X																		
P2	10				X	X																			
P3	11	X	X						X																
P4	12	X	X					X																	
	13																								
	14																								
	15																								
	16																								
	17																								
	18																								
	19																								
	20																								
	21																								
	22																								
	23																								
	24																								

CHECKED: Sean Kelloway DATE: 16/11/04

DESIGNED BY: GERALD TAMARAY

DATE 5/05/17