OPERATIONS SHEET

Location: Seletar West Link / West Camp Rd Int. No: 1707

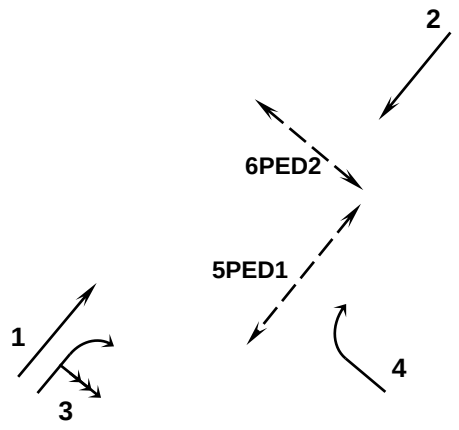
Prepared by: Lang Jie Date: 07 / 01 / 2025 Signal ID: 2375

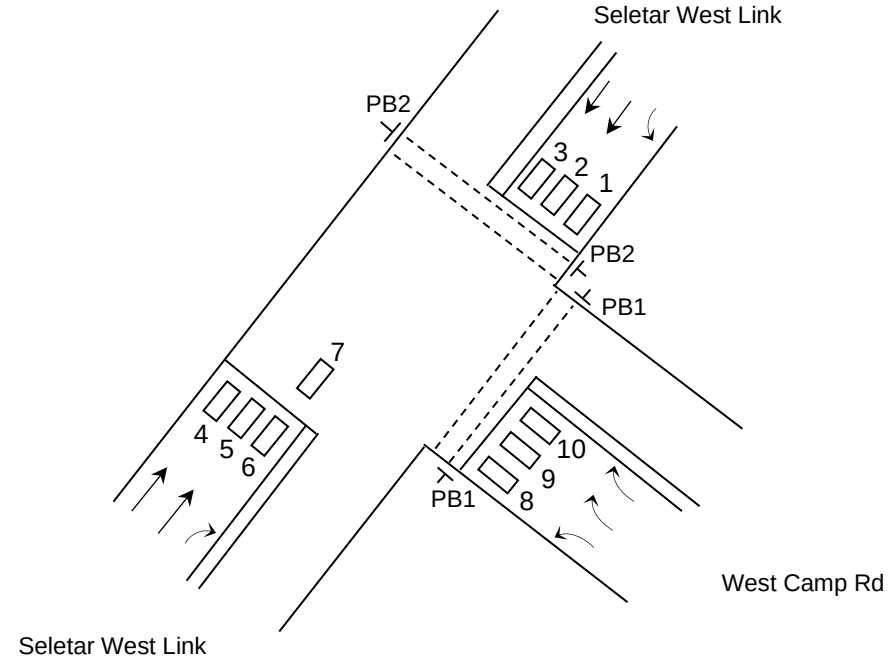
Checked by: Teo Wei Yong

Approved by: Simon Ho

GOMS: 20241226-0720

DE188 --- Stage 1
Road Widening
1. Add one Lane (D10)
2. Change in PEDs Timing
3. Re-arrange Loops





REMARKS

Location: _____ Int. No: 1707

☑ If phase change switch is equal or more than TSM15, controller is to send out MSS15 flag

☐ If phase _____ is not introduced, SG _____ will flash for 3 seconds (TSM 14) in All-Red.

☐ If phase _____ is not introduced, SG _____ will flash for 3 seconds (TSM 14) in All-Red.

☑ B, C, D phase(s) is/are demand dependent.

☑ A phase(s) is/are placed on permanent demand in all Modes.

☑ PED 1 is introduced when Push Button PB1 is activated.

☑ PED 2 is introduced when Push Button PB2 is activated.

☐ PED _____ is introduced when Push Button _____ is activated.

☐ PED _____ is introduced when Push Button _____ is activated.

☐ Detector loop(s) _____ is/are presence-timed lock call for _____ phase.

☐ Detector loop(s) _____ is/are presence-timed lock call for _____ phase.

☐ During _____ phase, after the lock call timer has expired (more than TSM _____), detector loop(s) _____ will cancel demand for _____ phase.

☐ During _____ phase, after the lock call timer has expired (more than TSM _____), detector loop(s) _____ will cancel demand for C phase.

☐ Left Turn Green Arrow SG _____

1. It is introduced in _____ phase.
2. SG _____ terminates with SG / Phase with green arrow flashing for 3 seconds.

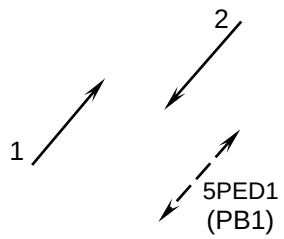
☐ Left Turn Green Arrow SG _____

1. It is introduced in _____ phase.
2. SG _____ terminates with SG5 / Phase C with green arrow flashing for 3 seconds.

PHASING DIAGRAM

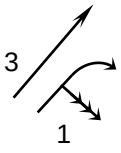
Location: _____ Int. No: 1707

A



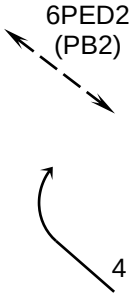
PHASE	PROHIBITED PHASE CHANGES TO	REVERSION ON MAXIMUM	MAXIMUM V. I. G. ON MAXIMUN
A			
B			
C			
D			
E			
F			
G			

B



1. If PED1 is introduced,
   A phase Min GRN = TSM21 = 43 Sec

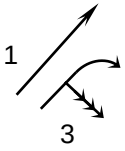
C



2. SG4 Late Start = 0.3 Sec

3. If PED2 is introduced:
1) SG4 Late Start = TSM2 = 3 Sec
2) C phase Min GRN = TSM22 = 32 Sec

D



V. A. Sequence: _____

DETECTOR FUNCTION

Location: _____ Int. No: 1707

DETECTOR NO	CALL PHASE	LOCKING	NON LOCKING	SET VIG ON PHASE	EXTEND PHASE	SPECIAL	DETECTOR ALARMS / FAULT SIMULATION			PLAN REFERENCE
							CALL & EXTEND	CALL ONLY	DISABLE	
1	A	✓			A		✓			
2	A	✓			A		✓			
3	A	✓			A		✓			
4	A	✓			A, B		✓			
5	A	✓			A, B		✓			
6	B, D	B	D		B, D		✓			
7	B, D	B	D		B, D		✓			
8	C	✓			C		✓			
9	C	✓			C		✓			
10	C	✓			C		✓			
11										
12										
13										
14										
15						PHASE CHANGE SWITCH			✓	
16						POLICE CONTROL SWITCH			✓	
PB1	A	✓				PED 1		✓		
PB2	C	✓				PED 2		✓		
PB3										
PB4										
PB5										
PB6										

APPROACH TIMING

Location: _____ Int. No: 1707

APPROACH	EXTENDING DETECTORS	SIGNAL GROUP	COMMENTS
A1	1	2	
A2	2	2	
A3	3	2	
A4	4, 5	2	
B1	4, 5	3	
B2	6	3	
B3	7	3	
B4			
C1	8	4	
C2	9	4	
C3	10	4	
C4			
D1	6	3	
D2	7	3	
D3			
D4			
E1			
E2			
E3			
E4			
F1			
F2			
F3			
F4			
G1			
G2			
G3			
G4			

NOTE: MAXIMUM NUMBER OF APPROACHES IS 16

INTERGREEN, PEDESTRIAN TIMES AND SPECIAL FUNCTIONS

Location: _____ Int. No: 1707

PHASE	CLEARANCE MOVEMENT	CLEARANCE DISTANCE	INTERGREEN		
			AMBER	RED	TOTAL
A			3	2	5
B			3	3	6
C			3	3	6
D			3	5	8
E					
F					
G					

PED NO.	PHASE	WALK		CLEARANCE TIME	
		DISTANCE (m)	GREEN TIME	1	2
1	A	34	6	34	
2	C	26	6	26	
3					
4					
5					
6					
7					

Pedestrian Walking Speed: 1.0 m/sec

SPECIAL FACILITIES

SIGNAL GROUP	HOUR	MINUTE	SECOND	FUNCTION

PRE-EMPTION

SIGNAL GROUP	PHASE	FUNCTION	REMARKS

CONTROLLER TIMESETTING

Location: _____ Int. No: 1707

SPECIAL MOVEMENT (S. M.) TIME

	S. M. INTERVAL	1	2	3	4	5	6	7	8
MINIMUM GREEN	1								
AMBER	2								
RED	3								
GAP	4								
HEADWAY	5								
WASTE	6								
MAXIMUM	7								
SIGNAL GROUP									
DETECTORS									

PRESENCE (RANGE 0 –5)

DET. NO	PRESENCE TIME	DET. NO	PRESENCE TIME
1	Sec	13	Sec
2	Sec	14	Sec
3	Sec	15	Sec
4	Sec	16	Sec
5	Sec	17	Sec
6	Sec	18	Sec
7	Sec	19	Sec
8	Sec	20	Sec
9	Sec	21	Sec
10	Sec	22	Sec
11	Sec	23	Sec
12	Sec	24	Sec

ALTERNATE TIME SETTING (RANGE 0-200)

ALT. NO	TIME	ALT. NO	TIME
1 SG4 LS	3 Sec	17	
2		18	
3		19	
4		20	*5 Sec
5		21 A Min GRN	43 Sec
6		22 C Min GRN	32 Sec
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15	50 Sec	31	
16		32	

***Note:** During start-up of controller, there will be a 5 seconds All Red (TSM20)

CONTROLLER TIMESETTING

Location: _____ Int. No: 1707

	PHASE	A	B	C	D	E	F	G	H	
	INTERVAL	1	2	3	4	5	6	7	8	Range
RED/YELLOW	1									0 – 5
LATE START	2			0.3						0 – 20
MINIMUM GREEN	3	10	7	7	7					5 – 20
INCREMENT	4									0 – 5
MAX. V. I. G.	5									0 – 40
MAX. EXT. GREEN	6	40	29	35	23					0 – 150
EARLY CUT-OFF	7									0 – 20
AMBER	8	3	3	3	3					3 – 7
ALL RED	9	6	6	6	6					0 – 15
SPECIAL ALL RED	10	2	3	3	5					0 – 15
GAP 1	11	3	3	3	3					0 –10
GAP 2	12	3	3	3	3					0 –10
GAP 3	13	3	3	3						0 –10
GAP 4	14	0								0 –10
HEADWAY 1	15	1.2	0.6	1.2	1.2					0 – 5
HEADWAY 2	16	1.2	1.2	1.2	1.2					0 – 5
HEADWAY 3	17	1.2	1.2	1.2						0 – 5
HEADWAY 4	18	0.6								0 – 5
WASTE 1	19	7	7	7	7					0 – 50
WASTE 2	20	7	7	7	7					0 – 50
WASTE 3	21	7	7	7						0 – 50
WASTE 4	22	7								0 – 50
MAXIMUM 1	23									0 – 150
MAXIMUM 2	24									0 – 150
MAXIMUM 3	25									0 – 150
MAXIMUM 4	26									0 – 150

Maximum V. A. Cycle Time: _____

☑ Use Special All Red if going from A phase to B phase

☑ Use Special All Red if going from B phase to C phase

☑ Use Special All Red if going from C phase to D / A phase

☑ Use Special All Red if going from D phase to A phase

	PEDESTRIAN NO.	1	2	3	4	5	6	7	8	
	INTERVAL	17	18	19	20	21	22	23	24	Range
DELAY	1									0 – 20
WALK	2	6	6							0 – 40
CLEARANCE 1	3	34	26							0 – 40
CLEARANCE 2	4									0 – 10
PAC		7	7							

CO-ORDINATION DATA

Location: _____ Int. No: 1707

MASTERLINK & FLEXILINK SPECIAL FLAGS

SIGNAL	FUNCTION
Y– FLEXI	Continuous
Y– MASTER	Auto Call Push Button PED 1, 2
Y+ FLEXI	
Z– FLEXI	Auto Call Push Button PED 1
Z– MASTER	
Z+ FLEXI	
Z+ MASTER	
R– FLEXI	B Phase Release Pulse
R+ FLEXI	C Phase Release Pulse
Q– FLEXI	D Phase Release Pulse
Q+ FLEXI	A Phase Release Pulse
Z1 MASTER	
Z MASTER	
Z MASTER	
Z MASTER	

LOOK AHEADS AND RELEASES

Phase Sequence 1			Phase Sequence 2		
PHASE	**LOOK AHEAD**	**RELEASE**	**PHASE**	**LOOK AHEAD**	**RELEASE**
A	NO	Q+	A		
B	NO	R-	B		
C	Yes to A	R+	C		
D	Yes to A	Q-	D		
E			E		
F			F		
G			G		

The following phases can be inhibited in Flexilink by omitting the call pulses in the plan data _____

NO	PHASE SEQUENCE
1 (No Z–)	A B C D
2 (Z–)	

GLIDE INTERSECTION DATA

Location: _____ Int. No: 1707

Note: The data shown on this page should be entered when the intersection is first placed on line. This data is not necessarily used for Master Link operation.

SLOT 130 = 4, 8, 2	E.g. x, y, z. x = No of Phases y = No of Split Plans z = No of PEDs
INT = 1707	
VC =	
CS =	
COM =	
PK =	
S# =	
LM = MF	**Note:** Always LM = F initially
RMN =	
DCL =	
VOLS = 1 – 10	
VP# =	
AT = 5	
BT = 6	
CT = 6	
DT = 8	
ET =	
FT =	
GT =	

Date:	Date:
PP1 = 0, 0 ^A	PP1 =
PP2 = 0, 0 ^A	PP2 =
PP3 = 0, 0 ^A	PP3 =
PP4 = 0, 0 ^A	PP4 =

Variation Parameter (VP)

VP1 =	VP8 =	VP15 =	VP22 =	VP29 =
VP2 =	VP9 =	VP16 =	VP23 =	VP30 =
VP3 =	VP10 =	VP17 =	VP24 =	VP31 =
VP4 =	VP11 =	VP18 =	VP25 =	VP32 =
VP5 =	VP12 =	VP19 =	VP26 =	VP33 =
VP6 =	VP13 =	VP20 =	VP27 =	VP34 =
VP7 =	VP14 =	VP21 =	VP28 =	VP35 =

W1 = 6			W4 =		
W1T = 39	P–		W4T =	P–	P+
W2 = 6			W5 =		
W2T = 32	P–	P+	W5T =	P–	P+
W3 =			W6 =		
W3T =	P–	P+	W6T =	P–	P+

SPLIT PLANS

	SF / FEATURES	1	2	3	4
A	0 PDFG B	< 0 >	< 0 >	< 0 >	< 0 >
B	C	14	14	14	18
C	D	30	34	34	30
D	A	14	14	14	14
E					
F					
G					

SF / FEATURES	5	6	7	8
	< 0 >	< 0 >	< 0 >	< 0 >
	18	22	26	22
	36	40	40	36
	SKIP	SKIP	SKIP	SKIP

PLAN DATA

Location: _____ Int. No: 1707

PLAN

		1	2	3	4	5	6	7	8	9	10
0	**CL**	134	124		134	104	114	124			
1	**A**	0	0		0	0	0	0			
2	**B**	51	52		51	51	51	52			
3	**C**	73	82		73	75	75	82			
4	**D**	114	123		114	103	113	123			
5	**E**										
6	**F**										
7	**G**										
8	**R−**	C	C		C	C	C	C			
9	**R+**	C	C		C	C	C	C			
10	**Y−**	C	C		C	C	C	C			
11	**Y+**										
12	**Z−**										
13	**Z+**										
14	**Q−**	C	C		C	C	C	C			
15	**Q+**	41	42		41	41	41	42			
16	**XSF (9-16)***										
17	**XSF (1-8)***										

* A digit hexadecimal number which signifies which XSF bits are used; e.g. AO signifies bits 14 & 16 are set.

PLAN SCHEDULE

CODE	HOUR	MINUTE	PLAN
8	0	0	5
8	7	0	1
8	9	0	7
8	12	0	2
8	17	0	4
8	21	0	6
8	23	0	5
7	0	0	5
7	7	0	7
7	9	0	7

CODE	HOUR	MINUTE	PLAN
7	12	0	6
7	15	0	2
7	21	0	6
7	23	0	5
1	0	0	5
1	7	0	7
1	9	0	7
1	14	0	2
1	21	0	6
1	23	0	5

Pedestrian and Vehicle Signal Groups Interlock Table

Location: _____ Int. No: 1707

	Phase A	Phase B	Phase C	Phase D	Phase E	Phase F	Phase G
SG 1	SGAR	SGAR	RED	SGAR			
SG 2	SGAR	RED	RED	RED			
SG 3	RED	SGAR	RED	SGAR			
SG 4	RED	RED	SGAR	RED			
SG 5	WALK	DON'T	DON'T	DON'T			
SG 6	DON'T	DON'T	WALK	DON'T			
SG 7							
SG 8							
SG 9							
SG 10							
SG 11							
SG 12							
SG 13							
SG 14							
SG 15							
SG 16							

Legend:

GAR	Green, Amber, Red
GEAR	Green, Amber, Red (With ECO)
RED	Red
SGRN	Special Green
SOFF	Special Off
WALK	PED Walk, Clearance 1 and Clearance 2
SWALK	Special PED Walk, Clearance 1 and Clearance 2
DON'T	PED Red

Appendix A

Signal Groups Conflict Matrix

Location: _____ Int. No: 1707

('C16' ENTER)

SG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1				X		X										
2			X	X		X										
3		X		X	X	X										
4	X	X	X		X											
5			X	X												
6	X	X	X													
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																