

TO	1. SENIOR ENGINEER, CONTROLLER APPLICATIONS 2. STEVE BELZ, PROGRAM DELIVERY	ACTION	DATE
FROM	NATHAN CORCORAN	DATE	28/02/20
SITE	CALDER HIGHWAY / OAK STREET	SITE NO.	6255
REGION	METRO NORTH WEST	MUNICIPALITY	GREATER BENDIGO

GENERAL

Works Program Job?	No	Project Number	BC122C
Classification	STANDARD	Works Order Number	4A006930

EXISTING CONTROLLER DETAILS

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

Target Date for Draft Opsheet	12/03/20
Target Date for completion of Program	09/04/20
Prepare Interlocking	

PERSONALITY CHECKSUMS

	Hex	Octal
Total	83	203
Times	E2	342
Pers	61	141

Dispatched 7/04/20

Update Graphics, Site Notes	No	<input checked="" type="checkbox"/> Site ID Revision updated to	B
Description of changes	Modified phasing. LED upgrade.		

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	NATHAN CORCORAN	Ext	1210
OR	DARREN VAUGHAN	Ext	1210
before 3:00pm on the day before switch on.			

SCATS Data Changes - Slot data, update graphics
TRAFFIC MANAGEMENT CENTRE

<input type="checkbox"/> Checksum update only
<input type="checkbox"/> Changes to trim or manual intervention features required
<input checked="" type="checkbox"/> Please notify NATHAN CORCORAN (x1210) on job completion.

DATE PROM INSTALLED

CONTROLLER OPERATION SPECIFICATION

SITE NAME **CALDER HIGHWAY / OAK STREET**

SITE NO. **6255**

MUNICIPALITY GREATER BENDIGO DESIGNED BY NATHAN CORCORAN

DATE 28/02/20

PLAN NO. 779523

DESIGN CHECKED

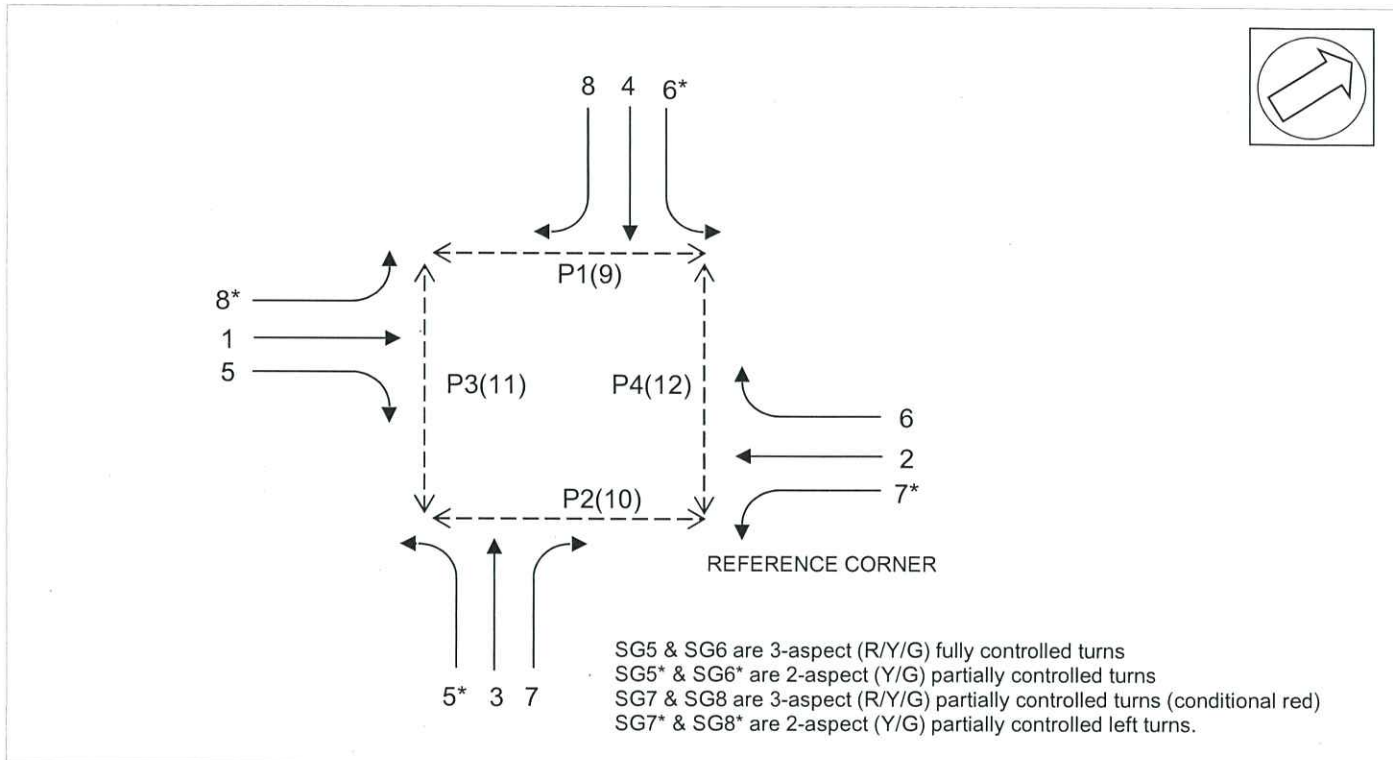
DATE 11/3/20

CONTROLLER TYPE PSC 2003

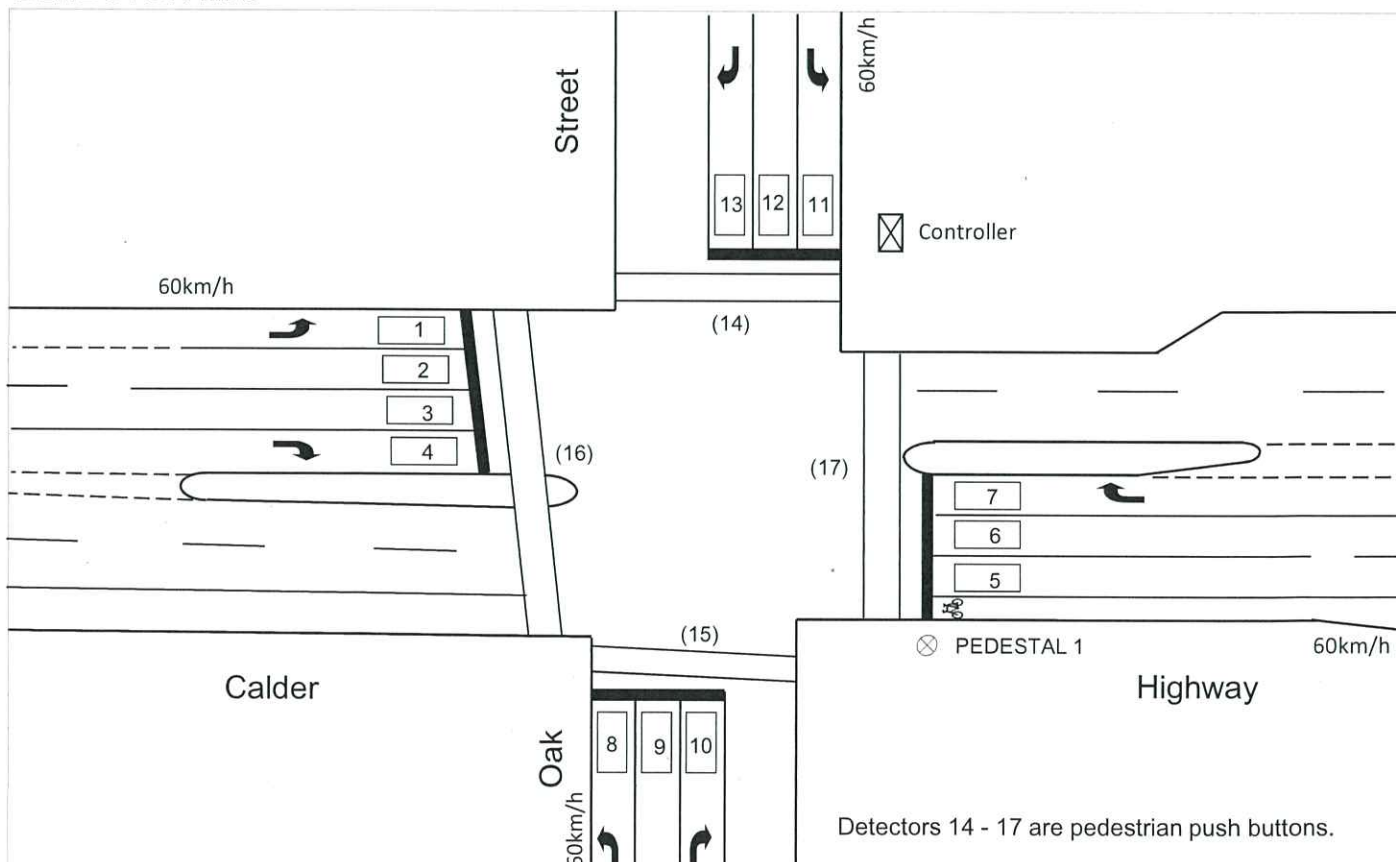
PROM CHECKED

DATE 7/4/20

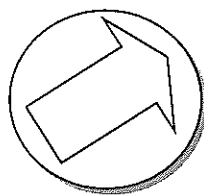
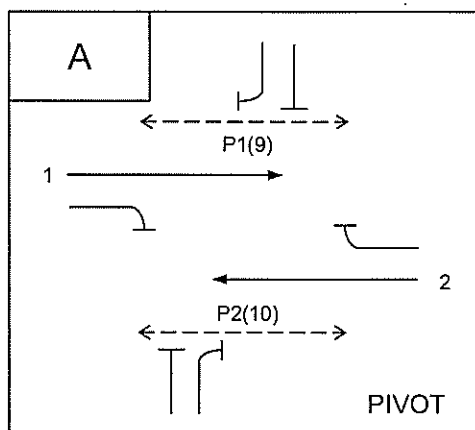
GROUP ALLOCATION



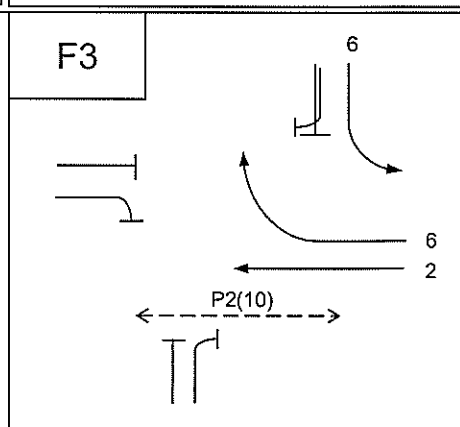
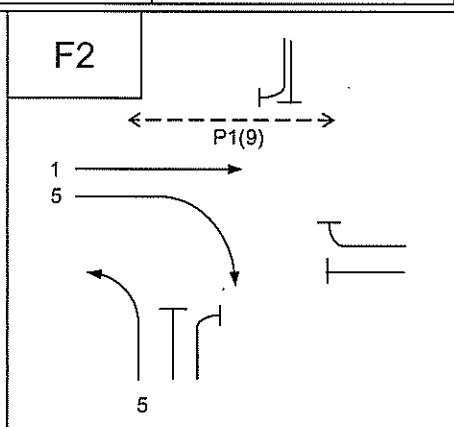
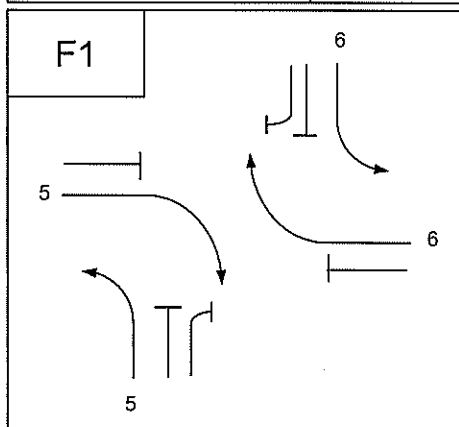
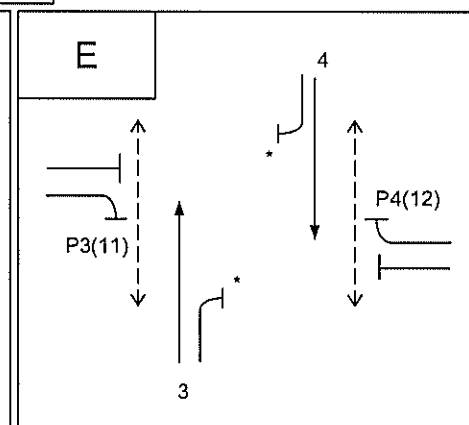
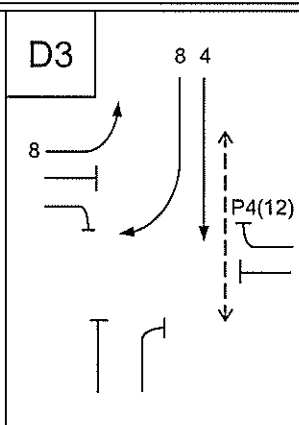
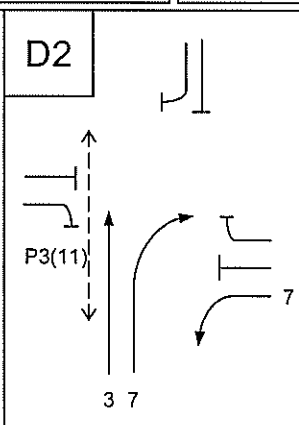
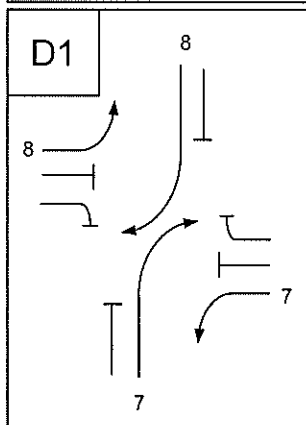
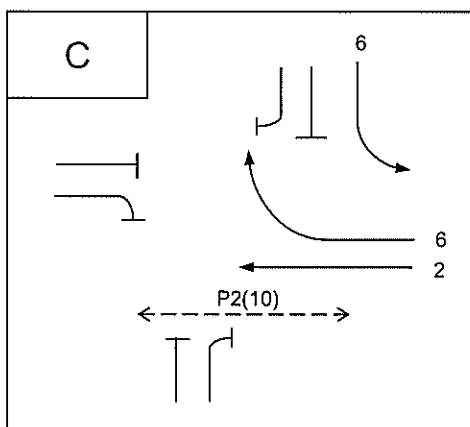
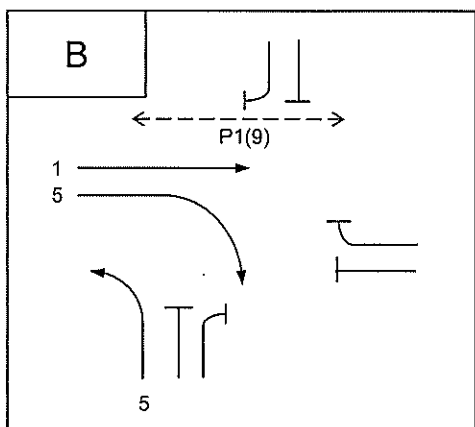
DETECTOR MAP



6255

[illegible]

Refer General Notes



ABDEF

DATE 28/02/20

SITE NAME

CALDER HIGHWAY / OAK STREET

SITE NO.

6255

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
1	I	1	A	✓			AB				0			✓		
2	I	2	A	✓			AB				0			✓		
3	I	3	A	✓			AB				0			✓		
4	I	4	BF	✓			BF			✓	0			✓		
5	I	5	A	✓			AC				0			✓		
6	I	6	A	✓			AC				0			✓		
7	I	7	CF	✓			CF			✓	0			✓		
8	I	8	E	✓			BEF			✓	0			✓		
9	I	9	E	✓			E				0			✓		
10	I	10	DE	E	D		DE			✓	0			✓		
11	I	11	E	✓			CEF			✓	0			✓		
12	I	12	E	✓			E				0			✓		
13	I	13	DE	E	D		DE			✓	0			✓		
14	E	1	A		✓			P1		✓	6		✓			
15	E	2	A		✓			P2		✓	6		✓			
16	E	3	E		✓			P3		✓	6		✓			
17	E	4	E		✓			P4		✓	6		✓			
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																
31																
32																

DESIGNED BY: NATHAN CORCORAN

DATE 28/02/20

APPROACH DEFINITIONS

PHASE APPROACHES

Approach No	EXTENDING DETECTORS	APPROACH TIMER AND TIMESETTING DEFINITION*	SIGNAL GROUP	APPROACH EXPIRY (EXPAP)	Refer Special Notes
1	2, 3	A11, B22	1	AØ ↔ BØ	
2	5, 6	A22, C22	2	AØ ↔ CØ	
3	1	A33, B33	1	AØ ↔ BØ	
4	4	B11, F11	5		
5	7	C11, F22	6		
6	10	D11, E53	7, 3		
7	13	D22, E64	8, 4		
8	8	E32, B44, F33	3, 5	EØ → F1Ø, EØ → F2Ø	
9	9	E11	3		
10	11	E42, C33, F44	4, 6	EØ → F1Ø, EØ → F3Ø	
11	12	E21	4		
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					

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).
- XSF3 - Inhibit calls for SG5 in FØ, and clear demands for CØ (All modes).
- XSF4 - Inhibit calls for SG6 in FØ, and clear demands for BØ (All modes).
- XSF5 - Selects Special Maximum for SG5 in FØ (Special Purpose Timesetting no. 9) (All modes).
- XSF6 - Selects Special Maximum for SG6 in FØ (Special Purpose Timesetting no. 10) (All modes).
- XSF7 - Selects Special Maximum for SG7 in DØ (Special Purpose Timesetting no. 11) (All modes).
- XSF8 - Selects Special Maximum for SG8 in DØ (Special Purpose Timesetting no. 12) (All modes).
- XSF11 - Auto introduction of P1 in AØ and FØ with SG1 (Master and Flexi).
- XSF12 - Auto introduction of P2 in AØ and FØ with SG2 (Master and Flexi).

GENERAL OPERATION

1. If in BØ clear demands for CØ.
2. If in CØ clear demands for BØ.
3. If in EØ, clear demands for DØ.
4. Use FØ yellow for BØ yellow if going BØ → AØ.
5. Use FØ yellow for CØ yellow if going CØ → AØ.
6. Use AØ special all red for AØ red if going AØ → BØ, AØ → CØ or AØ → FØ.
7. In Isolated and Flexi Isolated operation, BØ is allowed to run if XSF3 is set, and CØ is allowed to run if XSF4 is set.
8. If the site fallback is to Isolated or Flexilink, XSF3 or XSF4 must be entered into the Flexilink data to maintain either ABDEF3 or ACDEF2 sequences.

SIGNAL GROUP OPERATION

Signal Group 5

1. SG5 closes down in BØ when going BØ → FØ (called by SG6).
SG5 does not introduce in FØ when going BØ → FØ.
2. SG5 is controlled by Special Movement Timesetting no. 1 in FØ.
FØ All Red timesetting is substituted for Special Movement Timesetting no. 1.
3. XSF5 is used to set the maximum extension green time for SG5 in FØ.
This time is stored in Special Purpose Timesetting no. 9.
SG5 is forced off after this maximum extension green time.

Signal Group 6

1. SG6 closes down in CØ when going CØ → FØ (called by SG5).
SG6 does not introduce in FØ when going CØ → FØ.
2. SG6 is controlled by Special Movement Timesetting no. 2 in FØ.
FØ All Red timesetting is substituted for Special Movement Timesetting no. 2.
3. XSF6 is used to set the maximum extension green time for SG6 in FØ.
This time is stored in Special Purpose Timesetting no. 10.
SG6 is forced off after this maximum extension green time.

Signal Group 7

1. SG7 is controlled by Special Movement Timesetting no. 3 in DØ.
DØ Special All Red timesetting is substituted for Special Movement Timesetting no. 3.
2. XSF7 is used to set the maximum extension green time for SG7 in DØ.
This time is stored in Special Purpose Timesetting no. 11.
SG7 is forced off after this maximum extension green time.
3. SG7 operates green-yellow-red in DØ.

SITE NAME: Calder Highway / Oak Street

4. SG7 goes red with SG3 in EØ, and remains red through FØ, AØ, BØ, CØ and D3Ø.
5. SG7 closes down at the end of D1Ø or D2Ø green, remains red through EØ late start, then goes 'blank' at the start of EØ minimum green.

When P4 is demanded.

6. If going BØ → EØ, CØ → EØ or D3Ø → EØ, with a demand for P4, hold SG7 red for the duration of Timer 1 (Special Purpose Timesetting no. 13). Timer 1 starts timing at the start of P4 walk. When Timer 1 expires, SG7 red is switched off.
7. If going D1Ø → EØ or D2Ø → EØ, with a demand for P4, SG7 goes red at the start of D1Ø or D2Ø all red period, and is held red for the duration of Timer 1 (Special Purpose Timesetting no. 13). Timer 1 starts timing at the start of P4 Walk. When Timer 1 expires, SG7 red is switched off.
8. EØ ECO is used to guarantee SG7 minimum blank period. Timer 3 (Special Purpose Timesetting no. 15) starts timing at the start of SG7 blank period. When Timer 3 expires and Timer 4 has expired, expire EØ ECO.

Signal Group 8

1. SG8 is controlled by Special Movement Timesetting no. 4 in DØ.
DØ All Red timesetting is substituted for Special Movement Timesetting no. 4.
2. XSF8 is used to set the maximum extension green time for SG8 in DØ.
This time is stored in Special Purpose Timesetting no. 12.
SG8 is forced off after this maximum extension green time.
3. SG8 operates green-yellow-red in DØ.
4. SG8 goes red with SG4 in EØ, and remains red through FØ, AØ, BØ, CØ and D2Ø.
5. SG8 closes down at the end of D1Ø or D3Ø green, remains red through EØ late start, then goes 'blank' at the start of EØ minimum green.

When P3 is demanded.

6. If going BØ → EØ, CØ → EØ or D2Ø → EØ, with a demand for P3, hold SG8 red for the duration of Timer 2 (Special Purpose Timesetting no. 14). Timer 2 starts timing at the start of P3 walk. When Timer 2 expires, SG8 red is switched off.
7. If going D1Ø → EØ or D3Ø → EØ, with a demand for P3, SG8 goes red at the start of D1Ø or D3Ø all red period, and is held red for the duration of Timer 2 (Special Purpose Timesetting no. 14). Timer 2 starts timing at the start of P3 Walk. When Timer 2 expires, SG8 red is switched off.
8. EØ ECO is used to guarantee SG8 minimum blank period. Timer 4 (Special Purpose Timesetting no. 16) starts timing at the start of SG8 blank period. When Timer 4 expires and Timer 3 has expired, expire EØ ECO.

PEDESTRIAN GROUP OPERATION

Pedestrian 1

P1 calls AØ.

P1 is hidden in FØ.

P1 can introduce at anytime in F2Ø and at the start of AØ, and can overlap F2Ø → AØ, and AØ ↔ BØ.

In Master, P1 can introduce at anytime in AØ while XSF1 is set.

In Master and Flexi, P1 auto introduces in AØ and FØ with SG1 while XSF11 is set.

Pedestrian 2

P2 calls AØ.

P2 is hidden in FØ.

P2 can introduce at anytime in F3Ø and at the start of AØ, and can overlap F3Ø → AØ, and AØ ↔ CØ.

In Master, P2 can introduce at anytime in AØ while XSF2 is set.

In Master and Flexi, P2 auto introduces in AØ and FØ with SG2 while XSF12 is set.

SITE NAME: Calder Highway / Oak Street

Pedestrian 3

P3 calls EØ.

P3 can introduce at anytime in D2Ø and at the start of EØ, and can overlap D2Ø → EØ.

Pedestrian 4

P4 calls EØ.

P4 can introduce at anytime in D3Ø and at the start of EØ, and can overlap D3Ø → EØ.

DETECTOR OPERATION**General**

Clear vehicle demands during associated phase green and yellow.

Detector 4

Clear demands for BØ and FØ from detector 4 during SG5 green and yellow.

Detector 7

Clear demands for CØ and FØ from detector 7 during SG6 green and yellow.

Detector 8

Clear demands for EØ from detector 8 during SG3 and SG5 green and yellow.

Detector 10

Detector 10 places a non-locking call for DØ when its presence timer expires.

Detector 11

Clear demands for EØ from detector 11 during SG4 and SG6 green and yellow.

Detector 13

Detector 13 places a non-locking call for DØ when its presence timer expires.

SITE NAME **CALDER HIGHWAY / OAK STREET**SITE NO. **6255****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 → P4	37.0	60	60	60	4.0	2.5	6.5
B	5 → 3	30.0	60	60	45	4.0	2.5	6.5
C	6 → 4	28.0	60	60	45	4.0	2.5	6.5
D	8 → P3	34.0	60	45	45	3.0	3.0	6.0
E	3 → P2	34.0	60	60	60	4.0	2.0	6.0
F	5 → P2	33.0	60	45	45	3.0	2.5	5.5
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			
A	B, F	2 → 5	26.0	60	1.5	A SAR
A	C, F	1 → 6	28.0	60	2.0	A SAR
B	F3, A	5 → P2	33.0	45	2.5	B SAR
C	F2, A	6 → P1	32.0	45	2.5	C SAR
D	E	7 → P4	30.0	45	2.5	SM
		→				

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

PEDESTRIAN TIMES

PED	PHASE(S)	WALK			CLEARANCE				MINIMUM SOLID DON'T WALK
		DISTANCE (m)	TIME		DISTANCE (m)	TIME			
			GRAPH	ADOPTED		GRAPH	CL1	CL2	
P1	A BF	23.0	8	8	23.0	15	15.0		6.5
P2	A CF	18.0	8	8	18.0	12	12.0		6.5
P3	E D	15.0	15	15	12.0	8	8.0		6.0
P4	E D	22.0	8	8	22.0	15	15.0		6.0

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					2		
MINIMUM GREEN	3	10	6	6	6	6	8	
INCREMENT	4							
MAXIMUM INITIAL GREEN*	5							
MAXIMUM EXTENSION GREEN	6	30	10	5	10	20	15	
EARLY CUT OFF	7					4.0		
YELLOW	8	4.0	4.0	4.0	3.0	4.0	3.0	
ALL RED	9	2.5	2.5	2.5	3.0	2.0	2.5	
SPECIAL ALL RED	10	2.0			2.5			
GAP 1	11	2.5	3.0	2.5	2.5	2.5	3.0	
GAP 2	12	2.5	2.5	2.5	2.5	2.5	3.0	
GAP 3	13	2.5	2.5	2.5		2.5	3.0	
GAP 4	14		2.5			2.5	2.5	
HEADWAY 1	15	0.6	1.2	1.2	1.2	1.2	1.2	
HEADWAY 2	16	0.6	0.6	0.6	1.2	1.2	1.2	
HEADWAY 3	17	1.2	1.2	1.2		1.2	1.2	
HEADWAY 4	18		1.2			1.2	1.2	
WASTE 1	19	7	7	7	7	7	7	
WASTE 2	20	7	7	7	7	7	7	
WASTE 3	21	7	7	7		7	7	
WASTE 4	22		7			7	7	

* 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	15.0	8.0				
CLEARANCE 1	3	15.0	12.0	8.0	15.0				
CLEARANCE 2	4								

* Minimum walk time - used in Isolated and Flexilink operation

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

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	2.5	SG5 ALL RED (SUBSTITUTE FØ ALL RED)
2	2.5	SG6 ALL RED (SUBSTITUTE FØ ALL RED)
3	2.5	SG7 ALL RED (SUBSTITUTE DØ SPECIAL ALL RED)
4	3.0	SG8 ALL RED (SUBSTITUTE DØ ALL RED)
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	5	SG5 MAXIMUM EXTENSION GREEN IN FØ (XSF5)
10	5	SG6 MAXIMUM EXTENSION GREEN IN FØ (XSF6)
11	5	SG7 MAXIMUM EXTENSION GREEN IN DØ (XSF7)
12	5	SG8 MAXIMUM EXTENSION GREEN IN DØ (XSF8)
13	12	Timer 1 - hold SG7 red in EØ, when P4 is demanded.
14	12	Timer 2 - hold SG8 red in EØ, when P3 is demanded.
15	4	Timer 3 - SG7 minimum blank period in EØ
16	4	Timer 4 - SG8 minimum blank period in EØ
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		

SITE NAME **CALDER HIGHWAY / OAK STREET**SITE NO. **6255****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	
8	
9	
10	2.0
11	
12	
13	2.0
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)	

DESIGNED BY: NATHAN CORCORAN

DATE 28/02/20

FLEXILINK OPERATION

PHASE SEQUENCES

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

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	No	R+
C	No	Q-
D	Yes (to E, F, A)	Auto
E	Yes (to F, A)	Q+
F	Yes (to A)	Auto
G		

PHASE SEQUENCE 2		
PHASE	LOOK AHEAD*	RELEASE
A		
B		
C		
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

B, C, D

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	
Z- Flexi	
Z- Master	
Z+ Flexi	
Z+ Master	
R- Flexi	AØ RELEASE PULSE
R+ Flexi	BØ RELEASE PULSE
Q- Flexi	CØ RELEASE PULSE
Q+ Flexi	EØ RELEASE PULSE

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

WHICH SLOT DATA

SLOT <i>n</i>	=	6	,	4	,	4
		(phases)		(split plans)		(walks)
INT	=	6255				
VC	=	5				
CS	=					
COM	=	NET				
PK	=	!				
S#	=					
LM	=					
RMN	=	0				
DCL	=	0				
AT	=	7				
BT	=	7				
CT	=	7				
DT	=	6				
ET	=	6				
FT	=	6				
GT	=					
W1	=	0B*	W1 T	=	22	
W2	=	0C*	W2 T	=	19	
W3	=	2E	W3 T	=	14	
W4	=	2E	W4 T	=	21	
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	= 0PDB	A	= 0PDFGB	A	= 0PDFGB
B	= 1C	B	= 10C	B	= 1C
C	= 1D	C	= 1D	C	= 10D
D	= 15TGE	D	= 15TGE	D	= 15TGE
E	= 20TGFGF	E	= 20TGFGF	E	= 20TGFGF
F	= 15TGA	F	= 15TGA	F	= 15TGA

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	=		

GROUP CONFLICT TABLE

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

CHECKED: Necati Uyar DATE: 2/03/20

DESIGNED BY: NATHAN CORCORAN

DATE 28/02/20