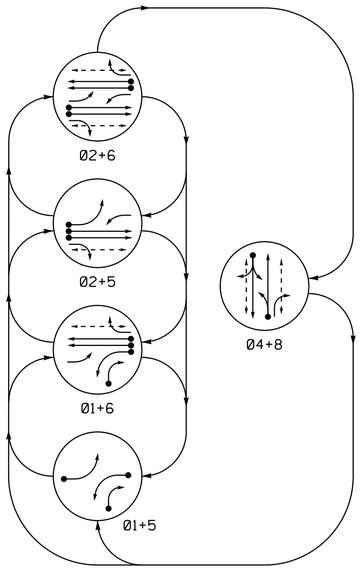
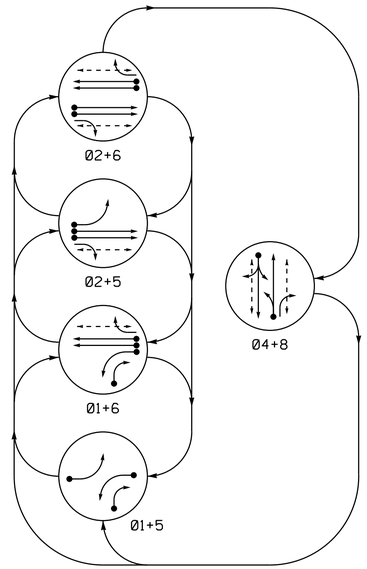
PROJECT REFERENCE NO.	SHEET NO.
W-57050	Sig. 1

DEFAULT PHASING DIAGRAM



ALTERNATE PHASING DIAGRAM



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	04+8	EVP 3	FLASH
11	~~←~~	~~←~~	~~F Y~~	~~F Y~~	~~R~~	~~R~~	~~Y~~
21, 22	R	R	G	G	R	R	Y
41	R	R	R	R	G	G/←	R
42	R	R	R	R	G	G	R
51	~~←~~	~~F Y~~	~~←~~	~~F Y~~	~~R~~	~~R~~	~~Y~~
61, 62	R	G	R	G	R	R	Y
81	R	R	R	R	G	R	R
82	R/←	R/←	R	R	G	R	R
P21, P22	DW	DW	W	W	DW	DW	DRK
P41, P42	DW	DW	DW	DW	W	DW	DRK
P61, P62	DW	W	DW	W	DW	DW	DRK
P81, P82	DW	DW	DW	DW	W	DW	DRK

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	04+8	EVP 3	FLASH
11	~~←~~	~~←~~	~~R~~	~~R~~	~~R~~	~~R~~	~~Y~~
21, 22	R	R	G	G	R	R	Y
41	R	R	R	R	G	G/←	R
42	R	R	R	R	G	G	R
51	~~←~~	~~R~~	~~←~~	~~R~~	~~R~~	~~R~~	~~Y~~
61, 62	R	G	R	G	R	R	Y
81	R	R	R	R	G	R	R
82	R/←	R/←	R	R	G	R	R
P21, P22	DW	DW	W	W	DW	DW	DRK
P41, P42	DW	DW	DW	DW	W	DW	DRK
P61, P62	DW	W	DW	W	DW	DW	DRK
P81, P82	DW	DW	DW	DW	W	DW	DRK

SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

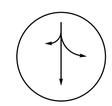
INDUCTIVE LOOPS						DETECTOR PROGRAMMING																
							TIMING		OPERATION MODE											STATUS	
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	ASSIGNED PHASE	DELAY	EXTEND (STRETCH)	0 VEHICLE	1 PEDESTRIAN	2 I CALL	3 STOP A	4 STOP B	5 PROTPER LEFT	6 PROTPER THROUGH	7 AND	SWITCH	SYSTEM LOOPS	NEW	EXISTING
1A	6X40	2-4-2	0	X	-	1	5 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
1B	6X40	2-4-2	0	X	-	1	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
2A	6X6	5	300	X	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
2B	6X6	5	300	X	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
4A	6X40	2-4-2	0	X	-	4	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
4B	6X6	3	0	X	-	4	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
5A	6X40	2-4-2	0	X	-	5	5 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6A	6X6	5	300	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6B	6X6	5	300	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
8A	6X40	2-4-2	0	X	-	8	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
EVP 3	EV PREEMPTOR 3			X	-	EVP3	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-

5 Phase Fully Actuated w/ Emergency Preemption (Raleigh Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. Pavement markings are existing unless otherwise shown.
9. Locate emergency vehicle preemption switch in Fire Station 24.
10. The Division Traffic Engineer will determine the Delay before Preempt and Preempt Dwell Min Green time for the emergency vehicle preemption timing.
11. This intersection features a wireless preemption system.
12. Program signal heads numbered 41 and 42 to clear to all red before going into preempt.
13. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
14. The Division (City) Traffic Engineer will determine the hours of use for each phasing plan.
15. All metal poles and pedestrian pedestals shall be black powder coated.
16. When in start up, controller will serve phase 7 once during the first cycle of normal operation.

EV PREEMPT PHASES



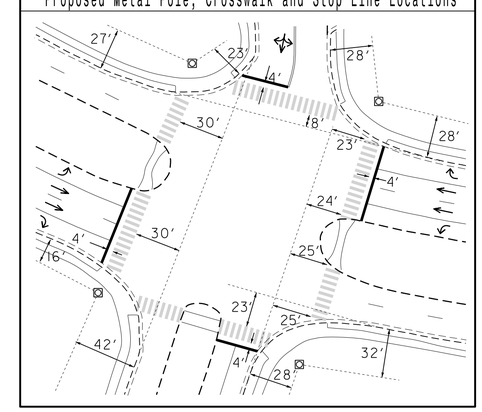
EVP 3 (Ø4+7)

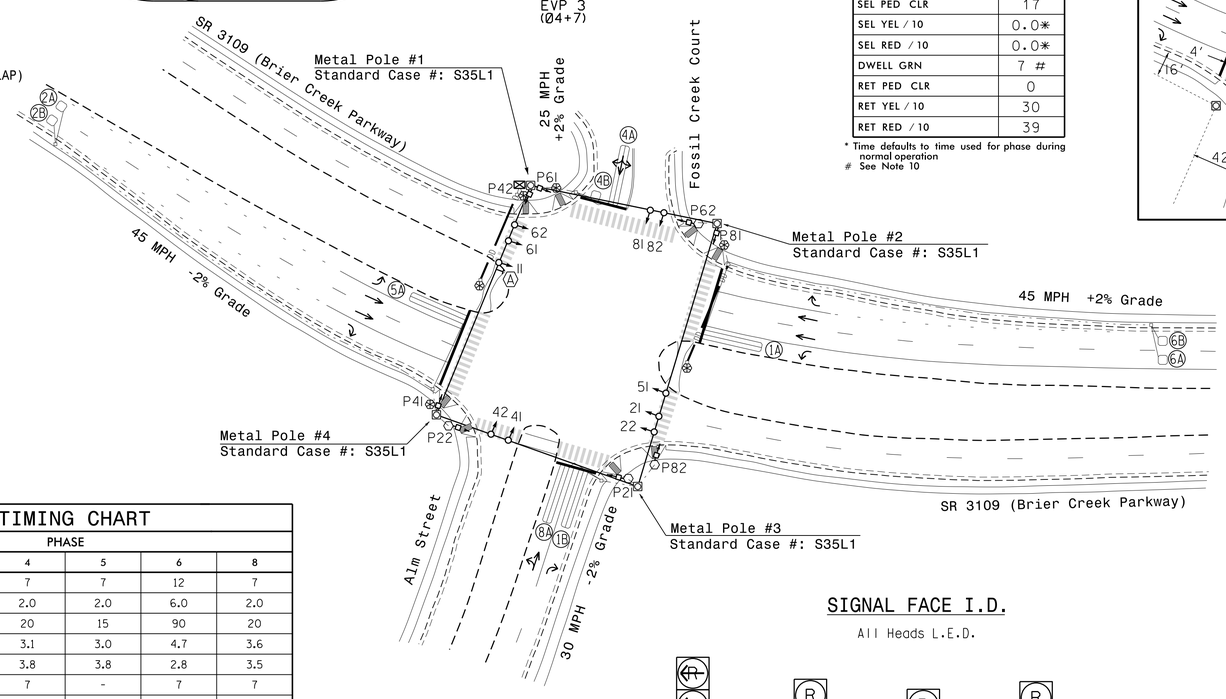
SE-PAC Preemption

FUNCTION	EVP 3
MIN GRN / WLK	1
EXIT PHASES	4+8
DELAY	0 #
MXCALL	120
SEL PED CLR	17
SEL YEL / 10	0.0*
SEL RED / 10	0.0*
DWELL GRN	7 #
RET PED CLR	0
RET YEL / 10	30
RET RED / 10	39

* Time defaults to time used for phase during normal operation
\# See Note 10

Proposed Metal Pole, Crosswalk and Stop Line Locations





PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

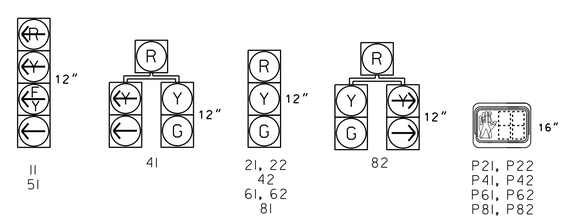
SE-PAC 2070 TIMING CHART

FEATURE	PHASE 1	2	4	5	6	8
Min Green *	7	12	7	7	12	7
Passage Gap *	2.0	6.0	2.0	2.0	6.0	2.0
Maximum Green *	15	90	20	15	90	20
Yellow Change	3.0	4.7	3.1	3.0	4.7	3.6
Red Clear	4.1	2.8	3.8	3.8	2.8	3.5
Walk *	-	7	7	-	7	7
Pedestrian Clear	-	22	34	-	18	32
Added Initial *	-	1.5	-	-	1.5	-
Maximum Initial *	-	34	-	-	34	-
Time Before Reduction *	-	15	-	-	15	-
Time To Reduce *	-	30	-	-	30	-
Minimum Gap	-	3.0	-	-	3.0	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	NON-LOCK	LOCK	NON-LOCK	NON-LOCK	LOCK	NON-LOCK
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

SIGNAL FACE I.D.

All Heads L.E.D.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Metal Strain Pole	
	Directional Drill	N/A
	Type I Pushbutton Post	
	Type II Signal Pedestal	
N/A	Curb Ramp	
	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	

New Installation

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 3109 (Brier Creek Parkway) at Alm Street and Fossil Creek Court

Division 5 Wake County Raleigh

PLAN DATE: April 2018 REVIEWED BY:
PREPARED BY: C.E. Carter REVIEWED BY:

SCALE 1"=50' (0 – 50)

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZELEMBA

DocuSigned by: 5/15/2018
SIGNATURE DATE

SIG. INVENTORY NO. 05-1931

01-JUN-2018 11:45
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