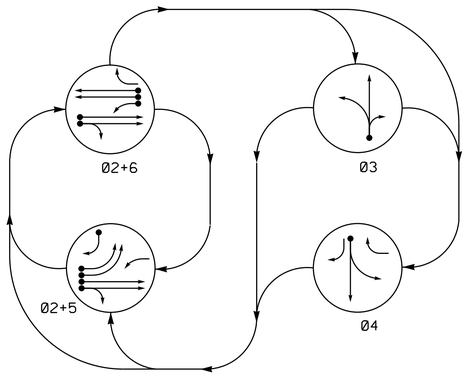
PROJECT REFERENCE NO.	SHEET NO.
U-5742	Sig.110.0

4 Phase
Fully Actuated w/ EV Preemption
Fayetteville Signal System

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

EV PREEMPT PHASES

(Medium Priority)

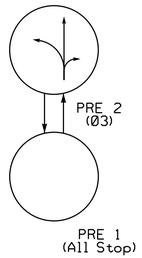


TABLE OF OPERATION

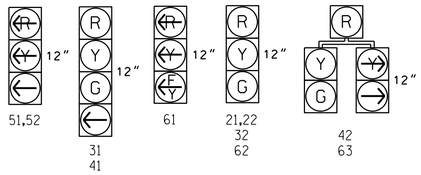
SIGNAL FACE	PHASE 2+5	2+6	3	4	Pre 1	Pre 32	FLASH
21,22	G	G	R	R	R	R	Y
31	R	R	G	R	R	G	R
32	R	R	G	R	R	G	R
41	R	R	R	G	R	R	R
42	R	R	R	G	R	R	R
51,52	~~←~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
61	~~F~~	~~F~~	~~R~~	~~R~~	~~R~~	~~R~~	~~Y~~
62	R	G	R	R	R	R	Y
63	R	G	R	R	R	R	Y

ASC/3 DETECTOR INSTALLATION CHART

DETECTOR						PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	TYPE	SYSTEM LOOP	NEW CARD
2A	6X6	300	5	-	2	Yes	-	-	N	-	X
2B	6X6	300	5	-	2	Yes	-	-	N	-	X
3A	6X60	0	2-4-2	-	3	Yes	-	10	S	-	X
4A	6X60	0	2-4-2	-	4	Yes	-	3	S	-	X
5A	6X60	0	2-4-2	-	5	Yes	-	3	S	-	X
5B	6X60	0	2-4-2	-	5	Yes	-	-	S	-	X
5C	6X60	0	2-4-2	-	5	Yes	-	15	S	-	X
6A,6B	6X6	300	5	-	6	Yes	-	-	N	-	X
6C	6X60	0	2-4-2	-	6	Yes	-	3	G	-	X
S6A	6X6	+165	4	-	-	No	-	-	N	X	X
S6B	6X6	+165	4	-	-	No	-	-	N	X	X

SIGNAL FACE I.D.

All Heads L.E.D.



NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. The order of phase 3 and phase 4 may be reversed.
5. Set all detector units to presence mode.
6. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
7. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
8. Pavement markings are existing.
9. The Division Traffic Engineer will determine the Delay Time and Preempt Min Dwell time for the emergency vehicle preemption timing.
10. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

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 Pole with Mastarm	○

ASC/3 TIMING CHART

FEATURE	PHASE 2	3	4	5	6
Min Green *	12	7	7	7	12
Walk *	0	0	0	0	0
Ped Clear	0	0	0	0	0
Veh. Extension *	6.0	1.0	1.0	1.0	6.0
Max 1 *	60	10	25	15	60
Yellow	4.5	3.8	3.9	3.0	4.5
Red Clear	1.3	2.0	1.8	2.8	1.3
Actuations B4 Add *	0	-	-	-	0
Seconds /Actuation *	1.5	-	-	-	1.5
Max Initial *	34	-	-	-	34
Time Before Reduction *	15	-	-	-	15
Time To Reduce *	30	-	-	-	30
Minimum Gap	3.0	-	-	-	3.0
Locking Detector	X	-	-	-	X
Recall Position	VEH. RECALL	-	-	-	VEH. RECALL
Dual Entry	-	-	-	-	-
Simultaneous Gap	X	X	X	X	X

* 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.

ASC/3 EV PREEMPT

FUNCTION	PRE 1	PRE 2
Exit Phase(s)	2,6	2,6
Preempt Override	OFF	OFF
Delay Time	**	**
Ped Clear Through Yellow	N	N
Terminate Phases	N	N
Entrance Walk	-	-
Entrance Ped Clear	-	-
Entrance Min Green	1	1
Entrance Yellow Change	25.5*	25.5*
Entrance Red Clear	25.5*	25.5*
Minimum Dwell Time	**	**
Preempt Input Extension Time	0	0
Preempt Max Time	0	0
Exit Yellow Change	25.5*	25.5*
Exit Red Clear	25.5*	25.5*

* Allows normal phase times to be used.
** See Note 9

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 1141 (Cumberland Road)
at
SR 2920 (Upchurch Drive) /
SR 1149 (Boone Trail)

Division 6 Cumberland County Fayetteville

PLAN DATE:	June 2016	REVIEWED BY:	JPG
PREPARED BY:	Jeff Spence	REVIEWED BY:	

SCALE 1"=40' (0 40)

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 029904 ENGINEER JASON P. GALLOWAY

DocuSigned by: Jason P. Galloway 9/28/2016
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SIG. INVENTORY NO. 06-0383

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