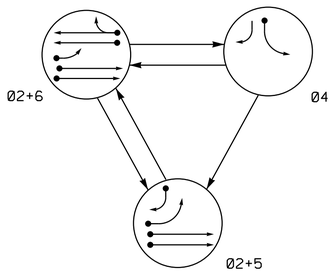
PROJECT REFERENCE NO.	SHEET NO.
U-5742	Sig. 93.0

3 Phase
Fully Actuated
W/Backup Preempt
Fayetteville Signal System

PHASING DIAGRAM



BACKUP PREEMPT PHASE
(Low Priority)

TABLE OF OPERATION					
SIGNAL FACE	PHASE				
	Ø2+5	Ø2+6	Ø4	PRE 3	FLASH
21, 22	G	G	R	G	Y
41	R	R	G	R	R
42	R/→	R	G	R/→	R
51	←	F/↑	↑R	←	↑Y
61,62	R	G	R	R	Y

SIGNAL FACE I.D.

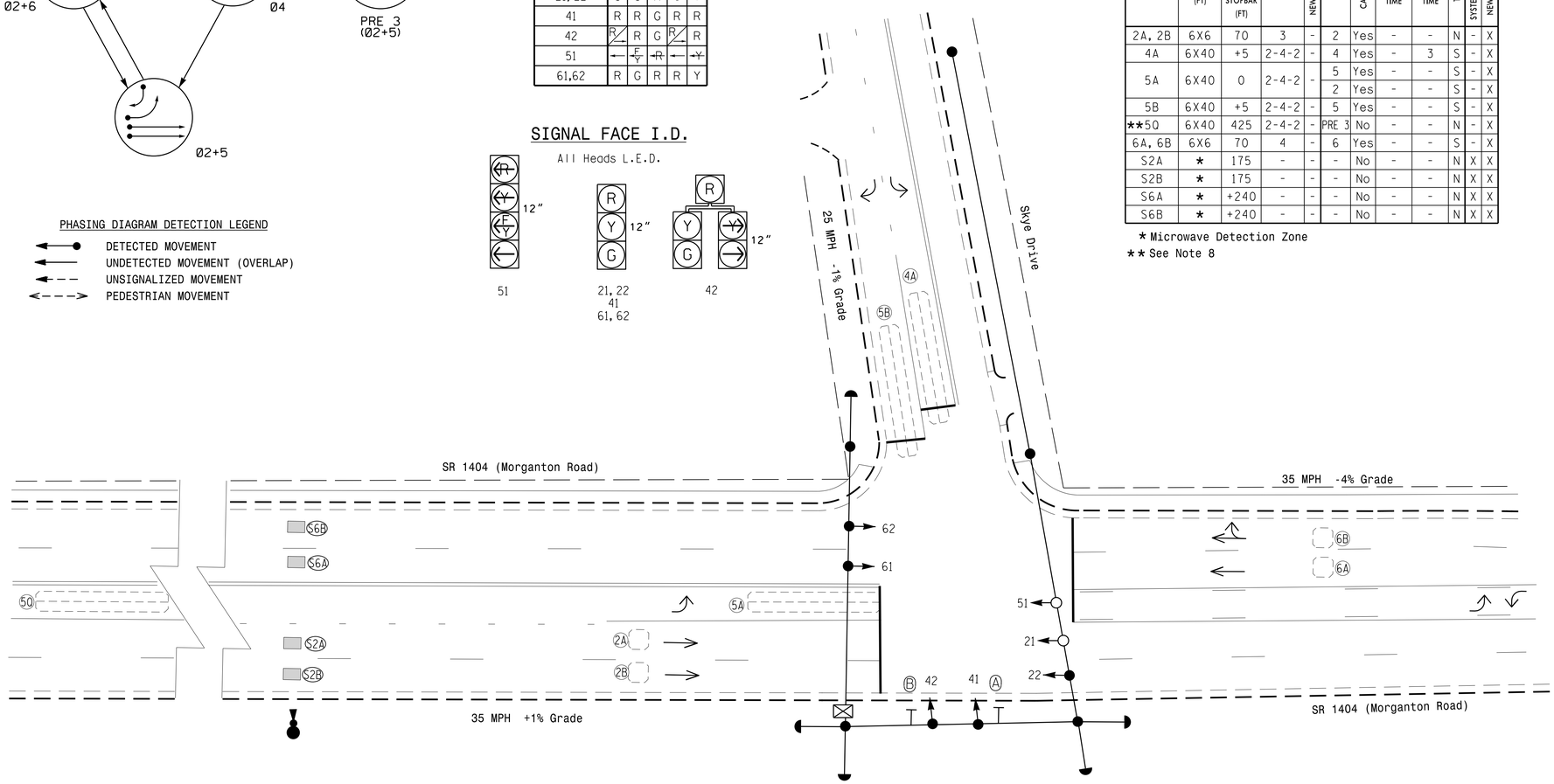
All Heads L.E.D.

PHASING DIAGRAM DETECTION LEGEND

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

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, 2B	6X6	70	3	-	2	Yes	-	-	N	-	X
4A	6X40	+5	2-4-2	-	4	Yes	-	3	S	-	X
5A	6X40	0	2-4-2	-	5	Yes	-	-	S	-	X
					2	Yes	-	-	S	-	X
5B	6X40	+5	2-4-2	-	5	Yes	-	-	S	-	X
**5O	6X40	425	2-4-2	-	PRE 3	No	-	-	N	-	X
6A, 6B	6X6	70	4	-	6	Yes	-	-	S	-	X
S2A	*	175	-	-	-	No	-	-	N	X	X
S2B	*	175	-	-	-	No	-	-	N	X	X
S6A	*	+240	-	-	-	No	-	-	N	X	X
S6B	*	+240	-	-	-	No	-	-	N	X	X

* Microwave Detection Zone
** See Note 8



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. Reposition existing signal head numbered 22.
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. This loop serve as a queue backup detector. After 5 seconds of constant actuation, the detector unit places a call to the controller to preempt normal operation to clear out the storage lane.
9. 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	▭
N/A	Detection Zone	▩
N/A	Microwave Detector	◆
⊠	Controller & Cabinet	⊠
□	Junction Box	■
----	2-in Underground Conduit	----
N/A	Right of Way	----
→	Directional Arrow	→
Ⓐ	Left Arrow "ONLY" Sign (R3-5L)	Ⓐ
Ⓑ	Right Arrow "ONLY" Sign (R3-5R)	Ⓑ

ASC/3 TIMING CHART				
FEATURE	PHASE			
	2	4	5	6
Min Green *	10	7	7	10
Walk *	-	-	-	-
Ped Clear	-	-	-	-
Veh. Extension *	3.0	2.0	2.0	3.0
Max 1 *	60	20	20	60
Yellow	4.1	3.0	3.0	4.1
Red Clear	1.2	2.6	1.6	1.2
Red Revert	-	-	-	-
Actuations B4 Add *	-	-	-	-
Seconds /Actuation *	-	-	-	-
Max Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Locking Detector	X	-	-	X
Recall Position	VEH. RECALL	-	-	VEH. RECALL
Dual Entry	-	-	-	-
Simultaneous Gap	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 BACKUP PREEMPT	
FUNCTION	PRE 3
Exit Phase(s)	-
Preempt Override	OFF
Delay Time	0
Ped Clear Trough Yellow	N
Terminate Phases	N
Entrance Walk	255*
Entrance Ped Clear	255*
Entrance Min Green	10
Entrance Yellow Change	25.5*
Entrance Red Clear	25.5*
Minimum Dwell Time	46
Preempt Input Extension Time	0
Preempt Max Time	0
Exit Yellow Change	25.5*
Exit Red Clear	25.5*

* Allows normal phase times to be used.

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SR 1404 (Morganton Road) at Skye Drive

Divsion 6 Cumberland County Fayetteville

PLAN DATE: March 2016 REVIEWED BY: JPG
PREPARED BY: Devin Smith REVIEWED BY:

REVISIONS	INIT.	DATE

SCALE 0 20 1"=20'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 029904 ENGINEER JASON P. GALLOWAY

DocuSigned by: Jason P. Galloway F700EA704B1841D...
5/13/2016 DATE

SIG. INVENTORY NO. 06-0350

29-OCT-2016 09:26
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jgalloway