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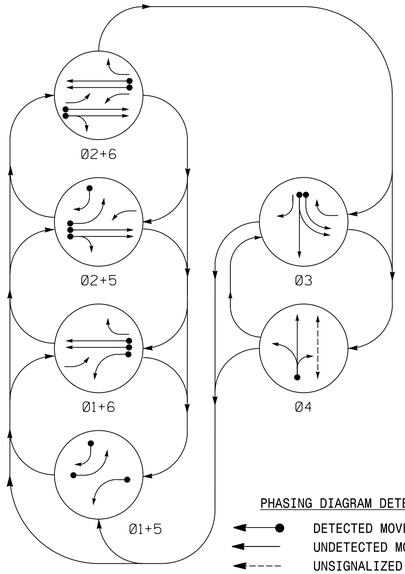
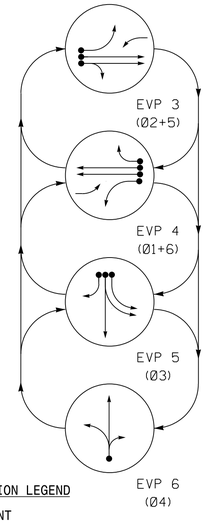
PROJECT REFERENCE NO.	SHEET NO.
U-5942	Sig. 23.0

PHASING DIAGRAM



EV PREEMPT PHASES



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4	EVP 3	EVP 4	EVP 5	EVP 6	FLASH
11	←	←	~~F Y~~	~~F Y~~	~~R~~	~~R~~	~~F Y~~	←	~~R~~	~~R~~	~~Y~~
21,22	R	R	G	G	R	R	G	R	R	R	Y
31	R	R	R	R	G ←	R	R	R	G ←	R	R
32	R/←	R	R/←	R	G	R	R	R	G	R	R
41	R	R	R	R	R	G ←	R	R	R	G ←	R
42	R	R	R	R	R	G	R	R	R	G	R
51	←	~~F Y~~	←	~~F Y~~	~~R~~	~~R~~	←	~~F Y~~	~~R~~	~~R~~	~~Y~~
61	R	G	R	G	R	R	R	G	R	R	Y
62	R	G	R	G	R/←	R	R	G	R	R	Y
P41,P42	DW	DW	DW	DW	DW	W	DW	DW	DW	DW	DRK

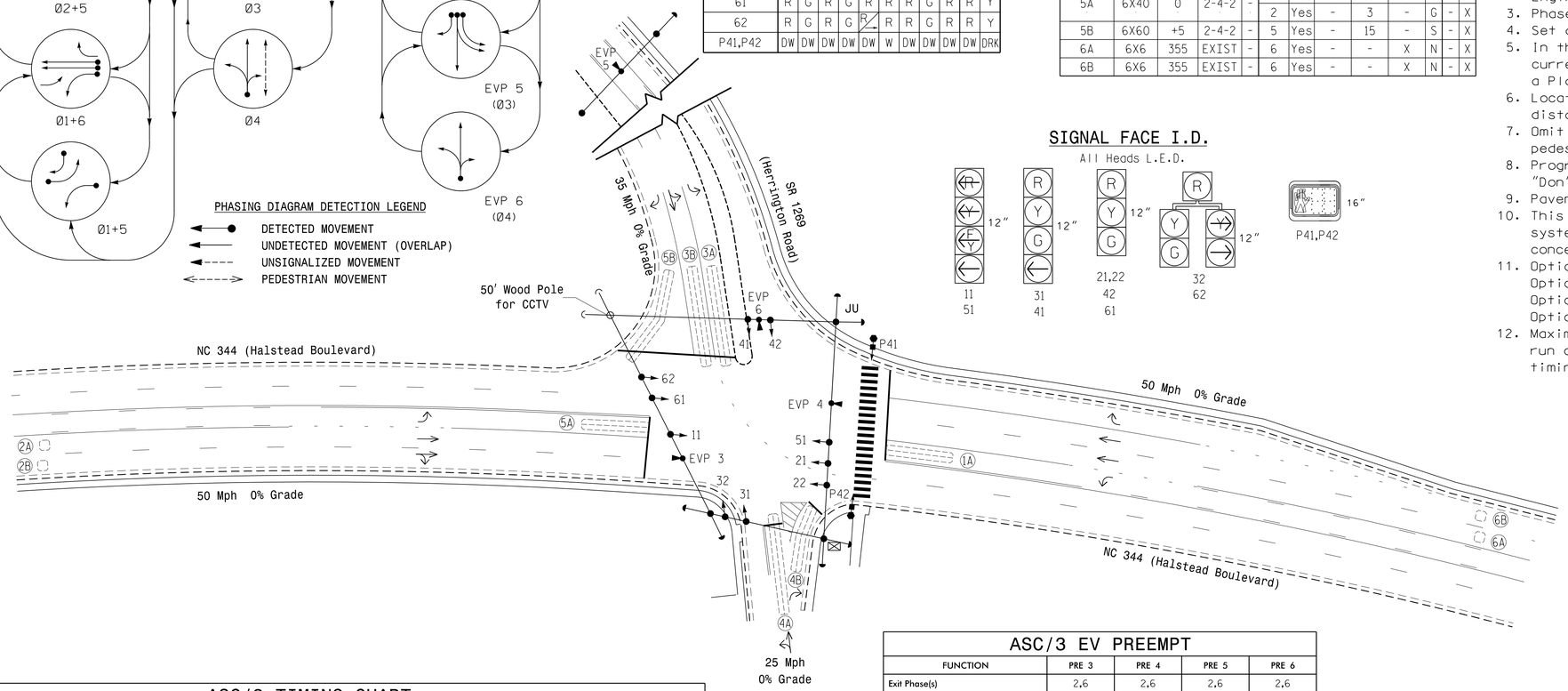
ASC/3 DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	-	1	Yes	-	15	-	S	-	X
					6	Yes	-	3	-	G	-	X
2A	6X6	355	EXIST	-	2	Yes	-	-	X	N	-	X
2B	6X6	355	EXIST	-	2	Yes	-	-	X	N	-	X
3A	6X60	+5	2-4-2	-	3/10	Yes	-	-	-	S	-	X
3B	6X60	+5	2-4-2	-	3/10	Yes	-	-	-	S	-	X
4A	6X60	+5	2-4-2	-	4	Yes	-	10	-	S	-	X
4B	6X40	0	2-4-2	-	4	Yes	-	15	-	S	-	X
5A	6X40	0	2-4-2	-	5	Yes	-	15	-	S	-	X
					2	Yes	-	3	-	G	-	X
5B	6X60	+5	2-4-2	-	5	Yes	-	15	-	S	-	X
6A	6X6	355	EXIST	-	6	Yes	-	-	X	N	-	X
6B	6X6	355	EXIST	-	6	Yes	-	-	X	N	-	X

6 Phase
Fully Actuated
w/ EV Preemption
(Elizabeth City 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. 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.
6. Locate new cabinet so as not to obstruct signt distance of vehicles turning right on red.
7. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
8. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
9. Pavement markings are existing.
10. This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
11. Optical detector 3 calls EVP 3;
    Optical detector 4 calls EVP 4;
    Optical detector 5 calls EVP 5;
    Optical detector 6 calls EVP 6.
12. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



SIGNAL FACE I.D.

All Heads L.E.D.

ASC/3 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	**10	OLH	OLI
Min Green *	7	14	7	7	7	14	7	0.1	0.1
Walk *	-	-	-	7	-	-	-		
Ped Clear	-	-	-	23	-	-	-		
Veh. Extension *	2.0	6.0	2.0	2.0	2.0	6.0	2.0		
Max 1 *	15	100	20	35	15	100	20		
Yellow	3.0	4.8	3.8	3.2	3.0	4.8	3.8	3.8	3.8
Red Clear	2.9	1.8	2.5	2.6	2.8	1.8	2.5	2.5	2.5
Actuations B4 Add *	-	0	-	-	-	0	-		
Seconds /Actuation *	-	1.5	-	-	-	1.5	-		
Max Initial *	-	40	-	-	-	40	-		
Time Before Reduction *	-	15	-	-	-	15	-		
Time To Reduce *	-	60	-	-	-	60	-		
Minimum Gap	-	3.3	-	-	-	3.3	-		
Locking Detector	-	X	-	-	-	X	-		
Recall Position	-	VEH. RECALL	-	-	-	VEH. RECALL	-		
Dual Entry	-	-	-	-	-	-	-		
Simultaneous Gap	X	X	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.

** Phase used for timing purposes only.

ASC/3 EV PREEMPT

FUNCTION	PRE 3	PRE 4	PRE 5	PRE 6
Exit Phase(s)	2,6	2,6	2,6	2,6
Preempt Override	OFF	OFF	OFF	OFF
Delay Time	0	0	0	0
Ped Clear Through Yellow	Y	Y	Y	Y
Terminate Phases	N	N	N	N
Entrance Walk	255*	255*	255*	255*
Entrance Ped Clear	255*	255*	255*	255*
Entrance Min Green	1	1	1	1
Entrance Yellow Change	25.5*	25.5*	25.5*	25.5*
Entrance Red Clear	25.5*	25.5*	25.5*	25.5*
Minimum Dwell Time	14	14	7	7
Preempt Input Extension Time	2	2	2	2
Preempt Max Time	120	120	120	120
Exit Yellow Change	25.5*	25.5*	25.5*	25.5*
Exit Red Clear	25.5*	25.5*	25.5*	25.5*

*Time defaults to time used for phase during normal operation

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	
	Optical Detector	

Signal Upgrade

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

NC 344 (Halstead Boulevard)
At
SR 1269 (Herrington Road)

Division 1 Pasquotank County Elizabeth City

PLAN DATE: September 2018 REVIEWED BY: CBHolden
PREPARED BY: DTSears REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

PLANS PREPARED BY :
RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NORTH CAROLINA 27609-3960
NC LICENSE NO. F-0112 • (919) 878-9560

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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 033753 ENGINEER C. BYRON HOLDEN

DocuSigned by:
C. Byron Holden 9/21/2018
SIGNATURE DATE

SIG. INVENTORY NO. 01-0219

9/21/2018
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