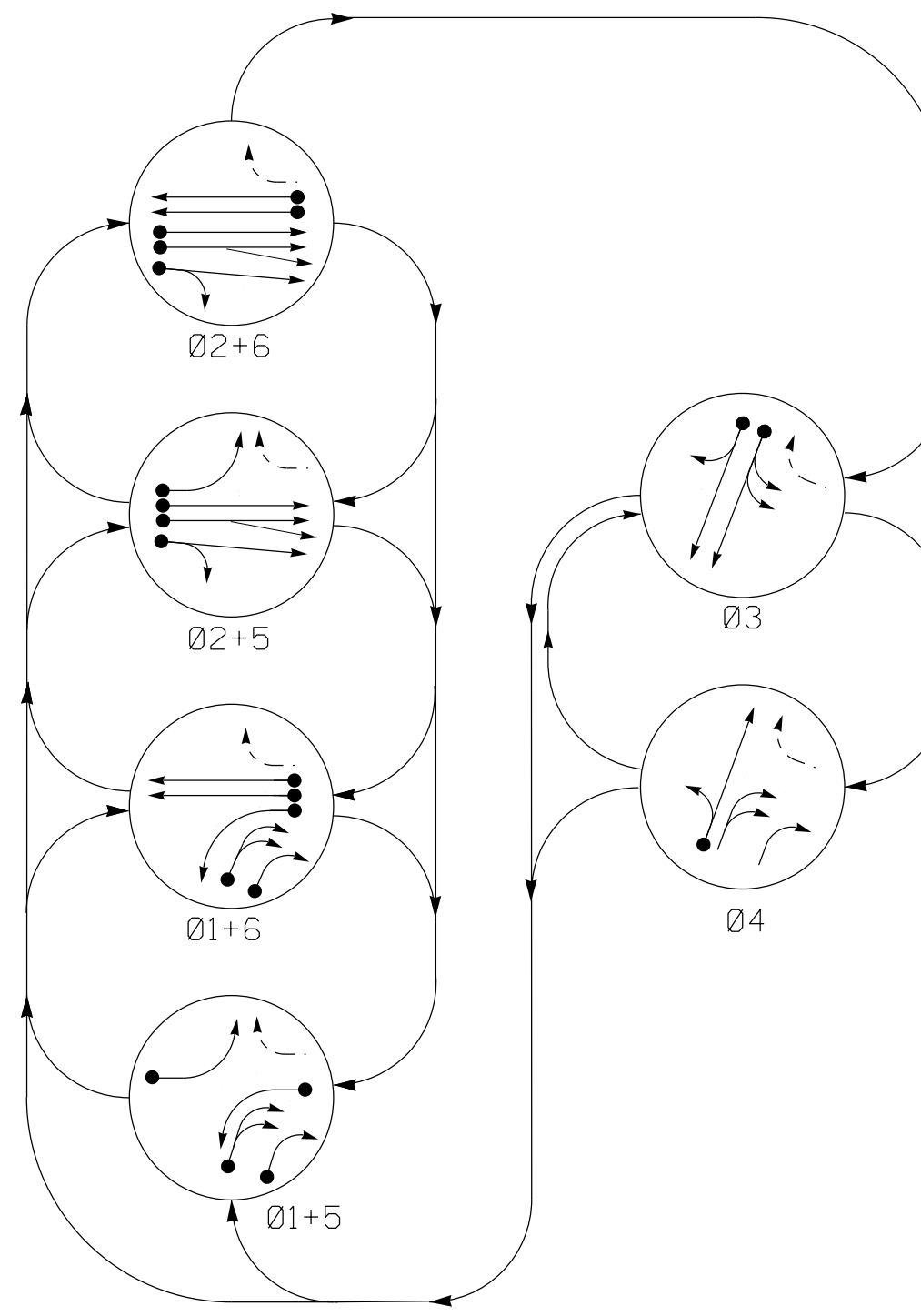
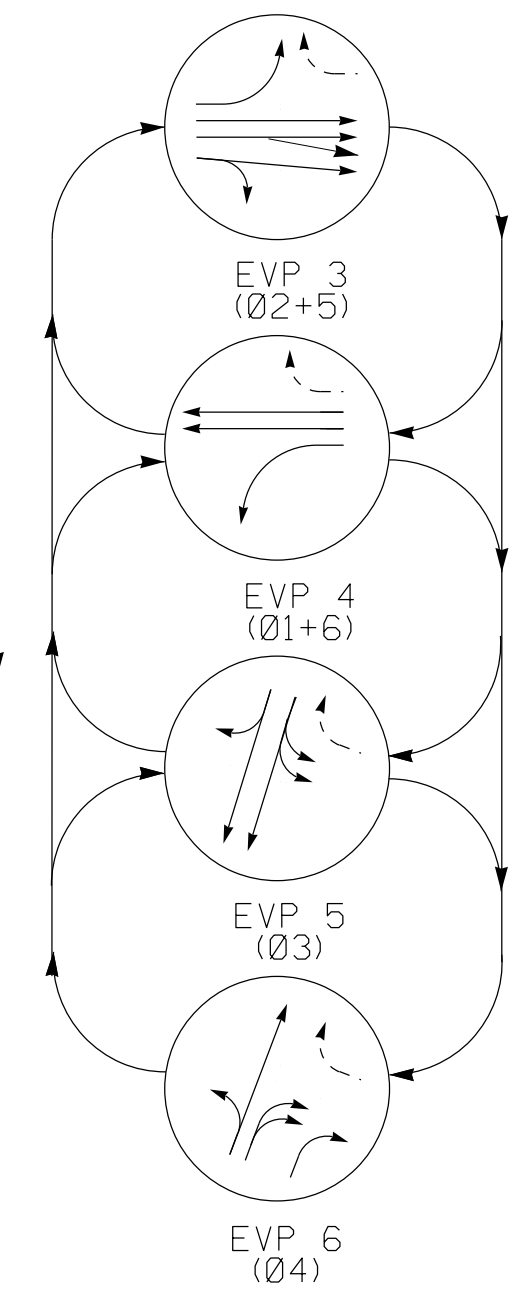


**PHASING DIAGRAM**



**EV PREEMPT PHASES**



**TABLE OF OPERATION**

SIGNAL FACE	PHASE										
	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4	PV	PV	PV	PV	PV
11											
12, 13											
21, 22, 23											
31											
32											
41											
42											
51											
61, 62											

**ASC/3 DETECTOR INSTALLATION CHART**

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	LOOP	NEW CARD
1A	6X60	+5	2-4-2		1	Yes					S	X
1B	6X60	+5	2-4-2		1	Yes		15			S	X
1C	6X60	+5	2-4-2		1	Yes					S	X
2A/S1	6X6	300	EXIST		2	Yes				X	N	X
2B/S2	6X6	300	EXIST		2	Yes				X	N	X
2C/S3	6X6	300	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		10			S	X
4A	6X60	+5	2-4-2		4	Yes					S	X
5A	6X60	+5	2-4-2		5	Yes		3			S	X
6A/S4	6X6	300	EXIST		6	Yes				X	N	X
6B/S5	6X6	300	EXIST		6	Yes				X	N	X

**6 Phase Fully Actuated w/ EV Preemption (Elizabeth City Signal System)**

**NOTES**

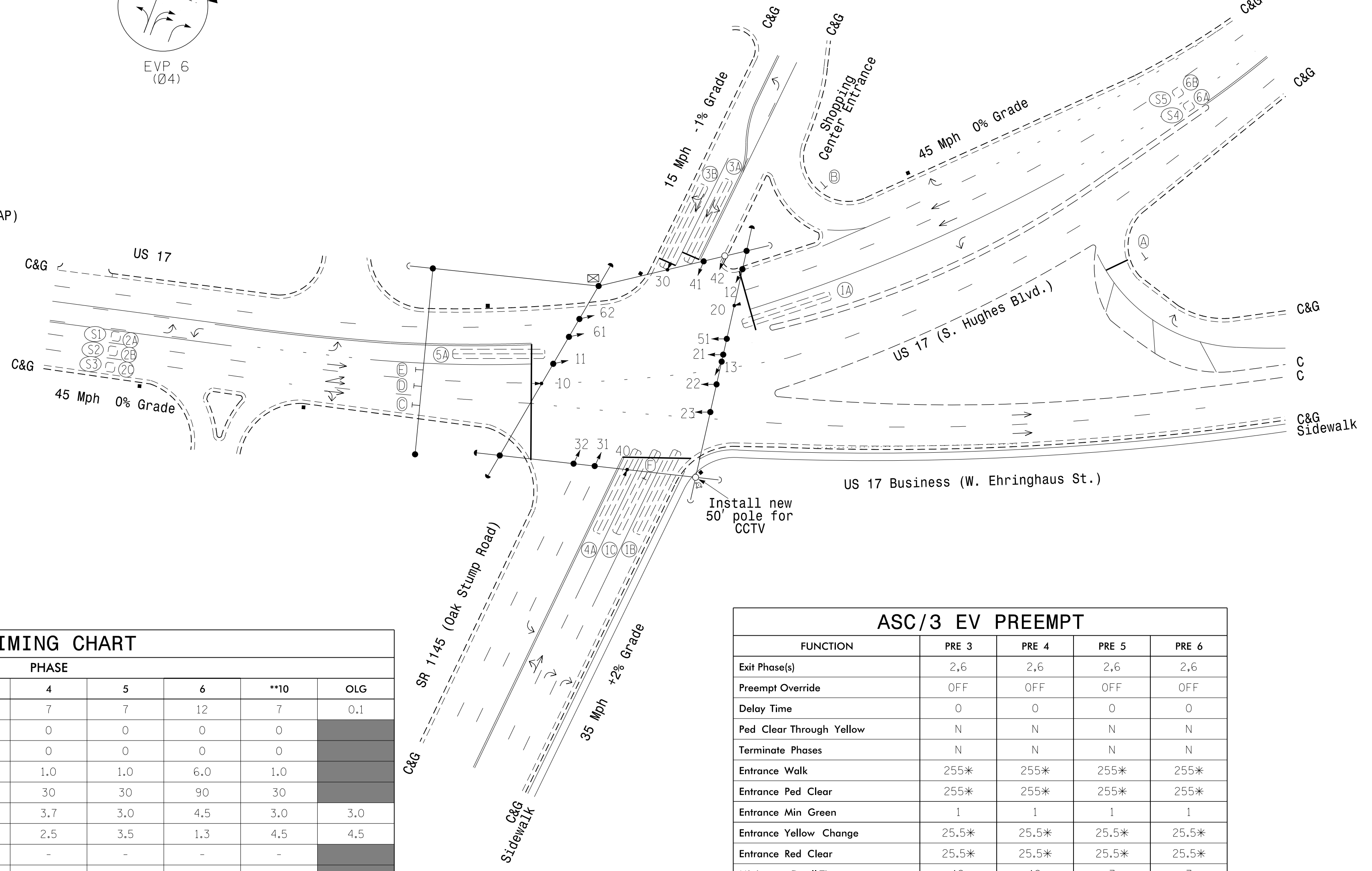
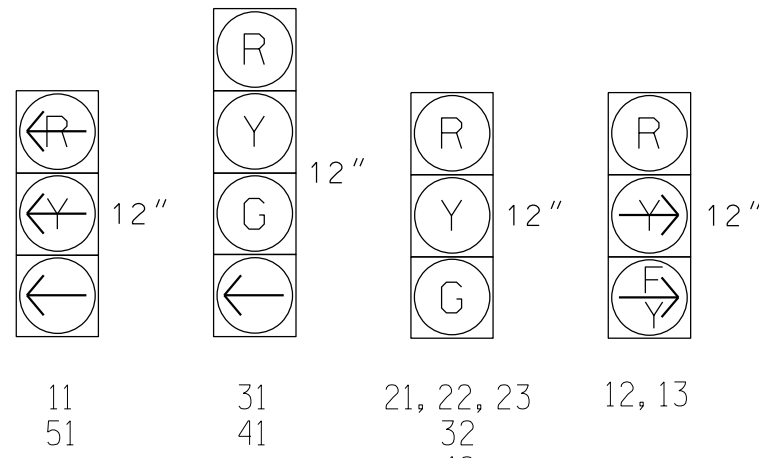
- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Maintain backplates for signal heads 11 and 13.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Pavement markings are existing.
- Relocate emergency vehicle preemption equipment from existing cabinet to new cabinet
- This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- Optical detector 10 calls EVP 3; Optical detector 20 calls EVP 4; Optical detector 30 calls EVP 5; Optical detector 40 calls EVP 6.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

**PHASING DIAGRAM DETECTION LEGEND**

- ➔ ● DETECTED MOVEMENT
- ➔ ○ UNDETECTED MOVEMENT (OVERLAP)
- ➔ --- UNSIGNALIZED MOVEMENT
- ➔ --- PEDESTRIAN MOVEMENT

**SIGNAL FACE I.D.**

All Heads L.E.D.



**LEGEND**

- | PROPOSED   | EXISTING  |
|--|---|
| ○ → Traffic Signal Head                            | ● → N/A   |
| ● → Modified Signal Head                           | ■ → N/A   |
| ○ → Pedestrian Signal Head With Push Button & Sign | ○ → Signal Pole with Guy                          |
| ○ → Signal Pole with Sidewalk Guy                  | ● → Signal Pole with Sidewalk Guy                 |
| □ → Inductive Loop Detector                        | □ → Controller & Cabinet                          |
| □ → Junction Box                                   | □ → Junction Box                                  |
| --- → 2-in Underground Conduit                     | --- → Right of Way                                |
| N/A → Directional Arrow                            | → → Fire Hydrant                                  |
| N/A → Optical Detector                             | ⊗ → Optical Detector                              |
| A → "STOP" Sign (R1-1)                             | A → "STOP" Sign (R1-1)                            |
| B → "YIELD" Sign (R1-2)                            | B → "YIELD" Sign (R1-2)                           |
| C → Combined Through and Right Arrow Sign (R3-6R)  | C → Combined Through and Right Arrow Sign (R3-6R) |
| D → [Sign]   | D → [Sign]  |
| E → [Sign]   | E → [Sign]  |
| F → [Sign]   | F → [Sign]  |

**ASC/3 TIMING CHART**

FEATURE	PHASE						**10	OLG
	1	2	3	4	5	6		
Min Green *	7	12	7	7	7	12	7	0.1
Walk *	0	0	0	0	0	0	0	
Ped Clear	0	0	0	0	0	0	0	
Veh. Extension *	1.0	6.0	1.0	1.0	1.0	6.0	1.0	
Max 1 *	30	90	30	30	30	90	30	
Yellow	3.0	4.5	3.0	3.7	3.0	4.5	3.0	3.0
Red Clear	3.5	2.0	4.5	2.5	3.5	1.3	4.5	4.5
Actuations B4 Add *	-	-	-	-	-	-	-	
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	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	N	N	N	N
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	12	12	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*

\* Allows normal phase times to be used.

**Signal Upgrade**

Prepared for the Offices of:

**DRMP**  
8000 Regency Parkway, Suite 175  
Cary, NC 27518  
NC License No. LC2213 (919) 650-1038

US 17 (S. Hughes Blvd.) at US 17 Bus. (W. Ehringhaus St.)/ SR 1145 (Oak Stump Rd.)/ Shopping Center Entrance

Division 1 Pasquotank County Elizabeth City  
PLAN DATE: June 2018 REVISIONS: JA Le INIT. DATE  
PREPARED BY: JA Le REVIEWED BY: AJ Davis  
REVISIONS: INIT. DATE

9/24/2018  
DATE  
SIC. INVENTORY NO. 01-0019

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