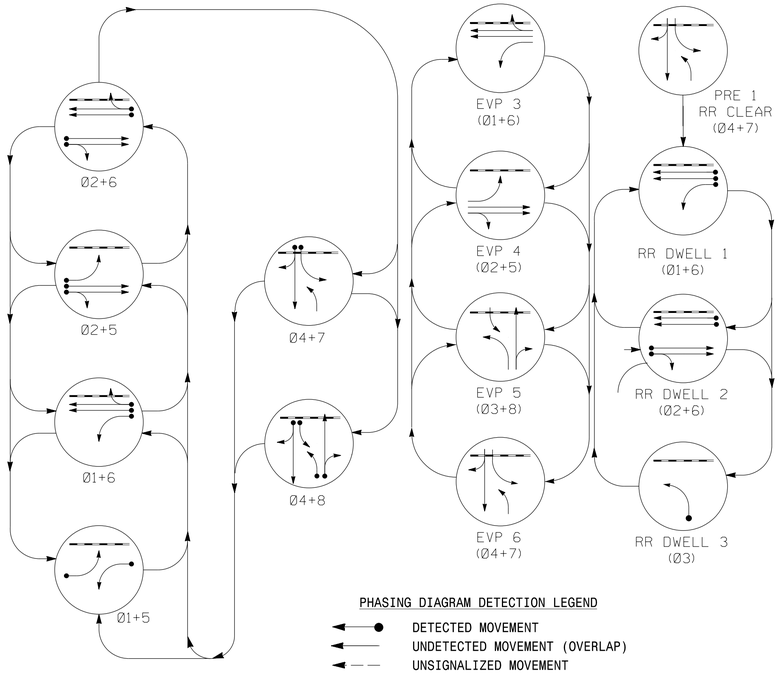
DocuSign Envelope ID: 2F682EC6-7D13-4BF5-90BE-A468B984ED31

PROJECT REFERENCE NO.	SHEET NO.
U-5942	Sig. 11.0

PHASING DIAGRAM



EV PREEMPT PHASES

RR 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	Ø4+7	Ø4+8	CLEAR	DWELL 1	DWELL 2	DWELL 3	EVP 3	EVP 4	EVP 5	EVP 6	FLASH
11	←	←	↛R	↛R	↛R	↛R	↛R	←	↛R	↛R	←	↛R	↛R	↛R	↛R
21, 22	R	R	G	G	R	R	R	R	G	R	R	G	R	R	Y
31	↛R	↛R	↛R	↛R	↛FY	↛FY	↛FY	↛R	↛R	←	↛R	↛R	←	↛FY	↛R
41, 42	R	R	R	R	G	G	G	R	R	R	R	R	R	G	R
51	←	↛R	←	↛R	↛R	↛R	↛R	↛R	↛R	↛R	↛R	←	↛R	↛R	↛R
61, 62	R	G	R	G	R	R	R	G	G	R	G	R	R	R	Y
71	↛R	↛R	↛R	↛R	←	↛FY	←	↛R	↛R	↛R	↛R	↛R	↛FY	←	↛R
81, 82	R	R	R	R	R	G	R	R	R	R	R	R	G	R	R
Sign B	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	#

See Note 8.

ASC/3 DETECTOR INSTALLATION CHART

DETECTOR LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6x40	0	2-4-2	-	1	Yes	-	3	-	S	-	X
2A	6x6	300	EXIST	-	2	Yes	-	-	X	N	-	X
2B	6x6	300	EXIST	-	2	Yes	-	-	X	N	-	X
4A	6x40	0	2-4-2	-	4	Yes	-	10	-	S	-	X
5A	6x40	+10	2-4-2	-	5	Yes	-	3	-	S	-	X
6A	6x6	300	EXIST	-	6	Yes	-	-	X	N	-	X
6B	6x6	300	EXIST	-	6	Yes	-	-	X	N	-	X
7A	6x40	0	2-4-2	-	7	Yes	-	15	-	S	-	X
				-	4	Yes	-	3	-	S	-	X
8A	6x40	+5	2-4-2	-	8	Yes	-	-	-	S	-	X
8B	6x40	+5	2-4-2	-	8	Yes	-	10	-	S	-	X

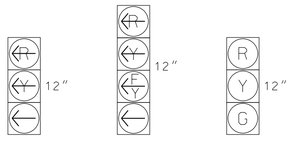
6 Phase
Fully Actuated
W/ RR and EV Preemption
(Elizabeth City Signal System)

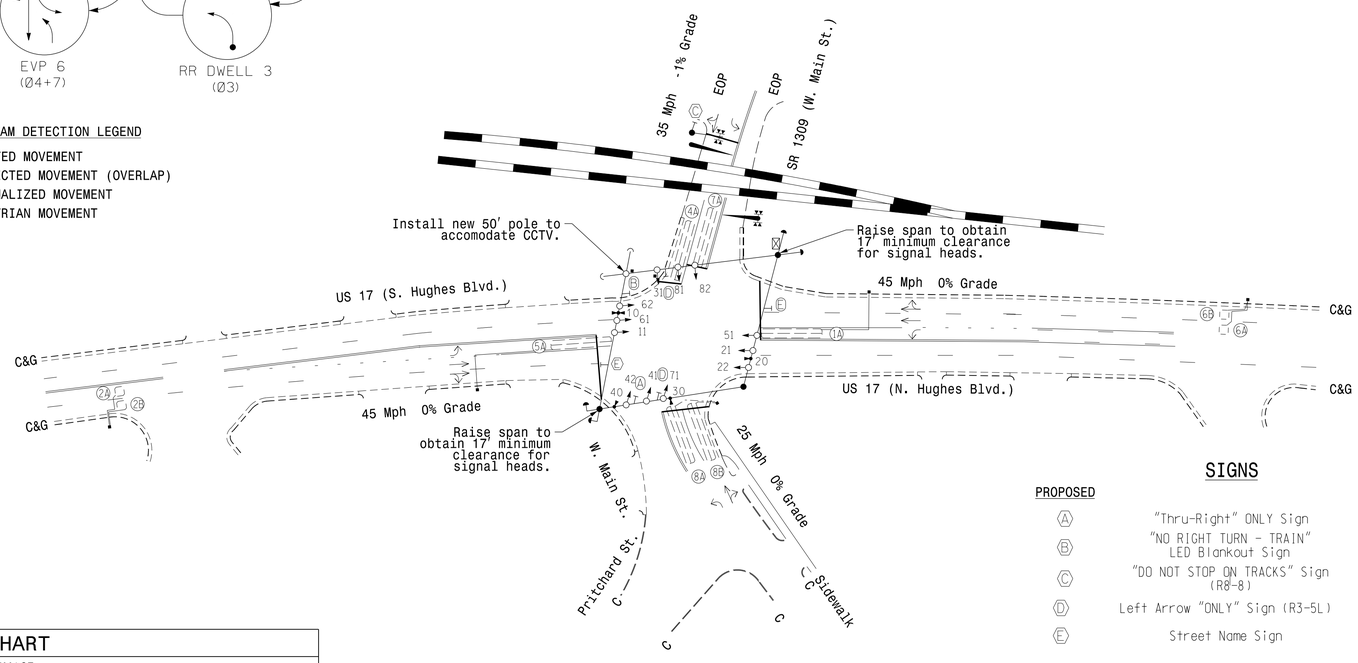
NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
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. Pavement markings are existing.
7. Relocate optical detection equipment from existing cabinet into new cabinet.
8. Optical detector 10 calls EVP 3; optical detector 20 calls EVP 4; optical detector 30 calls EVP 5; optical detector 40 calls EVP 6.
9. Ensure flashing operation does not alter operation of blankout signs.
10. Install new pole directly adjacent to existing pole and raise signal span to obtain 17' minimum clearance for signal head heights.
11. Remove sign W25-2.
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.





SIGNS

PROPOSED		EXISTING
Ⓐ	"Thru-Right" ONLY Sign	Ⓐ
Ⓑ	"NO RIGHT TURN - TRAIN" LED Blankout Sign	Ⓑ
Ⓒ	"DO NOT STOP ON TRACKS" Sign (R8-8)	Ⓒ
Ⓓ	Left Arrow "ONLY" Sign (R3-5L)	Ⓓ
Ⓔ	Street Name Sign	Ⓔ

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	
N/A	Railroad Gate	
N/A	Railroad Gate and Flasher	
N/A	Railroad Cantilever	
N/A	Railroad Tracks	
	Optical Detector	

ASC/3 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8
Min Green *	7	12	7	7	7	12	7	7
Walk *	-	-	-	-	-	-	-	-
Ped Clear	-	-	-	-	-	-	-	-
Veh. Extension *	2.0	6.0	-	2.0	2.0	6.0	2.0	2.0
Max 1 *	20	90	-	30	20	90	15	30
Yellow	3.0	4.5	3.0	3.9	3.0	4.5	3.0	3.9
Red Clear	2.6	1.3	1.9	1.4	2.6	1.1	1.9	1.4
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	-	-	-	X	-	-	-	X
Simultaneous Gap	X	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.

ASC/3 RR PREEMPT

FUNCTION	PRE 1
Exit Phase(s)	4,7
Preempt Override	ON
Delay Time	0
Ped Clear Trough Yellow	N
Terminate Phases	N
Track Clear Reservice	Y
Entrance Walk	255*
Entrance Ped Clear	255*
Entrance Min Green	1
Entrance Yellow Change	25.5*
Entrance Red Clear	25.5*
Track Clear Min Green	7
Track Clear Yellow Change	25.5*
Track Clear Red Clear	25.5*
Min Dwell Time	12
Exit Yellow Change	25.5*
Exit Red Clear	25.5*

* Allows normal phase times to be used.

ASC/3 EV PREEMPT

FUNCTION	PRE 3	PRE 4	PRE 5	PRE 6
Exit Phase(s)	4,8	4,8	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.

Plans Prepared By:

DRMP
DRMP, Inc.
8000 Regency Parkway, Suite 175
Cary, NC 27518
NC License No. C-2213 (919) 650-1038

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SCALE 1"=50' (0 – 50')

US 17 (Hughes Blvd.) at SR 1309 (W. Main St.)/ W. Main St.

Division 1 Pasquotank County Elizabeth City

PLAN DATE:	March 2018	REVIEWED BY:	AJ Davis
PREPARED BY:	JA Le	REVIEWED BY:	LM Moon

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022516 ENGINEER LISA M. MOON

DocuSigned by: Lisa M. Moon 8/21/2018
58CE588D83D0421
DATE

SIG. INVENTORY NO. 01-0013

21-AUG-2018 15:54
R:\U5942_sig_sheets\Design*Signals\01-0013.dgn
lmoon
AT CAR-LMOON1-W7