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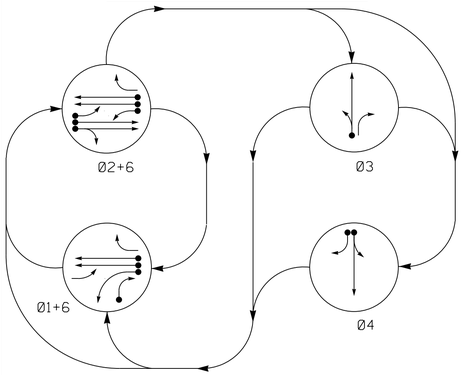
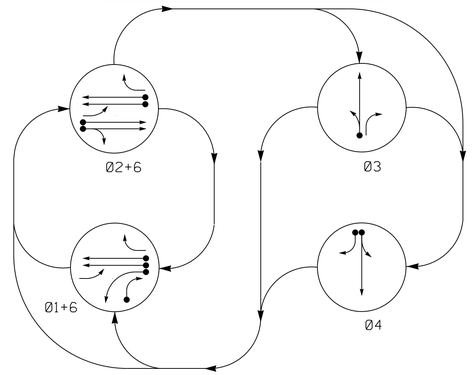
PROJECT REFERENCE NO.	SHEET NO.
U-5719	SIG-2.0

4 Phase W/ EV Preemption
Fully Actuated
Jacksonville Signal System

DEFAULT PHASING DIAGRAM



ALTERNATE PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

EV PREEMPT PHASES

(Medium Priority)

PRE 3
(Ø1+6)

DEFAULT TABLE OF OPERATION

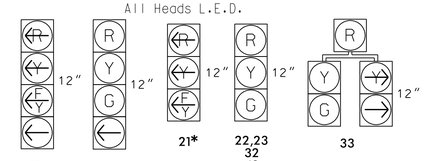
SIGNAL FACE	PHASE 01+6	PHASE 02+6	PHASE 03	PHASE 04	PHASE EVP3	PHASE FLASH
11	←	FY	R	R	←	Y
21	FY	FY	R	R	FY	Y
22,23	R	G	R	R	R	Y
31	R	R	G	R	R	R
32	R	R	G	R	R	R
33	R	R	G	R	R	R
41	R	R	R	G	R	R
42	R	R	R	G	R	R
61,62	G	G	R	R	G	Y

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+6	PHASE 02+6	PHASE 03	PHASE 04	PHASE EVP3	PHASE FLASH
11	←	R	R	R	←	Y
21	FY	FY	R	R	FY	Y
22,23	R	G	R	R	R	Y
31	R	R	G	R	R	R
32	R	R	G	R	R	R
33	R	R	G	R	R	R
41	R	R	R	G	R	R
42	R	R	R	G	R	R
61,62	G	G	R	R	G	Y

SIGNAL FACE I.D.

All Heads L.E.D.



*WIRE WITH SEPARATE RUN OF 7 CONDUCTOR CABLE

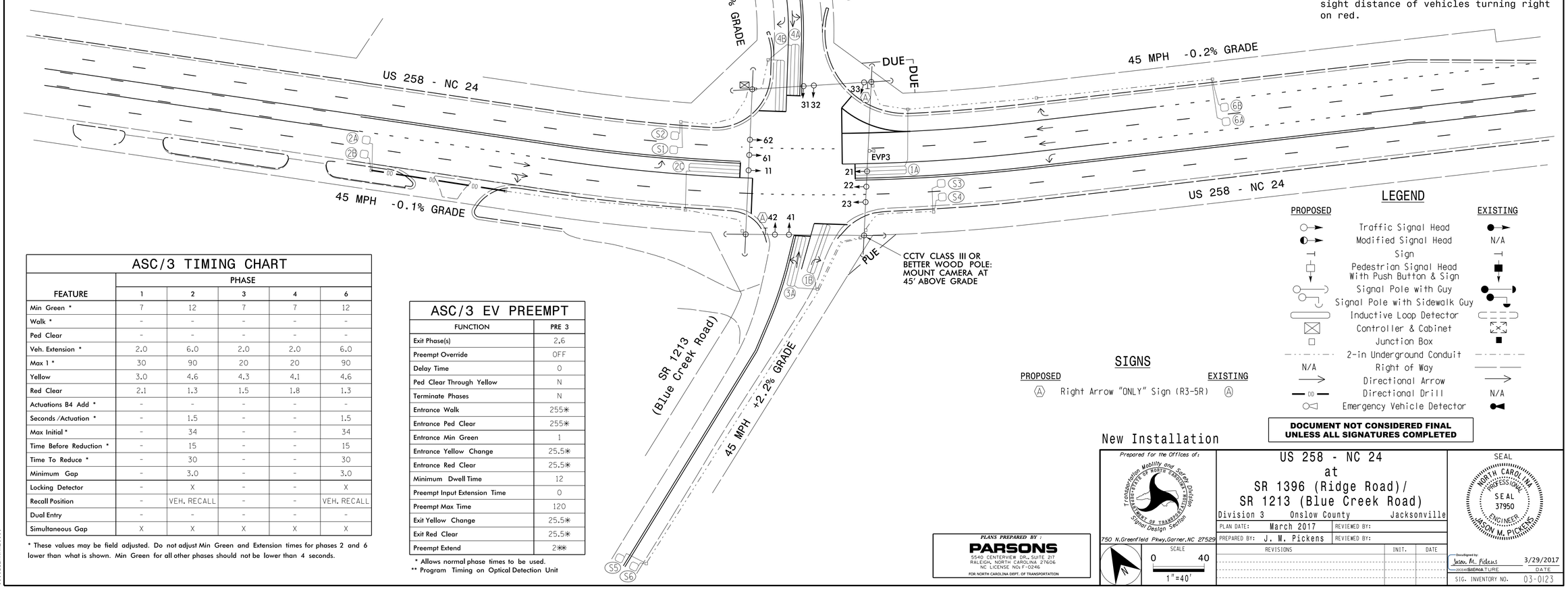
ASC/3 DETECTOR INSTALLATION CHART

DETECTOR: LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING: PHASE	CALLING	EXTEND TIME	DELAY TIME	TYPE	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	Y	1 ** 6	Yes Yes	- -	*10 3	S G	- -	Y Y
1B	6X40	0	2-4-2	Y	1	Yes	-	15	S	-	Y
2A	6X6	300	6	Y	2	Yes	-	-	N	-	Y
2B	6X6	300	6	Y	2	Yes	-	-	N	-	Y
2C	6X40	0	2-4-2	Y	2	Yes	-	3	G	-	Y
3A	6X40	0	2-4-2	Y	3	Yes	-	3	S	-	Y
4A	6X40	0	2-4-2	Y	4	Yes	-	3	S	-	Y
4B	6X40	0	2-4-2	Y	4	Yes	-	10	S	-	Y
6A	6X6	300	5	Y	6	Yes	-	-	N	-	Y
6B	6X6	300	5	Y	6	Yes	-	-	N	-	Y
S1	6X6	+150	3	Y	-	-	-	-	N	Y	Y
S2	6X6	+150	3	Y	-	-	-	-	N	Y	Y
S3	6X6	+150	5	Y	-	-	-	-	N	Y	Y
S4	6X6	+150	5	Y	-	-	-	-	N	Y	Y
S5	6X6	300	6	Y	-	-	-	-	N	Y	Y
S6	6X6	300	6	Y	-	-	-	-	N	Y	Y

* Disable Delay During Alternate Phasing Operation.
** Disable Phase 6 Call for Loop 1A During Alternate Phasing.

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 1 may be lagged.
4. The order of Phase 3 and Phase 4 may be reversed.
5. Set all detector units to presence mode.
6. The Division Traffic Engineer will determine the hours of use for each phasing plan.
7. This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
9. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.



ASC/3 TIMING CHART

FEATURE	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 6
Min Green *	7	12	7	7	12
Walk *	-	-	-	-	-
Ped Clear	-	-	-	-	-
Veh. Extension *	2.0	6.0	2.0	2.0	6.0
Max 1 *	30	90	20	20	90
Yellow	3.0	4.6	4.3	4.1	4.6
Red Clear	2.1	1.3	1.5	1.8	1.3
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

* 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 3
Exit Phase(s)	2,6
Preempt Override	OFF
Delay Time	0
Ped Clear Through Yellow	N
Terminate Phases	N
Entrance Walk	255*
Entrance Ped Clear	255*
Entrance Min Green	1
Entrance Yellow Change	25.5*
Entrance Red Clear	25.5*
Minimum Dwell Time	12
Preempt Input Extension Time	0
Preempt Max Time	120
Exit Yellow Change	25.5*
Exit Red Clear	25.5*
Preempt Extend	2**

* Allows normal phase times to be used.
** Program Timing on Optical Detection Unit

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	
DD	Directional Drill	N/A
	Emergency Vehicle Detector	

SIGNS

PROPOSED		EXISTING
A	Right Arrow "ONLY" Sign (R3-5R)	A

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

New Installation

Prepared for the Offices of:

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section

750 N.Greenfield Pkwy,Garner,NC 27529

SCALE 0 40 1"=40'

PLANS PREPARED BY :
PARSONS
5540 CENTERVIEW DR., SUITE 217
RALEIGH, NORTH CAROLINA 27606
NC LICENSE NO: F-0246
FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

US 258 - NC 24
at
SR 1396 (Ridge Road)/
SR 1213 (Blue Creek Road)

Division 3 Onslow County Jacksonville

PLAN DATE: March 2017	REVIEWED BY:
PREPARED BY: J. M. Pickens	REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 37950 ENGINEER JASON M. PICKENS

DocuSigned by: Jason M. Pickens
DOCUSIGNED SIGNATURE 3/29/2017 DATE

SIG. INVENTORY NO. 03-0123

29-MAR-2017 14:48
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